

ESG Briefing Session

—Efforts towards sustainability

November 22, 2022

Mitsui Mining & Smelting Co., Ltd.



We promote the well-being
of the world
through a spirit of
exploration and diverse
technologies.

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Representative Director**

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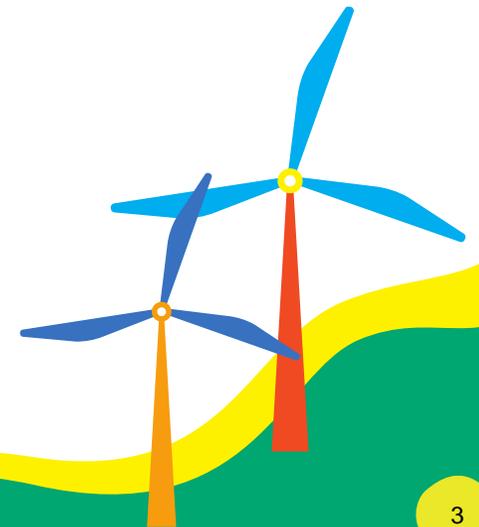
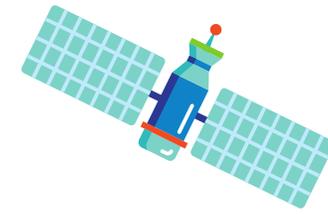
**General Manager of Sustainability
Promotion Department**

Human resources strategy

Akiko Sugimoto

**Executive Officer, General Manager of
Human Resource Department**

1. Philosophy



Upholding the perspective of sustainability through our management philosophy

探索精神と
多様な技術の融合で、
地球を笑顔にする。



Since our management philosophy was formulated in 1984, the company has been continuing to uphold its “perspective of sustainability” by placing contributions to society and sustainable growth at the core of management.

We will continue to uphold these values as our steadfast fundamental belief.

Management philosophy

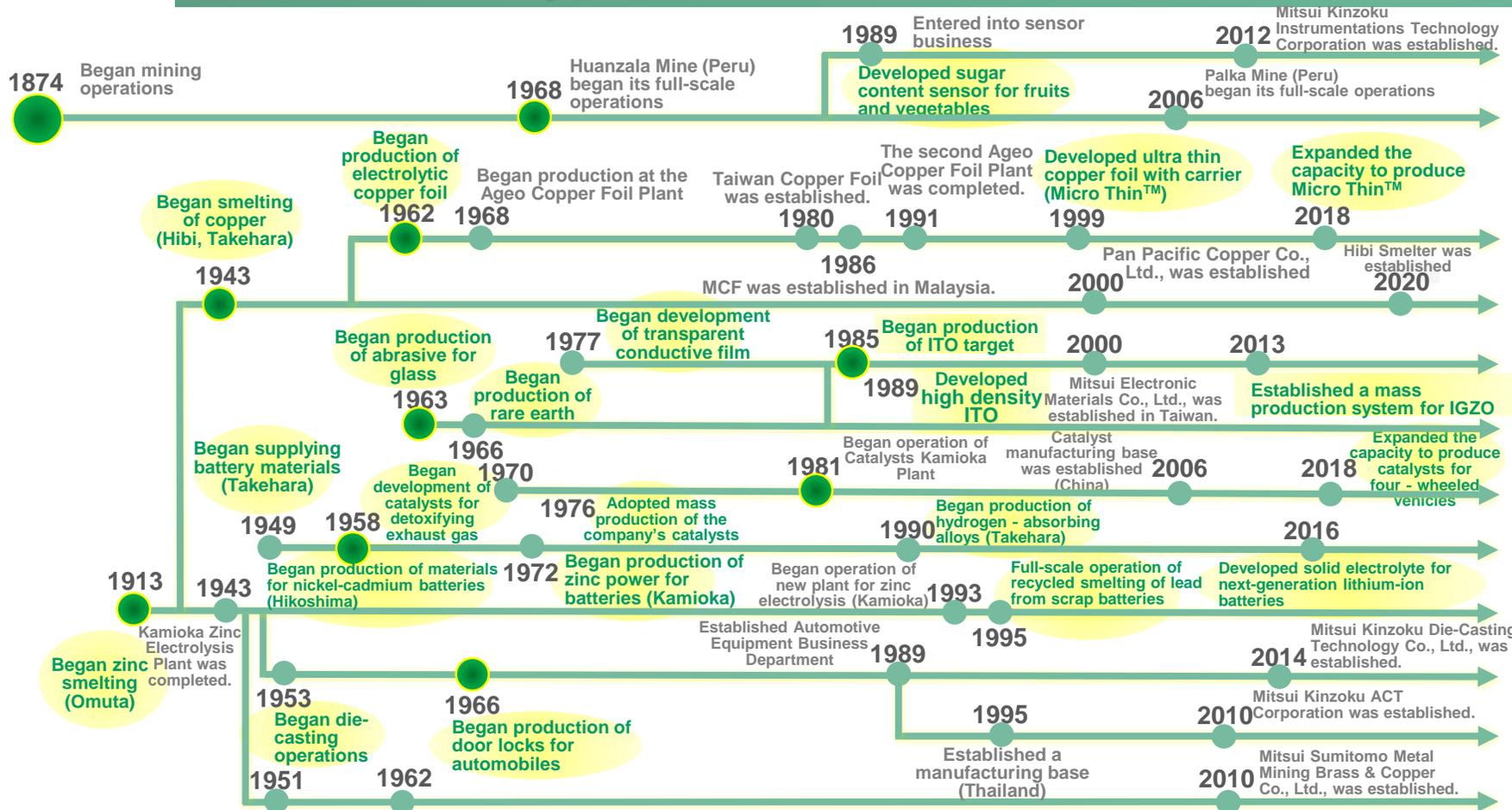
With creativity and productivity, we, the Mitsui Kinzoku Group, will explore products of value to society, and seek an eternal growth of our group.

History of our business

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多様な技術の融合で、
地球を笑顔にする。



The exploration of resources gifted by nature and smelting of nonferrous metals were the company's starting point. Furthermore, the company has been taking full advantage of its material intelligence to add value to nonferrous metals, and it has contributed to solving social issues by providing materials and parts that are essential to many industries.



2024 will mark the Group's 150th anniversary

We will continue to open the way to the future.



Business management centered around our purpose

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地球を笑顔にする。



To adapt to the era of VUCA, the company has defined its purpose, which serves as the change-tolerant foundation for management decisions and moral support for all employees.

Purpose



We promote the well-being of the world through a spirit of exploration and diverse technologies.

Group-wide vision

Building new businesses—and the future—with our material intelligence.

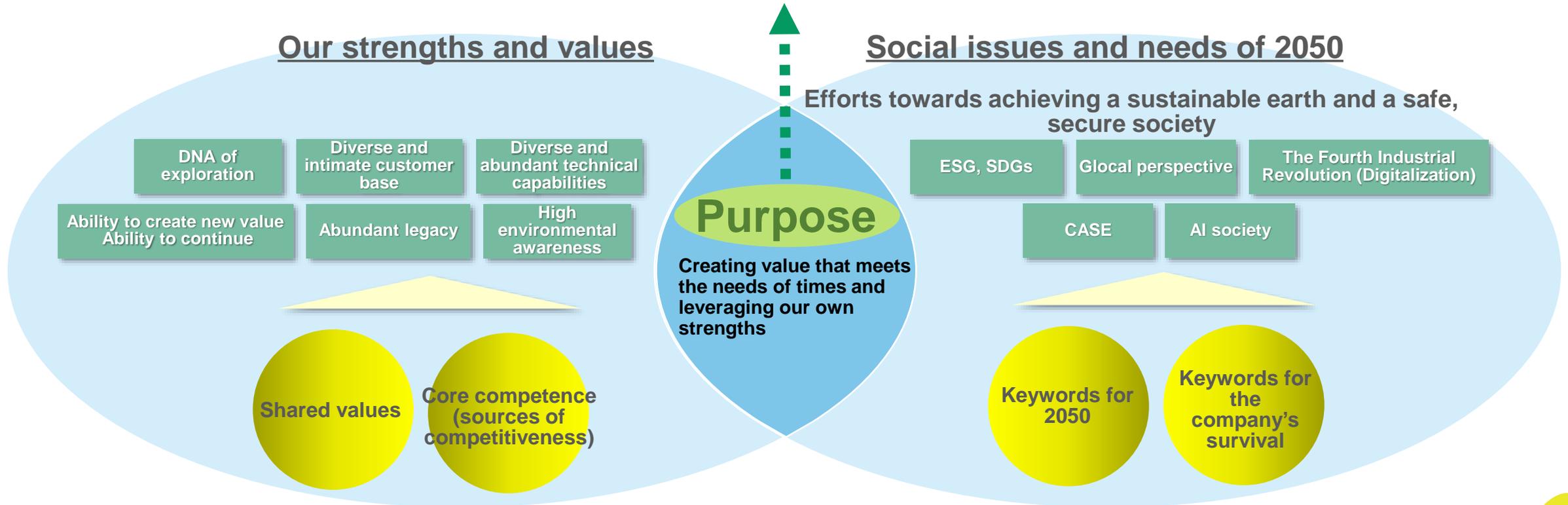
We will transform into an organization that can contribute to society by addressing its needs.



Standpoint for purpose designing

We defined our purpose as “creating value that meets the needs of times and leveraging our own strengths”
in areas where social issues/needs of 2050 and our strengths/values intersect.

We promote the well-being of the world through a spirit of exploration and diverse technologies.



Business domains aligned with our purpose

Leverage the company's spirit of exploration and diverse technologies to promote the well-being of the world so that we can contribute to the environment and the human race

We promote the well-being of the world through a spirit of exploration and diverse technologies.



Business activities to promote the well-being of the world

- Build a product/business portfolio with products that contribute to the creation of a society that is both low carbon and prosperous
- Reduce the environmental load in our business activities
- New business will lead to promotion of the well-being of the world

Promotion of the well-being of the world will transform our behavior

- Recruit people who identify with our work to promote the well-being of the world
- Employees develop ideas to promote the well-being of the world and act on them



2. Integrated thinking-based management

Consistent efforts made by the company to promote ESG

- Basic initiatives related to CSR
- Development and permeation

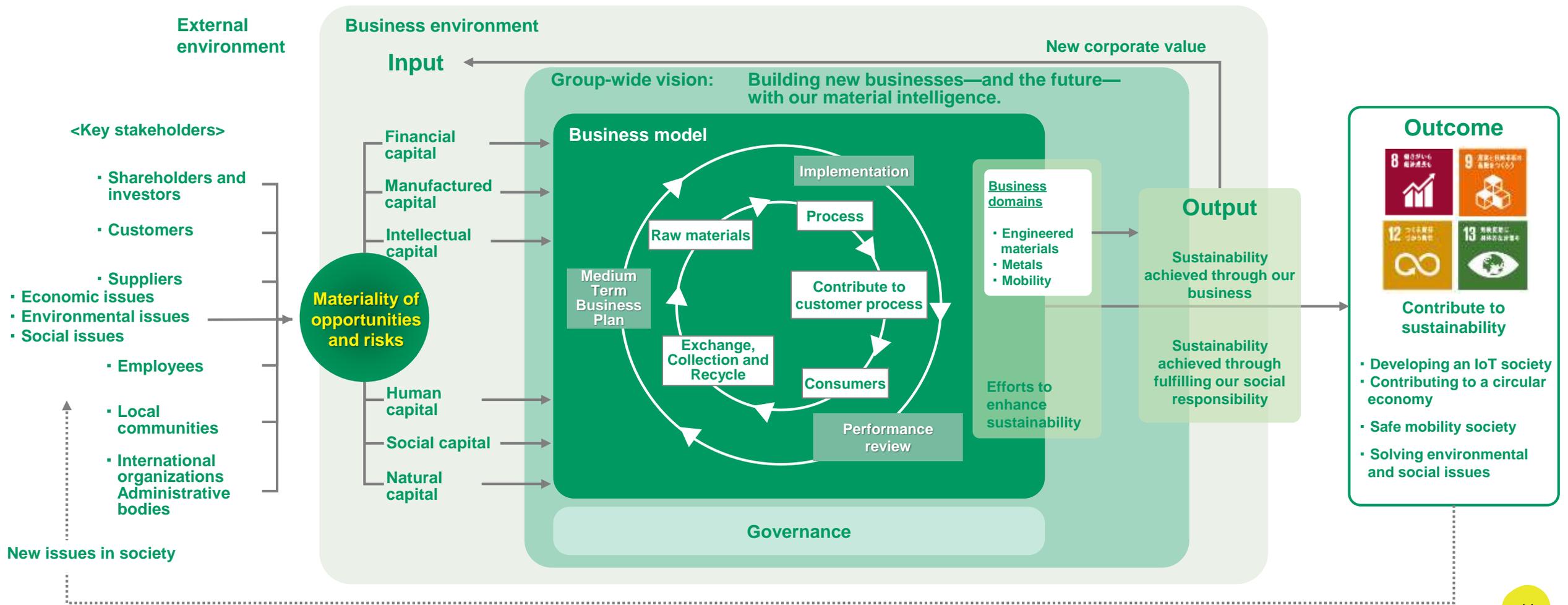
- Drive ESG-related initiatives as group-wide activities entwined with business initiatives
- Permeation and instilment

