

Social Challenges Surrounding Japan's Infrastructure

Changes in the demographic structure due to the declining birthrate and aging population have given rise to a lack of financial resources, labor shortages and accompanying social issues. This has in turn led to the aggravation of social issues such as the decline and deterioration of various infrastructural functions that support local livelihoods. It is also urgent to respond to the increase in extreme weather events due to climate change and ensure the stability of energy supplies in our daily lives. Pursuing decarbonization efforts and expanding renewable energy use are essential to resolving these issues. We at the INFRONEER Group are seeking to solve social issues surrounding such infrastructure through our business activities.

Current Status of Japan's Infrastructure

Insufficient financial resources

Japan's infrastructure stock in FY2020

Approx. **¥800** trillion

Construction investment ratio in gross domestic expenditures in FY1980–2023

**-7.6%** FY2023: 12.3% FY1980: 19.9%

Maintenance and repair work ratio in construction investments in FY2001–2021

**+9.6%** FY2001: 21.0% FY2022: 30.6%

Maintenance and renewal expenses incurred through breakdown maintenance in FY2048

**Approx. ¥12.3** trillion FY2018: Approx. ¥5.2 trillion

[Source] "Social Capital Stock Estimation Data" by Cabinet Office; "Digital Construction Hand Book" by Japan Federation of Construction Contractors; "Estimated Future Maintenance and Repair Costs of Social Capital under the Jurisdiction of the Ministry of Land, Infrastructure, Transport and Tourism" by Ministry of Land, Infrastructure, Transport and Tourism

Aging infrastructure

Percentage of road bridges that are 50 years old or older by 2040

Approx. **75%**

Percentage of port quay walls that are 50 years old or older by 2040

Approx. **66%**

Percentage of tunnels that are 50 years old or older by 2040

Approx. **53%**

Percentage of sewer pipes that are 50 years old or older by 2040

Approx. **35%**

[Source] "White Paper on Land, Infrastructure, Transport and Tourism in Japan, 2022" by Ministry of Land, Infrastructure, Transport and Tourism

Declining birthrate and aging population and regional challenges

Total population decline from peak period in 2050

Approx. **23.39** million people

Number of cities that is feared to disappear by FY2040

**896** municipalities

[Source] "Related data of the Third National Land Formation Plan (nationwide plan)" by Ministry of Land, Infrastructure, Transport and Tourism; "Future National Land Transport Strategies Geared to 'The Age of Disappearing Regions,' a theme of the 'Study Session for Policy Issues'" held by Policy Research Institute for Land, Infrastructure, Transport and Tourism

Energy

Ratio of renewable energy to electricity generated in FY2021

**20.3%**

Energy self-sufficiency among the 38 countries of the OECD member countries in FY2021

**2nd Worst** (37th out of 38 countries) Self-sufficiency rate: 13.3%

[Source] Japan's Energy 2023 Edition "10 Questions for Understanding the Current Energy Situation" by Agency for Natural Resources and Energy of Ministry of Economy, Trade and Industry

Abnormal weather

Average temperature rise between 1850–1900 and 2011–2020

**+1.1°C**

Frequency of heavy rainfall per year in 2014–2023 compared to 1976–1985

Number of instances per year of 150 mm or more in precipitation in a 3-hour span **Approx. 1.8** times

[Source] "Sixth Assessment Report (AR6) Summary for Policymakers" by Japan Meteorological Agency; "Emissions Gap Report 2022" by United Nations Environment Programme; "Changes to Date in Extreme Meteorological Phenomena Such as Heavy Rainfall and Intense Heatwaves" by Japan Meteorological Agency

Safe towns and easy living

Municipalities that require measures for people who have trouble going shopping in 2023

**971** municipalities

Vacant home rate in 2023

**13.8%** 9 million vacant homes

[Source] "2023 Results of the National Municipal Questionnaire on 'Food Access Problems'" by Ministry of Agriculture, Forestry and Fisheries; "2023 Housing and Land Survey" by Statistics Bureau of Japan

Shortage of workers

Reduced number of engineers from the peak period in 2023

**1.57** million people

Aging rate of construction workers (aged 55 and over) in 2023

**36.6%**

[Source] "Digital Construction Hand Book" by Japan Federation of Construction Contractors

