

**JGC** JGC HOLDINGS CORPORATION

Integrated Report 2024

# ***JGC*** Report

***Enhancing planetary health***



## JGC's Purpose and Values

Guided by its purpose and through its shared values, the JGC Group is taking on the challenge of transforming itself into “a corporate group that contributes to enhancing planetary health” by 2040 by leveraging the abilities it has cultivated and its track record.

### **Purpose** Our Purpose

# *Enhancing planetary health*

For the JGC Group to continue to grow sustainably, we believe that we must respond swiftly and flexibly to changes in the business environment while also contributing to the development of industry and society. As such, we have adopted the long-term, global perspective of “contributing to the creation of a healthy future for people and the earth.”

Based on this idea, we have defined our purpose as “Enhancing planetary health.” The health of people and the Earth are intertwined.

We will enhance ourselves in working toward a more prosperous future - this is the message behind our purpose.

**Values****Our Values**

We are driven by our shared values and professional commitments.

### Shared Values

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#### Challenge

We venture into new business fields, overcome technical hurdles and establish innovative methodologies.

#### Create

We remain dedicated to developing results-focused, thoughtful solutions that fully meet the needs of our clients and benefit society as a whole.

#### Integrate

We bring together a wide range of technologies, innovative tools and a diverse team dedicated to increasing value to all stakeholders.

#### Deliver

We commit to overcoming obstacles through diligence and our “never-give-up” philosophy, and to delivering quality products and services to our clients and society.

### Professional Commitments

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#### Respect

We undertake to foster mutual respect and support among all those involved in our activities and to emphasize the importance of safety for all.

#### Integrity

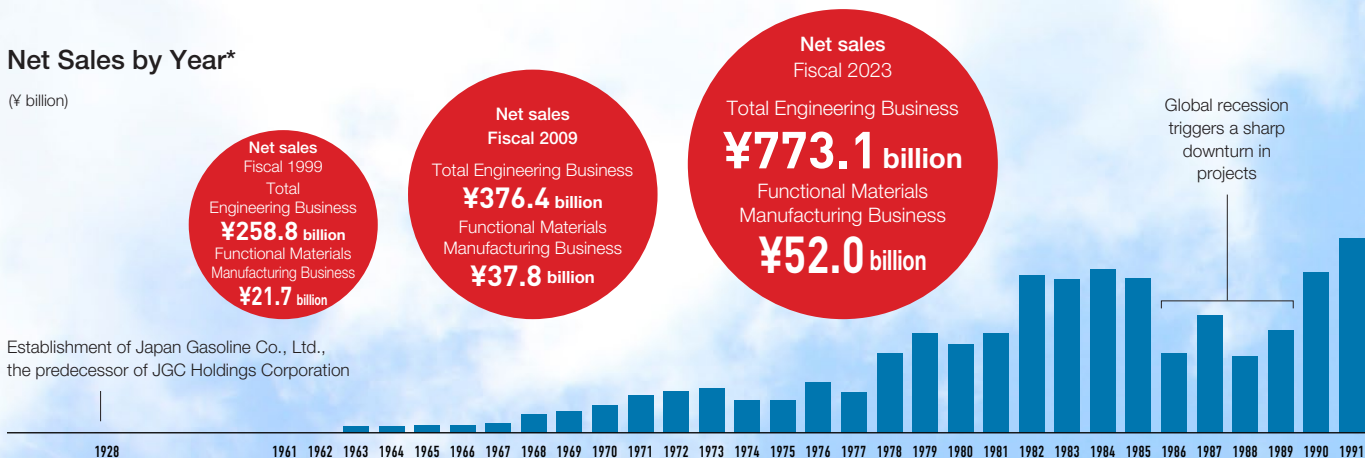
We pledge to maintain the highest ethical standards in everything we do.

# History of Value Creation

JGC Group growth is driven by constant transformation and ceaseless diligence in adapting to changing times and a changing world.

## Net Sales by Year\*

(¥ billion)



Establishment of Japan Gasoline Co., Ltd., the predecessor of JGC Holdings Corporation

## Social trends

- 1960** OPEC established
- 1962** Liberalization of crude oil imports in Japan
- 1973** First oil crisis, fourth Arab-Israeli conflict, floating exchange rates adopted
- 1979** Second oil crisis
- 1980** Iran-Iraq War (ends 1988)
- 1985** Plaza Accord
- 1987** Black Monday

### 1928

#### Founded as Japan Gasoline Co., Ltd. (currently JGC Holdings Corporation)

Japan Gasoline Co., Ltd. was founded to build and operate domestic refineries. The founder initially intended to market petroleum products, such as volatile oil (gasoline), kerosene, and diesel oil, and other petroleum products. However, he abandoned this plan due to various factors. Instead, he pursued business operations centered mainly on licensing processes from Universal Oil Products (UOP).

### 1930s-1950s

#### Full-scale operation of engineering business, start of catalyst production business

Along with the initiation of the engineering business, JGC began to design and construct refinery and petrochemical plants in the 1950s. Although it was common to place orders for engineering, procurement, and construction (EPC) of a new plant to different companies in those days, the Company received such orders collectively, and achieved completion with short delivery times. Establishing itself as Japan's first general contractor, the Company supported the rapid growth of Japan's economy. The Company started the catalyst manufacturing business in the 1940s, seeking to diversify its business models.



### 1960s

#### Concerted international expansion

In 1960, JGC newly established the business section dedicated for international sales within the sales department, getting business operation for overseas markets into full gear. Steadily building a track record in overseas projects, JGC secured contracts for a refinery construction project in Peru, a refinery modernization project in Argentina, and a refinery expansion project in Venezuela in the middle of the 1960s. In 1969, JGC secured a contract for a refinery construction project in Algeria with the contract amount of US\$70 million (¥25.2 billion), the largest contract amount in the history of plant export in Japan, in collaboration with ITOCHU Corporation.

Facing many difficulties in the construction work of this project, the Company lost a large amount of money, which also resulted in gaining of valuable experience useful for overseas projects. At the same time, this provided a spark for us to get out of the conventional construction management method that depended on experience or intuition, and seriously discuss the necessity of a modern project management method, which is the basis of our core competence.



### 1970s

#### Early days when earning a reputation as a world-class engineering firm

In the 1970s, JGC secured a series of contracts for large overseas projects such as a liquefied natural gas (LNG) plant construction project in Brunei, and oil refinery construction projects in Dominica and Singapore, with the ratio of overseas projects to the total number of contracts the Company secured reaching 88%. Unlike domestic projects, these overseas projects involved various difficulties due to systems, cultures, customs, and natural conditions. Through overcoming these difficulties and accumulating experiences one by one from these challenges, the Company acquired intangible assets, which has contributed to the subsequent business growth of the Company.

In addition, the 1970s was a period in which reform of project management methods progressed rapidly, and in the late 1970s, a basic framework of JGC's unique project management and a system necessary for that were developed in order to manage the execution of massive complex projects in a rational manner.



### 1980s

#### Building a global network for project execution

The steep appreciation of the yen triggered by fluctuations of the international economy, such as the second oil crisis in the late 1970s and the Plaza Accord in the middle of the 1980s, often had a grave impact on JGC's competitiveness for contracts and profitability of project execution.

Under such circumstances, after beginning to address the globalization of designing, procurement, and resources for construction work in the late 1970s, the Company established regional engineering subsidiaries, set up international procurement offices, and constructed a global resource management system in the 1980s, forging a project execution framework more resistant to foreign exchange risks.

Through completing overseas projects while overcoming various difficulties, the Company earned the profound trust of clients, and established itself as an international engineering company.



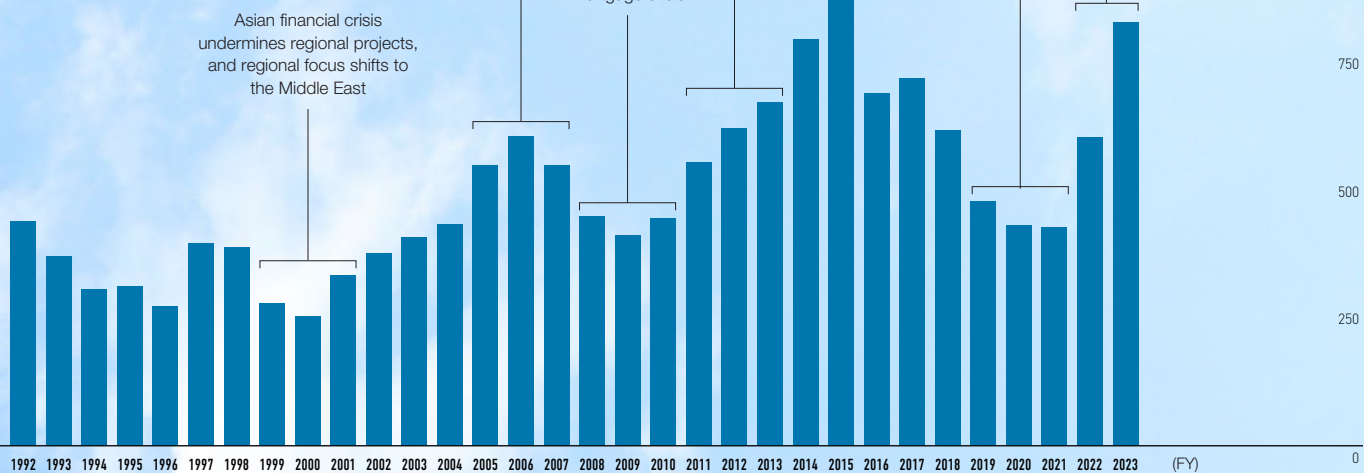
Return to higher crude oil prices and stronger capital investment by producers

High crude oil prices spur capital investment by Middle Eastern and other producers

Decrease in projects due to global recession from the subprime mortgage crisis

Decrease in projects due to slowdown in the global economy affected by slump in crude oil prices and spread of the COVID-19 pandemic

Increase in capital investments mainly in LNG as transitional energy, leading to increased sales



\* Non-consolidated figures used until fiscal 1989; consolidated figures used from fiscal 1999.

**1991**  
Gulf War

**2001**  
September 11  
terror attacks

**2005**  
Kyoto Protocol  
comes into effect

**2011**  
Great  
East Japan  
Earthquake

**2015**  
Paris Agreement  
adopted  
SDGs adopted at  
UN summit

**2020**  
Global COVID-19  
pandemic

**2003**  
Iraq War

**2008**  
Subprime  
mortgage crisis

### 1990s

#### Overcoming crisis, responding to an era of gas demand

In the first half of the 1990s, the engineering industry plunged into the age of mega-competition, marking the arrival of a turndown in plant engineering. Especially in Southeast Asia, where projects were concentrated, in addition to engineering contractors from Japan, the United States, and Europe, from South Korea participated, leading to intense contract competition.

The engineering industry was swamped by a wave of global restructuring and realignment, and Asian countries were hit by the currency crisis in 1997, which resulted in investment control and suspension of projects in various countries, and a series of nonpayment of construction costs. Despite facing a serious financial crisis, JGC carried out the drastic reform of corporate management, structures, and personnel, and came out of the crisis.

In the late 1990s, as global interest in environmental preservation grew and demand for clean energy such as LNG increased, the use of natural gas as a petrochemical raw material gained attention. This led the Company to secure several contracts for building LNG plants and natural gas processing plants.



### 2000s

#### Business expansion driven by accelerated worldwide resource development

The mega-competition brought about the elimination of inefficient businesses in the engineering industry, as well as changes in clients. The industry entered a period in which clients, while continuing to expect contractors to enhance cost competitiveness, selected ones that displayed strong abilities, including in technologies and project management, in a comprehensive manner.

After going through the turndown in plant engineering in the late 1990s, the 2000s brought expanding energy demand in emerging countries, which formed the backdrop to sharp rises in crude oil prices and an unprecedented boom in plant construction in the Gulf countries of the Middle East. By staying among the first to respond to this environment, the Company also experienced a rapid expansion in business performance and enjoyed an increase in the number of contracts.

Along with the acceleration of a shift in energy forms, in particular a shift from oil to natural gas and LNG, demand for these gases further expanded. An increasing number of LNG projects were planned, which brought the Company a succession of contracts for LNG projects, and by completing these projects, JGC has established its position as top contractor in the LNG field.



### 2010s

#### Expansion of business segments and regions, adoption of a holding company structure

Due to the shale gas revolution, the North American region has suddenly risen to prominence as the area with gas producing countries and the plant market. Numerous LNG, gas-based chemicals, and other projects have been realized in North America, and JGC succeeded in advancing into the North American market.

In the offshore field, the Company has also established its solid presence as an industry leader in the floating LNG (FLNG) area. In the field of infrastructure development, the Company engaged in power generation projects, including one for solar power generation in Japan, while promoting the expansion of the field for overseas infrastructure development in tandem with its overseas subsidiaries.

As of October 2019, the JGC Group became a corporate group with a holding company structure. JGC aimed to be a corporate group to achieve stable and sustainable growth from a multi-business portfolio comprised of overseas oil and gas, overseas infrastructures, domestic EPC+ maintenance, and functional materials manufacturing.



### 2020s

#### Accelerating toward realizing a decarbonized society raised in the 2040 Vision

Against the background of a worldwide shift toward carbonization or decarbonization and the COVID-19 pandemic, paradigm shifts in society and industry are rapidly progressing, in which business environments surrounding the Group are also drastically changing.

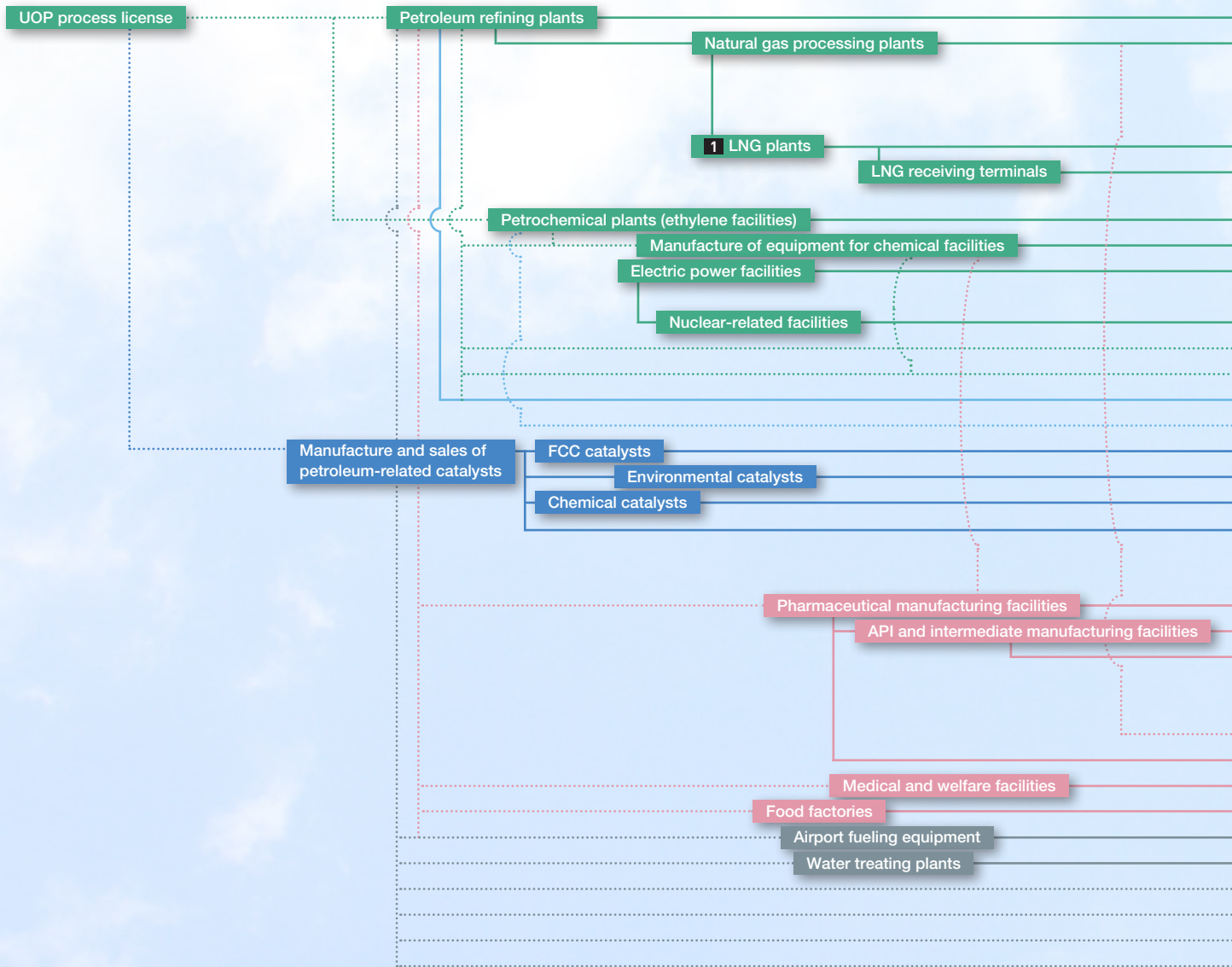
To ensure the Group's sustainable growth in this era of great uncertainty, it is necessary to respond swiftly and flexibly to business environments in front of us, and transform ourselves on a long-term basis while seeing ourselves from a heightened perspective.

Based on this idea, the Group redefined its purpose as "Enhancing planetary health" in May 2021, and formulated the long-term management vision, 2040 Vision, and the medium-term business plan, Building a Sustainable Planetary Infrastructure 2025 (BSP 2025), as its first phase. The Group is aiming to be a corporate group that contributes to enhancing planetary health in five business areas by 2040.



# Changes in Business Portfolio

Starting from the acquisition and supply of petroleum refinery process (UOP process) as well as EPC projects using this process, the JGC Group has gained a lot of expertise through executing EPC projects since its foundation. On the basis of such expertise, the Group expanded its area of activities into various fields (businesses), and has now entered into five business areas including energy transition, aiming to realize sustainable growth.



Brunei LNG plant

## FOCUS Received first order for LNG plant construction (1973)

1

In 1973, the Group received an order for an LNG plant construction project in Brunei, which was the first LNG project for the Group. Through continuing to successfully complete early LNG projects, the Group gained a strong reputation in the field of LNG plant construction, which has led to securing many contracts for the construction of LNG plants and most advanced FLNG plants and carrying out such projects until today.

\* A floating-body type production facility



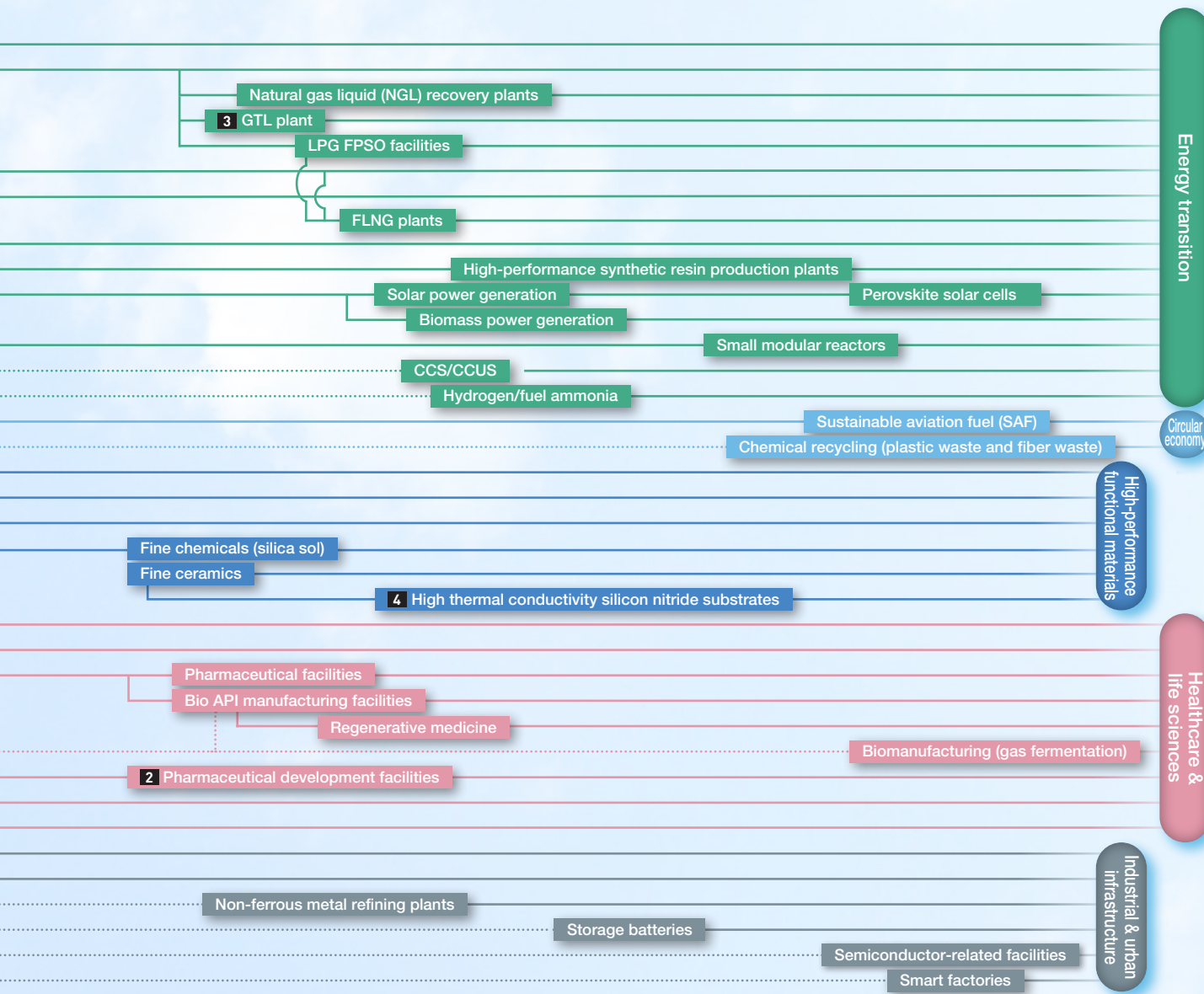
Santory Pharmaceutical Development Center

## FOCUS Full-scale entry into pharmaceuticals production field (1988)

2

The Group secured a contract for the construction of a facility to produce Vitamin B<sub>2</sub> in 1970 and made an entry into the pharmaceuticals field, and in 1988, the Group completed the project of constructing a large development center for the development of new drugs and the production of active pharmaceutical ingredients (APIs), sterile preparations, and solid preparations, thereby establishing a full-scale system to accept orders and implement projects in the field. Afterward, the Group realized many new concepts of facilities, growing into a pillar of the non-hydrocarbon field.

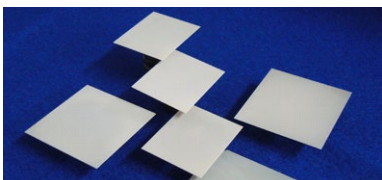
— Fields (businesses) to which the expertise on the constituent technologies and EPC projects of such fields are directly related  
 ..... Fields (businesses) to which expertise is indirectly related



Large commercial GTL project in Malaysia

**FOCUS** Received first order for large commercial GTL project (1989) **3**

In 1989, the Group secured a contract for a large gas to liquids (GTL) project in Malaysia. Since GTL can be used to produce clean petroleum products and petrochemical raw materials, it has opened a way for the realization of carbon-neutral fuels (synthetic fuels) such as e-Fuel and e-SAF, which are currently available. Experience and know-how gained through this project are being used to contribute to the acceleration of energy transition.



High thermal conductivity silicon nitride substrates

**FOCUS** High thermal conductivity silicon nitride substrates (2009) **4**

High thermal conductivity silicon nitride substrates that have become essential for power units used for EVs, hybrid vehicles and others, in recent years are expected to be more widely used in the future. The Group boasts an unparalleled technology superior to conventional manufacturing methods in terms of both performance and costs, and is aiming to achieve a high share.

# JGC Group at a Glance

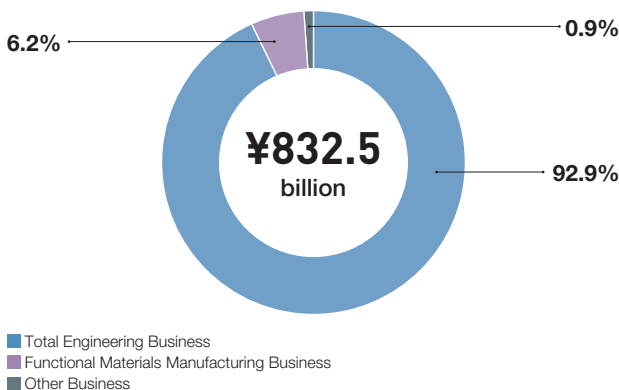
## Two Business Segments Centering on Five Major Companies

Main operating companies		Business Model
<b>Total Engineering Business</b> 	JGC Corporation (overseas business)	<p><b>EPC* business</b></p> <p>Provision of feasibility studies (FS), front-end engineering design (FEED), and EPC projects for plants and facilities</p> <p>* EPC: Engineering, Procurement and Construction</p> <p><b>Project Execution Flow</b></p>
	JGC Japan Corporation (domestic business)	<p><b>Maintenance</b></p> <p>Provision of daily maintenance and shut-down maintenance services mainly for petroleum refining plants and petrochemical plants in Japan</p> <p><b>Project management consulting (PMC)</b></p> <p>Provision of consulting service supporting the development of plants and facilities by leveraging our extensive EPC-related knowledge and track record to mediate between customers and contractors</p>
<b>Functional Materials Manufacturing Business</b> 	JGC Catalysts and Chemicals Ltd.	<p>Research and development, planning, and manufacturing of catalysts, fine chemicals, and fine ceramics products</p> <p><b>Business Execution Flow</b></p>
	Japan Fine Ceramics Co., Ltd.	
<b>Other Business</b> 	Japan NUS Co., Ltd., etc.	<p><b>Consulting, licensing, business participation, and digital platforms</b></p> <p>Consulting services such as various studies, analyses and assessments, and production support, business participation in various sectors, etc.</p>

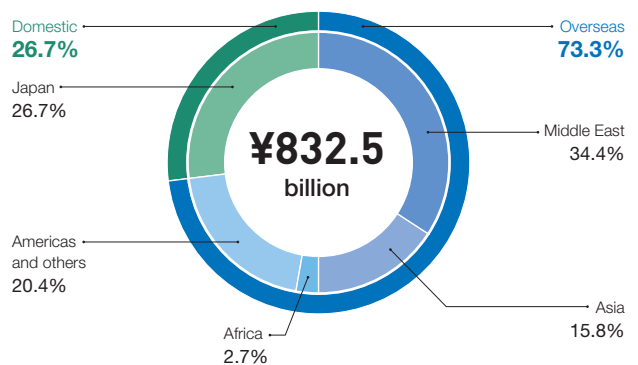
Operational Overview P.71

## Net Sales by Segment, and Net Sales by Country (Domestic and Foreign) and Region for Fiscal 2023

Net Sales by Segment



Net Sales by Country and Region



## Main Achievements

Track record of completed LNG plants globally

**More than 30%**

The Group has designed and constructed LNG plants responsible for more than 30% on a global production capacity basis.



LNG plant (Indonesia)

FLNG plants globally

**Involved in 3 of the 4 projects**

The Group is involved in three of the four FLNG projects that can be installed in the open seas exposed to offshore waves.

Track record of completing more than

**20,000 projects in over 80 countries**

Through the execution of EPC projects, the Group delivers a variety of plants and facilities that support the clients' businesses. We have executed more than 20,000 projects in over 80 countries around the world, and built up a high level of trust with clients worldwide.



Fluid Catalytic Crackers (FCC) catalysts

Fluid catalytic cracking (FCC) catalysts  
Silica sol for HDD polishing

**No. 1 share of the domestic market**

The Group focuses mainly on the manufacture and sales of products in the three sectors of catalysts, fine chemicals, and fine ceramics, achieving large domestic market shares in the sectors of specific products. In particular, the Group has offered FCC catalysts to oil refineries around the world, also achieving a leading market share globally.

## Group Companies and Bases (as of March 31, 2024)

Group companies

**95**  
(Subsidiaries: 59,  
Affiliated companies: 36)

Major overseas bases

**32 bases in  
22 countries**

Number of domestic bases

**33**

Number of employees

**8,865**

Total Engineering Business: 6,904

Functional Materials Manufacturing Business: 1,083

Company-wide level (common): 434



Other Business: 444

## Vision to Be Achieved by 2040

**A corporate group that contributes to enhancing planetary health in five business areas**

Through materials, helping to shape a more prosperous future for people and the Earth

**High-performance functional materials**

Establishing a stable energy supply and decarbonization

Making widespread use of environmentally conscious resources a reality

**Circular economy**

**Energy transition**

Through medical care and healthcare, contributing to human well-being

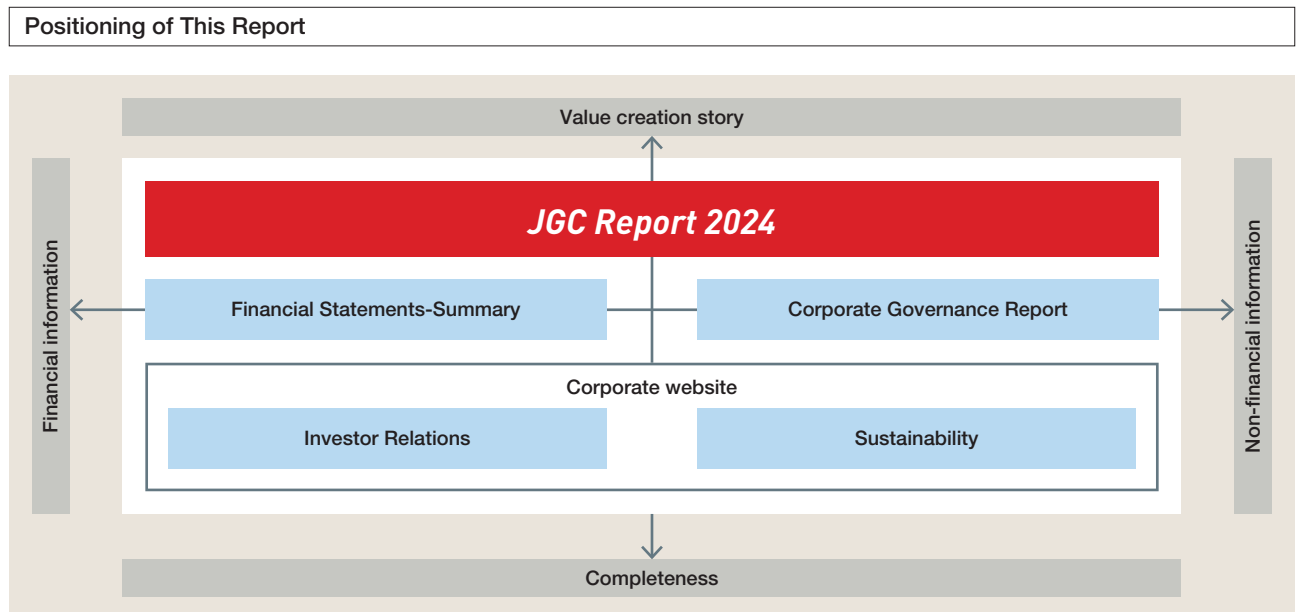
Establishing environmentally conscious industrial & urban infrastructure

**Industrial & urban infrastructure**

**Healthcare & life sciences**

# Editorial Policy/Contents

Editorial Policy	
<b>Purpose of This Report</b>	The purpose of the JGC Report, which was first published in 2015, is to explain to our stakeholders including shareholders and investors how the JGC Group works to generate sustainable growth and increase corporate value over the medium to long term. JGC uses this report as a tool to communicate with our stakeholders as part of its efforts to deliver sustainable growth through continuous, constructive dialogue.
<b>Organizations Covered</b>	In this report, “JGC Group” and “the Group” refer to JGC Holdings Corporation and its subsidiary operating companies.
<b>Period Covered</b>	In principle, the report covers the period from April 2023 to March 2024 (fiscal 2023), but also includes information related to events from April 2024.
<b>Information Provided</b>	This report summarizes and presents the most relevant information related to the JGC Group and society. For detailed and comprehensive financial and non-financial information about the Group, please visit the JGC website.
<b>Forward-Looking Statements</b>	Data and forecasts disclosed in this report are based on judgments and information available at the time of publication. The Company provides no guarantee for targets, forecasts, and earnings projections, which may change due to a range of factors.
<b>Reference Guidelines</b>	JGC Report 2024 was compiled referring to the disclosure framework of the International Financial Reporting Standards (IFRS) Foundation and the World Intellectual Capital Initiative (WICI), as well as “Guidance for Collaborative Value Creation” of the Ministry of Economy, Trade and Industry (METI).



Main tools for information disclosure	Contents
<b>Corporate Website</b>	A website that covers everything about the JGC Group including the long-term management vision, 2040 Vision, and the medium-term business plan, Building a Sustainable Planetary Infrastructure 2025 (BSP 2025). [Click here for About Us] [Click here for Sustainability] [Click here for Investor Relations]
<b>JGC Report 2024 (Integrated Report)</b>	An annual report that focuses on the JGC Group’s approach, based on management strategies that take a medium-term perspective, and its future outlook
<b>Corporate Governance Report</b>	An annual report that lists details of systems and policies on the JGC Group’s Corporate Governance Code
<b>Securities Report</b>	An annual report that provides particular details on the JGC Group’s finances

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JGC Report 2024 has been divided into five chapters to convey messages from the management and share information on the JGC Group's strategies toward sustainable growth and efforts to enhance management capital.

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### Overview of JGC Report 2024

The main message of JGC Report 2024 is that despite the current declining performance of the JGC Group, we will continue to work to promote sustainable growth with a medium- and long-term perspective by promptly reestablishing the structure to carry out EPC executions without changing the direction provided in the long-term management vision, 2040 Vision, and the medium-term business plan, BSP 2025. In formulating this report, we focused on the following two points.

① We outlined how to reestablish the structure to carry out EPC executions, and the steady progress we have made toward achieving the targets of the Total Engineering Business in BSP 2025. The Total Engineering Business is a prime source of revenue for the JGC Group, and to expand our business areas and business models, it is at the top of our list of priorities to ensure profits currently available toward realizing the Group's 2040 Vision. This report, therefore, describes our efforts to reestablish

the structure to carry out EPC executions, and the steady progress made toward achieving the targets of BSP 2025.

② We also outlined how we have brushed up the Group's value creation process. In an effort to show that it is possible for the Group to achieve sustainable growth in an understandable manner, we described the strengths that the Group has cultivated since its founding and how they are related to the 2040 Vision by clarifying our value creation process in a logical manner. In addition, viewing assets that were traditionally included in the management foundation such as intellectual property and human resources as "six management capitals," we described how they are related to the value creation process along with our strengths.

We will continue to cherish the opportunities to communicate with our stakeholders. We would appreciate your honest advice and feedback.

## Message from the Chairman and CEO

Striving for a  
Sustainable Future—  
Overcoming the  
Energy Trilemma



# CEO Message

### Masayuki Sato

Representative Director,  
Chairman and CEO

Joined JGC in 1979. Has worked in finance and accounting since joining, overseeing finance for the Middle East, North Africa, Southeast Asia, and CIS projects. Appointed as a director in June 2010; CFO, Managing Director, Senior General Manager of the Corporate Administrative & Financial Affairs Division in July 2011; and Executive Vice President in June 2012. Promoted to Representative Director and Chairman in June 2014 and subsequently to CEO in June 2017.

## The World Faces a Trilemma

The world now faces three complex challenges. To the challenges of accelerating decarbonization to achieve a sustainable society as well as meeting increasing immediate energy demands, we now add energy affordability. From a slightly different perspective, energy affordability can be described as commercial viability. Operating expenses (OPEX) and capital expenditure (CAPEX) have increased due to inflation in the prices of various goods and services, including increased interest rates, the cost to procure fuel and raw materials, and the unit cost of labor. Our sense of the global challenges aligns closely with what we assumed in our long-term management vision, 2040 Vision. However, I feel that the push to decarbonize and achieve a recycling-oriented society has started to come up against economic realities, and a steep barrier is starting to loom over us, which we must overcome.

Moreover, generative AI is becoming a major focal point for the effect it will have on energy demand from here on out. Although there are various projections, the spread of generative AI will not only increase the number of data centers, but its use will drive demand for higher processing capacity, which will lead to increased demand for electric power. The expectation is for data center operators to use carbon-free energy sources to supply the power needed for their operations. Therefore, it is expected that gas-fired power generation will serve as a stable power source for the time being, in addition to renewable and nuclear energy, and that demand for natural gas and LNG will remain firm over the medium to long term.

As we work toward enhancing the five business areas of our 2040 Vision (Energy transition, Healthcare & life sciences, High-performance functional materials, Circular economy, and Industrial & urban infrastructure) required by society and industry to achieve a sustainable society, I outlined how the JGC Group needs to fulfill its role as an equal partner, a collaborator, providing realistic solutions based on its technical expertise to countries, clients, and other stakeholders who face this trilemma. In fiscal 2023, I was

proud that we could do so, and felt even more strongly that this is what countries, clients, and other stakeholders want.

## Overview of Fiscal 2023

In fiscal 2023, the business environment was one of gradual recovery for the global economy while energy demand trended upward. The importance of natural gas and LNG as transitional energy sources was reaffirmed. As a result, demand for natural gas and LNG is growing rapidly worldwide and numerous LNG projects are moving steadily toward realization. Concurrently, we saw an acceleration of investment plans in sustainable segments such as hydrogen/fuel ammonia, SAF, and Carbon Capture and Storage (CCS), buoyed by governmental policies in various countries aimed at reducing or eliminating carbon emissions. This, combined with the acceleration of numerous LNG projects, has led to an extremely high number of inquiries from clients to the JGC Group. However, rising interest rates and rising CAPEX are beginning to delay some clients' investment decisions. The same is true in the Japanese domestic market, with increased CAPEX causing clients to take time in receiving subsidies and revising budgets, and investment in some projects has begun to be delayed. Faced with the problem of this increase in CAPEX, as well as the postponement of investment decisions on orders we had expected to receive in fiscal 2023 to fiscal 2024, orders received for our Total Engineering Business were limited to approximately ¥300 billion in fiscal 2023.

However, in March 2024 we received a limited notice to proceed for a large-scale low-carbon LNG plant construction project in the United Arab Emirates. Thereafter, in June the client made its final investment decision (FID) and the EPC contract officially came into effect. This flagship project meets increased energy demand as well as achieves the goal of decarbonization. It also reaches the bar for commercial viability, and I am proud to be involved in realizing such a project.

## Message from the Chairman and CEO

On the other hand, in regard to our performance in fiscal 2023, in addition to the projects carried out by our Group subsidiaries overseas, we anticipated additional costs and risk contingency for multiple projects carried out by JGC Corporation, the core of the Group's EPC business. Regrettably, this led to us recording an operating loss and a loss attributable to owners of parent.

The factors which led to additional costs and risk contingency vary depending on the specific background and particulars of each project. JGC Holdings, together with JGC Corporation, has examined the underlying factors and countermeasures. Details of these factors and countermeasures are discussed in the COO Message which follows. However, I do believe that we were not mistaken in the overall policy stated in our medium-term business plan, BSP 2025, and our long-term management vision, 2040 Vision. This calls for us to diversify our business into five business areas, starting with Energy transition, promote our own reforms, and achieve sustainable growth.

Even though we posted losses this time, we will not change our direction. In response to the losses recorded by our overseas Group subsidiaries, we put a brake on the efforts to build the stronger framework for regional management laid out in our 2040 Vision. The aim of these efforts was to expand our business by strengthening our capabilities in sales and project execution based on "local production for local consumption" in growth markets. We are presently strengthening the JGC Corporation management team and working together to tackle the immediate issues that have arisen. At JGC Holdings, we will also take the lead in overcoming this difficult situation and building a more resilient structure than ever before.

## Status of BSP 2025

Fiscal 2024 marks the fourth year of the BSP 2025 medium-term business plan covering the five-year period from fiscal 2021 to fiscal 2025. It is positioned as the first phase of our long-term management vision, 2040 Vision. Over the past three years, we have made steady progress toward the three key BSP 2025 strategies of transformation of EPC operations, expansion of manufacturing business for

high-performance functional materials, and establishment of future engines of growth. This is bringing about a steady shift in our Group business portfolio, which had been centered on the oil and gas sector, toward the five business areas set for expansion in the 2040 Vision.

On the other hand, because the projects which incurred additional costs and risk-associated expenses in fiscal 2023 will continue through fiscal 2025, our forecasts are as follows: net sales of ¥830 billion, operating profit of ¥26 billion, and profit attributable to owners of parent of ¥23 billion for fiscal 2024. The financial targets set forth in BSP 2025 (net sales of ¥800 billion, operating profit of ¥60 billion, and profit attributable to owners of parent of ¥45 billion) are dependent on achieving the targets for orders received in fiscal 2024 and the timing at which orders for individual projects are received. We will continue to diligently work toward achieving these targets.

## Promoting Stronger Corporate Governance

With respect to corporate governance, I believe that we need to establish a structure that encourages "aggressive" management, while also strengthening our "defenses" in preparation for the diversification of risks associated with taking on new challenges. Furthermore, I believe that the JGC Group needs to incorporate diverse perspectives into our management to bring about a new dimension of transformation. Up until now, we have been increasing our number of outside directors, and have received proposals from outside directors which strike a balance between "aggressive" and "defensive" stances. Following a resolution at the Ordinary General Shareholders' Meeting in June 2024, we have appointed two new outside directors: Shinjiro Mishima and Miku Hirano. While hailing from a different industry, Mr. Mishima has corporate management experience in an order-taking industry similar to that of our Group business. Ms. Hirano possesses extensive expertise in the fields of IT and AI. As a female entrepreneur and executive, she brings further diverse perspectives and opinions to the Board.

I intend to fulfill my responsibility as Chairman of the Board of Directors by reflecting the diverse opinions of outside



directors in our management, and ensuring that the Board of Directors operates in a highly effective manner.

## Wrapping Up

In fiscal 2024, we are rebuilding our EPC execution structure and will restore the trust of our shareholders and investors in our ability to implement EPC. We are also determined to steadily execute current EPC projects and consistently achieve the earnings we have forecast.

To allow our EPC Group companies centered around JGC Corporation and JGC Japan Corporation to make even greater strides, we will appropriately reorganize our EPC execution structure, grasp the major trends we see in the plant market, and achieve further momentum for our next medium-term business plan.

Our Functional Materials Manufacturing business has begun to grow into a stable source of earnings for the JGC Group. The semiconductor market, which is key in the fields of fine chemicals and fine ceramics, is expected to grow from its current US\$500 billion into an even vaster market of US\$1 trillion by 2030. JGC Holdings will solidly support the efforts of both of these functional materials companies in growth markets such as this.

Since our founding, we have overcome major obstacles time and again. I will fulfill my responsibility as CEO of the JGC Group in overcoming our current difficulties and strengthen the earning power of the Group, fulfilling our role as a collaborator taking on issues and providing realistic solutions.

I sincerely request the continued support of all our shareholders and investors.

## Message from the President and COO

# A Year for Rebuilding Our EPC Execution Structure



# COO Message

### Tadashi Ishizuka

Representative Director,  
President and COO

Joined JGC in 1972. Managed numerous projects outside of Japan after initially working in the Domestic Project Construction Division. Appointed Managing Director and General Manager of the Project Operation Services Division in June 2008; Senior Managing Director in 2010; Executive Vice President and Board Director in June 2011; Senior Executive Vice President and CPO in February 2017; and President and COO in June of the same year.

## Overview of Fiscal 2023

In fiscal 2023, we posted an operating loss of ¥18.9 billion and a loss attributable to owners of parent of ¥7.8 billion after two downward revisions during the fiscal year. This was due to the deterioration of profitability of our Total Engineering Business resulting from additional costs and risk contingencies for some EPC projects underway overseas and in Japan. In addition to external factors including soaring materials and equipment prices, the factors which led to our posting of additional costs and risk contingencies were, unfortunately, largely internal, such as design quality issues at overseas JGC Group subsidiaries and at JGC Corporation headquarters. Challenges during the design phase of our Total Engineering Business, the core of the Group, have caused serious successive losses in multiple projects. I see this as an extremely serious issue for the Group and we are currently working with the JGC Corporation management team to implement countermeasures.

As for new orders, although the market environment is robust, rising interest rates and soaring construction costs have pushed up CAPEX for clients. This has tended to delay the timing of investment decisions for large-scale plant construction projects. Out of an expected ¥800 billion in orders for fiscal 2023, actual orders received were approximately ¥300 billion. However, in March 2024 we received a limited notice to proceed order for a large-scale low-carbon LNG plant construction project in the United Arab Emirates. Since the order for this project was received in fiscal 2023, actual orders received in fiscal 2023, including this project, can be considered to be approximately ¥600 billion. Taking this into account, our backlog of orders at the end of fiscal 2023 was in excess of ¥1.5 trillion. This is a backlog of orders equivalent to about two years of sales, and we believe that it is a sufficient level of backlog.

To sum up fiscal 2023, while we were able to secure orders for projects that will serve as the basis for future earnings in the booming plant market, the continued deterioration of profitability in projects underway made it a year for reviewing the earning power of the JGC Group.

## Rebuilding EPC Execution Structure as the Core of the JGC Group

Within the JGC Group, we are analyzing the background and causes of the breakdowns in design quality at JGC Corporation headquarters and overseas Group subsidiaries that occurred for multiple projects underway in fiscal 2023, as follows.

First, to provide some background for this situation, the Group has been promoting the diversification of our business into five business areas, including Energy transition, that are identified in our long-term management vision, 2040 Vision, announced in fiscal 2021, and its first phase, the medium-term business plan BSP 2025. Specifically, JGC Holdings has played a central role in creating new business related to sustainability and has divided JGC Corporation into three areas: Energy Solutions, Sustainable Solutions, and Facility Solutions. Over the past few years, we have worked on numerous FS and FEED projects in the expectation that they will lead to future EPC projects, not just EPC projects in the areas of energy transition and sustainability.

