JGC JGC CORPORATION

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JGC Report 2019

JGC Report 2019

April 1, 2018 – March 31, 2019

JGC JGC CORPORATION

Corporate Philosophy

JGC Way

The corporate philosophy of the JGC Group, the "JGC Way," is the fundamental platform pursuant to which the business activities of the group are promoted and furthermore is followed by each and every JGC Group employee and executive in their activities.

Mission

We are committed to creating a more prosperous future for our clients, for people and for society through integrating our core capabilities and technical expertise to generate innovative solutions.

Values

We are driven by our shared values and commitments. These elements express our strengths and represent the basis for how we work and deliver solutions to our clients and stakeholders:

Shared Values

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

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.

Vision

We bring a new generation of innovative solutions to the energy and infrastructure industries by utilizing our core competencies in engineering and project management.

CONTENTS

As of October 1, 2019, the JGC Group will adopt a holding company structure. Through this reform, we are seeking to evolve into a corporate group with a balanced revenue structure from multiple business segments. Overseas oil and gas will remain a central Group business as we also allocate suitable management resources to overseas infrastructure, domestic EPC business, and functional materials manufacturing.

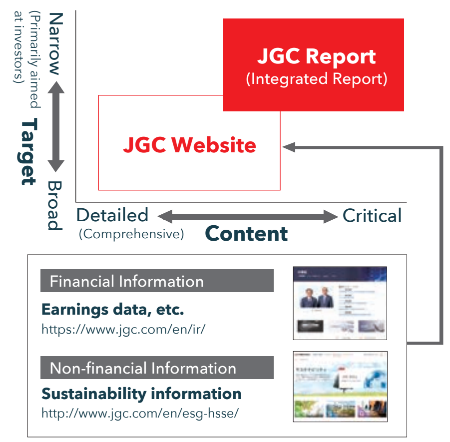
Editorial Policy

Purpose of This Report
The purpose of the JGC Report, which was first published in 2015, is to explain to stakeholders 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 stakeholders as part of its efforts to deliver sustainable growth through continuous, constructive dialogue.

Period Covered
In principle, the report covers the period April 2018 to March 2019 (fiscal 2018), but also includes information related to events from April 2019.

Information Provided
The JGC 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.

Forward-looking Statements
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.



Chapter 1

Toward Sustainable Growth

This chapter describes historical growth of the JGC Group and how the Group creates value. Responses to developments in the business environment and current measures in line with the Beyond the Horizon medium-term business plan are discussed by the chairman and president, with insight on financial strategy from the chief financial officer.

Masayuki Sato
Representative Director,
Chairman, and Chief Executive Officer

Tadashi Ishizuka
Representative Director,
President, and Chief Operating Officer

Message from CEO

For a structure by changes resource management unaffected in the natural market

Masayuki Sato

Representative Director, Chairman, and Chief Executive Officer (CEO)

Since joining JGC in 1979, Masayuki Sato has worked throughout the company in finance and accounting, in charge of finance for projects in the Middle East, North Africa, Southeast Asia, and CIS countries.
He was appointed director in June 2010.
He served as managing director, senior general manager of the Corporate Administrative & Financial Affairs Division, and Chief Financial Officer (CFO) from July 2011 and was appointed executive vice president and director in June 2012.
Since June 2017, he has held the positions of representative director, chairman, and CEO.

1. Reforming the group management structure

Of the many companies around the world that have grown more valuable over time, all have at one point undertaken and proven what they can do.
The nature of this reform varies. For some, reform is the only way to break free from a management crisis. Others undertake reform to become more robust, in response to market changes affecting their main business. And for others who anticipate future market changes, proactive reform expands business, as core competencies are applied from main business segments.
My decision to reform the group management structure, as world-class companies have done, was motivated by the awareness that now is the time for proactive reform in anticipation of future market changes, to expand business by applying core competencies from main business segments as the plant market steadily recovers.
In retrospect, it has been a longstanding challenge for us to diversify our business portfolio to avoid overreliance on the overseas oil and gas segment, as a company whose record has been shaken about once a decade by turbulence in the natural resource market.
The fact remains that despite our past attempts to move into and invest in EPC business in non-hydrocarbon sectors – and our success in cultivating EPC segments such as life sciences, healthcare, and nonferrous metals – these efforts did not substantially change our business portfolio itself.
In my view, there were primarily two reasons for this.
First, as long as we kept receiving orders on the scale of billions of dollars for oil and gas projects, that is where the attention of our top management was focused and our resources went, which undermined a sustained commitment to expanding our portfolio.
And second, we can generalize that in the new segments we ventured into in the past, our core competencies of broad technical expertise in engineering, advanced functional materials manufacturing, and superior project execution capabilities, were not sufficiently relevant, or that we did not find a good match for these competencies.
In anticipation of future market changes, we are moving to the new group management structure in order to expand business, building on core competencies. However, what greatly distinguishes this reform from past diversification is the change to a holding company structure, in which separate companies will pursue separate business.
Our intention here is to be a corporate group with a multi-business portfolio. In total engineering,

our portfolio consists of three businesses: the main overseas oil and gas segment, the overseas infrastructure segment (applying technical expertise and project management capabilities accumulated through domestic projects), and the domestic segment (consisting mainly of EPC and maintenance operations, where we expect to secure steady revenue). In all, the four businesses in the Group portfolio also include functional materials manufacturing, which holds great potential.

(Reference: "Reform of the Group Management Structure," p.13–14)

As outlined in "Growth Trajectory" (see p.15–16), although periodic global market changes have shaken JGC since the 1960s, we take pride in having survived to this day as an independent enterprise with ever-higher corporate value, instead of being swept into cycles of forming and breaking alliances among EPC contractors.

The robust management structure we are building – ready to establish our second and third pillars of business after overseas oil and gas – will help us avoid repeating past mistakes no matter how markets change, as we realize ongoing gains in corporate value.

I would like to thank all JGC stakeholders for their understanding of my commitment to this reform.

2. Future changes in energy: challenges, opportunities

This 2019 integrated report clarifies what we consider to be material. These are priority environmental, social, and governance issues that we have determined through comprehensive assessment of importance to society and stakeholders and relevance of the social value created by the JGC Group, accounting for international guidelines (such as SDGs) and macrotrend analysis.

They address (1) building sustainable societies, (2) working with our local communities around the world, (3) improving access to energy, (4) respecting human rights and making workplaces motivating, (5) improving quality of life, and (6) maintaining corporate governance and risk responsiveness.

(Reference: "JGC Group Materiality ," p. 59–60)

Of these, the issue most closely linked to our potential for ongoing gains in corporate value – or to put it simply, our margin for growth as a company – is the first material issue of building sustainable societies.

This is because, as those fearing risks of global climate change grow more vocal, it is believed that the ratio of fossil energy sources in primary energy sources as a whole must inevitably decline if a variety of measures are enacted for the 2°C scenario.

In this context of anticipating future developments, I am often asked by stakeholders if it might be difficult for an EPC contractor focused on fossil energy sources to seek sustained growth.

I tell them that such changes in energy do not necessarily threaten us but instead represent a significant opportunity to keep growing in value as the JGC Group.

In technical expertise, our core competencies are mainly focused on the energy segment, whether for fossil or renewable energy sources, and environmental fields are hardly new to us; they already represent one of our main segments.

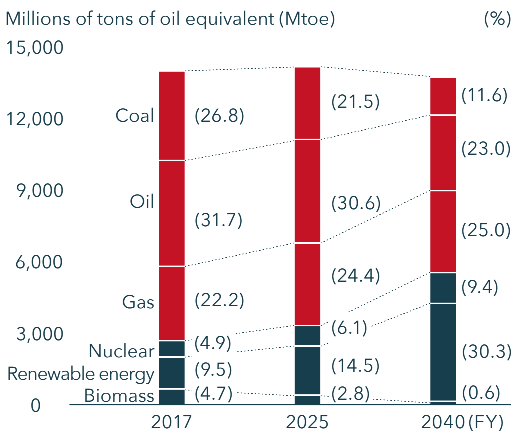
There is no halting the trend toward addressing environmental issues. Since the beginning of the 21st century, this trend has become firmly established in measures to reduce CO_2 emissions, promote wider use of renewable energy, popularize electric vehicles, build hydrogen energy infrastructure, and so on. The scale of these efforts will undoubtedly expand.

However, changes in primary energy sources will not happen suddenly, as in some drastic transformation. That's also important to keep in mind.

Considering that even under the International Energy Agency's Paris Agreement-based Sustainable Development Scenario, the primary energy mix in 2040 is estimated to consist of about 60% fossil energy sources and 40% renewable, the reality remains that as the world continues to seek sustainable growth, fossil energy will still represent a certain proportion of this mix.

With this outlook in mind, the JGC Group will help improve access to energy around the world through

Change in worldwide primary energy demand



Source: IEA "World Energy Outlook 2018" Sustainable Development Scenario

plant construction projects in our main segment of oil and natural gas, which are fossil fuel sources, as we actively diversify our business portfolio under the new group management structure to avoid overreliance on the overseas oil and gas segment.

The targets we are currently working towards for 2025 include 60% of operating profit from the oil and gas segment, 20% from infrastructure, and another 20% from the manufacture of functional materials.

In work that helps build sustainable societies, more than ever we are promoting environmentally low-impact fossil energy usage including LNG and power generation from sustainable energy sources such as solar, biomass and wind, while focusing on environmental segments where technical development aims to reduce the impact of fossil energy, among other goals.

Already, LNG plants and renewable power generation account for more than 70% of consolidated orders received (as of fiscal 2018) and, once again, we expect a higher environmental-sector share in our fiscal 2019 orders.

To our stakeholders, I must repeat that the changes taking place in energy represent a significant opportunity for the JGC Group to grow greater value as a company.

(Reference: "Adapting to Change," p.21–22)

3. Reinforcing a cornerstone of management for greater corporate value

Sustained gains in corporate value depend on sound corporate governance, which we have identified as a material issue for the JGC Group. This year our improvements to and reinforcement of this area have again proven effective.

Measures have included streamlining the Board of Directors and evaluating its effectiveness, adding outside directors, reviewing cross-holdings, and introducing an executive stock compensation system.

(Reference: "Corporate Governance," p.43–50)

Accordingly, this 2019 Integrated Report features expanded disclosure on matters of corporate governance.

In consideration of the change to a holding company structure as of October 1, I view our streamlining of the board and our addition of an outside director as especially significant steps forward in corporate governance.

Strengthening corporate governance will continue to be one of our most important policies.

4. Progress in the Medium–Term Business Plan

Two years remain in the five-year "Beyond the Horizon", i.e. Medium-Term Business Plan enacted in fiscal 2016.

Achievements such as Floating LNG project orders show how we are moving into offshore oil and gas, while our concerted effort to move into overseas infrastructure is evident from orders for solar power plants in Vietnam, among other achievements. Overall, we have made steady progress in line with our business strategies.

However, the market environment initially envisioned in the plan has not emerged. Instead, drops in crude oil prices left the plant market stagnant, and large LNG projects were postponed. These factors have made it difficult to meet our targets of at least ¥1 trillion in sales, net income of ¥60 billion, and ROE of 10% or higher.

Nevertheless, since 2018 the plant market has continued to emerge from this long slump and large LNG projects have resumed, demonstrating a true market recovery. We received our highest level of total engineering orders ever in the fiscal year 2018, at ¥939.4 billion.

This fiscal year as well, we have set a target of ¥800 billion in orders. Meanwhile, functional materials manufacturing continues to transform into a core business of ours, accounting for nearly 40% of consolidated operating income and holding potential for further growth.

Certainly the JGC Group has once again reached a juncture and is steering a new course to remain on track for growth.

At this juncture, it's time to consider what action to take so that the JGC Group can keep growing more valuable as a company, not only over the next few years but well into the future, as a corporate group that continues to meet stakeholder expectations. I view it as my duty as chief executive officer to attend to this priority.

Working with President and COO Ishizuka, I will ensure that, no matter the changes in the market environment, reform of the group management structure prepares us for stable, sustained profitability and greater value as a corporate group.

We appreciate the ongoing support of all JGC stakeholders.

1. Addressing project risk

We took very seriously the harsh judgment of some investors during the market slump that persisted for years; specifically, that investing in EPC business was not worth the risk.

Although we ourselves incurred losses in fiscal 2016 (from a petrochemical project in the U.S., among other factors) that resulted in the Company's first net loss in recent 19 years, over the two consecutive years since my appointment as president in fiscal 2017, JGC Group has remained in the black, and we expect fiscal 2019 to be another profitable year.

Because my own background in managing many large projects informs me that getting things done in EPC projects is a matter of risk management, I interpret investors' severe judgment as a call to refine project management and stabilize operating income.

After the bitter experience with the petrochemical project in fiscal 2016, we now decide whether to bid on projects in this region by analyzing and verifying the three factors of contract amount, type of contract, and construction partners. If risk management is considered to be difficult, we refrain from bidding.

In other words, we have established a policy of selectivity and focus to help us bid on projects with predictable operating income, and in fact there have been large projects in the U.S. on which we have declined to bid.

Traditionally, addressing project risk involves the four methods of eliminating risk, avoiding it, sharing it, or retaining it as a cost. We first consider measures to eliminate or avoid risk at an early stage. If this is to be too difficult, we pursue sharing risk with clients, joint-venture partners, equipment vendors, subcontractors, and others. As for simply retaining risk as a cost, we avoid this whenever it makes our bids less competitive.

We make it a point to practice these methods of risk management. But more than this, I consider it essential to arrange ongoing training of the project managers and other project members who support these mechanisms. I like to think that these members are our strongest asset as an EPC contractor.

In this integrated report for fiscal 2019 we disclose our systems for project risk management and project manager development, as well as actual project manager experiences.

(Reference: "JGC Group Strengths and Management Base Supporting These Strengths," p. 27)

Projects are like living things, however, and the fact remains that some risks are not readily evident from

Message
from
COO

Even more reliable risk management and stable operating income

Tadashi Ishizuka

Representative Director, President, and Chief Operating Officer

After joining JGC in 1972, Tadashi Ishizuka was assigned to the Domestic Project Construction Division before overseeing many projects outside of Japan.
He served as managing director and senior general manager of the Project Operation Services Division from June 2008.
After his appointment as senior managing director in 2010, he was promoted to executive vice president and board director in June 2011.
He became senior executive vice president in February 2017 and was appointed president and COO in June 2017.

studying the dynamics of a project.

JGC Group risk management is respected among EPC contractors around the world, and we will make it even more reliable as we continue to ensure project profitability.

2. Policy for orders in fiscal 2019, and measures to reinforce each segment

Last fiscal year, the solid recovery in the natural resources market since 2018 led to our highest level of orders ever in the total engineering business: ¥935.4 billion.

An equally ambitious target of ¥800 billion in orders has been set for this fiscal year.

We will continue to see large LNG projects in fiscal 2019, with the areas to watch being the Middle East for oil and gas, and Southeast Asia for infrastructure.

In Japan, we expect demand for infrastructure projects to remain steady.

The ¥800 billion in orders we are targeting breaks down to ¥600 billion in overseas oil and gas, ¥50 billion in overseas infrastructure, and ¥150 billion domestically.

Chief among the overseas oil and gas projects targeted is the Area 4 LNG project in Mozambique, for which we are awaiting bidding results.

Outside of LNG, we will be focusing on a yen loan-financed refinery project in Iraq and a gas processing plant in Saudi Arabia, among other projects.

As for other highlights of fiscal 2019, we are planning to bid on the pre-FEED and FEED stages of large LNG and ethylene projects. Laying the groundwork for EPC orders to receive in fiscal 2020 and beyond will be another key area of business this fiscal year.

With our move to a holding company structure in October, in EPC business we are reinforcing the overseas infrastructure and domestic segments in establishing our second and third pillars of business after our main business of overseas oil and gas.

In overseas infrastructure, we are targeting ¥50 billion in orders in fiscal 2019 in the areas of LNG receiving terminals, solar and waste power generation, chemicals, airports, and other projects.

Although fiscal 2018 saw us take on three solar power plants in Vietnam, considering the existing players we came to recognize that gaining a competitive edge requires an original approach.

In this targeted area of Asia, our approach is to focus on client accounts to help clients implement their business plans in the early project stage. We are committed to making this a pillar of JGC Group business over the next 5–10 years.

We view the domestic market, where risk is lower than overseas, as a mainstay for our operating income. Here, we focus on infrastructure projects such as facilities for renewable power generation, chemicals, pharmaceutical plants, and healthcare.

With the move to a holding company structure, these operations expand to include oil refining and petrochemical plant maintenance services.

This represents an ample plan to meet our target of ¥150 billion in orders in this segment.

Other segments in Japan show potential for growth, such as nuclear reactor decommissioning planning, wind power generation (including offshore) and other emerging fields, as well as life sciences. We hope to contribute solutions for the sophisticated and complex challenges faced by clients in Japan, which is facing some issues earlier than other industrialized nations.

As for functional materials manufacturing, although we must monitor market changes for possible repercussions from factors such as U.S.-China trade friction, our earnings forecast for fiscal 2019 is for sales of ¥47 billion and operating income of ¥7 billion, roughly the same as last fiscal year.

Operating income from functional materials manufacturing – production of catalysts, fine chemicals, and fine ceramics – accounts for nearly 40% of all projected JGC Group operating income on a consolidated basis. Clearly, this is a core business of the JGC Group.

In particular, further growth is anticipated in fine chemicals and fine ceramics that can help protect the environment. We plan to take bold, aggressive measures and avoid missing opportunities (including those for capital investment and M&As) under the new group management structure.

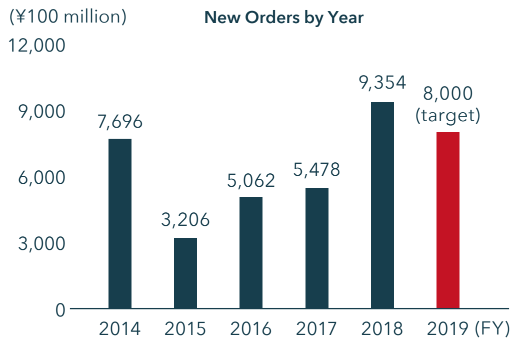
3. Current project conditions

In EPC business, we recognize that the massive, ¥600 billion-plus LNG Canada project that we were awarded in fiscal 2018 and are currently executing as a lump-sum contract will have a tremendous impact on our business record for years to come.

Since the bidding stage we have been keenly aware of the scale of risk inherent in this project, and I myself attended the project team's risk review meetings. After thorough risk profiling and exhaustive measures to eliminate, avoid, and share risk, we submitted the bid that was accepted.

Because we believed that risk in this project lies in the construction work (as it generally does in other U.S. projects), our policy was to minimize local construction work, which we considered the greatest safeguard available. Some 70% of all construction work will therefore be done through modular construction methods.

I am proud to say that, worldwide, few contractors can match the technical expertise in modular construction we have gained through the mammoth Gorgon and Ichthys LNG projects in Australia, the Yamal LNG project in Russia, and the Floating LNG projects in Malaysia and Mozambique. How well we manage modular construction in this project will determine how successful the project is.



Engineering and procurement are on track and we are proceeding as scheduled, with conclusion of the module yard agreements in China in March 2019, as well as other progress.

The LNG Canada project will greatly affect our achievements over the next several years, and we will maintain a sense of urgency as we complete the job.

Meanwhile, although other projects are underway that have incurred losses in the past – such as a refinery project in Kuwait, crude oil/gas gathering in Algeria, and solar power in Japan – all are now about a year up to completion and represent a limited share of total sales in fiscal 2019.

We will avoid any additional losses through rigorous project management through to completion of all of these projects.

4. Growing stature of JGC among EPC contractors

Now that the natural resource market is steadily recovering, what oil majors and other clients who are beginning to increase investment truly need is an EPC contractor known for comprehensive EPC execution in the global market and on-time delivery of high-quality facilities.

I have a sense that as some contractors change course – after years of losses, withdrawing from EPC business, refusing to bid on contracts in North America, or refusing to take on construction risks – JGC Group is gaining even more renown in the EPC business.

As one of the few contractors who can meet these client needs, and as a company that manages project risk thoroughly in overseas oil and gas, overseas infrastructure, and domestic operations, while in conjunction with functional materials manufacturing also ensuring stable operating income at present and in the future, we will earn even higher levels of trust from our stakeholders.

We sincerely thank you for your support.

Reform of the Group Management Structure

Holding Company Structure, as of October 1, 2019

The JGC Group will adopt a holding company structure starting October 1, 2019. This reform is intended to enable stable, sustained growth as a corporate group capable of meeting shareholder expectations. Here, we describe the group management structure after the change, as well as the background and aims of the change.

New Group Management Structure (as of October 1)

Overseas and domestic EPC business will be divided between respective operating companies. JGC will fulfill the functions of establishing group strategies and coordinating the activities of the operating companies. The trade name will change from JGC CORPORATION to JGC HOLDINGS CORPORATION on October 1, 2019.
EPC and maintenance operations in Japan will be managed by the new JGC JAPAN CORPORATION, formed by the merger and renaming of a JGC spin-off and the successor company, JGC Plant Innovations Co., Ltd (JPI).
As for overseas EPC operations, these JGC operations will be transferred to the newly established JGC CORPORATION. Within JGC CORPORATION, one company for oil and gas projects and another for infrastructure projects will pursue their business operations separately.

Management structure as a holding company

JGC HOLDINGS CORPORATION

Total Engineering
- JGC CORPORATION (Overseas Business)
  - Company for oil and gas projects
  - Company for infrastructure projects
- JGC JAPAN CORPORATION (Domestic Business)

Functional Materials Manufacturing
- JGC Catalysts and Chemicals Ltd
- JAPAN FINE CERAMICS CO., LTD.

- Japan NUS Co., Ltd.
- Other domestic and foreign group companies

Background of the Transition

Within the Group's main business of EPC operations, the Beyond the Horizon medium-term business plan for fiscal 2016-2020 calls for an ongoing focus on the oil and gas sector while expanding further into the field of infrastructure. In non-EPC operations, the plan calls for stronger involvement in manufacturing, among other types of business. Further growth and expansion are sought in both areas of operations.

To pursue this vision of a group with corporate value that continues to increase steadily and with a sense of speed, the decision was reached to transition to a holding company as the group's new management structure.
We will grant more independence to each operating company, enable more proactive, agile business operations, and achieve globally optimal resource allocation and accurate governance of group management.

Background and Aims from the Review Process

Building the framework for accelerating the establishment of new pillars of business in additon to the central overseas oil and gas business

Current Medium-Term Business Plan
- **EPC** Centered on oil & gas, broadening to infrastructure
- **Non-EPC** Strengthen manufacturing

Establish multi-pillar JGC Group business to increase corporate value

Group management structure reform: To consist of a holding company and operating companies

Aims	Changes
To strengthen group management capabilities and governance	Holding company
To build a framework for EPC execution that responds to market conditions	Overseas EPC operating company (Overseas oil and gas / Overseas infrastructure); Operating company for domestic EPC
To clarify the positioning of manufacturing business	Operating company for functional materials manufacturing (Catalysts / Fine chemicals)
To strengthen development of management personnel	Operating company for consulting

Aims and Nature of Reform

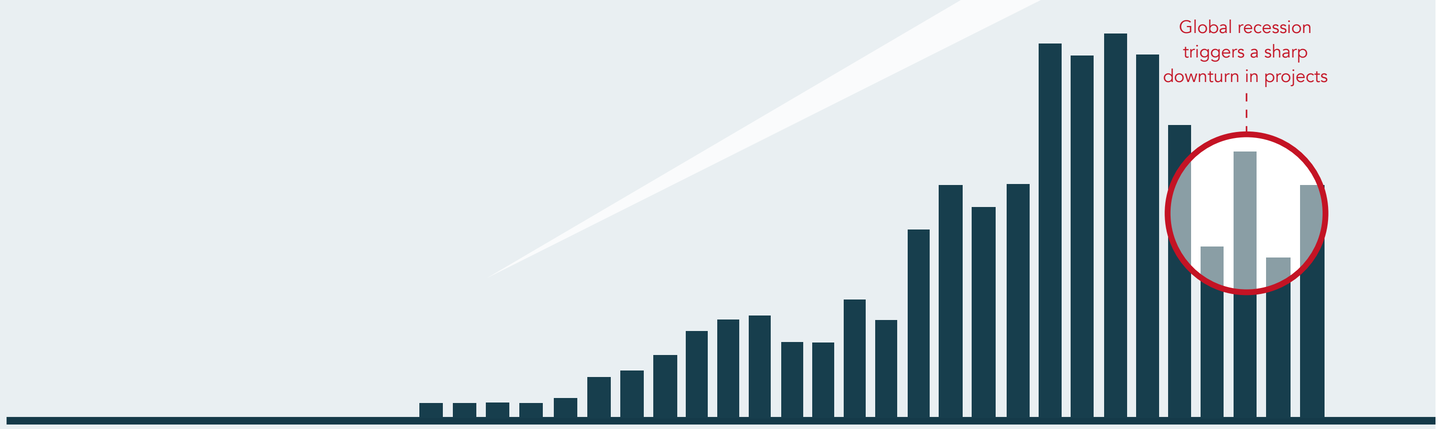
Aims of this reform to the group management structure are described in detail below.

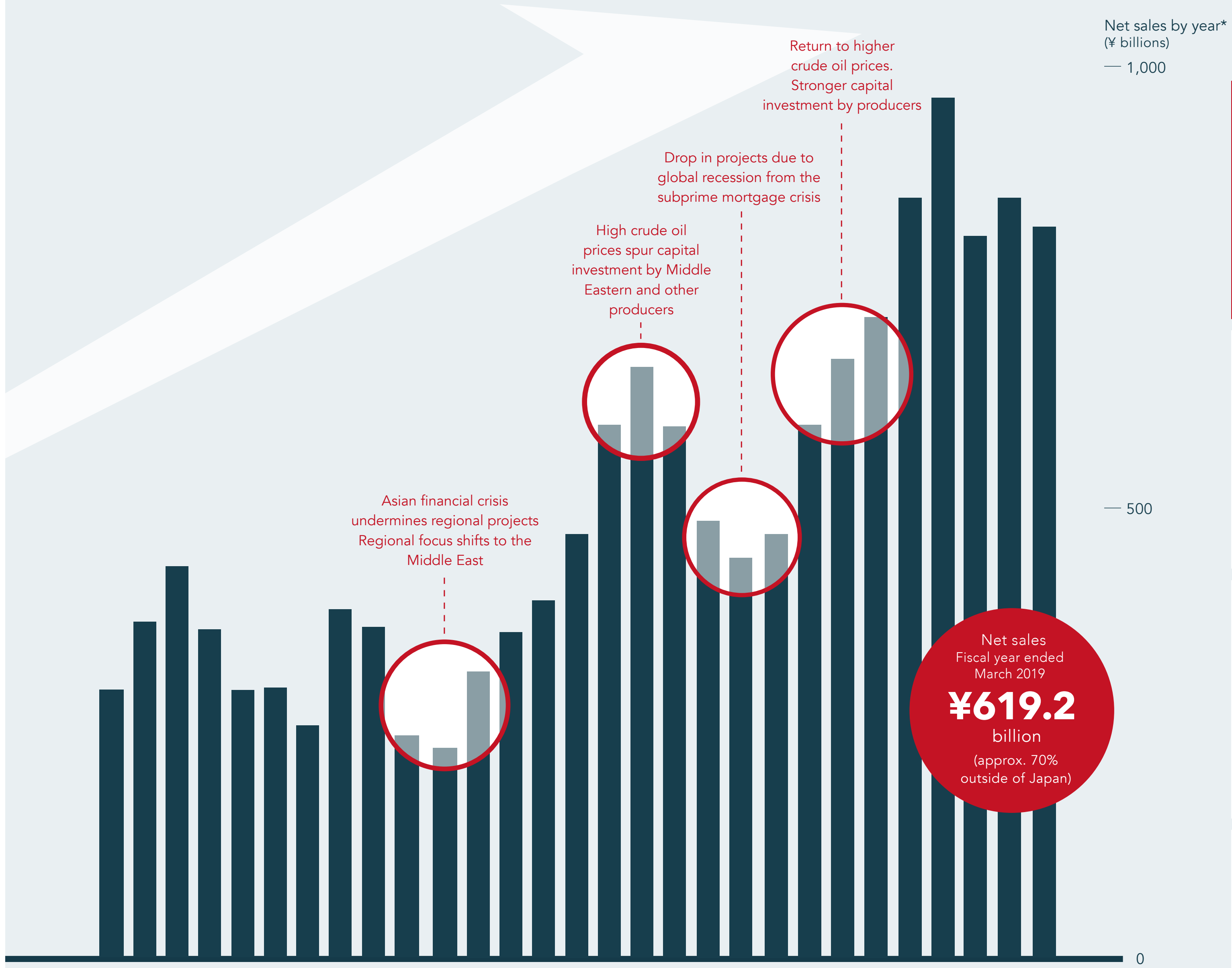
Aims		Details
Strengthen group management capabilities and governance		• Separate management from execution to enable the holding company to conduct the formulation of management policies and the oversight and administration of operating companies from a medium- to long-term perspective of the JGC Group, with the aim of maximizing corporate value and allocating management resources from a Group frame of reference. • Improve transparency of corporate management and strengthen governance of the Group as a whole by clarifying the division of roles and responsibilities between the holding company and operating companies and by strengthening group oversight functions.
Build a framework for EPC execution that responds to market conditions	Overseas oil and gas	• Respond swiftly to larger and more complex projects, making use of accumulated technologies, and demonstrate management capabilities.
	Overseas infrastructure	• Achieve business expansion and growth in a new pillar of EPC business, with management resources allocated appropriately through the project execution framework of an independent business unit should be dash a company for infrastructure projects.
	Domestic EPC business	• Improve efficiency and increase competitiveness by consolidating management resources of the current JGC Corporation's domestic business and those of wholly owned subsidiary JGC Plant Innovation, with the aim of expanding business areas and gaining market share.
Clarify the positioning of manufacturing business		• Clarify the status of manufacturing as a core Group business. • Conduct optimal allocation of management resources from a Group perspective, foster the development of technology that can contribute to the next generation of society and industry, and promote the supply of highly functional materials.
Strengthen the development of management personnel		• Delegate authority to operating companies to expand the roles and responsibilities of management personnel of each company, thus building the foundation for developing management personnel.

01 JGC STORY

Growth Trajectory

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





Key Developments

1960 OPEC established

1973 First oil crisis, fourth Arab-Israeli conflict, floating exchange rates adopted

1980 Iran-Iraq War (ends 1988)

1985 Plaza Accord

1991 Gulf War

2001 September 11 terror attacks

2005 Kyoto Protocol comes into effect

*Non-consolidated figures used until fiscal year ended March 1999; consolidated figures used from fiscal year ended March 2000.

1928 Established

1962 Liberalization of crude oil imports in Japan

1979 Second oil crisis

1987 Black Monday

2003 Iraq War

2015 Paris Agreement adopted

1928

Founded as Japan Gasoline Co., Ltd. (currently JGC Corporation), Japan's first engineering firm

Involved in process licensing and catalyst production business

1950s

Full-scale engineering operations

Domestic refinery and petrochemical plant construction supports Japan's postwar recovery and rapid economic growth

1960s

Concerted international expansion

Overseas expansion takes off, as JGC executes refinery construction projects in South America

1970s

Earning a reputation as a world-class engineering firm

Awarded a series of orders in resource-producing countries for oil refinery, petrochemical, and gas-processing facilities; built the first LNG plant in Brunei

1980s

Building a global network for EPC execution, diversifying operations

Greater use of overseas resources across the board in EPC, as sudden yen appreciation makes domestic resources less competitive

1990s

Growth in target segments and regions

Withstood a wave of global restructuring and realignment in engineering; responded to growing gas demand, and secured a succession of orders for natural gas processing and LNG plants

2000s

Business expansion driven by accelerated worldwide resource development

Higher sales and profit through resource development projects for Middle Eastern oil producers; now a world leader in the LNG plant industry

2010s

Expansion in North America and offshore and infrastructure sectors, responding to changes in oil and gas

North American expansion capitalizing on regional advances in shale oil and gas development; power generation projects now reflect a commitment to offshore, thermal, and renewable energy

WEB Visit us online to learn more about JGC Group history. 90th anniversary site : https://www.jgc.com/en/90th/

02 JGC STORY

Value Creation Process

Seeking maximum economic and social value, through ample management base and strengths in each segment.

JGC Group

Social Issues Recognized

P.59

- Global warming, climate change
- Loss of biodiversity, environmental pollution
- Global economic disparities
- Rising global energy demand
- Energy security for resource importers
- Greater responsibility for human rights in the supply chain
- Impact on residents near plant construction sites
- Diversity and globalization of human resources
- Rising standards of living in emerging economies
- Graying societies in developed countries
- Greater social demands on corporations
- Infrastructure development in countries with high risks of bribery
- Insufficient risk management

Management Base

Fiscal year ended March 2019

Internal

Human Resources p.35-36
Consolidated employees **7,841**

Financial base p.73-92
Consolidated net assets **¥410.3** billion
Shareholders' equity ratio **57.7**%
Credit rating: A+ (Rating outlook:Stable)*
*Long-term issuer rating, Japan Credit Rating Agency, Ltd.

External

Client base p.37
Clients Approx **7,000**
*Since 1965

Supplier base p.38
Suppliers Approx **13,000**
*Since 1965

Strengths

P.29 - 34

Total Engineering Business

- Engineering technologies
- Project management capabilities
- Extensive and geographically diverse business portfolio
- Proposal capabilities
- Ability to form and maintain alliances

Functional Materials Manufacturing Business

- Nanoparticle technologies
- Ceramic production/ processing technologies

Business Models

P.19

EPC Project Execution

Delivering plants and facilities that support client business

Production and Sales of High-performance Materials

Providing products that support everyday life and various industries

Output

P.20

Oil and Gas
Plants and facilities used for crude oil/gas gathering, gas-oil separation, offshore, LNG and gas processing, oil refining, petrochemicals and chemicals

Infrastructure
Plants and facilities used with renewable energy, LNG/ LPG terminals, waste power, pharmaceuticals, hospitals, airports, and non-ferrous metal refining

Catalysts
Catalysts used in oil refining and petrochemicals, chemicals and environmental protection

Fine Chemicals
Semiconductor, IT, electronics, optical, and cosmetics materials

Fine Ceramics
Semiconductor, automotive, telecommunications, industrial medical and aerospace materials

Economic Value Generated

P.73 - 92

Fiscal year ended March 2019

Net sales
¥619.2 billion

ROE
6.0%

Profit attributable to owners of the parent
¥24 billion

Total shareholder return
¥6.3 billion

Social Value Created

P.60

- Optimal energy mix Lower emissions of greenhouse gases
- Contributions to economic and industrial development in emerging economies and resource-producing countries
- Growth in energy supply
- Social equality Workplaces where diverse human resources can contribute
- Greater health and comfort
- Contributing to society through sustainable growth

Corporate Governance p.43～50

Corporate Philosophy p.1

Medium-Term Business Plan: 「Beyond the Horizon」

03 JGC STORY

JGC Group's Business

JGC Group creates economic and social value through two business models: total engineering business (in oil & gas and infrastructure segments) and functional materials manufacturing business.

Business Models

Total Engineering

Plants and facilities developed through engineering, procurement and construction (EPC) projects support client business of all kinds. The Group has completed more than 20,000 projects in 80 countries, earning a high level of trust from clients worldwide.