Diversity

Ratio of female workers in construction compared to all industries in 2023

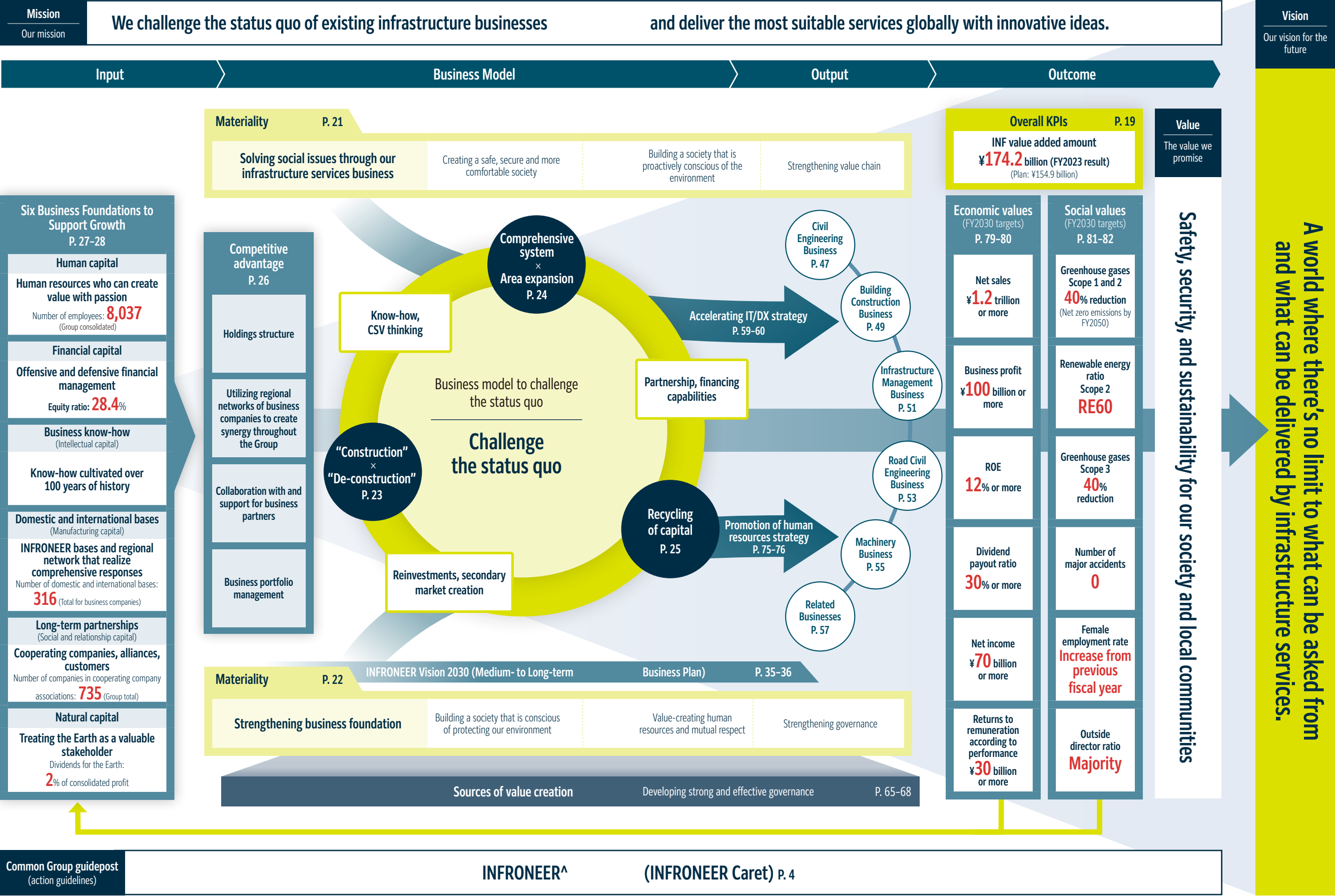
**Approx. 1/3**

Ratio of females in managerial position in the construction industry in 2023

**6.2%**

[Source] "Digital Construction Hand Book" by Japan Federation of Construction Contractors; Survey of corporate attitudes towards promotion of women (2023) by Teikoku Databank