We have been promoting efforts to build a stronger framework for regional management. These have aimed at expanding our business by strengthening our capabilities in sales and project execution based on “local production for local consumption” in growth markets primarily in Asia. JGC Holdings has established JGC Asia Pacific as our headquarters in Asia, strengthening the framework for regional management in the Asian region. In addition, JGC Group subsidiaries in Asia and the Middle East have been pursuing growth by targeting multiple projects each worth tens of billions of yen as clients have increased the capital investment in each project.

Against this backdrop, I see two issues. The first is ensuring the execution and quality of design work through appropriate allocation of JGC Corporation personnel. While JGC Corporation was rapidly expanding into our five areas of business, many design engineers within the Group were assigned to business development projects in areas related

## Message from the President and COO

to sustainability, as well as FS and FEED work. As a result, we were unable to appropriately allocate design resources as an organization, and we believe this was an underlying cause of design quality issues. In this way, problems with design quality in some EPC projects executed out by JGC Corporation caused delays in schedule. This led to a negative chain of events, including the investment of more resources to make up for these delays, and ultimately resulted in a deterioration of profitability.

The second issue is to implement projects in accordance with the execution capabilities of the overseas Group subsidiaries. We have adopted a policy of proactively winning orders for projects in local markets in Asia and the Middle East through our overseas Group subsidiaries. If these were mainly small-scale projects such as those they had previously handled, they would have been able to adequately perform them. However, their EPC execution capabilities and risk management systems were unable to keep up with medium-sized projects worth tens of billions of yen, which we believe exceeded their capabilities.

We are currently working on countermeasures for each of these issues. To begin with, we are driving forward three countermeasures for the first challenge of “ensuring the execution and quality of design work through appropriate allocation of JGC Corporation personnel.” First, as part of our criteria for selecting projects, we are focusing on: (1) Projects with high feasibility which are expected to yield profits immediately or in the medium term, (2) Projects that can be supported by Group resources, and (3) Projects that will be assets for the future, contributing to sustainable growth. Second, we will ensure project execution is not disrupted by prioritizing the allocation of resources to projects currently being carried out by JGC Corporation as a whole, rather than for each of the Solutions. We are also working at effectively allocating resources to projects that meet the aforementioned criteria and are being more selective than ever in taking on FS and FEED projects, which will become future assets. Third, we are expanding and enhancing the functions of our overseas Group subsidiaries in the Philippines and India, whose primary mission is to serve as engineering centers which support projects undertaken by JGC Corporation.

To address the second challenge of “carrying out projects in accordance with the execution capabilities of overseas

Group subsidiaries,” from the standpoint of the profitability of EPC projects undertaken by the overseas Group subsidiaries and the execution capabilities of each company, for the time being we have put the brakes on the development of our regional management framework. Moreover, we will redefine the three primary purposes for each location: (1) To be an engineering center for projects executed by JGC Corporation, (2) To be the signer of contracts entered into by JGC Corporation, and (3) To undertake and execute differentiated local EPC projects. By the end of 2024, we will restart operations at each site after redefining the focus of operations. For the moment then, we have put the brakes on our framework for regional management. We intend to again take up this challenge after we assess the capabilities of each site.

To vigorously promote these countermeasures, we have appointed Shoji Yamada, former Representative Director and President of JGC Japan Corporation, as Representative Director and Senior Executive Vice President of JGC Corporation, strengthening the JGC Corporation management team. Through the joint efforts of President Farhan Mujib and Senior Executive Vice President Shoji Yamada, we need to rebuild the JGC Group’s EPC execution structure and demonstrate the results in our business performance and in doing so restore the trust in the EPC execution capabilities of our Group at the earliest time. CEO Sato and I will firmly support these efforts.

## Fiscal 2024 Order Target and Earnings Forecast

Concerning the market environment for our Total Engineering Business in fiscal 2024, as in fiscal 2023 CAPEX by clients is on an upward trend due to rising interest rates and inflation. Although some clients are cautious about making FIDs, we believe that the appetite for investment is strong, primarily for large-scale LNG and for segments related to sustainability overseas, as well as for pharmaceutical manufacturing and segments related to sustainability in Japan. Meanwhile, before proceeding with selective orders, we will consider the appropriate number of projects to focus on based on the countermeasures for the issues I mentioned earlier, thoroughly examine and analyze the risks of targeted projects,

and effectively allocate resources. With these measures, we aim to achieve a total of ¥970 billion (¥840 billion from overseas EPC business and ¥130 billion from domestic EPC business) in projects for our Total Engineering Business in fiscal 2024, including projects that we expected to receive during the previous fiscal year but were postponed.

In Energy Solutions for our overseas EPC business, we are primarily focusing on the LNG sector in which demand is soaring. We received an order for a large-scale low-carbon LNG plant construction project in the United Arab Emirates in June, and we are also aiming at LNG projects in regions such as Africa. In Sustainable Solutions, our aim is to receive orders for EPC services for a CCS project in Asia, and FEED services for a methanation project in North America. In Facility Solutions, we are partnering with Exyte Singapore Pte. Ltd. to obtain early orders in advanced industrial segments such as data centers and semiconductor manufacturing facilities. Following on from fiscal 2023, we are aiming to secure contracts for pharmaceuticals plants, hospitals, and food-related facilities, among others, in the domestic EPC business.

Forecasts for fiscal 2024 are net sales of ¥830 billion, gross profit of ¥58 billion, operating profit of ¥26 billion, ordinary profit of ¥34 billion, and profit attributable to owners of parent of ¥23 billion.

In our outlook by segment, we foresee our Total Engineering Business achieving net sales of ¥770 billion, and segment profit of ¥26 billion. Sales are expected to remain flat compared to the previous fiscal year due to ongoing projects that remain underway. Segment profit is one of the factors pushing down overall profit as sales from projects whose profitability deteriorated in fiscal 2023 will continue to be recorded in fiscal 2024, but no profit will be recorded. In fiscal 2024, we will continue to rebuild our EPC execution structure so as not to incur additional costs. We intend to demonstrate these results in our business performance.

Net sales and segment profit for our Functional Materials Manufacturing Business are expected to remain unchanged from the previous fiscal year. In the catalysts sector, demand for products such as FCC catalysts is expected to remain firm, backed by increased demand for replacement catalysts as fuel demand recovers. Conversely, the electronic materials and semiconductors markets, which are the mainstay of our fine chemicals and fine ceramics sector,



are showing signs of bottoming out. Nonetheless, we expect a full-fledged recovery from the second half of fiscal 2024 onward.

## Wrapping Up

It is no exaggeration to say that fiscal 2024 is a critical period in achieving medium- to long-term growth for the JGC Group. In the Total Engineering Business, the core of our Group, we will work to promptly rebuild our EPC execution structure and do our utmost to reach our fiscal 2024 target and earnings forecasts. At the same time, we will fulfill our duties by steadily implementing the three priority strategies set out in BSP 2025. Thank you very much for your continued support.

## Message from the CFO

# Maintaining a Strong Financial Base While Implementing Strategic Investment for Growth



# CFO Message

### Kiyotaka Terajima

Director, Senior Executive Vice President, and CFO

Joined JGC in 1981. After joining, established business alliances and developed contracts for domestic and overseas projects in the Legal Department. Appointed Executive Officer and General Manager of the Corporate Administrative & Financial Affairs Division in 2014; Director, Executive Officer, and Senior General Manager of the division in 2016 (Senior Executive Officer in 2017); Executive Vice President and CFO in April 2018; and Senior Executive Vice President in April 2020.

## Overview of Fiscal 2023

For fiscal 2023, the JGC Group reported net sales of ¥832.5 billion, gross profit of ¥10.6 billion, operating loss of ¥18.9 billion, and loss attributable to owners of parent of ¥7.8 billion.

By segment, we saw our Total Engineering Business achieve net sales of ¥773.1 billion, and segment loss of ¥22.0 billion. Progress on large-scale EPC projects led to a significant year-on-year increase in revenue. Unfortunately, however, the Company posted a loss from additional costs and risk contingencies due to issues including manpower allocation for design work and the inability of our overseas Group subsidiaries to manage large-scale projects. In response to the problems identified, we are resolutely advancing efforts to restore profitability by promptly setting forth our response policy and gradually implementing specific actions, including making changes to some of the business strategies we have followed thus far.

Our Functional Materials Manufacturing Business achieved net sales of ¥52.0 billion, and segment profit of ¥7.2 billion. Despite a challenging market environment which includes a decline in demand for fine chemical products, record sales were achieved for the second year in a row, maintained a high level of segment profit while absorbing the burden of depreciation expenses, and continued to steadily grow. In addition to our ongoing R&D activities, we are making investments for further growth, such as acquiring land for business purposes, and intend to accelerate such investments going forward.

Moreover, three years have passed since the start of BSP 2025 which covers the period from fiscal 2021 to fiscal 2025, positioned as the first phase of our 2040 Vision. The three elements of our basic capital policy for this period have been: maintaining a solid financial footing to support our large-scale lump-sum EPC business, flexibly handling growth investments, and steadily ensuring shareholder returns. Going forward, we intend to formulate and execute financial strategies that align with these points.

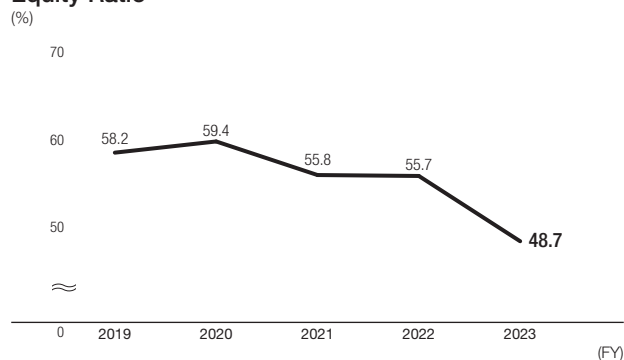
## Shareholders' Equity

In the Total Engineering Business, as the core business of our Group, it is necessary to secure liquidity to ensure its stable continuation. This is due to the nature of large-scale projects, the influence of the business environment, the possibility of

significant fluctuations in cash flow due to turmoil in financial markets, and other factors. We have also secured funding capacity by maintaining a solid financial footing in order to flexibly handle growth strategy investments.

Moreover, we want to maintain the trust of clients to be able to receive orders and carry out large-scale EPC lump-sum projects. We also need to maintain our credibility by securing the necessary level of capital as a safeguard against unavoidable large-scale losses. We believe that this will allow us to ensure business continuity. One of the critical goals for accomplishing this is maintaining a stable equity ratio of 50% or more. While total assets increased due to a significant increase in sales in fiscal 2023, shareholders' equity declined due to the fact that we posted a final loss. As of March 31, 2024, we had an equity ratio of 48.7%, but we judge that this level allows us to continue to maintain a solid financial position.

### Equity Ratio



## Utilizing Capital in an Effective Manner

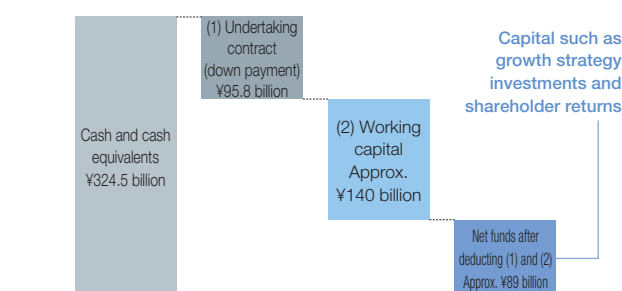
For EPC lump-sum projects in our Total Engineering Business, ideal contract conditions and execution plans require receiving advance payment at the time of order, which allows us to carry out the project without the burden of reimbursement while it is in-progress. Therefore, when there are a number of projects progressing well under favorable conditions, the balance of cash tends to be temporarily high.

Cash and cash equivalents as of March 31, 2024, stood at ¥324.5 billion, of which ¥95.8 billion corresponded to contract liabilities such as advances received on projects. Further, holding an amount of working capital equivalent to roughly two months of sales (currently estimated to be approximately ¥140 billion) allows us to minimize the impact of sudden changes in the environment, such as turmoil in

Message from the CFO

financial markets, and enables us to make flexible decisions on project execution. The approximate amount of ¥89 billion in net funds remaining after deducting this amount is positioned in BSP 2025 as a resource for use in growth strategy investments and shareholder returns. When making growth strategy investments, we will prioritize applying the amount that adds cash flows from future operating activities. However, we expect the shortfall to be made up through interest-bearing debt.

Status of Cash and Cash Equivalents as of March 31, 2024



Concerning debt procurement, we issued our first green bond for ¥10 billion in September 2023. Our growth strategy investments include several projects for developing businesses and technologies that contribute to decarbonization. These green bonds are intended to fund green projects such as SAF, biomanufacturing, and high thermal conductivity silicon nitride substrates for power modules in EVs.

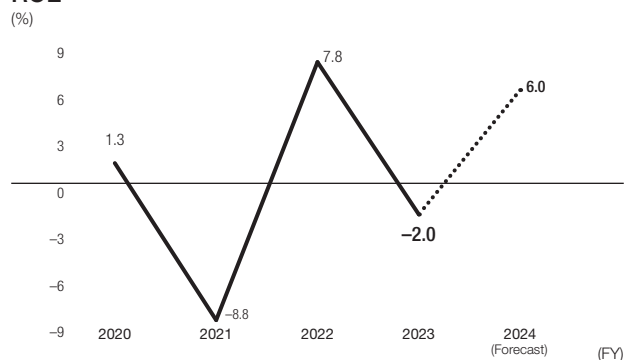
Prioritizing Operating Profit to Improve ROE

Based on our capital asset pricing model, we estimate the cost of shareholders' equity to be 8 to 10%, and we intend to secure return on equity (ROE) of 10% or more over the medium to long term. How we expand profit attributable to owners of parent is important for increasing ROE while working to enhance equity capital from the perspective of having a firm financial footing to support expansion of projects centered around our lump-sum EPC business. To this end, we place top priority on enhancing the profitability of our business activities.

Reflecting on the regrettable fact that we posted a final loss in fiscal 2023, we have embarked on efforts to restore profitability in our Total Engineering Business in fiscal 2024. Based on initial forecasts, ROE is expected to remain at

around 6%. Going forward, we will steadily implement measures to improve profitability and achieve capital efficiency in excess of 10%.

ROE



At present, we are actively engaged in the three key strategies of BSP 2025: transformation of EPC operations, expansion of manufacturing business for high-performance functional materials, and establishment of future engines of growth. As the CFO, I am seeking to increase ROE in the medium- to long-term by working toward these key strategies with a credible and tactical financial approach. In particular, we are planning growth strategy investments of approximately ¥200 billion over the five-year span of BSP

We have invested a total of approximately **¥65 billion** out of our ¥200 billion quota, primarily in research and development and capital investment.

If we include projects we plan to invest in during fiscal 2024 and beyond (for which internal investment has been decided), this comes to **¥120 billion**.

	Accumulated results from fiscal 2021 to fiscal 2023	Plan for fiscal 2024 and beyond
<b>Transformation of EPC operations</b>	<ul style="list-style-type: none"> <li>EPC digital transformation(DX) and execution technology-related, and others</li> <li>Establishment and operation of Indian operations center</li> <li>Acquisition of pharmaceutical business from IHI Plant Services Corporation, and others</li> </ul>	
<b>Expansion of manufacturing business for high-performance functional materials</b>	<ul style="list-style-type: none"> <li>Capital investment in high thermal conductivity silicon nitride substrates</li> <li>Acquisition of land for plants factory</li> <li>Renewal and expansion of production facilities, R&amp;D, and others</li> </ul>	
<b>Establishment of future engines of growth</b>	<ul style="list-style-type: none"> <li>INTEGNANCE VR</li> <li>Food tech related</li> <li>Healthcare-related, and others</li> </ul>	<ul style="list-style-type: none"> <li>DDR Commercialization</li> <li>Biomanufacturing</li> <li>Sustainable aviation fuel (SAF) business</li> <li>Ammonia related</li> <li>CVC, etc. and others</li> </ul>

2025 and have already invested approximately ¥65 billion over the three years of fiscal 2021 to fiscal 2023. The breakdown of amounts invested in accordance with our key strategies is: ¥8 billion for transformation of EPC operations, ¥30 billion for expansion of manufacturing business for high-performance functional materials, and ¥27 billion for establishment of future engines of growth. Investment projects for which decisions have already been made, combined with pre-cashout deals, will bring growth strategy investments to approximately ¥120 billion.

In selecting growth strategy investment projects, we are acutely aware of the sudden market changes that have occurred since fiscal 2021 when BSP 2025 began, such as future growth in the market for plants, the rapid pace of development of markets in the sustainability sector, and the planting of seeds for future business. We have invested in an Indian operations center with the goal of increasing our project execution capacity, we have succeeded in getting the SAF business off the ground, and we have established a location for the development of biomanufacturing. Biomanufacturing uses microbes to create a wide range of products including pharmaceuticals, materials, energy, and food. According to the Organisation for Economic Co-operation and Development (OECD), this business is expected to expand in the future, and the global market is estimated to reach ¥200 trillion by 2030. Our Group is pursuing an Integrated Biofoundry® business that will provide a one-stop service for everything from breeding and improving microbes to developing production processes. We expect the new biomanufacturing R&D facility that we will establish on Port Island in Kobe to be an important base for promoting the implementation of the technology from Kobe to the world through future collaboration between industry, government, and academia.

We consider investment returns from a long-term perspective, as establishing future engines of growth entails wide-ranging R&D expenditures that can be expected to create businesses and generate growth over the long term. In our Functional Materials Manufacturing Business, asset acquisitions for expanding the business are large, and we expect returns to exceed the cost of capital in the relatively short to medium term. But we have also made upfront investments in anticipation of future business expansion, including land acquisition. Concerning the transformation of EPC operations, our investments anticipate strengthening our competitiveness for future orders through DX and

improving the efficiency of EPC services.

The Group Investment and Loan Committee established under JGC Holdings Corporation conducts quantitative analyses that factor in capital costs when making investment decisions, and also carefully and cautiously deliberates research and development projects based on their potential to lead to future business expansion. The committee also monitors the progress of projects after investments are made, as part of a system that can effectively study whether to withdraw from certain businesses.

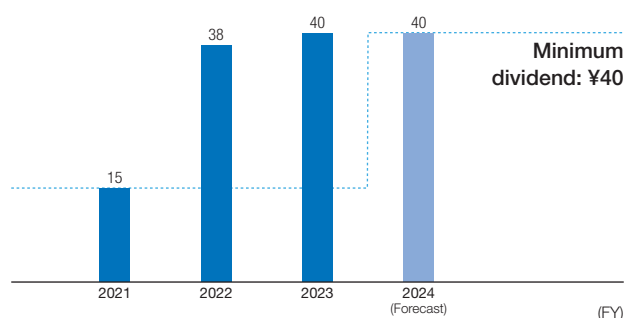
## Greater Shareholder Returns

We view shareholder returns as a key management issue for the Company, and our dividend policy seeks a payout ratio of about 30% during the BSP 2025 period. Cash dividends are generally paid once per year. We have revised the minimum annual dividend per share based on our current financial position and future earnings outlook, increasing it from ¥15 to ¥40 per share. Based on this policy, we have set the dividend forecast for fiscal 2024 to ¥40 per share.

Under this policy, the Company will consider share buybacks when needed, factoring in aspects including business outlook and free cash flow. I want to consider our forecast from here out once we verify the accuracy of our fiscal 2024 earnings forecast.

### Cash Dividends per Share

(Yen)



As the CFO, during fiscal 2024 I intend to ensure we meet our fiscal 2024 earnings forecast by supporting the financial rebuilding of our EPC execution structure. In addition, we intend to meet shareholder expectations by making consistent progress in increasing the dividend per share by expanding business performance and improving shareholder value over the medium to long term. We appreciate the continued understanding and support of all of our shareholders.

# *Chapter 3*

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## **Growth Strategy**

Under the purpose of “Enhancing planetary health,” the JGC Group has been steadily promoting its long-term management vision 2040 Vision, formulated in fiscal year 2021, as well as its medium-term management plan BSP 2025, which covers the current five-year period.

In this chapter, we outline the key issues underlying the Group’s value creation process and strategies, as well as progress in BSP 2025 and future policies aimed at achieving our goals.

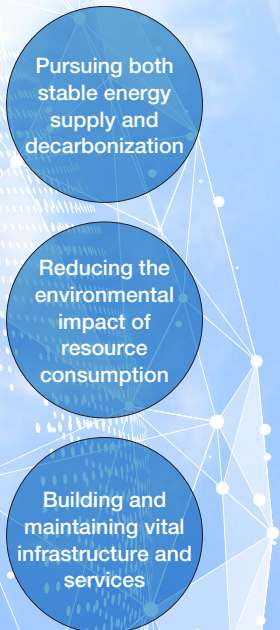
- 25 JGC Group's Value Creation Process
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- 35 JGC Group's Materiality (Material Issues)
- 37 Long-Term Management Vision and Medium-Term Business Plan
- 39 Progress in BSP 2025, the Medium-Term Business Plan

# JGC Group's Value Creation Process

The JGC Group aims to achieve sustainable growth and solve social issues by leveraging the strength that cultivated in its existing businesses, and unique management capital.

## Enhancing planetary health – Create a more prosperous future by pursuing the

Social issues that the JGC Group is aiming to solve



### Materiality

- Societies in harmony with environment
- Working with local communities around the world
- Human rights, employee motivation
- Energy access
- Quality of life
- Corporate governance, and risks management
- JGC Group Materiality (Material Issues) **P.35**

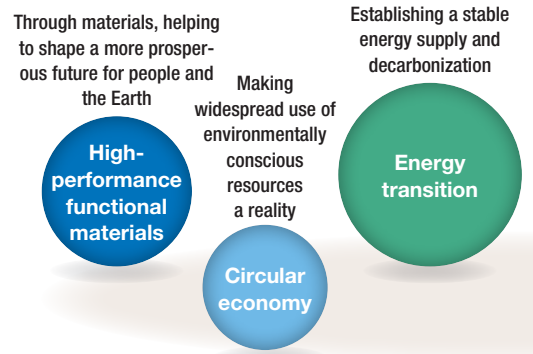
Formulation

Realization

## JGC Group's Growth 2040 Vision

2040 Vision of the JGC Group

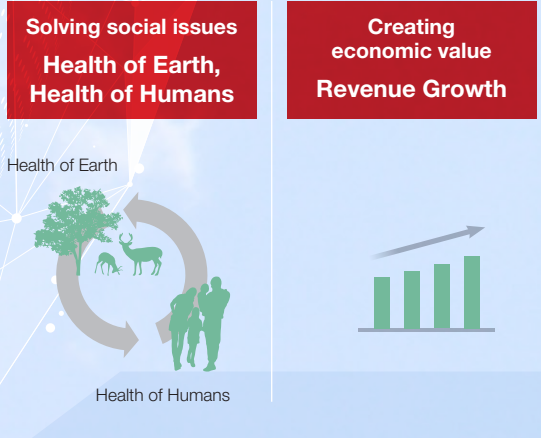
A corporate group that contributes to enhancing planetary health



Achievement

Achievement

### Improvement of Corporate Value



Reinvestment

### Management Capital

Human capital	Intellectual capital
Social and relationship capital	Manufacturing capital
Financial capital	Natural capital

JGC Group's Management Capital **P.27**

### Corporate Governance

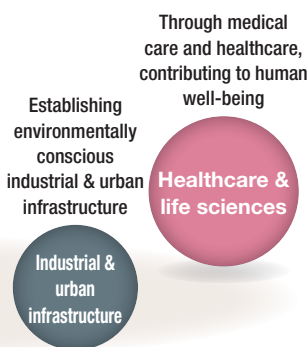
# intertwined health of humans and the earth—

JGC's Purpose and Values P.1

## Strategy

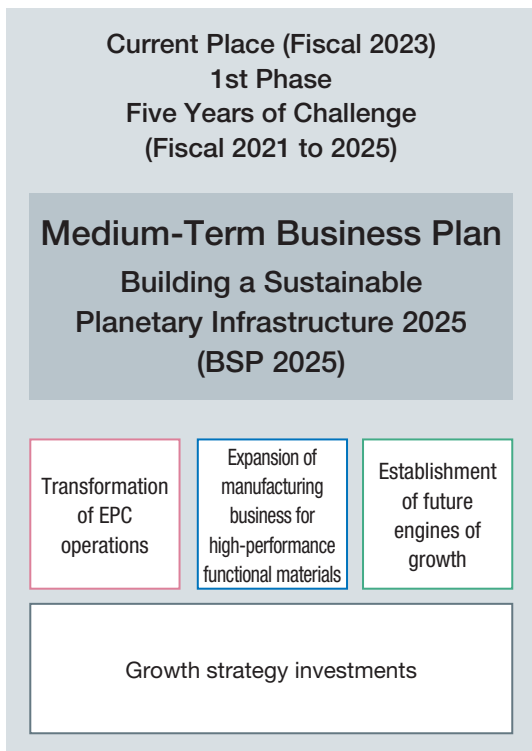
Long-Term Management Vision and Medium-Term Business Plan P.37

### in five business areas



### Three Aspects of Transformation (TX)

- Business area TX
- Business model TX
- Organizational TX



Demonstrate life-cycle engineering

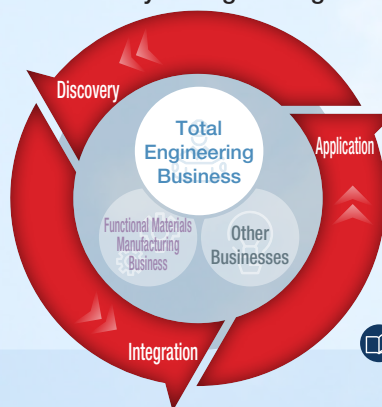
### Business Activities

Four strengths



Four key strengths keep life-cycle engineering going













Life-cycle engineering



Strengths Supporting Value Creation P.28

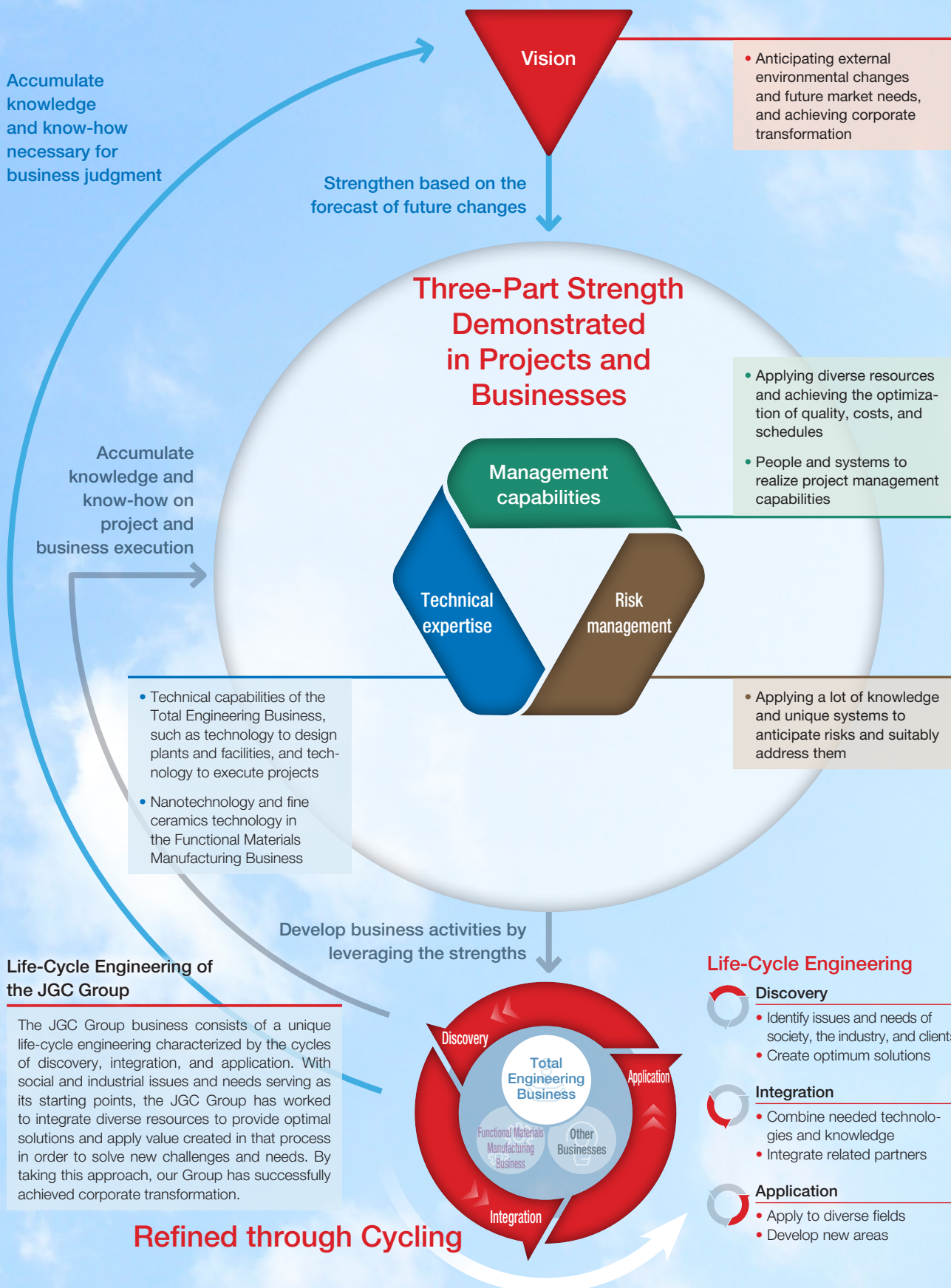
# JGC Group's Management Capital

The JGC Group built its unique management capital through many years of corporate activities. This management capital creates competitive energy in business activities, playing a critical role in the Group's value creation.

<p><b>Human capital</b></p>	<p>For the Group, in which the Total Engineering Business focusing on the software side of business accounts for 90% of sales, human capital is an extremely important part of management capital.</p>	<ul style="list-style-type: none"> <li>• Human resources strategy linked to growth strategy</li> <li>• Human resources who are experts in various fields such as chemical engineering</li> <li>• Human resources with various backgrounds and values</li> <li>• Open-minded corporate culture, and others</li> </ul>
<p> Strengths Supporting Value Creation <b>P.28</b>  Human Capital Initiatives <b>P.53</b>  Respect for Human Rights <b>P.65</b></p>		
<p><b>Intellectual capital</b></p>	<p>For the Group with an extensive track record and know-how in project management, which can be hard to visualize, intellectual capital is an important part of management capital.</p>	<ul style="list-style-type: none"> <li>• Intellectual capital for the Total Engineering Business including know-how that has been accumulated through completing more than 20,000 projects in over 80 countries</li> <li>• Intellectual capital for the Functional Materials Manufacturing Business including the technology to manufacture niche products</li> <li>• Usage of intellectual property and intangible assets, and others</li> </ul>
<p> Strengths Supporting Value Creation <b>P.28</b>  Intellectual Capital Initiatives <b>P.63</b></p>		
<p><b>Social and relationship capital</b></p>	<p>Having contacted with many people involved and played a leading role among them, JGC is ahead of other competitors in terms of social and relationship capital.</p>	<ul style="list-style-type: none"> <li>• Long-standing credibility with clients</li> <li>• Network of suppliers and subcontractors</li> <li>• Relationships with various relevant agencies</li> <li>• Collaboration with partners from various industries, and others</li> </ul>
<p> Strengths Supporting Value Creation <b>P.28</b>  Stakeholder Engagement <b>P.69</b></p>		
<p><b>Manufacturing capital</b></p>	<p>The JGC Group possesses the capacity to manage large and complex plant projects in safety and achieve on-time deliveries as well as manufacturing capital necessary for the manufacture of high-performance functional materials.</p>	<ul style="list-style-type: none"> <li>• Commitment to health, safety, security, and the environment (HSSE)</li> <li>• Quality management to design massive structures and achieve on-time deliveries</li> <li>• Manufacturing sites, technologies, and systems for the Functional Materials Manufacturing Business</li> </ul>
<p> Occupational Health and Society <b>P.67</b>  Quality Management <b>P.68</b></p>		
<p><b>Financial capital</b></p>	<p>The JGC Group possesses solid financial capital necessary to carry out large and long-term projects stably, and utilize such capital.</p>	<ul style="list-style-type: none"> <li>• Financial and investment strategies toward improving corporate value with a medium- and long-term perspective</li> <li>• Solid financial foundation to stably execute projects</li> <li>• Credit rating: A+, and others</li> </ul>
<p> CFO Message <b>P.19</b>  Long-Term Management Vision and Medium-Term Business Plan <b>P.37</b></p>		
<p><b>Natural capital</b></p>	<p>The JGC Group, in which the Total Engineering Business, plays a central role, works on EPC operations, and others, for environment-friendly plants according to the characteristics and specifications of projects.</p>	<ul style="list-style-type: none"> <li>• EPC initiatives for environment-friendly plants</li> <li>• Utilization of renewable energy, and others</li> </ul>
<p> Climate Change Initiatives <b>P.49</b></p>		

# Strengths Supporting Value Creation

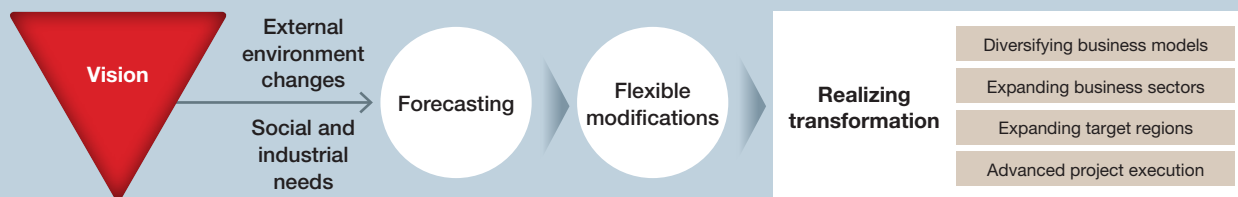
The JGC Group achieved sustainable growth by leveraging the four strengths that have been cultivated since its founding in management and business activities as well as by refining these strengths through using knowledge and know-how obtained in the process.



Strengths Supporting Value Creation

**Vision** • Anticipating external environmental changes and future market needs, and achieving corporate transformation

Foresight originally led to the founding of the JGC Group, in expectation of changes in domestic energy demand and supply. Since then, the Group has continued to grow by constantly anticipating internal and external changes in market the environment and social and industrial needs to expand our business sectors and target regions, diversify business models, and advance project execution. It is believed this strength will be increasingly valuable in the turbulent modern market environment and will drive sustained growth of the Group in times to come.



**Anticipate Social and Industrial Needs to Achieve Corporate Transformation**

**Expanding business sectors**

Anticipating social and industrial needs to advance into growth segments where we can take advantage of our technologies and knowledge

Example

▶ **Capturing of growth segments**

We have always explored promising segments where we can take advantage of our strengths to meet the needs of the times ahead of others.

e.g., Crude oil and natural gas production (upstream), LNG, renewable energy, nuclear power, pharmaceuticals and hospitals, etc.



**Expanding target regions**

Monitoring and anticipating regional trends in resource and energy demand and economic growth across the world to expand into promising regions

Example

▶ **Global expansion building on domestic business**

By applying refining expertise cultivated in Japan, we expanded our business into regions with active oil development such as South America and North Africa in the 1960s.



**Advanced project execution**

Along with an increase in the scale of projects, we have proactively worked on the streamlining of the method of managing processes for designing, procurement and construction work, as well as the sophistication of project management and risk management, seeking to provide high added value to the Total Engineering Business.

Example

▶ **Establishment of a scientific project management method**

We have developed an original project management system in which qualitative and quantitative project information can be visualized, managed, and utilized. This system is useful in latter project stages and in anticipating risks, and has been increasingly adapted to digitalization.

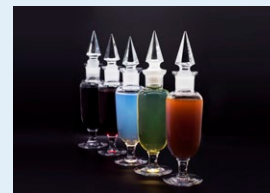
**Diversifying business models**

Anticipating social and industrial needs to expand business models by developing and applying our technologies and spinning off related businesses while remaining centered on engineering

Example

▶ **Expansion into catalyst and fine chemical business**

We separated and spun off the technology for manufacturing catalysts necessary in the oil refining process to start the catalyst production business. After that, by expanding and applying nanotechnologies cultivated in the catalyst production business, we advanced into the fine chemical business.



**2040 Vision — A Crystallization of Foresight**

The 2040 Vision formulated based on foresight is a product of our efforts to anticipate how the world will be in 2040 in view of environmental changes expected from various perspectives, including that of the energy sector, as well as to identify issues our Group has to solve and its roles to fulfill after comparing challenges the world is facing with the competence of the JGC Group, and we are moving forward steadily toward its realization.



## Technical expertise

- Technical capabilities of the Total Engineering Business, such as technology to design plants and facilities, constituent technologies, and technology to execute projects
- Nanotechnology and fine ceramics technology in the Functional Materials Manufacturing Business

The JGC Group's technical expertise supports the foundation of both the Total Engineering Business and the Functional Materials Manufacturing Business.



## Total Engineering Business

LNG plants, petroleum refining/petrochemical plants, clean energy plants, nuclear plants, pharmaceuticals manufacturing factories, hospitals, etc.

### Identify and integrate technologies

#### Technologies for plant and facility design (E)

##### ▶ Process design

Process design plays a central role in plant design. A total of more than 200 process engineers in Japan and overseas are engaged in the designing of a plant as whole.

##### ▶ Detailed design engineering

Engineers specialized in various areas, such as piping, equipment, civil engineering and construction, electricity and instrumentation, structure, IT, and others, are engaged in detailed design engineering.

##### ▶ Technical integration

Engineers cooperate while closely communicating with each other and integrate a wide variety of technologies to create an organic whole.

### Leading a project to an optimal solution

#### Project execution

We integrate a wide variety of knowledge and expertise in carrying out a project while optimizing engineering drawings, quality of specifications and cost schedule to give shape to a design and create an immense structure.

##### ▶ Project management



Management Capabilities P.31

##### ▶ Procurement (P)

In the light of quality and schedule and costs for a project, as well as to drawing sheets and specification documents created by engineering (E), an optimal vendor is selected from a broad network of client companies with which we have built long relationships, after which negotiations on prices and delivery deadline, and order management are conducted.

##### ▶ Construction (C)

On the basis of the track record of carrying out many projects, we can select subcontractors and construction methods\* suitable for each country or region. In addition, we supervise construction in which many interested persons are involved, with consideration for various viewpoints such as the progress of designing and procurement and the status of subcontractors, while being committed to HSSE, to create a massive organic whole.

\* The Company has a number of construction methods including the **modular construction method**.

Human resources supporting the technical expertise of the Total Engineering Business JGC Group's Expert Map P.61



## Functional Materials Manufacturing Business

Catalysts (petroleum refining, chemicals, and environment), fine chemicals, and fine ceramics

### Give shape to clients' potential needs with the power of materials

Nanotechnology and fine ceramics technology that constitute a foundation for catalyst development are applied in various areas, such as semiconductor production process, electronics materials, and cosmetics, supporting the Functional Materials Manufacturing Business of the JGC Group.

#### ▶ Catalysts and fine chemicals

By utilizing nanotechnology developed through the designing and production of catalysts, which can control grain size, micropore diameter, and macrostructure, we have developed advanced functional materials with unique engineering properties and surface properties, and created new value for clients in a wide range of industrial circles including that of semiconductors, responding to social challenges such as carbon neutrality and a circular economy.

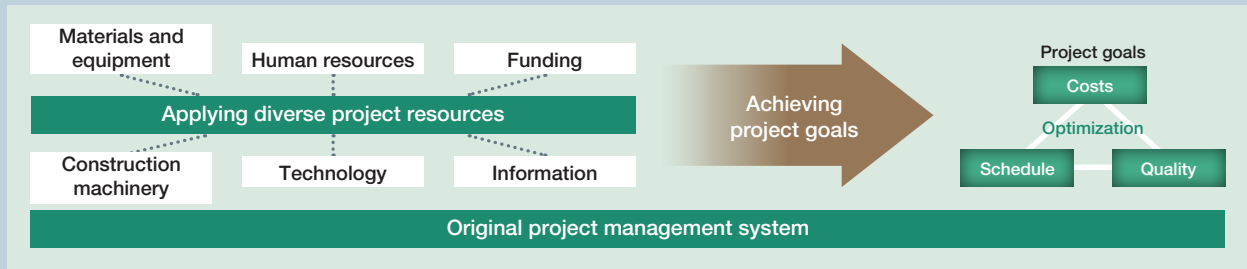
#### ▶ Fine ceramics

By developing meter-sized large ceramic components used for exposure devices of semiconductors such as non-oxide ceramics and metal-matrix composites with our original manufacturing and processing technologies, as well as our original manufacturing technologies, such as the world's first direct nitridation technology for metallic silicon. We have succeeded in mass-producing high thermal conductivity silicon nitride substrates to increase energy efficiency of power modules of EVs, contributing to the realization of a decarbonized society.

**Management capabilities**

- Applying diverse resources and achieving the optimization of quality, costs, and schedules
- People and systems to realize project management capabilities

Management capabilities—for project management in particular—are a core competency of the JGC Group as an EPC-focused enterprise. They efficiently manage diverse project resources with an original project management system to complete plants and facilities on time, on budget, and at the level of quality required by customers.



### Human Resources and Systems to Realize the JGC Group’s Project Management

This section describes the JGC Group’s typical approaches to support project management capabilities from the two perspectives of “human resources” and “system.”

**Human resources**

Our Group recognizes it is important to provide ongoing training for human resources to execute projects in the EPC business, particularly for project managers who serve as project supervisors, and others who head various functions. Continuous training of applicable candidates is monitored to provide extensive professional experience from a medium- and long-term perspective to provide ongoing training to develop human resources who can see projects from a higher perspective.

**Project manager (PM) career path**

Entering the Company — 30s

External experience and training

- Joint venture organization
- Overseas subsidiaries
- Corporate dispatching
- Internal and external training programs

30s — 40s

40s — 50s

**Creation and implementation of a human resources training plan that goes beyond the framework of company divisions and departments, based on a human resources vision looking toward the future**

JGC Holdings top management	Subsidiaries’ management
Project Staff Administration Department	Department of human resources management (office)

**System**

In our project management, it is common to adopt a work breakdown structure (WBS), in which a project is divided into smaller tasks and organized in a layered structure. Since the 1980s, the JGC Group has utilized a unique method, in which tasks are systematized with a matrix using two different types of WBS, and each of them are managed with ID separately. This has achieved efficient and sophisticated management of costs, schedules, resources, etc. This management method has also been standardized within the Group, contributing efficient expansion and sharing of knowledge between projects.

- ▶ ① **FWBS (Functional WBS):**  
FWBS refers to the categorization of tasks of a project under execution based on “functions,” such as designing, procurement, construction.
- ▶ ② **PCWBS (Project Control WBS):**  
PCWBS refers to the categorization of tasks of a project from different angles other than functions, such as area-based or equipment-based and categorization.
- ▶ ③ **Work Package:**  
Work Package refers to a minimum unit of a project in work management. Each Work Package is linked to information about work scope, work volume, needed resources, costs, schedules, etc.



## Risk management

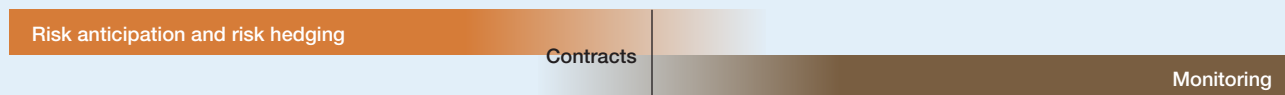
• Applying a lot of knowledge and unique systems to anticipate risks and suitably address them

With recent projects at larger scales, changes in individual project profitability may greatly affect overall corporate profit or loss. Based on the recognition that suitably addressing risks is essential in managing projects, and accordingly, all team members involved in projects follow a risk management flow applying our original project management system and methods to respond to a variety of project risks for each role fulfilled and in each phase.

### Major project risks

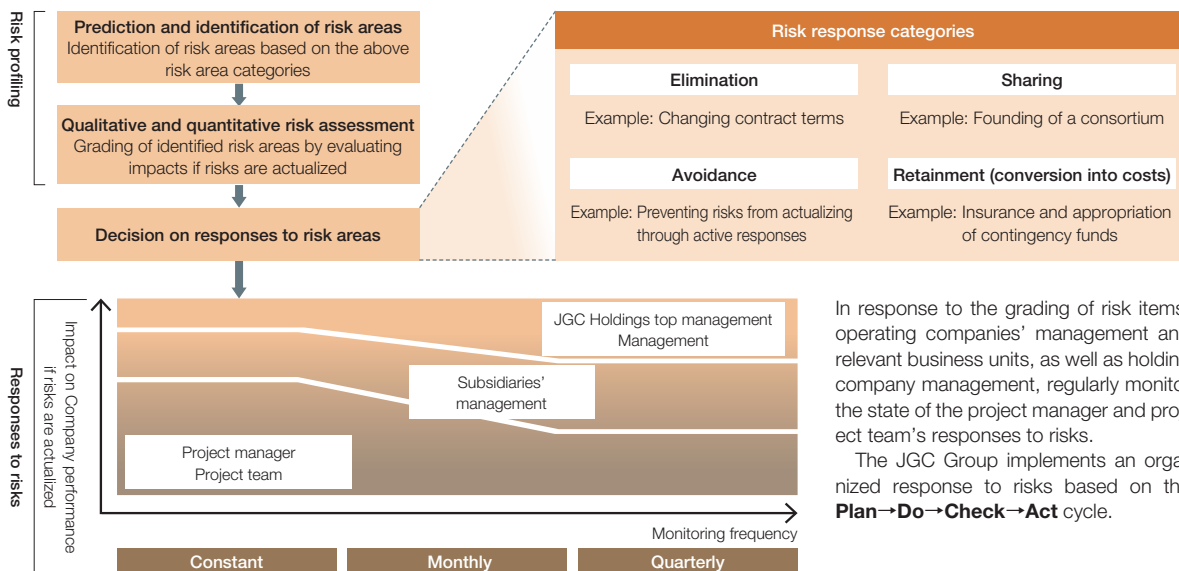
Technology risks	Market risks	Contract terms and other serious risks
Risks that must be grasped from the perspective of technical specifications and scope of work <b>Increase in design man-hours due to changes in technical specifications or defective transmission of information, untried process technologies, etc.</b>	Risks that must be understood from the perspective of project implementation <b>Market risks including rising materials, equipment prices, and labor costs</b>	Risks that must be grasped from the perspective of contract terms and project backgrounds <b>Exchange rates, taxations, political instability, climate and natural disasters, excessive requirements of performance, delivery guarantee, etc.</b>

### Risk Management Flow for General Projects



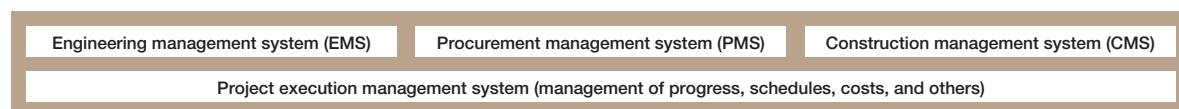
#### Risk anticipation and risk hedging

By leveraging the ability to foresee risks corroborated by our track record of executing many projects as well as by the collection of information based on solid supplier networks, etc., we identify risks in projects exhaustively, and adequately hedge such risks at the steps of contract, estimation, etc.