2016	Established the CSR office and the CSR committee	<ul style="list-style-type: none"> Started issuing the CSR Report Identified the company's materiality Formulated the Human Rights Policy and the CSR Basic Policy Revised the Code of Conduct
2017		<ul style="list-style-type: none"> Formulated the Procurement Policy and the Conflict Minerals Policy Revised the Environmental Action Plan
2018	Established the Supply Chain Committee	
2019		<ul style="list-style-type: none"> Started issuing the Integrated Report (replacing the CSR Report) Formulated the Human Rights Standards Announced Our Commitment on the UK Modern Slavery Act 2015 Announced the Tailings Dam management
2020		<ul style="list-style-type: none"> Reviewed the company's materiality Selected as a company eligible to receive support for TCFD by the Ministry of the Environment
2021	Established the Sustainability Promotion Department <ul style="list-style-type: none"> Consolidated the CSR Office Established the Climate Action Team Established the Diversity, Equity and Inclusion Office	<ul style="list-style-type: none"> Endorsed the Task Force on Climate-related Financial Disclosures (TCFD) Made My Declaration of Human Rights Created our Purpose and Vision
2022	Started the 2022–2024 Medium Term Business Plan <ul style="list-style-type: none"> Integrated thinking-based management Ambidexterity Established the Diversity, Equity, and Inclusion Committee	<ul style="list-style-type: none"> Formulated the MMS Group Health Management Declaration Implemented the Declaration of Partnership Building Endorsed the GX League Basic Concept

Note: Governance-related initiatives are not listed in this table. → Please refer to page 22

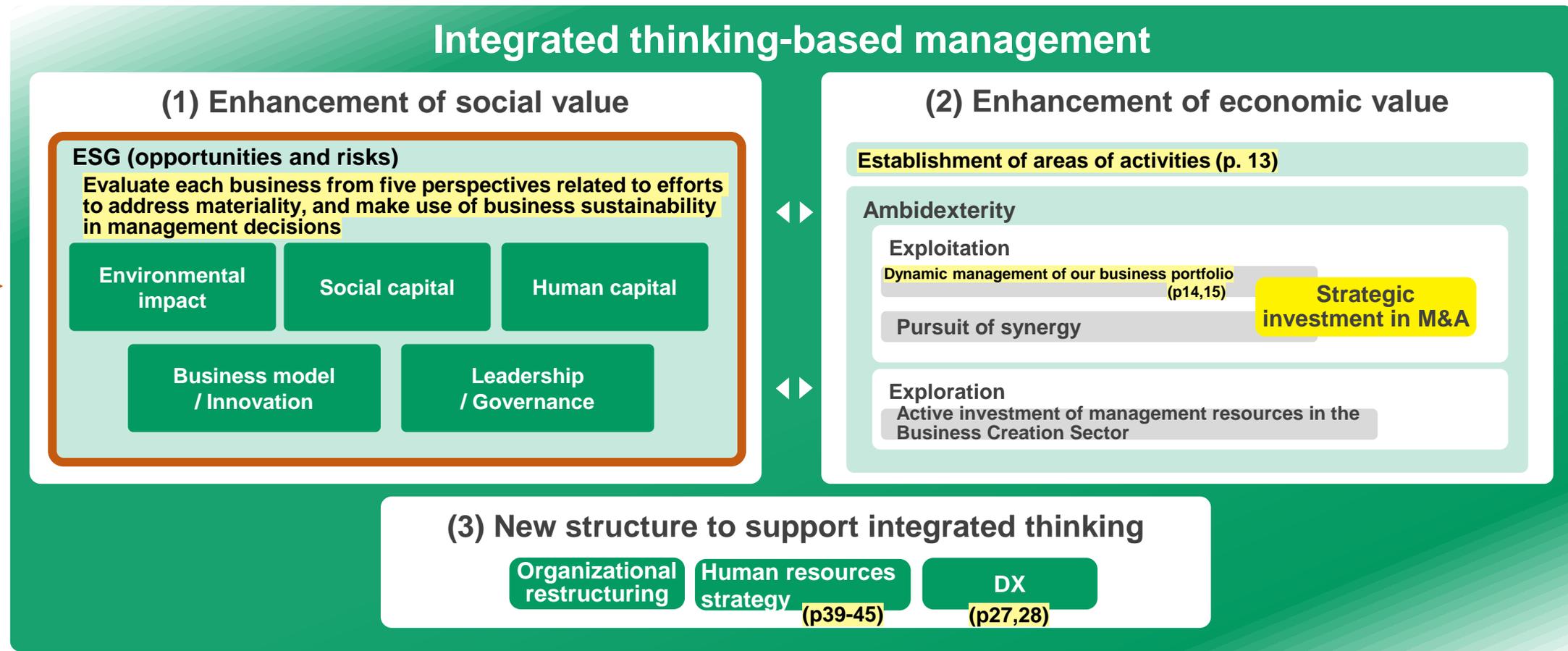
Our value creation process

We allocate and bolster management capital based on material issues (materiality), and run our business model in newly established business domains to create long-term value.



System of integrated thinking-based management

We aim to increase both social value and economic value.
We will accelerate ambidexterity while implementing integrated thinking-based management.



(3) New structure to support integrated thinking

Organizational restructuring

Human resources strategy (p39-45)

DX (p27,28)

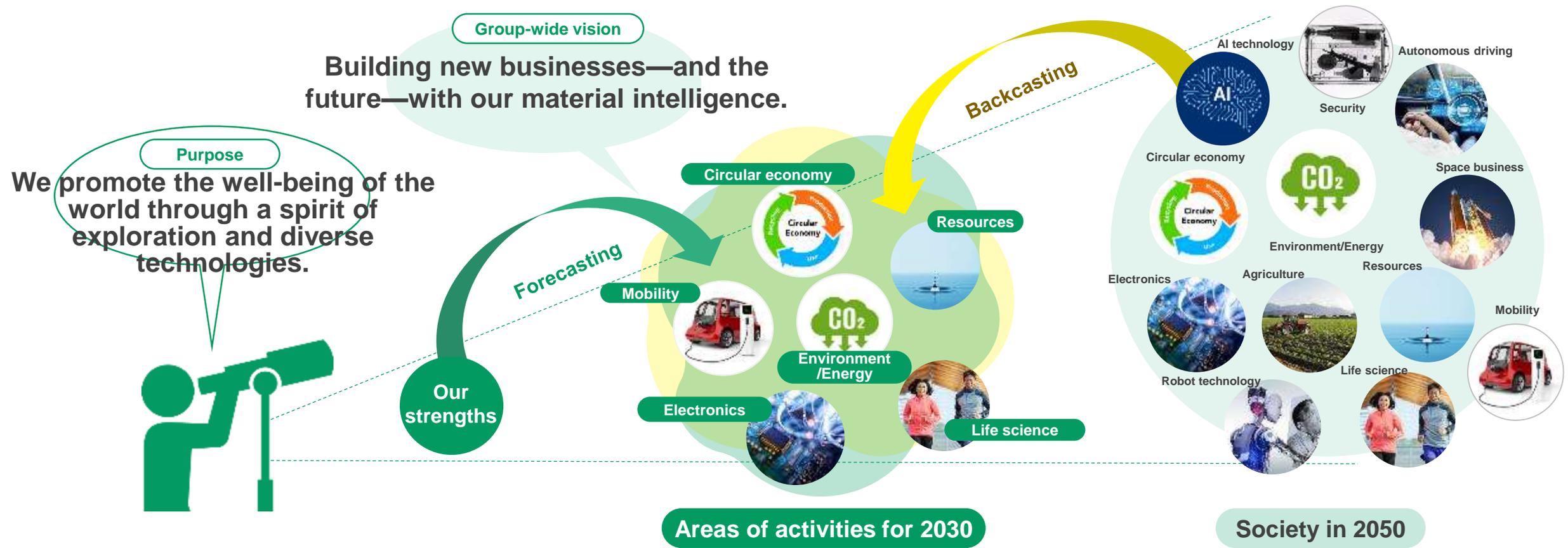
Explained on the previous page (p. 11)

Materiality of opportunities and risks



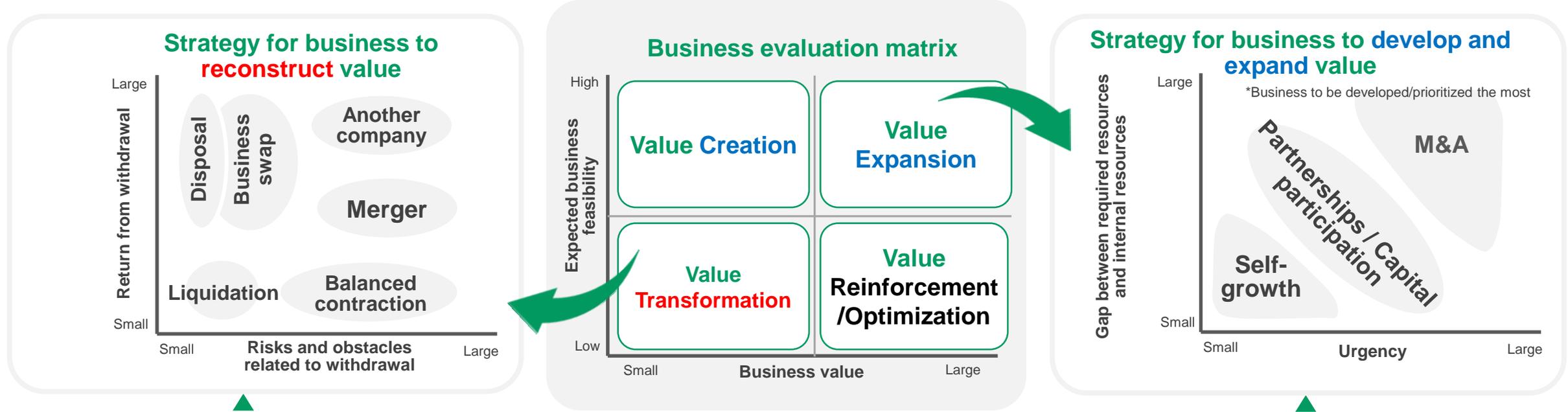
Establishing new areas of activities [Creating areas of activities for 2030]

Establish the Group's areas of activities for 2030 by backcasting attractive markets from 2050 and by forecasting advantageous markets based on our strengths.



Dynamic management of our business portfolio

- We will allocate assets to business areas with high business feasibility by periodically reviewing the evaluation of each business.
- On the other hand, for business areas with low business feasibility, we are seeking the best owners outside the company.