Value Creation Process



Efforts to Achieve Overall KPIs

The INFRONEER Group is working to maximize added value, which it defines in the INFRONEER Vision 2030 (Medium- to Long-term Business Plan). In comparison with Discounted Cash Flow (DCF) and other valuation methods used to determine corporate value in the market, INFRONEER's method views corporate value as comprising not only the market capitalization value but also the value distributed to our business base and all stakeholders. To become an integrated infrastructure service company, we believe it is essential to build a framework that encourages all our stakeholders, including society at large, the Company, and our employees and shareholders, to move toward a common goal. Such a framework must also enable various corporate activities related to social contribution, financial performance, employee remuneration, shareholder return, and others to link together and make progress together, rather than leaving each to advance independently. In line with this theory, we quantify and define certain portions of corporate value as "INF value added amount" and "INF value added productivity," which are positioned as overall KPIs and included in the list of management indicators. In FY2023, the actual amount was ¥174.2 billion compared with the planned amount of ¥154.9 billion.

In addition, we are striving to increase corporate value from a medium- to long-term perspective by introducing the overall KPI "INF value added amount" as an evaluation indicator for executive compensation.

Overall KPIs

Value added considered by INFRONEER: INF value added amount

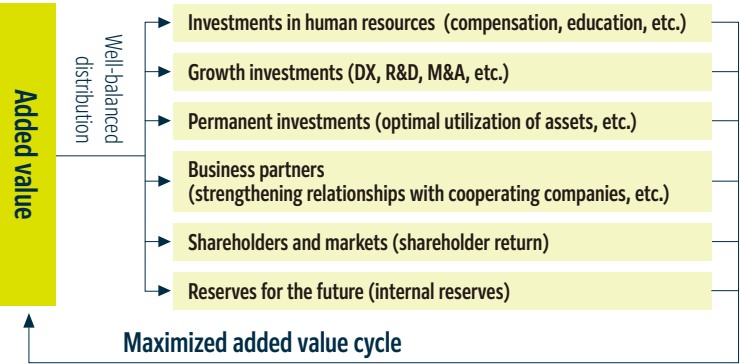
= Σ ( Total labor expenses + R&D expenses + Operating profit + Depreciation expenses )

Initiatives to improve expectations for future value creation    Initiatives to improve value accumulation for the future

"INF value added productivity" = INF value added amount / Total number of employees

Initiatives to increase the speed and acceleration of value creation

Distribution of Added Value for Sustained Growth

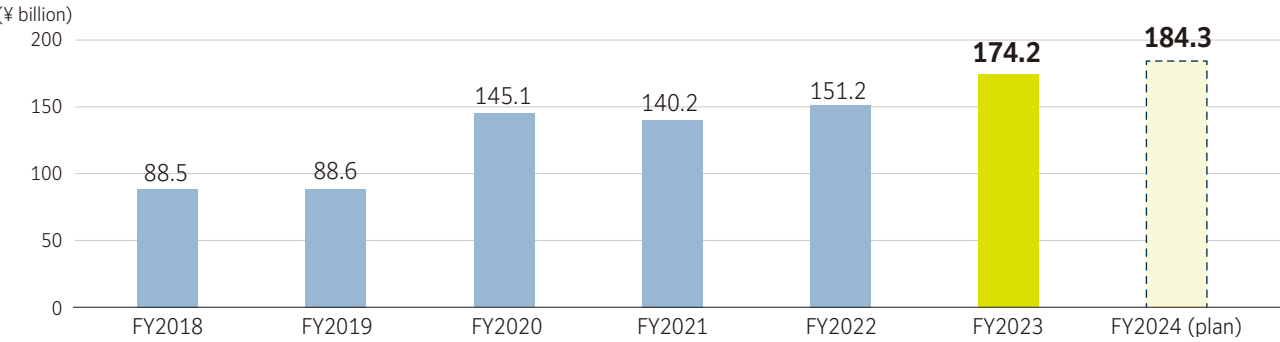


Our policy is to distribute added value in a balanced manner among employee returns, growth investment, shareholder return, and preparation for the future (internal reserves, etc.).

In order to maximize the amount available for distribution for these categories, including for growth investment and shareholder return, it is essential to first maximize added value, the source of the distributed funds.

We work on the maximization of added value and portfolio optimization and enhancement, with an eye to improving ROIC, reducing capital costs, and expanding the market capitalization value.