#### ► Unique project management tools

Our project management tools visualize the progress status of a project at each element and phase, and enable early detection and response to risks, and we are improving them through the DX of the EPC business.



Regarding identified risks, by utilizing a systematized review system and the project management tools, we thoroughly monitor risk occurrence and response status.

Monitoring

## Message from Employees

Here are messages from our Group's employees for you to clearly visualize how the JGC Group's strengths are actually displayed and contribute to value creation.

### Conscious of Becoming a "Driving Force" of Projects

Since joining the Company in 2007, I have been consistently engaged in project management for multiple sectors in the country, such as petroleum refining, power generation, gas processing, low-carbon/decarbonization engineering, and others.

In my early 30s, I became a project manager and began to get involved in the EPC business. Since then, while facing the tasks at hand, I have always fixed my eyes on the goal of EPC projects being conscious of becoming a driving force to advance projects by making full use of the resources available, such as technologies, information, time, and budgets. I feel that such a mindset has been spreading across the Company as a corporate culture, in which I have been brought up and fostered since I was young.

With the industrial structure rapidly changing in recent years, I feel our clients are beginning to expect us to play a role as a solution provider to solve issues occurring in clients' business operations, instead of simply playing a role as a plant construction company.

Going forward, I would like to contribute to the solution of social issues through realizing clients' projects, and strive to achieve "Enhancing planetary health," which the JGC Group is holding up as its purpose.



**Kazuaki Miyamoto**

Group Leader  
Energy Project Department,  
Energy Transition Division,  
JGC Japan Corporation



**Naoki Hattori**

Project Control Department,  
Project Operations Division,  
JGC Corporation

### Risk Management Seeing the Entire Project from a Higher Perspective

I joined the Company in 2006, and since then, I have been involved in estimation work and cost management for projects in the Middle East. Presently, I am in charge of cost management for a refinery upgrading project in Basrah, Republic of Iraq.

For a project to be profitable, it is necessary to identify all risks involved in the project, understand how to manage them, and invest money efficiently. In light of my past experience, I believe they are key factors to determine the profitability of a project. As an actual past case, in the middle of a construction period, there was a concern about delay in the entire construction schedule due to a shortage of cranes to hoist heavy goods and transport heavy machines. We thought that delay in the entire construction schedule itself would pose the largest risk for the project. Therefore, we quickly increased the number of cranes and transport heavy machines, by which we were able to avoid delay in the entire schedule. The cost impact caused by increasing the number of cranes and machines was not very small, but I recognized that we were able to avoid a vast cost impact arising from delay in the construction schedule by making this decision.

As shown in this case, unlike other companies, our risk management is carried out in a very dynamic way, in which I take pride. This was a good opportunity for me to learn that risk management is not always about controlling spending.

### "Center of Excellence" of FEED Based on Solid Technical Expertise

Since joining the Company in 2008, I have gained experience mainly in designing ethylene manufacturing plants. After serving as a process assistant lead engineer in the EPC project for the world's largest ethylene manufacturing plant, now I am aiming at the completion of the FEED for the same project and the starting of the plant's operation as a lead engineer.

JGC Group's process engineers have designed numerous plants for LNG, gas processing, oil refining, and petrochemicals. Based on the technical skills, extensive knowledge, and expertise we have cultivated, we provide valuable solutions to society. We aim to balance the growth of the Group with social contributions, making the world a better place. We could say that this strength is due to our multi-talented human resources, who have solid process technology as our core.

In addition, process engineers in charge of FEED, which accounts for 90% of plant costs, convey precise drawings and design information to a detailed design department according to the schedule, closely communicate with project engineers and the detailed design department in the case of unexpected circumstances, and provide optimal solutions to both clients and contractors.

From now on, with a view to realizing a decarbonized society, I would like to provide carbon-neutral plants by utilizing our strength of technical expertise, and contribute to the creation of a future where society, our clients, and the JGC Group enjoy happy lives.



**Yuki Kawamura**

Process Engineering Department,  
Process Technology Division,  
JGC Corporation

### New Business Built Up in “One Team”

Since joining the Company, I have been involved in domestic and overseas projects as a process engineer. Since 2020, I have been engaged in the new business of manufacturing SAF from waste cooking oil.

In the SAF business, in addition to serving as an EPC contractor, I am also working as the owner of the fuel manufacturing business personally. We have established SAFFAIRE SKY ENERGY LLC with partner companies, and are now constructing an SAF manufacturing factory in Sakai City, Osaka Prefecture, aiming at commencing its operation in 2025.

The success of this business depends on securing waste cooking oil used as a raw material. At first, most of the people working in the restaurant business and for food manufacturers did not know that aviation fuel can be produced from waste cooking oil. Therefore, our company launched the Fry to Fly Project (flying in the sky on waste cooking oil) in 2023, and has been steadily nurturing momentum since then, with the number of participating organizations exceeding 150 now.

Since beginning to consider its commercialization, we have been devoting ourselves aiming at the beginning of production supported by many people involved within the Company and outside who provided knowledge and insight. From the experience gained from past projects, we have created an environment that allows us to freely communicate beyond the barriers between positions and departments. Working together as “one team” has led to the successful conclusion of projects, which I believe made this happen.



#### Ayaka Uemura

Incubation Group,  
Sustainability Co-Creation Unit,  
Sustainability Co-Creation Office,  
JGC Holdings Corporation



#### Hirotada Arakane

MM No.2 Research Group Manager,  
Fine Chemicals Research Center  
JGC Catalysts and Chemicals Ltd.

### Aiming to Be the One Opening Up Further Potential of the JGC Group with the Power of Nanomaterials

I have been engaged in the research and development of products in fine chemicals. In 2004, when I joined the Company, color liquid crystal panels were adopted as mobile phone screens, spreading throughout the world. I worked on the development of functional transparent membranes to support their supply at the Company, providing them to clients in Japan and overseas. After that, I have continued aiming at developing one-of-a-kind materials as the manager of a research group handling displays, multimedia materials including semiconductors, IT-related materials, and nano-domain control technology.

After all, our strength lies in our ability to handle materials. In particular, we have the developing power to create products incorporating clients' needs for the next-generation society by leveraging nanotechnology in order to maximize the functions of materials by controlling their shape, size, and surface in nanometer-sized domains, which gives our Company an edge. I believe that the co-creation process to communicate with our clients through a “sample,” which is a value module that we can provide, and our manufacturing capabilities will have a powerful effect in the realization of clients' needs that continue to change while getting more complex.

The power of materials will become increasingly important for sustainable development and technical innovation of society in the future. As a developer of a functional materials manufacturer, I aim to be the one who can create original nanomaterials with high added value that can lead clients and markets with foresight, and open up further potential of the JGC Group.

### Team of Engineers Creating Energy and a Decarbonized Society in the Future

I have engaged in energy-related projects including overseas LNG projects at a government-affiliated financial institution and a general trading company for many years while playing various roles such as a finance advisor, a capital investor, and an off-taker. I am presently involved in strategy planning of the entire JGC Group.

When I started to work for the Company, I was impressed by the breadth of efforts, knowledge, and expertise that the JGC Group is directing toward the solution of the energy issue and the global warming issue, extremely weighty subjects that human beings are facing, which was beyond my expectation. In addition to the electrification of LNG, which is essential as transitional energy, and the low carbonization of CCS, the Group has been involved in most of the subjects listed in the Japanese government's Green Growth Strategy, such as those related to hydrogen and fuel ammonia, offshore wind power generation, solar power generation, nuclear power generation, SAF, chemical recycling, biomanufacturing, and semiconductor materials. This wide-ranging approach is rooted in the engineering firm's business trait to respond to client's various needs by carrying out designing, procurement, and plant construction while combining the best technologies and products available globally. In addition, because 90% of JGC Group employees are engineers in various fields such as chemistry, machinery, electricity and instrumentation, construction, civil engineering, and information, it has been possible to get involved in the weighty subject of global warming from various angles. This means that we have a strength to anticipate social implementation because we can tell which technology will be realized and when, so we commercialize such knowledge and know-how to achieve sustainable growth.

In addition, I find myself extremely so much blessed since I can construct my own scenarios for achieving carbon neutrality in the world and Japan. This is based on discussions with my colleagues, supported by academic evidence, regarding the major issues of energy and global warming.



#### Aya Yamazaki

Senior Advisor  
Strategic Planning Unit,  
Strategy Planning Office,  
JGC Holdings Corporation

# JGC Group Materiality (Material Issues)

The JGC Group has held up the Basic Policy for Sustainability, and identified key issues for stakeholders around the Company and its management as materiality. All our corporate activities are oriented toward resolving materiality, and we are also aiming to enhance the corporate governance structure and sustainability management as part of efforts toward resolving materiality.



















## **Purpose** *Enhancing planetary health*

### Basic Policy for Sustainability

The JGC Group will endeavor centered on its “Enhancing planetary health” as its purpose, to sustainably increase its corporate value through creation of social values.

To realize the above, it will actively pursue sustainability in the areas of environment, society, governance, quality, safety, and health.

### JGC Group Materiality (Material Issues)

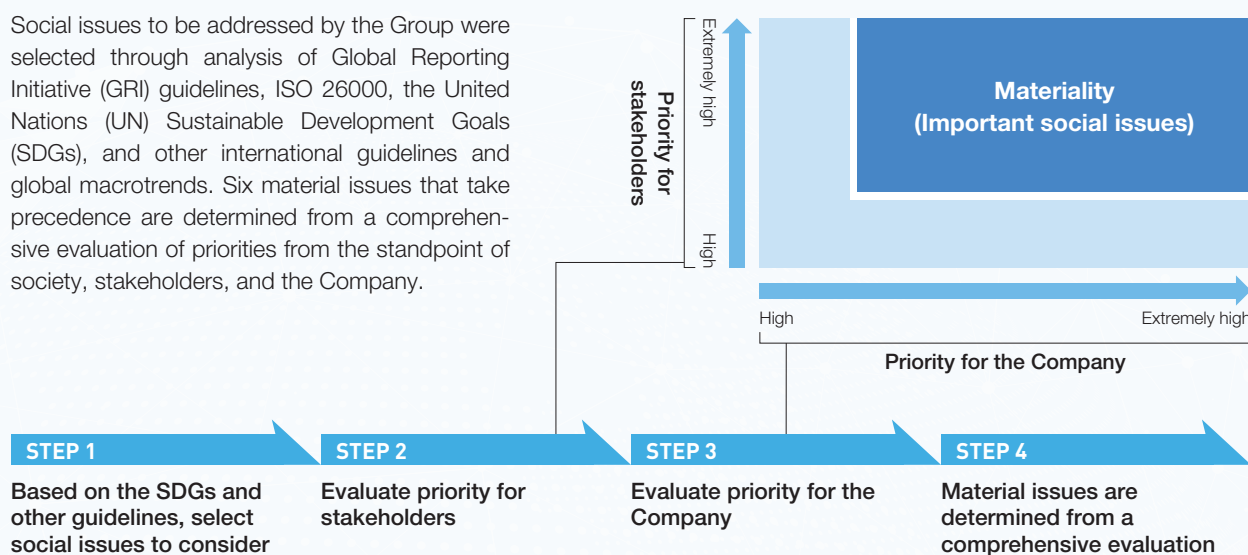
	Materiality	Related SDGs	
<b>E</b>	Societies in harmony with environment	   	
<b>S</b>	Materiality to address through business activities	Working with local communities around the world	   
		Human rights, employee motivation	  
	Materiality to achieve as a result of business activities	Energy access	 
		Quality of life	  
<b>G</b>	Corporate governance, and risks management	 	

## Materiality Positioning and Identification Process

With issues positioned as materiality viewed as key elements, fundamental in establishing management policies and conducting business, the JGC Group aims to help solve social issues and create economic, social, and environmental value through sound business activities.

### Materiality identification process

Social issues to be addressed by the Group were selected through analysis of Global Reporting Initiative (GRI) guidelines, ISO 26000, the United Nations (UN) Sustainable Development Goals (SDGs), and other international guidelines and global macrotrends. Six material issues that take precedence are determined from a comprehensive evaluation of priorities from the standpoint of society, stakeholders, and the Company.



Recognized social issues	Materiality icon
<ul style="list-style-type: none"> <li>Reducing the environmental impact of fossil energy</li> <li>Promoting use of a greater share of renewable energy</li> <li>Protecting ecosystems, maintaining biodiversity</li> <li>Promoting development of products and technologies that help curb global warming</li> </ul>	
<ul style="list-style-type: none"> <li>Contributing to economic and industrial development in emerging markets</li> <li>Creating employment in emerging markets</li> <li>Supporting technology transfer and human resource development in emerging markets</li> </ul>	
<ul style="list-style-type: none"> <li>Promoting workplace diversity</li> <li>Promoting female hiring and strengthening skill-building</li> <li>Respecting human rights in all business activities</li> </ul>	
<ul style="list-style-type: none"> <li>Meeting greater global energy demand</li> <li>Promoting wider use of renewable energy that contributes to sustainable growth</li> <li>Enhancing productivity through greater global energy efficiency</li> </ul>	
<ul style="list-style-type: none"> <li>Responding to aging social and industrial infrastructure</li> <li>Promoting development of social and industrial infrastructure in emerging markets</li> <li>Improving global medical standards</li> <li>Making life more convenient and comfortable</li> </ul>	
<ul style="list-style-type: none"> <li>Strengthening and improving corporate governance</li> <li>Ensuring regulatory compliance in business activities</li> <li>Responding appropriately to corporate and business risks</li> </ul>	

# Long-Term Management Vision and Medium-Term Business Plan

Toward 2040, the JGC Group will transform itself to be a corporate group that contributes to enhancing in planetary health in the five business areas of Energy transition, Healthcare & life sciences, High-performance functional materials, Circular economy, and Industrial & urban infrastructure, in which the Group can give full play to its technologies, track record, and core competence. With the long-term management vision, 2040 Vision, divided into the three phases of “Five years of challenge,” “Five years of harvest,” and “10 years of rapid growth,” we will promote the medium-term business plan, Building a Sustainable Planetary Infrastructure 2025 (BSP 2025) to be carried out during the first phase of “Five years of challenge.”

## 2040 Vision, Our Long-Term Management Vision

**2040 Vision of the JGC Group**

**A corporate group that contributes to enhancing in planetary health in five business areas**

Through materials, helping to shape a more prosperous future for people and the Earth

Making widespread use of environmentally conscious resources a reality

Establishing a stable energy supply and decarbonization

Through medical care and healthcare, contributing to human well-being

Establishing environmentally conscious industrial & urban infrastructure

## Three Aspects of Transformation

### 1 Business area transformation

Positioning the five business areas as core business, growth business, and future business depending on the timeline for expansion, the Group will establish them as pillars of business one by one.

● Oil & Gas ● Renewable energy ● Energy transition ● High-performance functional materials ● Healthcare & life sciences ● Circular economy ● Industrial & urban infrastructure

**Present**  
(Fiscal 2020)

- Advancing into renewable energy infrastructure
- Further developing our functional materials manufacturing capabilities
- Sowing the seeds for businesses promoting sustainability

**Five years of challenge**  
(Fiscal 2021 to Fiscal 2025)

- Expanding core business (Energy transition)
- Actively investing in growth businesses
- Laying the groundwork for future business

**Five years of harvest**  
(Fiscal 2026 to Fiscal 2030)

- Harvesting the fruit of efforts for growth business (High-performance functional materials, Healthcare & life sciences)
- Making future business profitable

**10 years of rapid growth**  
(Fiscal 2031 to Fiscal 2040)

- Developing the future business (Circular economy, Industrial & urban infrastructure) into pillars of business
- Establishing diversified portfolio management

Timeline →

**Five years of challenge**  
(Fiscal 2021 to Fiscal 2025)

**► Medium-Term Business Plan (BSP 2025)**

With the first five years (fiscal 2021 to fiscal 2025) toward the realization of the 2040 Vision positioned as the 1st phase, “Five years of challenge,” we formulated the medium-term business plan, Building a Sustainable Planetary Infrastructure 2025 (BSP 2025), to be carried out during this period in fiscal 2021. In addition, we established three key strategies in BSP 2025, on the basis of which we will implement the operation of each business and investment strategies.

Progress in BSP 2025, the Medium-Term Business Plan **P.39**

**Three key strategies**

**Key Strategy 1** Transformation of EPC operations

Increase competitiveness and profitability in mega-sized EPC projects

Take on EPC growth markets and segments

**Key Strategy 2** Expansion of manufacturing business for high-performance functional materials

Offer more product lineups in existing business for increased revenue

Expand sales of strategic products

Explore and develop next-generation business

**Key Strategy 3** Establishment of future engines of growth

## 2 Business model transformation

### Transformation of EPC business model

In the EPC business, we will promote the digitalization of EPC operations (EPC DX) in particular for the transformation of the EPC business model. We will also seek business model expansion upstream and downstream in the value chain based on our accumulated experience, aiming to establish new business models applying digital technologies.

### Diversifying into non-EPC business models

In the area of non-EPC business models, while reinforcing our existing Functional Materials Manufacturing Business, we will undertake transformation that leverages the Group strengths such as licensing, project management consulting (PMC) and other consulting, maintenance and digital O&M, digital platform business, as well as participation in new business.

## 3 Organizational transformation

### Stronger framework for regional management

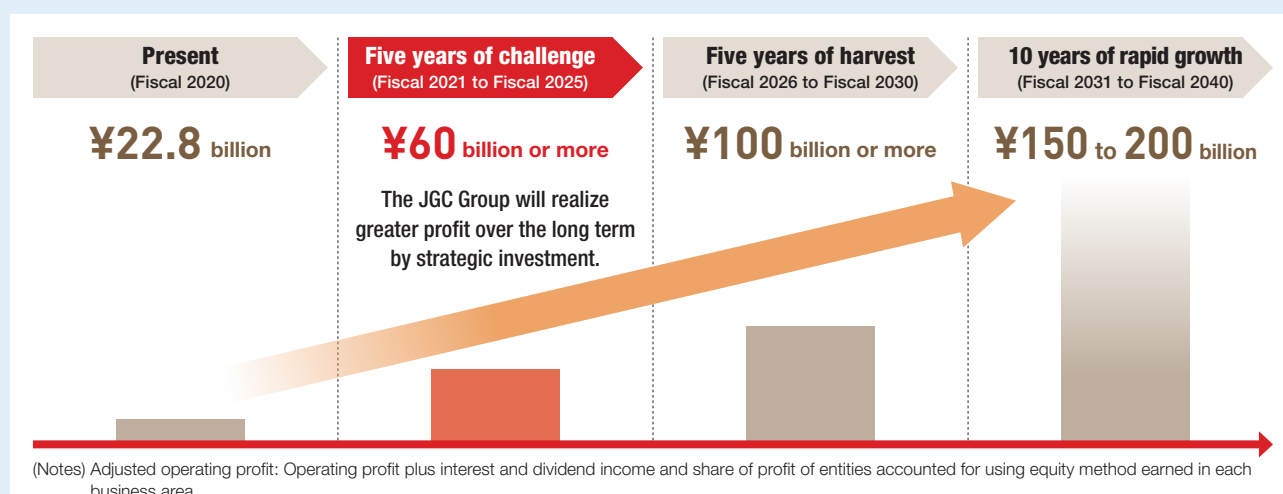
Complementing existing project management from the head office in Japan, we are strengthening our regional management framework, aimed at promptly proposing and executing solutions in an attentive, locally produced and consumed arrangement for local clients in growth markets.

### More vibrant culture of innovation

In new and existing operations, a corporate culture will be fostered for continuous innovation in technical commercialization and business model development, as needed for transformation in business areas and models. We will seek an “ambidextrous” organization with diverse work styles.

## Target Level of Operating Profit

We will make proactive strategic investments via these three facets of transformation to reach ¥150–200 billion of operating profit in 2040.



### Financial targets

Through steady progress in implementing the three key strategies, we are targeting net sales of ¥800 billion in fiscal 2025, with operating profit of ¥60 billion, profit attributable to owners of parent of ¥45 billion, and ROE of 10%.

### Strategic investments

A total of ¥200 billion in investment is planned during BSP 2025, including DX, business development, M&As, commercial demonstrations, production facilities, and R&D.

### Fiscal 2025 (targets)

Net sales	¥800 billion
Operating profit	¥60 billion
Profit attributable to owners of parent	¥45 billion
ROE	10%

Transformation of EPC operations

¥70 billion

Expansion of manufacturing business for high-performance functional materials

¥50 billion

Establishment of future engines of growth

¥80 billion

# Progress in BSP 2025, the Medium-Term Business Plan

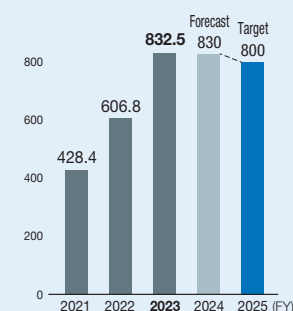
Fiscal 2024 marks the fourth year of BSP 2025 that 2025, which commenced in fiscal 2021. The JGC Group has advanced its own reform while diversifying its business into the five business areas including Energy transition as specified in the Group's medium-term business plan, BSP 2025, and long-term management vision, 2040 Vision, and the Group's general direction of achieving sustainable growth has not changed despite the posting of final loss in fiscal 2023. We will continue to steadily engage in the key BSP 2025 strategies to be carried out in the 1st phase toward achieving the 2040 Vision.

## Progress of Financial Targets

In fiscal 2023, multiple projects executed in Japan and overseas suffered declining profitability, resulting in a decline in earnings, however, we are expecting a business recovery in fiscal 2024. It is possible to achieve the financial targets of BSP 2025 depending on the timing of receiving prospective projects, and we will continue to exert ourselves toward achieving the targets.

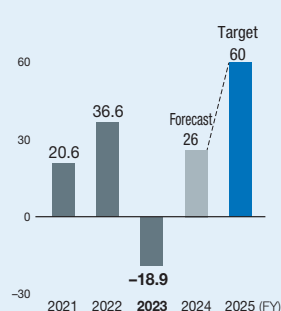
### Net Sales

(¥ billion)



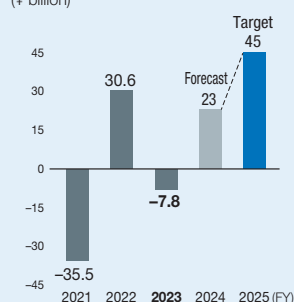
### Operating Profit (Loss)

(¥ billion)



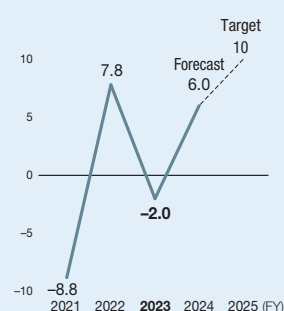
### Profit (Loss) Attributable to Owners of Parent

(¥ billion)



### ROE

(%)



## Causes of Loss, Issues, and Response Policy

### Issue 1

**Suitable human resource allocation to execute design work and ensure quality**

### Cause

JGC Corporation promoted the expansion of business areas and engaged in many FS for the development of businesses related to sustainability within the Group without adequately allocating design resources in related organizations. This caused the disturbance in design quality in some EPC projects executed by the head office of JGC Corporation, leading to delays in schedules. To make up for these delays, a lot of resources were devoted, which create a negative spiral, leading to the declining profitability.

### Response

#### Enhancement of human resources management

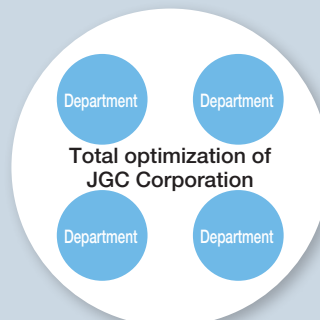
(1) Emphasize three points in project selection

Projects that allows securing profits (current and medium term) and are highly feasible

Projects that allows securing resources

Projects that will become stepping stones for the future

(2) Allocate resources by giving first priority to **the reliable execution of projects** in the light of project selection



(3) Overseas Group companies (Philippines and India) promote the improvement and enhancement of functions as engineering centers

## Issue 2

## Undertaking projects consistent with overseas Group subsidiaries' execution capabilities

## Cause

Amid the scale of client capital investment per project increasing in local markets in Asia and the Middle East, the overseas Group companies secured multiple contracts for medium-scale projects and executed them. However, subsidiaries in Saudi Arabia and Indonesia had not established a solid risk management system yet and did not have sufficient capabilities to carry out projects, with some EPC projects suffering declining profit.

## Response

## Pause efforts to build a stronger framework for regional management

## (1) Redefine the roles of individual overseas Group subsidiaries

Providing engineer support to projects executed out by JGC Corporation

Contract entities of projects executed by JGC Corporation

Securing and executing local EPC projects

## (2) Among projects targeted by bases that accept and execute local EPC projects, focus on only projects that can be differentiated in technologies and prices

To enhance the implementation of countermeasures for issues 1 and 2, Shoji Yamada, Representative Director and President of JGC Japan Corporation was appointed as Representative Director and Senior Executive Vice President of JGC Corporation. This aims to strengthen the management team.



**Shoji Yamada**

JGC Corporation,  
Representative Director and  
Senior Executive Vice  
President

In 1983, Mr. Yamada joined JGC Corporation (now JGC Holdings Corporation). He worked in the sales department for many years, leading efforts to explore new markets and clients in both domestic and African regions.

In 2018, he became an executive officer and held key positions in the domestic infrastructure division. As head of the JGC Japan Planning Office, he successfully led the integration of the former JGC domestic business division with Group domestic subsidiaries. In 2019, following the transition to a holding company structure, he assumed the role of Representative Director and President at JGC Japan Corporation (former position). In 2021, he also became a Member of the Board at JGC Holdings Corporation (current position).

## Organizational revision of JGC Corporation toward the enhancement of the EPC execution structure

Toward enhancing the structure to execute EPC operations, JGC Corporation implemented organizational revision as of July 1, 2024.

### Point 1 Establishment of the Project Operations Division

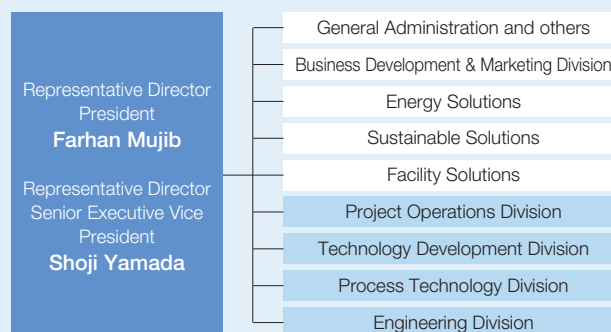
Departments related to project execution management and departments related to procurement, construction, and test operations included in the Project Solutions Center were integrated into one division to ensure the improvement of the capabilities to execute EPC operations, the visualization of execution status, and the enhancement of risk management capabilities, as well as to ensure schedule, costs, and quality through the collaboration between related departments.

### Point 2 Establishment of the Technology Development Division

The Technology Development Division was newly established to energetically promote the execution of EPC operations and the development and introduction of technologies for DX, as well as to enhance EPC and DX technologies.

### Point 3 Establishment of the Process Technology Division and the Engineering Division

The design department, which was originally concentrated in one division, was divided into the Process Technology Division supervising departments related to process design and the Engineering Division supervising departments related to detailed design. Since process design plays fundamental roles in ensuring the quality of plant design, we will work to enhance the functions of FEED and the development of human resources, as well as aim to revive the process-related departments, the core of engineering technology. In addition, since detailed design plays key roles in embodying FEED and making sure to reliably convey the quality of detailed design to departments related to procurement and construction, we will work to enhance the functions of detailed design and the development of human resources.



## Progress and Development of Material Issues

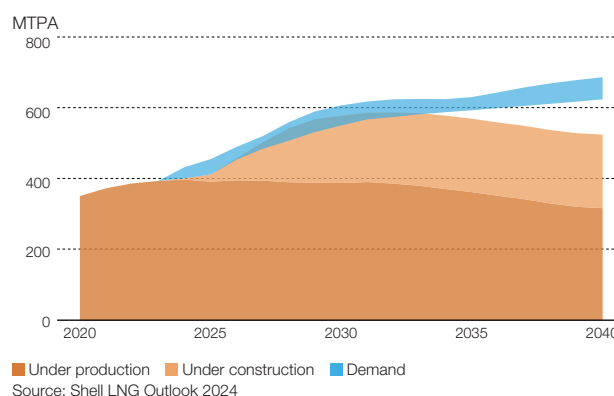
We will maintain the same policies for the key strategies of BSP 2025 toward achieving the 2040 Vision. However, we will flexibly adjust specific measures in response to environmental changes surrounding our Group, and continue to steadily implement the key strategies of BSP 2025 to be carried out during the 1st phase.

	Current understanding and outlook	Future policies
<b>Transformation of EPC operations</b>	<ul style="list-style-type: none"> <li>Rebuilding our framework for executing EPC projects is a pressing need.</li> <li>The market for large-scale EPC projects is booming, especially for LNG projects.</li> <li>Pharmaceutical projects steadily secure a booming market.</li> <li>In Asia, we have struggled with projects aimed at local production for local consumption.</li> </ul>	<ul style="list-style-type: none"> <li>In response to the booming market, narrow down projects to pursue and allocate resources appropriately.</li> <li>Direct special attention to the pace of progress in carbon neutrality, and aim to achieve business development meeting the needs of society.</li> <li>Strengthen the management team of JGC Corporation and take measures to restructure the framework for executing EPC projects.</li> <li>Pause efforts to build a stronger framework for regional management.</li> <li>Review roles of overseas Group companies in Asia and elsewhere.</li> </ul>
<b>Expansion of manufacturing business for high-performance functional materials</b>	<ul style="list-style-type: none"> <li>Catalyst demand is recovering, driven by a recovery in demand for petroleum products.</li> <li>Carbon and chemical recycling initiatives by domestic manufacturers are accelerating.</li> <li>The semiconductor market slump is bottoming out.</li> <li>Demand for EV components remains strong.</li> </ul>	<ul style="list-style-type: none"> <li>Participate in individual sectors selectively one by one while directing attention to the trends of the world.</li> <li>Make capital investments for chemical catalysts, fine chemicals, and silicon nitride substrates at the production sites acquired for the two companies to manufacture functional materials.</li> <li>Prepare and streamline production lines in anticipation of a recovery in the semiconductor market.</li> </ul>
<b>Establishment of future engines of growth</b>	<ul style="list-style-type: none"> <li>Development of domestic offshore wind power systems have been delayed.</li> <li>We are taking the initiative in hydrogen and ammonia markets and applying government subsidies.</li> <li>SAF demand is beginning to emerge.</li> <li>Data center demand is surging.</li> </ul>	<ul style="list-style-type: none"> <li>Strategically select sustainability-oriented projects in Japan.</li> <li>Maintain our hydrogen and ammonia organizations and collaborate on bidding and implementing FS/FEED projects.</li> <li>Execute FS/FEED projects in advanced industries in collaboration with Exyte.</li> </ul>

## TOPICS

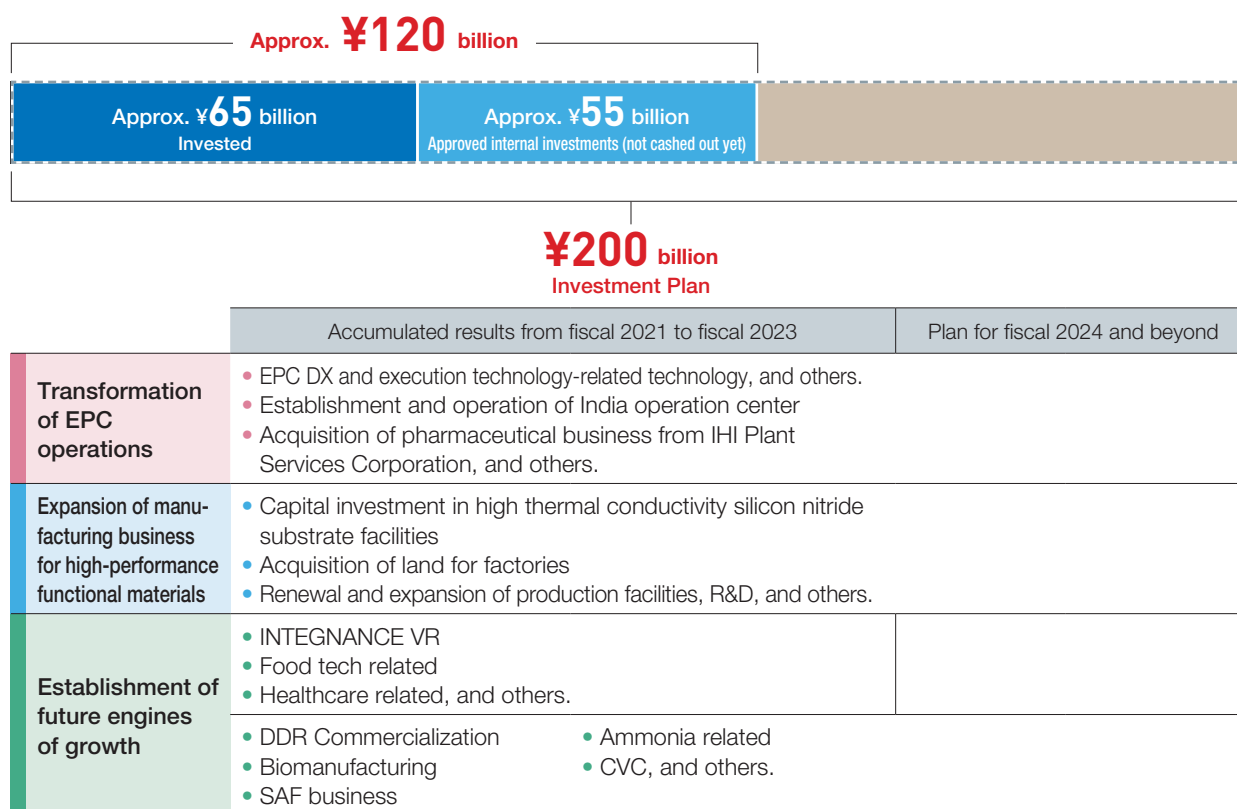
### Forecast of LNG Demand Globally

- Although demand for natural gas is already hitting a plateau in some regions, the global LNG market is expected to grow until the 2040s, especially in the ASEAN region mainly due to the trend for decarbonization in Chinese industries.
- LNG demand in 2040 is expected to reach approximately 625 million to 685 million tons per year.
- In some regions in South Asia and Southeast Asia, a decline in domestic gas production is expected, causing greater needs of fuels for gas-fired power generation and industries, which can lead to an increase in LNG demand.



## Growth Strategy Investments

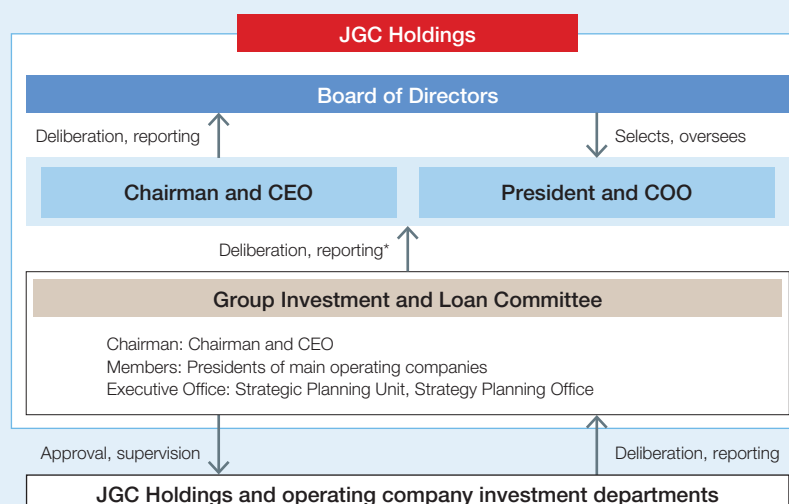
A total of ¥200 billion in growth strategy investment is planned with the aim of accelerating the three key strategies during the five years of BSP 2025. Approximately ¥65 billion was invested over the three years to fiscal 2023, primarily in EPC DX-related investment, product development investment, and capital investments in the high-performance functional materials business. Investments have already been approved internally, with approximately ¥120 billion planned including projects invested from fiscal 2024 and beyond. Suitable investment opportunities will continue to be identified to make investments in order to achieve growth strategies through to 2040.



**Cash will continue being used effectively, including M&A,  
for ongoing growth strategic investments**

### Strategic investment framework

The Group Investment and Loan Committee established under JGC Holdings Corporation conducts quantitative analyses that factor in capital costs when making investment decisions, and also carefully and cautiously deliberates R&D projects based on their potential to lead to future business expansion. The committee also monitors the status of projects after investments are made, as part of a system that can properly study whether to withdraw from certain businesses.



\* Subject to decisions from designated institutions (including deliberation and reporting)

## Major Initiatives for Key Strategies from Fiscal 2023 and Beyond

In fiscal 2023, the JGC Group steadily implemented various measures in line with the three key strategies of “transformation of EPC operations,” “expansion of manufacturing business for high-performance functional materials,” and “establishment of future engines of growth” specified in BSP 2025.

May 2023

### Japan's first large-scale production demonstration facility for domestic SAF under construction

The four companies, JGC Holdings Corporation, Cosmo Oil Co., Ltd., REVO International Inc., and SAFFAIRE SKY ENERGY LLC, are advancing the construction of a production demonstration facility for domestic SAF made from waste cooking oil.

This facility can produce approximately 30,000 kL per year of SAF made from purely domestic waste cooking oil. The facility is expected to be completed and begin operation by the end of fiscal 2024, and it is planned to start supply in 2025, when World Expo is held in Osaka, Kansai.

In addition, this facility will produce bionaphtha, which is used in the production of bioplastic, and renewable diesel fuel.



Groundbreaking ceremony

April 2023

July 2023

### Acquired new business sites in Niigata and Fukuoka

JGC Catalysts and Chemicals Ltd. purchased business sites, one at the Eastern Industrial Park in Agano, Niigata, in June 2023, and the other one in Wakamatsu in the city of Kitakyushu, Fukuoka, in July of the same year, for the business expansion of the Niigata Operation Center and the Kitakyushu Operation Center.

The acquisition of these sites was intended to respond to the expanding demand for new fine chemical products such as catalysts for carbon-neutral fuels (synthetic fuels), chemical recycling catalysts and adsorbents, high-speed communications materials, and polishing particles for semiconductor applications, and a total of approximately ¥20 billion in facility investment is planned between 2025 and 2030, which includes the current purchase of land for business operations.

July 2023

### Secured a contract for a hydrogen production plant in Australia

JGC Corporation received an EPC contract for a hydrogen project in Australia planned by Sumitomo Corporation in collaboration with Rio Tinto Ltd. This is the first time that the Group has engaged in a project to construct a plant to produce hydrogen with proton exchange membrane (PEM) electrolyzers. The hydrogen production plant will be capable of 2.50 million tons annually and is going to be constructed within the site of an alumina refinery plant owned and operated by Rio Tinto.



Planned construction site of alumina refinery plant

©Rio Tinto 2023

November 2023

### Signed basic cooperation agreement regarding domestic EPC business with TAKADA Corporation

In the domestic plant market, capital investment in the low-carbon and decarbonization sectors related to various products such as hydrogen and fuel ammonia, SAF, and synthetic fuels, as well as in the field of circular economy related to the chemical recycling of plastic waste, is expected to increase for the next few years.

JGC Japan Corporation, a domestic EPC operating company, is positioning the low-carbon and decarbonization sectors and the circular economy sector as growth segments that will become core businesses in the future. We have signed a basic cooperation agreement with TAKADA Corporation that has extensive track records in various areas including plant piping work, with the aim of extending resources to execute projects in these segments.

- Transformation of EPC operations
- Expansion of manufacturing business for high-performance functional materials
- Establishment of future engines of growth

December 2023

### Signed collaboration agreement with Exyte for high-tech industries

Along with development of the digital society, the market size of high-tech industries is continuously expanding. In recent years, the market has been supported by the incentive policies of respective countries for the strengthening of security and supply chains. Capital investment in the field of high-tech industries in Southeast Asia's emerging countries is expected to significantly grow, not just in developed countries such as Japan, Europe, the United States, and Singapore.

JGC Corporation and Exyte have entered into a collaboration agreement for the field of high-tech industries targeting the four countries of Indonesia, the Philippines, Vietnam, and Thailand. Under this collaboration, the two companies will collaboratively implement business operations, as well as estimation work, securing of contracts for EPC projects, and execution of such projects, aiming to expand business fields together.



At the signing ceremony

July 2024

### World's first R&D center for biomanufacturing with gas fermentation to be established at Port Island, Kobe

Biomanufacturing is a method of using microorganisms to create products for industries including pharmaceuticals, materials, energy, and food. The market scale of biomanufacturing is expected to reach ¥200 trillion by 2030 according to the OECD.

JGC Holdings Corporation has decided to newly construct a bioprocess lab (commonly called JGX) at Port Island in Kobe, where construction of the facility will begin in August 2024. Additionally, the company has forged closer ties through the third-party allocation of new shares by Bacchus Bio Innovation Co., Ltd., a collaborator in the Integrated Biofoundry® business.



Rendering of JBX1 at completion

November 2023

### Signed MOU on FEED study for 60 MW class alkaline water electrolyzer to produce green hydrogen in Malaysia

Asahi Kasei Corporation, Gentari Hydrogen Sdn Bhd<sup>\*1</sup>, and JGC Holdings Corporation have, after completing FS for the construction of a 60 MW class alkaline water electrolyzer system to produce up to 8,000 tons of green hydrogen per year, signed a memorandum of understanding (MOU) to enter a commercialization plan, FEED, the next phase of the project.

In this project, the 60 MW class electrolyzer will be introduced to demonstrate an integrated control system for the optimization of plant operation. This commercial-scale project demonstrates the three companies' commitment to promoting market development in Japan, Malaysia, and across Southeast Asia through green hydrogen production in Malaysia for the establishment of a foundation for regional green hydrogen production toward the realization of decarbonization.



At the MOU signing ceremony

January 2024

### New factory under construction for the increased production of high thermal conductivity silicon nitride substrates for power semiconductors

JGC Holdings Corporation started the construction of a new factory for the increased production of high thermal conductivity silicon nitride substrates for EV power semiconductors at a newly acquired business site in Tomiya City, Miyagi Prefecture.

In 2020, Japan Fine Ceramics Co., Ltd. started to mass-produce high thermal conductivity silicon nitride substrates for power semiconductors, which have excellent mechanical properties and insulation properties, in addition to having high thermal conductivity. In order to respond to the request for a further increase in production from auto manufacturers and companies manufacturing power semiconductor circuit boards, JGC Holdings Corporation decided to build the new plant, which is planning to start operation in 2025.



Conceptual drawing of the new plant at completion

March and June 2024

### Received contract to execute EPC operations to newly construct a large low-carbon LNG plant in United Arab Emirates (UAE)

JGC Corporation received a limited notice to proceed for the project to newly construct an LNG plant for Abu Dhabi National Oil Company (ANOC) in collaboration with Technip Energies in France and National Petroleum Construction Company (NPCC) in UAE in March 2024, and officially received the contract to execute EPC operations in June.

The plant will use electric-driven motors instead of conventional gas turbines and will be powered by clean energy. The plant is set to be the first LNG export facility in the Middle East and North Africa (MENA) region to run on clean power, making it one of the lowest-carbon intensity LNG plants in the world.



Signing ceremony

\*1 A wholly owned subsidiary of Gentari Sdn Bhd, a subsidiary for the clean energy business of Petrolim Nasional Berhad

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# *Chapter 4*

## Initiatives and Systems Supporting Continued Growth

Continuous gains in corporate value depend not only on results from management strategies but also on reinforcing management resources that support sustainable growth. Here, we describe JGC Group roles for the environment and society, including climate change and human rights initiatives. This chapter also introduces human and intellectual capital initiatives, our corporate governance, stakeholder engagement, and others.

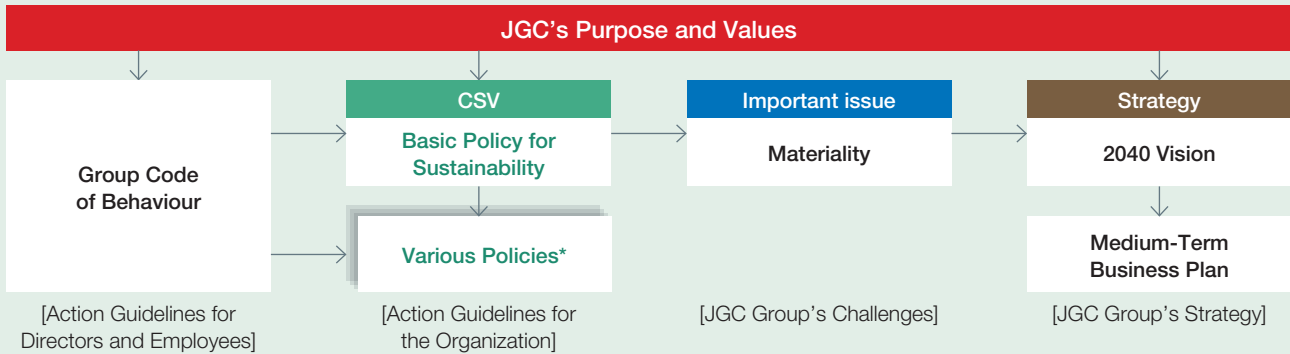
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# Sustainability Management

## Basic stance

The JGC Group has established the Basic Policy for Sustainability with which to support the continuous growth of corporate value through sustainability initiatives. This policy is core to each of the Group’s policies, materiality, and strategies, etc., and promotes sustainability within the Group.