Strategic determinants

<p>Measurement of risk related to withdrawal (scaling-down)</p> <ul style="list-style-type: none"> • Impact on other business • Risk related to utilization of human resources • Capital loss <p>Measurement of return from withdrawal (scaling-down)</p> <ul style="list-style-type: none"> • Generation of cash • Mitigation of risk • Human resources 	<p>Evaluation of options</p> <ul style="list-style-type: none"> • Disposal/Listing • Spin-off • Merger • Business swap • Liquidation • Balanced contraction to minimize loss
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Strategic determinants

<p>Axis for evaluating the gap in resources (example)</p> <ul style="list-style-type: none"> • Size • Technology - Products - Processes • Ability to sell products 	<p>Axis for evaluating urgency (example)</p> <ul style="list-style-type: none"> • Speed of market growth • Speed of technology development • Relative position among competitors
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Dynamic management of our business portfolio

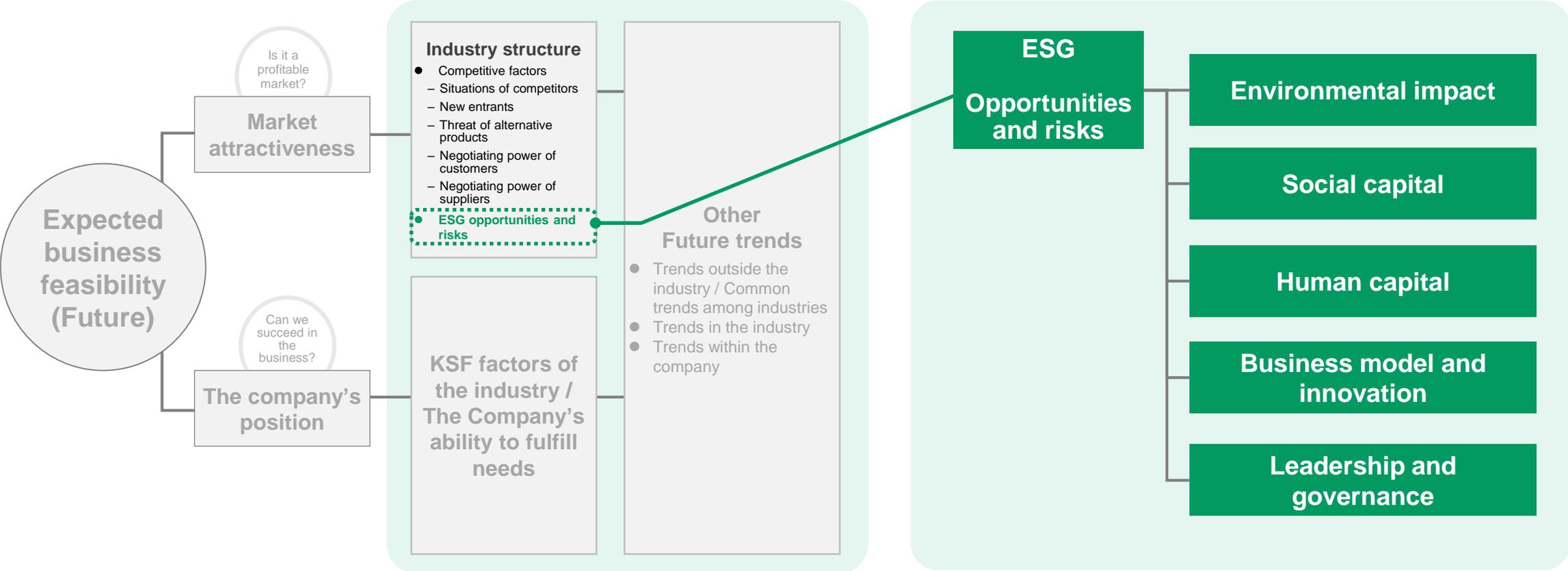
In the business evaluation matrix, we evaluate business by incorporating ESG opportunities and risks as information that drives the expected business feasibility.

Qualitative information

Sort out information on the drivers of expected business feasibility

Examination items for ESG opportunities and risks

Take social value into account, and identify opportunities and risks from an ESG perspective





3. Efforts to address materiality

Process of identifying materiality and sorting out the system

We will identify issues that have a significant impact on the businesses of stakeholders and our group, especially our value chains, and efficiently implement integrated thinking-based management.

- Step 1** Create a list of a range of economic, social and environmental issues based on a long-term perspective.
- Step 2** Identify issues that are related to the business of our group and/or value chains in the long term
- Step 3** Classify issues that were identified in Step 2 into levels based on the extent of expectations and demands of key stakeholders for the business activities of our group and the impact of such activities
- Step 4** Classify issues that were identified in Step 2 into levels in the CSR Committee based on the extent of impact on the financial aspect of our group
- Step 5** Map issues based on two axes of Step 3 and Step 4, and merge issues that are in the Area A below, and identify them as **materiality**
- Step 6** Classify the identified materiality into either business opportunities or ESG risks with a potential financial impact (initiatives related to social responsibility)
- Step 7** Recognize the mapped materiality in the Area B below as Initiatives supporting the progress of materiality = Capital for creating value
- Step 8** Approval by the Board of Directors



The status of initiatives to address materiality

We will increase our social value by defining commitments and KPIs for each theme of materiality, and by conducting a PDCA cycle.

[Materiality and the structure to support the progress of materiality]

Commitments for 2024
Note: For KPIs and the status of initiatives, please see p. 64–69 of the 2022 Integrated Report.

Materiality	Opportunities	CSV	01. Co-creation of markets ✓	Continue to create business and products that contribute to the environment and society ▪ Full-scale operation of the system for products that contribute to the environment (expansion of LCA)	Structure of ESG risk management ◆ Environment and safety management system ◆ Human rights due diligence ◆ Supply chain management ✓ Implement supplier due diligence and reduce the critical risks in supply chains ◆ Mining business management
			02. Material cycling ✓		
			03. Response to CASE		
	Risks	E: Environment	04. Greenhouse gas emissions ✓	Stay on track to achieve the reduction of GHG emissions by 38% by 2030	
			05. Energy management ✓	▪ Explore the utilization of renewable energy and promote its adoption; Utilize currently unused energy	
			06. Water management	▪ Water stress assessment; Optimization of water intake; Minimization of water consumption ▪ Ensure safe effluent treatment	
			07. Management of waste and hazardous materials	Play a role in a resource recycling society by using recycled materials and reducing hazardous materials and waste	
			08. Impact on biodiversity	▪ Identify the impact of our business activities on biodiversity; Prevent environmental damage ▪ Restore the ecosystem the company has consumed	
			09. Health and safety	▪ Create a workplace environment where all employees can work with peace of mind ▪ Eliminate severe accidents	
	S: Social	10. Human rights	Implement mitigation measures for risks identified through human rights due diligence, etc.		
		11. Fair business practices	Establish a global anti-bribery system and a PDCA cycle for fair business practices		
		G: Governance	12. Governance ✓	▪ Enhance corporate governance ▪ Compliance system ▪ ICT governance ▪ Ensure disclosure and transparency of information	
Initiatives supporting the progress of materiality	Human capital		Diversity ✓	▪ Create a corporate group where diverse human resources can deliver their full potential	
		Health management	▪ Support a healthy work environment and physical/mental conditions to enable all employees to work actively even when they grow older		
		Development of human resources ✓	▪ Provide support for autonomous career development and skill development ▪ Provide equal access to global learning opportunities to employees		
Capital for creating value	Intellectual capital	Intellectual property	▪ Build a governance system for intellectual property to create value ▪ Acquire intellectual property and protect technologies to support new initiatives ▪ Develop human resources based on job type and job class		
		Quality assurance	▪ Maintain a compliance system ▪ Provide relevant information to customers and society ▪ Design and develop sustainable products		
	Social capital	Contribution to local communities	▪ Continue to carry out CSR activities; Enhance engagement ▪ Promote volunteer activities and other activities ▪ Contribute to sustainable consumption		

CSV/Co-creation of markets

We promote the well-being of the world with co-creation partners.*

*Partners such as customers, universities, research institutions, startups, and suppliers that share the vision of a society we aim to realize

Development of technologies that contribute to the realization of a carbon neutral society

- Technologies that facilitate the transition to EVs and FCVs
- Technologies that support a hydrogen society

Development of technologies that contribute to the reduction of environmental load

- Technologies that contribute to energy and resource conservation
- Technologies that lead to the reduction of GHG emissions

Technologies that contribute to a circular economy

- Materials created with resource circulation in mind
- Material recycling technologies

Popularize safer and more comfortable EVs

Solid electrolyte
A-SOLiD®

New products



From Liquid to Solid

Popularize more energy conserving electronics

Sintering copper paste for power semiconductors

Developed products



From Solder to Copper

To greener energy

Aiming to develop technologies to manufacture synthetic fuels from carbon dioxide by working with eSep Inc.



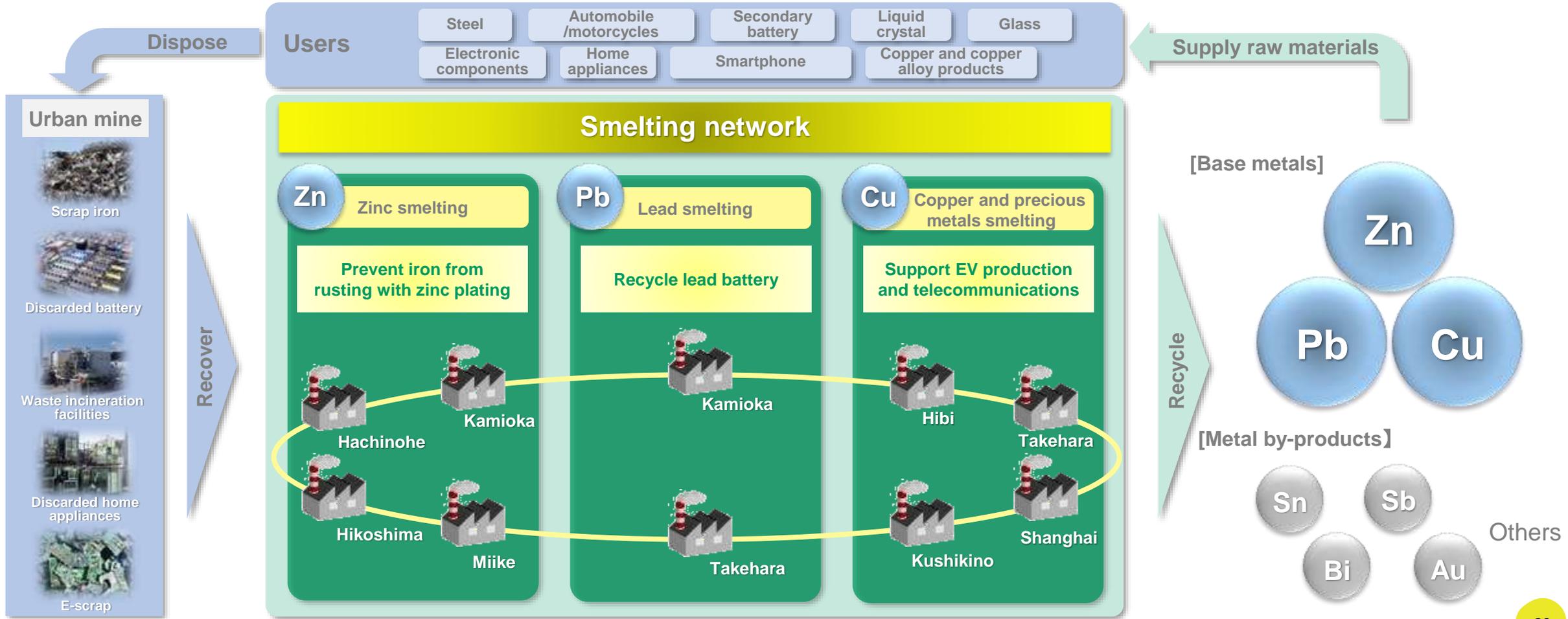
From fossil-resource-origin to renewable-energy-origin

Under development

CSV/Material cycling [Circular economy]

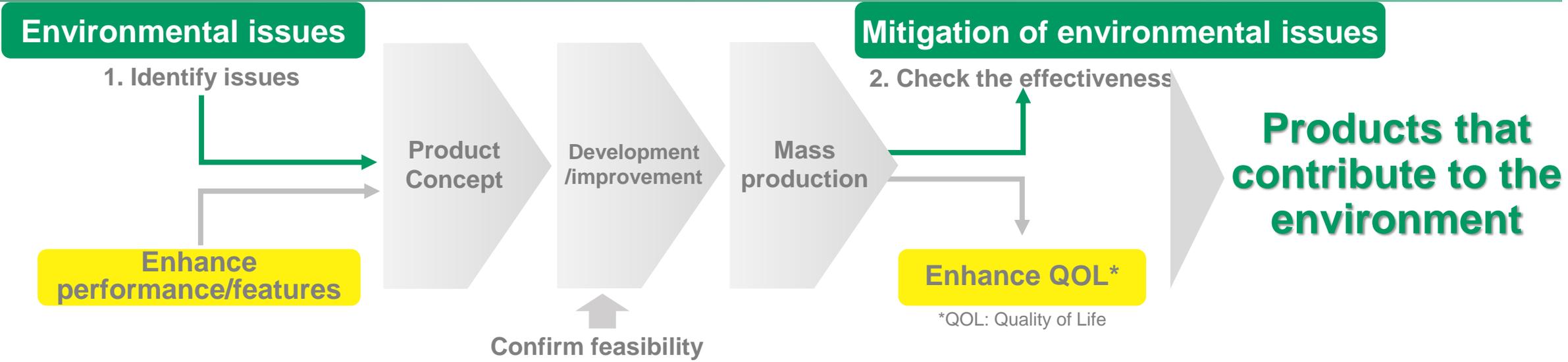
We will meet the recycling needs which are increasing along with the formation of a circular society.