Committed to successful projects, JGC Group works with clients early on in planning at the stages of feasibility studies (FS) and front-end engineering and design (FEED) before engaging in EPC work. After projects are complete, operations and maintenance (O&M) services are also offered to help clients get the most from their business throughout the life cycle of plants and facilities.

Sequence of project execution

Feasibility study » Front-end engineering and design » EPC: [Engineering › Procurement › Construction/ commissioning] » O&M

Functional Materials Manufacturing

Through R&D, planning, production, and sales in this business, JGC Group offers an array of catalysts, fine chemicals, and fine ceramics that enhance the value of our customers' operations in many applications.

Sequence of business operations

R&D » Marketing » Manufacturing » Sales

Output

Overseas

Oil and Gas	
Upstream	Crude oil/gas gathering, gas-oil separation, offshore, and others
Downstream	LNG and gas processing, oil refining, petrochemicals, chemicals, and others

Infrastructure	
Energy infrastructure	Renewable power generation (solar, biomass, offshore wind), LNG/LPG terminals, waste power, and others
Social infrastructure	Pharmaceutical manufacturing plants, hospitals, airports, and others
Industrial infrastructure	Non-ferrous metal refining and others

Domestic

Oil and Gas
Oil refining, petrochemicals, chemicals, maintenance, and others

Infrastructure
Renewable power generation (solar, biomass, offshore wind), IGCC (Integrated coal Gasification Combined Cycle) , LNG/LPG terminals, pharmaceutical plants, hospitals and others

Catalysts	Fine Chemicals	Fine Ceramics
Catalysts used in oil refining and petrochemicals, chemicals and environmental protection	Semiconductor, IT, electronics, optical, and cosmetics materials	Semiconductor, automotive, telecommunications, industrial, medical and aerospace materials

04 JGC STORY
Adapting to Change

JGC Group will achieve sustained growth by responding proactively and accurately to energy mix changes.

Awareness of Megatrends

Expanding the supply of energy while achieving a low-carbon society is one of the most important issues that humanity needs to address on a global scale.

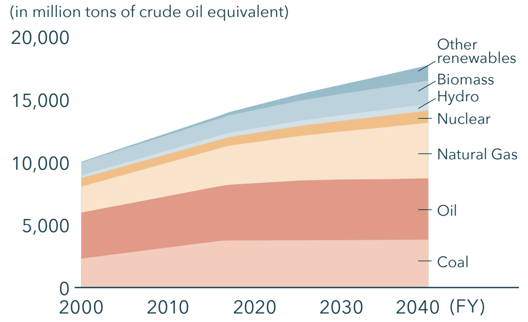
Global Issues in Energy Supply and Use

Improvement of energy access

Promoting the use of renewable energies

Expansion of Energy Demand

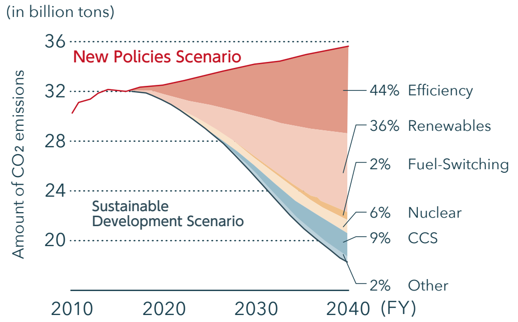
Predicted changes in global demand for primary energy



- 20 years from now the world's energy demand will have grown by 30%
- The use of natural gas (LNG) and renewable energies is expanding

Accomplishing the 2°C Scenario

CO_2 reduction required under a sustainable development scenario

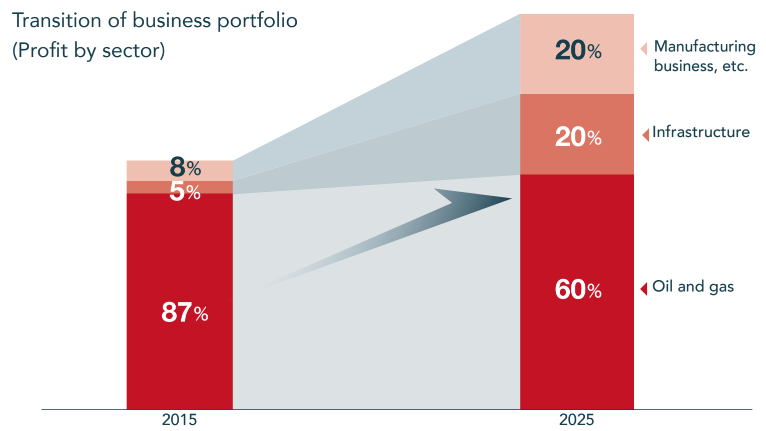


- It is necessary to promote energy-saving and an expanded use of renewable energies
- There are high expectations for CCS (carbon capture and storage)

The JGC Group Vision

JGC Group is building a well-balanced business portfolio that enables accurate responses to changes in circumstances while also fulfilling of energy access and transition to a low-carbon society.

Targeted Portfolio



JGC Group is building a broadly balanced business portfolio, while reinforcing its core sector of oil and gas and expanding in other areas.

Concrete Actions for Achieving a Low-carbon Society

Construction of LNG Plants

JGC Group continues to support increased use of natural gas, which produces the least greenhouse gases of all hydrocarbon fuels.

Renewable Energies Generation

In addition to the construction of solar power plants, which are steadily accumulating tracks record both in Japan and overseas, JGC is also actively involved in wind and biomass power generation.

Differentiation through Environmentally-friendly Technology

JGC Group continues to refine differential technologies such as CCS (capture and storage of CO_2), using ammonia as hydrogen energy, and recycling of plastic.

Message from CFO

Establishing the basis for successful reform

Kiyotaka Terajima

Director, Executive Vice President,
and Chief Financial Officer

After joining JGC in 1981, Kiyotaka Terajima worked in the Legal Department, where he was involved in establishing business alliances and developing contracts for domestic and overseas projects. He was appointed Executive Officer and Deputy General Manager of the Corporate Administrative & Financial Affairs Division in 2014, Director, Executive Officer and Senior General Manager of the same division in 2016, and Director, Senior Executive Officer and Senior General Manager of the same division in 2017. He was appointed to Executive Vice President and CFO in April 2018.

1. Current conditions and role of CFO

As of October 2019, the Group will move to a holding company structure. Through this reform to a new, multi-business group management structure, JGC will break free from a revenue structure reliant on the overseas oil and gas segment, which has left the Company highly susceptible to natural resource market turbulence. Total engineering business will consist of the three segments of overseas oil and gas, overseas infrastructure, and domestic operations, with functional materials manufacturing rounding out a business portfolio that offers stable revenue.

As the plant market makes a full recovery and orders expand significantly, this reform will enable rapid yet steady gains in JGC Group corporate value.

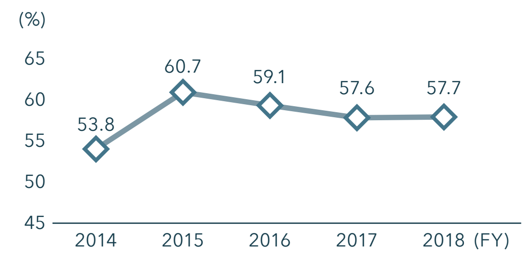
As chief financial officer, my role under these conditions is to take the lead in the financial measures needed to make the reform a success, and to support the CEO and COO by providing a broad perspective on matters including establishing the basis for successful reform.

2. Maintaining sound finances

Amid the recovery in the plant market and with expectations for large-scale capital investment plans being realized, it will be more important than ever to maintain sound finances, from the standpoint of earning client trust, being awarded very large-sized orders, and smoothly executing these projects.

As of March 31, 2019, the shareholders' equity ratio stood at 57.7%, which places us on a firm financial footing for the near future. And in anticipation of business on a broader scale, we will maintain this ratio at 50% or higher.

Shareholders' equity ratio (last five years)

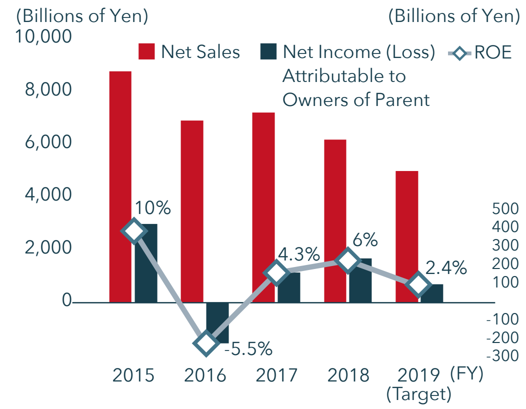


3. Enabling greater capital efficiency

Target ROE is 10% or higher, accounting for cost of equity.

The rate has remained lower than this for some time due to factors such as less-profitable projects during a plant market slump that lasted several years, making it difficult to improve capital efficiency.

New orders, Net Income and ROE by Year



As a start, we recognize that improving and expanding current business will play a key role in increasing ROE.

Thorough risk management by President and COO Ishizuka has supported tangible results in the form of two profitable years in a row. Along with the large LNG projects we have secured, this has led to our highest level of orders ever for the year ended March 31, 2019: approximately ¥900 billion. Moreover, we are also targeting ¥800 billion in orders for the year ending March 31, 2020.

Under current circumstances, as we look forward to better profitability and a high level of orders, it will be essential to ensure that we rise to the occasion and conduct business on a broader scale.

By means of reform of the group management structure, we hope to accomplish this with a sense of speed and urgency. For this, while maintaining sound finances, I will pursue effective human resource allocation for growth investment that enables expanded sales and profitability.

We expect a greater need for investment under the new group management structure in coming years – both IT investment to streamline project execution in EPC operations and growth investment (including M&As) in overseas infrastructure and domestic operations where we seek further growth. In functional materials manufacturing, which is positioned as a core JGC Group business, another form of investment that we consider essential will be prompt capital investment in response to market changes.

We plan to appropriately evaluate investment risk and returns, with increased capital efficiency in mind, and to act aggressively and in a timely manner with regard to growth investment.

4. Shareholder return

The basis of JGC shareholder returns is dividends to shareholders, with a dividend payout ratio target of 30% of net income attributable to owners of the parent under the current medium-term business plan.

By steadily expanding sales and profit under the new group management structure and increasing dividends, our aim is to offer higher shareholder return.

This will require our commitment to the growth investment mentioned above, and we must also win several large projects of billions of dollars in size in order to secure steady revenue.

As we anticipate a larger scale of business and increased total assets, maintaining a shareholders' equity ratio of 50% will entail further expansion of shareholder equity. We therefore ask for our shareholders' understanding of the current shareholder return policy of 30% of net income attributable to owners of the parent to enable us to hold 70% of net income attributable to owners of the parent.

We appreciate the understanding and support of all JGC stakeholders.

Financial and Non-financial Highlights

(Millions of yen)

	March 31, 2010	March 31, 2011	March 31, 2012	March 31, 2013	March 31, 2014	March 31, 2015	March 31, 2016	March 31, 2017	March 31, 2018	March 31, 2019
Performance Highlights										
Net Sales	414,257	447,222	556,966	624,637	675,821	799,076	879,954	693,152	722,987	**619,241**
Operating Income or Operating Loss (−)	41,919	63,559	67,053	64,123	68,253	29,740	49,661	-21,496	21,495	**23,249**
Net Income Attributable to Owners of Parent or Loss Attributable to Owners of Parent (−)*1	27,112	25,477	39,111	46,179	47,178	20,628	42,793	-22,057	16,589	**24,005**
New Contracts	733,549	618,203	793,278	594,091	818,161	769,680	320,626	506,293	547,826	**935,451**
Outstanding Contracts	982,594	1,163,256	1,506,146	1,549,813	1,767,814	1,772,036	1,192,625	1,045,684	846,157	**1,208,365**
Financial Position at Year-end										
Total Current Assets	283,538	319,464	376,172	460,231	575,886	533,538	522,747	480,865	521,320	**541,747**
Total Current Liabilities	137,728	174,293	205,771	262,439	333,353	286,533	225,203	226,457	215,773	**223,559**
Total Assets	430,176	468,502	526,169	628,757	746,102	719,754	689,782	646,291	684,921	**708,855**
Total Net Assets	246,140	264,483	291,042	336,083	379,882	388,496	419,673	383,260	395,779	**410,350**
Shareholders' Equity	245,819	263,983	290,415	335,534	374,654	387,480	418,695	382,215	394,701	**409,254**
Cash Flow										
Net Operating Cash Flow	-25,179	48,214	97,847	85,010	120,576	-71,416	-49,764	-28,884	5,539	**-55,259**
Investment Cash Flow	-19,823	116	-18,746	-28,370	-18,728	-23,411	8,696	-12,979	11,736	**-4,662**
Financing Cash Flow	-8,893	-7,317	-20,536	-3,695	-10,687	3,836	-4,374	-19,674	33,781	**-13,878**
Cash and Cash Equivalents at End of Year	123,808	161,894	222,556	284,777	385,252	297,707	247,947	185,603	235,394	**160,841**
Financial Highlights										
ROA (Return On Assets) (%)	9.0	14.1	14.6	12.6	12.2	6.1	7.4	-2.3	3.8	**4.6**
ROE (Return On Equity) (%)	11.5	10.0	14.1	14.8	13.3	5.4	10.6	-5.5	4.3	**6.0**
Net Income per Share or Net Loss per Share (−) (in yen)	107.25	100.83	154.90	182.91	186.90	81.73	169.60	-87.42	65.75	**95.14**
Cash Dividends per Share (in yen)	21.0	30.0	38.5	45.5	46.5	21.0	42.5	30.0	25.0	**28.5**
Gross Margin Ratio (%)	14.6	18.2	15.6	13.5	13.1	6.6	8.3	0.2	6.2	**7.3**
Operating Income Ratio or Operating Loss Ratio (−) (%)	10.1	14.2	12.0	10.3	10.1	3.7	5.6	-3.1	3.0	**3.7**
Shareholders' Equity Ratio (%)	57.1	56.3	55.2	53.4	50.2	53.8	60.7	59.1	57.6	**57.7**
Current Ratio (%)	205.9	183.3	182.8	175.4	172.8	186.2	232.1	212.3	241.6	**242.3**
Payout Ratio (%)	19.6	29.8	24.9	24.9	24.9	25.7	25.1	–	38.0	**30.0**
ESG Indicators										
Number of incidents of leaks of hazardous substances, etc. (Domestic and overseas construction sites)	2	1	0	0	0	0	0	0	1	**0**
Number of women in management positions	–	–	3	5	10	11	15	17	19	**21**
Rate of frequency of accidents accompanied by lost work time (%)*2	–	–	0.014	0.010	0.004	0.012	0.015	0.012	0.022	**0.018**

*1 As a consequence of applying "Accounting Standard for Business Combinations" (ASBJ Statement No. 21, September 13, 2013), "Net income" is referred to as "Net income attributable to owners of parent" from the fiscal year ended March 2016 onward

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

Chapter 2

JGC Group Strengths and Management Base Supporting These Strengths

This chapter outlines the strengths that enable the Group to create value, as well as initiatives to reinforce the management base that supports these strengths.

JGC Group Strengths

Seven Strengths Supporting Value Creation

Five Strengths in Total Engineering

Project implementation capabilities

Seeking constant innovation, we implement projects that optimize quality, cost and delivery while also appropriately managing various inherent project risks.

For details, see p.31-34

Solution proposal capabilities

We propose solutions to the increasingly complex and sophisticated challenges clients face and enhance their business value

Engineering technologies

The outstanding plants and facilities created by the JGC Group draw on a broad range of advanced engineering technologies.

Alliance capabilities

This strength enables us to build collaborative frameworks with other EPC contractors, and helps ensure flexibility in our capacity to execute projects.

Business portfolio covering a wide range of segments and regions

A business portfolio that covers a wide range of segments and regions enables us to respond flexibly to changes in the market and helps support the Group's sustained growth.

A record built on the strengths

Track record of more than 20,000 projects in over 80 countries worldwide

Liquefied Natural Gas (LNG)

LNG plant for BP Berau

Track record

48 trains

Location: Papua, Indonesia
Completed: End of 2009

JGC Group has constructed LNG plants with a combined total of 48 trains, equating to a market share of over 30% on a production capacity basis.

Ethylene

Ethylene plant for Chevron Phillips Chemical

Track record

42 projects

Location: Texas, US
Completed: 2018

JGC Group is recognized worldwide for its ability to deliver ethylene plant projects, which are seen as particularly challenging due to the complex nature of the facilities.

Two Strengths in Functional Materials Manufacturing

Catalysts and Fine Chemicals

Nanomaterial control technologies

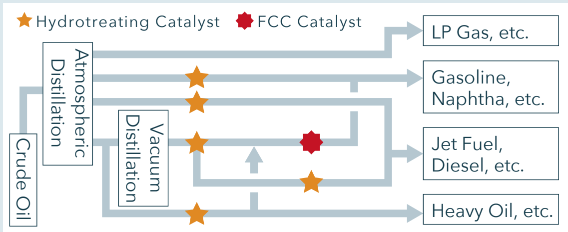
- **Nanoparticle preparation technology**
  Preparation of nanomaterials
- **Nanoparticle alignment control technology**
  Alignment of nanoparticles in single/multiple layers or compositions
- **Nano pore structure control technology**
  Control of pore distribution within a narrow margin
- **Nanomaterials processing technology**
  Control of macro structures

Products developed through the strengths

Unique "only-one" materials nanotechnologies

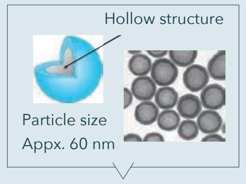
Catalysts Used in Oil Refining

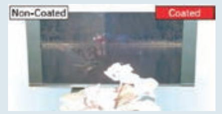
Catalysts used in petroleum refining for hydrotreating, hydrocracking and catalytic cracking. In fluid catalytic cracking catalysts, the company owns the leading market share in Japan.



Fine Chemicals

Various fine chemical products based on nanoparticle preparation and control technologies which were obtained through catalyst manufacturing.





Low-refraction hollow structure silica nanoparticles for anti-reflective film of flat-panel television.

Fine Ceramics

Ceramic manufacturing technologies

- **Development of ceramic materials with original properties**
  Focusing on material development as an R&D-oriented company
- **Integrated operations enabling delivery of high-quality products**
  In-house production of finished products, from mixing to firing and processing
- **High-variety low-volume manufacturing system**
  Capable of meeting diverse client needs

Product groups developed through these strengths

Commanding a high niche-market share

Engineering Ceramics

Products that capitalize on the mechanical advantages of ceramics, including resistance to heat, corrosion, and abrasion

Used in semiconductor manufacturing equipment and general industrial parts

Metal-matrix Composites

Composites that are light yet highly rigid and have low thermal expansion and high vibration damping

Used in parts of the Hayabusa2 asteroid probe

For illustrative purposes.

Project Risk Management System

The company is facing circumstances in which the diminishing profits of individual projects, along with their increasing scale, could have a significant impact on the profitability of the entire company.
At the JGC Group we have long fostered a project implementation culture that holds that large-scale projects overseas represent an aggregation of many risks, anappropriate response to which is the essence of project management. With this understanding, all staff involved in a project, not just project and company management, always respond to risks based on a high risk sensitivity in all EPC functions and phases.

Project Risk Areas

Technical Risks	Project Implementation Risks	Contract Terms and Other Consequent Risks
Risks that must be grasped from the perspective of technical specifications and scope of work. The project team and engineering sections cooperate to lead responses to these risks.	Risks that must be understood from the perspective of project implementation. The project team and PM lead responses to these risks.	Risks that must be grasped from the perspective of contract terms and project backgrounds. The PM leads the response to these risks in cooperation with company management.
E.g., disagreement with design requirements, new processes	E.g., securing of internal, vendor, and subcontractor resources	E.g., exchange rates, taxations, political instability, excessive requirements of performance and delivery guarantee

Risk Management Flow

Risk profiling

Prediction and identification of risk areas
Identification of risk areas based on the above risk area categories

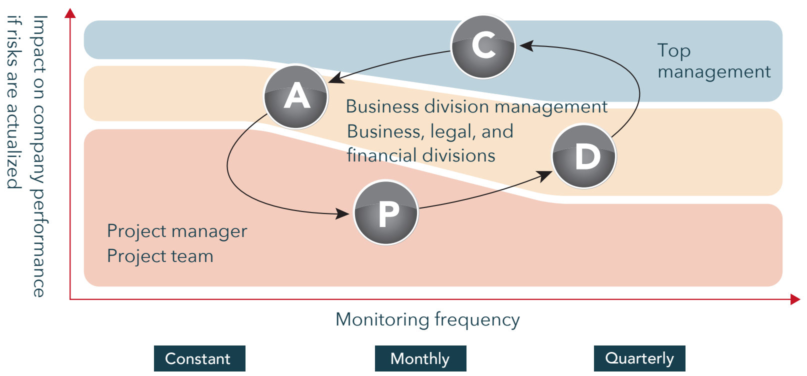
Qualitative and quantitative risk assessment
Grading of identified risk areas by evaluating impacts if risks are actualized

Responses to Risks

Decision on responses to risk areas

Risk response categories

Elimination	Sharing
Example: changing contract terms	Example: founding of a consortium
Avoidance	**Retainment** (conversion into costs)
Example: preventing risks from actualizing through active responses	Example: insurance and appropriation of contingency funds



In response to the grading of risk areas, business division management and connected divisions, as well as company management, regularly monitor the state of the project manager and project team's responses to risks.

The company implements an organized response to risks based on the Plan, Do, Check, Act cycle.

Column

Compatibility of Appropriate Responses to Risks and Contracting Competitiveness

Appropriately predicting and identifying risk areas during the estimation and planning stage, based on past project experience and identification of corresponding project characteristics, is an essential prerequisite to securing revenue during the project execution stage. However, if responses to identified risks tend towards adding a risk buffer to the bidding price for risk retainment (establishment of contingencies), this may jeopardize cost competitiveness. At JGC Group we strive to balance appropriate risk management with securing of cost competitiveness by utilizing our entire expertise to aim for proactive responses to risk, such as avoidance, prevention, and reduction.

Cultivating Project Management Staff

The quality and number of PMs is one of the most important elements in assessing an engineering firm's capability, and JGC works on PM training in an organized fashion that also involves company management.

What Is a Project Manager (PM)?

Utilizing project management techniques and tools in cooperation with internal and external partners to protect established delivery times, budgets, and quality, secure profits, complete a project, and ensure the client's satisfaction are the ultimate tasks of a PM.

A PM is required to set short-term, mid-term, and long-term strategies for executing a project and to participate in all project phases ranging from design to procurement, construction, and commissioning.

Required Knowledge and Abilities

- Comprehensive knowledge of respective technical and commercial areas, management skills
- Ability to set a master schedule and manning plan
- Ability to grasp cost conditions
- Ability to establish an outline of equipment composition/scale, costs, work processes, and man-hours based on plant capability requirements, and to explain this outline internally and externally

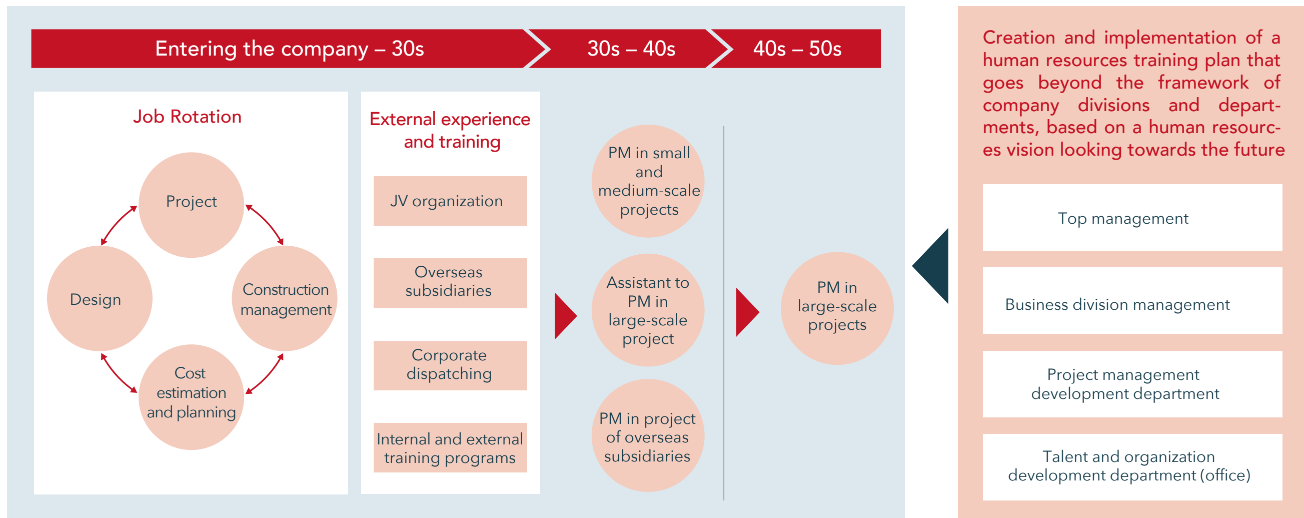
Required Assets

- Leadership, coordination and negotiation skills
- Strength of character and stress resistance
- Broad horizon and decision-making abilities
- Logicality, planning and scheduling abilities

Project Manager Training System

In order to cultivate outstanding PMs, it is important for them to undergo diverse experiences from a young age. That is why JGC Group has created a human resources training plan that goes beyond the framework of company divisions and departments, based on a human resources vision looking towards the future. In order to prevent specific divisions from holding back outstanding personnel and obstructing variation in their experiences, the talent and organization development department serves as an office that monitors the status of PM candidates and manages them from a mid- to long-term perspective to enable them to accumulate experience.

Project Manager Career Path



Implementation of Risk Management

Interview with the Project Director of the Yamal LNG Project

This interview with the project director of the Yamal LNG Project, which was successfully completed in 2019, showcases examples of risk management during the course of the project, as well as the state of JGC's PM career path development.

What kind of factors did you focus on while managing this project?

Because the project, located in an extremely cold region of Russia, contained many challenges, I assumed that the key to success would be to gather and utilize to the greatest extent possible the experience and lessons learned (hereafter,"LL") by all companies belonging to the joint venture (hereafter,"JV"). When it came to the module construction method adopted as our key resource to reduce risks during construction work, our approach was to ask our JV partner companies to proactively utilize the LL we had accumulated during our previous Gorgon and Ichthys LNG projects.

Along with additionally stationing JGC experts with individual sections of the JV supervisory organization, we also made an effort to proactively disseminate and share information in order to overcome the difficulties arising from undertaking a multi-location project.

My principle is to be sensitive to the risks inherent in daily project operations. That's because when one senses risk potential, and investigates and reviews it instead of blindly accepting the opinions of persons in charge, the advice of experts, and the contents of reports, it becomes possible to consistently anticipate issues and respond in advance.

When carrying out a project, there is much focus on risk management. Could you tell us about your own style and thinking when it comes to risk management?

Because there is great variance in the experience and abilities of individual persons working on the project, the setting of appropriate KPI and the like, a reporting system that makes it possible to look ahead, and the skills to spot problems are essential to sustain high-level performance during the project.

Lastly, it's important that problems encountered are not postponed and thoroughly resolved before moving on to the next matter. In other words, to ensure that one does not leave any potential traps.

> Problems encountered should not be postponed, but thoroughly resolved.

What are the most important assets and abilities for a PM?

I would say a well-balanced mix of traits such as being able to look ahead, the ability to make appropriate judgments and decisions in various circumstances, having a good understanding, and being persuasive. It's necessary to have broad technical and commercial expertise regarding the implementation of projects, and to have substantial experience that includes failures and difficulties.

The ideal is to have a super PM who can do everything on his or her own, but there are only a handful of people who get that far. Because the right people are in the right place during a project and capable personnel have been assigned to it, being able to come up with ways to encourage one's team and improve its teamwork by gathering everyone's strengths is also an important ability.

Module Construction Method – One of the Approaches for Risk Reduction

What is the Module Construction Method?

This construction method splits megaplants into their respective functions, constructs each section in advance at module fabrication sites, and installs and integrates those modules at the final construction site. Large modules can reach a depth, width, and length of several dozen meters each, with a weight of several thousand tons and a total number of components in the thousands, and the production and transport of modules of this size give the impression of a large-scale project of its own.

The fabrication of modules takes place primarily in Southeast Asia and China. By building modules in regions with relatively low labor costs, it becomes possible to minimize the amount of construction work at the final construction site, enabling this construction method to become a breakthrough in accomplishing plant construction in regions with extreme environments like the Arctic or regions with extremely high labor costs.

Application Cases

- Restrictions on construction work due to natural conditions, such as in cold regions
- Various necessary considerations during construction work due to environmental regulations
- Cramped construction and surrounding area where construction with conventional methods is difficult
- Difficulty of securing labor resources in the vicinity of the construction site

Merits

- Possible to implement construction work in countries and regions with lower labor costs, such as Southeast Asia and China
- Not affected by limitations of the final construction site such as natural conditions

Could you tell us what PM development should look like?

In order to cultivate PM who have developed strong points along their individual career paths, it's important to give them opportunities and objectives. The role of their superiors is to not only entrust them with authority, but to support them in responsible ways, and to continually give them appropriate feedback.

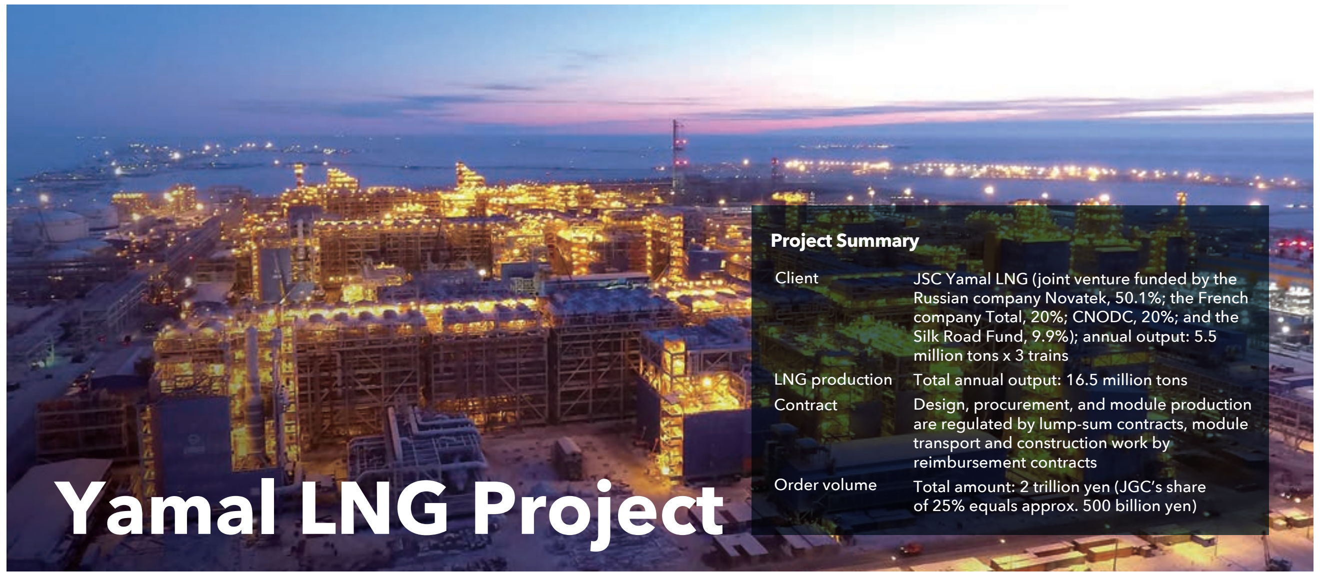
> Giving opportunities and objectives, as well as steady appropriate feedback, are the keys to cultivating PM

When I train the next generation of PM, I try to share with them the information I had during the management of actual projects, how I arrived at my decision-making, and what the circumstances of my conclusions were as much as possible. I think that this way, by getting them to understand what is expected from the position of PM and by having them undergo repeated simulations of that experience, they will become able to appropriately fulfill the role of PM during their next project.

Are there any final thoughts you would like to share on risk management and PM development?

In recent years, including at our competition, the implementation of project management systems has made progress, but in the end, active personal engagement is essential for thorough risk management. Over the last few years, client demands regarding quality, cost, and completion times have steadily increased, but at JGC we have in place the proper project management capacities, risk management system, and PM personnel training structures, and I believe that we will be able to continue to fulfill our clients' expectations into the future.

Project Director
Nobuyuki Sakae



Project Summary

Client	JSC Yamal LNG (joint venture funded by the Russian company Novatek, 50.1%; the French company Total, 20%; CNODC, 20%; and the Silk Road Fund, 9.9%); annual output: 5.5 million tons x 3 trains
LNG production	Total annual output: 16.5 million tons
Contract	Design, procurement, and module production are regulated by lump-sum contracts, module transport and construction work by reimbursement contracts
Order volume	Total amount: 2 trillion yen (JGC's share of 25% equals approx. 500 billion yen)

Management Base Supporting These Strengths

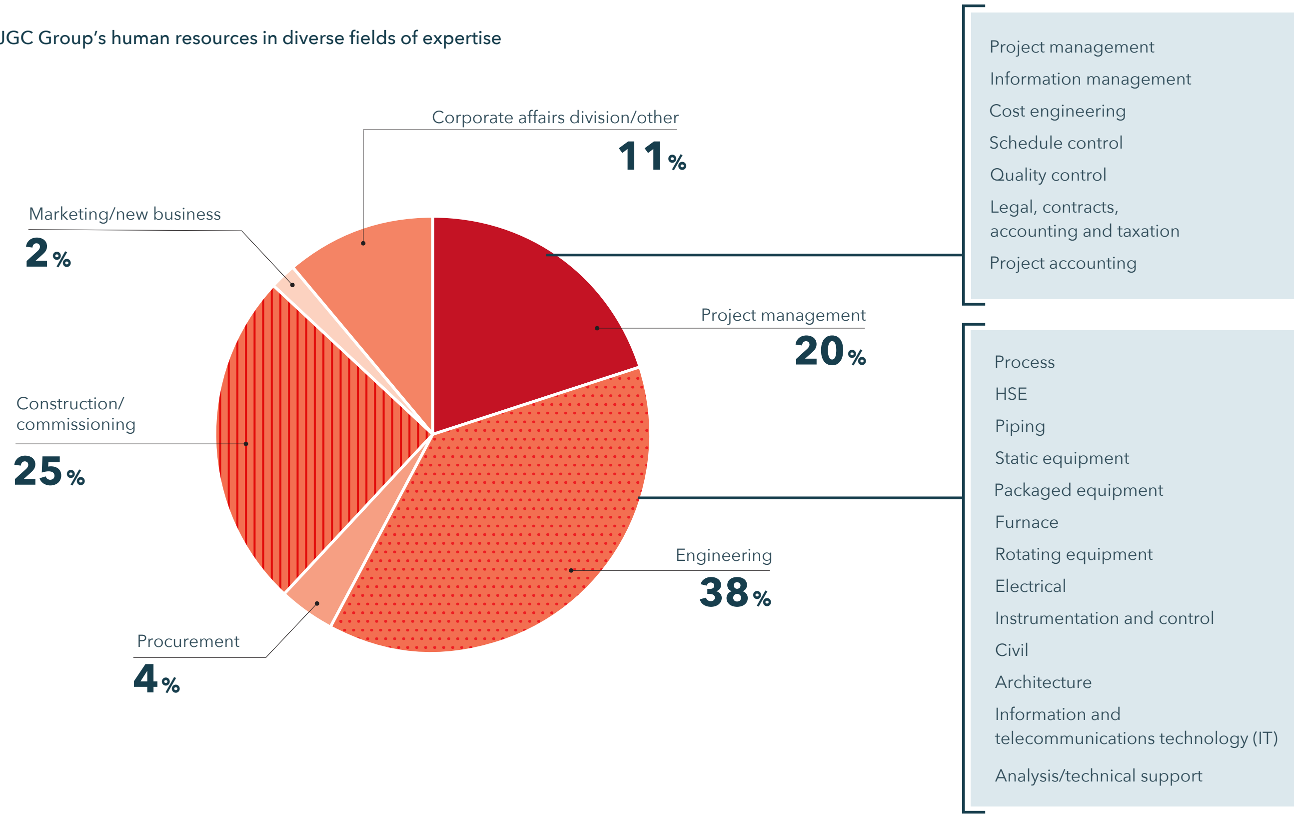
Strengthening Human Resources

For an engineering company without assets such as production facilities, our most important business asset among the management resources that support our strengths, such as engineering technologies and project management capabilities, is our human resources base – in other words: people. We are actively working to create a supportive work environment, establish training systems for our diverse workforce, and expand our human resources evaluation and remuneration systems to increase employee motivation.