**Basic Policy for Sustainability**  
 The JGC Group will endeavor centered on its “Enhancing planetary health” as its purpose, to sustainably increase its corporate value through creation of social values.  
 To realize the above, it will actively pursue sustainability in the areas of environment, society, governance, quality, safety, and health.



- \* Various JGC Group policies include the following related to Group sustainability.
- Basic Policy for Human Rights & Development
  - Basic Policy for Inclusion & Diversity
  - HSE Corporate Policy
  - Safety and Health Policy
  - Quality Policy
  - Environmental Policy
  - JGC Group Basic Security Policy against Security Risks and others

Details on each Group policy are available on our website.  
<https://www.jgc.com/en/about/policies.html>



## Signatory to the UN global compact

In January 2024, our Group signed the UN Global Compact, declaring that we will comply with and put into practice the 10 principles in the four areas of human rights, labor, environment, and anti-corruption.



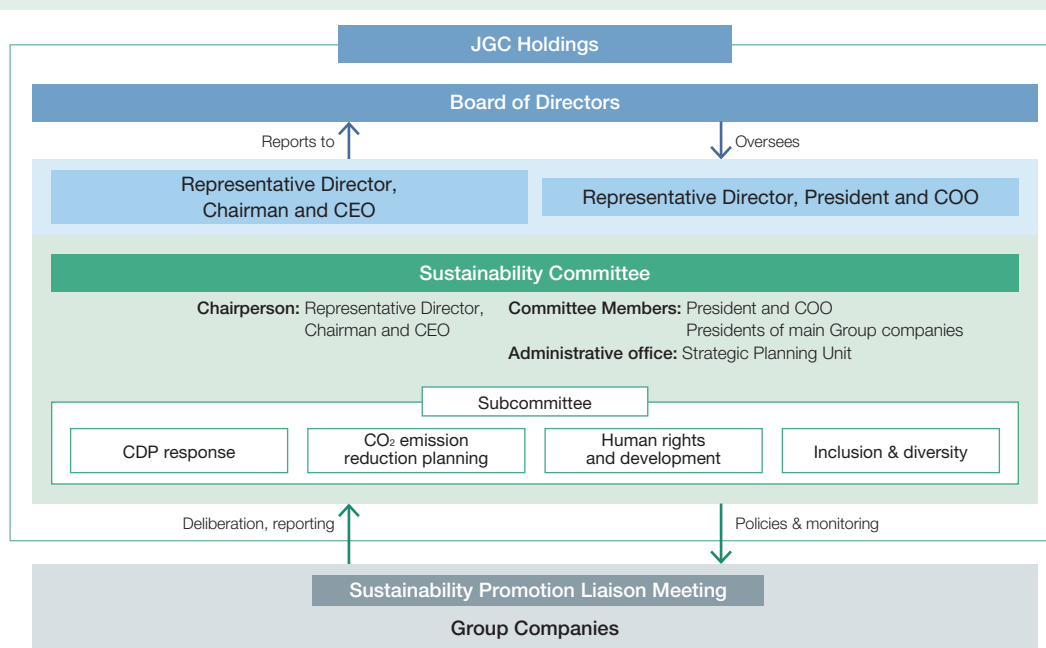
**Sustainability section of the corporate website**

Details on sustainability initiatives are available on our website.  
<https://www.jgc.com/en/esg-hsse/>

## Sustainability promotion system

The Group has established the Sustainability Committee, chaired by the Representative Director, Chairman and CEO, and this deliberates on the formulation, promotion, evaluation, and improvement of policies and action plans in the field of sustainability, including climate change and human capital. As well as submitting an annual report to the Board of Directors, this also aims to conduct discussions and provide reports as necessary in a timely manner.

Furthermore, starting from April 2024, we have appointed sustainability promotion members at each key subsidiary of our Group through nominations by the presidents of those subsidiaries in order to implement the policies and action plans formulated by the committee. We have also established and are operating the Sustainability Promotion Liaison Meeting, aimed at facilitating communication, coordination, and exchange of opinions between the promotion committee members.



### Results of main Sustainability Committee activities (as of September 2024)

2023	6th meeting : CDP response reported, formulating action plan for reducing total CO <sub>2</sub> emissions 7th meeting : Activity reports from each subcommittee, discussion of latest trends in sustainability, discussion of obtaining third-party verification of greenhouse gas (GHG) emissions 8th meeting : Report on the JGC Group action plan for reducing CO <sub>2</sub> emissions
2024	9th meeting : Draft of the Japanese version of sustainability disclosure standards and future support, progress report on considering obtaining third-party verification for GHG emissions 10th meeting : Formulation of human rights regulations, I&D action plan, and climate transition plan

## Comment from Sustainability Promotion member



### Mutsuto Tone

General Manager  
Execution Technologies  
Development Department,  
Technology Development Division  
JGC Corporation

Sustainability Promotion members participate as observers in the Sustainability Committee, and are responsible for ensuring that matters discussed are implemented by each operating company. I have long been involved in the startup and commissioning of plants for overseas projects. Leveraging this experience, I serve as the leader of the task force responsible for accounting JGC Corporation's GHG emissions and considering measures to reduce these, and I was also selected as a sustainability promotion member of our Company in order to further expand sustainability activities within the Company.

In fiscal 2024, we will continue with task force initiatives, and in fiscal 2025, we plan to expand these activities to overseas Group companies under the JGC Corporation umbrella. To achieve results from these initiatives, the understanding and cooperation of employees are essential. As a sustainability promotion member of our Company, I will demonstrate leadership in addressing the various sustainability issues discussed by the Sustainability Committee, including responses to climate change, and will promote initiatives throughout JGC Corporation.

# Climate Change Initiatives

## Basic stance

As we work toward a sustainable society, addressing climate change has become a global challenge. The JGC Group has identified “societies in harmony with environment” as a material issue. Besides taking climate action through environmentally conscious business activities, the JGC Group studies and formulates business strategies accounting for scenario analysis in recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).

## Strategies and Initiatives towards Achieving Societies in Harmony with Environment

Based on data from the International Energy Agency (IEA)’s “World Energy Outlook 2020,” our Group conducted an analysis targeting 2040, using multiple scenarios including the Stated Policies Scenario (STEPS) and the Sustainable Development Scenario (SDS), through which we have evaluated climate change-related risks and opportunities, and we will reflect these in our strategy.

### ► Main risks

<b>New regulatory risks</b>	The introduction of carbon taxes and carbon emissions targets in various countries may lead to higher equipment and fuel costs, which may affect business costs in the future. The introduction of carbon taxes and stricter emission targets in various countries also poses a risk of fewer contract opportunities, from a decline in oil & gas projects.
<b>Technology risks</b>	Lower gasoline demand from the spread of EVs and fuel cell vehicles poses a risk of fewer contract opportunities for plants in the oil & gas industry. A similar risk is posed by the spread of decarbonized materials and a shift to renewable energy driven by the spread of high-performance storage batteries.
<b>Regulatory risks</b>	Firms bidding on plant construction projects are likely to face stricter information disclosure requirements regarding their climate change measures. This poses a risk of lost opportunities or unsuccessful bids, which may affect the corporate reputation.
<b>Market risks</b>	Lower plant demand in the oil & gas industry may result in fewer contract opportunities. An aversion in financial and capital markets to business related to fossil fuels also poses a risk that projects may not be approved.
<b>Reputation risks</b>	Failure to maintain or build on our reputation as an enterprise with the technical expertise to contribute to climate change solutions such as carbon reduction, renewable energy, and hydrogen applications may adversely affect the JGC Group in various ways, such as contract opportunities, financing, or securing human resources.
<b>Acute physical risks</b>	More frequent extreme weather events such as heavy rain, storms, typhoons, and flooding attributed to climate change may physically damage materials, equipment, and JGC Group facilities, adversely affect employees, and delay procurement.
<b>Chronic physical risks</b>	Higher average temperatures may make longer construction periods more common, due to lower labor productivity at construction sites in temperate and tropical regions. Another concern is increased costs for countermeasures and accident compensation, due to higher occupational safety risks. There is also a risk of higher shipping costs from a lack of ports if sea levels rise in coastal areas.

### ► Main opportunities

<b>Products and services</b>	<p>The JGC Group has an extensive record in renewable energy plants such as solar and biomass power plants, which, as the international community shifts toward decarbonization, may increase contract opportunities. The JGC Group has also taken steps to expand orders by establishing an organization dedicated to the promising segment of offshore wind power generation.</p> <p>Oil &amp; gas sector applications of CCS, for which the JGC Group has completed multiple projects in Japan and overseas, and carbon capture, utilization, and storage (CCUS), for which joint development is underway, are expected to expand contract opportunities.</p> <p>The JGC Group is engaged in technological development and other initiatives in hydrogen, ammonia, and small modular reactors (SMRs) applications aimed at a decarbonized society. More contract opportunities here can be expected in the future.</p> <p>Greater worldwide demand for a circular economy can be expected to drive demand for technologies under development by the JGC Group, which include chemical recycling of plastic waste, recycling of fiber waste, and SAF.</p>
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### Scenario Analysis

Scenario item	Definition
Target	2040
Analysis reference data	Based on data from the IEA’s “World Energy Outlook 2020”
Scenarios	Based on the following outlook scenarios <ul style="list-style-type: none"> <li>Physical Climate Scenario (STEPS)</li> <li>Transition Scenario (SDS)</li> </ul>
Target of analysis	Analysis of Energy transition, Circular economy, and High-performance functional materials areas that are highly relevant to climate change

		Decreasing → → → → → Increasing	
Business area	Segment	Business growth potential (Scale of 1–6)	
		STEPS Physical Climate Scenario	SDS Transition Scenario
Energy transition	Refinery	→	←
	LNG	→	→
	Power generation, nuclear power, new energy	→	→
	Hydrogen/fuel ammonia	—	↑
Circular economy	Plastic waste chemical recycling	—	↑
High-performance functional materials	Catalysts	→	→
	Fine ceramics	→	→
Other	Consulting	→	→




Based on a recognition of the above scenarios and the risks and opportunities, the Key Areas listed below of Energy transition, Circular economy and High-performance functional materials in our “2040 Vision” are positioned as business areas that will contribute toward achieving “societies in harmony with environment.”

In addition, with the formulation of the climate transition plan in mind, we plan to review the scenario analysis aligned with the 1.5°C target of the Paris Agreement, while taking into account trends such as the revision of the Japanese government’s Basic Energy Plan and the Nationally Determined Contributions (NDC).

		Key areas	JGC Group strengths
Energy transition	Low-carbon/ decarbonized oil & gas	<ul style="list-style-type: none"> <li>Blue hydrogen/fuel ammonia</li> <li>CCS</li> <li>Energy conservation technology</li> <li>Carbon credits</li> </ul>	<ul style="list-style-type: none"> <li>Large-scale oil and gas project knowledge and track record</li> <li>CCS facility design and construction track record</li> <li>Maintenance track record</li> </ul>
	Clean energy	<ul style="list-style-type: none"> <li>Green hydrogen/fuel ammonia</li> <li>SMRs</li> <li>Offshore wind power generation</li> </ul>	<ul style="list-style-type: none"> <li>Process engineering</li> <li>Renewable energy and nuclear power knowledge</li> <li>Design and installation know-how of offshore structures</li> </ul>
Circular economy		<ul style="list-style-type: none"> <li>SAF</li> <li>Chemical recycling (plastic and fiber waste)</li> </ul>	<ul style="list-style-type: none"> <li>Process engineering</li> <li>Network with clients and partners</li> </ul>
High-performance functional materials		<ul style="list-style-type: none"> <li>Carbon and chemical recycling catalysts</li> <li>Energy storage and new energy materials</li> <li>High thermal conductivity silicon nitride substrates for EV power semiconductors</li> </ul>	<ul style="list-style-type: none"> <li>Catalyst development and business foundation</li> <li>Nanoparticle preparation and control technology</li> <li>Fine ceramics development and manufacturing</li> </ul>

## Using Green Bond to Promote Business to Achieve Societies in Harmony with Environment

On September 19, 2023, the JGC Group issued green bonds totaling ¥10 billion as a means to raise funds to allocate to new green projects. We believe that the issuance of these green bonds will provide an opportunity for investors and society to broadly recognize our Group’s commitment to contributing to the creation of economic, social, and environmental value through addressing social issues via our business activities.

Target projects		Fiscal 2023 allocated amount*1 (¥ billion)	CO <sub>2</sub> reduction contribution (t-CO <sub>2</sub> ) (estimate)*2
<b>SAF</b>  Domestic SAF manufacturing facility under construction	A project aiming to be the first large-scale domestic SAF production facility in Japan, using only waste cooking oil produced in Japan as a raw material, led by the merger company SAFFAIRE SKY ENERGY, a joint investment between Cosmo Oil Co., Ltd., REVO International Inc., and ourselves. Production facilities are being constructed within the Cosmo Oil Sakai Refinery, and by supplying 30,000 kL of SAF annually, we are working to demonstrate a supply chain model for SAF production sourced from waste cooking oil.	1.9	73,687 t-CO <sub>2</sub> *3
<b>High thermal conductivity silicon nitride substrates</b>  High thermal conductivity silicon nitride substrates	Our Group company Japan Fine Ceramics Co., Ltd., is developing, producing, and selling insulated, heat-dissipating ceramic substrates for power semiconductors that control the power of various devices required for energy savings in EVs. Through the production of high thermal conductivity silicon nitride substrates, with their superior thermal conductivity and insulation compared to conventional products, we are contributing to the improvement and spread of power semiconductors and the expansion of EVs, as well as energy conservation in high-speed railways and industrial equipment.	0	360,000 t-CO <sub>2</sub> *4
<b>Biomanufacturing</b>  Representation of completed biomanufacturing building	Biomanufacturing involves the improvement of microorganisms to produce chemicals such as bio-plastics and functional materials, as well as fuels, proteins, and animal feed using sugars and CO <sub>2</sub> as raw materials, aiming for a recycling-oriented manufacturing system that does not rely on fossil resources. The “Development of Polymer Synthesis Technology Using CO <sub>2</sub> as a Direct Raw Material,” which we are promoting with partner companies as a New Energy and Industrial Technology Development Organization (NEDO) Green Innovation Fund project not only contributes to reductions in CO <sub>2</sub> but also addresses issues such as resource shortages and marine plastic pollution, thereby contributing to the realization of a society that is sustainable from a range of perspectives.	1.0	Under R&D, so not disclosed

\*1 As of the end of March 2024. Total amount allocated: ¥2.9 billion, total amount not yet allocated: ¥7.1 billion

\*2 Reduction contribution from projects (estimated)

\*3 Estimated using the life cycle CO<sub>2</sub> emission intensity published by International Civil Aviation Organization (ICAO) regarding certification for compliance with the sustainability standards of CORSIA (Carbon Offsetting and Reduction Scheme for International Aviation)

\*4 Estimated CO<sub>2</sub> reduction effect based on improvements in energy efficiency of EVs using power semiconductors incorporating the produced high thermal conductivity silicon nitride substrates



Details on issuance of green bond is available on our website.

<https://www.jgc.com/en/esg-hsse/environment/green-bond/>



Climate Change Initiatives

**JGC Group Carbon Neutrality**

We announced our “Commitment to Carbon Neutrality by 2050” in 2021 as a sign of our dedication to enhancing corporate value in a sustainable manner through transformation toward achieving planetary health, as we continued with our initiatives to reduce CO<sub>2</sub> emissions.

Targets	Net-zero initiatives
<p><b>Scope 1 and 2</b></p> <p>2050: Net-zero CO<sub>2</sub> emissions 2030: 30% reduction in CO<sub>2</sub> emissions intensity per base unit of net sales</p>	<p>For Scope 1 and 2 reductions, adopt low-carbon/decarbonized practices, such as <b>energy conservation in our business activities, or using renewable energy</b></p>
<p><b>Scope 3</b></p> <p>Collaborate with stakeholders to reduce</p>	<p><b>Leverage technologies cultivated by the JGC Group to provide energy transition solutions to stakeholders</b></p>

**CO<sub>2</sub> emissions results**

CO <sub>2</sub> equivalent emissions data	Fiscal 2020 (Base year)	Fiscal 2021	Fiscal 2022	Fiscal 2023
Scope 1 and 2 (t-CO <sub>2</sub> )	132,546	133,573	134,004	133,695
Scope 1	84,325	87,856	82,943	83,729
Scope 2	48,221	45,717	51,061	49,966
Consolidated net sales (¥ billion)	433.9	428.4	606.8	832.5
Emissions intensity per base unit of production (t-CO <sub>2</sub> /¥ billion)	30.55	31.18	22.08	16.06
Comparison with base year	—	2%	(28%)	(47%)
Scope 3 (t-CO <sub>2</sub> )	—	702,873	975,775	1,497,309

- The Scope 1 and 2 emissions figures were calculated with the aim of identifying the major emitters and amounts within the Group and implementing reduction measures. Total emissions are the sum of emissions independently calculated by the major emitters in the Group, including JGC Holdings Corporation (including JGC Corporate Solutions Co., Ltd.), JGC Corporation, JGC Japan Corporation, JGC Catalysts and Chemicals Ltd., Japan Fine Ceramics Co., Ltd., and Japan NUS Co., Ltd. We will continue to work to improve the reliability of our emissions results through measures such as the establishment of a unified accounting framework for the Group and enhancing comprehensiveness, toward obtaining third-party assurance for this data. For more details on the assumptions and breakdowns within these emission results, please refer to our Group’s response to CDP 2024, an international framework for climate-related information disclosure.
- Scope 3 emissions are calculated and reported while excluding Category 11 (use of sold products). In fiscal 2023, emissions increased due to the higher progress rate of in-progress large-scale EPC projects.

**Promoting the management and reduction of CO<sub>2</sub> emissions**

In fiscal 2023, through the CO<sub>2</sub> Reduction Planning Subcommittee under the Sustainability Committee, we put in place a policy to organize the Group’s emission forecasts for Scope 1 and 2 by 2030 and established directions for future efforts, and by monitoring the progress of each company’s CO<sub>2</sub> reduction plans, to improve the JGC Group’s efforts toward reducing CO<sub>2</sub> emissions. As of July 2024, the status of the reduction measures being reviewed or implemented by each company are as follows.

▶ **JGC Holdings**

Achieving the CO<sub>2</sub> reduction targets with 2020 as a baseline year for the Yokohama Office, a key site for our Total Engineering Business that was submitted for participation in the METI’s GX League has required us to purchase non-fossil certificates from fiscal 2023 to make up for the shortfall in achieving a 3% reduction per year.

▶ **JGC Corporation**

As a part of our reduction strategy at construction site offices and accommodations, we are considering the installation of solar panels and optimizing the operation of temporary compressors used during test runs.

▶ **JGC Catalysts and Chemicals**

We are promoting a switch to LED lighting and electric forklifts.

▶ **Japan Fine Ceramics**

We are installing LED lighting, upgrading to highly energy-efficient equipment, and installing solar panels.

## Climate Change-Related Disclosure

In participating in international frameworks for climate change disclosure, the JGC Group has responded to CDP surveys since 2021 (in fiscal 2023, the Group received a B rating) and has followed TCFD disclosure guidelines as a supporter, including securities reports.



### Information disclosure based on TCFD framework

<b>Governance</b>	Through the Sustainability Committee chaired by the CEO, Representative Director, our Group is responsible for evaluating and managing climate-related risks and opportunities, as well as incorporating these into the Group's management strategies and objectives.	Sustainability promotion system <b>P.48</b>
<b>Strategy</b>	Based on both the risks and opportunities associated with climate change, and the results of scenario analysis, we are reflecting these outcomes in our management strategies, such as the 2040 Vision.	Strategies and initiatives towards achieving societies in harmony with environment <b>P.49</b>
<b>Risk Management</b>	We have separately established the Group Risk Management Committee, chaired by the Representative Director, President and COO to identify and manage the Group's overall risks including sustainability risks related to climate change, to maintain and build the risk management system, and to discuss and deliberate on improvements.	Risk Management <b>P.87</b>
<b>Metrics and Targets</b>	In 2021, the JGC Group announced our "Commitment to Carbon Neutrality by 2050," and we are monitoring Scope 1, 2, and 3 emissions.	JGC Group Carbon Neutrality <b>P.51</b>

## Other environmental initiatives

### Environmental management system

The JGC Group has long had an environmental management system in place, and we obtained ISO 14001 certification in 2003. In response to the 2019 split, JGC Holdings, JGC Corporation, and JGC Japan Corporation each obtained ISO 14001 certification independently, and each company set their own environmental policies while monitoring environmental performance.

### Environmental performance evaluations

At domestic construction sites, we evaluate performance annually using three environmental indicators—industrial waste recycling rate, number of incidents of leaks of hazardous substances, etc., and energy-related CO<sub>2</sub> emissions.

ESG Data Trends over Time **P.97**

### Biodiversity initiatives

#### Total Engineering Business: Nature conservation activities at the LNG Canada construction project

The construction site for the LNG Canada Project underway by JGC Corporation is surrounded by magnificent nature, with the surrounding area home to a variety of wildlife. In order to minimize the environmental impact over the duration of this project, this project features environmental protection activities including relocation of rivers within the construction site to areas unaffected by the work and efforts that illustrate the project's commitment to environmental harmony.

#### Functional Materials Manufacturing Business: Manufacturing of alternative materials for microbead

One global issue of note in recent years is microplastic beads ending up in the ocean—these beads are used in cosmetics and scrub products, and are largely non-biodegradable. JGC Catalysts and Chemicals has developed and marketed an alternative material made from silicon dioxide (silica), a sustainable mineral that accounts for roughly 60% of the Earth's surface. Silica is highly hydrophilic and dissolves in water, and is naturally taken up by phytoplankton, thus becoming part of a sustainable, natural cycle.

# Human Capital Initiatives

## Basic stance

Human resources are the JGC Group’s greatest asset throughout all businesses, such as the Total Engineering Business and Functional Materials Manufacturing Business, and are the most important source of capital for management. We are pressing ahead with completing a new human resource strategy by 2030, with the aim of developing the diverse human resources portfolio deemed essential for executing the business strategies of expanding business areas and diversifying business models set forth in the 2040 Vision, our long-term management vision.

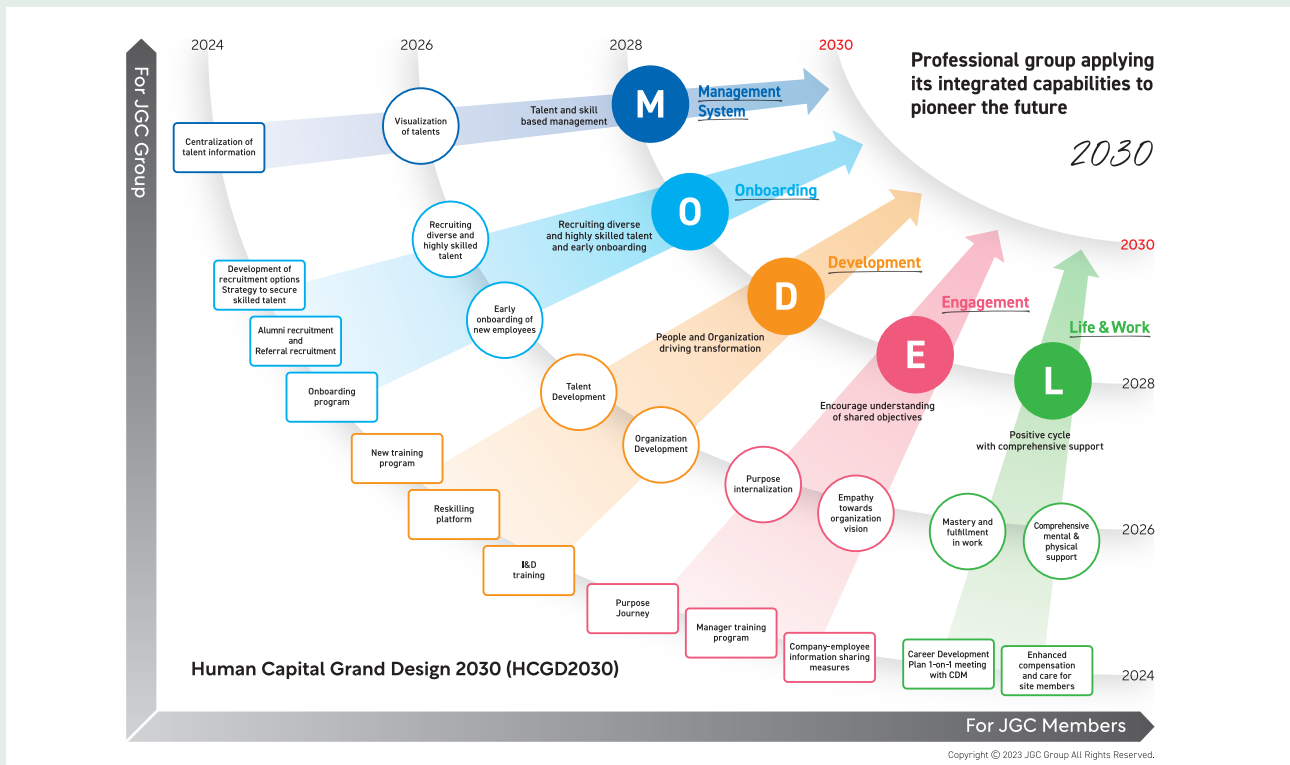
## Human Resources Grand Design

As we look toward achieving our 2040 Vision, we are aiming for a state of “sustainable enhancement of human capital” by fiscal 2030. Put differently, we believe that our Group is a professional group comprising individuals who can marshal and integrate our technological capabilities and internal and external human resources to pioneer and create the future; individuals who can take on and complete not only projects but also new challenges and exploration of new fields; and individuals who are sincere and who act with mutual respect.

To achieve this ideal state, we have organized the necessary measures and summarized them under the acronym “MODEL,” with each letter representing the main categories forming our Human Capital Grand Design 2030.

<b>M</b> Management System	Establish a talent management system to maximize the use of human resources and execution resources.
<b>O</b> Onboarding	Establish mechanisms to acquire the necessary human resources in both quality and quantity, and ensure that they can quickly familiarize themselves with the Company and become effective contributors.
<b>D</b> Development	In addition to proactive training, establish human resource development and workplace environments that foster autonomous growth rather than just passive participation.
<b>E</b> Engagement	Connect the Company’s purpose—its “being”—with each individual’s purpose to enhance mutual trust and attachment between the Company and individuals, and ensure that everyone understands the organizational goals—the “doing”—to foster proactive challenges.
<b>L</b> Life & Work	With the mindset that work is a part of life, and that by enriching work one can also enrich one’s own life, we aim to create a positive spiral that further enhances work satisfaction.

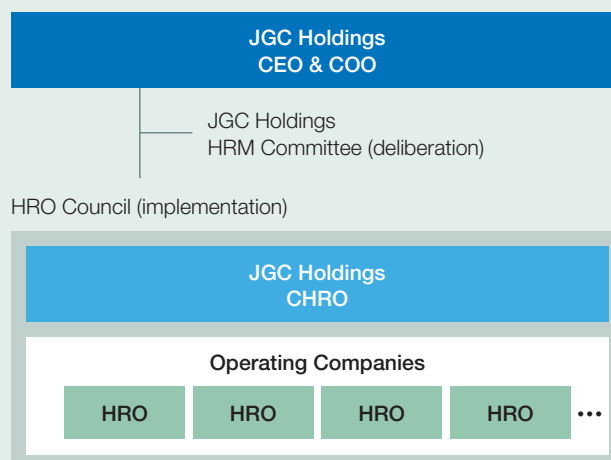
We define the realization of these five major categories as an ideal state in which we have the human resources and organization necessary to achieve the 2040 Vision, and are considering and implementing measures to achieve each of these categories.



## Human Resource Strategy Execution System

In 2022, we appointed a Chief Human Resource Officer (CHRO) to head the HRO Council as the implementing body under the HRM Committee (deliberative body for human resource matters), with the aim of properly establishing human resource strategy tied with management strategy. This system ensures the CHRO coordinates efforts with the JGC Holdings CEO and COO for proposing human resource strategy tied with management strategy, and in line with these, the HROs of each company move ahead with their own human resource strategy tied with their company's business strategies, which are then discussed by the HRO Council. In ensuring the effective implementation of the human resource strategy, the human resources departments of each company along with department heads and CDMs\* will play a central role in working seamlessly to continuously enhance and sustain us as a "professional group that pioneers and brings about the future, using integrated strength."

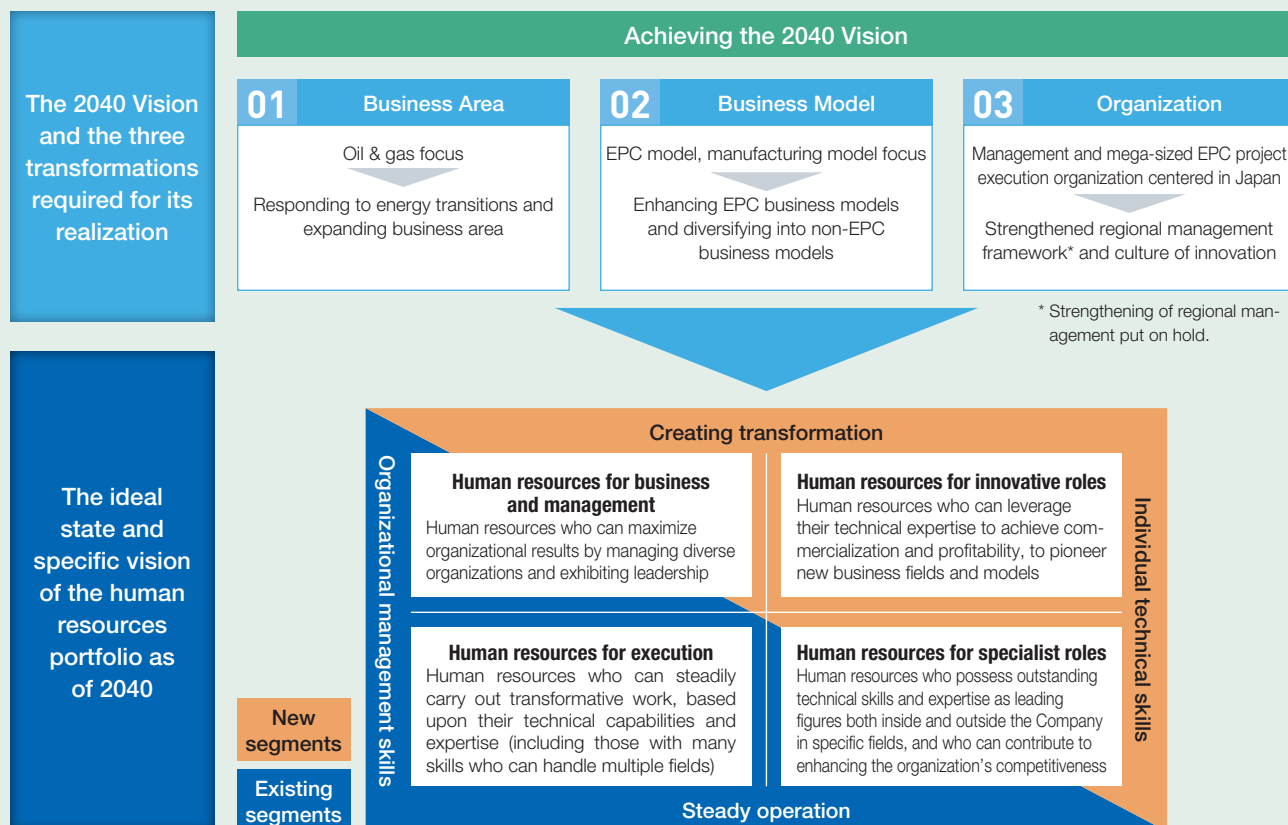
\* CDM: Career Development Manager. At JGC Corporation, in addition to General Managers, each department also has in place positions responsible for human resource development.



## M Management System

### Visualization of Human Resources Portfolios and Necessary Human Resources

As our Group looks toward achieving the 2040 Vision, we feel that we require transformations in the three areas: business areas, business models, and our organization. We are reviewing the kinds of human resources needed to push through these transformations, comparing these with our current human resources portfolio, and considering and implementing measures required in order to close these gaps.



For details on human resources for specialist roles (experts), please see JGC Group's Expert Map **P.61**.

Human Capital Initiatives

# O Onboarding

## Alumni Recruitment (Leveraging Networks)

We value the connections and relationships with employees who at one point left or retired from our Group—our alumni. In fiscal 2022 these efforts were honored by the third consecutive Encouragement Award from the Japan Alumni Award, which promotes renewed ties between organizations and their former employees and recognizes outstanding efforts to this end. In fiscal 2023, we received the Excellence Award in the Design of Will Category.

The Alumni Community is run by volunteers, and there are currently more than 150 alumni registered. Alumni have also held “Echo-Day” for the past five years in a row on October 25, the anniversary of our Company’s founding.

We also opened the JGC Members personnel registration systems catering to people outside the JGC Group who are seeking information about the Company. This initiative regularly disseminates information and organizes activities for people outside the Company who share the same attitude toward the JGC Group’s purpose.



Alumni recruitments in last five years

Fiscal 2023	7
Fiscal 2022	8
Fiscal 2021	0
Fiscal 2020	3
Fiscal 2019	1

## Promoting Retention

Key items are defined and implemented with the aim of boosting the retention rate of skilled human resources over a long-term span.

**Key items**

- Resonate with Company philosophy and strategies
- Enhance training systems and improve sense of growth
- Improve satisfaction with work details
- Improve compensation and treatment

	Turnover rate*
October 2021 to September 2022	4.8%
October 2022 to September 2023	3.8%
October 2023 to July 2024	2.9%

\* Based on a denominator of approximately 3,000 employees at the four companies: JGC Holdings Corporation, JGC Corporate Solutions Co., Ltd., JGC Corporation, and JGC Japan Corporation  
 \* Only employees less than 65 years old retiring for personal reasons

## Networking Program

Communication across departments is essential for our Group’s comprehensive engineering business. Therefore, starting from the fiscal 2023, we have introduced a networking program aimed at employees within three years of their career hire or within six years of their new graduate hire. The purpose is to provide an opportunity for them to build vertical, horizontal, and diagonal connections on their own initiative.

This program has been held 10 times with a total of 900 participants, and features card games and dialogue themed around “disclosing more than just your CV,” and enables participants to learn more about the culture of the JGC Group. By regularly holding various sessions and social gatherings, this facilitates the promotion of not only vertical connections between employees’ own superiors and subordinates as well as horizontal connections between colleagues or contemporaries who entered the Company at the same time but also the building of diagonal relationships with employees from other departments. In addition, clubs and volunteer activities also help in building internal networks.

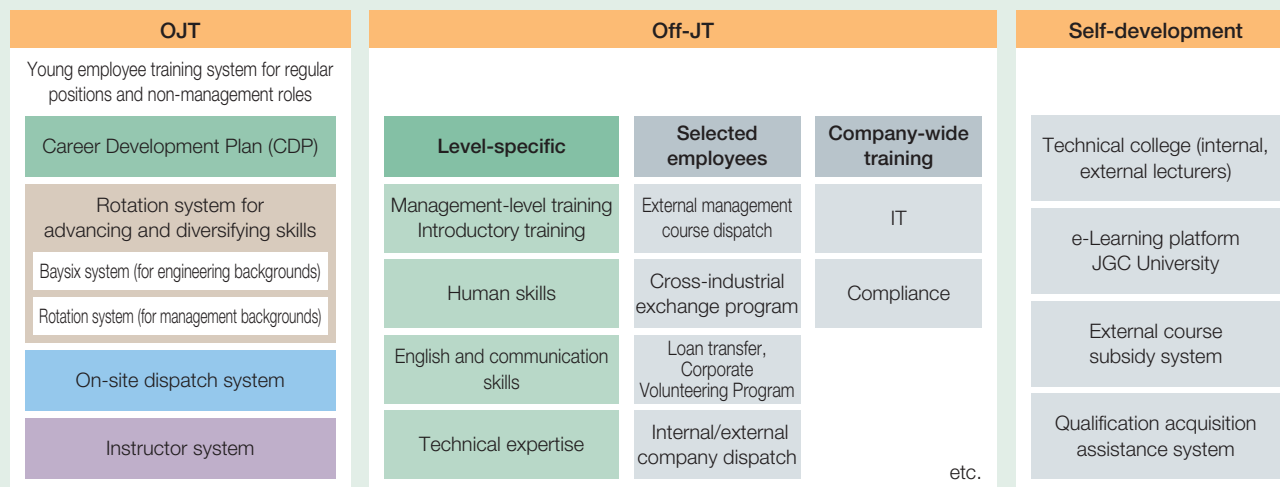


# D Development

## Training for Advancing and Diversifying Skills

The JGC Group provides strategic training to give human resources a competitive edge as soon as possible after they are recruited. In order to build up a diverse human resources portfolio capable of achieving the 2040 Vision, the JGC Group provides young employees with a strategic OJT program and various Off-JT training, such as level-based training, and programs that foster self-development. We are focusing in particular on OJT programs for young employees that facilitate development while engaged in work duties.

## Overall image of training for advancing and diversifying skills



### OJT (Young employee training system)

In addition to creating career development plans aimed at giving young employees in regular positions and non-management roles a competitive edge as fast as possible, we are working on building the foundation for the diverse human resources portfolio that will be required in the future by providing strategic training for young employees through OJT, including training programs for both humanities and engineering backgrounds, or the on-site dispatch system.

#### ► Career Development Plan (CDP)

Employees describe their current situation and the image they are aiming to achieve, and outline their deficiencies in skills, experience, mindset, and other factors required for performing work, to encourage self-awareness and individual career development. Fostering communications with one-on-one career discussions between superiors (development coach) and subordinates while creating a CDP provides growth opportunities in line with what the subordinates are seeking, and cultivates their awareness.

#### ► Rotation system for advancing and diversifying skills

A system that places young employees in different departments and roles for a defined period. While ensuring consistency from the time of recruitment, we conduct placement and training linked to the CDP, and promote both the early development of young employees and autonomous career formation. This is aimed at fostering a diverse range of human resources with extensive experience and skills, developing heightened, varied skills.

#### ► On-site dispatch system

A system that dispatches both new graduate and mid-career recruits to domestic or international construction sites for up to six months within three years of joining the Company, with the aim of giving them a deeper understanding of our Group's EPC business, and having them gain diverse experience.

#### ► Instructor system

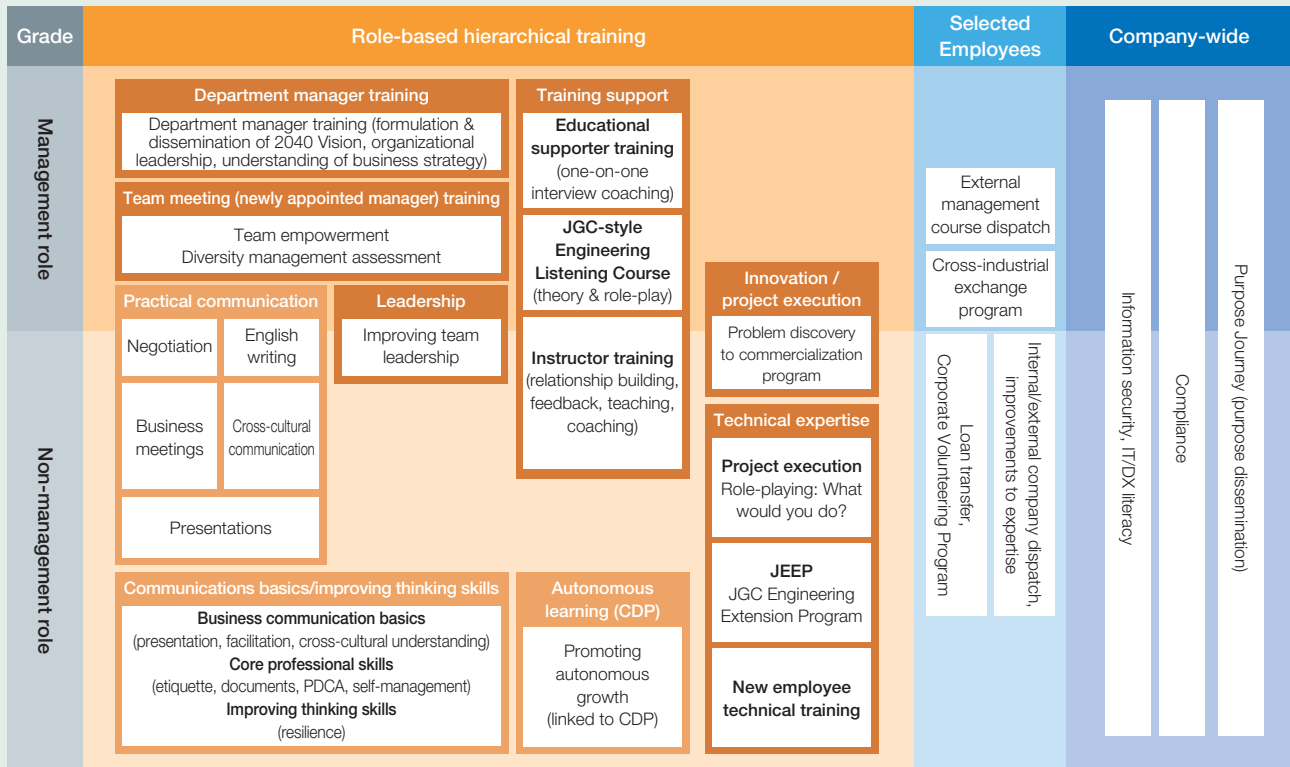
A system that assigns a dedicated instructor to all new graduate recruits for two years after they join the Company. These instructors support them both professionally and mentally, and by working with that department's management help them adapt quickly to become effective workers.

### Off-JT (Training program)

The Group runs various training programs so that employees can acquire the knowledge and skills necessary at all levels and in each role, from new recruits to management. In addition to training in business, communication, and leadership skills, we have also designed and implemented our own training programs at each company. These include role-play training to enhance EPC technical skills, listening skills courses to strengthen one-on-one communication between managers and employees, and Purpose Journey training to instill the Company's purpose. Furthermore, we have started implementing a long-term, hands-on new business development program to foster and strengthen innovative human resources. We plan to further expand these measures in fiscal 2024, thereby actively supporting the growth of our employees.

Human Capital Initiatives

Off-JT program



TOPICS

Listening Course

With the JGC-style Engineering Listening Course, our aim is to improve the listening skills that underpin psychological safety, and to impart skills to maintain human relationships in a range of situations, including one-on-one communication between managers and employees, as well as those between seniors and juniors, and with colleagues, employees, and staff from partner companies. Instructors are mainly in-house career consultants, and more than 200 people primarily in management roles have taken the course so far. We will continue to further expand this course to create a more open, productive, and creative workplace while improving work-life balance and ultimately achieving employee well-being.



Self-development

Our Group has established a number of self-development systems to support employees' autonomous growth. In addition to our "Qualification acquisition assistance system" and "External course subsidy system," we offer GLOBIS Unlimited as well as Udemy courses to all employees who wish to take them, thereby supporting their autonomous learning by helping them acquire the skills they need, when they need them. We have also developed JGC University, an e-learning platform that allows employees to acquire specialized knowledge unique to our Group. We are rolling this out not only in Japan but also to overseas Group companies.

Promotion of Inclusion and Diversity

Recognizing that diversity and fairness are essential for everyone to thrive and work together effectively, the JGC Group has established the Basic Policy for Inclusion and Diversity (I&D), and it is committed to promoting this policy throughout all its entities and activities worldwide.

In fiscal 2023, we focused on promoting an I&D foundation, as well as furthering initiatives to raise awareness of both the basic policy above and the Group's I&D philosophy, also monitoring the status of this promotion by using data from an engagement survey. As part of our awareness-raising activities, we held joint events with other companies and organizations in Kanagawa Prefecture, conducted I&D basic knowledge courses at internal events, and organized workshops at which participants could

experience the imbalances caused by differences in the positions of majority and minority groups, in order to promote and disseminate I&D.

Our Group values the well-being of our employees, and we believe that by creating an environment in which each individual can work with a positive, forward-looking attitude, we can promote business improvements, increase productivity, and drive innovation—ultimately, this leads to improved employee performance and increased corporate value. Given this belief, we will continue to promote our I&D activities.



Details on the I&D policy are available on our website.

<https://www.jgc.com/en/about/policies.html#anc11>



## TOPICS

### Holding an International Women's Day Event

On March 25, 2024, we held an event to commemorate International Women's Day.

This event was held with the cooperation of companies and organizations outside our Group, recognizing that to create a society in which diverse human resources can work together, "it is vital not only to advance I&D within companies but also to promote it across organizations and society at large." About 220 employees from our Group participated in this event, along with approximately 50 participants from companies and organizations based in Kanagawa Prefecture.

Taking this event as an opportunity, we will further accelerate the promotion of I&D within our Group and strengthen our external network, and by supporting the active participation of women in society, contribute to realizing one in which everyone can work with vitality, and be themselves.



### Promotion of women's careers

As part of our actively promoting highly capable female employees, we have set a target of doubling the number of female managers by 2025 over 2020 levels. With this in mind, we are creating an environment that lets women better demonstrate their leadership, as well as providing career support and opportunities for skill development and growth.

#### Number and ratio of women in management positions\*

	Fiscal 2022	Fiscal 2023
Number of total managers (Persons)	757	818
Number of female managers (Persons)	14	17
Ratio of female managers (%)	2.1	2.1

\* For employees at the four companies: JGC Holdings Corporation, JGC Corporate Solutions Co., Ltd., JGC Corporation, and JGC Japan Corporation. The criteria have been changed from fiscal 2023 to align disclosure with the definition of managers set by the Ministry of Health, Labour and Welfare.