- ◆ We will contribute to resource circulation by utilizing our own diverse smelting assets to collect and recycle metals from recycled materials.
- ◆ Zinc supports longer life of iron materials when used as antirust plating; lead supports resource conservation; and copper supports the production of EV and the advancement of telecommunications.



CSV/Products that contribute to the environment

We will build a system which incorporates actions against environmental issues into our product development and improvement concepts, and promote the reduction of the environmental load of new and existing products.



◆ Use Life Cycle Assessment (LCA) when identifying issues and assessing environmental load
Currently, LCA is being expanded company-wide (To be completed by FY2024)

Example of resource conservation in existing products



Governance [Our corporate governance]

The foundation that supports the creation of our long-term value

- This is a mechanism for making transparent and fair decisions swiftly and decisively, by taking into account the standpoints of stakeholders.
- It means building a management organizational structure and mechanism, and implementing necessary measures to realize the company-wide vision. It is the most important management issue.

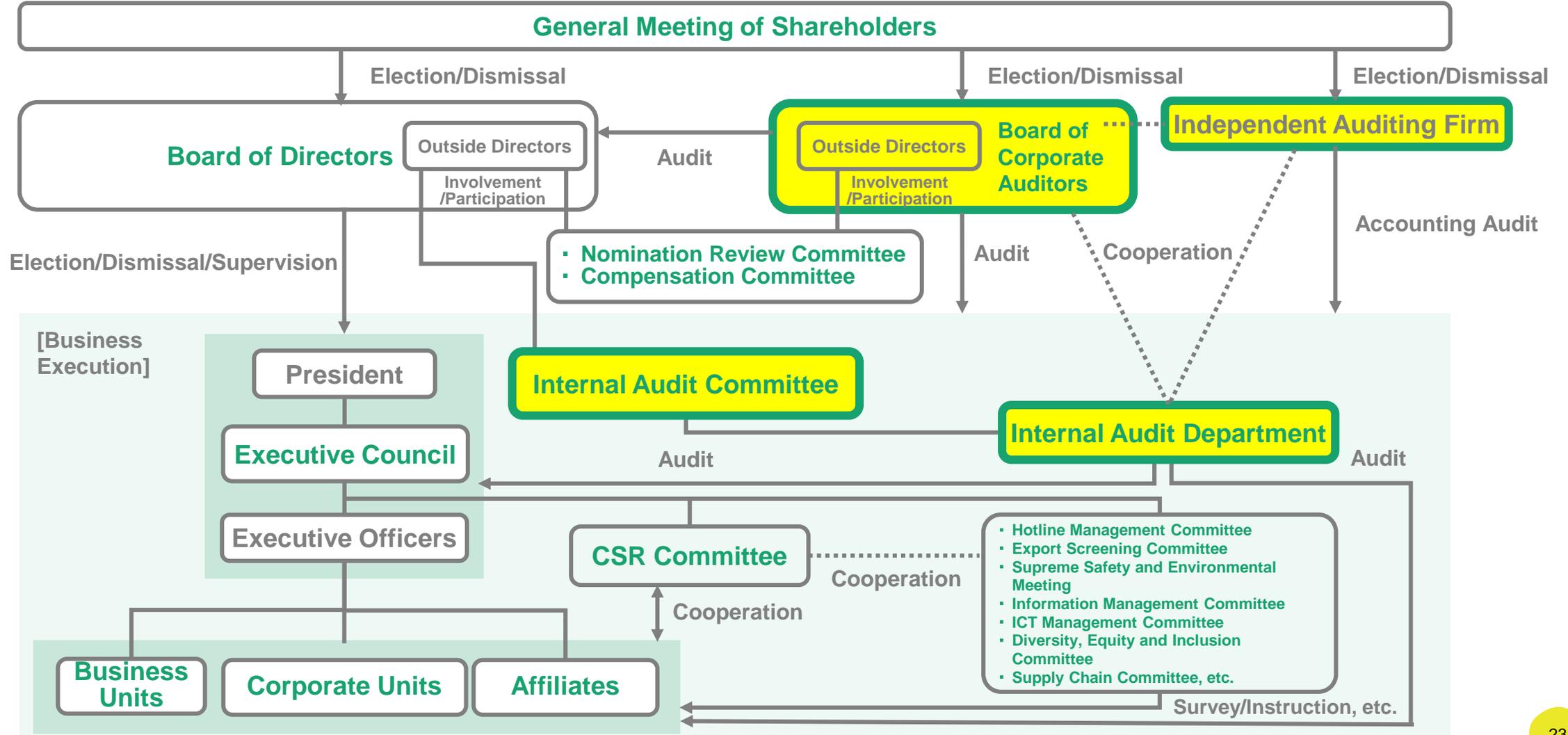
[History of our corporate governance reform]

 : Male  : Female  : Chairperson of the Board of Directors

FY	Steps taken	Composition of directors
-2014	<ul style="list-style-type: none"> ▪ Established the Nomination Review Committee and the Compensation Committee (2005) ▪ Stipulated that an outside director shall serve as the chairperson of the Nomination Review Committee (2008) 	(2014) Internal:  External: 
2015	<ul style="list-style-type: none"> ▪ Began evaluating the effectiveness of the Board of Directors 	Internal:  External: 
2016	<ul style="list-style-type: none"> ▪ Stipulated that an outside director shall serve as the chairperson of the Internal Audit Committee 	Internal:  External: 
2018	<ul style="list-style-type: none"> ▪ Stipulated that an outside director shall serve as the chairperson of the Compensation Committee 	
2019	<ul style="list-style-type: none"> ▪ Changed the term of directors from two years to one year 	
2020	<ul style="list-style-type: none"> ▪ Stipulated that an outside auditor shall be a member of the Nomination Review Committee and the Compensation Committee 	Internal:  External: 
2021	<ul style="list-style-type: none"> ▪ Stipulated that the Board of Directors shall be chaired by a director who is not serving as President and Representative Director ▪ Adopted a restricted stock compensation plan for directors and executive officers ▪ Turned our listed subsidiary, Mesco, Inc., into a wholly-owned subsidiary 	Internal:  External:  Non-president
2022	<ul style="list-style-type: none"> ▪ Stipulated that the Board of Directors shall be chaired by an outside director 	Internal:  External: 

Governance [Corporate governance system]

Along with the supervision of business execution by the Board of Directors, including outside directors, the company audits the decision-making process of the Board and the execution of the duties by directors through a three-pillar collaborative audit system.



Governance [Diversity of officers and their skill composition]

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地球を笑顔にする。



- Select outside directors and auditors from diverse fields to utilize diverse experience and knowledge in our management policy and the supervision of execution
- Nominate an outside director as the chairperson of the Board of Directors to separate management from execution, and to enhance the Board's function to supervise business execution
- Review the skills required of directors and auditors to ensure the diversity of the Board

Name	Title	Experience/Knowledge	Corporate management	Business strategy	Financial accounting	Technology Research & Development DX	Sales/Marketing	Human resources Human resources development	Legal affairs Risk management	Internationality	Sustainability Economic security
Takeshi Nou	President and Representative Director	Has a wealth of experience cultivated through his many years of involvement in the Group's electronic materials business and engineered materials business	◎	○		◎				○	◎
Hisakazu Kibe	Representative Director Senior Managing Director	Has a wide range of experience and knowledge in finance and corporate planning of the Group, including serving as an officer of affiliated companies	◎	○	◎			○	○	◎	◎
Satoshi Tsunoda	Senior Managing Director	Has a wide range of experience and knowledge in the metal business and corporate planning of the Group, including serving as an officer of affiliated companies		◎			◎			○	○
Masato Okabe	Director	Has knowledge of business strategy, sales and marketing through a wealth of experience in sales and planning in the Group's electronics material business and engineered material business		◎			◎			◎	○
Makoto Miyaji	Director	Has a wealth of experience cultivated through his many years of involvement in the Group's engineered materials business		○		◎		○		○	○
Morio Matsunaga	Outside Director	Has specialized knowledge of engineering and experience of organizational management as a university professor and the president of a national university corporation				◎		○		○	○
Kazuhiko Toida	Outside Director	Has a wide range of experience at Nissan Motor Co., Ltd., including product planning, sales promotion, and launch of a sales company. In addition, he has experience at Faltec Co., Ltd., as Representative Director and President.	◎	○			◎			○	○
Keiko Takegawa	Outside Director	Served as the Director General of the Public Relations Office and the Director General of the Gender Equality Bureau at the Cabinet Office, and has a wealth of knowledge and administrative experience through her engagement in the formulation and implementation of policies such as those involving the promotion of women's participation and advancement.						◎	○	◎	
Akira Kutsunai	Corporate Auditor	Has a wealth of experience gained over many years, centered around areas including finance, public relations, and corporate planning of the Group			◎					○	○
Hirotohi Fukumoto	Corporate Auditor	Has a wealth of experience gained over many years, centered around areas including research and development, manufacturing, and corporate planning of the Group, and has management experience in a subsidiary in Malaysia.		○		○				○	◎
Toru Ishida	Outside Corporate Auditor	Has a wealth of administrative experience in planning and implementing trade and industrial policies, as well as experience and expertise in holding important positions that contribute to the enhancement of commerce and industry							◎	○	◎
Hiroshi Inoue	Outside Corporate Auditor	Has a wealth of knowledge and experience in legal circles as a public prosecutor and a lawyer						○	◎		◎

Governance [Assessment of the effectiveness of the Board of Directors]

- ◆ The effectiveness of the Board of Directors is assessed every year to ensure the continuous enhancement of the Board's function.
- ◆ In FY2021, the secretariat of the Board of Directors prepared a questionnaire, and conducted the assessment of directors and corporate auditors through individual interviews, and confirmed that appropriate measures and improvements were implemented.

[Assessment of the effectiveness of the Board of Directors]

Item	Results of assessment	
Overall measures based on the corporate governance code	<ul style="list-style-type: none"> • Nominated one female independent outside director • Separated the chairperson of the Board of Directors from the president 	Measures based on the corporate governance code are advancing, to a certain extent
	<ul style="list-style-type: none"> • Promoted diversity • Set a target for the reduction of CO2 emissions <p>Held multiple meetings for the Board members including the Board of Directors meeting to share information and to have in-depth discussions during the process of consideration</p>	All members of the Board are appropriately functioning.
	<ul style="list-style-type: none"> • Periodical reporting to the Board of Directors on the progress of measures for DX 	
More enhanced discussion on management strategy, etc.	<p>Established the Purpose and Company-wide Vision, which serve as the foundation for decision-making in the implementation of integrated thinking-based management, and formulated a Medium Term Business Plan.</p> <p>During this process:</p> <ul style="list-style-type: none"> • The Board held multiple meetings that were attended by the Board members, including the Board of Directors meeting, to share information and thoroughly consider each matter. • The Board implemented a company-wide organizational restructuring by taking into account the discussion on the company's business portfolio. 	The involvement of all Board members in the discussion on the company's management strategy and other matters in the Board of Directors meetings is improving, compared to the past.

[Assessment of the effectiveness of the Board of Corporate Auditors] Reporting to the Board of Directors

Assessment item	Assessment method	Issues
<ul style="list-style-type: none"> • The effectiveness of the three-pillar collaborative audit system • The effectiveness of measures taken to address serious violations of the law and misconduct such as inappropriate accounting treatment, etc. • The effectiveness of ICT governance and the information system structure 	Conducted a self-assessment questionnaire for each corporate auditor, and discussed/validated the effectiveness with all corporate auditors	<ul style="list-style-type: none"> • Monitoring of the effectiveness of ICT investment • Validation of disclosed information related to ESG and SDGs

ESG risk management system [Supply chain management]

We are aiming to achieve mutual, continuous development and growth by fulfilling our social responsibility based on mutual understanding and relationships of trust with suppliers in our procurement activities.