Overall KPIs—INF Value Added Amount



Materiality and KPIs

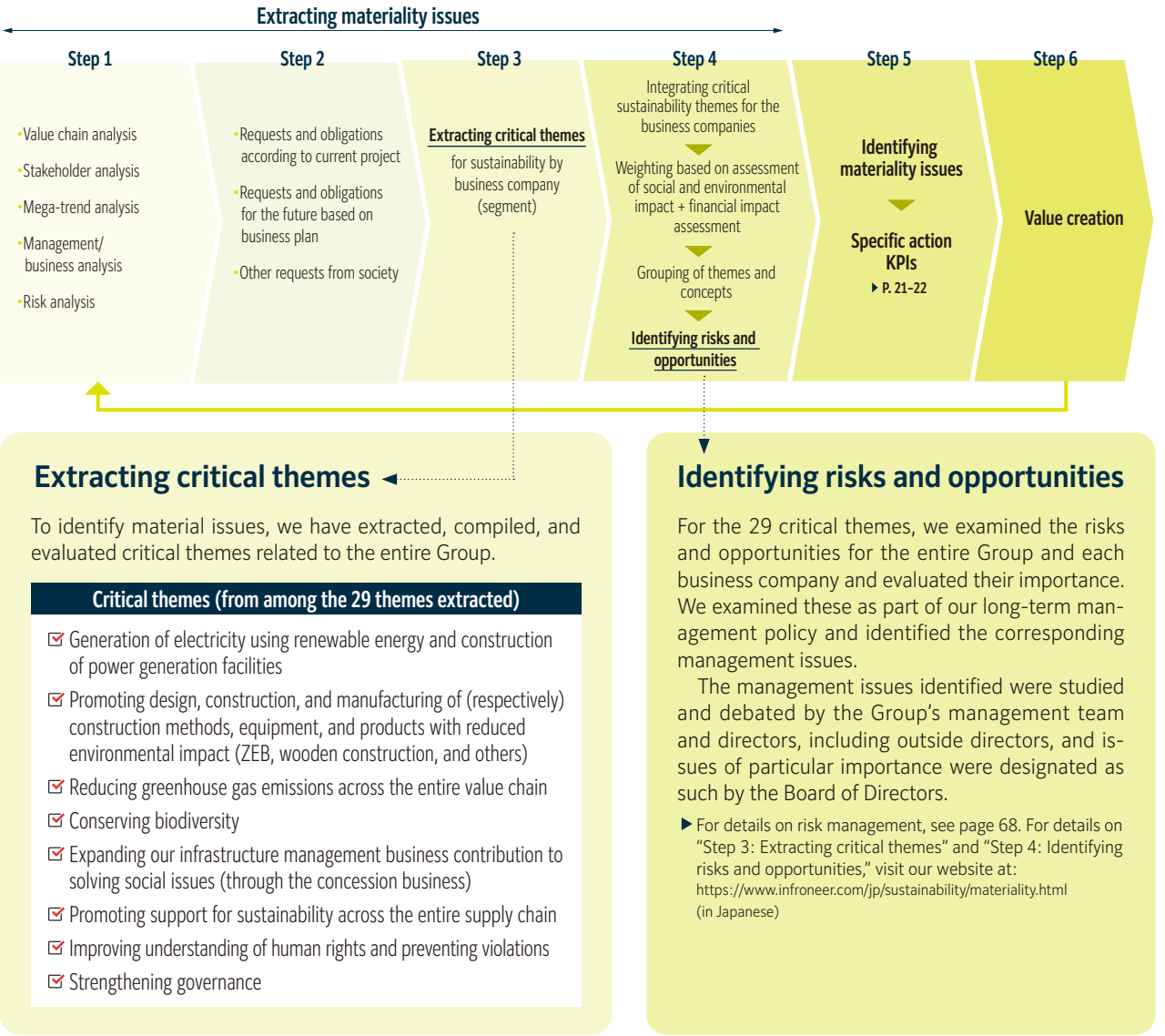
The Group has identified the following six materiality issues to quickly promote and implement initiatives to solve social issues as well as to improve corporate value and contribute to society as a whole permanently by pursuing and offering added value on an ongoing basis.

- Creating a safe, secure, and more comfortable society
- Building a society that is proactively conscious of the environment
- Strengthening value chain
- Building a society that is conscious of protecting our environment
- Value-creating human capital and mutual respect
- Strengthening governance

Identifying Issues for Our Materiality Assessment

To add to discussions undertaken by management and by the Board of Directors after transitioning to a holding company structure comprising business companies, committee members, who work in a variety of fields at the business companies, discussed solutions to social issues and identified specific material issues that should be addressed over a period of roughly six months.