#### ▶ Participation in women's leadership programs

Within the Group, we send female employees to multiple leadership programs every year aimed at promoting the development of the next generation of female leaders. Through these programs, we are furnishing participants with opportunities to refine their leadership styles, and with an eye to the future, focus on medium- to long-term career development.



### Promoting recruitment of people with disabilities

To further advance and stabilize recruitment of people with disabilities, Group company JGC Parallel Technologies Corporation was established in January 2021. As of June 2024, we have 37 employees, 34 of whom are IT engineers with physical, mental, or developmental disabilities. They are responsible for supporting the Group's IT/DX-related operations. The Group-wide rate of employment of people with disabilities is 2.68%, maintaining a level close to the statutory employment rate of 2.5% following the 2024 legal revision. We are promoting a new model for the employment of people with disabilities, and in 2023 we were introduced as a pioneering company in the field of neurodiversity by the METI.



Parallel × Technologies

We are aiming to create a society in which everyone can work in an equal footing manner regardless of disability to demonstrate their skills to the fullest, while feeling a sense of social significance.

Human Capital Initiatives

# E Engagement

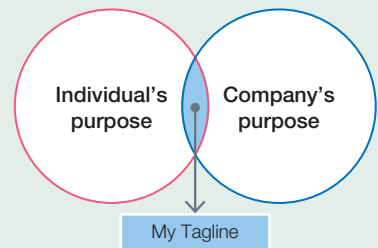
A broad range of measures are being implemented to increase engagement so that human resources of the JGC Group can make the most of their own capabilities toward achieving the 2040 Vision. These include developing rewarding systems, promoting I&D, and creating a comfortable workplace environment.

## Making Purpose Personally Relevant (Purpose Journey Training)

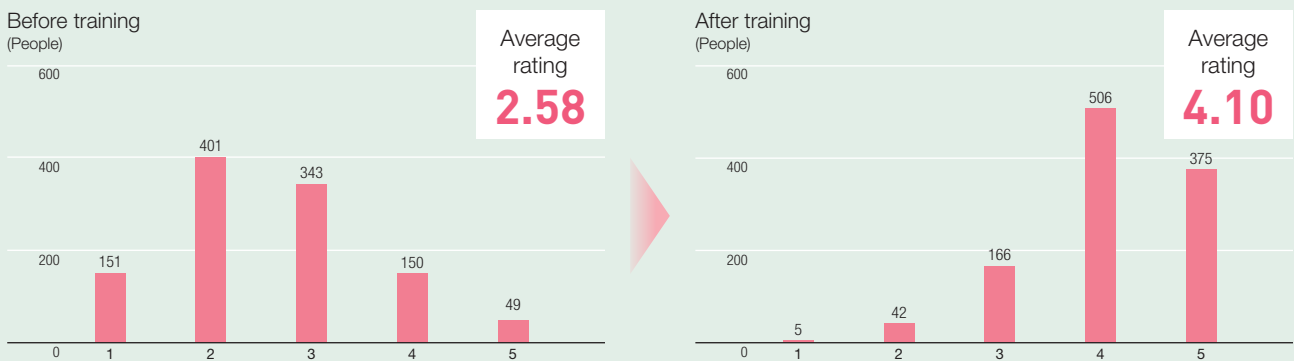
In addition to instilling the JGC Group’s purpose, “Enhancing planetary health,” we implement Purpose Journey training with the aim of having employees renew their own sense of purpose and pointing out items in common with the company and each individual.

Initiatives include a program for exploring the employee’s own sense of perspective, an aptitude test for analyzing oneself from objective and quantitative metrics, and a program for identifying personal qualities and strengths from individual lifeline charts. Participants discuss with each other the background of the Company’s purpose, and find areas in common between the Company and their own individual purposes, to create their My Tagline in around 15 words.

A survey of 1,200 out of 1,900 respondents conducted at the end of July 2024 after training indicated that the average level of satisfaction regarding our Group’s purpose grew from 2.58 points before training to 4.10 (out of 5) afterward. Additionally, 80% of employees have expressed that they are satisfied with the purpose.



### Numbers of respondents satisfied with the JGC Group purpose



## Organizational Diagnostic Survey\*

As of December 2023, we have introduced an organizational diagnostic survey to promote the sustainable growth of the organization and enhance employee engagement, and 93% of employees responded in the first round. Of the total 32 items in the survey, high satisfaction was gained for “influence within the industry” as well as “appealing human resources,” “responsibility and job satisfaction,” and “assistance and support for subordinates,” as well as for items important for project execution and related to communication such as “listening to subordinate opinions” and “mutual respect.” Items with high satisfaction were consistent across the companies, however, those with low satisfaction varied depending on the department. Accordingly, the Human Resources Department, department managers, and CDMs are cooperating in organizational development for areas with low satisfaction.

Looking to the future, we will consider selecting key items for the Group to focus on based on the results of this survey, and work toward achieving BSP 2025 and 2040 Vision.

#### <Ranked satisfaction items>

1st:	Influence within the industry
2nd:	Appealing human resources
3rd:	Responsibility and job satisfaction
4th:	Assistance and support for subordinates

\* For approximately 3,200 employees at the four companies: JGC Holdings Corporation, JGC Corporate Solutions Co., Ltd., JGC Corporation, and JGC Japan Corporation

## TOPICS

## Holding of People Day

We held a “People Day” with participation by many employees including executives, department heads, CDMs, and mid-level employees, aimed at promoting to them our human resource strategy. This event was well received, and in addition to explanations of human resource strategies from top management and the CHRO and lectures by external speakers, this also recognized various internal initiatives under the theme of “good practices for people and organizations.” After this, the venue was divided into theme-based sections such as I&D and internal HR systems, at which we increased employee awareness and promoted use of the systems.




## L Life &amp; Work

We consider a fulfilling work–life balance (sense of growth, physical and mental fulfillment) essential so that employees can continue working with vitality, and have introduced various systems and mechanisms to support this.

## Family Care System

The comprehensive family care system we have put in place helps members balance work with housework, childcare, and nursing care. We offer childcare leave without conditions up until the age of two, support for those raising children (two days off per month) for childcare leave, shorter working hours and childcare telecommuting (four days a week until the child is two years old, and two days a week until the child is in second grade), as well as nursing care leave comprising up to 365 cumulative days of caregiving leave and nursing care leave, and nursing care telecommuting (four days a week).

We support a flexible work style for both men and women that takes into account individual life events, with the childcare leave utilization rate for men reaching half of those eligible in fiscal 2023, with one-third utilizing this for at least one month.

 ESG Data Trends over Time P.97

## Physical and Mental Health Management

As well as industrial physicians and nurses, at our offices we also have public health nurses and licensed psychologists on staff, providing employees with support to ensure peace of mind at work in terms of their physical and mental health. We have put in place an environment in which employees can consult with us at any time through interviews, both in person and online, through email, or over the phone. Depending on the results of these, we provide suitable advice and referrals to specialists.

During our new employee training, we provide education about physical and mental health management. We convey to employees the importance of well-being and inform them about our internal and external consultation services. Additionally, we hold mental health issue prevention workshops for all employees, inviting external lecturers. We also stress to employees the importance of timely care from the perspectives of maintaining health, preventing issues with mental health, and being aware of one’s physical and mental condition. Furthermore, with regard to stress checks conducted in accordance with the law, we are implementing a healthy work environment that includes actively recommending that employees under high stress consult with industrial physicians.

## JGC Family Day

Since fiscal 2009, we have held the JGC Family Day, aimed at cultivating children’s perspectives on work and promoting family understanding of our work more deeply. We held this again in fiscal 2024 with a total of 40 children (employees’ children in grades 4 to 6) participating.

On the day, in addition to experiencing the workplace through tours and exchanging of business cards, we held various programs throughout the day including games that let participants experience our core EPC business, and have opportunities to interact with top management.



Top management exchanging business cards with employees’ children



Details on other initiatives and frameworks are available on our website.

<https://www.jgc.com/en/esg-hsse/social/human-capital/>



Human Capital Initiatives

# JGC Group's Expert Map\*

In April 2024, we revised our Expert System, which defines the roles and behaviors of experts (human resources for specialist roles) in order that we can realize our 2040 Vision. This aims to clarify the wide range of technical fields and human resources within the JGC Group, and by sustainably developing our human resources in each field, contribute to enhancing the competitiveness and corporate value of the Group. As of July 2024, we have appointed 85 experts across a wide range of fields.

\* This expert map applies to the four companies: JGC Holdings Corporation, JGC Corporate Solutions Co., Ltd., JGC Corporation, and JGC Japan Corporation.



Leading Expert



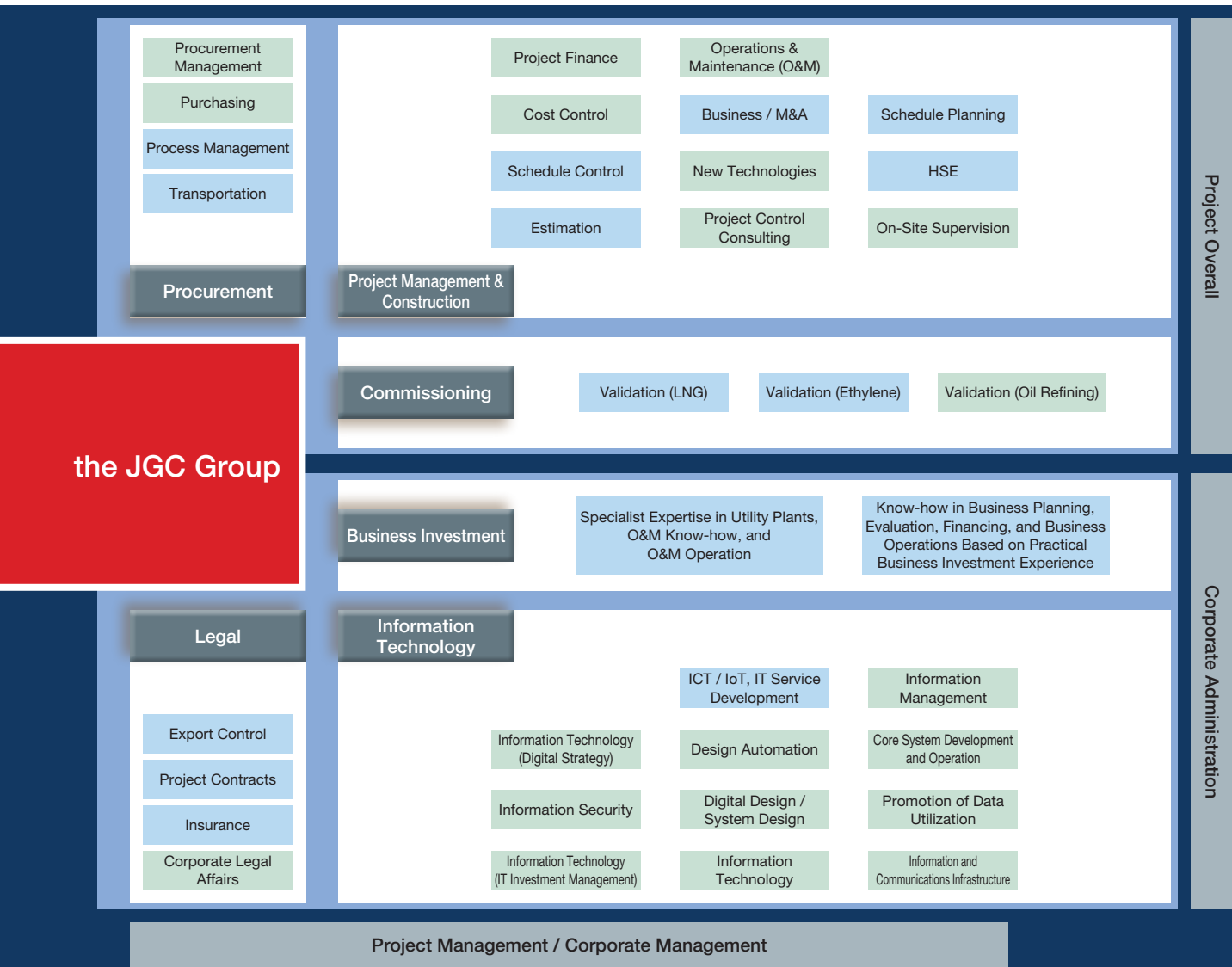
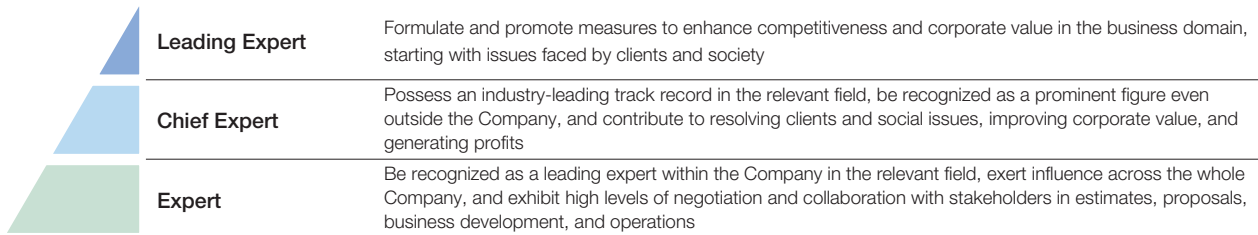
**Tomohide Muraoka**  
 Director, Chief Engineer  
 Sustainability Co-Creation Unit  
 Sustainability Co-Creation Office  
 JGC Holdings Corporation

I am involved in initial studies with clients developing technology structures, and creating new businesses as we aim to realize a sustainable society through carbon reductions.

Since joining the Company in 1995, I have gained experience in a wide variety of fields and industries, however, the core of my work has been the basic design of LNG and low-carbon technologies, with which I have been involved for many years as a process engineer.

Natural gas is expected to serve as a transitional energy, but since it is still a fossil fuel, we need further decarbonization. Looking to the coming era of carbon neutrality, we are examining focus areas for decarbonizing energy as a company, starting with new initiatives, and leveraging our expertise as a leading contractor in LNG plant construction, thereby advancing decarbonization efforts together with the Japanese government and partner companies.

## Expert Hierarchy and Each Role



## Expert

**Tomoko Kazama**

Technical HSE Department  
Process Technology Division,  
JGC Corporation

I am responsible for the field of HSE Risk Analysis. Safe operation and minimizing impact on the surrounding environment are fundamental principles of plant operation. To ensure that this premise is a given, my role is to identify potential dangers in the plant and understand the risks of these in view of their frequency of occurrence and their impact, and to incorporate effective countermeasures into the design. As an example, we formulate design concepts to ensure that the risk of leakage of flammable or toxic substances or the impact on the surrounding environment from wastewater or exhaust gases is kept to minimal levels. Information sharing and exchanges of opinions with related departments are essential for accurate risk analysis and deciding on countermeasures. We will continue to respond in a responsible manner as the bedrock upon which we build plants that plant owners and nearby residents can trust.

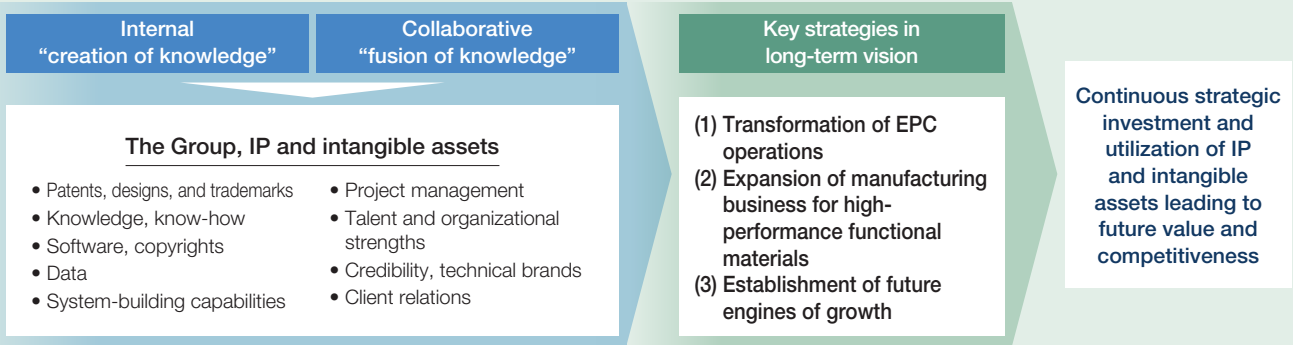
# Intellectual Capital Initiatives

## Basic stance

Intellectual capital is emphasized by the JGC Group as a management resource for sustained growth, and the Group is actively engaged in creating, protecting, and applying intellectual property (IP) and intangible assets, and in associated risk management.

A broad range of these IP and intangible assets built up through internal “creation of knowledge” and collaborative “fusion of knowledge” are used in a variety of ways while ensuring compliance with intellectual property laws and regulations, respecting the rights of third parties, and minimizing our own risks.

As the Group looks toward transformation of EPC operations, expansion of manufacturing business for high-performance functional materials, and establishment of future engines of growth, which are key strategies in the Group’s 2040 Vision, our long-term management vision, the Group will continue to invest strategically in and utilize IP and intangible assets that are tied to future value and competitiveness.



### Accumulating and utilizing IP and intangible assets

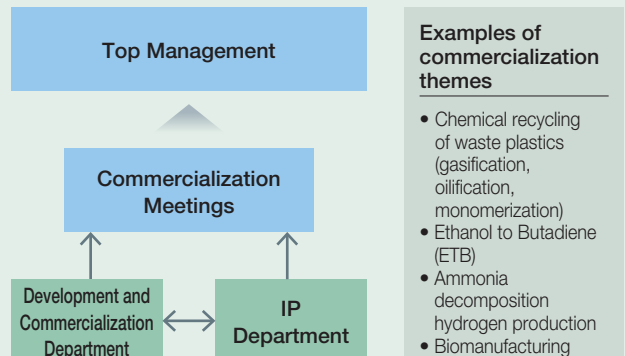
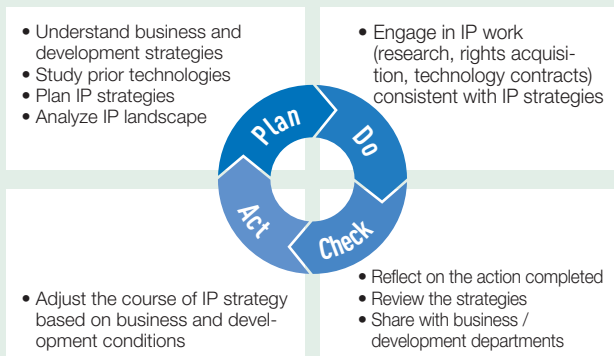
(1) Transformation of EPC operations	<ul style="list-style-type: none"> <li>EPC Advanced project execution                             <ul style="list-style-type: none"> <li>Utilization of systematized know-how related to advanced construction techniques such as large-scale modular construction methods</li> <li>Advanced Work Packaging (AWP) construction management system optimized for Group project execution</li> <li>Development of various design systems to achieve Data-Centric EPC execution* (* EPC execution using efficient data-centric information exchange, replacing conventional drawing-based information exchange)</li> </ul> </li> <li>Shortening of design time                             <ul style="list-style-type: none"> <li>Utilization of design systems constructed by converting tacit knowledge of skilled engineers —their experience, insights, and know-how, etc into explicit knowledge—their experience, insights, and know-how, etc.</li> </ul> </li> <li>Productivity improvements through labor-saving construction                             <ul style="list-style-type: none"> <li>Development of elemental technologies such as robotics, 3D printers, small and medium-sized modular construction methods, and remote operations, and application of these to projects</li> </ul> </li> </ul>
(2) Expansion of manufacturing business for high-performance functional materials	<ul style="list-style-type: none"> <li>Together with partner companies, promoting research and development of catalysts, fine chemicals, and fine ceramics products toward the expansion of our manufacturing business for high-performance functional materials (e.g., catalysts for carbon recycling, high thermal conductivity silicon nitride substrates, bone regeneration materials, etc.)</li> </ul>
(3) Establishment of future engines of growth	<ul style="list-style-type: none"> <li>Promotion of Business Commercialization in Co-Creation with partners in segments such as the circular economy segment (chemical recycling of waste plastics, waste fibers, and waste oil), low- and carbon-free segment (ammonia production), and the bio segment (carbon recycling through biomanufacturing technologies using CO<sub>2</sub> as the raw material)</li> <li>Establishing “soft” businesses such as stable plant operation / higher productivity services, plant maintenance, and safety risk assessment</li> </ul>

### Implementing IP Strategies Linked to Business and Development Strategies

The creation and growth of new businesses that will serve as future growth engines is promoted by formulating IP strategies linked to our business and development strategies using a backcasting approach from the desired future state. The Group then repeats PDCA cycles for IP that integrate all three strategies.

Regarding important commercialization themes, the IP Department participates in meetings to deliberate commercialization, and ensures that development and business strategies are linked by confirming with development and commercialization departments. During these deliberations, the IP Department conducts IP landscape analysis and uses the analysis results in discussing the materials.

#### Implementing a PDCA cycle for IP



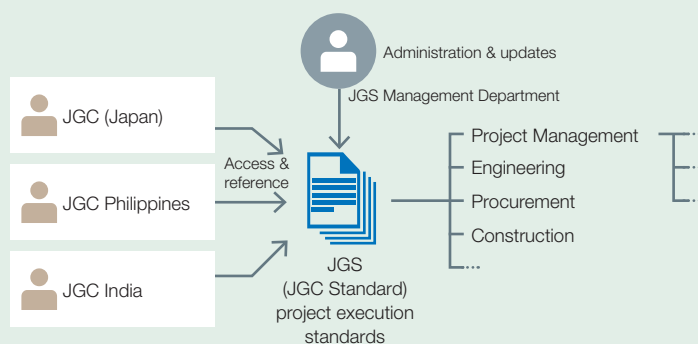
## Examples of Accumulation and Utilization of IP and Intangible Assets Tied to the Transformation of EPC Operations

### Standardization of EPC project execution know-how that the Group has accumulated over the years, and promotion of quality improvements in EPC project execution

The Group has accumulated a wealth of knowledge and know-how related to project execution over many years' experience with numerous EPC projects.

In recent years, projects have tended toward being larger and more complex. In our transformation of EPC operations, there is a need for further improvements in project execution capabilities and quality. In achieving this, the Group considers the knowledge and know-how related to project execution that has been collected so far as a source of competitive advantage, and is organizing this as organizational and explicit knowledge. This extracted knowledge and know-how is standardized and systematized as the JGC Standard (JGS), and is utilized by each Group company including overseas subsidiaries when executing projects.

The JGS comprises over 1,000 standard documents, categorized by field and depth. The dedicated department for managing the JGS regularly adds new items and revises existing ones, thus ensuring that the JGS is kept current with the knowledge and know-how gained from new projects. The standardization of project execution using the JGS plays an important role as the foundation upon which the Group can expand our EPC business globally.



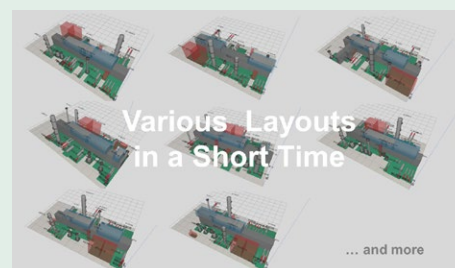
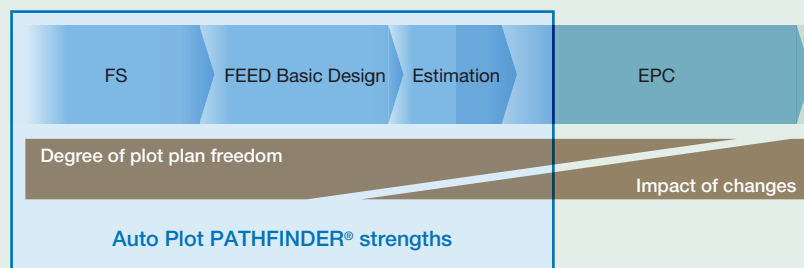
### Design innovation through Auto Plot PATHFINDER® DX

The plot plan is the overall layout of the plant, and its design requires advanced technology in order to optimize various requirements while being subject to complex constraints. As such, this field has been heavily reliant on the intuition of experienced senior engineers. The Auto Plot PATHFINDER® automated plot plan design system utilizes three technologies to automate and optimize plot plan design. These are: (1) division of process flow units through the use of graph clustering\*; (2) automation of equipment layout within units by formalizing and codifying the tacit knowledge of senior engineers; and (3) automatic optimal placement of units through the use of genetic algorithms.



Our Group actively utilizes Auto Plot PATHFINDER® in plot plan design tasks for FS and FEED. By protecting our design automation technology with IP rights, the Group will secure the improved efficiency of plot plan design and new proposal-based design (Generative Design) as the basis of our Group's competitive advantage, with which the Group will strive to create and expand business opportunities in the construction of a variety of plants.

\*A technology for clustering and analyzing large-scale data that has been graphically structured to represent complex connections, based on data attributes



### The Group IP Portfolio



Details regarding the construction of our IP portfolio are available on our website.  
[https://www.jgc.com/en/business/tech-innovation/intellectual\\_assets/#anc02](https://www.jgc.com/en/business/tech-innovation/intellectual_assets/#anc02)

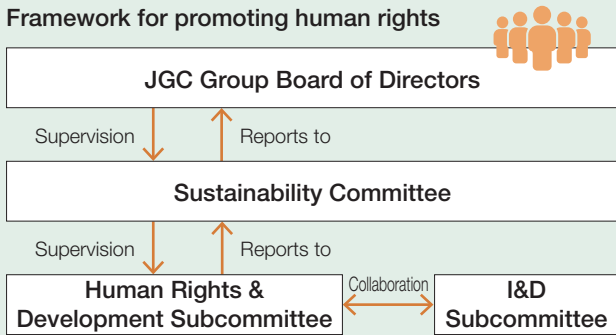
The Group is acquiring IP rights that will lead to future competitiveness. It is also regularly reviewing the IP rights required for business activities in line with business development and technological trends, and working to build an IP portfolio that both ensures self-implementation of business and that will be beneficial for technology licensing and collaborative activities with partners.



# Respect for Human Rights

## Basic stance

Recognizing that having respect for the human rights of all people affected by our business is a fundamental principle of our business, the JGC Group abides by internationally recognized human rights principles such as the International Bill of Human Rights and the ILO Declaration on Fundamental Principles and Rights at Work of the International Labour Organization (ILO). In addition to Group executives and employees, the Group asks stakeholders throughout our supply chains to respect human rights, in line with the JGC Group Code of Business Conduct and our Basic Policy for Human Rights & Development.



Under the guidance of the Sustainability Committee, chaired by the chairman and CEO of JGC Holdings, the Group has established the Human Rights & Development Subcommittee as part of our human rights framework.

To promote a unified, Group-wide approach to human rights, the subcommittee consists of senior executives of main Group companies and works with the I&D Subcommittee led by a human resources department. This ensures that respect for human rights is part of our corporate culture.

Details on the basic policy for human rights are available on our website.  
<https://www.jgc.com/en/about/policies.html#anc02>



## Promotion of Human Rights Due Diligence

### Study risk reduction measures based on the human rights risk map

Based on the Basic Policy for Human Rights & Development, the Group is also committed to putting together a human rights due diligence process. In fiscal 2022, the Group identified stakeholders in the supply chain for our domestic and international EPC businesses, and created a human rights risk map that classified human rights issues that may arise in the Group by severity and likelihood. In fiscal 2023, the Group considered the risk mitigation measures required based on issues identified in the human rights risk map. In addition to drafting the Group’s Human Rights Regulations, which are foundational in promoting respect for human rights, the Group worked on drafting clauses to add human rights provisions to procurement contract terms for domestic orders, as well as revising the human rights clauses in procurement contract terms for overseas vendors and subcontractors.

	— Fiscal 2023	Fiscal 2024	Fiscal 2025 —
Assess human rights risks	[Blue arrow spanning from start of Fiscal 2023 to end of Fiscal 2023]		
Study risk reduction measures	[Blue arrow spanning from start of Fiscal 2023 to end of Fiscal 2024]		
Implement risk reduction measures	[Blue arrow spanning from start of Fiscal 2024 to end of Fiscal 2025]		
Verify effectiveness	[Blue arrow spanning from start of Fiscal 2025 to end of Fiscal 2025]		
Disclose information, communicate externally	[Blue arrow spanning from start of Fiscal 2025 to end of Fiscal 2025]		

### Future issues to be addressed, and direction

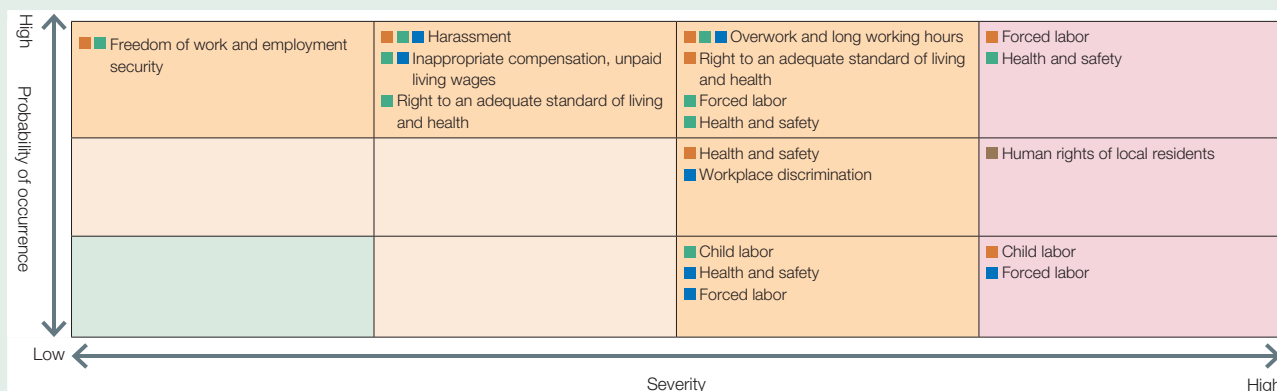
The Group will continue promoting our human rights due diligence initiatives, as well as aiming to further develop the process. Initially, the Group will draft implementation plans and guidelines for implementing risk reduction measures targeting our overseas EPC businesses, and will work on executing measures by sending human rights-related questionnaires to vendors and subcontractors, and requesting improvements based on interviews. In compliance pre-screening for business partners, the Group has already started initiatives that include sending some of them questionnaires containing items on human rights, and requesting from them the submission of declarations.

Furthermore, the Group plans to start from creating a human rights risk map in order to expand the human rights due diligence process to include functional materials manufacturing companies.

### Summary of human rights risk map (applies to overseas EPC business)

[Categories (in order of having a potential impact)]

■ Construction and design partner companies ■ Materials procurement sources  
■ Site and office employees ■ Local residents



### Support for Canada's Modern Slavery Act

The Group has prepared and submitted a modern slavery report in accordance with the Fighting Against Forced Labour and Child Labour in Supply Chains Act (Modern Slavery Act) that came into effect in May 2023 in Canada. This report details the efforts undertaken to identify, prevent, and reduce the risks related to forced and child labor in business activities and the supply chain related to the LNG Canada Project. Our Group is committed to addressing human rights risks in an appropriate manner within our global business operations and supply chains, promoting respect for human rights based on international human rights principles including the laws of each country.



Details on Canada's 2023 Modern Slavery Act Report are available on our website.

<https://www.jgc.com/en/esg-hsse/social/human-rights/#anc-01>



### Comment from lawyer Akiko Sato, a lecturer at our human rights training course in fiscal 2023



**Akiko Sato**

United Nations Development  
Programme Liaison Officer  
(Business and Human Rights project)

When building an effective ongoing process of human rights due diligence, it is essential to incorporate the human rights policy into daily operations along with strengthening initiatives on human rights around areas such as climate change, biodiversity, and conflict, providing dialogue with those stakeholders impacted by our business activities including our employees, suppliers' employees, and local communities, and provide reliable grievance mechanisms. The Group needs to promote specific measures to counter human rights risks identified throughout the value chain, including overseas, while reviewing existing initiatives in a range of fields such as occupational health and safety, as well as diversity, equity, and inclusion in light of international human rights standards. In addition to a governance system backed by a top-level commitment, enhancing collaboration with other subcommittees within the Sustainability Committee is also crucial in bringing about management focused on human rights. While this will be a long process, moving forward step by step is expected of us as part of our corporate social responsibility.

## TOPICS

### Listening Tours Conducted On-Site

The Group recognizes overseas plant construction sites as relatively high-risk areas for human rights violations within our Group's supply chain, and as such are areas of focus.

The Group conducts listening tour activities where on-site management staff listen directly to the opinions of supervisors and workers on each project, aiming to foster a safety culture on-site and ensure the occupational health and safety of workers. For the ongoing project for AGC Vinythai in Thailand, management staff from JGC Corporation engage in direct dialogue with workers weekly in each area of the site. There they listen to their opinions on work and their living conditions to foster a safety culture and improve their labor and living environments, which is also linked to human rights.

The Group aims to create a safe and secure working environment under the slogan "to create safe, secure and healthy workplaces in which all staff can carry out their functions with confidence." Through stakeholder engagement, including management staff from partner companies and on-site workers, the Group will strive to further foster a culture of safety and of reducing human rights risks.



# Occupational Health and Safety

## Basic stance

The JGC Group positions health, safety, security, and the environment (hereinafter, HSSE) performance as a corporate value that is to be continuously pursued, and has established the following HSSE fundamental principle common to the entire Group.

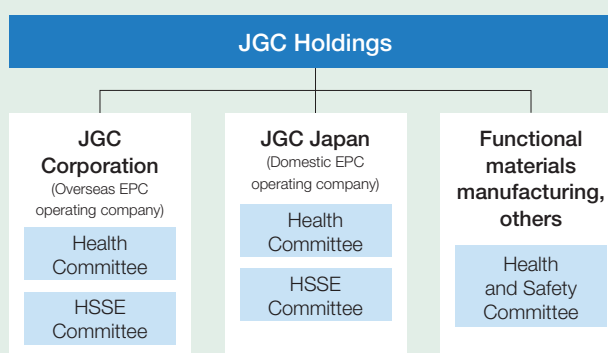
**“To create safe, secure and healthy workplaces in which all staff can carry out their functions with confidence”**

All people working at our offices and construction sites both in Japan and overseas, including not only Group employees but also those of partner companies share, this fundamental principle, working together to promote HSSE.

## Framework for Managing Occupational Health and Safety

EPC operating companies and functional materials manufacturing companies have developed their own health and safety policies based on the fundamental principle above, and established a Health and Safety Committee or HSSE Committee to develop a health and safety management system. These committees deliberate on key topics related to HSSE, and develop activities to reduce safety and health risks. In the event of a major disaster, the Occupational Health and Safety Management Department of each Group company address the incident quickly, and relevant committees work together with construction sites to isolate the root cause and then formulate and implement effective measures to prevent recurrence.

### Framework for managing occupational health and safety



## Increasing Performance of Occupational Health and Safety

The Group increases the performance of occupational health and safety from two angles—raising awareness of health and safety, and enhancing knowledge and expertise on health and safety. Raising awareness of health and safety involves working to boost awareness at all offices and construction sites in Japan and overseas by holding various events, such as the HSSE Conference organized by the President of JGC Holdings Corporation. Enhancing knowledge and expertise on health and safety involves providing education on health, safety and environment to new recruits and employees assigned to sites for the first time, as well as including periodic HSSE audits at construction sites in Japan and overseas.



Fiscal 2023 HSSE Conference

## Safety Performance at Construction Sites

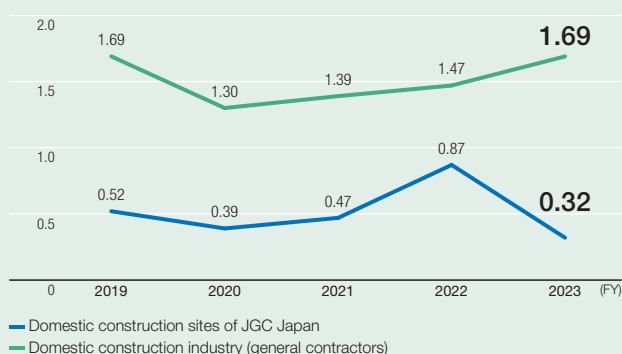
The Group’s industry-leading safety record at construction sites in Japan and overseas attests to our constant commitment to safety as a core value shared by all members. Sites in Japan maintain a lost time incident rate\*<sup>1</sup>, a standard safety indicator in Japan, below the industry average for general construction. Overseas sites also have a lower annual lost time incident rate (LTIR)\*<sup>2</sup> of construction companies outside Japan as reported by the International Association of Oil & Gas Producers (IOGP)\*<sup>3</sup>.

\*1 Indicating the frequency of lost time injuries, a safety benchmark in Japan representing the number of injuries due to workplace accidents per million actual working hours.

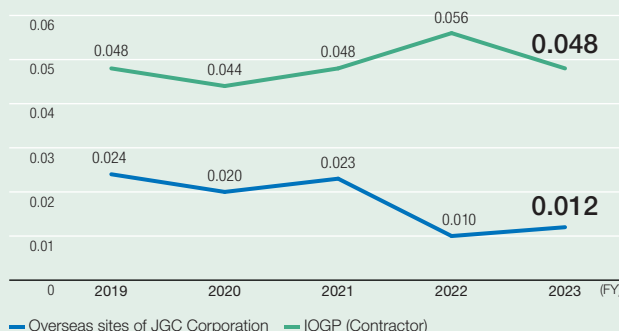
\*2 LTIR: A U.S. Occupational Safety and Health Administration (OSHA) metric for calculating the number of injuries that result in time away from work, and indicates the frequency of lost time injuries per 200,000 hours.

\*3 IOGP: Compiles safety records of construction companies in the oil & gas industry

### Injury Frequency at Construction Sites of JGC Japan Compared to the Domestic Construction Industry



### LTIR of Overseas Sites of JGC Corporation Compared to IOGP (Contractor)



## Quality Management

### Basic stance

Quality management is essential for plant EPC execution capacity as well as safe operation and stable production at plants and other facilities. Under the ISO 9001-certified quality management system in place at the Group, quality policies established by each company form the basis for quality objectives set at various organizational levels. After organizational issues are identified, quality objectives and action plans are formulated, implemented, evaluated, and improved in PDCA cycles for continuous improvement of organizational performance. Each company of the Group ensures quality through systems and human resources that bring together valuable knowledge and skills built up over many years.

### Framework for Quality Management at Group Companies

Quality assurance committees or similar bodies are established at each Group company, and held regularly.

The committees implement continuous improvements to ensure that the quality of the products and services provided remains satisfactory for customers, which includes monitoring quality management activities at each company along with investigating the root causes of any quality issues and preventing recurrence. The committees also evaluate these measures, as ongoing improvements are made.

In maintaining this framework for quality assurance, quality management activities are reviewed annually by the top management of each company.



### Think Quality Initiative (TQI)

JGC Corporation, an overseas EPC operating company, carries out activities under the Think Quality Initiative (TQI) aimed at fostering a culture of permanent quality improvements and creating opportunities for ongoing dialogues on quality. The Group aims to strengthen unity with overseas Group companies and promote business execution through an integrated management system that includes Group-wide quality management. TQI is an important cross-group activity from the perspective of enhancing quality awareness. As part of these activities, every year the Group host a Quality Day to which the Group invite stakeholders from our overseas Group companies.

In fiscal 2023, Quality Day was held in November at the Yokohama Head Office, with approximately 800 people including employees from seven overseas Group companies participating in person and online. Following an opening speech by the President of JGC Corporation, there were video messages from construction sites, a panel discussion, and a “Quality Senryu” contest. During the panel discussion, each overseas Group company raised topics related to quality. Active discussions were held online on these topics between Head Office staff and representatives of overseas Group companies, thereby enhancing quality awareness.

For fiscal 2024, the domestic operating company JGC Japan Corporation will also participate in actively developing TQI activities.



Key members from the Yokohama Head Office leading the Quality Day event



Group companies in the Middle East also participating in Quality Day online

# Stakeholder Engagement

## Basic stance

Our active promotion of attentive communication reflects the belief of the JGC Group that dialogue—engagement—with our diverse stakeholders is essential to sustainable growth and higher corporate value. By providing regular feedback from shareholders and investors to management and relevant departments, applying this knowledge in management strategies, and diligently disclosing both financial and non-financial information, the Group creates a forum for understanding our management policies.



## Shareholders and Investors

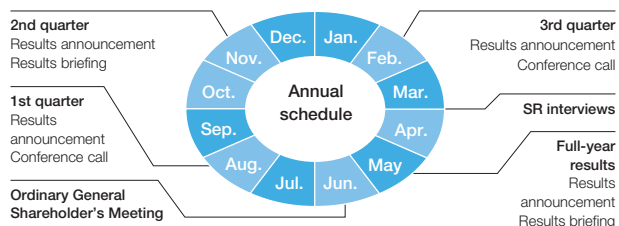
### Disseminating management information and providing feedback to management

#### Positive IR/SR activities

For sustainable growth and medium- to long-term enhancement of corporate value, the Group conducts constructive dialogue with shareholders and investors mainly through the CFO, the Public Relations IR Department, and the General Affairs Department. The Group provides feedback to management and the Board of Directors as appropriate regarding questions and opinions garnered from participants.

Furthermore, the Group ensures careful management of insider information by confirming with relevant departments in advance which information can be disclosed.

#### IR/SR activities schedule



#### Main IR/SR activities

Activity	Number of events	Number of companies
Responses to requests for information, phone calls from institutional investors in Japan / overseas	167	101
Results briefing conference calls	2	95
Results briefings by senior management	2	95
Overseas IR roadshows by top managements	15	15
Business activities briefing conference	9	9

#### Ordinary General Shareholders' Meetings

	Fiscal 2022	Fiscal 2023	Fiscal 2024
Date held	June 29 (Wed)	June 29 (Thu)	June 27 (Thu)
Shareholders attending	32*	48	65
Ratio of voting rights exercised	87.11%	84.65%	78.21%

\* The Group asked shareholders to avoid attending the meeting at the venue as much as possible, as part of measures to prevent the spread of COVID-19.

#### Enhancements to the JGC Report (Integrated Report)

More informative each year, the JGC Report serves a key role in providing information to investors regarding disclosure for long-term investment decisions. The content of JGC Report 2023 reflects the broad range of preliminary feedback received from shareholders and investors. Additionally, given that the previous period was the third year of the medium-term business plan, interest from the stock market centered around “what progress had been made so far, and whether the targets could be achieved in the remaining three years until 2025.” Accordingly, for each of the three key strategies, the Group outlined the progress of specific initiatives, the business environment, and future policies, showing the path toward achieving the targets set in the medium-term business plan. Moreover, the Group continued to focus on expanding the disclosure of non-financial information. The Group has systematically organized the overall structure of the human resource strategy including specific initiatives aimed at strengthening and enhancing human capital, which is essential for sustainable growth of the Group.



#### External evaluation of IR activities

The JGC Group received an award for excellence at Daiwa Internet IR Awards 2023, presented by Daiwa Investor Relations Co. Ltd.



## Clients

### Sharing know-how and training human resources

#### HR training programs in resource-rich countries

Over the past few decades, the Group has held training programs for engineers and students of chemical engineering and similar disciplines in efforts to strengthen ties with resource-rich countries. Many past participants have later contributed to domestic resource development and industrial growth after returning to their own countries, and also expanded the Group’s business in resource-rich countries.



## Employees

### Instilling the vision and management policy, frank dialogue

#### Dialogue with top management, quarterly Company newsletter, and more

The Group holds periodic executive—employee roundtable discussions for participants to speak freely and share in our vision. As a part of this, the JGC Council\*<sup>1</sup> was established to provide a relaxed forum at which top management and employees can discuss the future of the Group, with the understanding that the development of the Company and the improvement of employees' livelihoods are two sides of the same coin, and as such inseparable. Since its establishment in 1972, over 100 roundtable discussions have been held between the top management and employees of each company. Furthermore, after transitioning to a holding company structure, roundtable discussions\*<sup>2</sup> have been introduced between the four companies. In one such discussion held in July 2024, the Group's medium- to long-term management strategy was discussed, and the expectations for employees were clarified.

In addition, visits by top management to construction sites are carried out continuously. Every year, the top management and executives from operating companies visit construction sites within Japan and overseas with the aim of fostering a culture of safety, and to engage in dialogue with employees at these sites.

The Group also uses various media such as Company newsletters and Company-wide bulletin boards to promote initiatives to better communicate Company management policies and issues to employees, and are implementing communication activities to enhance Group employees' sense of belonging.

\*1 This currently applies to the four companies: JGC Holdings Corporation, JGC Corporate Solutions Co., Ltd., JGC Corporation, and JGC Japan Corporation

\*2 A roundtable discussion involving our top management, and all employees from the four companies



Employees in a dialogue with top management



JGC Corporation President explaining the culture of safety at a construction site overseas

Engagement P.59



## Local Communities and Next Generation of Human Resources

### Fostering interest in sciences and global issues

#### Company visits from public junior high schools and high schools in Kanagawa Prefecture

The Group hosts Company visits by students from public junior high schools and high schools in Kanagawa Prefecture. Here, talks with employees and students, and VR experiences etc., encourage communication. In fiscal 2023, the Group held a workshop on the theme of "how will our lives be different in 2040?" Employees and high school students imagined issues that might arise in their daily lives, and exchanged ideas on how to solve these. This helped foster an understanding of the Group's efforts toward bringing about a sustainable society.

#### Chemistry workshops for elementary students

Each year at its Kitakyushu facility, JGC Catalysts and Chemicals holds workshops with chemistry experiments for local elementary students. JGC C&C will continue to kindle an interest in chemistry through these opportunities, which also encourage people to know about their business activities. The company will continue to build positive engagement with the community.



An experiment at a chemistry workshop

#### Initiatives for Basra elementary students

At overseas construction sites, the JGC Group believes that collaboration with the local community is essential for the smooth execution of projects. The Group is currently conducting a construction project in Basra, Iraq. Academic decline in postwar Iraq has been significant, and educational investment is insufficient, particularly in Basra Province. Unemployment also remains high among young people, with jobs scarce even for university graduates. Against this backdrop, the Group has been providing education in programming along with science education classes for public elementary schools in Basra every year since 2022, with the aim of making long-term contributions, such as providing educational experiences for children and creating youth employment opportunities. By fiscal 2023, approximately 16,000 children had participated in programming classes, and approximately 7,000 in science experiment classes.