- ◆ **Thorough communication of the Basic Procurement Policy and the Procurement Guidelines**
(As of March 2022, Target: All suppliers)
- ◆ **Implementation of due diligence (DD)**
(As of March 2022, Target: Important suppliers)^{*5}
Completed the rectification of five companies that had been determined as high risk
- ◆ **The Declaration of Partnership Building** (April 2022)

▶ **13,646 companies**

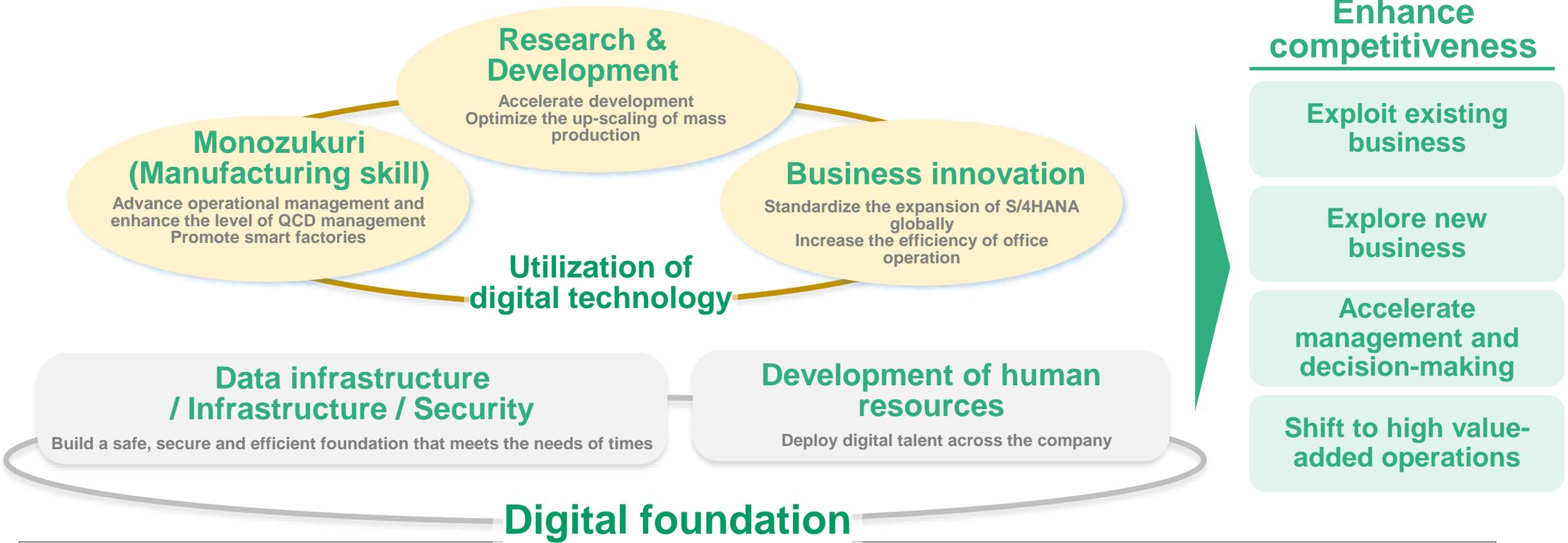
▶ **1,391 companies**

*1. RBA: The Responsible Business Alliance
 *2. RMI: Responsible Minerals Initiative
 *3. LBMA: The London Bullion Market Association
 *4. LME: The London Metal Exchange
 *5. Important suppliers: Suppliers that the company considers important for continuing its corporate activities

New initiatives to support integrated thinking [DX initiatives]



We will drive digital transformation and enhance our competitiveness to accelerate research and development, create smart factories, and increase the efficiency of operations.



Accelerate the management of metrics and decision-making as well as the flow of information while increasing the safety of the system

New initiatives to support integrated thinking [DX initiatives]



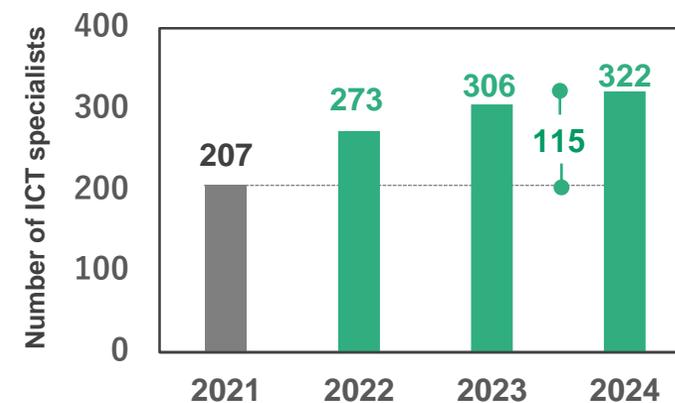
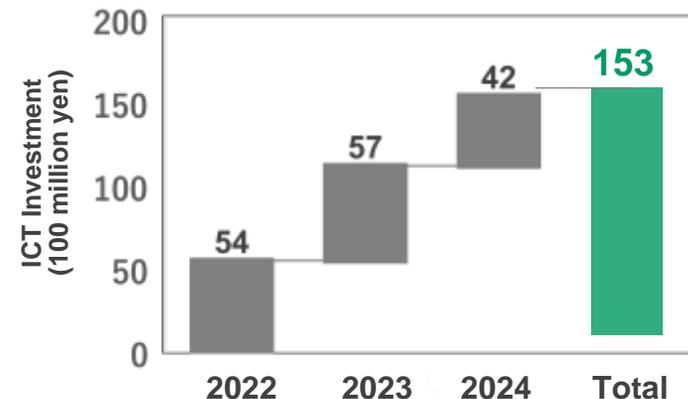
During the period of the 2022–2024 Medium Term Business Plan, we will invest 15.3 billion yen in ICT and add 115 ICT specialists.

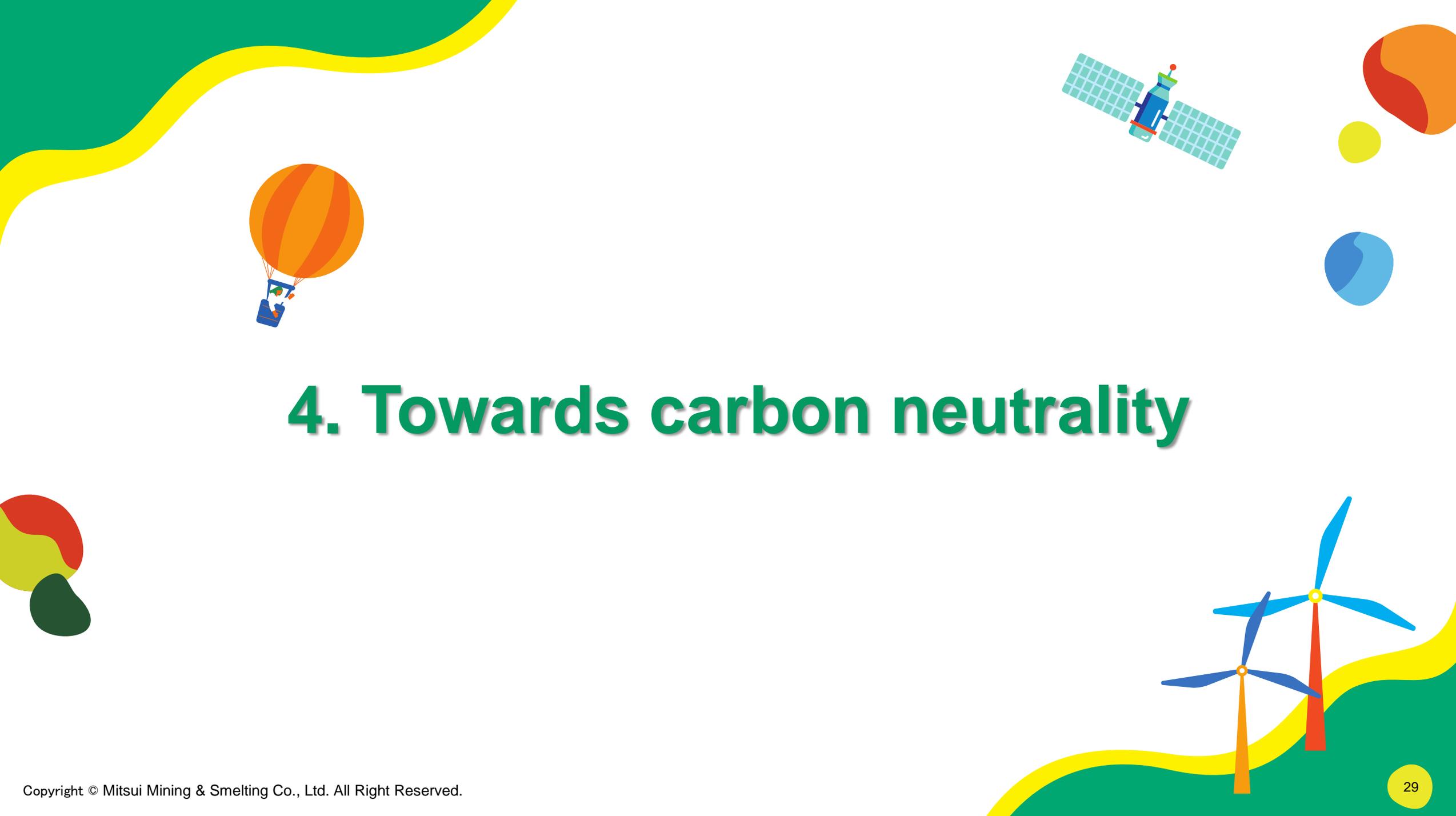
Digital transformation initiatives for 2022–2024

	Target for 2030	2022–2024 Medium Term Business Plan	Expected outcomes
Utilization of digital technology	Research & Development	Fastest development cycle in the industry	<ul style="list-style-type: none"> Complete a model that reduces the R&D cycle time to one-third Build data infrastructure and operational infrastructure
	Monozukuri (Manufacturing skill)	Highest level of monozukuri in the industry	<ul style="list-style-type: none"> Digitalize model smelting plants to achieve stable operations
	Business innovation	Effective and efficient use	<ul style="list-style-type: none"> Visualize themes for business innovation Expand the use of S/4HANA
Digital foundation	Infrastructure, Security, Governance	Safe and secure use of ICT and DX	<ul style="list-style-type: none"> Build a network suitable for using the cloud Enhance global security Improve and expand system controls
	Development of human resources	Deployment of digital talent across the company	<ul style="list-style-type: none"> Provide training using digital contents

Specific initiatives for each business domain

ICT investment and specialists for 2022–2024





4. Towards carbon neutrality

Addressing the environment / climate change

We will address climate change in accordance with the TCFD recommendations

[Information disclosure requested by the TCFD and the status of disclosure]