JGC Group's human resources have a wide range of expertise

JGC's human resources have technical capabilities spanning all of the various engineering fields required for plant construction projects, including information technology and chemical, civil, construction, mechanical, electrical, control, and safety engineering. They also possess project management capabilities to optimize cost, schedule, and quality, as well as advanced and diverse expertise such as knowledge in corporate areas like legal/contracts and accounting/taxation.

JGC Group's human resources in diverse fields of expertise

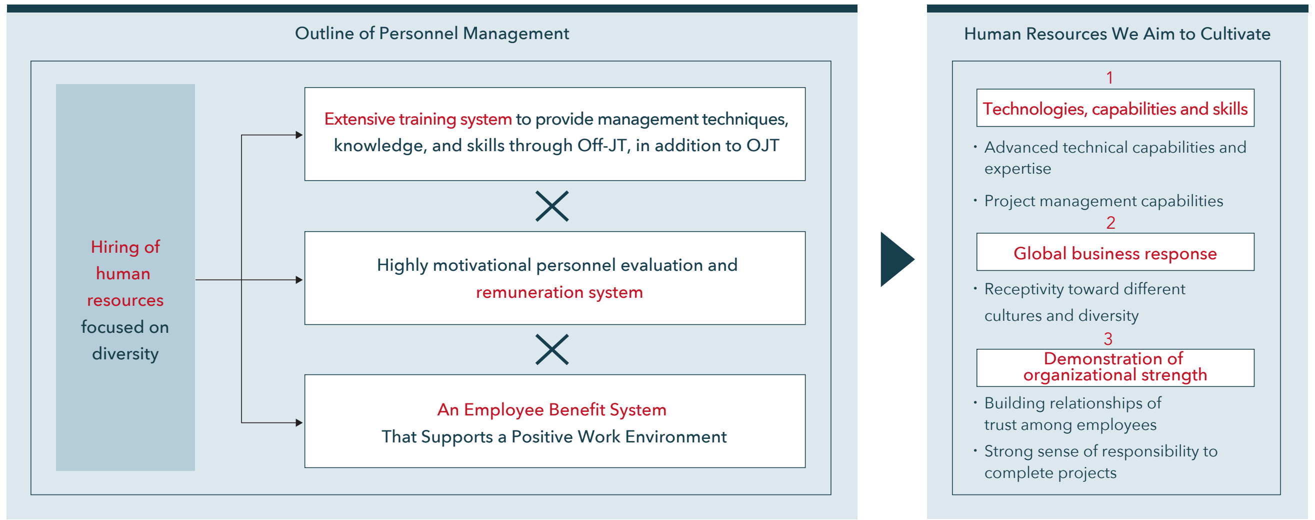


Human Resources We Aim to Cultivate and Outline of Personnel Management

JGC Group employees are required to possess advanced technical capabilities and expertise, receptivity toward different cultures and diversity is required to conduct operations in cooperation with multinational personnel, and the mentality to contribute to the demonstration of organizational strength, both as a JGC Group employee and as a member of the project team.

At JGC Group we endeavor to accomplish our vision of human resources by establishing well-rounded personnel policies focused on training, HR evaluation/remuneration, and employee benefit systems for our staff, who understand the immense social purpose of the engineering business and whom we recruited by hiring new graduates in Japan, but also through various methods such as hiring recent graduates, mid-career hires, and persons with disabilities.

Achieving Our Human Resources Vision Through Well-rounded HR Policies

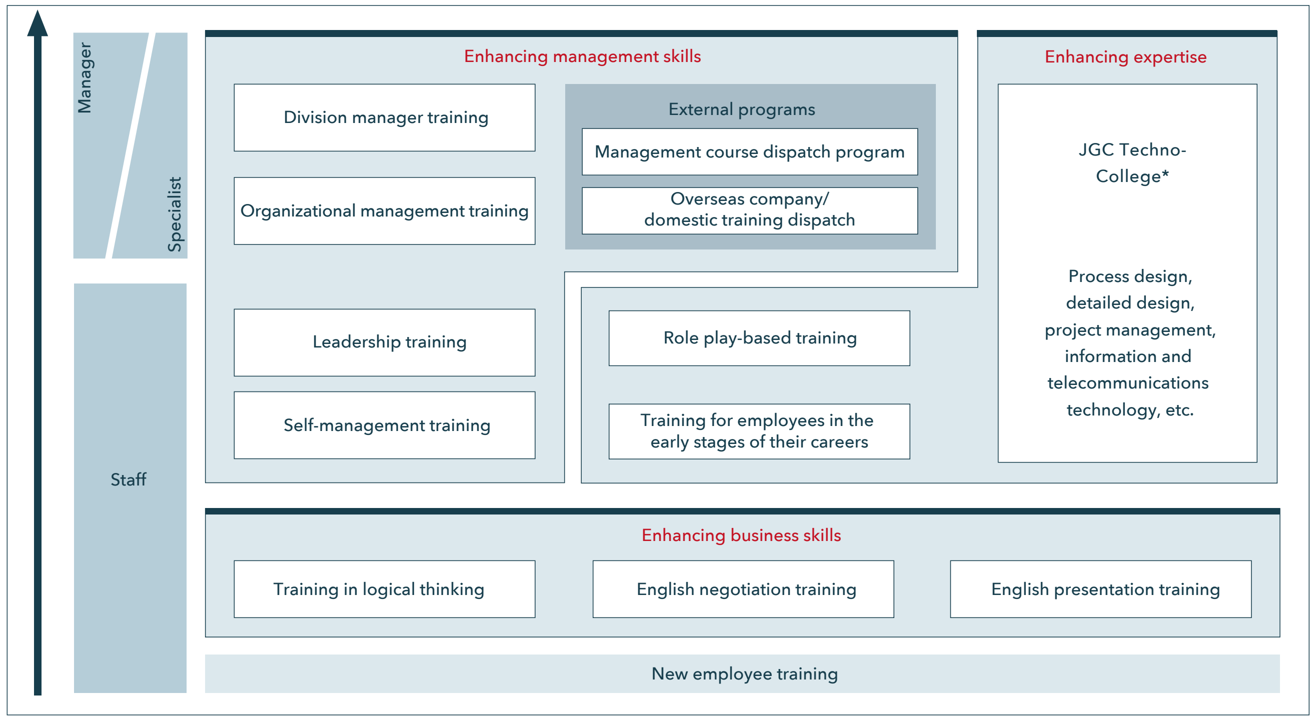


Training System

JGC Group cultivates human resources with high technical proficiency and expertise, awareness of other cultures and diversity, and the mentality required for teamwork through our training system consisting of three main pillars: on-the-job training (OJT), which includes an onsite training system and a job rotation system; off-the-job training (Off-JT), which comprises various training programs; and support for self-improvement, such as acquiring certifications or improving language skills.

In our Off-JT, we cultivate personnel through stepwise implementation of differing types of training in response to the skills required of differing types of employees, as shown in the graphic below.

Off-JT (various training) System



*Specialty lectures conducted by employee volunteers with the aim of passing on techniques, skills, and experience from senior to junior staff

Management Base Supporting These Strengths

Strengthening Our Client Base

Since the 1950s, JGC Group has been constructing and maintaining plants and other facilities for oil majors and national oil companies in oil- and gas-producingcountries, and a wide range of other clients in the energy infrastructure, industrial infrastructure and social infrastructure areas in Japan and overseas. When our clients decide to invest in new facilities, we put forward proposals that help them increase the value of their businesses andwork to deliver the best-quality plants and facilities on budget and on time. Our long track record of success has helped us win their confidence,resulting in a strong client base.

Trusted by Oil Majors and National Oil Companies

Gaining repeat orders through steady project implementation

By steadily leading projects to completion even under difficult environments, the Company's engineering technologies and project management capabilitieshave become highly valued by oil majors and national oil companies around the world. Due to this strong reputation, we have received more orders forprojects, and by steadily completing these projects, we have established solid relationships of trust that have led to repeat orders from these companies.

Main Repeat Clients (Oil Majors and National (Government-affiliated) Oil Companies)

Oil majors	National (government-affiliated) Oil Companies		
ExxonMobil	Algeria	Malaysia PETRONAS	Vietnam
	Saudi Arabia Saudi Aramco	Kuwait KNPC	Japan INPEX
Chevron	Indonesia PERTAMINA	Bahrain Bapco	United Arab Emirates ADNOC
bp	Nigeria	Qatar Qatar Petroleum	Venezuela PDVSA

Featured Projects


GTL (gas to liquids) plant for Qatar Shell GTL
Completed: 2012


LNG plant for INPEX
Completed: 2019


Oil refining plant for PetroVietnam
Completed: 2009


LNG plant for BP Berau
Completed: 2009


Gas gathering and separation plant for Sonatrach
Completed: 2013


Oil refining and petrochemical complex for Petro Rabigh
(joint venture between Saudi Aramco and Sumitomo Chemical)
Completed: 2008

Management Base Supporting These Strengths

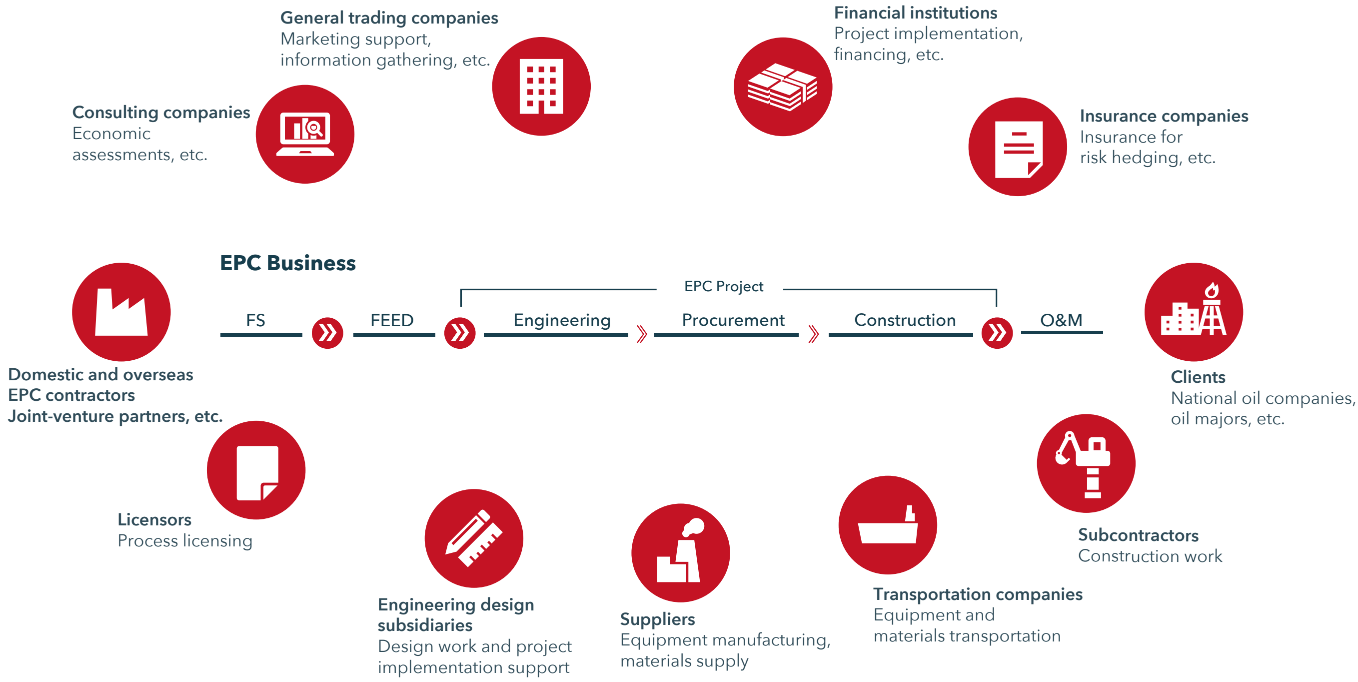
Strengthening Our Suppliers Base

JGC Group treats suppliers as partners in value creation, working with them to ensure mutual competitiveness and success through optimum quality, cost, and delivery. We select suppliers based on a fair and comprehensive assessment of factors such as quality, price, delivery, and technical capabilities, while also fully taking into account environmental considerations, human rights, health and safety, and information security during this process.

Global Supply Chain

Emphasizing the importance of suppliers as partners in value creation

Cooperation with partner companies in countries around the world is essential for plant construction. JGC Group has created a global supply chain for plantconstruction, thanks to more than half a century of implementing numerous projects overseas. JGC Group treats suppliers as partners in value creation, working with them to ensure success through optimum quality, cost and delivery.



TOPICS

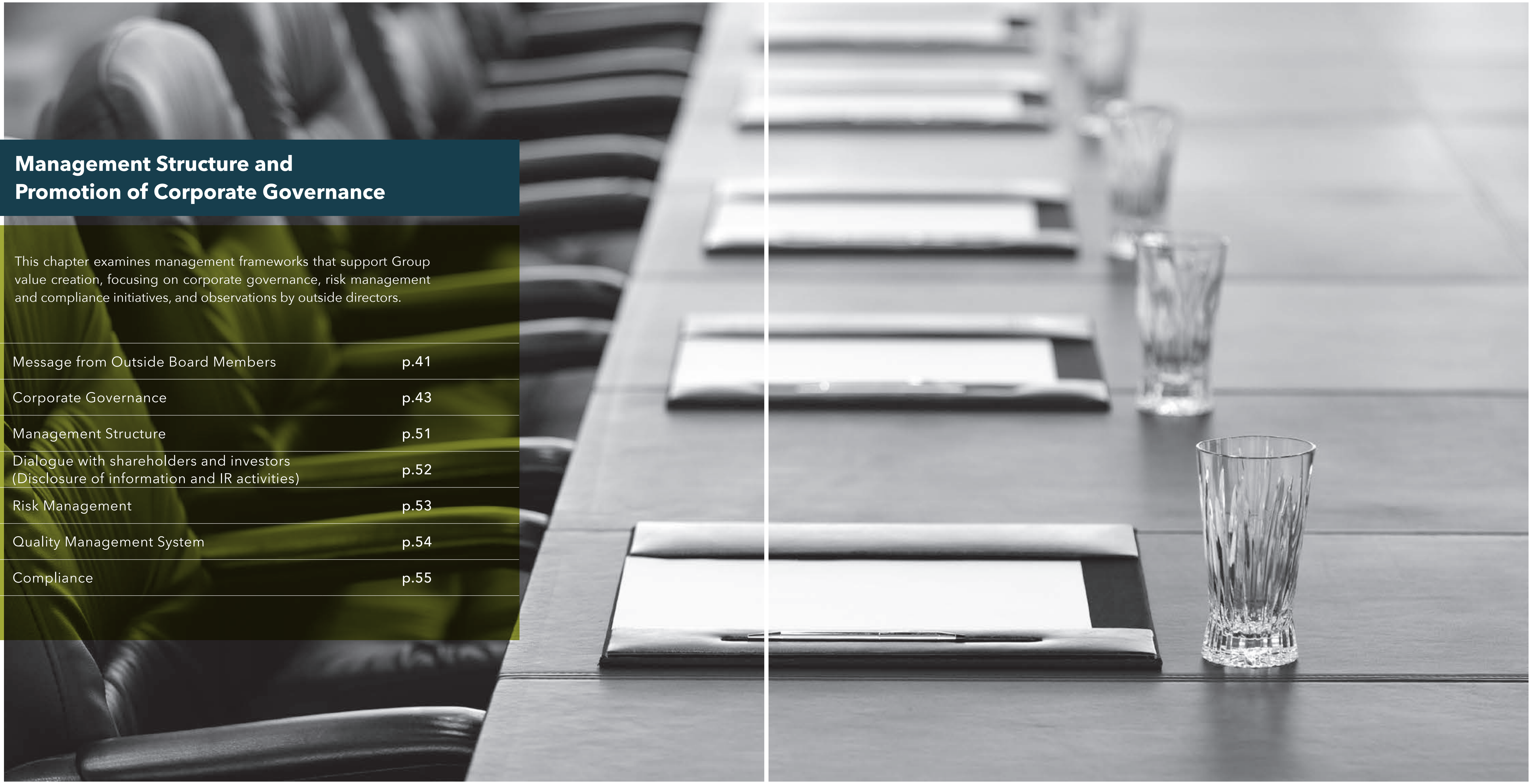
Vendor Technical Support Group Activities

In the Train 9 LNG plant construction project for Petronas that was completed in 2017, we stationed engineers from JGC vendor technical support group at four manufacturers in Malaysia from the start of the project to provide production support for a total of 140 units of equipment weighing 3,000 tons, including towers, vessels, and heat exchangers.

Thanks to the technical assistance provided based on comprehensive judgments made regarding the capabilities of each manufacturer and the difficulty of the specified equipment, these relatively inexperienced manufacturers succeeded in manufacturing equipment that fulfilled the quality requirements, on schedule. The new track record established through this project will help these manufacturers to obtain equipment orders for other projects. The company views the positive relationships with suppliers that have been achieved as a result of these efforts as valuable business partner assets, and for this reason, actively provides technical assistance to manufacturers.


Training for welders

Chapter 3



Management Structure and Promotion of Corporate Governance

This chapter examines management frameworks that support Group value creation, focusing on corporate governance, risk management and compliance initiatives, and observations by outside directors.

A constantly evolving system of governance and new challenge, with greater depth and breadth

Shigeru Endo

Outside Director

Each passing year sees JGC board meetings become livelier and more spirited, with pointed questions and candid observations. We discuss a broader range of topics, now that discretionary nominating and remuneration committees have been introduced, and there are more outside directors. Although JGC's system of governance is still being refined, discussions from a variety of perspectives have added depth and breadth.

One thing that's indispensable to JGC Group is risk management. JGC Group addresses risk directly – that's the stance taken, and rather than fearing these changing times, they continue to build up the courage to embrace and even grow from the changes. Moreover, if discipline or order becomes lax, JGC Group immediately tightens up operations, and they also have the capacity to reflect on their mistakes. Some risk is not readily apparent and requires a certain sensitivity to anticipate, but honing this awareness is fundamental to how JGC Group survives and thrives. And in this regard, those on the board do their best to arrange an environment that supports appropriate managerial risk-taking.

Since last fall, JGC Group has been taking on a new challenge: the move to a holding company structure. The holding company will be central, with stronger autonomy and independence for each operating company and coordinated operations. Ultimately, it will be a matter of efficiently seeking vertical and horizontal synergy to increase overall corporate value. Internally, management officers have spent more than half a year sharing their earnest thoughts on the aims and purpose of this reform. The key point has been to instill this awareness throughout the company and encourage a sense of ownership and an authentic, engaged response. It's essential for management officers to inspire an enduring will to support this effort, as I have said on the board. Through this effort, we hope to see the JGC Group become a world-renowned enterprise free from their traditional overreliance on overseas EPC business in oil and gas, with second and third pillars of business in place.

There is professionalism at JGC Group, whose strength is thorough technical expertise. For JGC Group to evolve and become a truly global enterprise, I think their corporate philosophy must reflect JGC's management strategies, professionalism, and thorough expertise, as well as their new group management structure. This will serve as the foundation for trust and credibility.

Another need in these times is management strategies that also respond to climate change. JGC Group will need to establish a vision accounting for ESG and SDG viewpoints as well as social conditions after the next few years. I also look forward to a fuller dialogue on the company's digital transformation. This theme goes beyond considerations of JGC's line of business and includes work-style reform and other topics affecting many stakeholders. Above all, for younger employees, how the company can achieve synergy between their personal self-actualization and the company's course of action is a matter of great interest and concern.

JGC is currently united internally and working to accomplish a variety of tasks at once besides routine business. As an outside director, I will do what I can to support JGC Group in this momentous challenge.

Vigorous outside guidance on successful group management reform

Masayuki Matsushima

Outside Director

Through the JGC Group mission, the company brings together core capabilities and technical expertise worldwide to create a more prosperous future for both clients and society. I'd like to begin by emphasizing the importance of reflecting on this ambitious mission and then putting it into practice.

To pursue this mission, JGC Group must no doubt become even more globally competitive, equip itself with advanced technical expertise, and meet client needs. Close coordination within the global network is required among those in marketing (who maintain a client-centered view and consider latent needs), engineering, and project management. Only then can JGC Group earn the unwavering trust of clients.

Yet that alone is not enough to thrive as a truly global enterprise. Companies must also arrange robust corporate governance, swift and accurate decision-making aided by IT, and a diverse HR portfolio that looks beyond nationality or gender. The factors that give JGC Group a global outlook are imprinted on the corporate DNA, and I'm looking forward to its evolution and expansion. This challenge may be formidable, but it will not seem insurmountable if all JGC Group employees are committed to making it happen.

Organizationally, what will certainly encourage members toward this end will be the change in October to a holding company structure. Rather than being a necessity forced upon JGC Group, reform of the group management structure was decided by managers willingly, of their own accord. I've heard that in some ways, successive generations of JGC Group leaders have always longed to break free from overreliance on highly volatile overseas oil and gas EPC business, which has remained a longstanding challenge. As I understand it, this reform of the group management structure allows each operating company to apply their own technical expertise, whether in overseas oil and gas EPC operations, overseas infrastructure, domestic EPC and maintenance, or functional materials manufacturing. Like adding a turbocharger, the reform will boost and motivate business expansion to the fullest.

From my position on the board as we reviewed moving to a holding company, I advised that key roles of the holding company would be to decide how to allocate group management resources (such as people and money) to each operating company, to seek optimal solutions for overall group growth and higher corporate value in line with each company's medium and long-term vision, and to study and determine the strategies needed for sustained group growth. As each operating company exercises discretion over securing and executing projects, a main point for the holding company will be how well from a management risk standpoint they can exert control by centrally monitoring the operating companies and managing governance. After becoming an outside director of the holding company, I myself hope to maintain a solid understanding of these conditions as I fulfill my advisory role.

As for management and supervision systems under the holding company structure, there will inevitably be some trial and error in actual operations. For a smooth transition, it will be desirable to refine these systems as needed. In any case, I hope this ideal opportunity to reform the group structure enables JGC Group to forge a corporate culture for the 21st century. As an outside director, I will continue to offer constructive advice to help make this reform a success.

Corporate Governance

Primary SDGs Contributed to

16 PEACE, JUSTICE AND STRONG INSTITUTIONS
17 PARTNERSHIPS FOR THE GOALS

Basic Stance

JGC is strongly aware of the importance of corporate governance and in order to foster this awareness in our corporate culture and climate, we have defined the JGC Group's corporate philosophy in the "JGC Way," Through information, education and training in this corporate philosophy we aim to establish social trust in JGC and to develop the company's business in harmony with society.

At the JGC Group, each individual executive and employee shares as a set of values the promotion of corporate activities that are imbued with a high sense of ethics and are fair and transparent, and it is with strong awareness of our corporate social responsibility that we endeavor to improve our medium- to long-term corporate value and implement our corporate philosophy. In order to accomplish both, JGC strives to build positive relations not only with shareholders and investors, but also with stakeholders such as clients, business partners, and local communities and to disclose information quickly and accurately, while aiming to expand our corporate governance by supporting and strengthening the functions of our board of directors and audit & supervisory board.

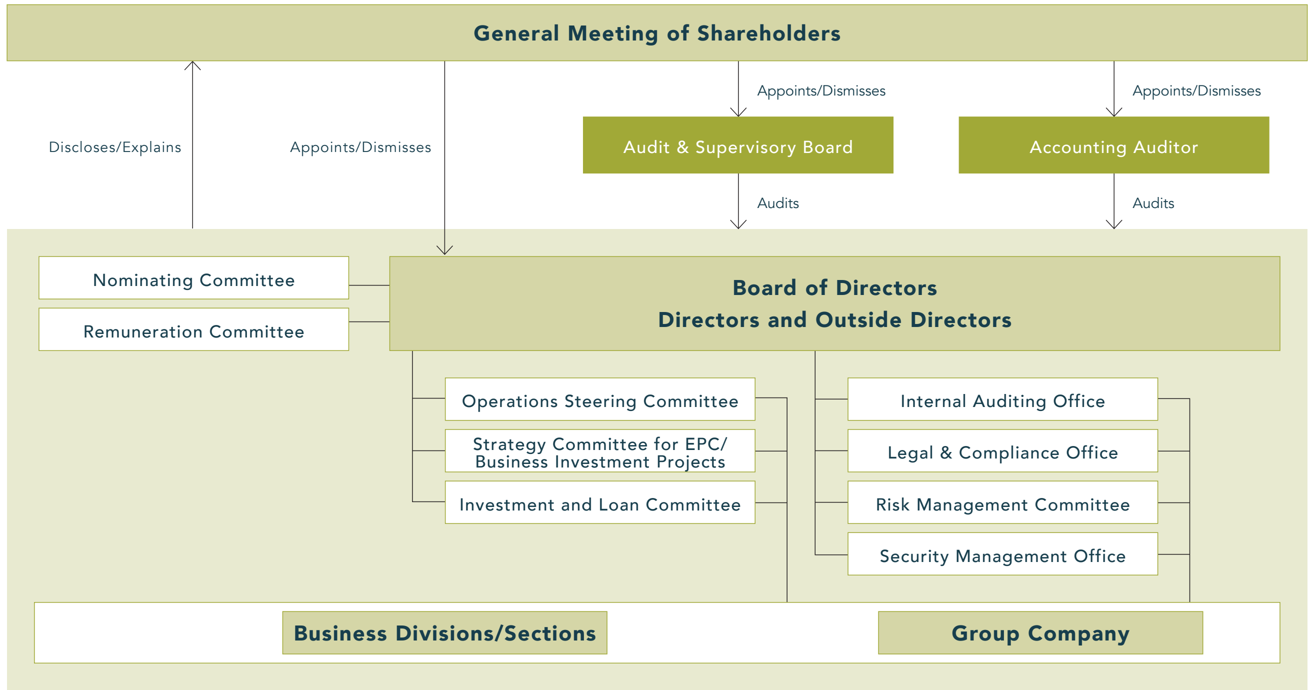
Outline of Corporate Governance System

JGC is a company with a board of directors and an audit & supervisory board and has also introduced an executive officer system to clarify responsibilities and authority in business execution and to improve the speed and efficiency of management decision-making and business execution. To reinforce management oversight and enhance transparency, we have appointed outside directors and outside audit & supervisory board members who satisfy the criteria for independent officers. The main elements of JGC's corporate governance system are described below.

Name of deliberative body	Purpose of establishment	Frequency of meeting	Members	Head of organization
Board of Directors	• Adjudicates important matters regarding business execution • Oversees directors' executive actions • Deliberates on medium- to long-term strategy and issues	Generally once per month	Nine directors (three of whom are outside directors) Five auditors (three of whom are outside auditors) (In order to enhance deliberations, executive officers and others responsible for certain areas may attend as well)	Chairman and Chief Executive Officer (CEO) Masayuki Sato
Audit & Supervisory Board	• Consults and governs based on reports of important matters regarding auditing • Presents opinions based on results if necessary to a director or the board of directors	Generally once per month	Five Audit & Supervisory Board Members (three of whom are outside Audit & Supervisory Board Members)	Full-time Audit & Supervisory Board Member Yukihiro Makino
Nominating Committee Remuneration Committee	• Deliberates on appointment and dismissal of officers, remuneration, etc.	Once per year (and whenever necessary)	Chairman and CEO Masayuki Sato President and Chief Operating Officer (COO) Tadashi Ishizuka Three outside directors* (Shigeru Endo, Masayuki Matsushima, and Kazuo Ueda) *In order to improve fairness and transparency, the majority of the committee consists of outside directors.	Chairman and CEO Masayuki Sato
Operations Steering Committee	• Deliberates on matters concerning JGC and JGC Group business execution	Generally twice per month	Consists of persons such as directors and executive officers appointed by the chairperson (Audit & Supervisory Board Members also attend)	President and COO Tadashi Ishizuka
Strategy Committee for EPC/Business Investment Projects	• Deliberates on JGC and JGC Group EPC and contracting strategies for business investment projects, etc.	Generally once per month	Consists of persons such as directors and executive officers appointed by the chairperson	President and COO Tadashi Ishizuka
Investment and Loan Committee	• Deliberates on JGC and JGC Group investment and lending projects	Generally once per month	Consists of persons such as directors and executive officers appointed by the chairperson (Audit & Supervisory Board Members also attend)	Chairman and CEO Masayuki Sato
Accounting Auditor	• The certified public accountants who audit JGC's accounts are Michitaka Shishido, Takemitsu Nemoto, and Yoshinori Saito of KPMG AZSA LLC • Seven other certified public accountants and nine other persons assist in carrying out these audits			

Corporate Governance System

* "→" denotes directing and reporting.



Improvement Status of Internal Control System

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

[Improvement Status]

1. The Internal Auditing Office monitors, evaluates, and improves the effectiveness of the internal control systems of JGC 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

About JGC's Response to the Corporate Governance Code

Since the implementation of the Tokyo Stock Exchange's Corporate Governance Code in June 2015, we have consistently held discussions on appropriate corporate governance for JGC and are making steady efforts to further solidify our corporate governance.

[Content]

1. Implementation of all principles laid out in the CG Code
2. Disclosure according to all 11 general principles, principles, and supplementary principles required by the Tokyo Stock Exchange

About the Board of Directors

1. Composition of Board of Directors

The decision-making regarding important business matters has always comprised the following elements from the perspective of oversight.

❶ Led by directors with advanced knowledge and expertise in EPC (Engineering, Procurement, Construction) projects and directors with broad experience in business markets

❷ In order to incorporate outside perspectives into management, the Board of Directors appoints independent outside directors from whom it expects objective advice to the board and the fulfillment of oversight functions from an independent standpoint

2. Reinforcement of Oversight Functions of the Board of Directors

Following the transition to a holding company system on October 1, 2019, JGC's Board of Directors will further enhance discussions on the JGC Group's medium- to long-term strategy and issues as the holding company's Board of Directors, while also aiming to reinforce oversight functions regarding the business execution of individual Group companies, by reducing the number of internal directors by three and increasing the number of outside directors by one, switching to a system of nine directors (of whom three will be outside directors).

(123rd ordinary general shareholders' meeting, held on June 27, 2019)

Basic Policy Regarding the Diversity of the Board of Directors

We believe that in order to carry out decision-making concerning important matters of business execution and fulfill its duties of overseeing the whole of JGC's business execution, it is important for the Board of Directors to include diverse perspectives, and it is JGC's policy to compose its Board of Directors without regards to nationality, race, or gender, while taking into account factors such as experience and areas of expertise.

Although there are currently no female or foreign executives, JGC has appointed executives with various backgrounds including global experience to ensure diversity among its Board of Directors.

Background of directors (six internal, three outside) etc.*

* Only directors of JGC HOLDINGS CORPORATION after the transition to the new Group system on October 1, 2019 are listed

Name and position at JGC	Age (in years)	Term as auditor (in years)	Outside director attendance at board meetings in Fiscal 2018	Background							
				Business planning and management	Project management	Technology	Sales and marketing	Human resources	Finance and accounting	Legal	Global experience
Masayuki Sato Chairman and CEO	63	9	—	●	●		●	●	●		●
Tadashi Ishizuka President and COO	67	2	—	●	●	●	●				●
Yutaka Yamazaki Representative Director	66	14	—	●	●	●	●				●
Kiyotaka Terajima Director	60	3	—	●				●	●	●	●
Masanori Suzuki Director	64	5	—	●			●	●	●	●	●
Tetsuya Muramoto Director	55	1	—	●	●	●	●				●
Shigeru Endo Outside Director	70	6	15/15 (100%)	●				●			●
Masayuki Matsushima Outside Director	73	3	14/15 (93.3%)	●					●		●
Kazuo Ueda Outside Director	67	Newly appointed	—	●					●		

Background of auditors (two internal, three outside), etc.*

* Only Audit & Supervisory Board Members of JGC HOLDINGS CORPORATION after the transition to the new Group system on October 1, 2019 are listed

Name and position at JGC	Age (in years)	Term as auditor (in years)	Outside director attendance at Audit & Supervisory Board in Fiscal 2018	Background		
				Corporate management	Legal, finance, accounting	Economics
Yukihiro Makino Audit & Supervisory Board Member	69	3	—		●	
Yasumasa Isetani Audit & Supervisory Board Member	68	1	—		●	
Masao Mori Outside Audit & Supervisory Board Member	76	8	19/19 (100%)		●	
Koichi Ohno Outside Audit & Supervisory Board Member	71	5	19/19 (100%)		●	●
Norio Takamatsu Outside Audit & Supervisory Board Member	66	3	19/19 (100%)	●	●	

Board of Directors' Effectiveness Evaluation

JGC carries out an analysis and evaluation of the effectiveness of its Board of Directors each year and the board aims to additionally raise its effectiveness by reviewing ongoing improvements, discussing options for further boosting effectiveness, and striving to continue to do so.

The process of the 2018 term evaluation of the Board of Directors' effectiveness, a survey summary, evaluation results, details on future efforts, and past main efforts to improve the board's effectiveness are listed below.

Process	● Survey of the Board of Directors and Audit &Supervisory Board Members ● Review of improvements to issues pointed out during the previous effectiveness evaluation ● Gathering of opinions for evaluating the current Board of Directors' effectiveness and further improving said effectiveness ● Based on the results, review of central future issues by the Board of Directors
Questions	● Review of JGC's responses to the principles laid out in the Corporate Governance Code's Chapter 4 – Responsibilities of the Board ● Collection of survey responses for further improving effectiveness; interviews held if necessary
Evaluation results and future issues to address	Evaluation Results Review of steady improvement and achievement of overall effectiveness, including whether important project reports are sufficiently thorough and whether there is substantial debate regarding the JGC Group's corporate restructuring Issues to be addressed for further improvement of effectiveness and planned solutions (Issues) ● Further expansion of discussions regarding medium- to long-term strategy and issues ● Review of the state of Group governance within the holding company system implemented on October 1, 2019 (Planned solutions) ● Further expansion of discussions regarding strategy and efforts to improve the Group's corporate value after the transition to a holding company system ● Establishment and maintenance of structures to ensure swift and appropriate business decisions by Group companies and proper management and oversight by the holding company

Past main efforts for improving the Board of Directors' effectiveness

	From Fiscal 2016	From Fiscal 2017	From Fiscal 2018
Main efforts by the Board of Directors and committees	•Switched to a system of two outside directors to foster debate •Established an Investment and Loan Committee and implemented further structural reforms to encourage appropriate risk-taking •Planned advance distribution of documents and enhancement of advance briefings to improve discussions among the Board of Directors	•Expanded matters reported on to the Board of Directors, including the state of the Internal Control System •Changed the frequency of Risk Management Committee meetings from once per year to twice per year to reinforce JGC's risk management system	•Enhanced debate among the Board of Directors on the shift to a holding company and reports on matters including in particular the status of important projects •After the June 2019 ordinary general shareholders' meeting, reduced the number of internal directors by three and increased the number of outside directors by one, switching to a system of nine directors (three of whom are outside directors)
Executive Training*	•Company seminars (duties and responsibilities of company executives) •Various external seminars	•On-site overseas visits by outside executives (Ichthys LNG Project) •Company seminars (ordinary general shareholders' meeting) •Various external seminars	•Company seminars (D&O insurance, 2018 revised CG Code) •Various external seminars

* Training policy regarding training for executives
JGC provides opportunities and information to e.g.acquire knowledge necessary for directors and Audit & Supervisory Board Members to properly fulfill their roles and duties, and shoulders the cost.