JGC Code Education programming class



## Vendors

### Sharing project know-how, collecting local information, and enhancing safety and quality standards

#### Supporting vendors with technical assistance

The Group actively promotes domestic procurement where plants are built, and when sophisticated equipment is ordered, our engineers may go on-site to provide technical assistance tailored to local vendors' expertise and facilities. Viewing these close ties as an asset, the Group takes the initiative in providing technical assistance to vendors.



Training for welders

# Operational Review



## Total Engineering Business

### Overseas Business Segments

**Farhan Mujib**

President  
Representative Director  
JGC Corporation



Fiscal 2023 Orders Received

**Approx. ¥136 billion**

Fiscal 2024 Orders Targeted

**¥840 billion**



Floating LNG plant (Africa)

#### Energy Solutions

Business Areas

EPC of various plants, including LNG, CSS, petroleum refining, petrochemical, chemicals, and gas processing

#### Operational Review

In fiscal 2023, as the global economy continued to recover, demand for natural gas (including LNG) remained high as a way to meet energy security as well as decarbonization needs because of its relatively low environmental impact. Clients also continued to consider capital investment plans. Meanwhile, rising interest rates and soaring construction costs have pushed up CAPEX for clients. This has delayed the timing of investment decisions for large-scale plant construction projects and has delayed expected orders into fiscal 2024. Against this backdrop, we received an order for a large-scale low-carbon LNG plant construction project from the Abu Dhabi National Oil Company (ADNOC), and worked on sales activities aimed at receiving orders for other plant construction projects. Unfortunately, we also had to anticipate additional costs and risk contingencies for several plant construction projects underway globally.

Concerning the market environment in fiscal 2024, we also expect continued growing demand for natural gas and LNG as a transitional energy source, especially in Asia and Africa, and believe that clients will make progress with their capital investment plans. However, CAPEX for clients continues to increase, and some clients are still postponing the timing of investment decisions. We will keep a close eye on these trends. In addition, we will strengthen and steadily execute our EPC execution structure and profitability management system in fiscal 2024 to ensure that we do not incur scheduling delays or additional costs for plant construction projects that are currently underway.



Ammonia synthesis pilot project facility (Fukushima)

#### Sustainable Solutions

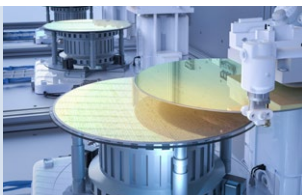
Business Areas

EPC of various plants, including hydrogen/fuel ammonia, SAF, and nuclear energy related (SMRs, and others)

#### Operational Review

In fiscal 2023, policy measures and support from each country toward decarbonizing boosted plans to achieve this goal in segments such as hydrogen/fuel ammonia, SAF, and synthetic methane (e-methane). Under these circumstances, we have received orders for FEED services for hydrogen production plants. These include a hydrogen production plant construction project for Sumitomo Corporation's Australian subsidiary, FEED services for a Malaysian MCH production plant planned by ENEOS Corporation and more, and the construction of an alkaline water electrolysis system in Malaysia, which we are pursuing together with Asahi Kasei Corporation and other companies.

In fiscal 2024, we expect to see our clients' capital investment plans realized through support from government initiatives and subsidies, particularly in the fields of hydrogen/fuel ammonia and SAF. Taking into consideration the distribution of our internal resources, we will work to select FS and FEED projects that are more feasible and are differentiated, and leading to future orders for EPC projects.



## Facility Solutions

### Business Areas

EPC of various infrastructure facilities for semiconductor and storage battery-related industries, data centers, LNG terminals, railroads, and others

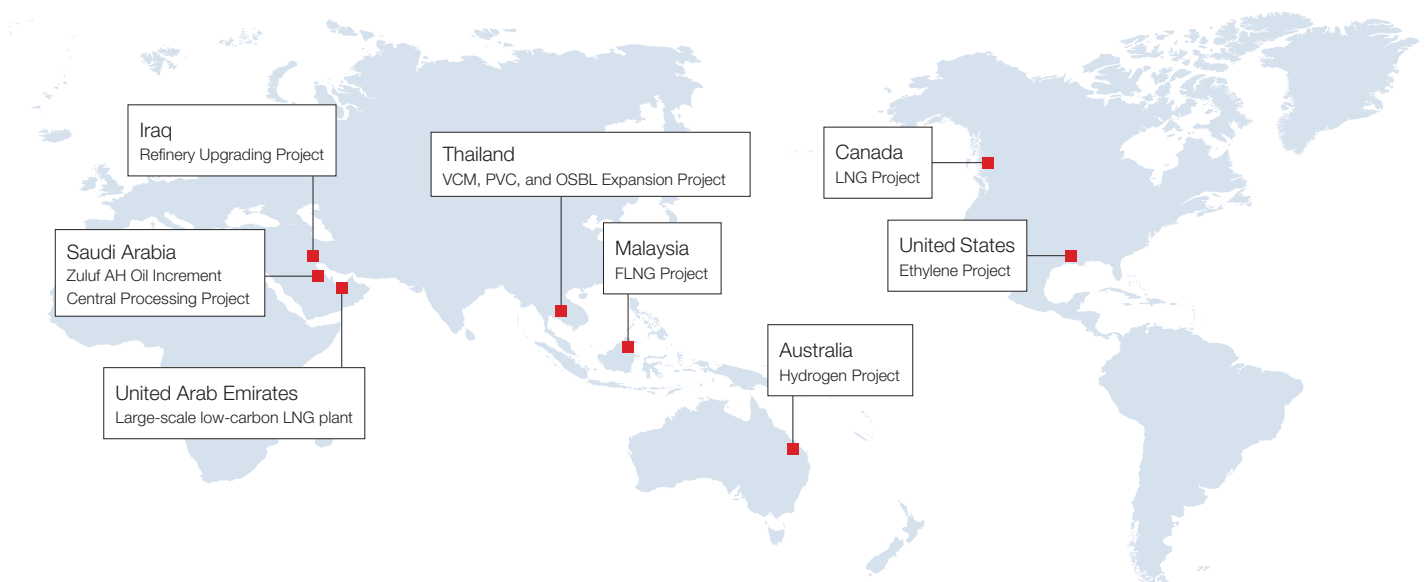
Semiconductor manufacturing facilities

### Operational Review

With the development of digital society and the status of U.S. policy toward China, our clients made steady progress in fiscal 2023 on capital investment plans primarily in regions such as North America and Asia for infrastructure facilities and related equipment to support digital industries including semiconductor materials, storage battery components, and data centers, for which demand is on the rise. Under these market conditions, we have received multiple orders for FS and EPC services in segments related to semiconductors and storage batteries. In addition, we have signed a collaborative agreement with Exyte Singapore Pte. Ltd. to undertake and execute EPC projects in four countries: Indonesia, the Philippines, Vietnam, and Thailand. Exyte Singapore Pte. Ltd. is a subsidiary of Exyte GmbH, which is a leading contractor in high-tech industries.

In fiscal 2024, with the further worldwide expansion of digital industries and diversification of production and facility locations, including investments related to generative AI, we expect clients to continue to make progress in Asia and North America on capital investment plans such as for semiconductors, storage batteries and related industries, as well as data centers. Particularly in Southeast Asia, where there is active investment in new data centers, we are striving to expand our business through collaboration with Exyte Singapore Pte. Ltd. with the aim of undertaking and executing EPC projects.

### Major EPC Projects Currently Underway





**Yasuharu Yamaguchi**

President  
Representative Director  
JGC Japan Corporation

# Domestic Sector

Fiscal 2023 Orders Received  
**Approx. ¥157 billion**

Fiscal 2024 Orders Targeted  
**¥130 billion**



**Business Areas**

EPC of plants for pharmaceuticals production, healthcare, SAF, hydrogen/fuel ammonia, chemical recycling, petroleum refining, petrochemicals and chemical, nuclear energy and others

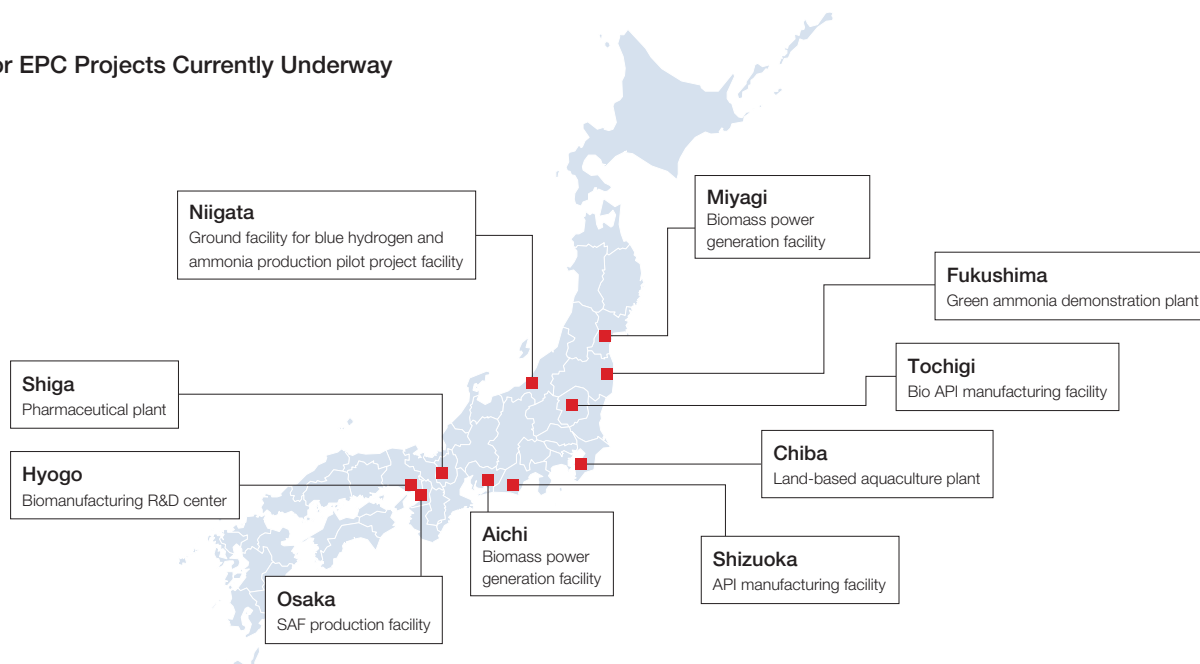
Pharmaceutical manufacturing facility (Shizuoka)

## Operational Review

In fiscal 2023, we saw steady progress in capital investment plans in the life sciences field, and support from government subsidies as well as other factors drove progress on capital investment plans in the decarbonization fields of SAF, hydrogen, and storage batteries, as well as the field of resource recycling. Against this backdrop, we received multiple orders for the construction of biopharmaceutical manufacturing facilities, installation of grid energy storage batteries, and the construction of land-based commercial aquaculture plants. We have also signed an MOU with Takada Kogyo Co., Ltd. for our domestic EPC business, and we plan to further expand our EPC business in Japan through joint execution of projects in areas related to decarbonization and resource recycling, which are expected to grow.

In fiscal 2024, we expect clients to make progress on capital investment plans primarily in the fields of life sciences and healthcare. Fiscal 2024 is also a major year for the maintenance of existing refineries and chemical plants, and demand for periodic maintenance is on the rise. In addition, some clients are postponing investment decisions on projects in decarbonization and resource recycling segments, including hydrogen/fuel ammonia, SAF, and waste plastic gasification, because of the increase in CAPEX due to delays in receiving government subsidies and rising construction costs. Since we expect these capital investment plans to materialize in the next fiscal year or later, we will focus primarily on carrying out FEED services in these same segments in fiscal 2024.

### Major EPC Projects Currently Underway





## Functional Materials Manufacturing Business

### Catalysts and Fine Chemicals Sector

#### Toshiharu Hirai

President  
Representative Director  
JGC Catalysts and  
Chemicals Ltd.



#### Business Areas

Development and production of catalysts used in petroleum refining, chemicals, and environmental conservation as well as of fine chemical products used as materials in semiconductor, IT/electronics, optics, cosmetics, and other applications

Oil refining catalysts

#### Operational Review

In fiscal 2023, in the catalysts sector, demand for products such as FCC catalysts and hydrogenation catalysts stabilized both in Japan and overseas due to an increase in demand for replacement catalysts as fuel demand recovered, and sales of raw materials for chemical catalysts and denitrification catalysts steadily increased. In the fine chemicals sector, demand for silica sols used in hard disk and semiconductor polishing and for silica sols used as anti-reflective material in flat panel displays and tablets declined due to cooling demand in the semiconductor (including hard disk) market, and inventory adjustments in the electronics market.

In the catalysts sector, fiscal 2024 will see JGC Catalysts and Chemicals Ltd. pursue a larger domestic market share for FCC catalysts and continue developing overseas operations, maintain our partnerships for hydrotreating catalysts, work to secure new chemical catalyst contracts, develop new chemical catalyst products for the growing carbon recycling and chemical recycling sectors, and develop materials for environmental conservation catalysts to handle energy transition. In the fine chemicals sector, while we still face the effects of a worsening business environment in our core electronics and semiconductor markets, we expect market conditions to recover from the second half of fiscal 2024. We will focus on launching new silica sol polishing materials, expanding functional coating material sales and applications, developing cosmetic microbead alternatives, and expanding optical material sales and applications.

#### Hiroshi Tanaka

President  
Representative Director  
Japan Fine Ceramics Co., Ltd.



### Fine Ceramics Sector



#### Business Areas

Development and production of ceramic materials for semiconductor, automotive, telecommunications, industrial, medical, and aerospace applications

Octacalcium phosphate bone regeneration material

#### Operational Review

In fiscal 2023, the semiconductor production equipment market continued to be sluggish and demand for semiconductor manufacturing equipment fell. However demand for high thermal conductivity silicon nitride substrates for power semiconductors grew as the shift to EVs continued to accelerate. We have begun construction of a new plant in Tomiya, Miyagi Prefecture, in response to the need for further increased production due to demand growth. Moreover, we have succeeded in mass-producing octacalcium phosphate, which has excellent bone regeneration properties and high bioabsorbability, and which had until now been difficult to reproduce. We have been working on turning this into a new business, and have begun shipping samples to pharmaceutical and medical device manufacturers.

In fiscal 2024, the data communications sector is expected to recover, mainly due to demand for data centers for generative AI and the expanding demand for thin-film circuit boards. We are reviewing our production plans and system for semiconductor production equipment in anticipation of a recovery in the demand for generative AI from the second half of this fiscal year. Although the power semiconductor sector has slowed somewhat due to a slight decrease in the growth rate of EV adoption, primarily in Europe and the United States, we expect to continue receiving orders due to the high quality of our high thermal conductivity silicon nitride substrates.

# Corporate Governance

## Basic stance

The JGC Group remains aware that sound governance is the foundation of management for sustained growth. We are therefore strengthening our corporate governance, which we view as a priority material issue.

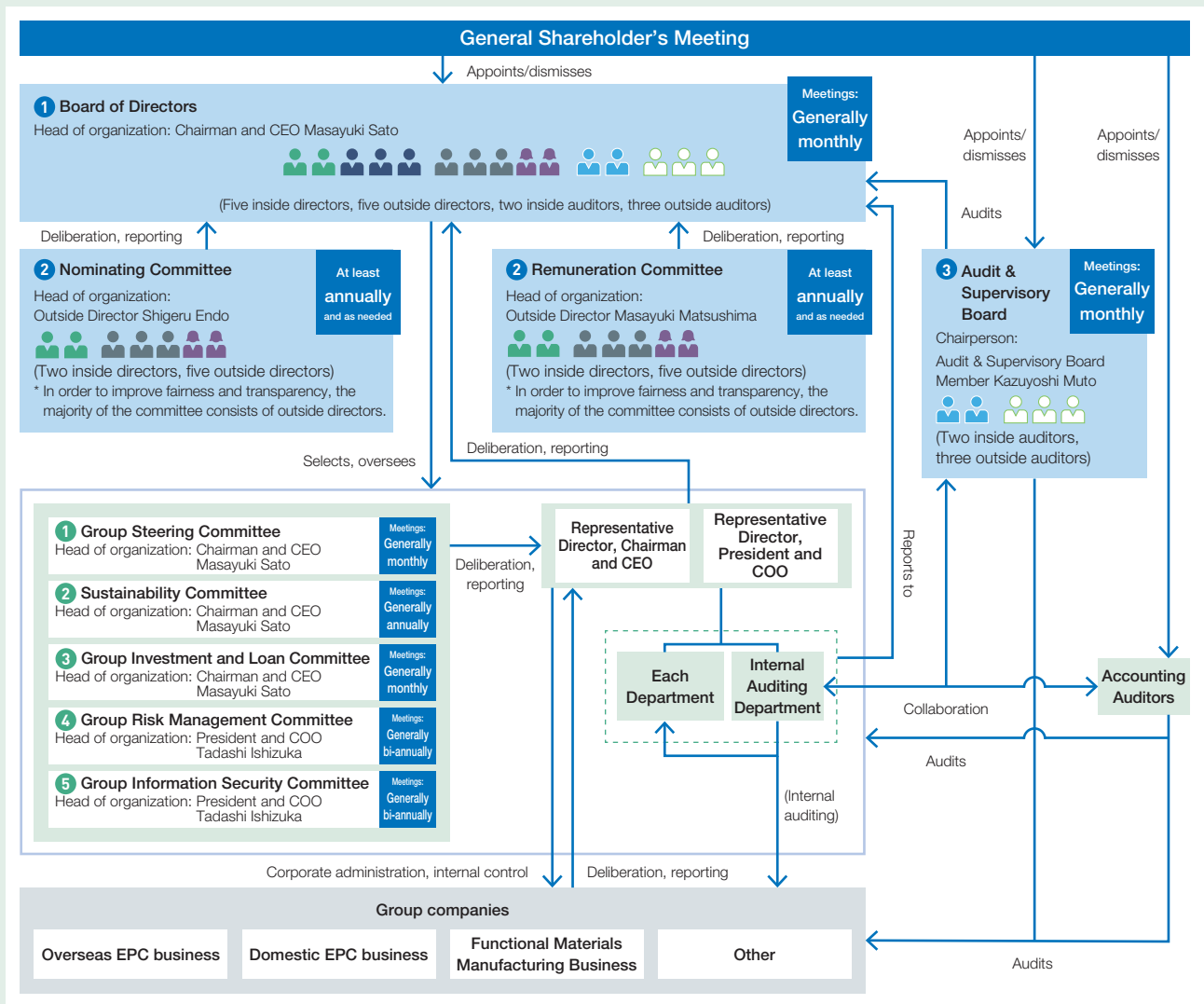
Our central mechanism for corporate governance is the Board of Directors. Its governance structures, functions, and roles are continuously reviewed, with Board effectiveness analyzed and assessed each year as we seek progress through steady improvement.

In regulatory compliance and other matters essential to appropriate corporate governance as well, our purpose and values call on each employee and officer to maintain high ethical standards in everything they do, so that the Group as a whole works to enhance medium- to long-term corporate value and achieve sustained growth.

## Outline of the Corporate Governance System

JGC Holdings maintains a Board of Directors and an Audit & Supervisory Board. The JGC Group has adopted a holding company structure under which operating companies pursue the Group's core business.

### Corporate governance system



Representative Director  
 Director  
 Outside Director (Male/Female)  
 Auditor  
 Outside Auditor

Separating management from execution provides greater clarity on roles and responsibilities of the holding company and operating companies. The holding company's role is to formulate management policies and oversee the operating companies from a medium- to long-term Group perspective. Operating companies apply Group management policies and strategies to respond flexibly and rapidly to market characteristics and seek further business expansion. This is intended to maximize corporate value and ensure optimal allocation of management resources for the Group as a whole while enhancing transparency of corporate management and strengthening overall Group governance. Committees have been established to deliberate key Group matters, and an executive officer system has been introduced to ensure efficient managerial decision-making and execution.

## Improvement Status of Internal Control System

JGC Holdings' Board of Directors determines the basic principles of the internal control system and revises them as necessary.

### Improvement status

1. The Internal Auditing Department monitors, evaluates, and improves the effectiveness of the internal control systems of JGC Holdings and the JGC Group and conducts separate audits as necessary
2. Rules of Management Authority regulate the duties and authority of each role, and clarify the system of responsibilities in corporate management and business execution
3. Management rules for Group companies have been formulated and implemented to ensure efficient and appropriate operations across the Group

## Response to the Corporate Governance Code

We implement all principles laid out in the Corporate Governance Code and provide disclosure according to all 14 general principles together with the supplementary principles required by the Tokyo Stock Exchange as stipulated in the revised Corporate Governance Code of June 11, 2021, and are making steady efforts to further solidify our corporate governance.



Details on the corporate governance report are available on our website. (in Japanese only)

[https://www.jgc.com/jp/ir/assets/pdf/CG\\_20240627.pdf](https://www.jgc.com/jp/ir/assets/pdf/CG_20240627.pdf)



Body	Purpose
1 Board of Directors	<ul style="list-style-type: none"> <li>• Resolves key matters of business execution</li> <li>• Oversees directors' execution actions</li> <li>• Deliberates on medium- to long-term strategies and issues</li> </ul>
2 Nominating and Remuneration Committees	<ul style="list-style-type: none"> <li>• Deliberates on appointment and dismissal of officers, remuneration, etc.</li> </ul>
3 Audit & Supervisory Board	<ul style="list-style-type: none"> <li>• Discusses or resolves issues based on reports of key auditing matters</li> <li>• Presents opinions based on the results above to directors or the Board of Directors as necessary</li> </ul>

Body	Purpose	Members
1 Group Steering Committee	Reports on and discusses the direction that the Group should take as well as steering matters such as management / business strategies for the Group as a whole and each operating company	Chairman and CEO Masayuki Sato President and COO Tadashi Ishizuka Auditors (rotating) Consists of members such as Group company officers appointed by the chairperson
2 Sustainability Committee	Formulates Group policies and action plans related to sustainability; deliberation to evaluate and promote action supporting sustainability	Chairman and CEO Masayuki Sato Consists of members proposed by presidents and chairpersons of Group companies and approved by the president of their company
3 Group Investment and Loan Committee	Deliberates on holding company and Group investment and lending projects	Standing members: Seven members (directors, executive officers, and auditors of the holding company and Group) Non-standing members: Three members (executive officers of the holding company may attend, depending on the agenda)
4 Group Risk Management Committee	Understands and organizes risks posed to the Group as a whole, develops and maintains a Group-wide risk management system, and proposes and deliberates on improvements	President and COO Tadashi Ishizuka Members appointed by the chairperson, and members appointed by the chairperson based on recommendations by the presidents of each operating company
5 Group Information Security Committee	Understands the status of information security measures across the Group as a whole, and plans and discusses cross-company adjustments and enhanced responses among Group companies	President and COO Tadashi Ishizuka Members from Group companies nominated by the chairperson and vice-chairperson

\* CPAs Takemitsu Nemoto, Atsushi Nagata, and Takashi Inoue of KPMG AZSA LLC audit JGC accounts. Auditing support is provided by nine other CPAs and 16 assistants.

Corporate Governance

Board of Directors

Board functions

The Board of Directors is responsible for decision-making on medium- to long-term Group strategies and issues, and it provides oversight regarding business execution of Group companies. Board composition is intended to enable effective and efficient execution of these functions.

Basic policy on Board composition and diversity

From the standpoint of further enhancing discussions on medium- to long-term Group strategies and issues of strengthening oversight regarding business execution of Group companies, the Board consists of the following members.

- 1 Consists mainly of directors with broad experience in business markets and directors with a high level of knowledge and expertise in EPC operations, which is the primary Group business.
- 2 Independent outside directors are appointed in order to incorporate outside perspectives in management, with the expectation that these directors will provide objective advice to the Board and fulfill oversight functions from an independent outside director.

As a matter of policy respecting the importance of diverse perspectives, members are appointed not solely based on professional experience and expertise but also on competence, regardless of nationality, race, or gender.

Skills Matrix of Directors (Five inside, five outside)

Name and position at JGC	Term as director (in years)	Attendance at Board meetings in fiscal 2023	Segment					
			Corporate management	Technology, project management, and IT	Global business	HR, human resource development, and labor relations	Finance and accounting	Legal and risk management
<b>Masayuki Sato</b> Representative Director, Chairman and CEO	14	13/13 (100%)	●		●		●	
<b>Tadashi Ishizuka</b> Representative Director, President and COO	7	13/13 (100%)	●	●	●			
<b>Kiyotaka Terajima</b> Director, Senior Executive Vice President, and CFO	8	13/13 (100%)	●				●	●
<b>Masaki Ishikawa*1</b> Director and Senior Executive Officer	0	–	●		●			●
<b>Shoji Yamada</b> Director	3	13/13 (100%)	●	●	●			
<b>Shigeru Endo</b> Outside Director	11	13/13 (100%)			●	●		●
<b>Masayuki Matsushima</b> Outside Director	8	13/13 (100%)	●		●		●	
<b>Noriko Yao</b> Outside Director	3	13/13 (100%)			●	●		●
<b>Shinjiro Mishima*1</b> Outside Director	0	–	●	●	●			
<b>Miku Hirano*1</b> Outside Director	0	–	●	●	●			

\*1 Appointed at the General Shareholders' Meeting held in June 2024.

Skills Matrix of Auditors (Two inside, three outside)

Name and position at JGC	Auditors (in years)	Attendance at Board meetings in fiscal 2023	Segment					
			Corporate management	Technology, project management, and IT	Global business	HR, human resource development, and labor relations	Finance and accounting	Legal and risk management
<b>Kazuyoshi Muto</b> Audit and Supervisory Board Member	3	13/13 (100%)		●	●		●	
<b>Akira Ninomiya</b> Audit and Supervisory Board Member	0	–	●		●		●	
<b>Norio Takamatsu</b> Outside Audit & Supervisory Board Member	8	13/13 (100%)	●	●			●	
<b>Kazuya Oki</b> Outside Audit & Supervisory Board Member	1	10/10*2 (100%)			●		●	●
<b>Norio Funayama*3</b> Outside Audit & Supervisory Board Member	0	–	●		●		●	

Note: Selection rationale for each skills matrix is shown on P.78. The above list is not exhaustive or prescriptive, which indicates disciplines where directors and auditors can further demonstrate their expertise, not all disciplines in which each director and auditor excels. In addition, ESG-related fields are positioned as an expected role required of all directors and auditors, and are therefore not listed as a separate item in the above table.

\*2 Attended the Board of Directors' meeting following the General Shareholders' Meeting held in June 2023.

\*3 Appointed at the General Shareholders' Meeting held in June 2024.

## Messages from Newly Appointed Outside Directors



**Shinjiro Mishima**

Outside Director

### Risk assessment and challenges

I have been involved in the shipbuilding business for many years. Given that Japan is an island nation with scarce natural resources, Japan's shipbuilding industry is indispensable not only in that it supports large-scale marine logistics but also in terms of both marine and seabed resource development and maritime safety and defense. However, we always struggled with fierce competition for orders with overseas rivals due to fluctuating demand, rising material costs, and the rapid appreciation of the yen.

Also in the construction industry, the JGC Group has played an important role since its establishment in 1928 in securing the energy resources vital for the functioning of the modern world, and in utilizing this in various sectors.

With the global calls for reductions in CO<sub>2</sub> and for new alternative energy sources, I believe that the JGC Group now faces a tremendous business opportunity.

On the other hand, engineering businesses based on EPC involve large-scale projects that are often fraught with multiple risks, including country risks. I feel it is extremely important that we analyze these risks before accepting a project, and respond to these with strong technical capabilities and competent teamwork. We often face situations where we feel cornered by strong demand from different countries, high expectations from key clients, and a desire to challenge ourselves with large projects that are beyond our capacity, leading to a sense that we must secure the order at all costs. Failure in such situations can prove very costly. How calmly we can analyze the situation when taking orders is crucial.

Fiscal 2023 was difficult in terms of profit and loss, however, we should take these results as a lesson, turn this situation to our advantage, and aim for further success. I hope that my modest efforts can contribute to the development of the JGC Group.



**Miku Hirano**

Outside Director

### Contributing to the JGC Group, to pass on a better society to future generations

While conducting AI research, I have been running digital and AI companies for nearly 20 years since founding a startup as a student. Having experienced both success and failure, I have gained a deeper understanding of starting new businesses. Now, as an outside director for JGC Holdings, I look forward to using my experience in contributing to the transformation of the JGC Group.

My mission in life is to pass a better society on to our children. I believe in this for my three children and future grandchildren, those of JGC Group employees, and for the children and grandchildren of the world. In 2023, the UN Secretary-General stated that humanity has "opened the gates to hell." The summer of 2024 also saw record-breaking heat. When I think of future generations, I feel a strong sense of connection with the JGC Group goals of balancing energy stability with decarbonization, reducing the environmental impact of resource consumption, and providing sustainable infrastructure and services. These are not just ideals for me—I am committed to making them a reality.

Furthermore, I value communication with the younger generation of employees, I intend to learn alongside them and work together to leverage their fresh ideas and energy for the Company's growth, so we can create a brighter future for the JGC Group and the planet.

As an outside director, I hope to play a part in contributing to "Enhancing planetary health."

## Selection Rationale for Each Skills Matrix

Skill	Selection rationale
Corporate management	To achieve goals of the medium-term business plan (BSP 2025) and the 2040 Vision in line with the Group purpose of "Enhancing planetary health," the Group requires directors experienced in establishing clear strategies for sustained growth and higher corporate value even in a turbulent business environment.
Technology, project management, and IT	The Group requires directors with a high level of knowledge and expertise in our main businesses in order to pursue, manage, and oversee growth strategies for sustained growth and greater corporate value. Directors must also be highly knowledgeable and experienced in the five business areas of Energy transition, High-performance functional materials, Circular economy, Healthcare & life sciences, and Industrial & urban infrastructure that will be essential in social issues we must begin to address to fulfill our purpose of "Enhancing planetary health."
Global business	Implementing growth strategies and managing and supervising progress toward sustainable Group growth and higher corporate value calls for directors with experience in overseas business management and extensive knowledge of and familiarity with everyday life, culture, business environments, and so on outside of Japan.
HR, human resource development, and labor relations	JGC Group employees are required to possess advanced technical capabilities and expertise, an appreciation of different cultures and diversity in order to work with others of many nationalities, and a mental attitude that helps us make the most of our organizational strengths. To this end, personnel management must be established that ensures peak employee performance, and the Group requires directors with solid knowledge and experience in human resources management or development, including promotion of diversity.
Finance and accounting	Beyond ensuring accurate financial reporting, the directors required by the Group must have reliable knowledge and experience in finance and accounting, as needed to build a strong financial foundation and to formulate financial strategies both for growth investments (including M&As) aimed at sustainable gains in corporate value and for higher shareholder return.
Legal and risk management	A suitable governance system is fundamental to sustainable growth in corporate value. Moreover, to continue enhancing Board oversight effectiveness, the Group requires directors with solid knowledge and experience in corporate governance, risk management, and compliance.

## Policies and Procedures for Senior Management Appointment and Dismissal

<b>Appointment process</b>	<p><b>Appointment of senior management and nomination of candidates for directors</b></p> <p>① Deliberations of the Nominating Committee, which consists of a majority of outside directors and is chaired by an outside director, are focused on the following items.</p> <ul style="list-style-type: none"> <li>(1) Qualities such as character and views</li> <li>(2) Senior management, and inside directors: Qualities such as experience, performance, and management capabilities, as defined in succession planning</li> <li>(3) Outside directors: Qualities such as independence and expertise</li> </ul> <p>② After comprehensive deliberation by the Nominating Committee, a decision is made by the Board. Appointment of senior management and nomination of director candidates follows this process and involves ample discussion before decisions are made, with the understanding that these individuals may one day be candidates to succeed the CEO.</p>
<b>Dismissal process</b>	<p><b>Dismissal of senior management</b></p> <p>In the event of any of the following, the Board decides on dismissal after deliberation by the Nominating Committee.</p> <ul style="list-style-type: none"> <li>(1) Wrongdoing, impropriety, or breach of faith</li> <li>(2) Violation of laws or articles of incorporation</li> <li>(3) Loss of the qualities and capabilities initially required for appointment</li> </ul>

## Succession Plan

The succession plan is a crucial matter for the sustainable enhancement of corporate value. Based on discussions in the Nominating Committee and the Board of Directors, we have started implementing the succession plan as follows.

### Purpose

- Toward attainment of BSP 2025 and the 2040 Vision, and for lasting enhancement of corporate value beyond this, we recognize the necessity of appointing optimal directors and executive officers for the current business environment and management strategies.
- Based on the business environment and management strategies, the plan clarifies the knowledge, experience, abilities, and personal qualities sought in top management, guiding development and selection of the Group's next leaders and enabling continuous appointment of these leaders whenever needed.

### Stance on leadership criteria

- In fiscal 2019, leadership criteria were determined through talks with current top management facilitated by a third-party organization, and future needs in leaders were defined from a medium- to long-term management vision.
- These criteria are classified on minimum essential attributes and ideal attributes (3-level scale), and candidates are assigned to groups with specific level requirements.

### Stance on succession planning

- The basic stance taken on succession planning involves defining leadership criteria, selecting several individuals for near- and far-term candidate groups, providing opportunities to develop required attributes and gain experience, and monitoring progress each year as candidates are groomed over the medium to long term.
- In line with the above approach, educational programs for near- and far-term candidate groups are enhanced and built upon through measures such as sending candidates to external educational and training programs, inviting external lecturers to give ongoing lectures, and providing opportunities for ongoing discussions.

## Messages from Outside Directors

### The JGC Group “Fights Back”

#### Shigeru Endo

Outside Director  
Chair of Nominating Committee  
Member of Remuneration Committee



The Board of Directors has now expanded to 10 members with the addition of two new outside directors and one inside director. Prior to this, the Nominating Committee had been reviewing measures to improve the skills and diversity of the Board of Directors, and the addition of new members has further broadened the scope of discussions. The committee also regularly discusses the management structure of the JGC Group as a whole. Recently, for instance, following a review of management at JGC Corporation and JGC Japan Corporation, changes were made to the management structures of both companies. Additionally, moving forward, it will be necessary to address topics such as succession planning and the advancement of women.

It was deeply regrettable that, following the loss recorded in fiscal 2021, we recorded another loss in fiscal 2023. We are currently identifying the causes of this and implementing measures to address them. Even in the midst of a rapidly changing business environment, we must urgently strengthen

our EPC execution framework while maintaining the directionality of our BSP 2025 medium-term business plan and our 2040 Vision, long-term management vision. We also need to focus on the “expansion of manufacturing business for high-performance functional materials” and “establishment of future engines of growth.” I do not think it an exaggeration to say that the Group is now at a critical juncture.

As I reflect on our history, I realize that we have always survived through challenges. We have stumbled, but we have picked ourselves up each time, ultimately creating greater strength and value. Some may call this “anti-fragility,” but I think this is the very DNA of our Group. Since the launch of BSP 2025 as well, we have faced challenges such as increasing momentum toward decarbonization and COVID-19, along with geopolitical crises such as Russia’s invasion of Ukraine and the Gaza conflict. We have fought back against these challenges with all our might. I believe that through such challenges, this “anti-fragility” will be further tempered.

## Cross-Shareholdings

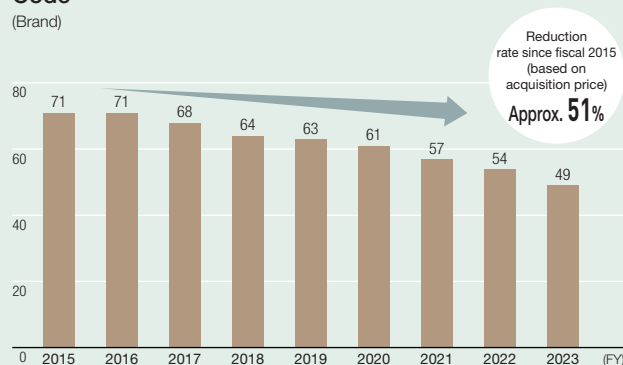
### 1. Purpose

The Group refrains from cross-shareholdings except in cases where maintaining and strengthening relationships with clients and business partners will contribute to higher medium- to long-term corporate value for the Group. Each year, the Board of Directors reviews the significance of maintaining each cross-shareholding, and both qualitative and quantitative aspects are reviewed. Quantitatively, total share holder return (TSR) and ROE are checked for each company, as well as whether business advantages are commensurate with the cost of equity. Sale of shares deemed to have lost their significance is investigated accounting for the market environment and changes in stock prices.

### 2. Basis for exercising voting rights

In exercising voting rights for cross-shareholdings, advantages and disadvantages are weighed based on whether the decision will contribute to the sustained growth of the company involved, and thus, higher Group corporate value over the medium to long term.

### History of Sales and Reductions in Cross-Shareholdings since the Introduction of the Corporate Governance Code



Details on the review process of each holding objective are available on our website.

<https://www.jgc.com/en/esg-hsse/governance/corporate-governance/#anc08>



## Director Compensation

Policy on determining director compensation amounts or calculation methods

### Basic policy, General Shareholders' Meeting resolutions

- Under a basic policy to secure the management personnel needed for greater global competitiveness and higher medium- to long-term corporate value, a resolution made at the 113th General Shareholders' Meeting held on June 26, 2009, set maximum annual director compensation at ¥690 million, with maximum auditor compensation at ¥88 million.
- As for the policy on determining the amount, calculation, and breakdown of compensation for individual directors, compensation shall not exceed the range resolved at the General Shareholders' Meeting, and details are discussed in advance by the Remuneration Committee (which consists of a majority of outside directors and is chaired by an outside director), whose report is considered by the Board to reach a decision.

### Process for determining compensation

- To ensure fairness, transparency, and consistency with this decision policy, decisions by the chairman and CEO reflect the results of comprehensive deliberation by the Remuneration Committee on evaluation of individual directors and the amount of remuneration.
- The compensation for individual directors within the range set at the General Shareholders' Meeting is at the discretion of the chairman of the Board, who as the Company's chief executive officer is most familiar with the duties and responsibilities of each director, their performance, and the extent to which this performance contributes to higher corporate value.
- The Board has determined that final decisions have been consistent with this policy, and in making this determination, the Board has been informed of a summary and results of Remuneration Committee deliberations, as well as final decisions by the chairman and CEO.

### Compensation mix and details

- Inside directors, excluding outside directors, receive compensation comprising monetary compensation and stock compensation, where monetary compensation comprises fixed compensation and bonuses, and stock compensation comprises restricted stock and performance share units.
- The compensation mix is designed to provide a higher proportion of variable compensation (bonus and stock compensation) for higher performance and rank.

#### ► Stock compensation

- Introduced the following two types of stock compensation so that directors share the benefits and risks of stock price fluctuations with shareholders and conduct business accordingly, and to further incentivize a higher stock price and greater medium- to long-term corporate value.
- A malus and clawback clause has been introduced, where in the event that a corporate scandal such as violation of laws is identified, the Company can seize some or all the stock compensation or request the return after the stock restriction is removed, based on deliberation by the Remuneration Committee and approval by the Board of Directors.

**Performance Share Unit (PSU)**

- Compensation as regards results was introduced at the 127th Ordinary General Shareholders' Meeting held on June 29, 2023
- Fiscal 2023 saw a loss attributable to owners of the parent, so no common stock was allocated to Company Directors.

**Outline of PSU**

**Scope:** Directors and executive officers of the holding company and directors of Group companies

**Performance evaluation period:** 1 year (from April 1 to March 31 of the following year)

**Performance evaluation index:** Operating profit and profit attributable to owners of parent

**Maximum monetary compensation:** ¥650 million per year

**Total shares of PSU (maximum):** 959,000 shares per year (approximately 0.40% of total issued shares)

**Restricted stock period:** Set to 3 years up to 30 years

**Restricted Stock (RS)**

As compensation for responsibilities, restricted stock compensation is allocated in August, and on August 4, 2023, 7,526 shares corresponding to 10% of base compensation (equivalent to ¥13 million) were allocated to three directors in fiscal 2023.

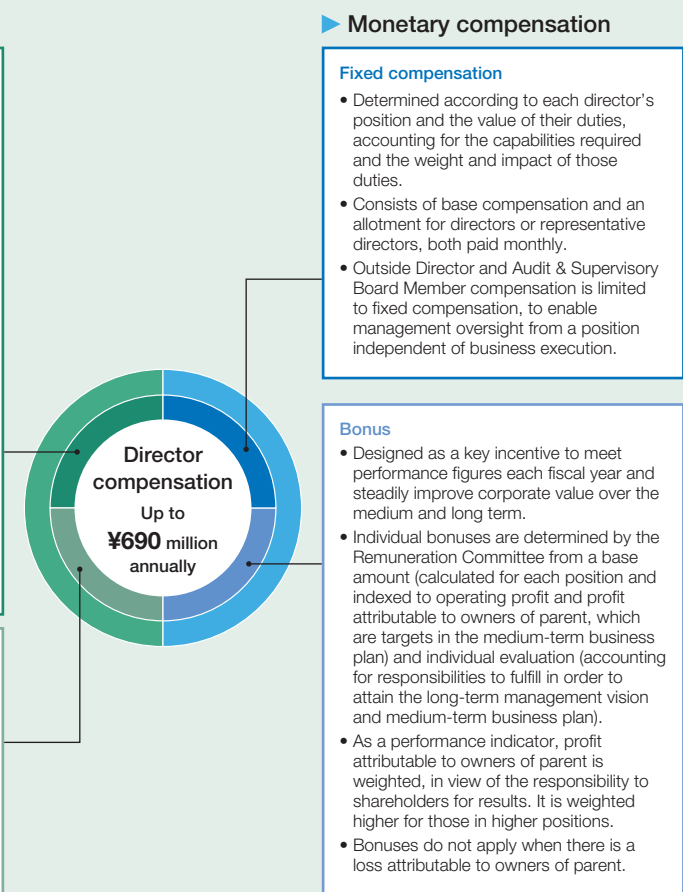
**Outline of RS**

**Scope:** Directors and executive officers of the holding company and directors of Group companies

**Maximum monetary compensation:** ¥190 million per year

**Total shares of RS (maximum):** 149,300 shares per year (approximately 0.06% of total issued shares)

**Restricted stock period:** Set to 3 years up to 30 years



## Breakdown of Executive Compensation

Category	Total value of compensation, etc.	Breakdown of compensation, etc.							
		Fixed compensation		Performance-based compensation (monetary)		Restricted stock		Performance share unit	
		Number of eligible executives	Total amount provided	Number of eligible executives	Total amount provided	Number of eligible executives	Total amount provided	Number of eligible executives	Total amount provided
Four directors (excluding outside directors)	¥187 million	4	¥173 million	–	–	3	¥13 million	–	–
Two Audit & Supervisory Board members (excluding Outside Audit & Supervisory Board members)	¥39 million	2	¥39 million	–	–	–	–	–	–
Seven outside executives (three Outside Directors and four Outside Audit & Supervisory Board members)	¥69 million	7	¥69 million	–	–	–	–	–	–

- (Notes) 1. As of the end of fiscal 2023, there were seven directors (including three outside directors) and five auditors (including three outside auditors).  
 2. The performance-based compensation (monetary) and performance share unit above did not achieve the performance evaluation indicators, and so were not granted.  
 3. Since our Company has no executives with total remuneration of ¥100 million or more, individual compensation is not disclosed.

## Messages from Outside Directors

### Promoting Reform of the Execution Compensation System

#### Masayuki Matsushima

Outside Director  
Chair of Remuneration Committee  
Member of Nominating Committee



For the JGC Group to achieve sustainable growth over the next 50 to 100 years, a sound business strategy and technological development, along with a robust human resources strategy to support these are essential. Particularly for our Group, given that we operate on a global scale, securing talent capable of thriving internationally is critical.

A rewarding work environment and suitable workplace conditions are fundamental if we are to achieve this general policy. However, at the same time, salary systems and levels must provide incentives that reflect skills and performance.

The Remuneration Committee, which is comprised of a majority of outside directors (and chaired by an outside director), is pursuing reforms of the compensation system

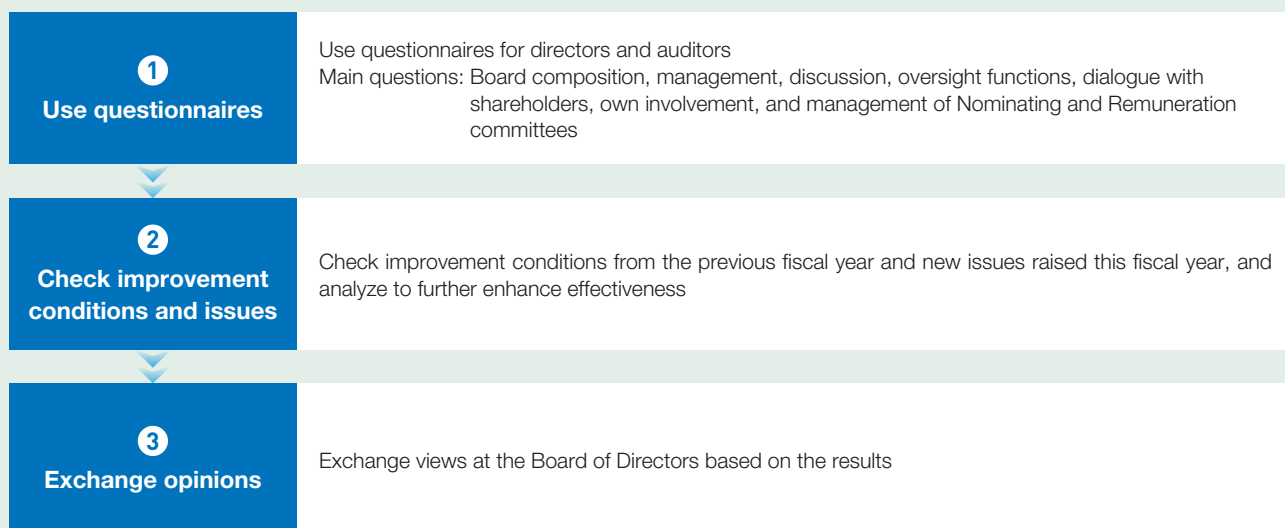
from a more objective perspective that incorporates external opinions. In 2019, we introduced restricted stock compensation for our director compensation, which comprises cash and stock, thereby enhancing alignment with our stock price. Additionally, from July 2024, we implemented performance share unit to increase the proportion of pay linked to performance, and are conducting stringent evaluations of departments (operating companies) that recorded a loss in fiscal 2023. The committee is also thoroughly deliberating individual compensation amounts.