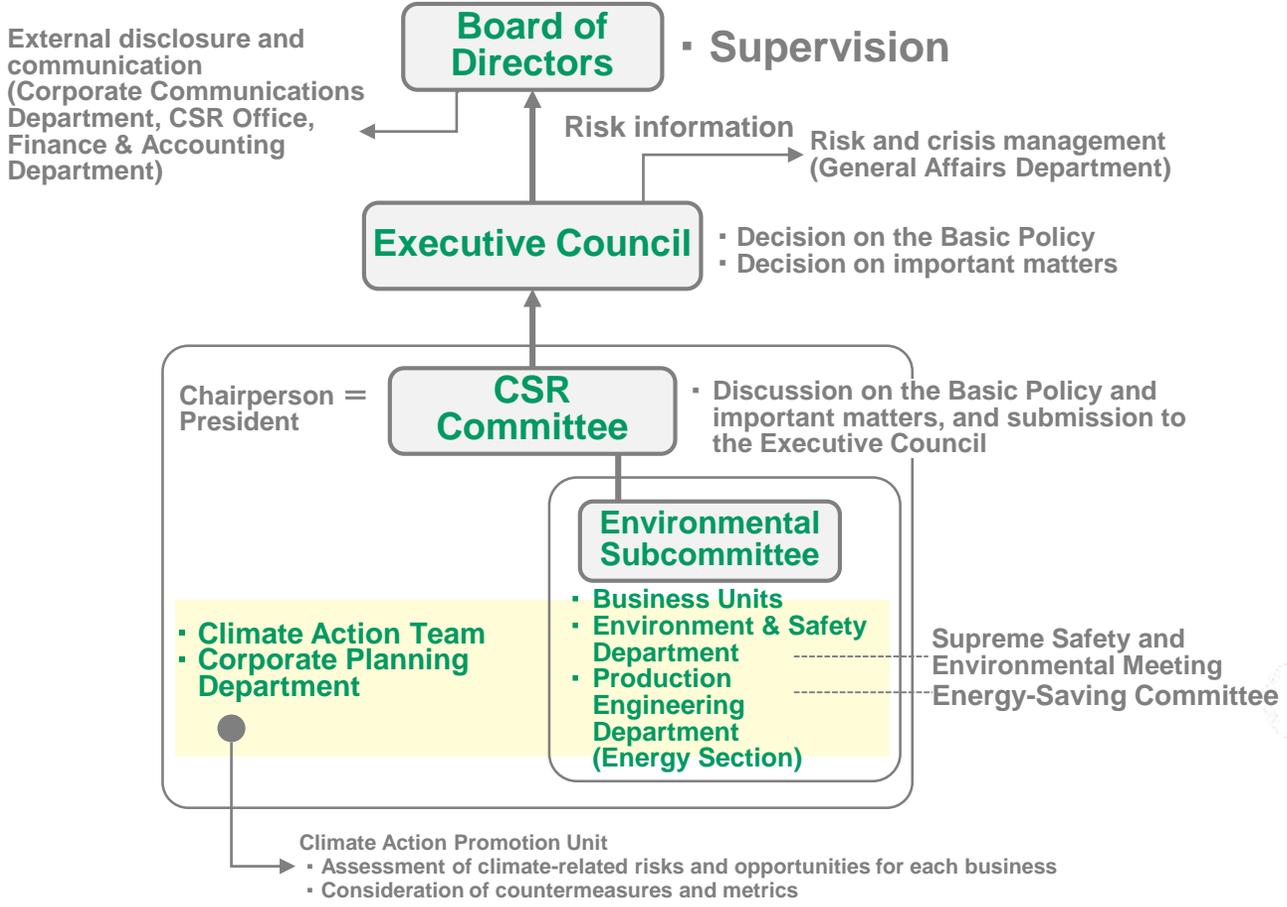
Requested item	Details	Status of disclosure
Governance	Disclose the organization's governance regarding climate-related risks and opportunities	<p>◆ Governance system related to climate change [p. 31] The steps of “discussion → deliberation and decision → monitoring and supervision” and the division of roles are made clear, and decisions are made accordingly.</p>
Strategy	Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material	<p>◆ Defining and conducting scenario analyses [p. 32] We started scenario analyses for business areas that are likely to be affected by climate change.</p> <p>◆ Summary of the results of scenario analyses (metals, copper foils, catalysts) [p. 33–35] We are conducting scenario analyses by focusing on risks and opportunities related to climate change in each business area and on the relationship between countermeasures and business strategy.</p>
Risk management	Disclose how the organization identifies, assesses, and manages climate-related risks.	<p>◆ Risk management process / Integration of scenario analyses and business strategy [p. 31] We formulate and promote business strategy while implementing a risk management cycle.</p>
Metrics and Targets	Disclose the metrics and targets used to assess and manage climate-related risks and opportunities where such information is material	<p>◆ Medium- and Long-Term CO₂ Emissions Reduction Targets [p. 36]</p> <ul style="list-style-type: none"> ▪ Reduce CO₂ emissions by 38% globally by FY2030 ▪ Achieve carbon neutrality (net zero emissions) by FY2050

Addressing the environment / climate change

Governance

The steps of “discussion → deliberation and decision → monitoring and supervision” and the division of roles are made clear, and decisions are made accordingly.

[Governance system related to climate change]



Risk management

We formulate and promote business strategy while implementing a risk management cycle.

[Risk management process / Integration of scenario analyses and business strategy]



- (4) Review of material risks and opportunities; Re-consideration of countermeasures**
 - Keep updated on external trends on climate change
 - Review risks and opportunities
 - Revise the company-wide direction and the path of business strategy, as necessary
 - Improve company-wide BCP
- (3) Reviewing the status of measures**
 - Confirm the outcome of the medium-term business plan, business strategy and improvements to be made
 - Review measures against physical risks
- (2) Implementation of countermeasures**
 - Incorporate countermeasures into the Medium Term Business Plan and the business strategy, and promote the countermeasures
 - Formulate and promote a company-wide BCP for addressing physical risks
- (1) Identification of material risks and opportunities, and consideration of countermeasures**
 - Keep track of external trends on climate change and collect information
 - Conduct business analyses; Identify and evaluate risks and opportunities
 - Consider a company-wide direction and business strategy related to
 - Consider a company-wide direction on addressing physical risks

Addressing the environment / climate change

Strategy/scenario analysis

We started scenario analyses for each business area, starting from business areas that are likely to be affected by climate change

[Definition of scenario analyses]

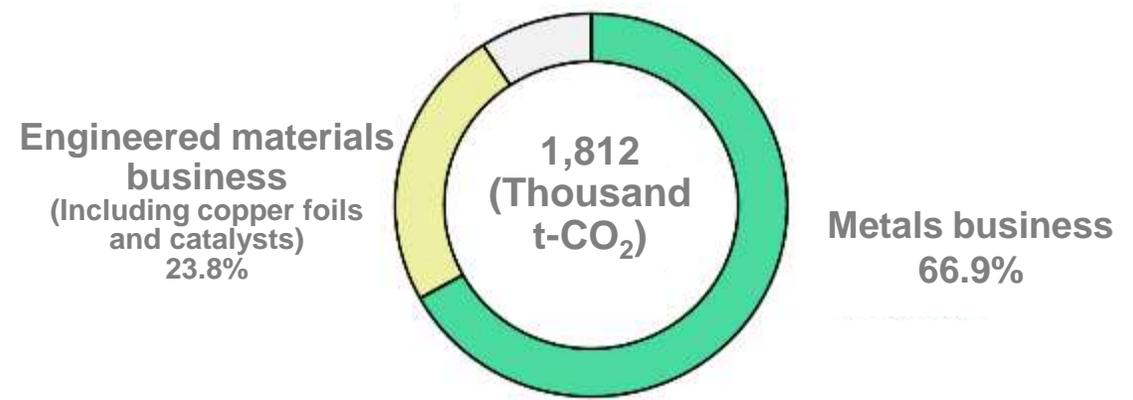
Assumed period: 2030s		
4°C scenario	4°C scenario	3.2–5.4°C higher than pre-Industrial Revolution levels if no additional measures against global warming are taken
	2°C scenario	2.7–4.0°C higher than pre-Industrial Revolution levels if no additional measures against global warming are taken
2°C scenario		0.9–2.3°C higher than pre-Industrial Revolution levels if strict measures are taken Note: A 1.5°C scenario was partially adopted.

[Scenario analyses conducted]

We have conducted scenario analyses in the following three business areas.

- Metals business:** Accounts for approximately 70% of our group-wide CO₂ emissions
- Copper foil business:** Second largest CO₂ emissions following the Metals business
- Catalyst business:** The market for main products of the business will be significantly affected by decarbonization

Breakdown of CO₂ emissions in FY2021



Addressing the environment / climate change

Strategy/scenario analysis

[Summary of scenario analysis] Metals business

While increases in carbon prices—which are directly linked to our energy consumption—will become a significant risk, an increase in demand resulting from electrification and/or the transition to renewable energy will bring opportunities to increase profit.

Note: Only items with major financial impacts are listed.

Impact Estimation items	Risks	Opportunities	Financial impact on MMS Group		Countermeasures
			4°C scenario	2°C scenario	
Increase in carbon prices	<ul style="list-style-type: none"> The introduction of carbon taxes or an increase in the coal tax rate could significantly increase the costs of raw material procurement, product manufacturing, and logistics. 	—	—	LOSS ▼ ▼	<ul style="list-style-type: none"> Promote investment in the reduction of GHG emissions by introducing internal carbon pricing Consider applying heat recovery technology to energy conservation in smelting plants Develop low-coke, carbon-free refining technology
Changes in energy costs	<ul style="list-style-type: none"> Increase in operating costs due to rising prices of energy, such as fossil fuels 	—	LOSS ▼	LOSS ▼	<ul style="list-style-type: none"> Set targets for renewable energy adoption rate Set long-term targets for the reduction of energy consumption
Changes in demand for important products	<ul style="list-style-type: none"> Increased costs for mining raw materials due to tightening of mining regulations will accelerate the development and growth of substitute products. 	<ul style="list-style-type: none"> Increase in demand for metals due to the promotion of electrification, etc. Increase in demand for copper in renewable energy-related facilities 	PROFIT ▲ ▲	PROFIT ▲ ▲	<ul style="list-style-type: none"> Maximize the efficiency of the production of zinc, lead, and copper, for which demand is expected to increase Increase the ratio of recycled materials, such as metal scraps collected from customers
Intensification of abnormal weather	<ul style="list-style-type: none"> Production sites and supply chains may be affected, increasing the risk of a shutdown of operations or an increase in countermeasures costs Tailings dams may be affected, increasing the risk of violation of laws and regulations resulting from hazardous material spills. Increased costs due to rising insurance premiums 	—	LOSS ▼ ▼	LOSS ▼	<ul style="list-style-type: none"> Establish a system for managing backup supply to enable swift recovery from damage Construction work for disaster countermeasures at suspended and closed mines Develop treatment technologies with low environmental loads and low cost for suspended and closed mines
Rising average temperatures	<ul style="list-style-type: none"> Reduced productivity and an increase in industrial accidents due to heat stress and the rising risk of infectious diseases 	—	LOSS ▼	LOSS ▼	<ul style="list-style-type: none"> Implement FA for work in hot places Develop a remote control system for machinery in mines

Addressing the environment / climate change

Strategy/scenario analysis

[Summary of scenario analysis] Copper foil business

While the market for copper foil as a electronic circuit material will steadily grow regardless of the climate change scenario, the use of energy and resources that contribute to the realization of a decarbonized society is being strongly demanded.

Note: Only items with major financial impacts are listed.

Impact Estimation items	Risks	Opportunities	Financial impact on MMS Group		Countermeasures
			4°C scenario	2°C scenario	
Increase in carbon prices	<ul style="list-style-type: none"> Increase in operating costs due to the advancement of carbon pricing systems driven by carbon taxes and emissions trading Increase in operating costs due to rising prices of energy, such as fossil fuels 	—	—	LOSS ▼	<ul style="list-style-type: none"> Introduce internal carbon pricing Reduce energy intensity through improvement of processes Introduce of renewable energy facilities and utilization of green electricity Purchase of non-fossil certificates
Changes in energy costs	<ul style="list-style-type: none"> Increase in the costs of procuring electricity due to changes in the energy mix, such as a higher ratio of renewable energy 	—	—	LOSS ▼	<ul style="list-style-type: none"> Reduce energy (electricity) intensity through improvement of processes
Raw materials	<ul style="list-style-type: none"> Unstable costs and supply of raw materials due to increasing demand for materials related to renewable energy 	—	—	LOSS ▼	<ul style="list-style-type: none"> Maintain production with 100% recycled copper materials Seek appropriate procurement terms by closely monitoring medium-term pricing trends Reduce the amount of materials used by improving productivity and thinning foils
Customer reputation and changing needs	<ul style="list-style-type: none"> Advanced customers prefer to procure raw materials and parts from suppliers that participate in activities to contribute to the realization of a decarbonized society, such as RE100 and SBTi, and avoid materials that are considered to have a large GHG emissions load. 	<ul style="list-style-type: none"> Products that can achieve both the reduction of the GHG emission intensity in the company's process and the processes of customers. 	LOSS ▼ ▼ ▼	LOSS ▼ ▼ ▼	<ul style="list-style-type: none"> Achieve a thinner carrier for Micro Thin™ ultra thin copper foil <ul style="list-style-type: none"> Reduction of energy intensity in the manufacturing process Reduction of energy intensity in the machining processes of customers

Addressing the environment / climate change



Strategy/scenario analysis

[Summary of scenario analysis] Catalyst business

We cannot avoid the shrinkage of the market for exhaust gas purification catalysts used in internal combustion engine vehicles due to the expansion of carbon regulations. Consequently, we need to shift to developing catalysts optimized for HEV and/or new products related to decarbonization.