Corporate Governance

Executive Remuneration System

Policy regarding amounts of executive compensation and decisions on the computation method for such compensation

About JGC's Basic Policy and Decisions by the Ordinary General Shareholders' Meeting	● Under JGC's basic policy to secure management personnel, which is necessary for raising its global competitiveness as an engineering company and for sustained improvement of its corporate value, the 113th ordinary general shareholders' meeting held on June 26, 2009 decided to set the annual amount of compensation for directors at 690 million yen or less, and that for auditors at 88 million yen or less. ● Amounts of compensation and the like for directors, as well as the policy regarding decisions on the method of computation for such compensation, are limited to the range established by the general meeting of shareholders as above, and are deliberated on in advance by the Remuneration Committee and decided on by the Board of Directors based on the committee's report.
About the Decision Process for Setting Remuneration Amounts	● Amounts of compensation and the like for directors are entrusted to the chairman and CEO, within the limited range of remuneration established by the decision of the general meeting of shareholders as above ● In order to ensure fairness and transparency, the chairman and CEO decides based on the results of the Remuneration Committee's deliberations
About Fixed Remuneration and Performance-based Remuneration	Fixed remuneration ● Determined according to each director's position and responsibilities Performance-based remuneration ● In order to increase incentives for improving medium- to long-term corporate value through accomplishing JGC's medium-term business plan, performance-based remuneration is indexed to the target value listed in the medium-term business plan for current-term net profit attributable to parent company shareholders. ● Based on the fact that in JGC's primary business of EPC it takes several years from contracting efforts to profit contributions, amounts of performance-based remuneration are determined based on an evaluation of each director's professional duties and the degree of contribution to fiscal-year performance, including whether or not the director contributed to improvements in medium- to long-term corporate value ● The remuneration of outside directors is limited to fixed remuneration to ensure their ability to appropriately oversee management from a position independent from business execution

Breakdown of Executive Remuneration

Category	Total value of remuneration, etc.	Breakdown of remuneration, etc.			
		Fixed remuneration		Performance-based remuneration	
		Number of eligible executives	Total amount provided	Number of eligible executives	Total amount provided
Ten directors (excluding outside directors)	433 million yen	Ten	384 million yen	Nine	49 million yen
Three Audit & Supervisory Board Members (excluding outside Audit & Supervisory Board Members)	36 million yen	Three	36 million yen	—	—
Five outside executives (two outside directors and three outside Audit & Supervisory Board Members)	47 million yen	Five	47 million yen	—	—

Notes: 1. The above fixed remuneration includes one director and one Audit & Supervisory Board Member who stepped down at the conclusion of the 122nd ordinary general shareholders' meeting held on June 28, 2018.
2. At the end of fiscal 2018 there were 11 directors (including two outside directors) and five Audit & Supervisory Board Members (including three outside Audit & Supervisory Board Members).
3. In addition to the above table, 14,723 limited transfer shares (worth 22 million yen) were granted to six JGC directors (excluding three outside directors) effective August 5, 2019 based on the stock remuneration system described in (3).

Reform of Executive Remuneration System (Introduction of Stock Remuneration)

At the ordinary general shareholders' meeting held on June 27, 2019, it was decided to introduce a stock remuneration system to allocate limited transfer shares to directors (exclusive of outside directors) within the established remuneration limits.
Based on this decision, JGC has introduced similar stock remuneration systems for JGC executive officers and some of its subsidiaries.
We will continue to deliberate on appropriate executive remuneration systems for the JGC Group and we intend to continue providing incentives that contribute to improving our medium- to long-term corporate value.

① Goals of introducing a stock remuneration system

● Management will share the benefits and risks resulting from changes in the stock price along with shareholders, and conduct business accordingly

● The system improves upon existing incentives to increase the stock price and improve the JGC Group's medium- to long-term corporate value

② Overview of the Stock Remuneration System

Eligible persons
● JGC directors and executive officers, as well as executives at Group companies

Total number of limited-transfer shares (maximum)
● 71,200 shares per year (approx. 0.03% of the total number of previously issued shares)

Disbursed amount of monetary compensation claims (maximum)
● 90 million yen per year

Limited transfer period
● A limited transfer period of three to 30 years has been established for limited-transfer stock

Policy and Procedures Regarding Appointment and Dismissal of Upper Management

Appointment process	Appointment of upper management and nomination of director candidates ①Deliberations among the Nominating Committee, which includes outside directors, focus on the items below: (1) Items related to character and views (2) For upper management and company directors: performance, management ability, etc. (3) For outside directors: independence, expertise, etc. ②After the Nominating Committee has completed its comprehensive deliberations, the Board of Directors decides on nominations. Moreover, in the case of appointing upper management and nominating director candidates, appointments and nominations are made following the above process and substantial discussion, given that such individuals will become candidates for succeeding JGC's CEO.
Dismissal process	Dismissal of upper management In the event that any of the below items applies, the Board of Directors will decide on dismissal after deliberations by the Nominating Committee (1) Cases of wrongdoing, impropriety, and breach of faith (2) Cases of violations of laws or articles of incorporation (3) Cases where qualities and abilities required at the time of appointment can no longer be discerned

Corporate Governance

About the Succession Plan

When the Board of Directors considers nominating a director or executive officer, in consideration of the fact that this potential nominee would become a candidate for succeeding the CEO, the Nominating Committee will first conduct substantial discussion regarding factors such as whether the nominee possesses the qualities required in a CEO, has demonstrated the necessary past performance, and can be expected to be a worthy successor candidate, before the Board of Directors will nominate him or her.

Furthermore, in order to make JGC's succession plan, which until now had not been stated explicitly, more concrete and effective, the responsible divisions will establish detailed criteria regarding qualities, experience, etc. required of a CEO, while JGC advances discussions on efforts such as the actualization of plans to cultivate potential CEOs based on these criteria.

Introduction of Outside Directors

This section introduces JGC's outside directors, who serve an important role on its Board of Directors, Nominating Committee, Remuneration Committee, etc., as well as their resumes and reasons for their appointment

Name	Resume	Reason for appointment
Shigeru Endo  Significant Positions Concurrently Held ・Outside Director, IINO KAIUN KAISHA, LTD. ・Special Assistant to the Minister for Foreign Affairs ・Outside Director, ADEKA Corporation	Apr. 1974 Joined the Ministry of Foreign Affairs Apr. 2001 Director-General, Middle Eastern and African Affairs Bureau Feb. 2002 Director-General, Consular and Migration Affairs Department Aug. 2003 Ambassador to The Permanent Mission of Japan to the United Nations and Other International Organizations in Geneva and Consul General, Consulate General of Japan in Geneva Mar. 2007 Ambassador Extraordinary and Plenipotentiary to the Republic of Tunisia Jul. 2009 Ambassador Extraordinary and Plenipotentiary to Saudi Arabia Oct. 2012 Retired from the Ministry of Foreign Affairs Jun. 2013 Outside Director, JGC CORPORATION (current post) Jun. 2013 Outside Director, IINO KAIUN KAISHA, LTD. (current post) Apr. 2014 Special Assistant to the Minister for Foreign Affairs (current post) Jun. 2018 Outside Director, ADEKA Corporation (current post)	Mr. Shigeru Endo does not have direct experience in company management, but he has served as the Ambassador Extraordinary and Plenipotentiary to Saudi Arabia and Tunisia and possesses unique experience and knowledge of the Company's principal business market. He is nominated as an Outside Director because the Company believes that he will be able to appropriately perform his expected duties as an Outside Director, which includes providing accurate advice and opinions for the management and business of the Company and exerting a supervisory function from an independent standpoint, by making the most of the aforementioned experience and knowledge. He satisfies the requirements of an Independent Executive pursuant to the provision of the Tokyo Stock Exchange, and the Company will continue to designate him as an Independent Executive and notify the said Stock Exchange to that effect.
Masayuki Matsushima  Significant Positions Concurrently Held ・Senior Advisor, Integral Corporation ・External Councillor, Grant Thornton Taiyo LLC	Apr. 1968 Joined Bank of Japan Jun. 1998 Executive Director, in charge of the Bank's International Affairs Jun. 2002 Senior Advisor, the Boston Consulting Group Feb. 2005 Senior Executive Advisor, Credit Suisse Securities (Japan) Limited Jun. 2008 Chairman, Credit Suisse Securities (Japan) Limited May 2011 Senior Advisor, the Boston Consulting Group Jun. 2011 Outside Director, Mitsui Fudosan Co., Ltd. Jun. 2011 Outside Director, Mitsui O.S.K. Lines, Ltd. (current post) Sep. 2014 Senior Advisor, Integral Corporation (current post) Jun. 2016 Outside Director, JGC CORPORATION (current post) Jul. 2017 External Councillor, Grant Thornton Taiyo LLC (current post)	Mr. Masayuki Matsushima has wide experience and knowledge in the fields of finance and corporate management, having served as Executive Director of Bank of Japan, and in other significant positions. He is nominated as an Outside Director because the Company believes that he will be able to appropriately perform his expected duties as an Outside Director, which includes providing accurate advice and opinions for the management and business of the Company and exerting a supervisory function from an independent standpoint, by making the most of the aforementioned experience and knowledge. He satisfies the requirements of an Independent Executive pursuant to the provision of the Tokyo Stock Exchange, and the Company will continue to designate him as an Independent Executive and notify the said Stock Exchange to that effect.
Kazuo Ueda  Significant Positions Concurrently Held ・Outside Director, Development Bank of Japan Inc. ・Director, Center for Advanced Research in Finance, The University of Tokyo ・Professor, Faculty of International Studies, Kyoritsu Women's University ・Outside Audit & Supervisory Board Member, MELCO HOLDINGS INC.	Apr. 1989 Assistant Professor, Faculty of Economics, The University of Tokyo Mar. 1993 Professor, Faculty of Economics, The University of Tokyo Apr. 1998 Member of the Policy Board, Bank of Japan Apr. 2005 Professor, Graduate School of Economics, The University of Tokyo Oct. 2005 Dean, Graduate School of Economics, The University of Tokyo Oct. 2005 Dean, Faculty of Economics, The University of Tokyo Oct. 2008 Outside Director, Development Bank of Japan Inc. (current post) Apr. 2017 Director, Center for Advanced Research in Finance, The University of Tokyo (current post) Apr. 2017 Professor, Faculty of International Studies, Kyoritsu Women's University (current post) Jun. 2017 Professor Emeritus, The University of Tokyo (current post) Jun. 2017 Outside Audit & Supervisory Board Member, MELCO HOLDINGS INC. (current post) Jun. 2019 Outside Director, JGC (current post)	Mr. Kazuo Ueda does not have direct experience in company management, but he has abundant academic experience as an expert on macroeconomics. He is nominated as an Outside Director because the Company believes that he will be able to appropriately perform his expected duties as an Outside Director, which includes providing accurate advice and opinions for the management and business of the Company and exerting a supervisory function from an independent standpoint, by making the most of the aforementioned experience and knowledge. He satisfies the requirements of an Independent Executive pursuant to the provision of the Tokyo Stock Exchange, and the Company will designate him as an Independent Executive and notify the said Stock Exchange to that effect.

Cross-shareholdings

1. Objectives of shareholdings

The CG Code revised in June 2018 now refers to aspects such as "reduction of cross-shareholdings" and "cost of capital." In cases where we find that maintaining and strengthening JGC's relationship with its clients and business partners will contribute to increasing the JGC Group's medium- to long-term corporate value, we hold shares of such companies. JGC's Board of Directors each year reviews the objectives of maintaining individual cross-shareholdings. The review process and history of sales and reductions are as follows.

2. Use of Held Stock Voting Rights

JGC decides how to make use of voting rights after considering whether a proposal will contribute to sustained growth of the company of which JGC holds shares and whether the result of such a contribution will in turn benefit the JGC Group's medium- to long-term corporate value.

Review process of holding objective and stock to be sold

Primary criteria for reviewing holding objective

Quantitative aspects
Dividend yield from held stock, valuation gains, etc.

Qualitative aspects
Difficult to quantify business benefits

↓

The Board of Directors reviews the objective of cross-shareholdings each year considering both quantitative and qualitative aspects, as well as cost of capital comparisons

↓

Concerning stock whose holding objective is determined as diminished upon review, the Board of Directors discusses its sale, after a consideration of factors such as the market environment and changes in stock price

History of sales and reductions in cross-shareholdings since the introduction of the CG Code

	Number of companies whose stock was sold	Total value of sales (based on acquisition price)	Reduction rate*
Fiscal 2015 to fiscal 2018 (fiscal 2018 in parentheses)	29 companies (eight companies)	3,831 million yen (1,913 million yen)	Approx. 30%

* Represents the reduction rate for publicly listed stock held as of April 1, 2015 (ratio based on acquisition prices).

Management Structure

JGC will transition to a holding company structure starting October 1, 2019.
After the transition, JGC HOLDINGS CORPORATION will have the following management structure.

*On October 1, 2019, the company name will change from JGC CORPORATION to JGC HOLDINGS CORPORATION.

Directors

Representative Director, Chairman and Chief Executive Officer (CEO)
Masayuki Sato

Representative Director, President and Chief Operating Officer (COO)
Tadashi Ishizuka

Representative Director
Yutaka Yamazaki

Member of the Board
Kiyotaka Terajima

Member of the Board
Tetsuya Muramoto

Member of the Board
Masanori Suzuki

Outside Director
Shigeru Endo

Outside Director
Masayuki Matsushima

Outside Director
Kazuo Ueda

Audit and Supervisory Board Members

Audit & Supervisory Board Member
Yukihiro Makino

Audit & Supervisory Board Member
Yasumasa Isetani

Audit & Supervisory Board Member (Outside Auditor)
Masao Mori

Audit & Supervisory Board Member (Outside Auditor)
Koichi Ohno

Audit & Supervisory Board Member (Outside Auditor)
Norio Takamatsu

Executive Officers

Senior Executive Vice President & Chief Project Officer (CPO)
Yutaka Yamazaki

Executive Vice President & Chief Financial Officer (CFO), General Manager, Group Management Development Dept.
Kiyotaka Terajima

Executive Vice President, General Manager, Group Strategic Planning Dept.
Tetsuya Muramoto

Senior Executive Officer
Masanori Suzuki

Senior Executive Officer, General Manager, Quality Assurance, Safety & Environment Dept.; General Manager, Crisis Management Dept.
Yasuhiro Okuda

Senior Executive Officer, General Manager, Sustainability Co-Creation Dept.
Masahiro Aika

Senior Executive Officer & Chief Digital Officer (CDO), General Manager, Digital Initiative Dept.
Takuya Hanada

Senior Executive Officer & Chief Technology Officer (CTO)
Yutaka Yamanaka

Executive Officer, General Manager, Asset Management Dept.
Masayasu Endo

Executive Officer, Advisor, Group Strategic Planning Dept.
Aya Yamazaki

Executive Officer, General Manager, Government/ Industry Relations Dept.
Takeshi Kawasaki

Executive Officer, General Manager, Group Administration Dept.
Takehiko Hirose

Dialogue with shareholders and investors (disclosure of information and IR activities)

Basic stance

The Group considers dialogue with shareholders and investors (engagement) to be indispensable to sustainable growth and improvements in corporate value, and actively works to achieve the highly transparent disclosure of information that provides the foundation for this dialogue. Moreover, we listen to the opinions received during dialogue with shareholders and investors, and feed it back to management and relevant departments for use in management strategies. In addition, we work to realize an environment in which shareholders can commit to long-term, stable ownership of the shares of the Company through the active disclosure of not only financial, but also non-financial, information.

Main IR activities (fiscal 2018)

Site tour held for securities analysts

In December 2018, we held a site tour of the FLNG2 project under construction in South Korea for Petronas. We welcomed eight securities analysts to the shipyard on Geoje Island, where Samsung Heavy Industries, the shipyard owner and our joint venture partner, is carrying out ongoing construction work. By giving the visitors the opportunity to see the actual plant being assembled in modules, we were able, with the assistance of the project manager, who is stationed locally, to give a detailed explanation of the dynamism and the difficulties involved in the execution of this project. After the tour, the securities analysts expressed their admiration for the advanced nature of our initiatives in the FLNG field, and for our strengths in project management.

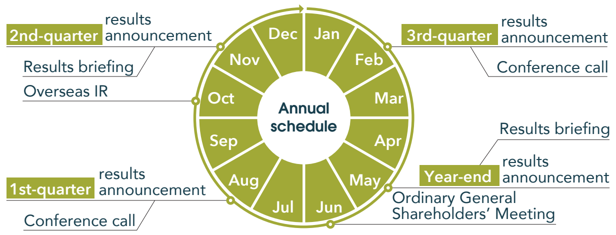
Securities analysts and JGC staff

Enhancements to the JGC Report (integrated report)

Since 2015, non-financial information has been added to the financial information in the JGC Report, and additionally we make efforts every year to enhance the information it contains so as to provide an important disclosure resource to support investment decisions with a long-term perspective. Following on from 2017, when the domestic asset management arm of the Government Pension Investment Fund (GPIF) selected JGC for publishing the "Most-Improved Integrated Report," in 2018 we went further to incorporate opinions from the capital markets into our planning, and expanded the contents with reference to our medium-to-long-term management strategy and our ESG initiatives, with the result that JGC was also selected by the domestic asset management arm of the GPIF for publishing a "Superior Integrated Report."

For the "JGC Report 2018," please click the following URL:
https://www.jgc.com/jp/ir/ir-library/annual-reports.html

IR activities schedule



Main IR activities

Activity	No. of events	No. of companies
Responses to requests for information, phone calls from institutional investors in Japan/overseas	245	131
Results briefing conference calls	2	60
Results briefings by senior management	2	68
ESG-related meetings	4	4
Overseas IR roadshows by senior management	11	11

Ordinary General Shareholders' Meetings

	Fiscal year 2016	Fiscal year 2017	Fiscal year 2018
Held	June 29 (Wed)	June 29 (Thu)	June 28 (Thu)
Shareholders attending	182	201	187
Ratio of voting rights exercised	76.8%	80.9%	84.1%
Date on which the notice of convocation was sent	June 7 (Tue)	June 7 (Wed)	June 6 (Wed)
Date on which the notice of convocation was made available on the website	May 27 (Fri)	May 27 (Sat)	May 25 (Sat)

Risk Management

Related SDGs

Basic Stance

The JGC Group classifies risks that inhibit sustained corporate growth into two categories: "corporate risk" associated with the survival of the company and safety of employees, such as natural disasters, large-scale accidents, violations of laws and ordinances, and information leakage; and "project risks" that significantly impact income (loss). The JGC Group has established a management system to comprehensively reduce risks by systematically assessing and managing the management items and risk items specified in each category. In particular, among the group's businesses, overseas sales in the total engineering business generate more than 80% of total net sales, and as such, we recognize that it is essential to expeditiously and appropriately respond to various risks in and around the countries where we implement projects.

For further details on project risks, see "Strengths and Management Base of the JGC Group" in Chapter 2 (p. 29-34).

Risk classification

Category	Details
Corporate Risk	Risks associated with the survival of the company and safety of the lives of employees
Project Risk	Risks associated with project profitability and the income (loss) of the company as a whole

Corporate Risk

JGC Group undertakes maximum efforts on a daily basis to mitigate and prevent risks, with corporate affairs divisions fulfilling a central role, and if risks materialize, JGC works to minimize their impact and associated loss by responding expeditiously and appropriately.

Ensuring the safety of employees as a top priority

JGC recognizes that protecting its employees, who represent its only asset, from natural disasters, large-scale accidents, acts of terrorism, and other risks and ensuring their safety is a top-priority risk measure. We are able to provide 24/7 support in times of emergency, in order to ensure the safety of employees who make more than 5,000 overseas trips each year and roughly 500 personnel who are stationed overseas in 30 countries. In addition, during normal times, we proactively conduct activities to prevent such risks, including reinforcement of the collection and analysis of information on local conditions, enhancement of preventive measures, and implementation of awareness-raising activities.

Information security response to prevent information leakage

Handling large volumes of information (specification documents, design plans, reports, etc.) is a natural part of project execution, in particular. Much of this information consists of confidential data, including the know-how of clients and business partners. Protecting such information is one of our inherent responsibilities.
We continuously invest in information-related systems, including information security measures, to prevent the leakage of confidential data of clients and business partners.

Quality Management System

Basic Stance

In our business, quality assurance is an essential part of achieving safe plant operation and stable production. The Quality Policy established by the JGC Group is to ensure "JGC Quality" satisfying all applicable requirements by globally using the knowledge, skills, systems, and highly talented human resources that we have continually built up through many years of project execution. This effort is led by the Quality Assurance Committee, and a framework is in place for quality assurance.

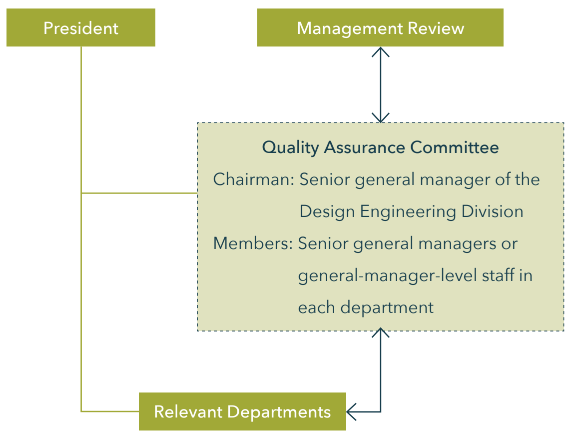
Thorough QMS-based Quality Assurance

JGC obtained ISO 9001 certification for its quality management system (QMS) in 1993. We have actively improved our organization on a continuous basis, led by the Quality Assurance Committee, with the aim of improving organizational performance as appropriate to the type of work performed.
Every year, quality guidelines announced by the president of JGC are treated as a quality policy by each department and section, which set quality targets in line with the policy. Each fiscal year, they identify any organizational issues and formulate operating policies and action plans ("Plan"), implement them ("Do"), evaluate them ("Check"), and improve them on the basis of the evaluation process ("Act").

Quality Assurance Committee

The Quality Assurance Committee meets monthly and reports directly to the president. The committee is chaired by the senior general manager of the Design Engineering Division and comprises executive-level general managers.
The Quality Assurance Committee implements a range of remedial measures to ensure the quality of products and services provided to clients consistently meets their specifications. It also evaluates the impact of those measures to drive ongoing improvements.
Once a year, the president conducts a management review of the Quality Assurance Committee's activities, with the president leading efforts to continuously improve the quality assurance organization.

Positioning of Quality Assurance Committee



Compliance

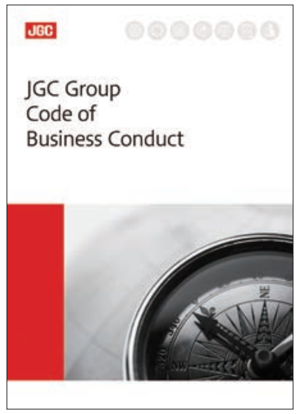
Basic Stance

Guided by our corporate philosophy, the JGC Way, the JGC Group has positioned compliance as the cornerstone of management, based on two keywords in its 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 all other countries where the Group operates, 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.

Establishing the JGC Group Code of Business Conduct

Although the company formulated a manual for business conduct in 2002, since then the demands of society towards compliance efforts required of companies have become more diverse and in-depth. In April 2018, the JGC Group revised the previous manual in response to these changes in social conditions and established the new JGC Group Code of Business Conduct in order to make its contents more comprehensive and concrete.

This JGC Group Code of Business Conduct specifically indicates the standards for actions and decisions that we should follow, as we put our corporate philosophy, the JGC Way, into practice.



JGC Group Code of Business Conduct
www.jgc.com/en/about/pdf/code-of-conduct.pdf

Group Compliance System

The JGC Group has established a Group compliance system that ensures business activities conform to the highest ethical principles at all Group companies. Each Group company has appointed compliance officers, creating a single contact point for compliance issues in order to improve the effectiveness of compliance activities. The compliance officers evaluate compliance risks specific to their companies and develop and implement compliance measures tailored to those risks. Compliance officers from across the Group regularly meet to share information and promote closer cooperation, while also working to develop systems and implement measures that raise awareness about compliance issues.

In fiscal 2018 compliance officers from domestic and overseas Group companies gathered at our head office and in the Philippines (at JGC Philippines) to attend Group Compliance Conferences. The conferences featured lively discussions about the issues and risks faced by each company, as well as ideas about effective measures to resolve and avoid risks and issues.

Compliance officers of JGC and overseas Group companies

Measures to Prevent Bribery

JGC works to ensure fair business practices, in line with its basic policy of complying with all anti-bribery rules and regulations, such as provisions in Japan's Unfair Competition Prevention Law prohibiting the bribing of foreign public officials, the US Foreign Corrupt Practices Act (FCPA) and the UK Bribery Act 2010.The table below shows the JGC Group's regulations and programs related to preventing bribery, based on provisions in the JGC Group's corporate philosophy and Code of Business Conduct.

JGC Group corporate philosophy

JGC Group Code of Business Conduct

Bribery Prevention Regulations

Regulations to prevent bribery by employees	Regulations to prevent bribery by business partners	Regulations to ensure effective operation of bribery prevention programs
Gifts, entertainment, and travel policy	Anti-corruption policy for international commercial representative	Rules related to the JGC Group Compliance Hotline
Policy on charitable donations	Anti-corruption policy for joint ventures	Bribery risk management guidelines
Policy on political contributions	Anti-corruption policy for suppliers and subcontractors	Bribery prevention training guidelines
		Compliance monitoring guidelines

Preventing Bribery by Suppliers and Subcontractors

JGC requires all suppliers and subcontractors to comply with rules and regulations prohibiting bribery.Before starting a business relationship with a company, JGC assesses the company's links with public officials and evaluates its governance and compliance systems. Business partners are also required to sign declarations or business contracts agreeing to JGC's anti-bribery policy and stating their commitment not to engage in bribery.In cases where the risk of bribery is deemed to be high, JGC conducts a further round of rigorous due diligence and only decides to begin a business relationship if all concerns have been completely eliminated.

Initiatives in Regions with a High Risk of Bribery

JGC addresses risks specific to each project, conducting assessments at the bidding stage to identify the risk of bribery in the order and implementation phases of each project.

For projects in regions with a high risk of bribery, the JGC Compliance Office takes a rigorous approach, visiting construction sites midway through project implementation to conduct intensive monitoring, evaluate efforts to prevent bribery, and recommend any necessary improvements.

Number of EPC projects underway, order backlog in countries ranked in bottom 20 in Corruption Perceptions Index

(FY)

	2014	2015	2016	2017	2018
Number of EPC projects underway	2	2	1	1	1
Outstanding contracts (¥100M yen)	277	241	234	231	231

Compliance Training

JGC conducts compliance training programs tailored to different employee grades and topics in order to raise compliance awareness

Number of training courses, participants

(FY)

	2014	2015	2016	2017	2018
Number of courses	8	18	12	13	6
Number of participants	312	600	373	353	199

JGC Group Compliance Hotline

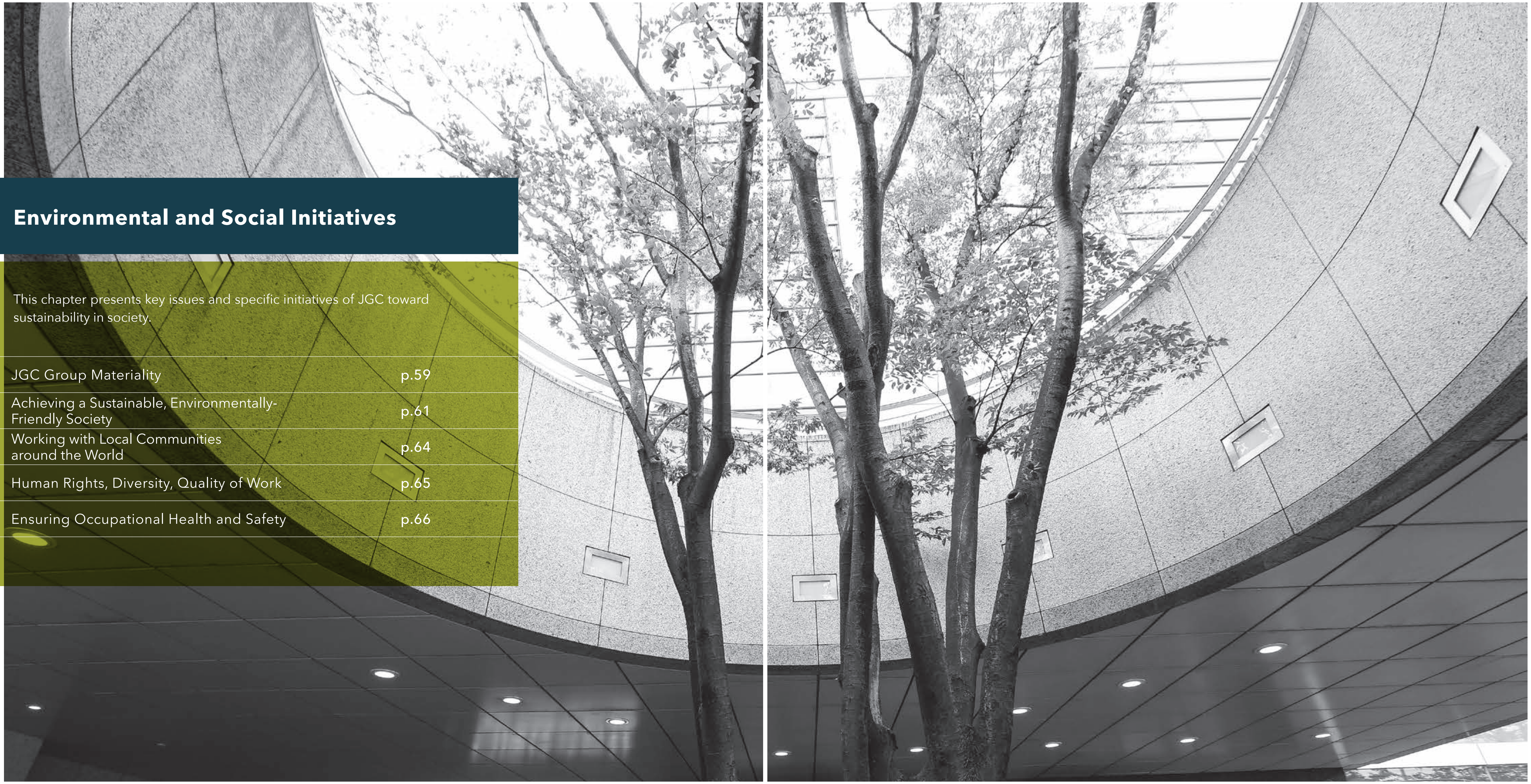
We have established the JGC Group Compliance Hotline to help rapidly identify, mitigate, and prevent compliance risks. The hotline allows employees to seek advice or report any concerns related to compliance violations or activities that may constitute a violation of compliance rules.

Number of reports received by hotlines

(FY)

2014	2015	2016	2017	2018
3	5	12	18	28

Chapter 4



Environmental and Social Initiatives

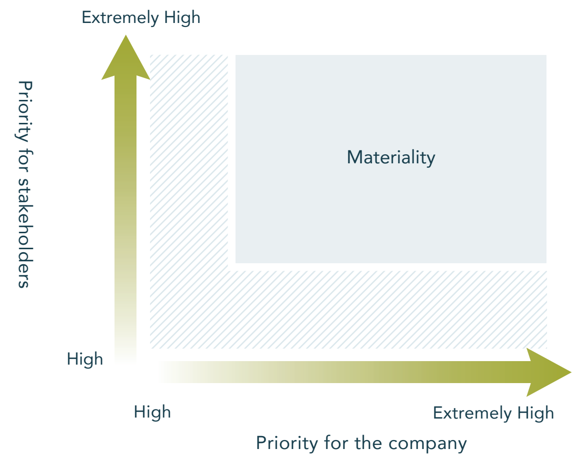
This chapter presents key issues and specific initiatives of JGC toward sustainability in society.

JGC Group Materiality

These themes are positioned as materiality addressed by the Group: societies in harmony with the environment, working with local communities around the world, energy access, human rights and employee motivation, quality of life, and corporate governance and risk management.
Progress in the six areas will be published in the Company's integrated reports and online, and we will review their suitability and consider new materiality as needed in response to changes in macrotrends and our business.

Process to identify materiality

Social issues to be addressed by the Group are selected through analysis of GRI guidelines, ISO 26000, 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.



	Materiality	Related SDGs	Recognized Social Issues	Group Initiatives	Social Value Created
E	Societies in harmony with environment	7, 12, 13, 15	• Global warming, climate change • Loss of biodiversity, environmental pollution	• Construct energy plants with low environmental impact (such as LNG plants) • Develop environmental technologies (such as carbon capture and storage technologies and de-SOx/de-NOx systems) • Promote wider use of renewable energy/hydrogen energy • Be environmentally conscious throughout all phases of EPC > P.61-63 Environmental Initiatives	Optimal energy mix Lower emissions of greenhouse gases
S	Working with local communities around the world	8, 9, 10	• Global economic disparities	• Maximize use of local resources where plants are built • Constructed plants support industrial development • Promote transfer of technologies throughout all phases of EPC > P.64 Working with Local Communities around the World	Contributions to economic and industrial development in emerging economies and resource-producing countries
S	Energy access	7, 12	• Rising global energy demand • Energy security for resource importers	• Construct various types of energy plants in regions worldwide • Promote wider use of renewable energy	Growth in energy supply
S	Human rights, employee motivation	5, 8, 10	• Greater responsibility for human rights in the supply chain • Impact on residents near plant construction sites • Diversity and globalization of human resources	• Human rights-based HR policy and labor management • Nurture mutual trust with and among employees • Respect local residents where plants are constructed, create employment opportunities > P.65 Human Rights, Diversity, Quality of Work	Social equality Workplaces where diverse human resources can contribute
S	Quality of life	3, 11	• Rising standards of living in emerging economies • Graying of societies in developed countries	• Construct medical facilities and pharmaceutical plants • Supply parts for medical devices (such as artificial organs) • Construct transportation infrastructure	Greater health and comfort
G	Corporate governance, risks management	16, 17	• Greater social demands on corporations • Infrastructure development in countries with high risks of bribery • Insufficient risk management	• Establish a framework for suitable corporate governance • Position compliance as the cornerstone of management • Establish a management system for comprehensive risk reduction > P.43-50 Management Structure, Corporate Governance	Contributing to society through sustainable growth

Achieving a Sustainable, Environmentally Friendly Society

Related SDGs: 7, 12, 13, 15

Basic Stance

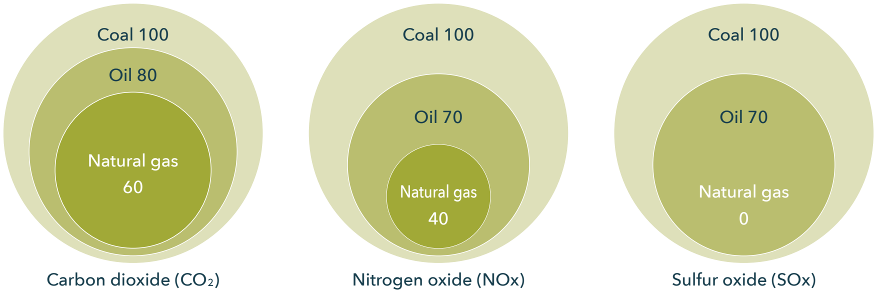
Amid expanding populations and rising standards of living in emerging countries, global demand for energy continues to increase and interest in preserving the Earth's environment and creating societies in harmony with nature is growing.
The JGC Group recognizes protecting nature and achieving harmony with the environment through our business activities as an important issue and based on our Environmental Policy we are making efforts to protect the Earth's environment, such as building LNG plants, which have an extremely small environmental impact, developing technology for the recycling of plastics, and promoting the spread of renewable energy.