These matters are reviewed by the Remuneration Committee, voted on as part of the Board of Directors' agenda, and then actioned.

## Board Effectiveness Evaluation

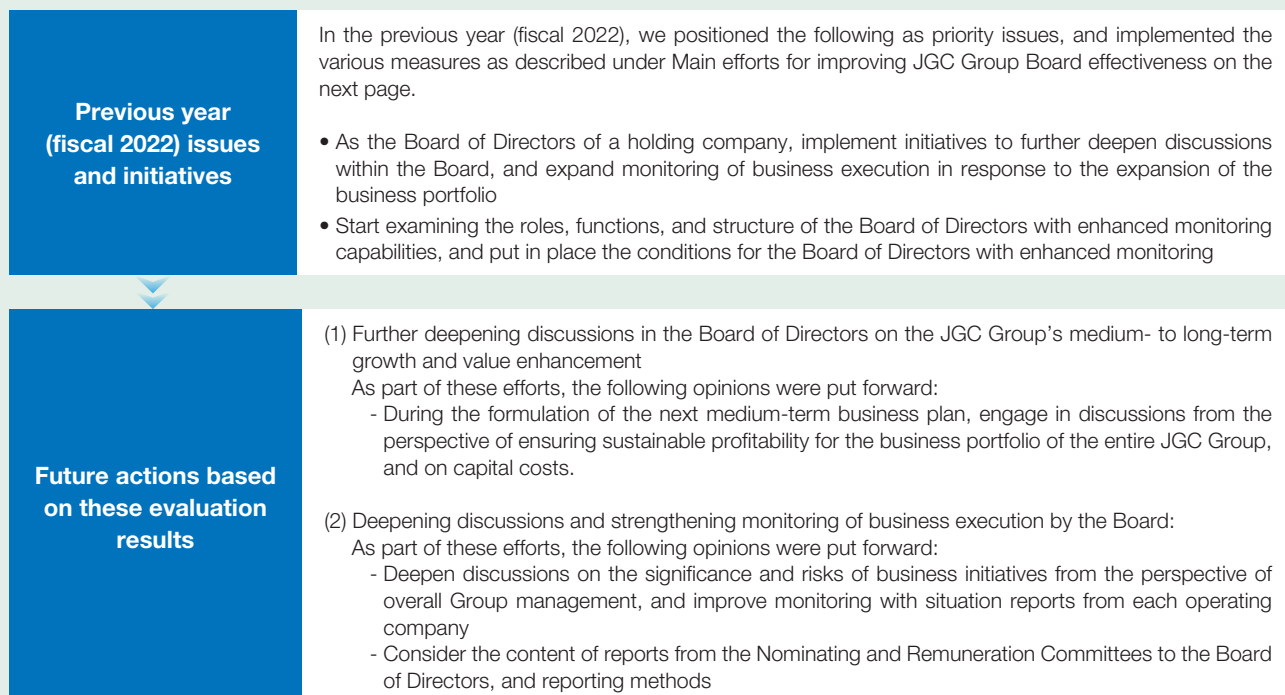
Board effectiveness is analyzed and evaluated annually, efforts toward improvement are reviewed, and issues linked to further gains in effectiveness are discussed by the Board in pursuit of continuous improvement. Presented below is a summary of the process for evaluating Board effectiveness in fiscal 2023, the state of initiatives based on the Board evaluation results of the previous year (fiscal 2022), and future response policy based on these evaluation results.

### Evaluation process



### Evaluation results

Survey analysis and evaluation has indicated that the Board is functioning appropriately and effectively in its current state. Details of the evaluation results are as follows.



## Main efforts for improving JGC Group Board effectiveness

	Fiscal 2021	Fiscal 2022	Fiscal 2023
<b>Main Board and committee efforts</b>	<ul style="list-style-type: none"> <li>Basic Policy on Sustainability enacted, Sustainability Committee established, and the committee rules formulated by the Board</li> <li>Improved the framework for monitoring and review of measures in BSP 2025</li> <li>Revised Board rules and internal approval procedures in accordance with clarification of investment and loan categories and revision and improvement of review and approval procedures</li> </ul>	<ul style="list-style-type: none"> <li>Creation of Basic Policy for Human Rights &amp; Development and Basic Policy for Inclusion &amp; Diversity, and reporting on Sustainability Committee activities, such as GHG reduction solutions at the Board of Directors</li> <li>Discussions on sustainable growth and increasing long-term corporate value, including diversification of business portfolios, based on quantitative and qualitative monitoring of level of achievement of numerical targets defined in BSP 2025 and estimated capital cost value of each business</li> </ul>	<ul style="list-style-type: none"> <li>Holding of off-site meetings for directors to discuss matters necessary for further deepening discussions at Board meetings (such as additional information provision from the executive side), and discussions on roles, functions, and desired approach of the Board of Directors in view of our business portfolio centered around our EPC business</li> <li>Strengthening of business execution monitoring by sharing content of discussions regarding new business investment projects with the Board of Directors, and enhancing the reporting on the status of EPC projects that could impact overall management of the Group as a whole</li> <li>In terms of Board of Directors' composition, appointing outside directors with experience in corporate management, and increasing the ratio of female Board members</li> <li>Develop system that includes increasing personnel numbers at the Board of Directors' Executive Office</li> </ul>
<b>Director training*</b>	<ul style="list-style-type: none"> <li>Internal workshops on EPC risk and financial risk management</li> </ul>	<ul style="list-style-type: none"> <li>Internal workshops on new initiatives toward a recycling-oriented society such as SAF production business and biomanufacturing, estimation process for the EPC business, and budgeting and cost review processes when executing projects</li> </ul>	<ul style="list-style-type: none"> <li>Internal workshops on the following:               <ol style="list-style-type: none"> <li>Functional Materials Manufacturing Business with JGC Catalysts and Chemicals Ltd. and Japan Fine Ceramics Co., Ltd.</li> <li>Measures by the holding company to enhance governance of EPC projects by each operating company (updating the contract terms policy and establishing a review and approval process based on this that includes the holding company, along with a review framework for collaboration partners)</li> </ol> </li> </ul>

\* Policy on director training: JGC Holdings bears costs for and provides opportunities and information for directors and auditors to acquire the knowledge and competence to fulfill their roles and responsibilities.

## Messages from Outside Directors

### Group Governance to Support Implementation of Reforms

**Noriko Yao**  
Outside Director  
Member of Nominating Committee  
Member of Remuneration Committee



Unfortunately, we recorded a loss in fiscal 2023, primarily due to declining profitability in the overseas EPC business.

The Board of Directors have been conducting discussions on the cause of this decline, as well as on the challenges faced and response strategies, and is promoting the review and strengthening of human resource allocation and business management systems.

The EPC business involves long-term projects that can take many years from the start of estimates through to completion, and given rapid shifts in the business environment, including geopolitical risks, I feel there is an increasing demand for foresight and risk-handling capabilities. As these have a significant impact on our Group's operations, timely and accurate monitoring, coupled with its enhancement and practical implementation are considered important issues.

To achieve the goals of expanding business domains and diversifying business models set forth in the 2040 Vision, our long-term management vision, various initiatives are currently being carried out simultaneously at each of our Group companies. In this context, appropriate risk management by the holding company across the Group, along with the allocation

of human capital and other management capital, are viewed as important issues for building a foundation for sustainable growth. Accordingly, we intend to continue closely monitoring the Group governance system.

To enhance the effectiveness of the Board of Directors, in fiscal 2023, separate to the Board of Directors, initiatives including workshops on EPC governance enhancements and off-site meetings among directors were undertaken to deepen discussions about the role, function, and desired nature of the Board of Directors at our Company, which is a holding company. Additionally, the Board will welcome two new outside directors with diverse knowledge and experience, and this is expected to foster further discussions from a more diverse range of perspectives.

We will continue to work toward further enhancing the effectiveness of the Board of Directors and meeting the expectations of shareholders in view of these issues, and looking toward achieving sustainable growth and enhancing corporate value past the BSP 2025 medium-term business plan.

# List of Executives

(As of July 1, 2024)

## Directors

### Masayuki Sato

Representative Director, Chairman and Chief Executive Officer (CEO)



April 1979 Joined the Company  
 July 2009 Company Executive Officer and General Manager, Finance and Accounting Division  
 July 2010 Company Director, Chief Financial Officer, and Senior General Manager, Finance and Accounting Division  
 July 2011 Company Managing Director, Chief Financial Officer, and Senior General Manager, Corporate Administrative & Financial Affairs Division  
 June 2012 Company Executive Vice President, Director, Chief Financial Officer, and Senior General Manager, Corporate Administrative & Financial Affairs Division  
 April 2013 Company Executive Vice President, Director, Chief Financial Officer, Senior General Manager, Corporate Administrative & Financial Affairs Division, and Senior General Manager, Security Management Office  
 June 2014 Company Representative Director and Chairman  
 June 2017 Company Representative Director, Chairman and Chief Executive Officer (current position)

### Tadashi Ishizuka

Representative Director, President and Chief Operating Officer (COO)



April 1972 Joined the Company  
 July 2004 Company Executive Officer and General Manager, Energy Project Division  
 June 2005 Company Senior Executive Officer and General Manager, Energy Project Division  
 August 2007 Company Senior Executive Officer and General Manager, Project Operation Services Division  
 June 2008 Company Managing Director and General Manager, Project Operation Services Division  
 June 2010 Company Senior Managing Director  
 June 2011 Company Director and Executive Vice President  
 July 2014 Company Director, Senior Executive Vice President, and Senior General Manager, Security Management Office  
 June 2015 Retired from Director position  
 February 2017 Company Senior Executive Vice President and Chief Project Officer  
 June 2017 Company Representative Director, President and Chief Operating Officer (current position)  
 October 2019 Director, JGC Japan Corporation (current position)

### Kiyotaka Terajima

Director



April 1981 Joined the Company  
 August 2007 Representative General Manager, Compliance Administration Office, Legal & Compliance Office  
 July 2011 Representative General Manager, Corporate Administration Department, Corporate Administrative & Financial Affairs Division  
 July 2014 Appointed Company Executive Officer, General Manager, Corporate Administrative & Financial Affairs Division  
 June 2016 Appointed Company Director, Executive Officer, and General Manager, Corporate Administrative & Financial Affairs Division  
 September 2016 Company Director, Executive Officer, and Senior General Manager, Corporate Administrative & Financial Affairs Division  
 June 2017 Company Director, Senior Executive Officer, and Senior General Manager, Corporate Administrative & Financial Affairs Division  
 April 2018 Company Director, Executive Vice President, Chief Financial Officer, and Senior General Manager, Corporate Administrative & Financial Affairs Division  
 April 2019 Company Director, Executive Vice President, Chief Financial Officer, Senior General Manager, Corporate Administrative & Financial Affairs Division, and Senior General Manager, Legal & Compliance Office  
 October 2019 Company Director, Executive Vice President, Chief Financial Officer, and General Manager, Group Management Development Division  
 April 2020 Company Director, Senior Executive Vice President, and Chief Financial Officer (current position)  
 April 2023 Representative Director, President, JGC Corporate Solutions (current position)

### Masaki Ishikawa

Director



April 1985 Joined Ministry of International Trade and Industry (now Ministry of Economy, Trade and Industry)  
 October 2012 Director-General, Trade Control Department, Trade and Economic Cooperation Bureau  
 July 2013 Deputy Director-General, Commerce and Information Policy Bureau  
 July 2015 Director-General, Acquisition, Technology and Logistics Agency  
 July 2017 Director-General, Trade and Economic Cooperation Bureau  
 November 2019 Advisor, Mitsui Sumitomo Insurance Co. Ltd.  
 April 2021 Company Executive Officer  
 April 2022 Company Senior Executive Officer  
 June 2024 Company Director, and Senior Executive Officer (current position)

### Shoji Yamada

Director



April 1983 Joined the Company  
 April 2018 Company Executive Officer, JGC Japan Corporation Establishment Preparation Office, appointed as Acting Manager of Domestic Infrastructure Project Division, Infrastructure Business Headquarters  
 July 2018 Company Executive Officer, Senior General Manager, JGC Japan Planning Office and General Manager, Domestic Infrastructure Project Division, Infrastructure Division and General Manager, Sales Division  
 April 2019 Company Executive Officer, Senior General Manager, JGC Japan Planning Office and General Manager, Domestic Infrastructure Project Division  
 October 2019 Representative Director and President, JGC Japan Corporation  
 June 2021 Company Director (current position)  
 June 2024 Representative Director and Senior Executive Vice President, JGC Corporation (current position)

### Shigeru Endo

Outside Director



April 1974 Joined Ministry of Foreign Affairs  
 February 1989 Seconded to IEA  
 April 2001 Director-General, Middle Eastern and African Affairs Bureau  
 February 2002 Director-General, Consular and Migration Affairs Department  
 August 2003 Ambassador to the Permanent Mission of Japan to the United Nations and Other International Organizations in Geneva, and Consul General to the Consulate General of Japan in Geneva  
 March 2007 Ambassador Extraordinary and Plenipotentiary in Tunisia  
 July 2009 Ambassador Extraordinary and Plenipotentiary in Saudi Arabia  
 October 2012 Retired from Ministry of Foreign Affairs  
 June 2013 Company Outside Director (current position), and Outside Director, Iino Kaiun Kaisha, Ltd.  
 April 2014 Special Assistant to the Minister for Foreign Affairs  
 December 2017 Special Envoy to Expo 2025  
 June 2018 Outside Director, ADEKA Corporation (current position)

## Masayuki Matsushima

Outside Director



April 1968 Joined Bank of Japan  
June 1998 Director at Bank of Japan (responsible for international relations)  
June 2002 Senior Advisor, Boston Consulting Group  
February 2005 Senior Executive Advisor, Credit Suisse Securities (Japan) Limited  
June 2008 Chairman, Credit Suisse Securities (Japan) Limited  
May 2011 Senior Advisor, Boston Consulting Group

June 2011 Outside Director, Mitsui Fudosan Co., Ltd. and Mitsui O.S.K. Lines  
September 2014 Senior Advisor, Integral Corporation (current position)  
June 2016 Company Outside Director (current position)  
July 2017 Member of Management Council, Grant Thornton Taiyo LLC

## Noriko Yao

Outside Director



March 1995 Graduated from the Legal Training and Research Institute  
April 1995 Registered as an attorney (Fukuoka Bar Association)  
September 2001 Joined Paul, Hastings, Janofsky & Walker LLP  
October 2002 Registered an attorney (Daini Tokyo Bar Association)  
Admitted as an attorney New York State Bar Association qualification  
July 2007 Joined TMI Associates  
January 2008 Partner, TMI Associates (current position)

October 2014 Outside Auditor, Japan Overseas Infrastructure Investment Corporation for Transport & Urban Development  
November 2015 Outside Director, MEIKO NETWORK JAPAN CO., LTD.  
June 2016 Outside Director, Audit & Supervisory Board Member, SATO HOLDINGS CORPORATION (current position)  
June 2019 Outside Director, ASAHI Net, Inc. (current position)  
June 2021 Company Outside Director (current position)  
June 2023 Outside Director, ARATA CORPORATION (current position)

## Shinjiro Mishima

Outside Director



April 1973 Joined NKK Corporation (currently JFE Holdings, Inc.)  
July 1996 General Manager, Shipbuilding Design Department, Tsu Shipyard & Machinery Works  
October 2002 General Manager, Corporate Planning Department, Universal Shipbuilding Corporation  
July 2006 Executive Officer, General Manager of Tsu Plant, Universal Shipbuilding Corporation  
July 2008 Representative Director, President and Chief Operating Officer, Universal Shipbuilding Corporation  
January 2013 Representative Director, President and Chief Operating Director, Japan Marine United Corporation  
April 2018 Special Advisor, Japan Marine United Corporation  
June 2019 President, Japan Institute of Shipping and Oceanography  
April 2022 Representative Director, Planning and Design Center for Greener Ships (current position)  
June 2024 Company Outside Director (current position)

## Miku Hirano

Outside Director



October 2011 Director, mixi Inc.  
October 2012 CEO, Spicy Cinnamon Pte. Ltd.  
October 2016 Representative Director, President and Chief Operating Officer, co-CEO, Cinnamon Co., Ltd. (current position)  
June 2024 Company Outside Director (current position)

## Auditors

### Kazuyoshi Muto

Audit and Supervisory Board Member

### Akira Ninomiya

Audit and Supervisory Board Member

### Norio Takamatsu

Outside Audit & Supervisory Board Member

### Kazuya Oki

Outside Audit & Supervisory Board Member

### Norio Funayama

Outside Audit & Supervisory Board Member

## Executive Officers

### Kiyotaka Terajima

Senior Executive Vice President  
Chief Financial Officer (CFO)

### Takuya Hanada

Senior Managing Executive Officer  
Chief Human Resource Officer (CHRO)

### Masahiro Aika

Senior Managing Executive Officer  
Technology Commercialization Officer (TCO)

### Masaki Ishikawa

Senior Executive Officer

### Takeshi Kawasaki

Executive Officer

### Yoshihiro Mizuguchi

Executive Officer  
Chief Technology Officer (CTO)

### Akihito Sawaki

Executive Officer  
Chief Information Officer (CIO)

### Keiji Tanigawa

Executive Officer  
Chief Digital Officer (CDO)

### Satoshi Kurata

Executive Officer  
General Counsel

### Hiroyuki Morishima

Executive Officer  
Chief Manufacturing Officer (CMO)

### Shinya Miyake

Executive Officer

### Shinichi Taguchi

Executive Officer

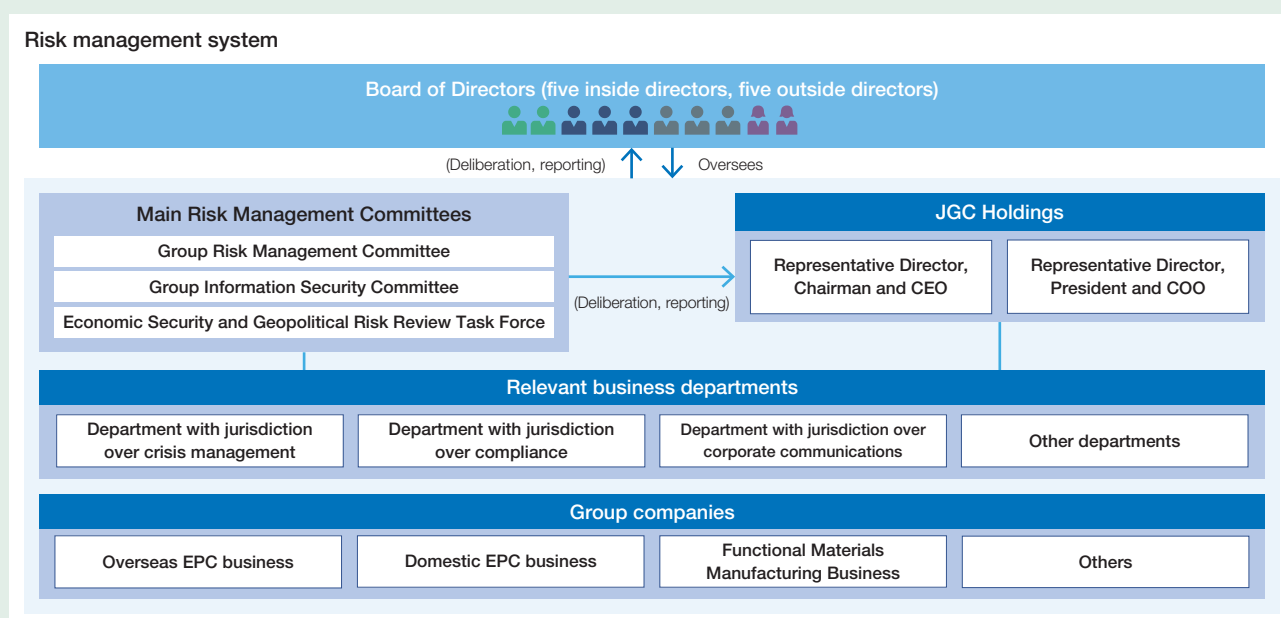
# Risk Management

## Basic stance

Recognizing that appropriate risk management reduces losses and contributes to profits for the Group, we strive to reduce and prevent risks routinely by understanding and organizing risks posed to the Group as a whole and by building, maintaining, and refining our risk management system. If risks do materialize, we respond rapidly and appropriately to minimize the impact and associated loss.

## Risk Management System

Based on the Group Risk Management Committee rules, the JGC Group has established and uses a comprehensive risk management system for a systematic understanding of the risks posed to the Group as a whole. We are committed to further reducing these risks. Additionally, we have newly set up the Group Information Security Committee for information security, and the Economic Security and Geopolitical Risk Review Task Force for economic security and geopolitical risks—these groups focus on Group-wide risk management in their respective areas. Also, management of business risks of the Group is mainly carried out by each operating company, with significant individual risks reported to the holding company Board and discussed as necessary.



## Primary Group Risks and Responses

Primary risk area	Nature of typical risks	Countermeasures
<b>Risk associated with receiving and executing projects</b>	<ul style="list-style-type: none"> <li>Change of plans, cancellation, suspension, or postponement of projects in the Total Engineering Business after orders are received</li> <li>Worsening financial conditions, insufficient project execution capabilities, and defaulting in the portion of operations covered by joint venture consortium partners as comprehensive engineering projects are executed</li> </ul>	<ul style="list-style-type: none"> <li>Specific risk analysis and management by operating companies, monitoring of project progress and profitability</li> <li>In addition to the above, as a holding company we will implement the following:                             <ol style="list-style-type: none"> <li>Discuss at Board of Directors' meetings the aforementioned risks from the estimation and bidding stages for projects that could impact the overall management of the Group.</li> <li>Review contract negotiation policies prepared by each operating company based on a contract terms policy that consolidates past project experiences for projects that could affect the overall management of the Group.</li> <li>Conduct partner due diligence to investigate the financial condition and project execution capabilities of partner companies in advance, and take appropriate measures.</li> </ol> </li> </ul>
<b>Country risk</b>	<ul style="list-style-type: none"> <li>Impact on business activities from political instability, war, revolution, domestic conflict, terrorism, sudden changes in economic policies or conditions, or economic sanctions</li> </ul>	<ul style="list-style-type: none"> <li>Use of trade insurance</li> <li>Collecting, analyzing, and sharing information on country risk for the Group as a whole by the Group Risk Management Committee and Economic Security and Geopolitical Risk Review Task Force.</li> <li>Setting reasonable contract conditions with clients, addressing force majeure clauses and regulatory changes</li> <li>Strengthening crisis management functions by the Crisis Management Department</li> </ul>

Primary risk area	Nature of typical risks	Countermeasures
<b>Risk associated with natural disasters, epidemics, etc.</b>	<ul style="list-style-type: none"> <li>Impact on business activities from natural disasters of unforeseen magnitude such as earthquakes, torrential rain, or typhoons, or from global pandemics such as new strains of influenza</li> </ul>	<ul style="list-style-type: none"> <li>Establishing disaster response procedures, introducing systems to confirm safety, and implementing disaster training</li> <li>Gathering information on risk</li> <li>Taking necessary measures in response to official requests, confirming safety in accordance with national conditions and regulations</li> <li>Setting reasonable contract conditions with clients, addressing force majeure clauses and regulatory changes</li> <li>Requesting and discussing with clients any necessary rescheduling or rebudgeting</li> </ul>
<b>Foreign exchange volatility risk</b>	<ul style="list-style-type: none"> <li>Impact on sales and profit / loss from sharp fluctuations in foreign exchange rates</li> </ul>	<ul style="list-style-type: none"> <li>Using project contracts denominated in multiple currencies, using overseas procurement</li> <li>Issuing orders denominated in foreign currencies, using forward foreign exchange agreements</li> </ul>
<b>Risk of construction worker shortages, substantial wage increases</b>	<ul style="list-style-type: none"> <li>Impact on business activities in the Total Engineering Business from shortages of construction workers or substantial increases in wages</li> </ul>	<ul style="list-style-type: none"> <li>Monitoring and forecasting trends in the construction industry labor force for primary plant markets</li> <li>Adopting modular construction techniques to minimize on-site construction</li> <li>Working with companies that have extensive track records in local construction</li> <li>Contractual measures against substantial rises in labor costs</li> </ul>
<b>Risk of substantial increases in material and equipment costs, and fuel costs</b>	<ul style="list-style-type: none"> <li>Increased procurement and transport costs for material and equipment in the Total Engineering Business</li> <li>Substantial rises in prices of raw materials or fuel in the Functional Materials Manufacturing Business</li> </ul>	<ul style="list-style-type: none"> <li>Monitoring and forecasting price trends, ongoing efforts to improve forecast accuracy</li> <li>Placing orders for materials and equipment early on</li> <li>Diversifying suppliers</li> <li>Transfers to product prices</li> <li>Addressing this risk in contracts</li> </ul>
<b>Investment risk</b>	<ul style="list-style-type: none"> <li>Loss from unforeseen circumstances in the investment environment</li> <li>Inability to withdraw from investments at the preferred time or in the preferred manner, due to low liquidity or similar factors</li> </ul>	<ul style="list-style-type: none"> <li>Clarifying the significance and purpose of new investment, and making decisions after deliberation by the Board or committees</li> <li>Careful selection of new investments</li> </ul>
<b>Legal and regulatory risk</b>	<ul style="list-style-type: none"> <li>Restrictions under business laws and regulations such as tax or construction laws, various domestic and international environmental laws, import/export trade regulations including those for security purposes, various laws and regulations to prevent corruption such as graft, laws and principles on human rights protection, or business or investment licenses</li> </ul>	<ul style="list-style-type: none"> <li>Developing, implementing, monitoring, and improving compliance programs and Group policies and rules</li> <li>Under the Group-wide Compliance Committee, compliance officers appointed at key Group companies design and implement measures tailored to each company's specific circumstances</li> <li>Special emphasis is placed on establishing rules and providing guidance and oversight regarding bribery prevention measures and compliance with import/export trade regulation.</li> </ul>
<b>Information security risk</b>	<ul style="list-style-type: none"> <li>Leaks and loss of information from power outages, disasters, failure, loss, or theft of host computers, servers, or network equipment, external attacks, or virus infections</li> </ul>	<ul style="list-style-type: none"> <li>The Group Information Security Committee identifies Group-wide information security responses, and formulates and deliberates on strengthened measures.</li> <li>Security measures such as preventing intrusion by establishing information security policies, adopting antivirus measures, and using encryption</li> <li>Information security education, training and practice for executive officers and employees</li> </ul>
<b>Risk associated with quality</b>	<ul style="list-style-type: none"> <li>Poor quality of supplies or items procured, recall of delivered products due to defects, liability for damages</li> </ul>	<ul style="list-style-type: none"> <li>Promoting quality management system activities by establishing organizations with jurisdiction over quality assurance</li> <li>Using product liability insurance</li> </ul>
<b>Risk associated with changes in the macroeconomic environment and social and international affairs</b>	<ul style="list-style-type: none"> <li>Impact on business activities from fluctuating energy prices linked to global recessions</li> </ul>	<ul style="list-style-type: none"> <li>Collecting, analyzing, and sharing information on risks related to changes in the macroeconomic environment and social and international conditions for the Group as a whole by the Group Risk Management Committee and Economic Security and Geopolitical Risk Review Task Force.</li> <li>Diversifying our business portfolio by shifting to a Group management structure</li> <li>Developing technologies to reduce environmental impact</li> <li>Building value chains in collaboration with other companies that possess advanced technologies</li> </ul>
<b>Risk associated with climate change</b>	<ul style="list-style-type: none"> <li>Natural disasters at construction and manufacturing sites</li> <li>Impact on business activities from lower fossil fuel-related investment by clients, or from similar changes to client business itself</li> <li>Changes in the business environment such as changes throughout society and industry as the backdrop to climate change issues</li> </ul>	<ul style="list-style-type: none"> <li>Receiving and executing non-fossil fuel, circular economy, and renewable energy projects</li> <li>Transforming business areas, business models, and the Group's internal organization in line with the 2040 Vision, our long-term management vision</li> </ul>
<b>Risk associated with intellectual property</b>	<ul style="list-style-type: none"> <li>Potential inadvertent infringement of third-party intellectual property rights in countries where it is difficult to understand the intellectual property system or the status of third-party rights</li> </ul>	<ul style="list-style-type: none"> <li>Establishment of a strengthened governance framework for intellectual property management</li> <li>Implementing appropriate measures to respect third-party intellectual property rights, and preventing patent disputes, etc.</li> <li>Conducting internal education regarding intellectual property, and promoting awareness by disseminating information</li> <li>Monitoring third-party intellectual property rights, and identifying, analyzing, and addressing intellectual property risks through collaboration among relevant departments</li> </ul>

# Compliance

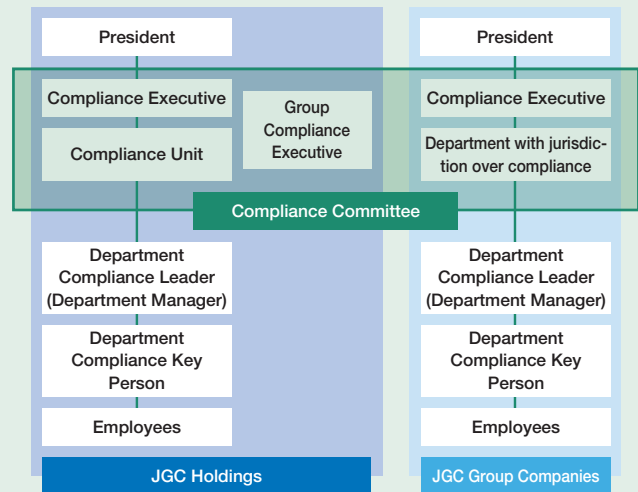
## Basic stance

Guided by our sense of purpose and values representing our corporate philosophy, we view compliance as the cornerstone of management, based on two keywords in a list of shared values—respect and integrity. As a member of the international community, the JGC Group believes that compliance with the laws of Japan and overseas, as well as fair and equitable business practices in accordance with corporate ethics, are essential to the pursuit of sustainable business development. Based on this belief, the Group has developed the JGC Group Code of Business Conduct. The code, which must be followed by all employees, contains key points to ensure that the JGC Group's corporate philosophy is implemented in practice.

## Group Compliance System

The JGC Group has established a Group compliance system to ensure each company carries out its business based on high ethical standards. Compliance executives assigned to each main Group company work with compliance officers under their supervision to evaluate risks faced by the Company and implement suitable measures. The JGC Group has also established the Compliance Committee as a forum to share information and collaborate among Group companies. We are aiming to achieve a sense of unity to the entire Group through the Committee. The Compliance Unit at JGC Holdings Corporation is in charge of comprehensive measures, coordination, and other functions.

### JGC Group Compliance System Organization

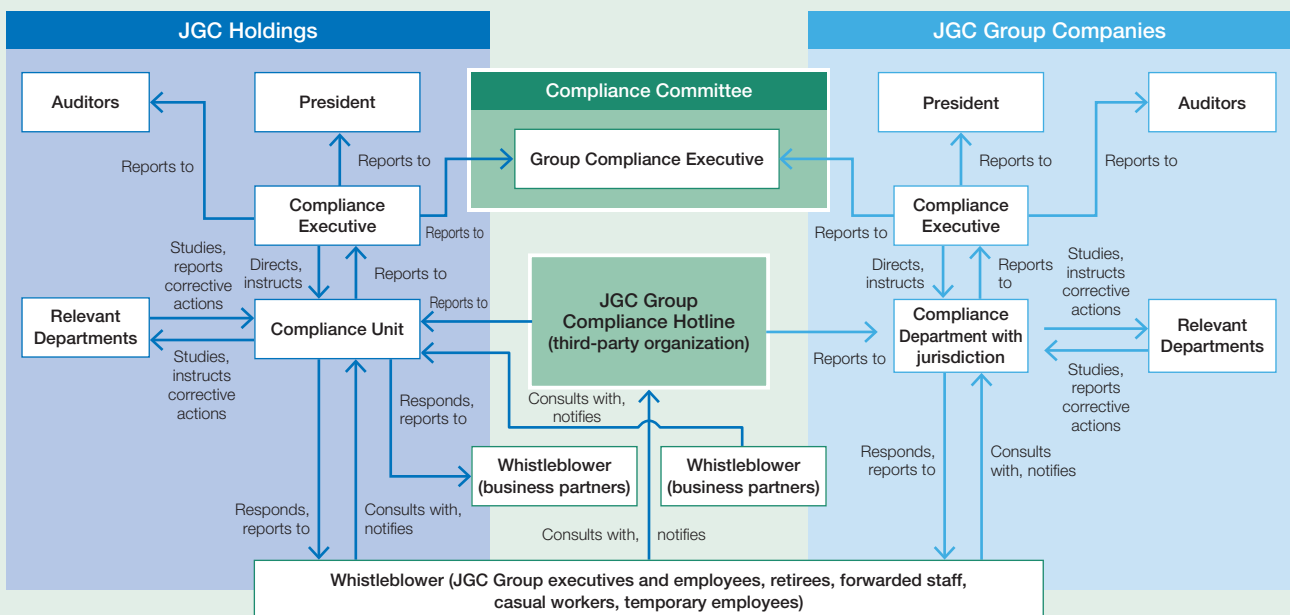


## Compliance Hotline

For prompt identification and prevention of compliance risks, the JGC Group has made available several ways to seek advice and report suspicions, mainly based on the JGC Group Compliance Hotline external contact point to facilitate anonymous consultation and reporting. In addition to accepting reports from employees, we have created a convenient system that also responds to consultations and accepts reports of violations. A system has also been developed that allows suppliers to submit reports via our homepage.

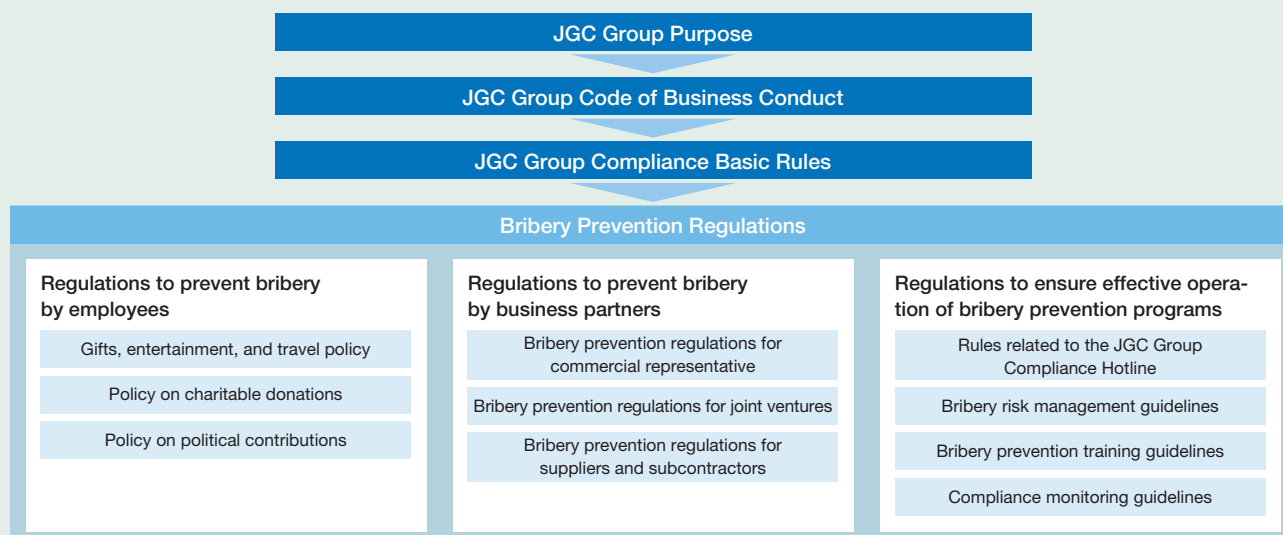
ESG Data Trends over Time P.97

### JGC Group Consulting and Reporting Hotline Organization



## Measures to Prevent Bribery

Within our Group, each company conducts business activities based on a high ethical standard, and in order to ensure these activities are carried out responsibly, we not only ensure strict compliance with anti-bribery laws in Japan, the United States, the United Kingdom, and other relevant jurisdictions but also assess reputational risks to ensure that our business partners are free from illegal activities and not tarnished by negative information, with our fundamental policy being only to engage with trustworthy business partners.



Under these policies, business partners intending to do business with the JGC Group are screened in advance to prevent illegal transactions or those that could result in sanctions. Based on the results, we implement any necessary risk-based measures, such as stipulating strict anti-corruption clauses in contracts with business partners, or any other clauses deemed appropriate.

In addition, under the Group's purpose and our Code of Conduct, we have developed bribery prevention rules and regulations as shown in the table above, and implemented bribery prevention programs. Any gifts, entertainment, donations, or contributions must be approved in advance and monitored, so that we are aware of transactions that may be linked to corruption or reputational risk.

## Compliance training

Awareness of compliance is enhanced through thematic and level-specific compliance training programs. Four types of level-based courses including new employee training to suit employees' positions are available for employees at Group companies in Japan. Beyond compliance basics, the training features case studies and encourages each employee to view matters of compliance as personally relevant.

Furthermore, a top message (Tone at the top) connecting all Group companies has been crafted, with senior management emphasizing compliance directly to employees in order to instill a sense of compliance in all of our Group executives and employees.

### Courses and Participation

	Fiscal 2023
Number of courses	33
Number of participants	5,403

ESG Data Trends over Time **P.97**

### Training Courses in Fiscal 2023

Type of training	Course	Participants
Level-specific	New employee training	New employees of domestic Group companies
	Compliance training A	Newly appointed assistant managers of domestic Group companies
	Compliance training B	Section managers of domestic Group companies
	Compliance training C	General managers and managers of domestic Group companies
Thematic	Project compliance training	Members involved in projects
	Anti-harassment training	JGC Japan employees at domestic sites or regional offices
	Risk-specific compliance training (anti-corruption, subcontracting and anti-monopoly laws, and other risks)	JGC Group employees at domestic sites or regional offices (only for specific department and job category)
	JGC Group Code of Business Conduct e-learning	Executive officers and employees at JGC Holdings, JGC Corporation, JGC Japan, and domestic and overseas Group companies

\* Expanding it to both domestic and overseas Group companies as of 2024

# *Chapter 5*

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## **Data Section**

The JGC Group's value creation mechanism creates economic, social, and environmental value while supporting our sustained growth, with outcomes gauged and evaluated through financial and non-financial metrics. Here, we present business results for fiscal 2023 and chronicle this value creation.

93 Financial and Non-Financial Highlights

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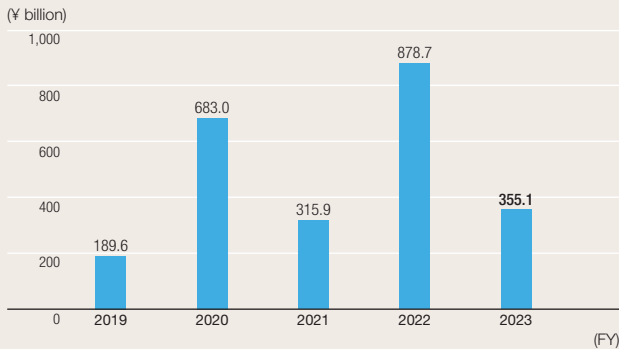
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# Financial and Non-Financial Highlights

## New Contracts

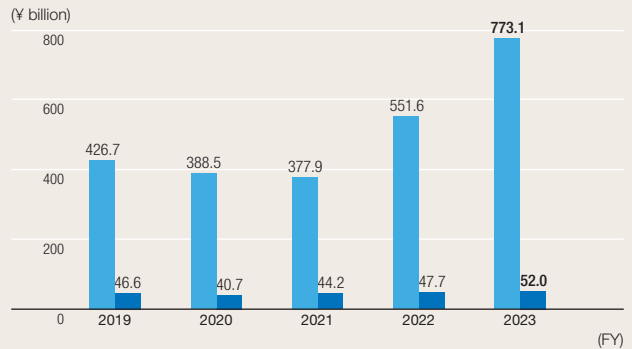
While various capital investment plans were underway domestically and internationally, rising interest rates and increased construction costs have led to a trend of higher CAPEX for clients. As a result, some clients have postponed their investment decisions to fiscal year 2024 and beyond. Consequently, the new contracts for fiscal 2023 amounted to ¥355.1 billion.



(Note) The method used to calculate new contracts was changed from fiscal 2022, and includes new contracts of the Functional Materials Manufacturing Business.

## Net Sales by Reportable Segment

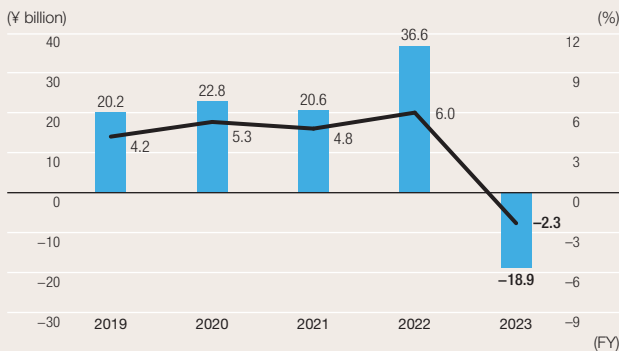
In the Total Engineering Business, large-scale projects progressed, resulting in a 40% year-over-year increase in net sales to ¥773.1 billion for fiscal 2023. In the Functional Materials Manufacturing Business, net sales for fiscal 2023 rose 8.9% year-on-year to ¥52 billion driven by increased sales of catalysts.



■ Total Engineering Business  
■ Functional Materials Manufacturing Business

## Operating Profit (Loss) / Operating Profit (Loss) Ratio

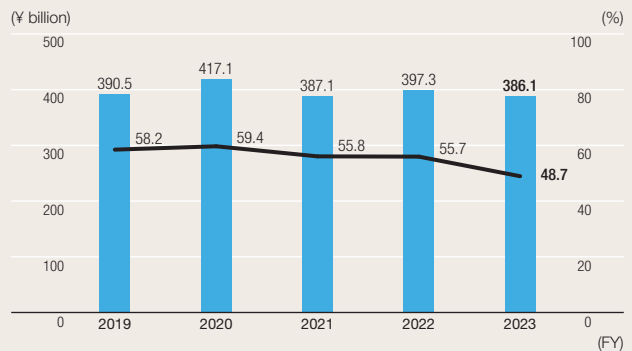
In the Total Engineering Business, challenges continued in some domestic and international projects, leading to both additional costs and risk contingencies, resulting in an operating loss of ¥18.9 billion for fiscal 2023.



■ Operating Profit (Loss) (Left axis)  
— Operating Profit (Loss) Ratio (Right axis)

## Equity / Equity Ratio

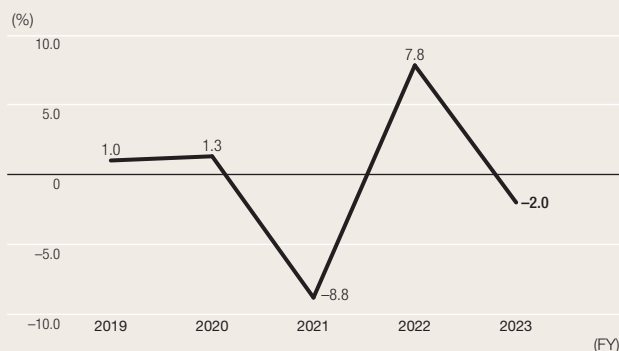
Total net assets at the end of fiscal 2023 were ¥387.8 billion, a decrease of ¥10 billion compared to the end of the previous fiscal year. This was primarily due to a decline in retained earnings due to the recording of losses. As a result, the equity ratio was 48.7% compared with 55.7% at the end of the previous fiscal year.



■ Shareholders' Equity (Left axis)  
— Equity ratio (Right axis)

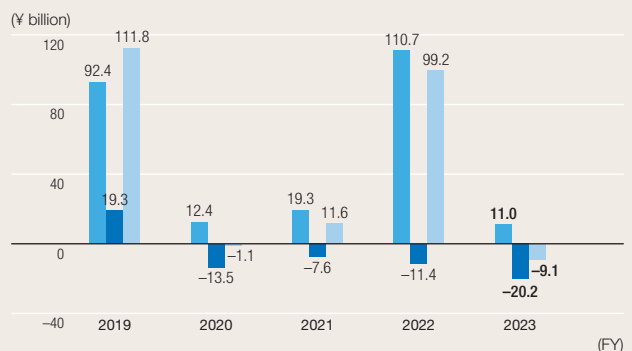
## Return on Equity (ROE)

The loss recorded in the Total Engineering Business led to a ¥7.8 billion loss attributable to owners of parent for fiscal 2023, with ROE dropping to -2.0%. To improve ROE, we will focus on quickly strengthening our current EPC execution structure while ensuring the prompt and effective implementation of the key strategies set out in our BSP 2025 medium-term business plan.



## Cash Flows

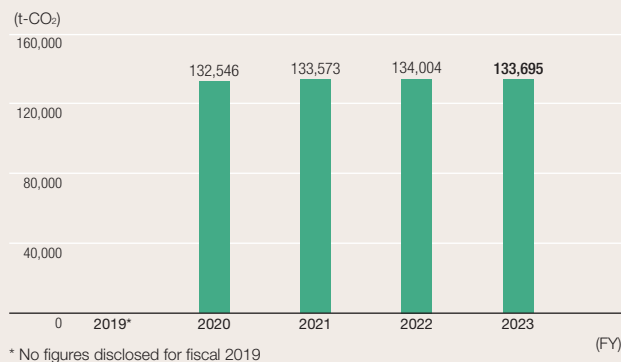
Cash and cash equivalents (hereafter, "net cash") on a consolidated basis as of the end of fiscal 2023 stood at ¥324.5 billion, a year-on-year decrease of ¥8.2 billion. Cash flows from operating activities amounted to ¥11.0 billion due to changes in working capital, as well as profit before income taxes of ¥2.8 billion. Cash flows from investing activities totaled ¥20.2 billion, mainly due to payments for purchase of property, plant and equipment. Cash flows from financing activities were ¥8.8 billion, mainly due to payment for dividends.