Note: Only items with major financial impacts are listed.

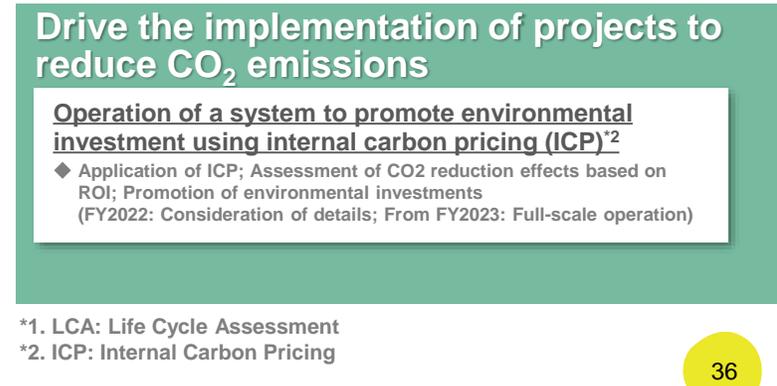
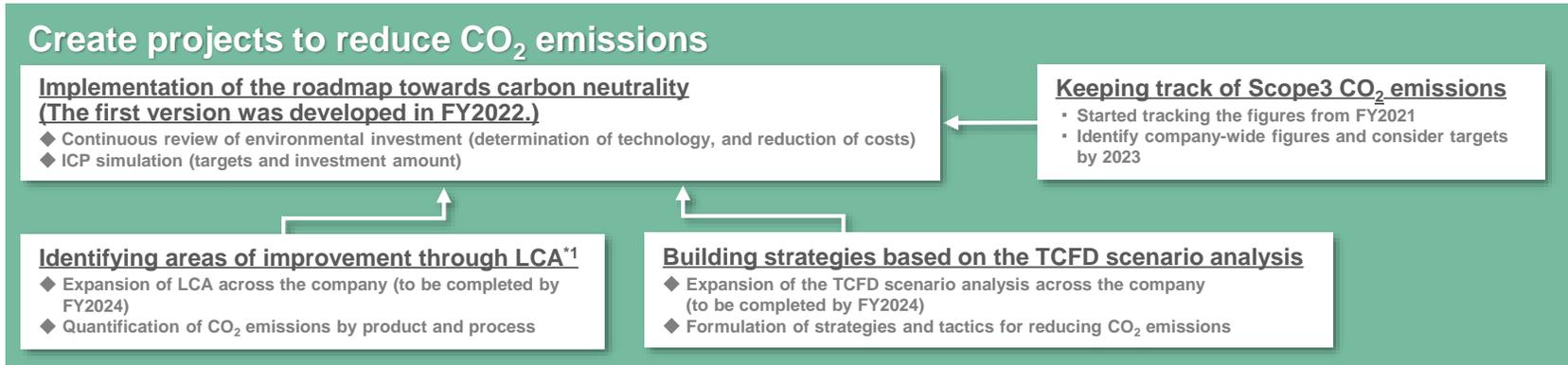
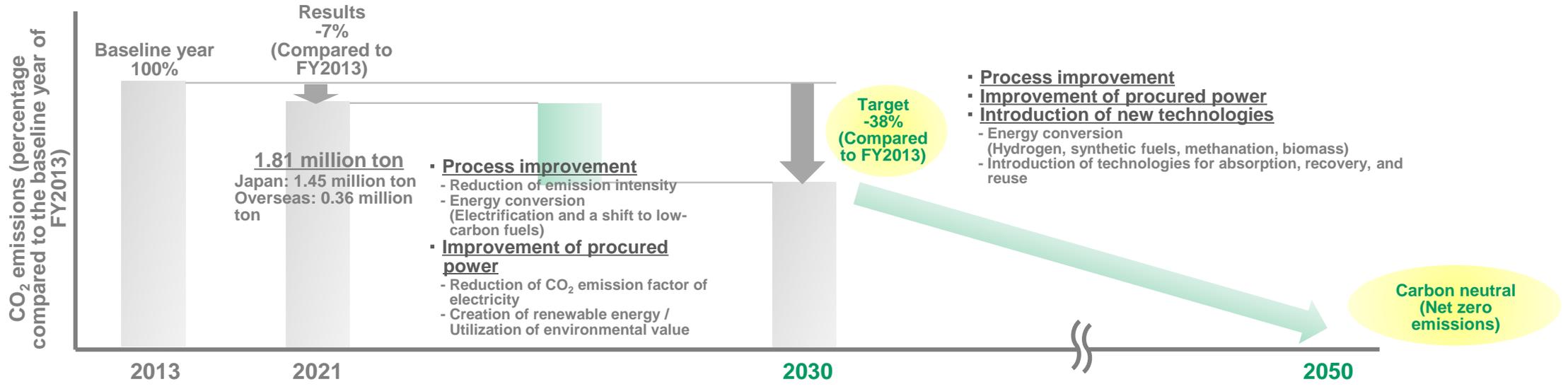
Impact Estimation items	Risks	Opportunities	Financial impact on MMS Group		Countermeasures
			4°C scenario	2°C scenario	
Raw materials	<ul style="list-style-type: none"> Unstable costs and supply of raw materials due to increasing demand for materials related to renewable energy The reduction of raw materials will be required, intensifying the competition 	<ul style="list-style-type: none"> Gain a competitive advantage by early adoption of technologies that reduce the amount of raw materials used and by cost reduction 	—	Unable to quantify	<ul style="list-style-type: none"> Reduce the amount of precious metals used in products Expand the catalyst recycling business
Changes in demand for important products	<ul style="list-style-type: none"> Demand for exhaust gas purification catalysts will decrease as sales of internal combustion engine vehicles (ICEV) will decrease due to the tightening of laws and regulations, such as fuel efficiency regulations. 	<ul style="list-style-type: none"> Demand for products used in HEV and PHEV will increase. The market for new catalyst-related products for decarbonization will grow. 	—	LOSS ▼	<ul style="list-style-type: none"> Shift to developing and supplying catalyst products optimized for HEV and PHEV Work with the Business Creation Sector to develop new catalyst products for a decarbonized society, and create new business
Customer reputation and changing needs	<ul style="list-style-type: none"> Low carbon manufacturing processes will be demanded, increasing operating costs Products that are considered to have large GHG emissions load will be avoided 	—	—	LOSS ▼	<ul style="list-style-type: none"> Introduce of renewable energy facilities and utilization of green electricity Introduce energy-conserving facilities Improve facilities to reduce exhaust heat loss

Addressing the environment / climate change

Metrics and Targets

[Medium- and Long-Term CO₂ Emissions Reduction Targets]

- ◆ We will reduce CO₂ emissions by 38% globally by FY2030 (Scope 1 and 2, compared to FY2013)
- ◆ We will achieve carbon neutrality (net zero emissions) by FY2050



Environment / Energy Management [Creation of Renewable Energy]

We will contribute to the achievement of carbon neutrality by introducing renewable power generation facilities that make maximum use of features of the company's assets, such as technologies, lands and buildings.

Hydraulic power generation

Kamioka Mining and Smelting Co., Ltd.



Power generation capacity has increased after renewal work started in FY2017.

Japan and overseas: 11 locations

271 GWh*

Geothermal power generation

Okuaizu Geothermal Co., Ltd.



The company sells steam → Power is generated by Tohoku Electric Power Co., Ltd.

107 GWh*

Solar power generation

Group sites in Japan and overseas



Japan and overseas: Six locations

6 GWh*

• The number of sites has doubled since FY2017 as we have been increasing sites in Japan and overseas.
• We will continue to build additional sites.

Generate enough carbon-free power to supply electricity to 95 thousand households

*Results of FY2021



Calculated based on 4,047 kwh/year per household
Source: The Ministry of the EnvironmentHP <https://www.env.go.jp/earth/ondanka/kateico2tokei/index.html>



5. Human resources strategy

Human resources strategy

We will utilize talent as an organization while respecting each individual.

Motivate employees and create an environment where everyone can work diligently.

- A work environment where employees feel comfortable
- Value is placed on diversity, and a high level of psychological safety is ensured.
- An environment where all employees can make contributions and they are fairly evaluated
- Employees are working autonomously.
- Employees understand the relation between their work and the company's objectives.
- Employees feel they have support from their organization and managers

Enhancement of the underlying strength of the company

This underlying strength is the foundation of the company's competitiveness.

- ◆ Job satisfaction
- ◆ D&I
- ◆ Human resources system
- ◆ Training system

Reinforce talent allocation

- Enhance talent management
- Allocate talent to achieve business strategies

Promote business strategy from the human resources aspect

- ◆ Human resources business partner function

Job Satisfaction and Diversity & Inclusion

We will enhance the strength of individuals and the organization to increase competitiveness by leveraging diversity.
The first step is to work on promoting women's advancement.

Creation of innovation

Workplace where employees can work with enthusiasm

Enhance and leverage diversity

Promotion of diversity

- ◆ Promote women's advancement as a foothold to leverage diversity
Initiatives: Enable flexible workstyles; Build a support system; Develop a corporate culture

Published as our General Employer Action Plan on the website of the Ministry of Health, Labour and Welfare

KPI (2024)

- Increase the percentage of newly hired female employees to 20% or more
- Increase the percentage of female managers to 5% or more
- Increase the percentage of family-care leave taken for spouses giving birth to 50% or more

Recognize and embrace diversity

Support for career development

- ◆ Recognize diverse careers, and support the growth of each employee as well as the achievement of their career vision

Initiatives: 1-on-1, career interviews, career training, etc.

Job satisfaction reform

- ◆ Create a place* that attracts diverse talent
* An environment where employees can concentrate on, strive for, and be passionate about their work
- ◆ Create and spread information on success cases that are suitable for Mitsui Kinzoku by identifying and implementing appropriate initiatives based on employee surveys

Performance-based talent management

Job Satisfaction and Diversity & Inclusion

Desirable behaviors for 2030 and a scheme to achieve those behaviors

[Job satisfaction]

- (1) We will create a work environment where we can work with peace of mind by recognizing and respecting each other
- (2) We will create a work environment where we can work autonomously and feel our own growth through success and failure in work

[Promotion of women's advancement]

- (1) We will respect each other (the individuality of each person) regardless of status and attributes
- (2) We will become an organization where employees with diverse attributes can thrive through initiatives of women's advancement
- (3) We will become persons and an organization that can change conventional ways of working and systems without hesitation and work on new initiatives

[Scheme]

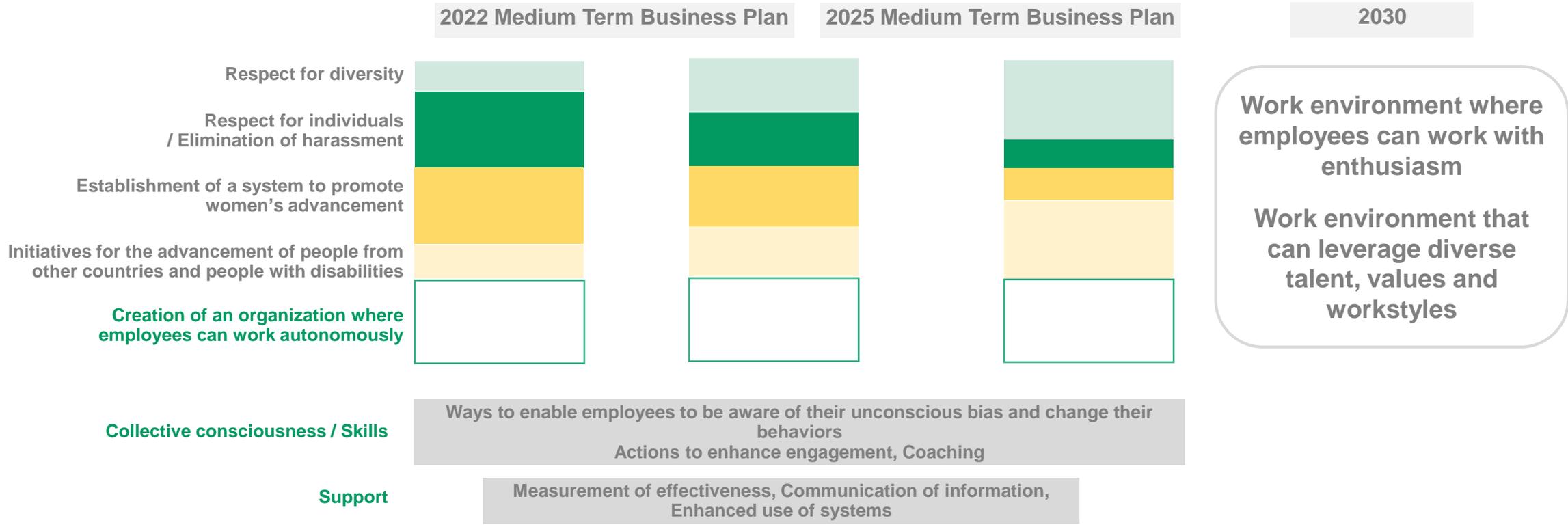
Establish KPIs and incorporate them into the performance metrics of officer-level employees