Helping the Environment by Building LNG Plants

In order to bring about a low-carbon or carbon-free society, efforts to expand the use of renewable energy and the like are being actively promoted, but it is assumed that fossil fuels will continue to be expected to play a role for several decades.
Among fossil fuels, natural gas has a low volume of carbon dioxide (CO_2) and nitrogen oxide (NOx) compared to coal and oil when burned, and its use is being expanded globally as a source of energy with an extremely low environmental burden that emits no sulfur oxide.
In the JGC Group's primary business of energy plant construction, we are focusing on the construction of LNG (liquefied natural gas) plants. JGC possesses the technology to design and construct liquefaction equipment, the heart of LNG plants–something that few companies in the world are able to do. Since building JGC's first LNG plant in Brunei in 1973, over a period of 50 years we have designed and constructed LNG plants responsible for over 30% of global output, responding to our clients' needs and accomplishing their projects as the leading contractor of LNG plants.

Furthermore, in recent years we have been developing technology for offshore LNG plants constructing and improving the productivity of LNG plants using AI technology, and we are actively working towards creating an environmentally friendly society through our business activities.

Emissions of fossil fuel combustion products
(relative quantities with coal as 100)



Source: IEA "Natural Gas Prospects to 2010"

Track record of completed LNG plants

52 Trains

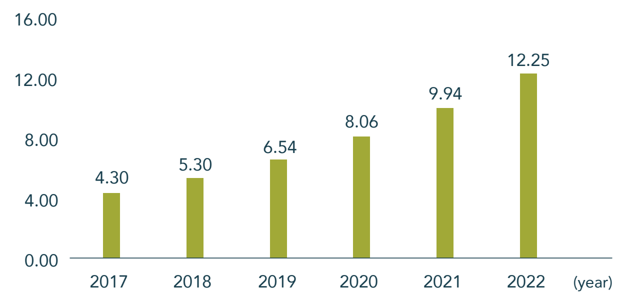
Total capacity: 162,470,000 T/Y

Corresponds to over 30% of global output

Efforts towards Accomplishing Carbon Recycling

In order to substantially reduce carbon dioxide (CO_2) output resulting from the use of fossil fuels in accordance with the 2°C scenario established in the 2016 Paris Agreement, we must pursue all technological options.
JGC is promoting proactive efforts in various fields of research and development to limit the CO_2 output resulting from fossil fuel use and to sequester carbon or accomplish effective carbon recycling.

Market scale predictions for CO_2 capture, utilization, and storage (CCUS)
(in billion dollars)



Source: Frost&Sullivan

JGC Initiatives to Accomplish Carbon Recycling

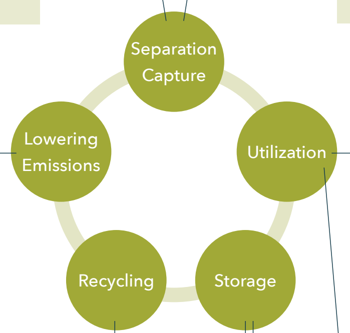
Technology Already in Use or Trial

High-Pressure Acid-gas Capture Technology

HiPACT®(High-Pressure Acid-gas Capture Technology) absorbs and separates CO_2 from natural and synthetic gases and captures it at high pressure. In partnership with BASF (Germany)

CO_2 Separation and Capture Process Using Zeolite Membranes

This highly effective CO_2 separation technology uses zeolite membranes (in partnership with NGK INSULATORS, LTD.)



Development of Technology for Using Ammonia as a Hydrogen Energy Carrier

JGC has developed a process for synthesizing ammonia based on hydrogen.
Using this ammonia as fuel for thermal power plants or boilers and industrial furnaces limits CO_2 emissions.

CO_2-EOR Technology for Oil-producing Countries

This technology increases oil field output by injecting CO_2 into oil fields whose productivity has declined.

CO_2 Carbonate Immobilization

Established a CCSU research group and engaged in corresponding research and development with Idemitsu Kosan, Ube Industries, and multiple universities.

Development of Gasification Technology for Plastic Waste

JGC is studying the development of a process that uses gasified plastic as fuel or chemical material.

Construction of CO_2 Capture and Storage (CCS) Plants

This technology captures CO_2 emitted by power plants before it is diffused in the atmosphere, transports it to a geological layer appropriate for underground storage, and safely stores it there for the long term.

- Completed construction of CCS plant in Algeria.
- Participation in CCS verification test operations in Tomakomai, Hokkaido, Japan.

Achieving a Sustainable, Environmentally Friendly Society

Contributions to the Expanded Use of Renewable Energy

The JGC Group has been involved in the construction of 23 solar power plants in Japan and the rest of the world, including projects still under way. The combined output of the plants is nearly 800 MW, or enough to power roughly 260,000 households for one year. JGC is one of the most experienced contractors in Japan's solar power plant construction market. In addition to construction work, the JGC Group provides plant operation and maintenance services and is involved in solar power plant operation helping to spur wider uptake of solar power in Japan through its involvement in various phases of solar power businesses. Leveraging our wealth of experience in solar power plant construction and operation in Japan, we are also working with JGC subsidiaries around the world to actively target solar power plant construction projects overseas. In Vietnam we completed a mega-solar power plant construction in December 2018 and two more in June 2019, and have built up a track record of power plants providing the energy equivalent to the annual consumption of 130,000 general households there.

Number of constructed plants

In Japan **20** projects

Overseas **3** projects

Total electricity produced

In Japan **800** MW

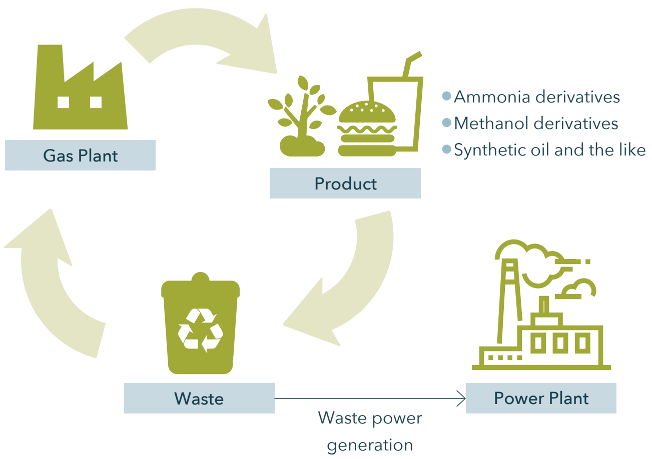
Overseas **190** MW

Plastic Recycling Initiative

The world currently produces about 380 million tons of plastic products per year and the quantity produced continues to rise year after year along with the development of emerging countries.

However, the recycling rate of plastic products is limited to approximately 9% and unrecycled plastic is discarded as trash. This plastic waste has a harmful impact on marine life and the natural environment, and the problem grows worse each year.

JGC considers this a grave issue and is promoting the development of technology that can be used to recycle plastic. We are focused on activities for protecting the Earth's environment, such as the construction of power plants using waste that includes plastic or the development of technology for recycling discarded plastic through gasification.



Working with Local Communities around the World

Related SDGs

Basic Stance

The JGC Group recognizes that it has a responsibility to contribute to the development of society through our business, in addition to increasing economic value. We are working to fulfill our corporate social responsibility while always seeking to coexist with society. Through our projects, we will contribute to the sustainable development of society, including regional communities, by creating employment opportunities and implementing various activities such as education, training, and guidance programs for local workers.

Industrial Development in Countries where Plants are Located

Building on Malaysian Industrial Development

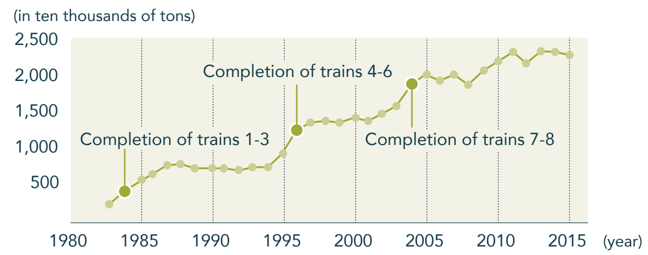
The Bintulu LNG Complex, which is owned by Malaysia's state-owned oil company Petronas, is one of the largest LNG production centers in Asia. The facility currently has nine trains with a combined annual LNG production capacity of roughly 26 million tons. For more than 30 years, starting in the 1980s, JGC has carried out engineering, procurement, construction, and commissioning (EPCC) work for all the plant's nine trains, as well as ongoing work to increase capacity and upgrade facilities after completion.

The Bintulu region in Sarawak, Malaysia, where the complex is located, is currently one of the major regions for the oil and gas industry in Malaysia, and the LNG plant that was constructed by JGC has played a central role in the industrial development of this region.

JGC's construction projects have not only created many jobs for local workers, but also by proactively utilizing Malaysian equipment manufacturers JGC has also contributed to the development of industry around our plants.

These efforts are greatly appreciated by Malaysia's state-owned oil company Petronas.

Development of Petronas' LNG Production volume



Promotion of Technology Transfer — Training Program for Personnel in Resource-producing Countries —

Over the past several decades, JGC Group has conducted various training programs for engineers and students specializing in fields such as chemical engineering from resource-producing countries for the purpose of strengthening relationships with such countries. Many of the participants in these programs are working and contributing to resource development and industrial development in their own countries after returning home.

Selected training programs completed in fiscal 2018

Companies and universities	Numbers of trainees	Duration
State Oil Company of the Azerbaijan Republic	4	8 months
King Fahd University of Petroleum and Minerals (Saudi Arabia)	4	2 months
Mozambique Ministry of Mineral Resources, and others*1	14	1 month
Other national oil/gas companies, etc. *2	112	Half a day to several days

*1 Contracted project from the Japan Oil, Gas and Metals National Corporation
*2 Contracted project from the Japan Cooperation Center Petroleum

Trainee from Saudi Arabia presenting a training outline

Human Rights, Diversity, Quality of Work

Related SDGs

Basic Stance

The promotion of fair human resources policies that value human rights is a fundamental policy at JGC Group, and through equitable hiring efforts and a diverse human resources system, we strive to diversify our organization. Furthermore, we consider building an environment that respects diverse lifestyles, increases the motivation of individual talent, and allows everyone to demonstrate their abilities and energy to the utmost extent to be extremely important, including from the perspective of broad-based value creation and sustainable growth.

Respect for the Diversity of Human Resources

Overseas large-scale projects are accomplished through teamwork by personnel with a wide variety of specializations and diverse cultures and values, and thus truly manifest diversity. Through a multitude of policies we are actively working towards the further promotion of diversity.

System and Policies for Accomplishing Diversity

Women

JGC Group has created a supportive environment, for example through an expansion of our family care system

People with Disabilities

JGC Group strives to strictly observe the employment ratio designated by the Act for Promotion of Employment of Persons with Disabilities and provides appropriate workplace environments

Seniors

By raising the retirement age to 65, we support the work of seniors at the front-lines and promote the inter-nal transfer of expertise

Global Human Resources

Promotion of recruitment and training of multicultural human resources able to work globally

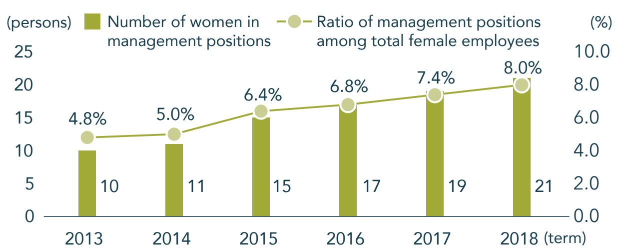
Promotion of Women's Careers

In the energy plant business, technicians from science and technology backgrounds, few of them women, previously comprised the majority of company staff, and due to factors such as carrying out construction work under harsh environmental conditions or a multitude of projects in Islamic countries, the field was characterized by obstacles to women's careers. However, at JGC Group we have been advancing the promotion of women to leadership positions and the creation of a supportive work environment for women through, e.g. discussions with female employees and expansion of our family care system, including working from home, and in recent years the number of female employees and managers has been steadily increasing.

Overview of JGC's Family Care System

- Sick/injured childcare leave
- Parental leave
- Reduced hours for childcare
- Parenting support work
- Nursing care leave
- Temporary retirement for nursing care
- Work from home
- Welcome Back system (system for rehiring former employees who retired due to their spouse's job relocation)

Number and ratio of women in management positions



Creating a Meaningful Workplace Environment

Through an expansion of our employee benefit system, which includes the introduction of a family care system that allows working from home and a special quarterly leave system for personnel stationed overseas, as well as through various efforts aimed at revitalizing employee communication such as Group Sports Day and JGC Family Day (bring-your-child-to-work day), JGC strives to promote workplaces that allow employees to find meaning in their work and life.

Ensuring Occupational Health and Safety

Basic Stance

Safety is one of the highest priorities for an engineering contractor. In accordance with JGC's Health and Safety Policy and the JGC Group Basic HSSE* Guidelines, and under the leadership of senior management, JGC works to prevent worksite accidents and traffic accidents involving its own employees and those of partner companies. Our efforts regarding safety are highly valued by our clients as well, and we will continue to rigorously enforce worksite and traffic safety measures across the JGC Group.

* HSSE stands for Health, Safety, Security and the Environment

HSSE Organization

The HSSE Committee discusses and deliberates on important safety matters for the whole JGC Group. It also reports to the Operations Steering Committee chaired by the president. Matters decided by the HSSE Committee are promptly implemented by the Company's divisions. An audit group appointed by the chairman of the HSSE Committee is tasked with conducting health and safety audits at principal construction sites in Japan and overseas, and then submitting audit reports to the Operations Steering Committee.

HSSE Organization

Overview of Fiscal 2018 Activities

In fiscal 2018, in order to reduce the risk of incidents, we thoroughly identified incidents and near-misses (HIPO: High Potential Incident and Near-miss) at construction sites, including not only serious incidents but also potential factors that could lead to serious accidents, analyzed the root causes of incidents, and thoroughly called for attention in domestic and overseas sites.

SHD Scenario-based HIPO Determination

* Tool for incident root analysis and risk reduction

As a result, the Lost Time Incident Rate (LTIR)*1 in company-wide disaster statistics for fiscal 2018 was 0.018, while the Total Recordable Injury Rate (TRIR)*2 was 0.11, both of which were an improvement over the fiscal 2017 results. Furthermore, no fatal disaster occurred in the JGC statistics for fiscal 2018 and regarding our traffic safety measures, no significant traffic accidents occurred in the JGC statistics.

*1 Lost Time Incident Rate (LTIR)
= (Number of accidents accompanied by lost work time) x 200,000 / (Total project working hours) (OSHA base)
*2 Total Recordable Injury Rate (TRIR)
= (Total number of recordable accidents) x 200,000 / (Total project working hours) (OSHA base)

JGC Safety Day 2018

Each year between June and July JGC holds a campaign focused on construction and traffic safety as an activity for the entire JGC Group and aims to raise group-wide HSSE awareness. On July 31, 2018, the HSSE Forum/Conference was held with management in attendance and under the banner of "Eliminating Major Disasters" featured lively debate on further increasing our HSSE performance.

Chapter 5

Business Outlook

This chapter explores Group value creation through a survey of current measures and projects in the total engineering and functional materials manufacturing business.

Total Engineering Business

Overseas oil and gas sector

(After the transition to the new Group structure on October 1, 2019, operations managed by JGC CORPORATION's Oil & Gas Project Company)

Covered Sectors

Engineering, procurement and construction of plants and facilities in sectors such as crude oil and gas gathering, refinery, gas processing, LNG (liquefied natural gas) and petrochemicals

New Contracts in Fiscal 2018

By securing new contracts including a large-scale LNG plant construction project in Canada in October 2018 and a chemical plant construction project in Thailand in December 2018, we have achieved a high standard of new contracts.

New Contracts Targeted for Fiscal 2019

600 billion yen

By securing new projects such as an expansion of LNG in Africa, a refinery upgrade and a gas processing in the Middle East, we are working on securing a high volume of contracts comparable to the previous term.

Director,
Senior Executive Officer,
Senior General Manager,
Oil & Gas Division
Tetsuya Muramoto
(scheduled to assume the positions of Member of the Board, Executive Vice President, General Manager, Group Strategic Planning Department of JGC HOLDING CORPORATION and Representative Director and President of JGC CORPORATION on October 1, 2019)

Business Policy

Despite fluctuations in the price of crude oil since October 2018, capital investment in the oil and gas sector in oil- and gas-producing countries has steadily developed of late. Due to the impact of stagnating crude oil prices since autumn 2015, plans for large-scale LNG in various global regions that had been delayed for several years have also begun moving again towards a final investment decision (FID), as represented by Shell's FID in October 2018 on its LNG Canada project, the contract for which was secured by a joint venture that includes JGC. We estimate that capital investment in the oil and gas sector will continue to develop reliably amid economic growth and environmental policies in resource-rich and emerging countries.

It is also expected that the trend of diversifying client demands and needs regarding quality, cost, and delivery term will further intensify. We will continue to strive for stable and sustained growth in this sector by, e.g. further strengthening our EPC competitiveness utilizing digitalization, perfecting our risk management for project operations, ascertaining client needs, and improving the strength of our proposals based on our technical expertise.

Projects in progress

LNG Canada Project

This project is led by Royal Dutch Shell and will liquefy and export abundant natural gas produced in Canada at a low cost. JGC formed a joint venture with the U.S.-based Fluor Corporation, which secured the contract for the project in May 2018. And the EPC contract came into effect by FID of the client in October 2018.

JGC plans to minimize work volume at the construction site by applying its J•I•Module™ (JGC Integrated Module) concept. As of August 2019, engineering and procuring are proceeding smoothly, the contract with the module fabricator has been completed, and planning for module fabrication beginning in autumn 2019 is in progress.

Project Summary

Client	LNG Canada
Construction site	British Columbia, Canada
Capacity	Annual production of 14 million tons (7 million tons each by two trains)
Contract format	Lump-sum contract
Execution framework	Joint venture consisting of JGC and Fluor Corporation

Overseas infrastructure sector

(Operations managed by JGC CORPORATION, Infrastructure Project Company on October 1, 2019)

Target Sectors

Engineering, procurement, and construction of infrastructure facilities focused on renewable energy power generation (solar, biomass, wind), LNG/LPG terminals, waste power generation, pharmaceuticals and food factories, hospitals, airports, non-ferrous metal smelting, etc.

New Contracts in Fiscal 2018

JGC secured contracts for two solar power projects in Vietnam in quick succession in May and June 2018, and its overseas subsidiary secured new contracts for the construction of a chemical receiving terminal and the expansion of a non-ferrous metal smelting plant.

New Contracts Target for Fiscal 2019

50 billion yen

JGC plans to submit bids for project solar power plants, waste power plants, LNG/LPG terminals, airports and the like in the Southeast Asia region, and continues to work towards achieving its new contracts target.

Senior Executive Officer,
Senior General Manager,
Overseas Infrastructure Project Division
Terumitsu Hayashi
(scheduled to assume the position of Member of the Board, Infrastructure Project Company President of JGC Corporation on October 1, 2019)

Business Policy

As economic growth, population increases, and urbanization of emerging nations continue, the need for infrastructure facilities and equipment that achieve both environmental compatibility and economic rationality is expanding dramatically. By responding to the conditions and growth phases of individual partner countries and regions and proposing solutions for respective issues, the Infrastructure Project Company aims to achieve infrastructure facilities and equipment that contribute to enhance clients' business value.

In the Asia region, our primary target market at this moment, we expect an expansion of the EPC project market for various infrastructure facilities, although diverse contractors have entered the market for individual countries, regions and projects, and the competitive environment is challenging. By utilizing our project management capabilities and diverse engineering element technology cultivated in the oil and gas sector, and with a "local production for local consumption" approach that increases our cost competitiveness through partnerships with overseas Group companies, we intend to steadily secure contracts for and execute profitable projects in the overseas infrastructure sector and establish this sector as a new pillar of revenue for the JGC Group.

Completed Projects

Solar Power Plant Project (Vietnam)

This project constructed one of Vietnam's largest mega-solar plants for the Gia Lai Electricity Joint Stock Company (part of Vietnam's TTC Group). By partnering with its subsidiary JGC Vietnam and achieving consistent project management, the project was successfully completed in December 2018.

In addition to this project, the JGC Group also secured contracts for two solar power plant construction projects in Vietnam's Tay Ninh province in May and July 2018, completing both contracts in spring 2019.

In Vietnam, which is trying to expand the use of renewable energy throughout the country, JGC is actively working with JGC Vietnam on securing further contracts for future mega-solar power plant construction projects, while also seeking to secure contracts for wind power plant construction projects.

Project Summary

Client	Gia Lai Electricity Joint Stock Company
Construction site	Krong Pa District, Gia Lai Province, Socialist Republic of Vietnam
Capacity	Approx. 70 megawatts (DC)
Contract format	Lump-sum contract
Execution framework	Joint venture consisting of JGC and JGC Vietnam

Total Engineering Business

Domestic Sector

(After the transition to the new Group structure, on October 1, 2019, operations managed by JGC JAPAN CORPORATION)

Covered Sectors

Engineering, procurement, construction and maintenance of plants and facilities for oil and gas, pharmaceuticals and laboratories, healthcare (medicine and welfare), renewable energy power generation, nuclear energy-related, and more

New Contracts for Fiscal 2018

133.3 billion yen

As a result of receiving steady new contracts in sectors such as solar power generation, chemicals, pharmaceuticals, and hospitals, and strong trends in the oil and gas sector maintenance business, as in the previous term JGC was able to secure contracts valued significantly over 100 billion yen.

New Contract Target for Fiscal 2019

150 billion yen

Based on expected robust capital investment in a broad range of sectors, such as refineries (expansions), specialty chemicals, renewable energies, pharmaceuticals, and hospitals, we are aiming to achieve a contract volume exceeding that of fiscal 2018.

Executive Officer
President and
Representative Director,
JGC PLANT INNOVATION
CO., LTD.

Shoji Yamada

(Expected to assume the position of Representative Director, Executive Officer and President of JGC JAPAN CORPORATION on October 1, 2019)

Business Policy

By reliably securing contracts and completing projects in the existing five core sectors of JGC's domestic EPC business – energy and chemicals, pharmaceuticals and laboratories, healthcare, nuclear energy, and power generation – while adding maintenance, formerly handled by JGC Plant Innovation, the newly created JGC JAPAN CORPORATION seeks to provide a stable foundation for JGC Group profits.

In Japan, which is facing problems typical of developed countries, such as a shrinking and aging population and an increasingly serious labor shortage, we intend to become an organization that diligently refines its technology while confronting these problems, and that shoulders the development of new added value and the promotion of partnerships for overseas business.

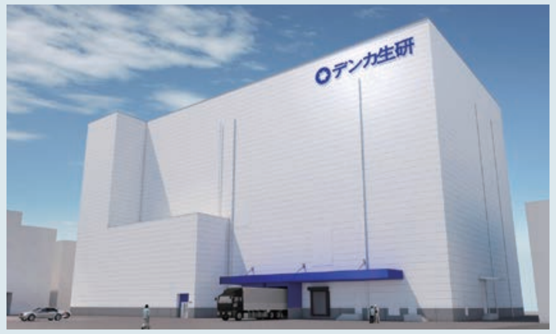
Completed and ongoing projects

Methionine Plant

Client: SUMITOMO CHEMICAL COMPANY LIMITED
Completion: fiscal 2018
Site of construction: Niihama City, Ehime Prefecture

This plant produces methionine, an additive in feed mixtures for poultry. By completing this project, JGC indirectly contributed to resolving issues with the global food supply.

Vaccine Plant



Client: DEMKA SEIKEN CO., LTD.
Contracted in: 2018 (in progress)

This facility will produce an undiluted solution for influenza vaccines. JGC will construct the plant that consistently produces high-quality vaccines by utilizing its engineering technology.

Functional Materials Production Business

(Operations managed by JGC Catalysts and Chemicals Ltd. and JAPAN FINE CERAMICS CO., LTD.)

Catalysts and fine chemicals sector

JGC Catalysts and Chemicals Ltd.
Representative Director,
President

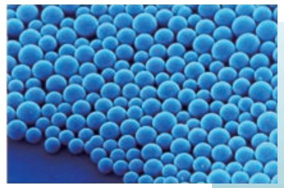
Toshiharu Hirai

The catalysts business environment is undergoing major changes, such as the restructuring of oil refineries due to the impact of the Act on Sophisticated Methods of Energy Supply Structures in Japan and increasing environmental compatibility and higher added value of products resulting from influence by International Maritime Organization (IMO) regulations. The fine chemicals business on the other hand requires the ability to respond to such rapid market changes as the increasing capacity of memory devices, the increasing resolution of displays, environmental regulations for cosmetics, and the polarization in product prices.

In these business circumstances, we will be expanding the scale of our sales and increasing the value of the functional materials production business within the JGC Group by swiftly developing and commercializing products with great appeal to satisfy on client needs.

Furthermore, through the production and sale of, e.g. silica beads added to cosmetics as environmentally friendly inorganic materials or highly refractive particles used as a coating for thin, high-grade eyeglass lenses, we also intend to keep contributing to a society in harmony with nature and to improving people's quality of life.

Oil Refining Catalysts
(FCC Catalysts)



Silica Beads

Cosmetics Ingredients
(Silica Beads, an Environmentally Friendly Inorganic Material)

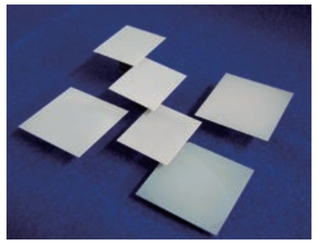
Fine Ceramics Sector

JAPAN FINE CERAMICS CO., LTD.
Representative Director, President

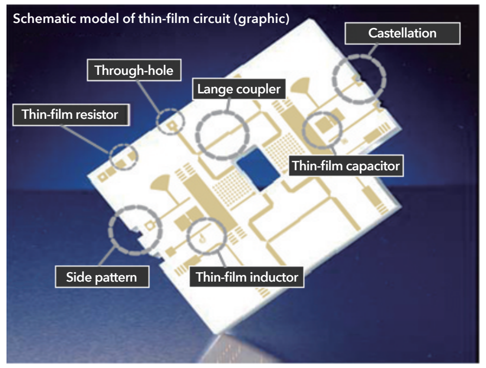
Shigeru Adachi

The fine ceramics sector's market environment is currently undergoing an adjustment phase due to the slowing Chinese economy in the wake of the U.S.-China trade dispute and such, as well as the impact of delayed investment by semiconductor manufacturers, but we nonetheless expect growth in the long term around capital investment related to semiconductors and FPD due to the spread of technology such as IoT and automated driving. Also, regarding high-thermal-conductivity silicon nitride substrates used in the power units of electric vehicles, the production technology we have developed is superior to existing methods both in terms of performance and cost, and I fully expect it to become a pillar of revenue for us in the future.

JAPAN FINE CERAMICS has achieved growth in the fine ceramics sector to date by creating a product lineup with a high share in niche markets. As in the expression "manufacturing is character-building," as long as each individual employee actively confronts the issues facing us, we can expect further advances and we will take on new challenges with the goal of becoming a global company that can deal with global markets as a manufacturer.



High-thermal-conductivity silicon nitride substrate



Coated integrated circuit

Chapter 6

Data Section

Six-Year Summary

(As of March 31 of each year)

Consolidated

(Millions of yen)

	2014	2015	2016	2017	2018	**2019**
Net Sales	675,821	799,076	879,954	693,152	722,987	**619,241**
Operating Income (Loss)	68,253	29,740	49,661	△21,496	21,495	**23,249**
Net Income (Loss) Attributable to Owners of Parent	47,178	20,628	42,793	△22,057	16,589	**24,005**
Total Current Assets	575,886	533,538	522,747	480,865	521,320	**541,747**
Total Current Liabilities	333,353	286,533	225,203	226,457	215,773	**223,559**
Working Capital	242,533	247,005	297,544	254,408	317,200	**318,188**
Current Ratio (%)	172.8	186.2	232.1	212.3	241.6	**242.3**
Net Property and Equipment	70,290	78,560	76,255	69,877	55,222	**55,440**
Total Assets	746,102	719,754	689,782	646,291	684,921	**708,855**
Long-term loans payable	13,001	22,715	20,991	12,631	4,294	**3,949**
Total Net Assets	379,882	388,496	419,673	383,260	395,779	**410,350**
New Contracts	818,161	769,680	320,626	506,293	547,826	**935,451**
Outstanding Contracts	1,767,814	1,772,036	1,192,625	1,019,621	846,157	**1,208,365**
Net Income (Loss) per Share (in yen)	186.90	81.73	169.60	△87.42	65.75	**95.14**
Cash Dividends per Share (in yen)	46.5	21.0	42.5	30.0	25.0	**28.5**
Number of Employees	7,005	7,332	7,489	7,554	7,610	**7,841**

Analysis of Performance and Financial Position

Our View of the Operating Environment

During the consolidated fiscal year under review, with regard to the oil and gas market (oil refinery, petrochemicals, gas processing, LNG, etc.), in the total engineering business crude oil prices were volatile from October 2018 onwards, but in addition to signs of capital investment plans being restarted in oil and gas-producing countries, repair and maintenance plans and suchlike were implemented in Japan, and the business environment as a whole is showing improvement.

In addition, for infrastructure in the same business (power generation, pharmaceutical, medical, etc.), a number of capital investment projects, including power generation for renewable energy, are being implemented primarily in Asia, while in Japan there has also been continuous capital investment in the areas of renewable energy and life sciences.

The functional materials manufacturing business saw a continuation of the generally solid market environment, and we worked to expand orders for catalysts, fine chemicals, and fine ceramics bound for both domestic and overseas markets.

Results of Operations

In the consolidated fiscal year under review, the JGC Group reported net sales of ¥619,241 million (down 14.3% year on year), an operating income of ¥23,249 million (compared with an operating income of ¥21,495 million in the previous fiscal year), an ordinary income of ¥32,304 million (compared with an ordinary income of ¥24,927 million in the previous fiscal year), and a net income attributable to owners of the parent of ¥24,005 million (compared with a net income of ¥16,589 million in the previous fiscal year). ROE was 6.0%.

● Assets

Current assets at the end of the consolidated fiscal year under review came to ¥541,747 million, an increase over the end of the previous fiscal year of ¥20,427 million. The main components of this were decreases in cash and deposits of ¥34,552 million, and of ¥42,445 million in short-term loans receivable, while notes receivable, accounts receivable from completed construction contracts, and other increased by ¥46,010 million and accounts receivable increased by ¥50,294 million. Total non-current assets were ¥167,107 million, an increase of ¥3,506 million over the end of the previous fiscal year. This was caused mainly by an increase of ¥3,011 million in investments and other assets.

As a result, total assets were ¥708,855 million, an increase of ¥23,934 million year on year.

● Liabilities

Current liabilities at the end of the consolidated fiscal year under review came to ¥223,559 million, an increase over the end of the previous year of ¥7,785 million. This was due primarily to a decline in short-term loans payable of ¥12,748 million, and an increase in advances received on uncompleted construction contracts of ¥26,676 million. Total non-current liabilities were ¥74,945 million, a year-on-year increase of ¥1,577 million. The main driver of this was an increase in provision for loss on business liquidation of ¥1,464 million.

As a result, total liabilities were ¥298,504 million, an increase of ¥9,362 million year on year.

● Net Assets

Net assets at the end of the consolidated fiscal year under review came to ¥410,350 million, an increase over the end of the previous fiscal year of ¥14,571 million. The main components of this were profit attributable to owners of the parent of ¥24,005 million, and cash dividends paid of ¥6,307 million.

Accordingly, the shareholders equity ratio was 57.7%, compared to 57.6% at the end of the previous fiscal year.

Segment Information

● Total Engineering Business

Having worked to win orders in Japan, Southeast Asia, the Middle East, Africa, North America, and Russia/CIS, in August 2018, JGC Group won an order for FEED contract to for the LNG plant expansion project in Nigeria. In addition, in October 2018, JGC Group won orders for a large-scale LNG plant construction project in Canada and a construction project involving the manufacturing facility for influenza vaccine in Niigata Prefecture, respectively and, in December 2018, an order for a chemical plant construction project in Thailand.

Moreover, in addition to beginning LNG production at the Ichthys LNG project in Australia in October 2018, in December 2018 LNG production also began at the third train of the Yamal LNG project in Russia.

To further strengthen our ability to win orders and execute projects, in April 2018 we concluded a cooperation agreement with China Offshore Oil Engineering Company (COOEC), which has high-level capabilities in the fabrication of modules used in modular construction techniques for LNG projects, which are effective in cases where plant construction on site is particularly challenging. In May 2018, we inked a cooperation agreement with US-based construction company S&B Engineers and Constructors, Ltd (S&B), which has an extensive track record in the Gulf of Mexico, with the aim of developing our joint order-winning and project execution capabilities in the US market, for which numerous projects are being planned.

In August 2018, we concluded a cooperation agreement with PETRONAS for the purpose of building a Hot Air Recirculation prediction system that uses AI and IoT to improve productivity at LNG plants.

In addition, as part of our initiatives to help realize a hydrogen energy-based society, we constructed pilot project facilities in Fukushima Prefecture for an ammonia synthesis process that uses a new ammonia catalyst to facilitate the production of ammonia, which is considered a promising hydrogen energy carrier. In October 2018, JGC recorded a world first by succeeding in synthesizing ammonia using hydrogen derived from renewable energy, and using the synthesized ammonia to generate power.

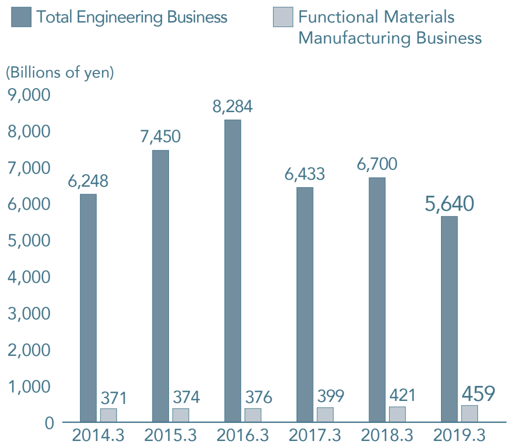
In preparation for full-scale entry into offshore wind power generation, a market that is expected to expand going forward, we established a new Wind Power Project Office in November 2018, as well as significantly improving the efficiency of the EPC business by utilizing digital technologies such as AI and IoT, and reforming project management, including the forecasting function, by drawing up an "IT Grand Plan 2030" in December 2018.