■ Cash flows from operating activities  
■ Cash flows from investing activities  
■ Free cash flow

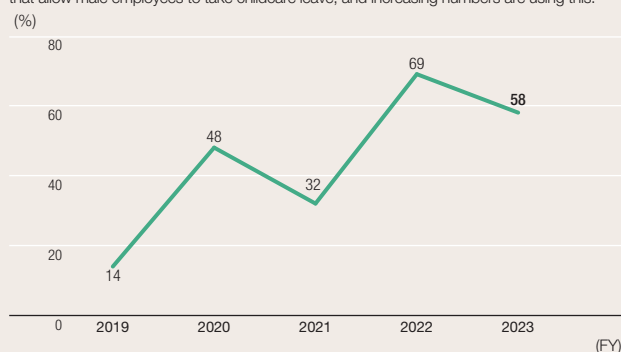
## Scope 1 and 2 GHG Emissions

From fiscal 2020, the Group has been calculating and disclosing Scope 1 and 2 and Scope 3 emissions for our six main Group companies. While net sales for fiscal 2023 increased significantly over the base year, the amount of Scope 1 and 2 emissions was kept at only a slight decrease, resulting in a 47% reduction in emissions intensity per base unit of production (against fiscal 2020).



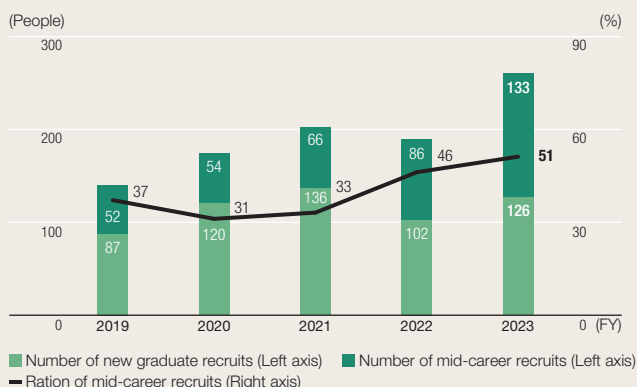
## Ratio of Male Employees Taking Childcare Leave

Given the increase in households where both partners are working, the Group has established a family care system that includes support for those raising children that includes up to two days off per month for childcare leave along with shorter working hours. The Group has put a family care system in place, thereby creating a workplace environment and supportive systems that allow male employees to take childcare leave, and increasing numbers are using this.



## Number of New Graduate Recruits/Number of Mid-Career Recruits/Ratio of Mid-Career Recruits

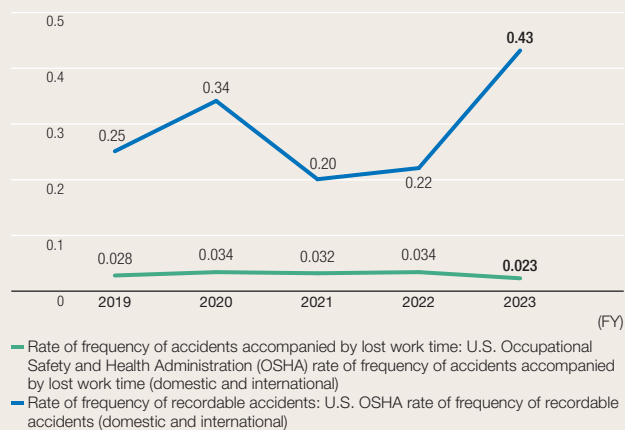
In addition to greater recruitment of human resources aimed at increasing project execution capacity, the Group proactively engages in mid-career recruitment of human resources who are experts in new business areas that are underpinned by new technical competence and knowledge, and in the DX and IT sector that is expected to be more important in the future. In fiscal 2023, we ran career-focused train station advertising within Minatomirai Station, the nearest station to our Company, to promote mid-career recruitment.



## Occupational Health and Safety

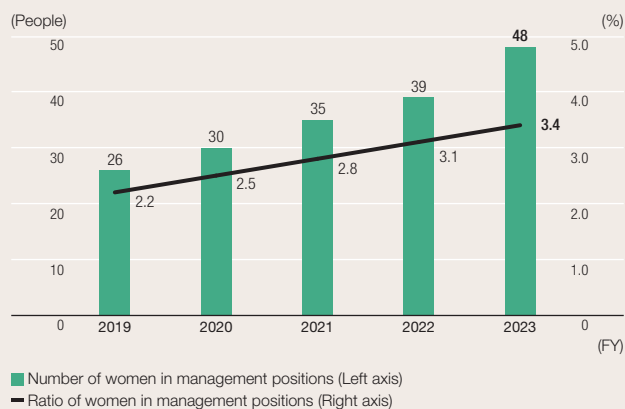
(Rate of frequency of accidents accompanied by lost work time/Rate of frequency of recordable accidents)

In fiscal 2023, while lost work time injuries declined compared to previous fiscal years, recordable accidents at overseas construction sites increased. In response, JGC Corporation is working with construction site management and partner companies to study accident prevention measures and implement improvements.



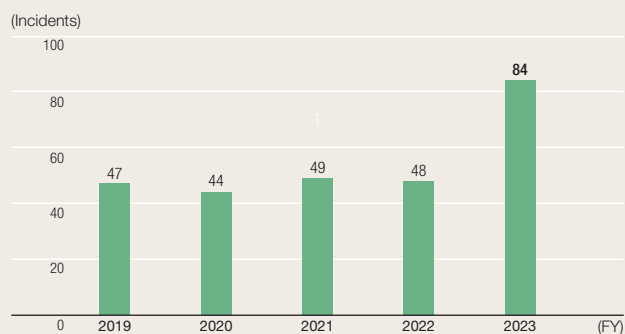
## Number and Ratio of Women in Management Positions

The Group is seeking to double the number of women in management positions compared to fiscal 2020 levels by fiscal 2025, and is working at fostering female leaders at an early stage by developing robust systems to create a more supportive and empowering work environment for women, and by dispatching employees to participate in external programs.



## Number of Reports Received by Hotlines

For prompt identification and prevention of compliance risks, the Group has made available several ways to seek advice and report suspicions, mainly based on our external contact point to facilitate anonymous consultation and reporting. In addition to accepting reports from employees, the Group has created a convenient system that also responds to consultations and accepts reports of violations.



## Trends in Financial Figures over Time

JGC Holdings Corporation and its consolidated subsidiaries\*\*

	Fiscal 2014	Fiscal 2015	Fiscal 2016	Fiscal 2017
<b>Performance Highlights</b>				
Net Sales	799,076	879,954	693,152	722,987
Operating Profit (Loss)	29,740	49,661	(21,496)	21,495
Profit (Loss) Attributable to Owners of Parent*2	20,628	42,793	(22,057)	16,589
New Contracts*3	769,680	320,626	506,293	547,826
Outstanding Contracts	1,772,036	1,192,625	1,045,684	846,157
<b>Financial Position at Year-End</b>				
Total Current Assets	533,538	522,747	480,865	521,320
Total Current Liabilities	286,533	225,203	226,457	215,773
Working Capital	247,005	297,544	254,408	317,200
Total Property, Plant and Equipment	78,560	76,255	69,877	55,222
Total Assets	719,754	689,782	646,291	684,921
Long-Term Loans Payable	22,715	20,991	12,631	4,294
Total Assets	388,496	419,673	383,260	395,779
Shareholders' Equity	387,480	418,695	382,215	394,701
<b>Cash Flows</b>				
Cash Flows from Operating Activities	(71,416)	(49,764)	(28,884)	5,539
Cash Flows from Investing Activities	(23,411)	8,696	(12,979)	11,736
Cash Flows from Financing Activities	3,836	(4,374)	(19,674)	33,781
Cash and Cash Equivalents at End of Period	297,707	247,947	185,603	235,394
<b>Financial Highlights*4</b>				
Return on Assets (ROA) (%)	6.1	7.4	(2.3)	3.8
Return on Equity (ROE) (%)	5.4	10.6	(5.5)	4.3
Net Income (Loss) per Share (Yen)	81.73	169.60	(87.42)	65.75
Cash Dividends per Share (Yen)	21.0	42.5	30.0	25.0
Gross Profit Ratio (%)	6.6	8.3	0.2	6.2
Operating Profit (Loss) Ratio (%)	3.7	5.6	(3.1)	3.0
Equity Ratio (%)	53.8	60.7	59.1	57.6
Current Ratio (%)	186.2	232.1	212.3	241.6
Payout Ratio (%)	25.7	25.1	—	38.0
Number of Employees	7,332	7,489	7,554	7,610

\*1 As of March 31, 2024, there were 30 consolidated subsidiaries.

\*2 As a consequence of applying the "Accounting Standard for Business Combinations" (ASBJ Statement No. 21, September 13, 2013), "Net income (loss)" is referred to as "Profit (loss) attributable to owners of parent" from fiscal 2015 onward.

\*3 The method used to calculate new contracts was changed from fiscal 2022, and includes new contracts of the Functional Materials Manufacturing Business.

\*4 The "Accounting Standard for Revenue Recognition" (ASBJ Statement No. 29, March 31, 2020) has been applied from the beginning of fiscal 2021.

(Millions of yen)

	Fiscal 2018	Fiscal 2019	Fiscal 2020	Fiscal 2021	Fiscal 2022	Fiscal 2023
	619,241	480,809	433,970	428,401	606,890	<b>832,595</b>
	23,249	20,234	22,880	20,688	36,699	<b>(18,995)</b>
	24,005	4,117	5,141	(35,551)	30,665	<b>(7,830)</b>
	935,451	189,643	683,068	315,956	878,789	<b>355,151</b>
	1,208,365	941,618	1,241,204	1,215,911	1,571,093	<b>1,253,452</b>
	541,747	537,955	548,359	533,343	539,493	<b>603,563</b>
	223,559	228,386	197,055	253,836	272,206	<b>350,736</b>
	318,188	309,569	351,304	279,507	267,287	<b>252,827</b>
	55,440	49,794	66,654	69,534	72,234	<b>84,411</b>
	708,855	671,273	702,529	694,274	713,127	<b>792,296</b>
	3,949	347	16,783	11,496	13,891	<b>14,717</b>
	410,350	390,979	417,616	387,662	397,981	<b>387,885</b>
	409,254	390,516	417,120	387,145	397,343	<b>386,155</b>
	(55,259)	92,442	12,467	19,311	110,769	<b>11,090</b>
	(4,662)	19,364	(13,520)	(7,695)	(11,471)	<b>(20,201)</b>
	(13,878)	(7,699)	196	(148)	(61,288)	<b>(8,894)</b>
	160,841	261,898	268,281	288,009	332,755	<b>324,507</b>
	4.6	3.2	3.7	4.3	7.2	<b>0.0</b>
	6.0	1.0	1.3	(8.8)	7.8	<b>(2.0)</b>
	95.14	16.32	20.37	(140.77)	122.28	<b>(32.48)</b>
	28.5	12.0	12.0	15.0	38.0	<b>40.0</b>
	7.3	9.0	10.1	10.6	11.0	<b>1.3</b>
	3.7	4.2	5.3	4.8	6.0	<b>(2.3)</b>
	57.7	58.2	59.4	55.8	55.7	<b>48.7</b>
	242.3	235.5	278.2	210.1	198.2	<b>172.1</b>
	30.0	73.5	58.9	—	31.1	<b>—</b>
	7,841	7,607	7,371	7,275	7,876	<b>8,865</b>

# ESG Data Trends over Time

	JGC's main KPIs	Units	Fiscal 2014	Fiscal 2015
<b>E Report on Environmental Initiatives</b>				
<b>Environment-related initiatives</b> <ul style="list-style-type: none"> <li>Contribution to environmental protection</li> <li>Environmental improvement activities in line with our business</li> <li>Promotion of the zero emissions initiative</li> </ul>	Scope 1 and 2 GHG emissions*2	t-CO <sub>2</sub>	—	—
	Scope 3 GHG emissions*2	t-CO <sub>2</sub>	—	—
	Industrial waste recycling rate (Domestic construction sites)	%	94.1	96.3
	Number of incidents of leaks of hazardous substances, etc. (Domestic and overseas construction sites)	Incidents	0	0
	Energy-related CO <sub>2</sub> emissions (Domestic construction sites)	kgCO <sub>2</sub> /hour	0.63	0.64
	Rate of diffusion of electronic manifests	%	—	79.4
	Energy consumption (Yokohama Head Office)*3	Crude oil equivalent (kl)	2,770	2,579
	Yokohama Head Office power consumption	1,000 kWh	7,308	6,720
	Consumption of chilled water by Yokohama Head Office	1,000 MJ	17,112	16,195
	Consumption of steam by Yokohama Head Office	1,000 MJ	8,252	8,021
	Volume of waste disposed by Yokohama Head Office	1,000 kg	258	224
	Rate of recycling of waste by Yokohama Head Office	%	63.2	66.6
	<b>S Report on Social Initiatives</b>			
<b>Initiatives related to human rights and labor practices</b> <ul style="list-style-type: none"> <li>Promotion of diversity</li> <li>Support for realization of work-life balance</li> <li>Support for employee career formation</li> </ul>	Number of women in management positions	Persons	11	15
	Ratio of women in management positions	%	—	—
	Rate of employment of people with disabilities*4	%	1.91	1.75
	Number of re-employed employees*5	Persons	209	208
	Number of non-Japanese employees*5	Persons	85	97
	Number of male employees taking childcare leave	Persons	2	1
	Ratio of male employees taking childcare leave	%	—	—
	Number of female employees taking childcare leave (Rate of reinstatement of female employees taking childcare leave)	Persons (%)	20 (100)	29 (100)
	Number of employees taking spousal childbirth leave	Persons	76	72
	Number of employees taking sick or injured childcare leave	Persons	113	125
	Number of employees taking nursing care leave	Persons	2	4
	Number of employees taking temporary retirement for nursing care	Persons	1	2
	Number of employees working reduced hours for childcare	Persons	33	37
	Number of employees working reduced hours for nursing care	Persons	0	1
	Rate of utilization of annual leave	%	50	53
	Number of employees dispatched for on-site training/on-site instruction	Persons	125	98
	Total annual training	Hours	—	—
	Training per person	Hours	—	—
	Number of employees dispatched to overseas companies, etc.	Persons	3	2
	<b>Initiatives related to health and safety**</b> <ul style="list-style-type: none"> <li>Fostering of culture of health and safety</li> <li>HSSE leadership by top management</li> <li>Enhancement of HSSE management system for investment projects</li> <li>Ongoing implementation of traffic safety measures</li> <li>Further development of in-house health and safety education</li> <li>Enhancement of Head Office construction HSSE functions</li> </ul>	Total project working hours	1,000 hours	206,831
Number of fatal accidents		Incidents	0	0
Number of accidents accompanied by lost work time		Incidents	12	14
Number of restrictions on work		Incidents	60	37
Number of conditions requiring specialized treatment		Incidents	124	99
Rate of frequency of accidents accompanied by lost work time*7			0.012	0.015
Rate of frequency of recordable accidents*8			0.19	0.16
<b>G Report on Governance Initiatives</b>				
<b>Initiatives related to fair business practices</b> <ul style="list-style-type: none"> <li>Realization of increased compliance awareness</li> </ul>	Number of times compliance training implemented/Number of employees receiving compliance training*9	Times (People)	8 (312)	18 (600)
	Number of reports received by hotlines	Incidents	3	5
<b>Initiatives related to the promotion of information security</b> <ul style="list-style-type: none"> <li>Increased awareness of information security</li> <li>Drills against targeted threats</li> </ul>	Number of serious information security-related incidents	Incidents	0	0
	<b>Reinforcement of governance system</b>	Number of outside directors	Persons	1

\*1 Applies to JGC Holdings, JGC, and JGC Japan combined.

\*2 Based on CDP reporting. Also includes JGC Catalysts and Chemicals, Japan Fine Ceramics, and Japan NUS.

\*3 Energy consumption (Yokohama Head Office): Reduction target set so that an average annual reduction of 1% over the past five years can be achieved.

\*4 From fiscal 2022, scope includes special subsidiary JGC Parallel Technologies Corporation.

\*5 Number of re-employed employees and number of non-Japanese employees = (Number of employees in April + Number of employees in March) ÷ 2

\*6 This data is the total based on the period from January to December.

\*7 Rate of frequency of accidents accompanied by lost work time = (Number of accidents accompanied by lost work time × 200,000) ÷ Total project working hours

Fiscal 2016	Fiscal 2017	Fiscal 2018	Fiscal 2019	Fiscal 2020	Fiscal 2021	Fiscal 2022	Fiscal 2023
—	—	—	—	132,546	133,573	134,004	<b>133,695</b>
—	—	—	—	—	702,873	975,775	<b>1,497,309</b>
98.1	97.7	96.1	85.2	88.3	98.4	99.0	<b>94.8</b>
0	1	0	0	0	0	0	<b>0</b>
1.43	3.52	2.39	0.61	0.40	1.91	1.35	<b>0.55</b>
96.0	64.2	79.5	69.5	85.9	93.9	99.6	<b>99.8</b>
2,405	2,248	2,224	2,139	2,091	2,022	2,035	<b>1,978</b>
5,974	5,571	5,497	5,221	4,756	4,658	4,819	<b>4,429</b>
15,857	14,071	15,353	15,503	14,349	13,327	14,970	<b>15,809</b>
8,886	9,153	7,724	7,170	10,377	9,963	7,708	<b>8,081</b>
209	212	206	191	109	129	149	<b>137</b>
64.9	65.7	61.4	59.5	65.5	68.6	61.4	<b>65.3</b>
17	19	21	26	30	35	39	<b>48</b>
—	—	—	2.2	2.5	2.8	3.1	<b>3.4</b>
1.81	1.82	1.87	1.97	2.27	1.72	2.58	<b>2.68</b>
189	159	109	55	55	13	8	<b>16</b>
94	100	89	86	95	93	90	<b>98</b>
2	8	11	14	40	43	64	<b>71</b>
—	—	10	14	48	32	69	<b>58</b>
27 (96)	24 (100)	24 (100)	19 (100)	27 (100)	27 (100)	33 (100)	<b>30 (100)</b>
81	81	64	80	91	87	61	<b>61</b>
115	123	185	187	217	167	189	<b>239</b>
8	20	22	11	42	33	38	<b>39</b>
2	1	0	0	1	0	3	<b>4</b>
44	42	51	47	47	44	68	<b>97</b>
1	2	0	0	0	0	0	<b>2</b>
53	57	53	59	60.75	60.95	70.25	<b>69.20</b>
62	72	86	45	55	88	102	<b>71</b>
—	—	—	—	—	57,877	50,871	<b>46,833</b>
—	—	—	—	—	18	17	<b>15</b>
5	5	2	4	4	1	1	<b>2</b>
128,036	81,072	90,993	57,305	40,861	49,334	46,401	<b>43,061</b>
3	2	0	0	1	0	0	<b>2**1</b>
8	9	8	8	7	8	8	<b>5</b>
25	6	11	18	15	11	13	<b>25</b>
65	41	31	46	46	31	32	<b>60</b>
0.012	0.022	0.018	0.028	0.034	0.032	0.034	<b>0.023</b>
0.16	0.14	0.11	0.25	0.34	0.20	0.22	<b>0.43</b>
12 (373)	13 (353)	6 (199)	21 (559)	19 (1,856)	27 (846)	42 (5,053)	<b>33 (5,403)</b>
12	18	28	47	44	49	48	<b>84</b>
0	0	0	1**10	0	0	0	<b>0</b>
2	2	2	3	4	4	3	<b>3</b>

\*8 Rate of frequency of recordable accidents = [(Number of fatal accidents + Number of accidents accompanied by lost work time + Number of restrictions on work + Number of conditions requiring specialized treatment) × 200,000] ÷ Total project working hours

\*9 From fiscal 2022, includes e-Learning.

\*10 Number of serious information security-related incidents: 1 (Emails sent to external parties due to unauthorized access)

Corrective measures for the above incident: Introduction of measures to prevent unauthorized access through two-factor authentication

\*11 Two employees of a partner company lost their lives due to an accident at a JGC Corporation construction site overseas. In response, JGC Corporation is having the head office conduct an emergency occupational health and safety audit along with other measures in order to prevent a recurrence.

# Consolidated Financial Statements

## Consolidated Balance Sheets

The translation of the Japanese yen amounts into U.S. dollars, using the prevailing exchange rate at March 31, 2024 of ¥151.41 to US\$1, is included solely for the convenience of readers outside Japan.

Years ended March 31, 2024 and 2023

Millions of yen

Millions of U.S. dollars

<b>ASSETS</b>	2023	2024	2024
<b>CURRENT ASSETS</b>			
Cash and deposits	332,951	<b>324,964</b>	<b>2,146</b>
Notes receivable, trade receivables, contract assets and other	141,846	<b>200,819</b>	<b>1,326</b>
Costs on construction contracts in progress	16,981	<b>25,304</b>	<b>167</b>
Merchandise and finished goods	7,760	<b>7,474</b>	<b>49</b>
Work in process	3,236	<b>3,731</b>	<b>25</b>
Raw materials and supplies	4,520	<b>4,411</b>	<b>29</b>
Accounts receivable - others	25,710	<b>28,167</b>	<b>186</b>
Other	6,802	<b>9,242</b>	<b>61</b>
Allowance for doubtful accounts	(315)	<b>(553)</b>	<b>(4)</b>
<b>TOTAL CURRENT ASSETS</b>	<b>539,493</b>	<b>603,563</b>	<b>3,986</b>
<b>NON-CURRENT ASSETS</b>			
<b>PROPERTY, PLANT AND EQUIPMENT</b>			
Buildings and structures	75,001	<b>79,968</b>	<b>528</b>
Machinery, vehicles, tools, furniture and fixtures	72,569	<b>79,639</b>	<b>526</b>
Land	18,639	<b>24,862</b>	<b>164</b>
Leased assets	2,690	<b>3,055</b>	<b>20</b>
Construction in progress	2,928	<b>3,392</b>	<b>22</b>
Accumulated depreciation	(99,595)	<b>(106,505)</b>	<b>(703)</b>
<b>TOTAL PROPERTY, PLANT AND EQUIPMENT</b>	<b>72,234</b>	<b>84,411</b>	<b>557</b>
<b>INTANGIBLE ASSETS</b>			
Software	10,650	<b>13,060</b>	<b>86</b>
Other	374	<b>268</b>	<b>2</b>
<b>TOTAL INTANGIBLE ASSETS</b>	<b>11,025</b>	<b>13,328</b>	<b>88</b>
<b>INVESTMENTS AND OTHER ASSETS</b>			
Investment securities	59,224	<b>56,073</b>	<b>370</b>
Long-term loans receivable	11,074	<b>11,869</b>	<b>78</b>
Retirement benefit asset	1,277	<b>1,600</b>	<b>11</b>
Deferred tax assets	15,483	<b>22,834</b>	<b>151</b>
Other	25,333	<b>22,985</b>	<b>152</b>
Allowance for doubtful accounts	(22,018)	<b>(24,369)</b>	<b>(161)</b>
<b>TOTAL INVESTMENTS AND OTHER ASSETS</b>	<b>90,373</b>	<b>90,993</b>	<b>601</b>
<b>TOTAL NON-CURRENT ASSETS</b>	<b>173,633</b>	<b>188,733</b>	<b>1,247</b>
<b>TOTAL ASSETS</b>	<b>713,127</b>	<b>792,296</b>	<b>5,233</b>

		Millions of yen	Millions of U.S. dollars
	2023	2024	2024
<b>LIABILITIES AND NET ASSETS</b>			
<b>CURRENT LIABILITIES</b>			
Notes payable, accounts payable for construction contracts and other	90,005	147,309	973
Short-term borrowings	2,336	3,817	25
Current portion of bonds payable	10,000	—	—
Current portion of long-term borrowings	544	741	5
Income taxes payable	4,794	5,480	36
Contract liabilities	113,989	95,855	633
Provision for bonuses	12,509	8,281	55
Provision for bonuses for directors (and other officers)	299	209	1
Provision for loss on construction contracts	838	48,072	317
Provision for warranties for completed construction	958	1,249	8
Other	35,929	39,719	262
<b>TOTAL CURRENT LIABILITIES</b>	<b>272,206</b>	<b>350,736</b>	<b>2,316</b>
<b>NON-CURRENT LIABILITIES</b>			
Bonds payable	10,000	20,000	132
Long-term borrowings	13,891	14,717	97
Retirement benefit liability	12,803	11,486	76
Provision for retirement benefits for directors (and other officers)	233	1,059	7
Deferred tax liabilities	1,438	2,231	15
Deferred tax liabilities for land revaluation	1,014	1,014	7
Other	3,557	3,163	21
<b>TOTAL NON-CURRENT LIABILITIES</b>	<b>42,939</b>	<b>53,674</b>	<b>354</b>
<b>TOTAL LIABILITIES</b>	<b>315,145</b>	<b>404,410</b>	<b>2,671</b>
<b>NET ASSETS</b>			
<b>SHAREHOLDERS' EQUITY</b>			
Share capital	23,733	23,798	157
Capital surplus	25,831	25,378	168
Retained earnings	369,066	350,511	2,315
Treasury shares	(26,741)	(25,485)	(168)
<b>TOTAL SHAREHOLDERS' EQUITY</b>	<b>391,889</b>	<b>374,202</b>	<b>2,471</b>
<b>ACCUMULATED OTHER COMPREHENSIVE INCOME</b>			
Valuation difference on available-for-sale securities	7,219	7,410	49
Deferred gains on hedges	2,359	3,072	20
Revaluation reserve for land	(10,891)	(10,891)	(72)
Foreign currency translation adjustments	6,089	11,082	73
Remeasurements of defined benefit plans	677	1,278	8
<b>TOTAL ACCUMULATED OTHER COMPREHENSIVE INCOME</b>	<b>5,454</b>	<b>11,952</b>	<b>79</b>
<b>NON-CONTROLLING INTERESTS</b>	<b>637</b>	<b>1,730</b>	<b>11</b>
<b>TOTAL NET ASSETS</b>	<b>397,981</b>	<b>387,885</b>	<b>2,562</b>
<b>TOTAL LIABILITIES AND NET ASSETS</b>	<b>713,127</b>	<b>792,296</b>	<b>5,233</b>

## Consolidated Financial Statements

## Consolidated Statements of Operations

Years ended March 31, 2024 and 2023

Millions of yen

Millions of U.S. dollars

	2023	2024	2024
<b>NET SALES</b>	606,890	<b>832,595</b>	<b>5,499</b>
<b>COST OF SALES</b>	540,164	<b>821,931</b>	<b>5,429</b>
<b>GROSS PROFIT</b>	66,725	<b>10,663</b>	<b>70</b>
<b>SELLING, GENERAL AND ADMINISTRATIVE EXPENSES</b>	30,026	<b>29,659</b>	<b>196</b>
<b>OPERATING PROFIT (LOSS)</b>	36,699	<b>(18,995)</b>	<b>(125)</b>
<b>NON-OPERATING INCOME</b>			
Interest income	7,364	<b>15,749</b>	<b>104</b>
Divided income	2,119	<b>1,021</b>	<b>7</b>
Share of profit of entities accounted for using equity method	2,714	—	—
Foreign exchange gains	2,833	<b>3,602</b>	<b>24</b>
Other	226	<b>2,343</b>	<b>15</b>
<b>TOTAL NON-OPERATING INCOME</b>	15,259	<b>22,717</b>	<b>150</b>
<b>NON-OPERATING EXPENSES</b>			
Interest expenses	1,162	<b>1,364</b>	<b>9</b>
Share of loss of entities accounted for using equity method	—	<b>1,366</b>	<b>9</b>
Other	235	<b>631</b>	<b>4</b>
<b>TOTAL NON-OPERATING EXPENSES</b>	1,397	<b>3,362</b>	<b>22</b>
<b>ORDINARY PROFIT</b>	50,560	<b>358</b>	<b>2</b>
<b>EXTRAORDINARY INCOME</b>			
Gain on change in equity	1,318	—	—
Gain on sale of investment securities	399	<b>2,384</b>	<b>16</b>
Gain on liquidation of subsidiaries and associates	—	<b>828</b>	<b>5</b>
Gain on sale of receivables	2,079	—	—
Other	5	—	—
<b>TOTAL EXTRAORDINARY INCOME</b>	3,802	<b>3,212</b>	<b>21</b>
<b>EXTRAORDINARY LOSSES</b>			
Impairment losses	2,525	—	—
Loss on retirement of non-current assets	174	<b>100</b>	<b>1</b>
Loss on valuation of investments in capital	—	<b>600</b>	<b>4</b>
Other	2,853	<b>61</b>	<b>0</b>
<b>TOTAL EXTRAORDINARY LOSSES</b>	5,552	<b>762</b>	<b>5</b>
Profit before income taxes	48,811	<b>2,809</b>	<b>19</b>
Income taxes - current	19,302	<b>18,401</b>	<b>122</b>
Income taxes - deferred	(538)	<b>(7,738)</b>	<b>(51)</b>
Total income taxes	18,763	<b>10,662</b>	<b>70</b>
<b>PROFIT (LOSS)</b>	30,047	<b>(7,852)</b>	<b>(52)</b>
<b>LOSS ATTRIBUTABLE TO NON-CONTROLLING INTERESTS</b>	(618)	<b>(22)</b>	<b>(0)</b>
<b>PROFIT (LOSS) ATTRIBUTABLE TO OWNERS OF PARENT</b>	30,665	<b>(7,830)</b>	<b>(52)</b>

## Consolidated Statements of Comprehensive Income

Years ended March 31, 2024 and 2023

Millions of yen    Millions of U.S. dollars

	2023	2024	2024
PROFIT (LOSS)	30,047	<b>(7,852)</b>	<b>(52)</b>
OTHER COMPREHENSIVE INCOME			
Valuation difference on available-for-sale securities	(177)	<b>1,256</b>	<b>8</b>
Deferred gains or losses on hedges	(2,979)	<b>902</b>	<b>6</b>
Foreign currency translation adjustments	1,387	<b>4,218</b>	<b>28</b>
Remeasurements of defined benefit plans	1,215	<b>556</b>	<b>4</b>
Share of other comprehensive income of entities accounted for using equity method	3,933	<b>(318)</b>	<b>(2)</b>
TOTAL OTHER COMPREHENSIVE INCOME	3,378	<b>6,615</b>	<b>44</b>
COMPREHENSIVE INCOME	33,425	<b>(1,236)</b>	<b>(8)</b>
COMPREHENSIVE INCOME ATTRIBUTABLE TO			
COMPREHENSIVE INCOME ATTRIBUTABLE TO OWNERS OF PARENT	33,875	<b>(1,331)</b>	<b>(9)</b>
COMPREHENSIVE INCOME ATTRIBUTABLE TO NON-CONTROLLING INTERESTS	(449)	<b>95</b>	<b>1</b>

## Consolidated Financial Statements

## Consolidated Statements of Cash Flows

Years ended March 31, 2024 and 2023

Millions of yen

Millions of U.S. dollars

	2023	2024	2024
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>			
Profit before income taxes	48,811	2,809	19
Depreciation	7,839	9,702	64
Impairment losses	2,525	—	—
Increase (decrease) in allowance for doubtful accounts	4,489	2,038	13
Interest and dividend income	(9,484)	(16,771)	(111)
Interest expenses	1,162	1,364	9
Foreign exchange losses (gains)	(11,761)	(7,319)	(48)
Share of loss (profit) of entities accounted for using equity method	(2,714)	1,366	9
Decrease (increase) in notes receivable, trade receivables, contract assets and other	898	(56,474)	(373)
Decrease (increase) in inventories	5,310	(7,315)	(48)
Increase (decrease) in notes and accounts payable - trade	26,594	54,175	358
Loss (gain) on sale of investment securities	(398)	(2,384)	(16)
Increase (decrease) in retirement benefit liability	(3,324)	(1,601)	(11)
Increase (decrease) in provision for loss on construction contracts	429	47,214	312
Loss on valuation of investments in capital	—	600	4
Gain on liquidation of subsidiaries and associates	—	(828)	(5)
Loss (gain) on change in equity	(1,318)	—	—
Increase (decrease) in contract liabilities	3,753	(19,176)	(127)
Decrease (increase) in accounts receivable - other	36,579	(2,270)	(15)
Increase (decrease) in accounts payable - other	7,177	2,594	17
Gain on sale of receivables	(2,079)	—	—
Other, net	9,540	(3,690)	(24)
Subtotal	124,029	4,033	27
Interest and dividends received	9,985	19,889	131
Interest paid	(932)	(1,249)	(8)
Proceeds from sale of receivables	2,079	—	—
Income taxes paid	(24,392)	(11,583)	(77)
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>	<b>110,769</b>	<b>11,090</b>	<b>73</b>
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>			
Purchase of property, plant and equipment	(6,565)	(13,520)	(89)
Purchase of investment securities	(2,629)	(7,899)	(52)
Proceeds from sale of investment securities	939	4,095	27
Purchase of intangible assets	(5,573)	(5,467)	(36)
Proceeds from capital reduction of investments	733	1,308	9
Proceeds from liquidation of subsidiaries and associates	—	871	6
Other	1,623	409	3
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>	<b>(11,471)</b>	<b>(20,201)</b>	<b>(133)</b>
<b>CASH FLOWS FROM FINANCING ACTIVITIES</b>			
Proceeds from long-term borrowings	2,324	—	—
Repayments of long-term borrowings	(9,197)	(664)	(4)
Proceeds from issuance of bonds	—	10,000	66
Redemption of bonds	(30,000)	(10,000)	(66)
Purchase of treasury shares	(20,000)	(0)	(0)
Dividends paid	(3,789)	(9,136)	(60)
Dividends paid to non-controlling interests	(44)	(51)	(0)
Net increase (decrease) in short-term borrowings	56	1,826	12
Other, net	(637)	(867)	(6)
<b>CASH FLOWS FROM FINANCING ACTIVITIES</b>	<b>(61,288)</b>	<b>(8,894)</b>	<b>(59)</b>
<b>EFFECT OF EXCHANGE RATE CHANGES ON CASH AND CASH EQUIVALENTS</b>	<b>6,592</b>	<b>8,938</b>	<b>59</b>
<b>NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS</b>	<b>44,602</b>	<b>(9,067)</b>	<b>(60)</b>
<b>CASH AND CASH EQUIVALENTS AT BEGINNING OF PERIOD</b>	<b>288,009</b>	<b>332,755</b>	<b>2,198</b>
<b>INCREASE IN CASH AND CASH EQUIVALENTS RESULTING FROM INCLUSION OF SUBSIDIARIES IN CONSOLIDATION</b>	<b>144</b>	<b>818</b>	<b>5</b>
<b>CASH AND CASH EQUIVALENTS AT END OF PERIOD</b>	<b>332,755</b>	<b>324,507</b>	<b>2,143</b>

# Group Companies

(As of March 31, 2024)

● Consolidated subsidiaries

● Affiliated companies accounted for by the equity method

## Total Engineering Business

Industry	Name	Country	Share capital	Percentage of voting rights owned*
EPC	● JGC Corporation	Japan	¥1.0 billion	100%
	● JGC Japan Corporation	Japan	¥1.0 billion	100%
	● JGC ASIA PACIFIC PTE. LTD.	Singapore	S\$2,100,000	100% (100%)
	● JGC PHILIPPINES, INC.	Philippines	PHP1,300,000,000	100%
	● JGC Gulf International Co., Ltd.	Saudi Arabia	SAR4,702,000	100% (100%)
	● JGC OCEANIA PTY LTD	Australia	A\$913,800,000	100%
	● JGC America, Inc.	U.S.A.	US\$41,051,000	100%
	● PT. JGC INDONESIA	Indonesia	IDR1,357,050,000	49% (14%)
	● JGC Gulf Engineering Co., Ltd.	Saudi Arabia	SAR500,000	75% (75%)
	● JGC Construction International Pte. Ltd.	Singapore	US\$1,043,000	100% (100%)
	● JGC ASIA PACIFIC (M) Sdn. Bhd.	Malaysia	MYR2,500,000	100% (100%)
	● JGC Vietnam Co., Ltd.	Vietnam	VND519,831,000,000	100% (62%)
	● JGC INDIA EPC PRIVATE LIMITED	India	INR280,000,000	100% (100%)
	● Japan NuScale Innovation, LLC	U.S.A.	US\$173,008,000	29% (29%)
	● JGC Corporation Oceania Pty Ltd	Australia	A\$100,000	100% (100%)
Inspection / Maintenance	● JGC PLANTECH AOMORI Co., Ltd.	Japan	¥50 million	100% (100%)
Process Licensing	● Nikki-Universal Co., Ltd.	Japan	¥1.0 billion	50%
Other	● Sunrise Healthcare Service Co., Ltd.	Cambodia	KHR130,000,000,000	98% (98%)
	● Sunrise Property Co., Ltd	Cambodia	KHR8,000,000	49% (49%)

## Functional Materials Manufacturing Business

Name	Country	Share capital	Percentage of voting rights owned*
● JGC Catalysts and Chemicals Ltd.	Japan	¥1.8 billion	100%
● Japan Fine Ceramics Co., Ltd.	Japan	¥300 million	100%
● JFC Materials Co. Ltd.	Japan	¥10 million	100% (100%)
● Nikki-Universal Co., Ltd.	Japan	¥1.0 billion	50%

## Other Businesses

Industry	Name	Country	Share capital	Percentage of voting rights owned*
Consulting	● Japan NUS Co., Ltd.	Japan	¥50 million	88%
Office Support Services	● NIKKI BUSINESS SERVICES CO., LTD.	Japan	¥1.4 billion	100%
	● Swing Corporation	Japan	¥5.5 billion	33%
Water Treatment	● Swing AM Corporation	Japan	¥100 million	[100%]
	● Swing Engineering Corporation	Japan	¥300 million	[100%]
Oil and Gas Production Sales	● JGC (GULF COAST), LLC	U.S.A.	US\$27,450,000	100% (100%)
	● JGC Exploration Eagle Ford LLC	U.S.A.	US\$117,100,000	100% (100%)
	● JGC EXPLORATION CANADA LTD.	Canada	C\$0	100%
Water Desalination	● Al Asilah Desalination Company S.A.O.C.	Oman	OMR17,500,000	75%
	● A.R.C.H. WLL	Bahrain	US\$758,000	30%
	● ASH SHARQIYAH OPERATION AND MAINTENANCE COMPANY LLC	Saudi Arabia	SAR1,000,000	29%
Floating Production, Storage and Offloading system (FPSO)	● Japan Sankofa Offshore Production Pte. Ltd.	Singapore	US\$29,824,000	26%
Manufacturing Business for SAF, Bio-naphtha, and Bio-diesel Using Domestically Produced Waste Cooking Oil	● SAFFAIRE SKY ENERGY LLC	Japan	¥100 million	49%

\* Figures in ( ) in percentage of voting rights owned are indirect ownership ratios, and figures in parentheses [ ] are ownership ratios held by persons closely related to or in agreement with the company, and are outside figures.

# Stock Information

(As of March 31, 2024)

Authorized Shares	600,000,000
Issued and Outstanding Shares	259,481,819
Number of Shareholders	59,519
Administrator of the Shareholders' Register	Mitsubishi UFJ Trust and Banking Corporation 1-4-5, Marunouchi, Chiyoda-Ku, Tokyo 100-8212, Japan

## Major Shareholders

	Number of shares (Thousands)	Percentage of total (%)
The Master Trust Bank of Japan, Ltd. (Trust Account)	45,618	18.88
Custody Bank of Japan, Ltd. (Trust Account)	30,011	12.42
JGC Trading & Services Co., Ltd.	12,112	5.01
JGC-S SCHOLARSHIP FOUNDATION	8,433	3.49
JPMorgan Securities Japan Co., Ltd.	4,471	1.85
SSBTC CLIENT OMNIBUS ACCOUNT	3,896	1.61
Sumitomo Mitsui Banking Corporation	3,300	1.36
JP MORGAN CHASE BANK 385781	2,913	1.20
Mizuho Bank, Ltd.	2,899	1.20
HSBC HONG KONG-TREASURY SERVICES A/C ASIAN EQUITIES DERIVATIVES	2,728	1.12

(Notes) 1. Number of shares is rounded down to the nearest thousand. Percentage of total is rounded down to the second decimal place.

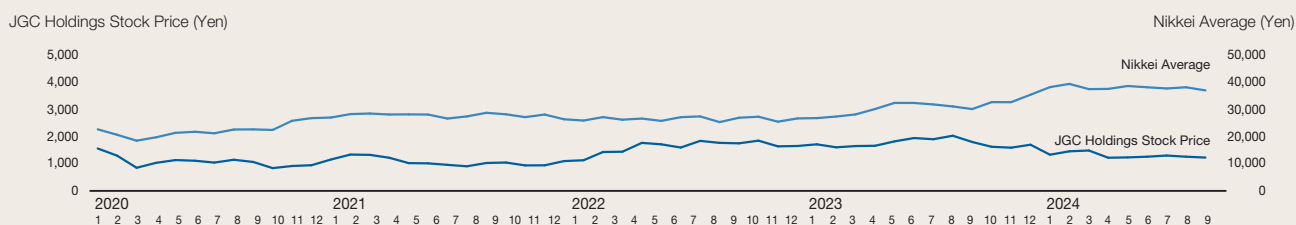
2. The Company holds 17,940 thousand shares (6.91%, 3rd) of treasury stock, but this is excluded from the above table.

3. Percentage of total is calculated excluding treasury stock.

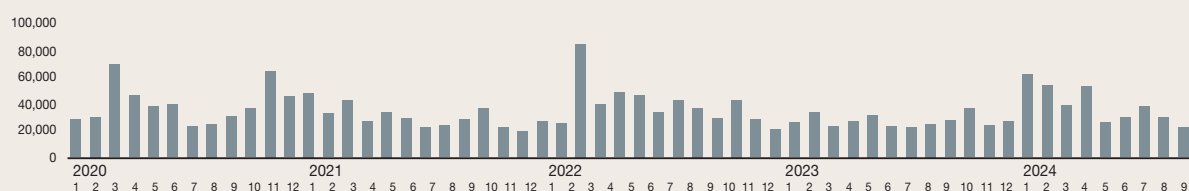
## Distribution of Shareholders



## Stock Price



Volume (Thousands of shares)



# Outline of JGC

(As of March 31, 2024)

<b>Company Name</b>	JGC HOLDINGS CORPORATION
<b>Head Office</b>	2-3-1, Minato Mirai, Nishi-ku, Yokohama-shi, Kanagawa 220-6001, Japan
<b>Established</b>	October 25, 1928
<b>Share Capital</b>	¥23,798,810,000
<b>Employees</b>	249 (Consolidated: 8,865)
<b>Independent Auditor</b>	KPMG AZSA LLC

## Glossary

(In alphabetical order)

Glossary	Meaning
<b>Biomanufacturing</b>	Technology that creates highly engineered cells (smart cells) that are optimized to efficiently produce targeted substances to create various materials, and thus bring about a recycling-oriented manufacturing society. In addition to the medical and healthcare fields, in the future this technology is expected to expand into areas such as materials, energy, and food.
<b>CCS</b>	Abbreviation for Carbon Capture and Storage. A technology for capturing CO <sub>2</sub> emitted from fossil fuel refining or combustion and injecting it into the ground before it is released into the atmosphere, for stable, long-term storage.
<b>EPC</b>	Abbreviation for Engineering, Procurement, and Construction. The plant engineering workflow for the installation and construction work of large-scale facilities and plants. The process involves making designs based on drawings, procuring necessary equipment and materials, and on-site construction.
<b>FCC</b>	Abbreviation for Fluid Catalytic Cracking. A process that uses a catalyst to decompose raw oil into gas, gasoline, and diesel using fluid circulation between reaction and regeneration stages.
<b>FEED</b>	Abbreviation for Front-End Engineering Design. Of the design work required for manufacturing structures, equipment, and systems, and others, this refers to both design work that develops the overall structure and functionality of a product to ensure consistency between structural elements in order to satisfy its required specifications, and to design work which specifies physical and functional requirements of structural components in order to enable detailed design.
<b>FLNG</b>	Abbreviation for Floating Liquefied Natural Gas. Offshore facilities for the production, storage, and shipment of LNG.
<b>FS</b>	Abbreviation for Feasibility Study. A study conducted before starting a project to assess the technical feasibility, profitability, and viability as a business.
<b>GTL</b>	Abbreviation for Gas To Liquids. A process that converts gaseous hydrocarbons to liquid products through chemical reactions. Natural gas is commonly converted into liquid form, enabling the production of various petroleum products such as gasoline, diesel, and kerosene. Natural gas is typically converted into synthetic gas comprising carbon monoxide and hydrogen, which is then further processed into waxy hydrocarbons. GTL products are clean fuels that contain no impurities such as sulfur or nitrogen.
<b>High thermal conductivity silicon nitride substrates</b>	A critical component that enables efficient heat dissipation in power semiconductors used in hybrid vehicles, solar/wind power generation, and fuel cells, which are being introduced to help achieve a low-carbon society. Power semiconductors generate a large amount of heat during operation, and we are seeing increasing application of silicon nitride substrates, with their high thermal conductivity and strength, to quickly dissipate this heat.
<b>LNG</b>	Abbreviation for Liquefied Natural Gas. As natural gas is a gas at normal temperatures, it is liquefied by cooling to cryogenic (-163°C) for easier transportation and storage.
<b>Project management</b>	Specialized management activities that apply an organically integrated set of techniques and management skills to integrate resources such as personnel, materials, finances, and time along with technology and information under a unified approach. This has the goal of planning, organizing, coordinating, and controlling the project to complete it as originally intended within certain constraints such as time, budget, and quality.
<b>SAF</b>	Abbreviation for Sustainable Aviation Fuel. SAF is a type of aviation fuel compatible with existing infrastructure and when compared to conventional aviation fuel, is expected to significantly reduce GHG emissions across its entire life cycle, from the production and collection of raw materials such as biomass, waste cooking oil, and municipal waste, to manufacturing and combustion.

**JGC** JGC HOLDINGS CORPORATION

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