To give our stakeholders a broader understanding of the challenges surrounding infrastructure and the Group's activities, the material issues have been summarized in the form of simple and easy-to-understand expressions. We have also been careful to clarify the links between our business plan, each business segment, and the priority issues. In view of changes in the environment and the views and expectations of our stakeholders, we will discuss and review the issues that are material to our business through discussion at the Sustainability Committee. With JWD joining the Group in January 2024, we are currently revising some of the materiality and KPI. The tables on the following pages are based on the materiality and KPIs as of April 2023.





Materiality & KPIs

Three Strategic Pillars	Materiality	Sub-issues	2030 Medium- to Long-term Goals (Achievement Vision)	KPIs (Targets for FY2030) * Set in 2022	KPI Values	FY2023 Results
Establishing a new revenue base P. 36	Creating a safe, secure, and more comfortable society	<ul style="list-style-type: none"><li>Expanding our infrastructure management business contributing to solving social issues (through the concession business)</li><li>Ensuring the safety and quality of construction (buildings, bridges, tunnels, roads, dams, and others)</li><li>Promoting construction methods and the development, sales, and construction of products that contribute to improving functionality and comfort (buildings, bridges, tunnels, roads, dams, and others)</li><li>Promoting disaster prevention and mitigation</li></ul>	<ul style="list-style-type: none"><li>Enhance portfolio and increase profitability</li><li>Earn high ratings from customers (quality, safety, functionality, comfort, and value-added proposals)</li></ul>	Operating profit ratio between "construction" and "de-construction"	50:50	102:-2 * Operating profit from "de-construction" was lower in FY2023 due to the strategic postponement of infrastructure sales.
				Civil engineering Construction performance rating	80 points or higher out of 100 points	81.2 points
Solving social issues through our infrastructure services business	Building a society that is proactively conscious of the environment	<ul style="list-style-type: none"><li>Generating electricity using renewable energy sources and construction and operation of power generation facilities</li><li>Promoting design, construction, and manufacturing of (respectively) construction methods, products, and equipment that reduce environmental impacts (ZEB, wooden construction, and others)</li></ul>	<ul style="list-style-type: none"><li>Grow businesses involved in renewable energy</li><li>Strengthen efforts for design and construction facilities that contribute to realizing carbon neutrality</li></ul>	Cumulative total power capacity developed	1 million MWh/year (1,000 GWh/year)	546,000 MWh/year (546 GWh/year)
				Design and construction ratio Building construction	70% (3-year average)	63.29% (3-year average)
Productivity reforms P. 35	Strengthening value chain	<ul style="list-style-type: none"><li>Improving public benefit for local communities/preferential in-region procurement</li><li>Strengthening collaboration with cooperating companies/strengthening of supply capacities and improving productivity (hiring and training of workers)</li><li>Promoting design, construction/development, and manufacturing of (respectively) construction methods, technologies, and products that save labor and contribute to efficiency on the construction site</li></ul>	<ul style="list-style-type: none"><li>Expand local recruitment rate of locally based employees and intra-regional orders</li><li>Improve the supply capacity of cooperating companies and train workers</li><li>Enhance labor productivity, efficiency, and optimization on the construction site</li><li>Appropriate allocation of management resources by maximizing operational efficiency and minimizing SG&amp;A expenses through economies of scale</li><li>Accelerate development of certified technologies and products that save labor and contribute to an efficient construction site</li></ul>	Rate of local employment in SPC employees hired for concession projects operated by MK	64.6%	56.4%
				Construction career advancement system site registration rate for FY2023	100%	Business registration rate: 75% Registration rate of technicians: 75% Registration rate at the registration site: 100%
				Net sales of completed construction contracts per person	¥137 million/person Civil engineering ¥153 million/person Building construction	¥107 million/person Civil engineering ¥125 million/person Building construction
				ROIC	In preparation	4.0%
				Early formulation of certified technical standards	In preparation	—