In February 2019, we began a joint demonstration test with the Japan Oil, Gas and Metals National Corporation in relation to a new CO_2 separation and capture technology using a CO_2 separation membrane developed by the Company in cooperation with NGK Insulators, Ltd. This technology aims to enable the separation and capture of CO_2 from gas entrained during crude oil production, and the reduction of costs for the removal of CO_2 when generating natural gas, thus simultaneously increasing energy supplies and conserving the global environment.

● Functional Materials Manufacturing Business

In the catalysts and fine chemicals area of the functional materials manufacturing business, although domestic sales of FCC catalysts declined, orders rose in Southeast Asia. Furthermore, sales of hydrotreating catalysts and chemical catalysts were strong, and coating materials for spectacles also grew. In fine ceramics, shipments of components for Organic Light Emitting Diode production equipment entered a slowdown, but demand for optical communication components, which had been hit by an inventory correction, began to recover. Orders were strong, centering on components used in semiconductor cleaning equipment and photolithography equipment.

Net Sales by Reporting Segment



Cash Flow

On a consolidated basis, cash and cash equivalents for the consolidated fiscal year under review (hereinafter referred to as "net cash"), declined by ¥74,552 million from the end of the previous fiscal year, to ¥160,841 million. With regard to net cash used in operating activities, profit before income taxes was ¥32,516 million, but as a result of factors such as an increase in notes and accounts receivable' trade, the result was a decline of ¥55,259 million, compared to an increase of ¥5,539 million the previous fiscal year. Net cash used in investing activities declined by ¥4,662 million, due to purchase of property, plant and equipment and etc., whereas the previous year it had increased by ¥11,736 million.

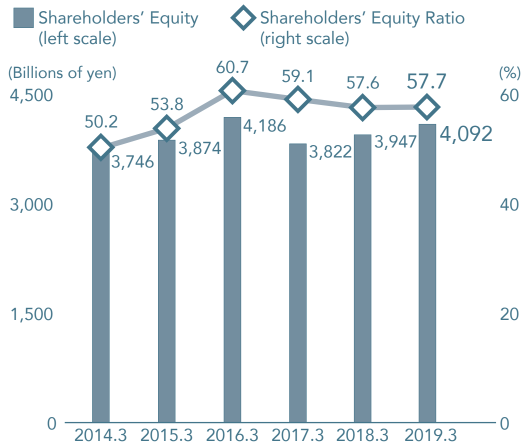
Net cash used in financing activities declined by ¥13,878 million (compared to an increase of ¥33,781 million the previous fiscal year), due to items such as a net decrease in short-term loans payable, and cash dividends paid.

	2017.3	2018.3	**2019.3**
Shareholders' equity ratio	59.1	57.6	**57.7**
Shareholders' equity ratio (market basis)	75.5	85.2	**52.4**
Interest-bearing liabilities to cash flow ratio	–	12.2	–
Interest coverage ratio	–	12.1	–

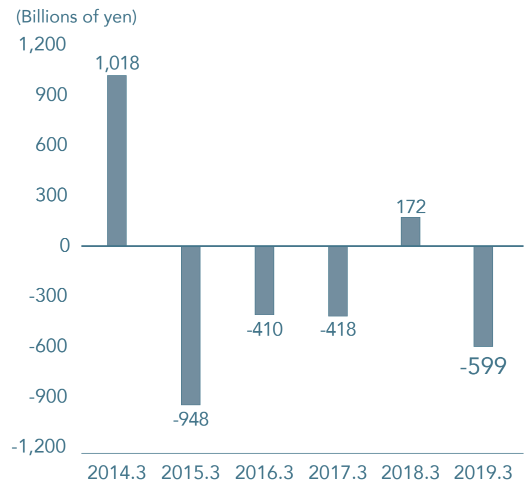
Notes: Shareholders' equity ratio: (Total net assets – Minority interests) / Total assets
Shareholders' equity ratio (market basis): Total market capitalization / Total assets
Interest-bearing liabilities to cash flow ratio: Interest-bearing liabilities / Cash flow
Interest coverage ratio: Cash flow / Interest expense

* All indicators are calculated using consolidated financial figures.
* "Interest-bearing liabilities" includes all liabilities on the consolidated balance sheet on which interest is paid. "Cash flow" is cash flow from operating activities shown in the consolidated statements of cash flow. "Interest expense" is the amount of interest paid shown in the consolidated statements of cash flows.
* In fiscal years where cash flow is negative, the interest-bearing liabilities to cash flow ratio and the interest coverage ratio are denoted by a dash.

Shareholders' Equity and Shareholders' Equity Ratio



Free Cash Flows



Analysis of New Contracts

In the fiscal year under review, orders received totaled ¥935,451 million. The tables below provide a breakdown of new contracts in the total engineering business by sector and region.

New Contracts by Business Sector (Billions of yen)

	2018.3	2019.3	2019.3 (Percentage of new contracts)
Oil and gas development projects	1,299	375	4.0%
Petroleum refining projects	199	454	4.9%
LNG projects	2,245	6,659	71.2%
Chemical projects	772	948	10.1%
Other projects	961	916	9.8%

New Contracts by Region (Billions of yen)

	2018.3	2019.3	2019.3 (Percentage of new contracts)
Japan	1,495	1,333	14.3%
Asia	594	948	10.1%
Africa	1,786	20	0.2%
Middle East	479	405	4.3%
Oceania and Other	1,122	6,646	71.1%

Business Outlook

● **Total Engineering Business**

In oil and gas, population growth in emerging countries is expected to lead to continued growth in demand for energy, and there are signs that previously stalled capital investment plans are gradually shifting towards implementation. Movement is also being seen in certain large LNG projects, suggesting that, despite the lack of visibility in some areas, the business environment for the JGC Group is beginning to improve.

In infrastructure, the market environment is expected to remain robust both in Asia and Japan. The JGC Group will make concerted efforts to increase added value and to strengthen cost competitiveness, with the aim of winning projects on favorable conditions.

● **Functional Materials Manufacturing Business**

In the catalysts and fine chemicals area of the Functional materials manufacturing business, in addition to increasing our share of the domestic FCC catalyst market, expanding sales in overseas markets, and winning new orders for chemical catalysts, we will increase sales of coatings for spectacles and for anti-glare materials used in flat panel displays, as well as opening up new applications, while also focusing on growing sales of substitute materials for microplastics used in cosmetics.

In the fine ceramics, in addition to continuing to focus on winning new orders for energy-related substrates, we will work on actively entering the markets for wireless communications, LED, and medical.

Business Risks

Risks associated with the businesses and other aspects of the JGC Group with the potential to have a material impact on the decisions of investors are as follows. Furthermore, forward-looking statements in the text are based on the available information as of March 31, 2019 and take into account the JGC Group as a whole.

1.Country risk

In the event of the emergence of so-called country risk, such as political instability, war, revolution, domestic conflict, terrorism, sudden changes in economic policies or conditions, or economic sanctions, the profitability of a project may deteriorate as a result of it being suspended, discontinued or postponed, which could affect the performance of the JGC Group. We work to mitigate these risks by implementing countermeasures, such as using trade insurance, and inserting force majeure clauses in our agreements with customers. As for measures to ensure the safety of employees posted overseas in the event of terrorism or conflict, etc., based on the basic rules for crisis management, the central role is played by the security countermeasures office. In normal times this office works to further strengthen security functions, such as strengthening the gathering and analysis of information, enhancing various preventative measures, and bolstering responses to emergencies, etc.

2.Natural disaster risk

In the event of natural disasters of unforeseen magnitude, such as earthquakes, torrential rain, or typhoons, project profitability may deteriorate as a result of the Total engineering business discontinuing or redoing construction work. In addition, operations at Functional materials manufacturing business facilities or factories may be halted, and production capacity may be hit, which could affect the performance of the JGC Group. We work to mitigate these risks by drawing up procedures for the head office, and for each construction site, facility, and factory to follow in the event of a natural disaster, and by implementing training and so on.

3.Foreign exchange volatility risk

Almost all of the overseas net sales of the JGC Group are generated under agreements denominated in foreign currencies, and in the event of fluctuations in foreign exchange rates, JGC Group orders, sales, and profits may be affected. We work to mitigate these risks through such measures as using project contracts denominated in multiple currencies, overseas procurement, issuing orders denominated in foreign currencies, and using forward foreign exchange agreements, as the situation requires.

4.Risk of construction worker shortages, substantial wage increases

In the event of a shortage of construction workers at the location where a plant is being constructed, or of a substantial increase in construction worker wages, this may result in the delay of construction works and increases in construction work costs, leading to deterioration in project profitability, which could affect the performance of the JGC Group. We work to mitigate these risks by monitoring and forecasting trends in the construction industry labor force for the major plant markets, by adopting modular construction techniques to minimize the amount of construction performed on site, and by working in cooperation with companies that have extensive track records in local construction.

5.Risk of substantial increases in material and equipment costs

Because in the Total engineering business there is a time lag between quotations received in relation to material and equipment needed for plant construction and the point at which orders are placed, in the event of substantial increases in costs for materials and equipment during this time, the procurement costs for materials and equipment may rise, leading to a deterioration in project profitability. In addition, in the event that raw material prices rise substantially, profit margins may fall, which could affect the performance of the JGC Group. We work to mitigate these risks by monitoring and forecasting price trends for raw materials and for materials and equipment, taking ongoing steps to improve the accuracy of forecasts, placing orders for materials and equipment early on, diversifying our sources of procurement, and passing on higher prices to customers.

6.Investment risk

The JGC Group invests in businesses in such areas as oil, gas and resources development, power generation, desalination, and medical. In the event of the occurrence of unforeseen circumstances in the investment environment as a result of sudden changes in the price of energy resources, such as crude oil or gas, the performance of the JGC Group could be affected. We work to mitigate these risks by further strengthening our monitoring of existing businesses, as well as by selecting new investments with extreme care.

7. Risk associated with the Ichthys LNG Project

Together with KBR (US) and Chiyoda Corporation, the JGC Group formed a joint-venture group (hereinafter, "the JV") that received orders in 2012 from INPEX Corporation subsidiary Ichthys LNG (hereinafter, "the customer") for engineering, procurement, and construction services in relation to an onshore natural gas liquefaction plant for the production of LNG (hereinafter, "the project"), which the JV has subsequently been executing.

The construction of the plant for this project has been completed, and it was handed over to the customer in August 2018. The JV has been unable to come to an agreement with the customer in relation to costs resulting from the expansion in the scope of the JV's services and other factors, which should be refunded under the terms of the contract, as well as in relation to certain monies that should be adjusted under the terms of the contract. Discussions continue, and in some cases have gone to arbitration. In addition, as part of the project the JV placed an order for the design and construction of combined cycle power generation facilities, under a fixed-price contract, with a consortium consisting of General Electric Company, General Electric International, Inc., UGL Engineering Pty Limited, and CH2M Hill Australia Pty. Limited (hereinafter, "the consortium"). However, part-way through the project the consortium unilaterally rescinded the contract and demanded additional payments, entering arbitration. The JV appointed a subcontractor to replace the consortium and, while constructing combined cycle power plant facilities, initiated legal action against the consortium, demanding that it bear the burden of the construction costs. Based on the situation described above, in the event that the results of discussions and arbitration between the JV and the customer or the consortium are disadvantageous to the JV, construction liabilities and advance costs may be partially unrecoverable, which could affect the performance of the JGC Group.

Consolidated Balance Sheets

(March 31, 2019 and 2018)

ASSETS	March 31 2019	March 31 2018	March 31 2019
	(Millions of yen)		(Thousands of U.S. dollars)
			(Note 1)
CURRENT ASSETS			
Cash and deposits (Notes 3, 12 & 15)	¥160,842	¥195,394	$ 1,449,158
Notes and accounts receivable (Notes 2, 9 & 15)	232,683	186,672	2,096,432
Inventories (Note 4)	36,028	29,881	324,605
Short-term loans receivable (Notes 2, 9,12 & 15)	4,029	46,475	36,301
Other current assets (Notes 2, 9 & 15)	109,341	63,189	985,143
Allowance for doubtful accounts	(1,175)	(291)	(10,587)
TOTAL CURRENT ASSETS	541,748	521,320	4,881,052
PROPERTY AND EQUIPMENT (Note 3)			
Land (Note 13)	18,491	18,550	166,601
Buildings and structures	59,915	56,057	539,823
Machinery and equipment	64,888	64,357	584,629
Construction in progress	935	2,386	8,424
Other	4,402	4,385	39,661
	148,631	145,735	1,339,138
Less accumulated depreciation	(93,191)	(90,513)	(839,634)
NET PROPERTY AND EQUIPMENT	55,440	55,222	499,504
INVESTMENTS AND OTHER ASSETS			
Investments in unconsolidated subsidiaries and affiliates (Notes 8 & 15)	37,929	30,220	341,734
Investment securities (Notes 3, 8 & 15)	31,065	39,599	279,890
Long-term loans receivable (Notes 2 & 15)		3,368	
Deferred tax assets (Note 11)	25,197	16,649	227,020
Net defined benefit asset (Note 5)	605	425	5,451
Other	16,871	18,118	152,005
TOTAL INVESTMENTS AND OTHER ASSETS	111,667	108,379	1,006,100
TOTAL ASSETS	¥ 708,855	¥ 684,921	$6,386,656

The accompanying notes are an integral part of these statements.

LIABILITIES AND NET ASSETS	March 31 2019	March 31 2018	March 31 2019
	(Millions of yen)		(Thousands of U.S. dollars)
			(Note 1)
CURRENT LIABILITIES			
Short-term loans and current maturities of long-term debt (Notes 2, 3 & 9)	¥ 614	¥ 13,363	$ 5,532
Notes and accounts payable (Notes 2, 9 & 15)	92,092	89,164	829,732
Advances received on uncompleted contracts (Note 2)	74,105	47,428	667,673
Reserve for job warranty costs	1,154	1,444	10,397
Reserve for losses on contracts	17,765	21,819	160,059
Income taxes payable	3,011	4,815	27,129
Other current liabilities (Notes 2, 9 & 15)	34,819	37,740	313,713
TOTAL CURRENT LIABILITIES	223,560	215,773	2,014,235
LONG-TERM LIABILITIES			
Long-term debt, less current maturities (Note s 3, 9 & 15)	53,949	54,295	486,071
Net defined benefit liability (Note 5)	16,180	16,121	145,779
Deferred tax liabilities for land revaluation (Notes 11 & 13)	1,015	1,015	9,145
Provision for loss on business liquidation	1,464		13,190
Other long-term liabilities (Notes 2 & 11)	2,337	1,938	21,056
TOTAL LIABILITIES	74,945	73,369	675,241
NET PROPERTY AND EQUIPMENT	298,505	289,142	2,689,476
CONTINGENCIES (Note 6)			
NET ASSETS (Note 7)			
SHAREHOLDERS' EQUITY			
Common stock			
Authorized — 600,000,000 shares, Issued — 259,052,929 shares in 2019 and 2018	23,511	23,511	211,830
Capital surplus	25,609	25,609	230,732
Retained earnings	376,145	355,572	3,388,999
Treasury stock, at cost 6,746,081 shares in 2019 and 6,745,465 shares in 2018	(6,739)	(6,737)	(60,717)
TOTAL SHAREHOLDERS' EQUITY	418,526	397,955	3,770,844
ACCUMULATED OTHER COMPREHENSIVE INCOME			
Net unrealized holding gains on securitie (Notes8 & 15)	7,240	11,169	65,231
Deferred losses on hedges (Note 9)	(277)	(518)	(2,496)
Revaluation reserve for land (Note 13)	(10,891)	(10,919)	(98,126)
Foreign currency translation adjustments	(3,968)	(1,170)	(35,751)
Remeasurements of defined benefit plans (Note 5)	(1,376)	(1,816)	(12,397)
TOTAL ACCUMULATED OTHER COMPREHENSIVE INCOME	(9,272)	(3,254)	(83,539)
NON-CONTROLLING INTERESTS	1,096	1,078	9,875
TOTAL NET ASSETS	410,350	395,779	3,697,180
TOTAL LIABILITIES AND NET ASSETS	¥ 708,855	¥ 684,921	$ 6,386,656

Data Section

Consolidated Statements of Income

March 31, 2019 and 2018

	Year ended March 31		Year ended March 31
	2019	2018	2019
	(Millions of yen)		(Thousands of U.S. dollars)
			(Note 1)
NET SALES (Note 10)	¥ 619,241	¥ 722,988	**$ 5,579,250**
COST OF SALES	574,279	678,039	**5,174,151**
Gross profit	44,962	44,949	**405,099**
SELLING, GENERAL AND ADMINISTRATIVE EXPENSES	21,712	23,454	**195,621**
Operating income	23,250	21,495	**209,478**
OTHER INCOME (EXPENSES)			
Interest and dividend income	6,454	5,681	**58,149**
Interest expense	(393)	(512)	**(3,541)**
Gain on sales of investment securities (Note 8)	2,372	51	**21,371**
Loss on impairment of fixed assets (Note 10)	(574)		**(5,172)**
Exchange loss, net	(528)	(2,620)	**(4,757)**
Equity in earnings of affiliates	3,218	814	**28,994**
Reversal of allowance for investment loss		774	
Provision for loss on business liquidation	(1,457)		**(13,127)**
Loss on sales of investment securities	(151)		**(1,360)**
Provision of allowance for doubtful accounts		(4,909)	
Gain on sales of shares of subsidiaries and affiliates		1,394	
Gain on transfer from business divestitures		8,936	
Bond issuance cost		(213)	
Other, net (Note 8)	325	775	**2,928**
	9,266	10,171	**83,485**
Income before taxes on income	32,516	31,666	**292,963**
TAXES ON INCOME (Note 11)			
Current	15,081	10,591	**135,877**
Deferred	(6,804)	4,263	**(61,303)**
NET INCOME	24,239	16,812	**218,389**
NET INCOME ATTRIBUTABLE TO NON-CONTROLLING INTERESTS	233	223	**2,099**
NET INCOME ATTRIBUTABLE TO OWNERS OF JGC CORPORATION	¥ 24,006	¥ 16,589	**216,290**

	Yen		U.S. dollars
AMOUNTS PER SHARE OF COMMON STOCK			(Note 1)
Net income	¥ 95.14	¥ 65.75	**$ 0.86**
Cash dividends applicable to the year	¥ 28.50	¥ 25.00	**$ 0.26**

The accompanying notes are an integral part of these statements.

Consolidated Statements of Comprehensive Income

March 31, 2019 and 2018

	Year ended March 31		Year ended March 31
	2019	2018	2019
	(Millions of yen)		(Thousands of U.S. dollars)
			(Note 1)
NET INCOME	¥ 24,239	¥ 16,812	**$ 218,389**
OTHER COMPREHENSIVE INCOME (Note 16)			
Net unrealized holding (losses) gains on securities (Notes 8 & 15)	(3,929)	3,214	**(35,400)**
Deferred gains (losses) on hedges (Note 9)	234	(73)	**2,108**
Translation adjustments	(3,157)	(414)	**(28,444)**
Remeasurements of defined benefit plans (Note 5)	480	726	**4,325**
Share of other comprehensive income of affiliates accounted for using equity method	86	28	**775**
TOTAL OTHER COMPREHENSIVE INCOME	¥ (6,286)	¥ 3,481	**$ (56,636)**
TOTAL COMPREHENSIVE INCOME	¥ 17,953	¥ 20,293	**$ 161,753**
Comprehensive income attributable to owners of JGC Corporation	¥ 17,727	¥ 20,057	**$ 159,717**
Comprehensive income attributable to non-controlling interests	¥ 226	¥ 236	**$ 2,036**

The accompanying notes are an integral part of these statements.

Data Section

Consolidated Statements of Changes in Net Assets

March 31, 2019 and 2018

	Common stock		Capital surplus	Retained earnings	Treasury stock, at cost	Net unrealized holding gains on securities (Notes 8 & 15)	Deferred losses on hedges (Note 9)	Revaluation reserve for land (Note 13)	Foreign currency translation adjustments	Remeasurements of defined benefit plans	Non-Controlling Interests
	Shares	Amount									
	(Thousands of shares)	(Millions of yen)									
Balance at April 1, 2017	259,053	¥ 23,511	¥ 25,609	¥ 341,764	¥ (6,736)	¥ 7,955	¥ (432)	¥ (6,131)	¥ (756)	¥ (2,569)	¥ 1,045
Net income attributable to owners of JGC Corporation				16,589							
Cash dividends				(7,569)							
Decrease of land revaluation				4,788							
Gain on disposal of treasury stock			0		0						
Net unrealized holding gains on securities						3,214					
Net deferred losses on hedges							(86)				
Foreign currency translation adjustments									(414)		
Increase of treasury stock					(1)						
Remeasurements of defined benefit plans										753	
Net changes during the year								(4,788)			33
Balance at March 31, 2018	259,053	¥ 23,511	¥ 25,609	¥ 355,572	¥ (6,737)	¥ 11,169	¥ (518)	¥ (10,919)	¥ (1,170)	¥ (1,816)	¥ 1,078
Net income attributable to owners of JGC Corporation				24,006							
Cash dividends				(6,308)							
Decrease of land revaluation				(28)							
Gain on disposal of treasury stock			0		0						
Effect of change in scope of equity method accounting				2,903							
Net unrealized holding losses on securities						(3,929)					
Net deferred gains on hedges							241				
Foreign currency translation adjustments									(2,798)		
Increase of treasury stock					(2)						
Remeasurements of defined benefit plans										440	
Net changes during the year								28			18
Balance at March 31, 2019	259,053	¥ 23,511	¥ 25,609	¥ 376,145	¥ (6,739)	¥ 7,240	¥ (277)	¥ (10,891)	¥ (3,968)	¥ (1,376)	¥ 1,096

		Common stock	Capital surplus	Retained earnings	Treasury stock, at cost	Net unrealized holding gains on securities (Notes 8 & 15)	Deferred losses on hedges (Note 9)	Revaluation reserve for land (Note 13)	Foreign currency translation adjustments	Remeasurements of defined benefit plans	Non-Controlling Interests
		(Thousands of U.S. dollars) (Note 1)									
Balance at April 1, 2018		$ 211,830	$ 230,732	$ 3,203,640	$ (60,699)	$ 100,631	$ (4,667)	$ (98,378)	$(10,542)	$ (16,361)	$ 9,713
Net income attributable to owners of JGC Corporation				216,290							
Cash dividends				(56,834)							
Decrease of land revaluation				(252)							
Gain on disposal of treasury stock			0		0						
Effect of change in scope of equity method accounting				26,155							
Net unrealized holding losses on securities						(35,400)					
Net deferred gains on hedges							2,171				
Foreign currency translation adjustments									(25,209)		
Increase of treasury stock					(18)						
Remeasurements of defined benefit plans										3,964	
Net changes during the year								252			162
Balance at March 31, 2019		$ 211,830	$ 230,732	$ 3,388,999	$ (60,717)	$ 65,231	$ (2,496)	$ (98,126)	$ (35,751)	$ (12,397)	$ 9,875

The accompanying notes are an integral part of these statements.

Consolidated Statements of Cash Flows

March 31, 2019 and 2018

	Year ended March 31		Year ended March 31
	2019	2018	2019
	(Millions of yen)		(Thousands of U.S. dollars)
			(Note 1)
CASH FLOWS FROM OPERATING ACTIVITIES			
Income before taxes on income and Non-Controlling Interests in earnings of consolidated subsidiaries	¥32,516	¥31,666	**$292,963**
Adjustments to reconcile income before taxes on income and Non-Controlling interests in earnings of consolidated subsidiaries to net cash (used in) provided by operating activities:			
Depreciation and amortization	7,291	7,427	**65,691**
Loss on impairment of fixed assets	574	-	**5,172**
Increase in allowance for doubtful accounts	887	6,445	**7,992**
Decrease in reserve for losses on contracts	(4,004)	(9,214)	**(36,075)**
Increase (Decrease) in net defined benefit plans	97	(65)	**874**
Interest and dividend income	(6,454)	(5,681)	**(58,149)**
Interest expense	393	512	**3,541**
Exchange (gain) loss	(581)	112	**(5,235)**
Equity in earnings of affiliates	(3,218)	(814)	**(28,994)**
Gain on sales of investment securities	(2,221)	(51)	**(20,011)**
Loss (Gain) on sales of property and equipment	6	(6,542)	**54**
Gain on transfer from business divestitures	-	(8,936)	**-**
Gain on sales of shares of subsidiaries and affiliates	-	(1,394)	**-**
(Increase) Decrease in notes and accounts receivable	(46,936)	5,061	**(422,885)**
(Increase) Decrease in inventories	(6,223)	13,931	**(56,068)**
Decrease in other assets	(52,533)	(21,377)	**(473,313)**
Increase (Decrease) in notes and accounts payable	4,011	(5,612)	**36,138**
Increase in advances received on uncompleted contracts	26,902	2,515	**242,382**
Other	4,124	1,343	**37,157**
Subtotal	(45,369)	9,326	**(408,766)**
Interest and dividends received	7,359	6,104	**66,303**
Interest paid	(471)	(460)	**(4,244)**
Income taxes paid	(16,778)	(9,431)	**(151,167)**
NET CASH (USED IN) PROVIDED BY OPERATING ACTIVITIES	(55,259)	5,539	**(497,874)**

	Year ended March 31		Year ended March 31
	2019	2018	2019
	(Millions of yen)		(Thousands of U.S. dollars)
			(Note 1)
CASH FLOWS FROM INVESTING ACTIVITIES			
Payments for purchases of property and equipment	(7,321)	(7,190)	**(65,961)**
Proceeds from sales of property and equipment	83	15,238	**748**
Payments for purchase of investment securities	(2,451)	(7,329)	**(22,083)**
Payments for purchases of intangible assets	(2,344)	(2,379)	**(21,119)**
Proceeds from sales of investment securities	5,943	1,947	**53,545**
Proceeds from business separation	-	14,879	**-**
Proceeds from liquidation of subsidiaries and affiliates	1,867	-	**16,821**
Other	(439)	(3,429)	**(3,955)**
NET CASH (USED IN) PROVIDED BY INVESTING ACTIVITIES	(4,662)	11,737	**(42,004)**
CASH FLOWS FROM FINANCING ACTIVITIES			
Proceeds from issuance of bonds	-	50,000	**-**
Net decrease in short-term loans	(5,222)	(786)	**(47,049)**
Proceeds from long-term loans	2	3	**18**
Repayments of long-term loans	(1,850)	(7,270)	**(16,668)**
Payments for purchase of treasury stock	(1)	(1)	**(9)**
Cash dividends paid	(6,311)	(7,569)	**(56,861)**
Cash dividends paid to non-controlling interests	(208)	(204)	**(1,874)**
Other	(289)	(391)	**(2,604)**
NET CASH (USED IN) PROVIDED BY FINANCING ACTIVITIES	(13,879)	33,782	**(125,047)**
EFFECT OF EXCHANGE RATE CHANGES ON CASH AND CASH EQUIVALENTS	(752)	(1,267)	**(6,775)**
NET (DECREASE) INCREASE IN CASH AND CASH EQUIVALENTS	(74,552)	49,791	**(671,700)**
CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR	235,394	185,603	**2,120,858**
INCREASE IN CASH AND CASH EQUIVALENTS FROM NEWLY CONSOLIDATED SUBSIDIARIES	-	-	**-**
CASH AND CASH EQUIVALENTS AT END OF YEAR (Note 12)	¥160,842	¥235,394	**$ 1,449,158**

The accompanying notes are an integral part of these statements.

Notes to Consolidated Financial Statements

Note 1 : SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

(a) BASIS OF PRESENTING CONSOLIDATED FINANCIAL STATEMENTS

The accompanying consolidated financial statements of JGC Corporation (Nikki Kabushiki Kaisha, the "Company") and its consolidated subsidiaries have been prepared in accordance with the provisions set forth in the Japanese Financial Instruments and Exchange Act and its related accounting regulations, and in conformity with accounting principles generally accepted in Japan ("Japanese GAAP"), which are different in certain respects as to application and disclosure requirements from International Financial Reporting Standards.

The accounts of consolidated overseas subsidiaries are prepared in accordance with either International Financial Reporting Standards or U.S. generally accepted accounting principles, with adjustments for the specified five items as applicable. The accompanying consolidated financial statements have been translated into English (with some expanded descriptions) from the consolidated financial statements of the Company prepared in accordance with Japanese GAAP and filed with the appropriate Local Finance Bureau of the Ministry of Finance as required by the Japanese Financial Instruments and Exchange Act. Certain supplementary information included in the statutory Japanese language consolidated financial statements, but not required for fair presentation, is not presented in the accompanying consolidated financial statements.

In addition, certain reclassifications have been made to present the accompanying consolidated financial statements in a format which is more familiar to readers outside Japan. Furthermore, certain reclassifications of previously reported amounts have been made to reconcile the consolidated financial statements for the year ended March 31, 2018 to the 2019 presentation.

The translation of the Japanese yen amounts into U.S. dollars is included solely for the convenience of readers outside Japan, using the prevailing exchange rate at March 31, 2019, which was ¥110.99 to U.S. $1. The convenience translations should not be construed as representations that the Japanese yen amounts could be converted into U.S. dollars at this or any other rate of exchange.

(b) PRINCIPLE OF CONSOLIDATION

The consolidated financial statements include the accounts of the Company and its significant subsidiaries that include less than 50% owned affiliates controlled through substantial ownership of majority voting rights or existence of substantial control. All significant inter-company transactions and account balances are eliminated in consolidation.

Investments in non-consolidated subsidiaries and affiliates over which the Company has the ability to exercise significant influence over operating and financial policies of the investees are accounted for by the equity method.

The number of consolidated subsidiaries and affiliates accounted for using the equity method at March 31, 2019 and 2018, was as follows:

	2019	2018
Consolidated subsidiaries	17	19
Affiliates under the equity method	2	1

Consolidated subsidiaries and affiliates accounted for using the equity method at March 31, 2019 and 2018, was as follows:

Consolidated subsidiaries	Location	Capital Share	
		2019	2018
JGC PLANT INNOVATION CO., LTD.	Japan	100%	100%
JGC PLANTECH AOMORI CO., LTD.	Japan	100%	100%
JGC Catalysts and Chemicals Ltd.	Japan	100%	100%
JAPAN FINE CERAMICS CO., LTD.	Japan	100%	100%
NIKKI BUSINESS SERVICES CO., LTD.	Japan	100%	100%
JAPAN NUS CO., LTD.	Japan	89%	89%
JGC-ITC Rabigh Utility Co., Ltd. *1	Japan	-	100%
JGC Mirai Solar Co., Ltd.	Japan	51%	51%
Kamogawa Mirai Solar Co., Ltd *1	Japan	-	100%
JGC SINGAPORE PTE LTD	Singapore	100%	100%
JGC PHILIPPINES, INC.	Philippines	100%	100%
JGC Gulf International Co. Ltd.	Saudi Arabia	100%	100%
JGC Gulf Engineering Co. Ltd.	Saudi Arabia	75%	75%
JGC OCEANIA PTY LTD	Australia	100%	100%
JGC America, Inc.	U.S.A.	100%	100%
JGC (GULF COAST), LLC	U.S.A.	100%	100%
JGC Exploration Eagle Ford LLC	U.S.A.	100%	100%
JGC EXPLORATION CANADA LTD.	Canada	100%	100%
PT. JGC INDONESIA	Indonesia	100%	100%

Affiliates under the equity method	Location	Capital Share	
		2019	2018
Nikki -Universal Co., Ltd.	Japan	50%	50%
Rabigh Arabian Water and Electricity Company *2	Saudi Arabia	25%	25%

Investments in non-consolidated subsidiaries and affiliates not accounted for by the equity method are carried at cost, adjusted for any substantial and non-recoverable decline in value. The effect on net income and retained earnings from those investments not accounted for under the equity method is immaterial.

*1 JGC-ITC Rabigh Utility Co., Ltd. was excluded from the scope of consolidation because the Company merged into it on February 1, 2019. And at the year ended March 31, 2019, Kamogawa Mirai Solar Co., Ltd was excluded from the scope of consolidation because this company was liquidated during this fiscal year.

*2 At the year ended March 31, 2019, Rabigh Arabian Water and Electricity Company was included in the scope of the equity method because its effect on the consolidated financial statement became significant.

(c) CONSOLIDATED STATEMENTS OF CASH FLOWS

In preparing the consolidated statements of cash flows, cash on hand, readily available deposits and short-term highly liquid investments with negligible risk of changes in value, and maturities not exceeding three months at the time of purchase are considered to be cash and cash equivalents.

(d) CONVERSION OF FOREIGN CURRENCIES AND TRANSLATION OF STATEMENTS

Receivables and payables denominated in foreign currencies are translated into Japanese yen at the year-end rates.

Balance sheets of consolidated overseas subsidiaries are translated into Japanese yen at the year-end rates except for net assets accounts, which are translated at the historical rates. Income statements of consolidated overseas subsidiaries are translated at average rates except for transactions with the Company, which are translated at the rates used by the Company.

(e) UNIFICATION OF ACCOUNTING POLICIES APPLIED TO FOREIGN SUBSIDIARIES FOR CONSOLIDATED FINANCIAL STATEMENTS

The Accounting Standards Board of Japan has issued ASBJ Practical Issues Task Force No. 18 "Practical Solution on Unification of Accounting Policies Applied to Foreign Subsidiaries for Consolidated Financial Statements" ("PITF No. 18"). PITF No. 18 requires that accounting policies and procedures applied by a parent company and its subsidiaries to similar transactions and events under similar circumstances should, in principle, be unified for the preparation of the consolidated financial statements. PITF No. 18, however, as a tentative measure, allows a parent company to prepare consolidated financial statements using foreign subsidiaries' financial statements prepared in accordance with either International Financial Reporting Standards or U.S. generally accepted accounting principles. In this case, adjustments for the following five items are required in the consolidation process so that their impacts on net income are accounted for in accordance with Japanese GAAP unless the impact is not material.

(1) Goodwill not subjected to amortization
(2) Actuarial gains and losses of defined benefit plans recognized outside profit or loss
(3) Capitalized expenditures for research and development activities
(4) Fair value measurement of investment properties, and revaluation of property, plant and equipment, and intangible assets
(5) Reclassification adjustments recognized in other comprehensive income on subsequent changes of fair value of equity instruments

(f) ALLOWANCE FOR DOUBTFUL ACCOUNTS

Notes and accounts receivable, including loans and other receivables, are valued by providing for individually estimated uncollectible amounts plus the amounts for probable losses calculated by applying a percentage based on collection experience to the remaining accounts.

In Investments And Other Assets, the amount of Allowance for doubtful accounts is deducted from long-term loans receivable and other.

(g) MARKETABLE SECURITIES, INVESTMENTS IN UNCONSOLIDATED SUBSIDIARIES AND AFFILIATES, AND INVESTMENT SECURITIES

The Company and its consolidated subsidiaries are required to examine the intent of holding each security and classify those securities as (1) securities held for trading purposes, (2) debt securities intended to be held to maturities, (3) equity securities issued by subsidiaries and affiliates, and (4) all other securities that are not classified in any of the above categories (hereafter, "available-for-sale securities"). The Company and its consolidated subsidiaries did not have the securities defined as (1) above for the years ended March 31, 2019 and 2018.