Diversity, Equity and Inclusion
Committee

Job Satisfaction and Diversity & Inclusion



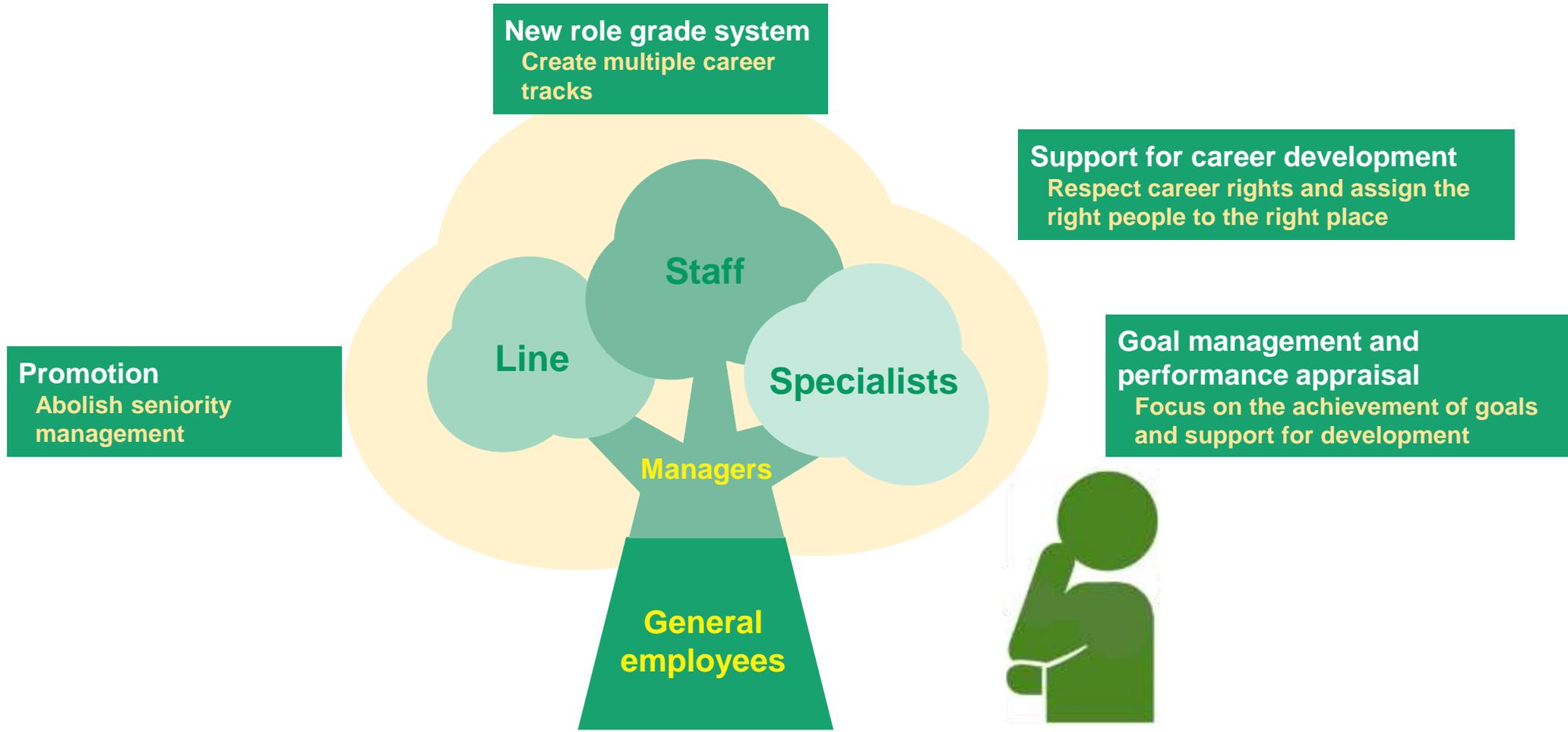
We will work on improving the mentality and skills of the organization to achieve desirable behaviors



The allocation of resources to individual matters will change based on the progress of initiatives
The creation of an underlying organization is consistently considered as an important item.

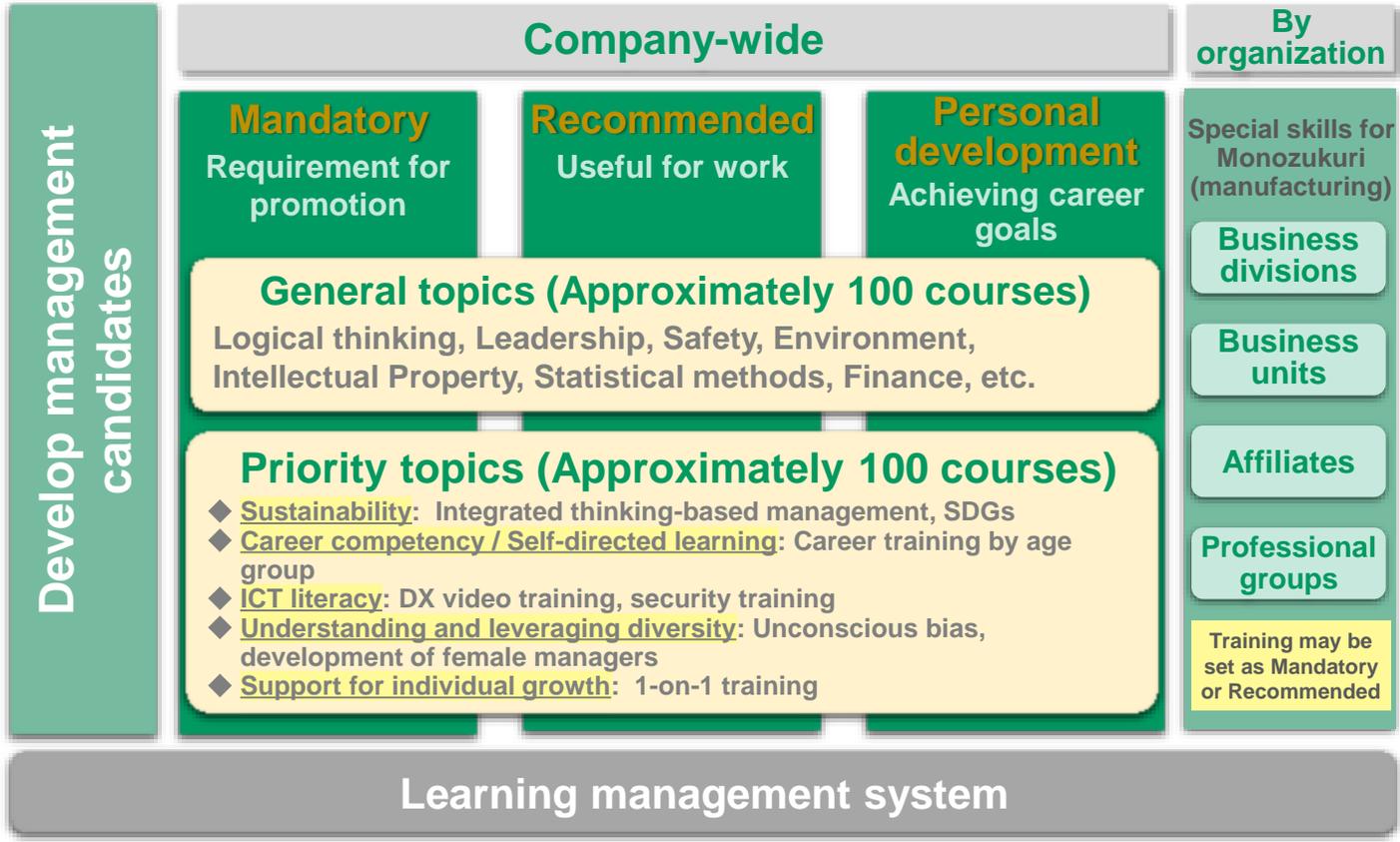
Human resources system

We will achieve performance-based allocation and treatment while respecting employees' career rights.



Training system

We will provide training programs with rich and timely content which employees can self-select.



A cafeteria style system where employees can freely choose courses of their interest in addition to mandatory courses required for promotion.

ICT training under the initiative of deploying digital talent across the company

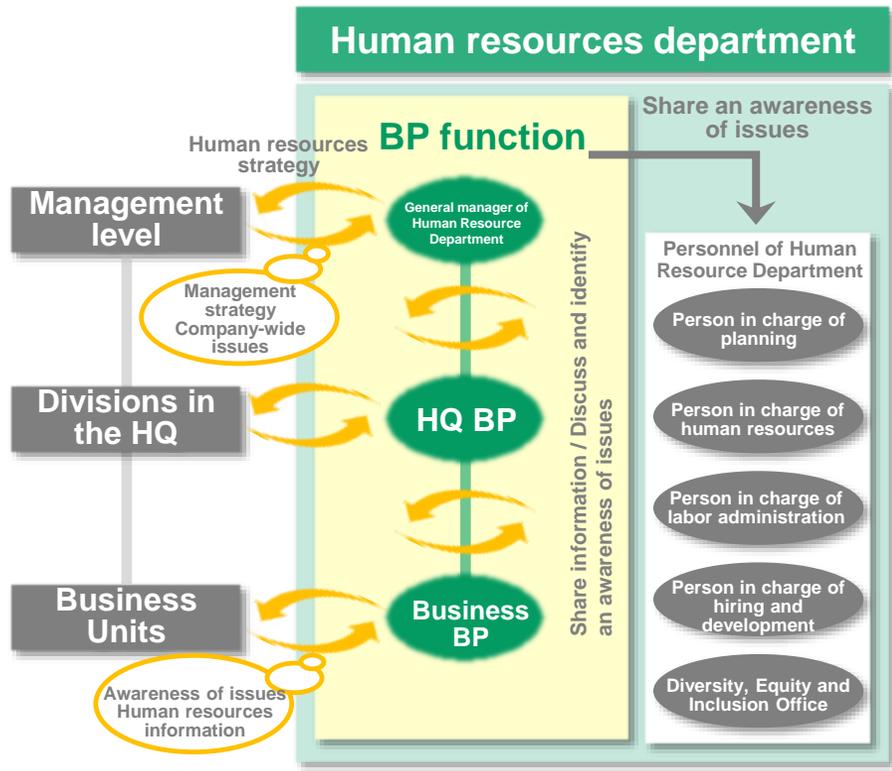
Training for organization-specific skills are separately scheduled

Management of individuals' learning status by linking it to human resources information through a learning management system

Human resources business partner function

We will strategically allocate talent across the company through the human resources business partner function.

Business partner (BP) system



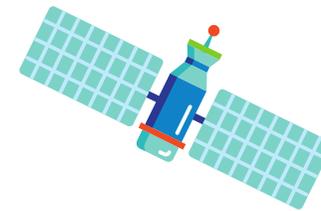
Enhance the function for formulating human resources strategy (Including allocation of human resources), and solve issues faster

Plan and execute hiring, development, allocation, and evaluation

Eliminate the dependence on specific employees by comprehensively managing human resources information
Central management of human resources information (Promotion of DX)

Gather information on human resources-related risks

Ensure periodic dialogues with other departments and reinforce cooperation



mitsui KINZOKU