Three Strategic Pillars	Materiality	Sub-issues	2030 Medium- to Long-term Goals (Achievement Vision)	KPIs (Targets for FY2030) * Set in 2022	KPI Values	FY2023 Results
Strengthening and improving our corporate culture P. 36	Building a society that is conscious of protecting our environment P. 69	<ul style="list-style-type: none"><li>Reducing greenhouse gas emissions across the entire value chain</li><li>Reducing use of raw materials derived from fossil resources</li><li>Improving the utilization rate of recycled materials to achieve zero waste</li><li>Conserving biodiversity</li></ul>	<ul style="list-style-type: none"><li>Reduce greenhouse gas emissions across the entire value chain</li><li>Introduce non-fossil fuel certificates to the entire company</li><li>Reduce greenhouse gas emissions from plants</li><li>Reduce waste in new construction projects</li><li>Reduce waste at plants significantly</li><li>Improve the utilization rate of recycled materials</li><li>Establish a management system for biodiversity conservation</li><li>Develop preservation technology for biodiversity</li><li>Continue forestry activities and development</li></ul>	Reduce greenhouse gases (Compared to FY2018) Scopes 1 and 2	40% reduction by FY2030 Substantially zero emissions by FY2050	29% reduction
				Scope 2 Utilization rate of renewable energy (electrical power)	RE60 in FY2030 RE100 in FY2050	62%
	Value-creating human capital and mutual respect P. 73	<ul style="list-style-type: none"><li>Education for the Group's human resources strategy (increasing and improving training)</li><li>Improving the working environment and conditions of workers/promoting safety and health</li><li>Promoting diversity in the workplace and expanding career opportunities/improving understanding of human rights and preventing violations</li><li>Prevention of illegal work/forced labor (support for foreign laborers)</li></ul>	<ul style="list-style-type: none"><li>Give each employee the full training required</li><li>Improve rate of leave utilization for family reasons and the like</li><li>Ensure appropriate working hours</li><li>Maintain physical and mental health of workers</li><li>Create an attractive workplace</li><li>Improve the employment rate of persons with disabilities, female employees, and skilled female employees</li><li>Ensure that all employees respect human rights and can make appropriate decisions and take appropriate actions</li><li>Continue to ensure legitimate working conditions for all foreign workers employed on construction sites</li></ul>	Waste discharge	Improve compared with previous fiscal year	Total amount: MK: 510,000 t (160,000 t decrease YoY) MD: 310,000 t (20,000 t decrease YoY) MS: Under compilation
				Usage rate of recycled materials	Improve compared with previous fiscal year	Asphalt: 78% (2% increase YoY) Concrete: 32% (10% increase YoY) Steel: 58% (10% increase YoY)
	Strengthening governance P. 65	<ul style="list-style-type: none"><li>Building an effective governance system</li><li>Observance of compliance and prevention of unfair competition and corruption</li><li>Information security</li><li>Customer privacy</li><li>Strengthening of risk management</li></ul>	<ul style="list-style-type: none"><li>Form a Board of Directors with a majority of outside directors</li><li>Operate the Nominating Committee, Compensation Committee, and Audit Committee</li><li>Promote initiatives under the leadership of the Sustainability Committee</li><li>Build a governance system that can be trusted by stakeholders</li><li>Reduce the number of serious legal violations to zero</li><li>Eliminate serious information security breaches</li><li>Eliminate customer data breaches</li><li>Operate an effective risk management system</li></ul>	Amount of dividends for the Earth to contribute to maintaining biodiversity and ecosystem service	Increase from previous fiscal year	¥8 million (¥3 million increase YoY)
				Improve employee engagement by building a corporate culture and system in which diverse personnel play an active role		
				Strengthen our advantages and create more room for us to grow (weaknesses) (Feedback and implementation of measures)		
				Improve the employment rate of female employees	Increase from previous fiscal year	16.0% (1.3% decrease YoY)
				Zero major accidents Reduce frequency rate	Keep frequency rate below 0.6 up to FY2030 (MK)	Frequency rate: 0.50 Strength rate: 0.02
				Implement human resource training to improve individual skills	100%	94.6%
				Strengthen the governance function by introducing a Nominating Committee into the company system		
				Outside director ratio	Majority	55.5% (5 people/9 people)
				Appoint independent outside directors as chairpersons of the Board of Directors and of the Nominating, Compensation, and Audit Committees		Appoint independent outside directors as chairpersons of the Board of Directors and of the Nominating, Compensation, and Audit Committees
				Implement PDCA under a Sustainability Committee led by the president		Number of Sustainability Committee meetings held: 4

MK: MAEDA CORPORATION MD: MAEDA ROAD CONSTRUCTION Co., Ltd. MS: MAEDA SEISAKUSHO CO., LTD.  
\* With JWD joining the Group in January 2024, we are currently revising some of the materiality and KPI. The tables above are based on the materiality and KPIs as of April 2023.