Available-for-sale securities with available fair market values are stated at fair market value. Unrealized gains and losses on these securities are reported, net of applicable income taxes, as a separate component of net assets. Realized gains and losses on the sale of such securities are computed using the moving-average method. Other securities with no available fair market value are stated at moving-average cost. Equity securities issued by subsidiaries and affiliates, which are not consolidated or accounted for using the equity method, are stated at moving-average cost.

If the market value of available-for-sale securities declines significantly, such securities are restated at fair market value and the difference between fair market value and the carrying amount is recognized as loss in the period of decline (See Note 8). For equity securities with no available fair market value, if the net asset value of the investee declines significantly, such securities are required to be written down to the net asset value with the corresponding losses in the period of decline. In these cases, such fair market value or the net asset value will be the carrying amount of the securities at the beginning of the next year.

(h) PROVISION FOR LOSSES ON GUARANTEEST

To provide for losses on guarantees, the Company makes a provision for potential losses at the end of the fiscal year.

(i) RECOGNITION OF SALES, CONTRACT WORKS IN PROGRESS AND ADVANCES RECEIVED ON UNCOMPLETED CONTRACTS

Sales on contracts for relatively large projects, which require long periods for completion and which generally include engineering, procurement (components, parts, etc.) and construction on a full-turnkey basis, are recognized on the percentage-of-completion method, primarily based on contract costs incurred to date compared with total estimated costs for contract completion.

Contract works in progress are stated at cost determined by a specific identification method and comprised of direct materials, components and parts, direct labor, subcontractors' fees and other items directly attributable to the contract, and job-related overheads. Selling, general and administrative expenses are charged to operations as incurred and are not allocated to contract job work costs.

The Company normally receives payments from customers on a progress basis in accordance with the terms of the respective construction contracts.

(j) INVENTORIES

Inventories of the Company and its consolidated subsidiaries are stated at cost determined using the moving-average method (which writes off the book value of inventories based on decreases in profitability) except for contract works in progress as stated in Note 1(j).

(k) OPERATING CYCLE

Assets and liabilities related to long-term contract jobs are included in current assets and current liabilities in the accompanying consolidated balance sheets, as they will be liquidated in the normal course of contract completion, although it may require more than one year.

(l) PROPERTY AND EQUIPMENT, DEPRECIATION AND FINANCE LEASES

Property and equipment are stated at cost, except for certain revalued land as explained in Note 13. Depreciation of property and equipment is calculated primarily using the straight-line method for buildings used for business operation and structures which were acquired since April 1, 2016, and the declining-balance method for other property and equipment over the estimated useful lives of the assets based on the Corporate Tax Code of Japan.

Expenditures for new facilities and those that substantially increase the useful lives of existing property and equipment are capitalized. Maintenance, repair and minor renewals are charged to expenses as incurred.

The cost and accumulated depreciation applicable to assets retired or otherwise disposed of are eliminated from the related accounts and the gain or loss on disposal is credited or charged to income.

(m) IMPAIRMENT OF FIXED ASSETS

The Company and its consolidated subsidiaries review their long-lived assets for impairment whenever events or changes in circumstances indicate the carrying amount of an asset or asset group may not be recoverable. An impairment loss would be recognized if the carrying amount of an asset or asset group exceeds the sum of the undiscounted future cash flows expected to result from the continued use and eventual disposition of the asset or asset group. The impairment loss would be measured as the amount by

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which the carrying amount of the asset exceeds its recoverable amount, which is the higher of the discounted cash flows from the continued use and eventual disposition of the asset or the net selling price at disposition.

(n) RETIREMENT AND SEVERANCE BENEFITS AND PENSION COSTS

(1) Employees' severance and retirement benefits

The Company and its consolidated subsidiaries provide two types of post-employment benefit plans, unfunded lump-sum payment plans and funded non-contributory pension plans, under which all eligible employees are entitled to benefits based on the level of wages and salaries at the time of retirement or termination, length of service and certain other factors.

The Company and its certain consolidated subsidiaries also have a defined contribution pension plan, which was transferred from a portion of defined benefit pension plan.

The Company and its consolidated subsidiaries provided allowance for employees' severance and retirement benefits at March 31, 2019 and 2018, based on the estimated amounts of projected benefit obligation, actuarially calculated using certain assumptions and the fair value of the plan assets at that date.

The method of attributing the amount of expected retirement benefit in each period is a benefit formula basis.

The Company and its consolidated subsidiaries recognize past service costs as expenses using the straight-line method over 12 years within the average of the estimated remaining service lives of the employees, and actuarial gains and losses as expenses using the declining-balance method over 12 years within the average of the estimated remaining service lives.

However, certain consolidated subsidiaries recognized actuarial differences as expenses in the period incurred.

(2) Officers' severance and retirement benefits

Consolidated domestic subsidiaries provide for liabilities in respect of lump-sum severance and retirement benefits to directors and corporate statutory auditors computed on the assumption that all officers retired at a year-end.

(o) RESERCH AND DEVELOPMENT COSTS

Research and development costs for the improvement of existing skills and technologies or the development of new skills and technologies, including basic research and fundamental development costs, are charged to income in the period incurred. The total amount of research and development expenses, included in Costs of Sales and Selling, General and Administrative expenses, was ¥ 5,825 million ($ 52,482 thousand) and ¥ 5,875 million, respectively, in 2019 and 2018.

(p) TAXES ON INCOME

The Company and its consolidated subsidiaries provide tax effects of temporary differences between the carrying amounts and the tax basis of assets and liabilities. The asset and liability approach is used to recognize deferred tax assets and liabilities for the expected future tax consequences of temporary differences.

(q) RESERVE FOR JOB WARRANTY COSTS

A reserve for the estimated cost of warranty obligations is provided for the Company's engineering, procurement and construction work at the time the related sales on contracts are recorded.

(r) RESERVE FOR LOSSES ON CONTRACTS

A reserve for losses on contracts is provided for an estimated amount of probable losses to be incurred in future years in respect of construction projects in progress.

(s) PROVISION FOR LOSS ON BUSINESSES LIQUIDATION

A reserve for business liquidation is provided for an estimated amount of probable losses to be incurred in future years in respect of losses associated with business reorganization and rationalization. Provision for loss on business liquidation was recorded in the amount of ¥ 1,457 million ($ 13,127 thousand) as of the year ended March 31, 2019, and it was the an estimated amount of probable losses to be incurred in future years in respect of losses associated with business reorganization and rationalization for the consolidated subsidiary JGC America, Inc.

(t) PER SHARE INFORMATION

Net income per share is computed by dividing net income available to common shareholders by the weighted-average number of common shares outstanding for the period.

Cash dividends per share have been presented on an accrual basis and include dividends to be approved after the balance sheet date but applicable to the year then ended.

(u) AMORTIZATION OF GOODWILL

Goodwill is amortized over five years on a straight-line basis. Negative goodwill is recognized in income statement immediately

(v) DERIVATIVE TRANSACTIONS AND HEDGE ACCOUNTING

The accounting standard for financial instruments requires companies to state derivative financial instruments at fair value and to recognize changes in the fair value as gains or losses unless the derivative financial instruments are used for hedging purposes.

If derivative financial instruments are used as hedges and meet certain hedging criteria, the Company and its consolidated domestic subsidiaries defer recognition of gains or losses resulting from changes in fair value of derivative financial instruments until the related losses or gains on the hedged items are recognized.

However, in cases where foreign exchange forward contracts are used as hedges and meet certain hedging criteria, foreign exchange forward contracts and hedged items are accounted for in the following manner (Allocation Method):

(1) If a foreign exchange forward contract is executed to hedge an existing foreign currency receivable or payable,

(i) The difference, if any, between the Japanese yen amount of the hedged foreign currency receivable or payable translated using the spot rate at the inception date of the contract and the book value of the receivable or payable is recognized in the statement of income in the period which includes the inception date, and

(ii) The discount or premium on the contract (that is, the difference between the Japanese yen amount of the contract translated using the contracted forward rate and that translated using the spot rate at the inception date of the contract) is recognized over the term of the contract.

(2) If a foreign exchange forward contract is executed to hedge a future transaction denominated in a foreign currency, the future transaction will be recorded using the contracted forward rate, and no gains or losses on the foreign exchange forward contract are recognized.

Also, where interest rate swap contracts are used as hedges and meet certain hedging criteria, the net amount to be paid or received under the interest rate swap contract is added to or deducted from the interest on the liabilities for which the swap contract was executed (Special method for interest rate swap).

(w) ACCRUED BONUSES TO DIRECTORS AND CORPORATE AUDITORS

Accrued bonuses to directors and corporate auditors are provided by the estimated amounts, which are obligated to pay to directors and corporate auditors after the fiscal year-end, based on services provided during the current period.

(x) ACCRUED BONUSES TO EMPLOYEES

Accrued bonuses to employees are provided by the estimated amounts, which are obligated to pay to employees after the fiscal year-end, based on services provided during the current period.

(y) ACCOUNTING STANDARDS NOT YET APPLIED, ETC.

(Accounting standards for revenue recognition)

◊ "Accounting Standard for Revenue Recognition" (ASBJ Statement No. 29 on March 30, 2018, Accounting Standards Board of Japan)

◊ "Implementation Guidance on Accounting Standard for Revenue Recognition" (ASBJ Guidance No.30 on March 30, 2018, Accounting Standards Board of Japan)

(1) Overview

The International Accounting Standards Board (IASB) and the Financial Accounting Standards Board (FASB) in the United States jointly developed comprehensive accounting standards for revenue recognition and published the "Revenue from Contracts with Customers" (IFRS 15 in the IASB and Topic 606 in the FASB) in May 2014. Given that IFRS 15 will be applied from a fiscal year starting on or after January 1, 2018 and that Topic 606 will be applied from a fiscal year starting after December 15, 2017, the Accounting Standards Board of Japan (ASBJ) has developed comprehensive accounting standards for revenue recognition and published them in step with the Implementation Guidance.

The basic policy of the ASBJ in developing accounting standards for revenue recognition is thought to be setting accounting standards, with the incorporation of the basic principles of IFRS 15 as a starting point, from a standpoint of comparability between financial statements, which is one of the benefits of ensuring consistency with IFRS 15, and to be adding alternative accounting treatments without losing comparability if there is an item that we should take into account in practices, etc. that have been conducted in Japan.

(2) Planned date of application

To be applied from the beginning of the fiscal year ending March 31, 2022.

(3) Impact of the application of the accounting standards, etc.

The amount of the impact on consolidated financial statements is currently under evaluation.

(z) CHANGES IN PRESENTATION

(Changes due to adoption of "Partial Amendments to Accounting Standard for Tax Effect Accounting")

Upon application of "Partial Amendments to Accounting Standard for Tax Effect Accounting" (ASBJ Statement No. 28, February 16, 2018 (hereinafter, "Statement No. 28")) from the beginning of the current fiscal year, the Company and its domestic subsidiaries changed the presentation and related notes of "Deferred tax assets" and "Deferred tax liabilities", such that "Deferred tax assets" and "Deferred tax liabilities" are classified as part of "Investments and other assets" and "Long term liabilities", respectively.

As the result, "Deferred tax assets" under "Current assets" on the consolidated balance sheets for the previous fiscal year decreased ¥ 11,654 million and "Deferred tax assets" under "Investment and other assets" increased ¥11,573 million. In addition, "Deferred tax liabilities" under "Long-term liabilities" decreased ¥ 81 million.

Net amount is used for "Deferred tax assets" and "Deferred tax liabilities" for the same taxable entity. This change reduced total assets by ¥81 million.

The notes related to tax effect accounting additionally included those described in notes 8 (excluding total amount of valuation reserves) and 9 of "Accounting Standard for Tax Effect Accounting", which are required in paragraphs 3 to 5 of Statement No. 28. However, this additional information corresponding to the previous fiscal year is not disclosed, in accordance with the transitional treatments prescribed in paragraph 7 of Statement No. 28.

(Consolidated statements of income)

(1) "Gain on sales of fixed assets", which was presented separately in the previous fiscal year, is included in "Other, net" under "Other income (expenses)" for the fiscal year ended March 31, 2019 due to its decreased materiality. As a result, ¥ 6,549 million presented as "Gain on sales of fixed assets" on the consolidated statements of income for the previous fiscal year has been reclassified as "Other, net".

(2) "Loss on valuation of investment securities", which was presented separately in the previous fiscal year, is included in "Other, net" under "Other income (expenses)" for the fiscal year ended March 31, 2019 due to its decreased materiality. As a result, ¥ 5,198 million presented as "Loss on valuation of investment securities" on the consolidated statements of income for the previous fiscal year has been reclassified as "Other, net".

(Consolidated statements of cash flows)

(1) "Loss on valuation of investment securities", which was presented separately under "Cash flows from operating activities'' in the previous fiscal year, is included in "Other" for the fiscal year ended March 31, 2019 due to its decreased materiality. As a result, ¥ 5,198 million presented as "Loss on valuation of investment securities" under "Cash flows from operating activities" on the consolidated statements of cash flows for the previous fiscal year has been reclassified as "Other".

(2) "Increase in short-term loans receivable", which was presented separately under "Cash flows from investing activities'' in the previous fiscal year, is included in "Other" for the fiscal year ended March 31, 2019 due to its decreased materiality. As a result, ¥ 4,993 million presented as "Increase in short-term loans receivable" under "Cash flows from investing activities" on the consolidated statements of cash flows for the previous fiscal year has been reclassified as "Other".

(3) "Net decrease in short-term loans'', which was included in "Other" under "Cash flows from financing activities'' in the previous fiscal year, is presented "Net decrease in short-term loans'' for the fiscal year ended March 31, 2019 due to its increased materiality. As a result, ¥ 1,177 million presented as "Other" under "Cash flows from financing activities" on the consolidated statements of cash flows for the previous fiscal year has been reclassified as ¥ 786 million of "Net decrease in short-term loans'' and ¥ 391 million of "Other".

Note 2 : RECEIVABLES FROM AND PAYABLES TO UNCONSOLIDATED SUBSIDIARIES AND AFFILIATES

Significant receivables from and payables to unconsolidated subsidiaries and affiliates at March 31, 2019 and 2018, were as follows:

	(Millions of yen)		(Thousands of U.S. dollars) (Note 1)
March 31,	2019	2018	2019
Notes and accounts receivable	¥ 1,453	¥ 989	$ 13,091
Short-term loans receivable	834	425	7,514
Other current assets	5,887	4,510	53,041
Long-term loans receivable	–	1,880	–
Short-term loans	121	90	1,090
Notes and accounts payable	1,316	670	11,857
Advances received on uncompleted contracts	1,869	–	16,839
Other current liabilities	608	286	5,477
Other non-current liabilities	–	10	–

Note 3 : BORROWINGS AND ASSETS PLEDGED AS COLLATERAL

Short-term loans consisted mainly of unsecured notes and bank overdrafts and bore interest at the annual rates of 0.27% and 2.31% at March 31, 2019 and 2018, respectively. Such loans are generally renewable at maturity.
Long-term debt consisted of the following:

	(Millions of yen)		(Thousands of U.S. dollars) (Note 1)
March 31,	2019	2018	2019
Secured Loans			
1.26% loans from banks due serially through 2032	¥ 3,817	¥ 4,088	$ 34,390
Unsecured Debt			
0.63% – 0.7% loans from banks and insurance companies due serially through 2020 (some debt has no fixed term)	525	2,124	4,730
0.09% – 0.20% bonds due serially through 2022	50,000	50,000	450,491
	54,342	56,212	489,611
Less current maturities	(393)	(1,917)	(3,540)
Long-term debt due after one year	¥ 53,949	¥ 54,295	$ 486,071

Assets pledged as collateral for short-term loans and long-term debt at March 31, 2019 and 2018, were as follows:

	(Millions of yen)		(Thousands of U.S. dollars) (Note 1)
March 31,	2019	2018	2019
Buildings and structures, at net book value	¥ 188	¥ 211	$ 1,694
Machinery and equipment, at net book value	4,340	4,649	39,103
Cash and deposits	1,103	1,041	9,938
Investments securities	1,900	1,638	17,118
Total	¥ 7,531	¥ 7,539	$ 67,853

The annual maturities of long-term debt outstanding at March 31, 2019 were as follows:

Year ending March 31,	(Millions of yen)	(Thousands of U.S. dollars) (Note 1)
2020	¥ 393	$ 3,540
2021	20,283	182,746
2022	288	2,595
2023	30,246	272,511
2024 and thereafter	3,132	28,219
Total	¥ 54,342	$ 489,611

Note 4 : INVENTORIES

Inventories at March 31, 2019 and 2018 were summarized as follows:

	Amount		
	(Millions of yen)		(Thousands of U.S. dollars) (Note 1)
March 31,	2019	2018	2019
Inventories:			
Contract works in progress	¥ 24,472	¥ 20,634	$ 220,488
Finished goods and merchandise	4,765	3,958	42,932
Works in process	2,810	2,453	25,317
Raw materials and others	3,981	2,836	35,868
Total	¥ 36,028	¥ 29,881	$324,605

Note 5 : RETIREMENT BENEFIT PLAN

The significant components of the pension plans as of and for the years ended March 31, 2019 and 2018 were summarized as follows:

(a) DEFINED BENEFIT PLAN

(1) Movement in retirement benefit obligations

	(Millions of yen)		(Thousands of U.S. dollars) (Note 1)
March 31,	2019	2018	2019
Balance at beginning of year	¥ 51,005	¥ 51,025	$ 459,546
Service cost	2,040	2,138	18,380
Interest cost	257	223	2,316
Actuarial (gain) loss	(357)	6	(3,217)
Benefits paid	(1,904)	(2,138)	(17,155)
Past service costs	(155)	(178)	(1,397)
Other	(157)	(71)	(1,414)
Balance at end of year	¥ 50,729	¥ 51,005	$ 457,059

(2) Movement in plan assets

	(Millions of yen)		(Thousands of U.S. dollars) (Note 1)
March 31,	2019	2018	2019
Balance at beginning of year	¥ 35,601	¥35,280	$ 320,759
Expected return on plan assets	529	524	4,766
Actuarial (gain) loss	(250)	416	(2,253)
Contributions paid by the employer	1,007	992	9,073
Benefits paid	(1,349)	(1,581)	(12,154)
Other	(79)	(30)	(712)
Balance at end of year	¥ 35,459	¥ 35,601	$ 319,479

(3) Reconciliation from retirement benefit obligations and plan assets to net defined benefit liability and asset.

	(Millions of yen)		(Thousands of U.S. dollars) (Note 1)
March 31,	2019	2018	2019
Funded retirement benefit obligations	¥ 37,434	¥ 38,117	$ 337,273
Plan assets	(35,459)	(35,601)	(319,479)
	1,975	2,516	17,794
Unfunded retirement benefit obligations	13,295	12,888	119,786
Allowance for officers' lump-sum severance benefits	305	292	2,748
Total net defined benefit liability	¥ 15,575	¥ 15,696	$ 140,328
Net defined benefit liability	16,180	16,121	145,779
Net defined benefit asset	(605)	(425)	(5,451)
Total net defined benefit liability	¥ 15,575	¥ 15,696	$ 140,328

(4) Retirement benefit expenses

	(Millions of yen)		(Thousands of U.S. dollars) (Note 1)
March 31,	2019	2018	2019
Service cost	¥ 2,040	¥ 2,139	$ 18,380
Interest cost	257	223	2,316
Expected return on plan assets	(529)	(524)	(4,766)
Net actuarial gain and loss amortization	716	675	6,450
Past service cost amortization	(234)	(222)	(2,108)
Total retirement benefit expenses	¥ 2,250	¥ 2,291	$ 20,272

(5) Remeasurements of defined benefit plans

	(Millions of yen)		(Thousands of U.S. dollars) (Note 1)
March 31,	2019	2018	2019
Actuarial losses	¥ 820	¥ 1,085	$ 7,388
Past service costs	(79)	(44)	(712)
Others	13	6	118
Total balance	¥ 754	¥ 1,047	$ 6,794

(6) Cumulative effect of remeasurements of defined benefit plans

	(Millions of yen)		(Thousands of U.S. dollars) (Note 1)
March 31,	2019	2018	2019
Actuarial losses that are yet to be recognized	¥ (3,736)	¥ (4,756)	$ (33,661)
Past service costs that are yet to be recognized	1,917	2,151	17,272
Total balance	¥ (1,819)	¥ (2,605)	$ (16,389)

(7) Plan assets
Components of plan assets

	March 31, 2019	March 31, 2018
Bonds	66%	66%
Equity securities	19	18
Cash and cash equivalents	1	1
Other	14	15
Total	100%	100%

Long-term expected rate of return
Current and target asset allocations and historical and expected returns on various categories of plan assets have been considered in determining the long-term expected rate of return.

(8) Actuarial assumptions
The principal actuarial assumptions at March 31, 2019 and 2018 were as follows:

	March 31, 2019	March 31, 2018
Discount rate	Principally 0. 25%	Principally 0. 25%
Long-term expected rate of return	Principally 1.5%	Principally 1.5%
Expected rate of salary increase	Principally 4.4%	Principally 4.1%

(b) DEFINED CONTRIBUTION PENSION PLAN
The Company's contributions were ¥ 432 million ($ 3,892 thousand) and ¥ 316 million for the years ended March 31, 2019 and 2018, respectively.

Note 6 : CONTINGENCIES

(1) It is a business practice in Japan for a company to guarantee the indebtedness of certain of its trading agents, suppliers, subcontractors and certain subsidiaries and affiliates. The aggregate amount of such guarantees was ¥ 10,633 million ($ 95,801 thousand) and ¥ 6,045 million at March 31, 2019 and 2018, respectively.

(2) The Company has guaranteed employees' housing loans and others from banks in the amount of ¥ 10 million ($ 90 thousand) and ¥ 11 million at March 31, 2019 and 2018, respectively.

Note 7 : NET ASSETS

Under the Japanese Corporation Law ("the Law") and regulations, the entire amount paid for new shares is required to be designated as common stock. However, companies may, by a resolution of the Board of Directors, designate an amount not exceeding one-half of the price of the new shares as additional paid-in capital, which is included in capital surplus.

Under the Law, companies are required to set aside an amount equal to at least 10% of cash dividends and other cash appropriations in a legal earnings reserve until the total of the legal earnings reserve and additional paid-in capital equals 25% of common stock.

Under the Law, the legal earnings reserve and additional paid-in capital can be used to eliminate or reduce a deficit by a resolution of the shareholders' meeting or can be capitalized by a resolution of the Board of Directors.

Additional paid-in capital and legal earnings reserve may not be distributed as dividends. Under the Law, however, additional paid-in capital and legal earnings reserve may be transferred to retained earnings by a resolution of the shareholders' meeting as long as the total amount of the legal earnings reserve and additional paid-in capital remained equal to or exceeded 25% of common stock.

The maximum amount that the Company can distribute as dividends is calculated based on the non-consolidated financial statements of the Company in accordance with the Law.

At the annual shareholders' meeting of the Company held on June 27, 2019, the shareholders approved cash dividends amounting to ¥7,190 million ($64,781 thousand). Such appropriations have not been accrued in the consolidated financial statements as of March 31, 2019. Such appropriations are recognized in the period in which they are approved by the shareholders.

Note 8 : INFORMATION ON SECURITIES

A. The following tables summarize acquisition costs and book values stated at the fair value of securities with available fair values as of March 31, 2019 and 2018.

AVAILABLE-FOR-SALE SECURITIES WITH AVAILABLE FAIR VALUES:

(1) Securities with book values exceeding acquisition costs:

	(Millions of yen)		
March 31, 2019	Acquisition cost	Book value	Difference
Equity securities	**¥8,563**	**¥18,468**	**¥9,905**

	(Millions of yen)		
March 31, 2018	Acquisition cost	Book value	Difference
Equity securities	¥10,132	¥25,817	¥15,685

	(Thousands of U.S. dollars) (Note 1)		
March 31, 2019	Acquisition cost	Book value	Difference
Equity securities	**$77,151**	**$166,393**	**$89,242**

(2) Securities with book values not exceeding acquisition costs:

	(Millions of yen)		
March 31, 2019	Acquisition cost	Book value	Difference
Equity securities	**¥0**	**¥0**	**¥(0)**

	(Millions of yen)		
March 31, 2018	Acquisition cost	Book value	Difference
Equity securities	¥908	¥340	¥(568)

	(Thousands of U.S. dollars) (Note 1)		
March 31, 2019	Acquisition cost	Book value	Difference
Equity securities	**$0**	**$0**	**$(0)**

B. The following tables summarize book values of securities with no available fair values or securities not valued by fair market prices as of March 31, 2019 and 2018.

(a) AVAILABLE-FOR-SALE SECURITIES WITH NO AVAILABLE FAIR VALUES:

	(Millions of yen)		(Thousands of U.S. dollars) (Note 1)
March 31,	**2019**	2018	**2019**
Non-listed equity securities	**¥10,839**	¥12,484	**$97,658**
Subscription certificate	**38**	38	**342**
Non-listed affiliate's bond	**1,720**	920	**15,497**
Total	**¥12,597**	¥13,442	**$113,497**

(b) UNCONSOLIDATED SUBSIDIARIES AND AFFILIATES:

	(Millions of yen)		(Thousands of U.S. dollars) (Note 1)
March 31,	**2019**	2018	**2019**
Securities of unconsolidated subsidiaries	**¥6,227**	¥5,957	**$56,104**
Securities of affiliates	**31,702**	24,263	**285,630**
Total	**¥37,929**	¥30,220	**$341,734**

(c) LOSS ON VALUATION OF INVESTMENT SECURITIES:

The Company recognized loss on valuation for investment securities in the amount of ¥8 million ($72 thousand) and ¥5,198 million for the years ended March 31, 2019 and 2018, respectively.

The Company and its consolidated domestic subsidiaries follow a policy of devaluation of available-for-sale securities. The policy of devaluation for the Company and its consolidated domestic subsidiaries is that if the available fair value of the securities declines by 50% or more, compared with acquisition cost, all the corresponding securities are devalued, as such decline is considered to be substantial and non-recoverable in value. In addition, in the case whereby the available fair value of the securities declines by more than 30% but by less than 50%, the Company and its consolidated domestic subsidiaries examine the recoverability of the fair value of the securities and devaluate if those securities are considered to be unrecoverable.

(d) SALES OF SECURITIES CLASSIFIED AS OTHER SECURITIES

	(Millions of yen)		(Thousands of U.S. dollars)
March 31,	**2019**	2018	**2019**
Equity securities:			
Sales proceeds	**¥5,890**	¥101	**$53,068**
Aggregate gain	**2,372**	51	**21,371**
Aggregate loss	**(151)**	–	**(1,360)**

Note 9 : DERIVATIVE TRANSACTIONS AND HEDGE ACCOUNTING

As explained in Note 1 (v), the accounting standard for financial instruments requires companies to state derivative financial instruments at fair value and to recognize changes in the fair value as gains or losses unless derivative financial instruments are used for hedging purposes.

The Company utilizes foreign currency forward contracts and interest rate swap contracts as derivative financial instruments only for the purpose of mitigating future risks of fluctuation of foreign currency exchange rates with respect to foreign currency receivable and payable and mitigating future risks of interest rate increases and lowering the financing costs with respect to borrowings.

Foreign currency forward contracts and interest rate swap contracts are subject to risks of foreign exchange rate changes and interest rate changes, respectively.

The derivative transactions are executed and managed in accordance with the established policies and within the specified limit on the amounts of derivative transactions allowed.

The following summarizes hedging derivative financial instruments used by the Company and hedged items:

Hedging instruments:	Hedged items:
Foreign currency forward contracts	Foreign currency accounts receivable, accounts payable and future transactions denominated in a foreign currency
Foreign currency deposit	Foreign currency payable and future transactions denominated in a foreign currency
Interest rate swap contracts	Interest on loans payable

The Company evaluates hedge effectiveness semi-annually by comparing the cumulative changes in cash flows from or the changes in fair value of hedged items and the corresponding changes in the hedging derivative instruments. However, where the principal conditions underlying the hedging instruments and the hedged assets or liabilities are similar, the evaluation of hedge effectiveness is not performed.

The Company's financial instrument counter-parties are all prime banks with high ratings, and the Company does not expect non-performance by the counter-parties.

(a) FAIR VALUE OF UNDESIGNATED DERIVATIVE FINANCIAL INSTRUMENTS

Fair value of undesignated derivative financial instruments as of March 31, 2019 and 2018, is summarized as follows:

	(Millions of yen)				
	Contract amount				
March 31, 2019	Due within one year	Due after one year	Total	Fair value	Profit or loss evaluation
Forward exchange contracts					
Sell U.S. dollars	**¥38,558**	**¥ -**	**¥38,558**	**¥27**	**¥27**
Buy GBP	**45**	**-**	**45**	**(0)**	**(0)**

	(Millions of yen)				
	Contract amount				
March 31, 2018	Due within one year	Due after one year	Total	Fair value	Profit or loss evaluation evaluation
Forward exchange contracts					
Sell U.S. dollars	¥36,971	¥ –	¥36,971	¥(2)	¥(2)
Buy Euro	264	–	264	2	2
Buy IDR	2,187	–	2,187	11	11

	(Thousands of U.S. dollars) (Note 1)				
	Contract amount				
March 31, 2019	Due within one year	Due after one year	Total	Fair value	Profit or loss evaluation evaluation
Forward exchange contracts					
Sell U.S. dollars	**$347,401**	**$ –**	**$347,401**	**$243**	**$243**
Buy GBP	**405**	**–**	**405**	**(0)**	**(0)**

Fair value of forward exchange contracts is stated based on the quoted price from banks.

(b) FAIR VALUE OF DERIVATIVE FINANCIAL INSTRUMENTS DESIGNATED AS HEDGING INSTRUMENTS

Fair value of derivative financial instruments designated as hedging instruments as of March 31, 2019 and 2018 is summarized as follows:

March 31, 2019			(Millions of yen)		
			Contract amount		
Accounting method	Hedging instruments	Hedged item	Contract amount	Portion over one year	Fair value
Allocation method (Note 1(v))	Forward exchange contracts Buy Euro	Accounts payable	**¥758**	**¥ –**	**¥(50)**
Allocation method (Note 1(v))	Forward exchange contracts Buy AUD	Accounts payable	**22,798**	**–**	**(215)**
Allocation method (Note 1(v))	Forward exchange contracts Sell U.S. dollars	Accounts receivable	**4,942**	**–**	**(6)**
Allocation method (Note 1(v))	Forward exchange contracts Sell Euro	Accounts receivable	**113**	**–**	**(1)**
Principal method (Note 1(v))	Interest rate swap contracts Receive variable rate and Pay fixed rate swap	Long-term debt	**3,442**	**3,160**	**(239)**

March 31, 2018			(Millions of yen) Contract amount		
Accounting method	Hedging instruments	Hedged item	Contract amount	Portion over one year	Fair value
Allocation method (Note 1(v))	Forward exchange contracts Buy Euro	Accounts payable	¥ 4,406	¥ 266	¥ (63)
Allocation method (Note 1(v))	Forward exchange contracts Buy AUD	Short-term loans receivable	13,618	–	(565)
Principal method (Note 1(v))	Interest rate swap contracts Receive variable rate and Pay fixed rate swap	Long-term debt	3,536	3,244	(239)

March 31, 2019			(Thousands of U.S. dollars) (Note 1) Contract amount		
Accounting method	Hedging instruments	Hedged item	Contract amount	Portion over one year	Fair value
Allocation method (Note 1(v))	Forward exchange contracts Buy Euro	Accounts payable	$ 6,829	$ –	$ (450)
Allocation method (Note 1(v))	Forward exchange contracts Buy AUD	Accounts payable	205,406	–	(1,937)
Allocation method (Note 1(v))	Forward exchange contracts Sell U.S. dollars	Accounts receivable	44,527	–	(54)
Allocation method (Note 1(v))	Forward exchange contracts Sell Euro	Accounts receivable	1,018	–	(9)
Principal method (Note 1(v))	Interest rate swap contracts Receive floating and Pay fixed	Long-term debt	31,012	28,471	(2,153)

Fair value of forward exchange contracts is stated based on the quoted price from banks.

Note 10 : SEGMENT INFORMATION

(a) OVERVIEW OF REPORTED SEGMENTS

The reported segments of the Company are those units for which separate financial statements can be obtained among the constituent units of the Company and regularly examined by Chief Executive Officer for decisions on the allocation of management resources and for assessing business performance. The operations of the Company and its consolidated subsidiaries are classified into two reportable segments: the total engineering business and the functional materials manufacturing business.

Major activities included in the total engineering business are design, procurement, construction and performance test services of machinery and plants for petroleum, petroleum refining, petrochemicals, gas, chemicals, nuclear energy, metal refining, biochemical, food, pharmaceuticals, medical, logistics, information technology, environment conservation and pollution control. Major activities in the functional materials manufacturing business include manufacturing and distribution of chemical and catalyst products (FCC catalysts, hydro treating catalysts, deNOx catalysts, petrochemical catalysts, etc.) and new functional material products (colloidal silica, coating materials for surface treatment, material for semiconductors and cosmetic products, etc.).

The reported segment presented "Catalysts and fine products" was changed to "Functional materials manufacturing" from the year ended March 31, 2019. This change was only the change of reported segment name, therefore no effect on the segment information. In addition, the reported segment for the year ended March 31, 2018, was also presented by the name after change.

The accounting policies of the segments are substantially the same as those described in the significant accounting policies in Note 1.

The following is information about sales and profit or loss by reported segments for the years ended March 31, 2019 and 2018:

(Millions of yen)

	Reported Segment						
Year ended March 31, 2019	Total engineering	Functional Materials Manufacturing	Sub-Total	Other	Total	Adjustment	Consolidated
Net sales:							
External customers	¥ 564,045	¥ 45,997	¥ 610,042	¥ 9,199	¥ 619,241	¥ –	¥ 619,241
Inter-segment	177	8	185	2,081	2,266	(2,266)	–
Total	¥ 564,222	¥ 46,005	¥ 610,227	¥ 11,280	¥ 621,507	¥ (2,266)	¥ 619,241
Segment profit	¥ 13,778	¥ 7,400	¥ 21,178	¥ 1,990	¥ 23,168	¥ 82	¥ 23,250
Segment assets	¥ 629,975	¥56,218	¥ 686,193	¥ 29,915	¥ 716,108	¥ (7,253)	¥ 708,855
Impairment	¥ 574	¥ –	¥ 574	¥ –	¥ 574	¥ –	¥ 574
Depreciation and amortization	¥ 3,353	¥ 2,496	¥ 5,849	¥ 1,446	¥ 7,295	¥ (4)	¥ 7,291
Capital expenditures	¥ 5,041	¥ 3,249	¥ 8,290	¥ 337	¥ 8,627	¥ –	¥ 8,627

*1.The "Other" category includes business activities of consulting, management of real estate, power and water supply and oil and gas production.
*2.Adjustments for segment profit, segment assets and other items represent the elimination of intersegment transactions.
*3.Segment profit is reconciled to operating income of consolidated statements of operations.

(Millions of yen)

	Reported Segment						
Year ended March 31, 2018	Total engineering	Functional Materials Manufacturing	Sub-Total	Other	Total	Adjustment	Consolidated
Net sales:							
External customers	¥ 670,087	¥ 42,141	¥ 712,228	¥ 10,760	¥ 722,988	¥ –	¥ 722,988
Inter-segment	420	5	425	2,127	2,552	(2,552)	–
Total	¥ 670,507	¥ 42,146	¥ 712,653	¥ 12,887	¥ 725,540	¥ (2,552)	¥ 722,988
Segment profit	¥ 11,542	¥ 7,199	¥ 18,741	¥ 2,607	¥ 21,348	¥ 147	¥ 21,495
Segment assets	¥ 598,158	¥ 50,514	¥ 648,672	¥ 46,193	¥ 694,865	¥ (9,944)	¥ 684,921
Depreciation and amortization	¥ 2,933	¥ 2,426	¥ 5,359	¥ 2,124	¥ 7,483	¥ (56)	¥ 7,427
Capital expenditures	¥ 5,854	¥ 2,635	¥ 8,489	¥ 578	¥ 9,067	¥ –	¥ 9,067

*1.The "Other" category includes business activities of consulting, management of real estate, power and water supply and oil and gas production.
*2.Adjustments for segment profit, segment assets and other items represent the elimination of intersegment transactions.
*3.Segment profit is reconciled to operating income of consolidated statements of operations.

(Thousands of U.S. dollars) (Note 1)

	Reported Segment						
Year ended March 31, 2019	Total engineering	Functional Materials Manufacturing	Sub-Total	Other	Total	Adjustment	Consolidated
Net sales:							
External customers	$ 5,081,944	$ 414,425	$ 5,496,369	$ 82,881	$ 5,579,250	$ –	$ 5,579,250
Inter-segment	1,595	72	1,667	18,749	20,416	(20,416)	–
Total	$ 5,083,539	$ 414,497	$ 5,498,036	$ 101,630	$ 5,599,666	$ (20,416)	$ 5,579,250
Segment profit	$ 124,137	$ 66,673	$ 190,810	$ 17,929	$ 208,739	$ 739	$ 209,478
Segment assets	$ 5,675,962	$ 506,514	$ 6,182,476	$ 269,528	$ 6,452,004	$ (65,348)	$ 6,386,656
Impairment	$ 5,172	$ –	$ 5,172	$ –	$ 5,172	$ –	$ 5,172
Depreciation and amortization	$ 30,210	$ 22,489	$ 52,699	$ 13,028	$ 65,727	$ (36)	$ 65,691
Capital expenditures	$ 45,419	$ 29,273	$ 74,692	$ 3,036	$ 77,728	$ –	$ 77,728

(b) RELATED INFORMATION

I. INFORMATION BY GEOGRAPHY

(1) Net Sales

Year ended March 31, 2019

Japan	East and Southeast Asia	Middle East	Africa	Oceania	Other	Total
¥ 195,329	**¥ 64,058**	**¥ 92,302**	**¥ 93,126**	**¥ 30,669**	**¥ 143,757**	**¥ 619,241**

*1. Net sales are classified by the place of customers' address.
*2. Oceania includes Australia ¥ 30,669 million ($ 276,322 thousand).
*3. Other includes Russia ¥ 110,590 million ($ 996,396 thousand).

Year ended March 31, 2018

Japan	East and Southeast Asia	Middle East	North America	Oceania	Other	Total
¥ 148,300	¥ 78,566	¥ 115,909	¥ 47,148	¥ 146,763	¥ 186,302	¥ 722,988

*1. Net sales are classified by the place of customers' address.
*2. Oceania includes Australia ¥ 146,763 million.
*3. Other includes Russia¥ 107,044 million.

Year ended March 31, 2019

Japan	East and Southeast Asia	Middle East	Africa	Oceania	Other	Total
$ 1,759,879	**$ 577,151**	**$ 831,624**	**$ 839,049**	**$ 276,322**	**$ 1,295,225**	**$ 5,579,250**

(2) Property and equipment

	(Millions of yen)		(Thousands of U.S. dollars) (Note 1)
	Years ended March 31,2019	Year ended March 31, 2018	**March 31, 2019**
Japan	**¥ 49,734**	¥ 49,471	**$ 448,094**
Other	**5,706**	5,751	**51,410**
Total	**¥ 55,440**	¥ 55,222	**$ 499,504**

II. INFORMATION BY MAJOR CUSTOMERS

The following is information on major customers that account for 10% or more of the net sales on the consolidated statements of income for the years ended March 31, 2019 and 2018:

Year ended March 31, 2019	(Millions of yen)	(Thousands of U.S. dollars) (Note 1)	Related segments
JSC YAMAL LNG	**¥ 110,467**	**$ 995,288**	**Total engineering**
SONATRACH SPA	**¥ 67,220**	**$ 605,640**	**Total engineering**

Year ended March 31, 2018	(Millions of yen)	Related segments
Ichthys LNG Pty Ltd	¥ 138,850	Total engineering
JSC YAMAL LNG	¥ 106,703	Total engineering

III. INFORMATION ON IMPAIRMENT LOSS

This information is not disclosed, as this information is disclosed in Note 10 (a) for the years ended March 31, 2019 and 2018.

Note 11 : TAXES ON INCOME

Income taxes applicable to the Company and its domestic consolidated subsidiaries comprise corporate taxes, inhabitants' taxes and enterprise taxes which, in the aggregate, resulted in statutory tax rates of 30.6% for the year ended March 31, 2019 and 30.9% for the year ended March 31, 2018.

(1) The following table summarizes the differences between the statutory tax rate and the Company's and its consolidated subsidiaries' effective tax rate for financial statement purposes for the years ended March 31, 2019 and 2018, follows:

	2019	2018
Statutory tax rate	**30.6%**	30.9%
Non-deductible expenses	**0.9**	1.2
Non-taxable dividend income	**(2.0)**	(2.0)
Tax credit for research and development expenses	**(2.3)**	(1.6)
Foreign tax credit	**(2.3)**	5.5
Tax loss carryforwards with unrecognized tax effects	**2.0**	3.2
Valuation allowances	**2.6**	9.7
Foreign income not subject to enterprise tax	**(4.0)**	(0.4)
Other	**0.0**	0.4
Effective tax rate	**25.5%**	46.9%

(2) Significant components of the Company's and its consolidated subsidiaries' deferred tax assets and liabilities as of March 31, 2019 and 2018, were as follows:

	(Millions of yen)		(Thousands of U.S. dollars) (Note 1)
March 31,	**2019**	2018	**2019**
Deferred tax assets:			
Accounts payable	**¥ 12,371**	¥ 2,574	**$ 111,460**
Loss on valuation of investment securities	**5,826**	6,097	**52,491**
Reserve for losses on contracts	**5,350**	6,194	**48,203**
Net defined benefit liability	**4,794**	4,797	**43,193**
Tax loss carryforward *2	**14,442**	15,634	**130,120**
Allowance for doubtful accounts	**2,092**	1,734	**18,849**
Accrued bonuses to employees	**2,043**	2,070	**18,407**
Foreign tax credit	**1,586**	1,750	**14,290**
Adjustment of percentage completion method	**759**	1,596	**6,838**
Depreciation	**705**	620	**6,352**
Provision for loss on business liquidation	**446**	-	**4,018**
Reserve for job warranty costs	**341**	435	**3,072**
Loss on valuation of fixed assets	**311**	257	**2,802**
Other	**1,513**	1,623	**13,632**
Subtotal deferred tax assets	**52,579**	45,381	**473,727**
Valuation allowance for tax loss carryforward *2	**(14,442)**	-	**(130,120)**
Valuation allowance for deductible temporary difference	**(9,326)**	-	**(84,025)**
Total valuation allowances *1	**(23,768)**	(23,191)	**(214,145)**
Total deferred tax assets	**28,811**	22,190	**259,582**
Deferred tax assets:			
Net unrealized holding gains on securities	**(3,192)**	(4,924)	**(28,759)**
Net defined benefit asset	**(159)**	(163)	**(1,433)**
Reserve for advanced depreciation of noncurrent assets	**(263)**	(454)	**(2,370)**
Total deferred tax liabilities	**(3,614)**	(5,541)	**(32,562)**
Net deferred tax assets	**¥ 25,197**	¥ 16,649	**$ 227,020**

*1 For the year ended March 31, 2019, the valuation allowances increased by ¥ 577 million ($ 5,199 thousand). This is mainly due to increased valuation allowance for provision for loss on business liquidation by ¥ 446 million ($ 4,018 thousand) and valuation allowance for tax loss carryforward by ¥ 112 million ($ 1,009 thousand).

*2 The amount of tax loss carryforward and its deferred tax assets will expire as follows;

Year ended March 31, 2019

	Tax loss carryforward		Valuation allowance		Deferred tax assets	
	(Millions of yen)	(Thousands of U.S. dollars) (Note 1)	(Millions of yen)	(Thousands of U.S. dollars) (Note 1)	(Millions of yen)	(Thousands of U.S. dollars) (Note 1)
2020	**¥ -**	**$ -**	**¥ -**	**$ -**	**¥ -**	**$ -**
2021	-	-	-	-	-	-
2022	-	-	-	-	-	-
2023	-	-	-	-	-	-
2024	-	-	-	-	-	-
2025 and thereafter	**14,442**	**130,120**	**(14,442)**	**(130,120)**	-	-
Total	**¥ 14,442**	**$ 130,120**	**¥ (14,442)**	**$ (130,120)**	**¥ -**	**$ -**

	(Millions of yen)		(Thousands of U.S. dollars) (Note 1)
March 31,	**2019**	2018	**2019**
Deferred tax liabilities			
Undistributed earnings of foreign consolidated subsidiaries	**¥ 531**	¥240	**$ 4,784**
Others	**118**	0	**1,063**
Total deferred tax liabilities	**¥ 649**	¥ 240	**$ 5,847**

Note 12 : NOTES TO THE CONSOLIDATED STATEMENTS OF CASH FLOWS

(1) Reconciliation of cash in the consolidated balance sheets and cash and cash equivalents in the consolidated statements of cash flows was as follows:

	(Millions of yen)		(Thousands of U.S. dollars) (Note 1)
March 31,	**2019**	2018	**2019**
Cash and deposits	**¥ 160,842**	¥ 195,394	**$ 1,449,158**
Short-term loan receivable with a maturity date of three months or less	**–**	40,000	**–**
Cash and cash equivalents	**¥ 160,842**	¥ 235,394	**$ 1,449,158**

(2) Significant non-cash transaction

During the year ended March 31, 2018, the Company acquired shares by contribution in kind.

Details of the movement resulting from the acquisition of shares by contribution in kind are as follows:

	(Millions of yen)		(Thousands of U.S. dollars) (Note 1)
March 31,	**2019**	2018	**2019**
Decrease in short-term loan receivables	**–**	¥ 5,525	**$ –**
Increase in investments in unconsolidated subsidiaries and affiliates	**–**	¥ 5,525	**$ –**

Data Section

Note 13 : LAND REVALUATION

Pursuant to Article 2 of the Enforcement Ordinance for the Law Concerning Land Revaluation effective March 31, 1998, the Company recorded its owned land used for business at the fair value as of March 31, 2002, and the related revaluation difference, net of income taxes, was debited to Land revaluation, net of deferred tax portion in the Net Assets section. The applicable income tax portion was reported as Deferred Tax Liabilities for Land Revaluation in the consolidated balance sheets at March 31, 2019 and 2018. When such land is sold, land revaluation is reversed and debited to retained earnings.

Note 14 : RELATED PARTY TRANSACTIONS

This information is not disclosed, as this is immaterial for the years ended March 31, 2019 and 2018.

Note 15 : FINANCIAL INSTRUMENTS

A. QUALITATIVE INFORMATION ON FINANCIAL INSTRUMENTS

(a) POLICIES FOR USING FINANCIAL INSTRUMENTS

The Company manages surplus capital using financial instruments that are short-term and carry low risk. The Company uses derivatives to mitigate the risks that are described below, and does not use derivatives for speculative transactions.

(b) FINANCIAL INSTRUMENTS, ASSOCIATED RISKS AND THE RISK MANAGEMENT SYSTEM

Notes and accounts receivable expose the Company to customer credit risk. Investment securities are mainly related to the business and capital alliance companies and expose the Company to the changes in market prices. Loans receivable are mainly related to subsidiaries and affiliates.

Most notes and accounts payable are due within one year. Some accounts payable associated with purchasing machines and construction contracts are denominated in foreign currencies, which expose the Company to the risks of exchange rate fluctuations. The Company generally procures capital required under its business plan through bank loans. Some bank loans and bonds expose the Company to the risks of interest rate fluctuations, which the Company uses interest rate swaps to hedge.

The Company uses derivatives transactions including foreign exchange forward contracts to hedge the risk of exchange rate fluctuations associated with accounts receivable and payable denominated in foreign currencies and interest rate swaps to hedge the risk of interest rate fluctuations associated with loans. "Derivative Transactions and Hedge Accounting" in Note 1(v) and Note 9 presented earlier explain hedge accounting issues including methods, hedging policies, hedged items and recognition of gain or loss on hedged positions

(c) RISK MANAGEMENT SYSTEM FOR FINANCIAL INSTRUMENTS

(1) Credit risk management (counter-party risk)

The Company has established internal procedures for receivables under which the related divisions are primarily responsible for periodically monitoring counter-party status. The department manages amounts and settlement dates by counter-party and works to quickly identify and mitigate payment risk that may result from situations including deterioration of the financial condition of counter-parties. Consolidated subsidiaries are subject to the same risk management rules.

In using derivatives transactions, the Company mitigates counter-party risk by conducting transactions with highly creditworthy financial institutions

(2) Market risk management (risk of exchange rate and interest rate fluctuations)

The Company monitors the balance of the foreign currency receivable and payable by each currency and every month and utilizes foreign currency forward contracts and foreign currency deposit to hedge the risk of fluctuations. The Company uses interest rate swaps to mitigate the risk of interest rate fluctuations associated with loans.

Regarding marketable securities and investment securities, the Company periodically examines fair value and the financial condition of the issuing entities and revises its portfolio based on its relationships with said entities.

The derivative transactions are executed and managed by the Finance & Accounting Department in accordance with the established policies and within the specified limit on the amounts of derivative transactions allowed. The Department periodically provides administrative reports on the results to the financial director and treasurer.

(3) Management of liquidity risk associated with capital procurement (payment default risk)

The Company manages liquidity risk by creating and updating a capital deployment plan based on reports from each division.

(d) SUPPLEMENTAL INFORMATION ON THE FAIR VALUE OF FINANCIAL INSTRUMENTS

The fair value of financial instruments is based on market prices, or a reasonable estimate of fair value for instruments for which market prices are not available. Estimates of fair value are subject to fluctuation because they employ variable factors and assumptions.

In addition, the contractual amounts of the derivatives transactions discussed in B (a) below are not an indicator of the market risk associated with derivatives transactions.

B. FAIR VALUES OF FINANCIAL INFORMATION

(a) FAIR VALUES OF FINANCIAL INSTRUMENTS

Fair values of financial instruments as of March 31, 2019 and 2018 were summarized as follows:

The financial instruments, whose fair values were difficult to measure, were not included in the table below and were summarized in B (b).

(Millions of yen)

	March 31, 2019			March 31, 2018		
	Carrying amount	Estimated fair value	Difference	Carrying amount	Estimated fair value	Difference
Cash and deposits	¥ 160,842	¥ 160,842	¥ –	¥ 195,394	¥ 195,394	¥ –
Notes and accounts receivable net*1	231,764	231,764	–	186,672	186,672	–
Short-term loans receivable	4,029	4,029	–	46,475	46,475	–
Other receivables*2	93,545	93,545	–	43,251	43,251	–
Investment securities	18,468	18,468	–	26,158	26,158	–
Long-term loans receivable, net*1	-	-	–	3,368	3,370	2
Total Assets	¥ 508,648	¥ 508,648	¥ –	¥ 501,318	¥ 501,320	¥ 2
Notes and accounts payable	¥ 92,092	¥ 92,092	¥ –	¥ 89,164	¥ 89,164	¥ –
Long-term debt	53,949	54,097	148	54,295	54,430	135
Total Liabilities	¥ 146,041	¥ 146,189	¥ 148	¥ 143,459	¥ 143,594	¥ 135
Derivative financial instruments, net	¥ (484)	¥ (484)	¥ –	¥ (838)	¥ (838)	¥ –

(Thousands of U.S. dollars) (Note 1)

	March 31, 2019		
	Carrying amount	Estimated fair value	Difference
Cash and deposits	$ 1,449,158	$ 1,449,158	$ –
Notes and accounts receivable, net *1	2,088,152	2,088,152	–
Short-term loans receivable	36,301	36,301	–
Other receivables*2	842,823	842,823	–
Investment securities	166,393	166,393	–
Long-term loans receivable, net *1	–	–	–
Total Assets	$ 4,582,827	$ 4,582,827	$ –
Notes and accounts payable	$ 829,732	$ 829,732	$ –
Long-term debt	486,071	487,405	1,334
Total Liabilities	$ 1,315,803	$ 1,317,137	$ 1,334
Derivative financial instruments, net	$ (4,361)	$ (4,361)	$ –

*1 The amount of individual allowance for doubtful accounts is deducted from notes and accounts receivable and long-term loans receivable.

*2 Other receivables is included in Other current assets on the consolidated balance sheets.

Data Section

The following methods and assumptions were used to estimate the fair value of the financial instruments.

Cash and deposits, and Marketable securities
All deposits and negotiable certificates of deposit are short-term. Therefore, the carrying amount is used for the fair value of these items because these amounts are essentially the same.

Notes and accounts receivable
Notes and accounts receivable are short-term. Therefore, the carrying amount is used for the fair value of short-term receivables because these amounts are essentially the same.

Short-term loans receivable
Short-term loans receivable are short-term. Therefore, the carrying amount is used for the fair value of short-term receivables because these amounts are essentially the same.

Other receivables
Other receivables are short-term. Therefore, the carrying amount is used for the fair value of other receivables because these amounts are essentially the same.

Investment securities
Fair value of Investment securities is the price listed on securities exchanges for equities. In addition, Note 8 provides information on marketable securities by holding intent.

Long-term loans receivable
Fair value of long-term loans receivable is estimated as discounted present value of total principal and interest using assumed interest rates for equivalent new loans. With respect to doubtful claims, because the amount obtained by deducting the irrecoverable balance, which is estimated based on collectable amounts from the amount stated in the consolidated balance sheet as of the current year approximate the fair value, this amount is deemed to be the fair value.

Notes and accounts payable
Notes and accounts payable are short-term. Therefore, carrying amount is used for the fair value of short-term payables because these amounts are essentially the same.

Long-Term Debt
Floating-rate long-term debt reflects market interest rates. In addition, fair value approximates carrying amount because the Company's creditworthiness does not vary significantly after assuming long-term debts. Therefore, carrying amount is used for fair value of floating-rate long-term debt. Fair value of fixed-rate long-term debt is the discounted value of total principal and interest using an assumed interest rate on equivalent new loans and bonds.

Derivative financial instruments
Please refer to "DERIVATIVE TRANSACTIONS AND HEDGE ACCOUNTING" in Note 1(v) and Note 9.

(b) FINANCIAL INSTRUMENTS, WHOSE FAIR VALUES WERE DIFFICULT TO MEASURE

The financial instruments, whose fair values were difficult to measure, as of March 31, 2019 and 2018, were summarized as follows:

	(Millions of yen)		(Thousands of U.S. dollars) (Note 1)
March 31,	**2019**	2018	**2019**
Unconsolidated subsidiaries and affiliates	**¥ 37,929**	¥ 30,220	**$ 341,734**
Non-listed equity securities	**10,839**	12,484	**97,657**
Subscription certificate	**38**	38	**342**
Non-listed affiliate's bond	**1,720**	920	**15,497**

It is difficult to measure the fair value of these financial instruments because there is no market price available and it is not practical to calculate future cash flow. Therefore, these financial instruments were not included in the Investment securities described in B (a).

(c) MATURITIES OF FINANCIAL INSTRUMENTS

The maturities of the financial instruments at March 31, 2019 were as follows:

	(Millions of yen)			
Year ending March 31	2020	2021 - 2025	2026 - 2030	2031 and thereafter
Cash and deposits	¥ 160,842	¥ -	¥ -	¥ -
Notes and accounts receivable	231,764	-	-	-
Short-term loans receivable	4,029	-	-	-
Other receivable	93,545	-	-	-
Assets Total	¥ 490,180	¥ -	¥ -	¥ -

	(Thousands of U.S. dollars) (Note 1)			
Year ending March 31	2020	2021 - 2025	2026 - 2030	2031 and thereafter
Cash and deposits	$ 1,449,158	¥ -	¥ -	¥ -
Notes and accounts receivable	2,088,152	-	-	-
Short-term loans receivable	36,301	-	-	-
Other receivable	842,823	-	-	-
Assets Total	$ 4,416,434	¥ -	¥ -	¥ -

Please see Note 3 for the maturities of long term-debt.

Note 16 : OTHER COMPREHENSIVE INCOME

Reclassification adjustments of the Company's and consolidated subsidiaries' other comprehensive income for the years ended March 31, 2019 and 2018, were as follows:

	(Millions of yen)		(Thousands of U.S. dollars) (Note 1)
March 31,	**2019**	2018	**2019**
Net unrealized holding gains on securities			
Unrealized holding gains arising during the year	**¥ (3,440)**	¥ 3,171	**$ (30,994)**
Reclassification adjustment	**(2,221)**	1,460	**(20,011)**
Sub-total	**(5,661)**	4,631	**(51,005)**
Deferred gains (losses) on hedges			
Deferred losses on hedges arising during the year	**298**	(711)	**2,685**
Reclassification adjustment	**40**	583	**360**
Sub-total	**338**	(128)	**3,045**
Translation adjustments			
Translation adjustments arising during the year	**(3,157)**	(414)	**(28,444)**
Reclassification adjustment	**-**	-	**-**
Sub-total	**(3,157)**	(414)	**(28,444)**
Remeasurements of defined benefit plans			
Defined benefit plans during the year	**272**	594	**2,451**
Reclassification adjustment	**482**	453	**4,343**
Sub-total	**754**	1,047	**6,794**
Equity for equity method affiliates			
Share of other comprehensive income of affiliates accounted for using the equity method arising during the year	**86**	28	**775**
Sub-total	**86**	28	**775**
Before-tax amount	**(7,640)**	5,164	**(68,835)**
Income tax effect	**1,354**	(1,683)	**12,199**
Total other comprehensive income	**¥ (6,286)**	¥ 3,481	**$ (56,636)**

Tax effects allocated to each component of other comprehensive income for the years ended March 31, 2019 and 2018, were as follows:

	(Millions of yen)		
Year ended March 31, 2019	Before-tax amount	Income tax effect	Net-of-tax amount
Net unrealized holding gains on securities	**¥ (5,661)**	**¥ 1,732**	**¥ (3,929)**
Deferred (losses) on hedges	**338**	**(104)**	**234**
Translation adjustments	**(3,157)**	**–**	**(3,157)**
Remeasurements of defined benefit plans	**754**	**(274)**	**480**
Equity for equity method affiliates	**86**	**–**	**86**
Other comprehensive income	**¥ (7,640)**	**¥ 1,354**	**¥ (6,286)**

	(Millions of yen)		
Year ended March 31, 2018	Before-tax amount	Income tax effect	Net-of-tax amount
Net unrealized holding gains on securities	¥ 4,631	¥ (1,417)	¥ 3,214
Deferred gains on hedges	(128)	55	(73)
Translation adjustments	(414)	–	(414)
Remeasurements of defined benefit plans	1,047	(321)	726
Equity for equity method affiliates	28	–	28
Other comprehensive income	¥ 5,164	¥ (1,683)	¥ 3,481

	(Thousands of U.S. dollars) (Note 1)		
Year ended March 31, 2019	Before-tax amount	Income tax effect	Net-of-tax amount
Net unrealized holding gains on securities	**$ (51,005)**	**$ 15,605**	**$ (35,400)**
Deferred gains on hedges	**3,045**	**(937)**	**2,108**
Translation adjustments	**(28,444)**	**-**	**(28,444)**
Remeasurements of defined benefit plans	**6,794**	**(2,469)**	**4,325**
Equity for equity method affiliates	**775**	**-**	**775**
Other comprehensive income	**$ (68,835)**	**$ 12,199**	**$ (56,636)**

Note 17 : SUBSEQUENT EVENT

Signing of Absorption-Type Corporate Separation Agreement Accompanying Transition to a Holding Company Structure through a Corporate Separation

The Company resolved at the Board of Directors meeting held on May 14, 2019 to enter an absorption-type corporate separation agreement with Nikki Global Kabushiki Kaisha (established on April 8, 2019, and its English company name to be registered as "JGC CORPORATION" on October 1, 2019) to succeed the overseas EPC (Engineering, Procurement and Construction) business the Company is engaged in. In addition, it was resolved to enter an absorption-type corporate separation agreement with JGC Plant Innovation Co., Ltd. (its Japanese company name to be changed to "Nikki kabushiki Kaisha" and English company name to be changed to "JGC JAPAN CORPORATION" on October 1, 2019; hereinafter referred to as "JPI") to succeed the domestic EPC business the Company is engaged in. Following this absorption-type corporate separation, the Company will change its company name to JGC HOLDINGS CORPORATION and change its business purpose in line with the business after transition to a holdings company structure on October 1, 2019 (planned).
This absorption-type company separation and amendment to the Articles of Incorporation were approved at the general meeting of shareholders held on June 27, 2019. Note that this absorption-type company separation assumes the acquisition of approval from government agencies.

1. Background and purpose of transition to a holding company structure
Although JGC group's main business is EPC operations, the Beyond the Horizon medium-term business plan for fiscal 2016-2020 calls for an ongoing focus on the oil and gas sector while expanding further into the field of infrastructure. In non-EPC operations, the plan calls for stronger involvement in manufacturing, among other types of business. Further growth and expansion are sought in both areas of operations.
To pursue this vision of a corporate group with greater corporate value steadily, but with a sense of speed, we have decided to transition to a

holding company as the group's new management structure.

The Company is seeking to grant more independence to future primary business operating companies, enable more proactive, agile business operations, and bring about globally optimal resource allocation and accurate governance of group management.

2. Summary of absorption-type corporate separation

(1) Schedule of absorption-type corporate separation

Board of Directors to approve the absorption-type corporate separation agreement (the Company, Nikki Global Kabushiki Kaisha, JPI)	May 14, 2019
Signing of the absorption-type corporate separation agreement (the Company, Nikki Global Kabushiki Kaisha, JPI)	May 14, 2019
General meeting of shareholders to approve the absorption-type corporate separation agreement (the Company, JPI)	June 27, 2019
Extraordinary meeting of shareholders to approve the absorption-type corporate separation agreement (Nikki Global Kabushiki Kaisha)	June 27, 2019
Effective date of absorption-type corporate separation	October 1, 2019 (planned)

(2) Method of absorption-type corporate separation

Absorption-type corporate separation with the Company as the splitting company and the Company's wholly owned subsidiaries, Nikki Global Kabushiki Kaisha and JPI, as the successor companies.

(3) Details of allocation related to this absorption-type corporate separation

Along with the absorption-type corporate separation, the successor companies will issue the following number of shares of common stock as consideration for the rights and obligations related to the succeeded businesses, and allocate all of these shares to the Company.

Successor company	Number of shares of common stock
Nikki Global Kabushiki Kaisha	5,000 shares
JGC Plant Innovation Co., Ltd.	2,000 shares

(4) Handling of subscription rights and bonds with subscription rights accompanying the absorption-type corporate separation

Not applicable.

(5) Change in capital through the absorption-type corporate separation

There will be no change in the Company's capital from this absorption-type corporate separation.

(6) Rights and obligations succeeded by successor companies

With this absorption-type corporate separation, the successor companies will succeed the assets, liabilities, contractual status, and other rights and obligations related to the domestic EPC business and overseas EPC business belonging to the Company as of the effective date, excluding rights and obligations specifically provided for in the absorption-type corporate separation agreement. Note that the obligations succeeded by the successor companies are based on the concomitant assumption method.

(7) Expectations towards performance of obligations

Following this absorption-type company separation, the assets of the Company and the successor companies are projected to exceed liabilities, and in terms of the profit projections following this absorption-type company separation, an event that would interfere with the performance of obligations to be assumed by the Company and the successor companies is not projected at this point in time. Accordingly, it has been determined that there are no issues with the Company and the successor companies performing on their obligations after the absorption-type company separation.

(8) Basis for calculation of number of shares to be allocated related to this absorption-type corporate separation

The Company, which is the splitting company, wholly owned the successor companies. And the number of shares to be allocated can be determined arbitrarily between the companies since this absorption-type corporate separation transfers assets and liabilities at book value and allocates all shares issued by the successor companies to the Company. Therefore, we did not require take the third party evaluation for the allocation details.

3. Overview of the companies in the absorption-type corporate separation

(1) Splitting company (as of March 31, 2019)

(1) Company name	JGC CORPORATION	
(2) Address	2-3-1 Minatomirai, Nishi Ward, Yokohama, Kanagawa Prefecture	
(3) Position and name of representative	Masayuki Sato, Chairman and Chief Executive Officer (CEO)	
(4) Description of business	EPC business, etc. for various plants and facilities	
(5) Capital	23,511 million yen	
(6) Date of establishment	October 25, 1928	
(7) Number of issued shares	259,052,929 shares	
(8) Fiscal year-end	March 31	
(9) Major shareholders and ownership ratio	The Master Trust Bank of Japan, Ltd. (Trust Account)	14.64%
	Japan Trustee Services Bank , Ltd. (Trust Account)	9.46%
	JGC Trading & Services Co., Ltd.	4.67%
	JGC-S SCHOLARSHIP FOUNDATION	3.25%
	Japan Trustee Services Bank , Ltd. (Trust Account 9)	2.13%
(10) Financial position and business results in the most recent fiscal year (fiscal year ended March 31, 2019 [consolidated])		
Net assets	410,350 million yen	
Total assets	708,855 million yen	
Net assets per share	1,622.05 yen	
Net sales	619,241 million yen	
Operating income	23,250 million yen	
Ordinary income	32,304 million yen	
Net income attributable to owners of the parent	24,006 million yen	
Net income per share	95.14 yen	

(2) Successor companies

(1) Company name	Nikki Global Kabushiki Kaisha	JGC Plant Innovation Co., Ltd.
	As of establishment on April 8, 2019	As of March 31, 2019
(2) Address	2-3-1 Minatomirai, Nishi Ward, Yokohama City, Kanagawa Prefecture	2-3-1 Minatomirai, Nishi Ward, Yokohama City, Kanagawa Prefecture
(3) Position and name of representative	Representative Director Kiyotaka Terajima	Representative Director and President Kenichi Yoshida (Shoji Yamada was appointed to Representative Director and President on April 1, 2019)
(4) Description of business	EPC business for various plants and facilities overseas	EPC business and maintenance business, etc. for various plants and facilities in Japan
(5) Capital	50 million yen	830 million yen
(6) Date of establishment	April 8, 2019	April 19, 2000
(7) Number of issued shares	5,000 shares	8,000 shares
(8) Fiscal year-end	March 31	March 31
(9) Major shareholders and ownership ratio	JGC CORPORATION 100%	JGC CORPORATION 100%
(10) Financial position and business results in the most recent fiscal year		
	As of establishment on April 8, 2019	As of March 31, 2018
Net assets	50 million yen	26,069 million yen
Total assets	50 million yen	38,939 million yen
Net assets per share	10,000.00 yen	3,258,646.80 yen
Net sales	-	49,448 million yen
Operating income	-	5,001 million yen
Ordinary income	-	5,214 million yen
Net income	-	3,644 million yen
Net income per share	-	455,514.98 yen

Because Nikki Global Kabushiki Kaisha was established on April 8, 2019 and it does not have a most recent fiscal year, only net assets, total assets, and net assets per share on the establishment date are stated in "(10) Financial position and business results in the most recent fiscal year."

4. Summary of business of split division

(1) Description of business of split division

Successor company	Description of business of split division
Nikki Global Kabushiki Kaisha	Overseas EPC business
JGC Plant Innovation Co., Ltd.	Domestic EPC business

(2) Business results of split division (fiscal year ended March 31, 2019)

(1) Overseas EPC business

	Overseas EPC business (a)	JGC's results (non-consolidated) (b)	Ratio (a/b)
Net sales	313,966 million yen	434,323 million yen	72.3%

(2) Domestic EPC

	Domestic EPC business (a)	JGC's results (non-consolidated) (b)	Ratio (a/b)
Net sales	119,930 million yen	434,323 million yen	27.6%

(2) Items and amounts of assets and liabilities to be split off (as of March 31, 2019)

(1) Overseas EPC business

Assets		Liabilities	
Item	Book value	Item	Book value
Current assets	101,518 million yen	Current liabilities	46,209 million yen
Non-current assets	10,444 million yen	Non-current liabilities	4,496 million yen
Total	111,963 million yen	Total	50,705 million yen

(2) Domestic EPC business

Assets		Liabilities	
Item	Book value	Item	Book value
Current assets	62,151 million yen	Current liabilities	62,858 million yen
Non-current assets	2,178 million yen	Non-current liabilities	1,301 million yen
Total	64,330 million yen	Total	64,160 million yen

Because the amounts above are calculated based on the balance sheets as of March 31, 2019, the amounts actually succeeded will be amounts adjusted for changes up to the effective date.

5. Status of JGC after the absorption-type corporate separation (as of October 1, 2019 [planned])

	Splitting company
(1) Company name	JGC HOLDINGS CORPORATION (A change in the English company name from the current JGC CORPORATION is scheduled on October 1, 2019.)
(2) Address	2-3-1 Minatomirai, Nishi Ward, Yokohama, Kanagawa Prefecture
(3) Position and name of representative	To be determined (an announcement will be made once decided)
(4) Description of business	Proposal of Group strategy, supervision, and management, etc. of operating companies
(5) Capital	23,511 million yen
(6) Fiscal year-end	March 31

Data Section

6. Status of successor companies after the absorption-type corporate separation (as of October 1, 2019 [planned])

	Splitting company
(1) Company name	"Nikki Global Kabushiki Kaisha" (A registration of the English company name as "JGC CORPORATION" is scheduled on October 1, 2019)
(2) Address	2-3-1 Minatomirai, Nishi Ward, Yokohama, Kanagawa Prefecture
(3) Position and name of representative	To be determined (an announcement will be made once decided)
(4) Description of business	EPC business for various plants and facilities overseas
(5) Capital	1,000 million yen
(6) Fiscal year-end	March 31

	Splitting company
(1) Company name	JGC JAPAN CORPORATION (A change in the English company name from the current JGC Plant Innovation Co., Ltd. is scheduled on October 1, 2019.)
(2) Address	2-3-1 Minatomirai, Nishi Ward, Yokohama, Kanagawa Prefecture
(3) Position and name of representative	To be determined (an announcement will be made once decided)
(4) Description of business	EPC business and maintenance business, etc. for various plants and facilities in Japan
(5) Capital	1,000 million yen
(6) Fiscal year-end	March 31

7. Future outlook

The absorption-type corporate separation will have no significant impact on the Company's consolidated results. Note that as a result of the absorption-type corporate separation, the Company's revenues will mainly consist of dividend income, etc. from JGC Group companies and the Company's expenses will mainly consist of functions as a holding company.

Note 18 : OTHER

(Ichthys LNG Project)

JKC Australia LNG Pty Ltd, an Australian company operating as a joint venture among KBR, Chiyoda Corporation and the Company's subsidiary, (hereinafter referred to as "JKC") has contracted with INPEX Operations Australia Pty Ltd. (hereinafter referred to as the "Client") to perform the engineering, procurement, construction and commissioning of onshore LNG facilities in Darwin, Australia (hereinafter referred to as the "Ichthys LNG project"). The execution of the Ichthys LNG project has been substantially completed and the plant handed over to the Client in August 2018.

Notwithstanding the above situation, JKC and the Client have not reached a final settlement about part of the additional costs incurred due to increase in services scope and other factors, and the parties are currently under a few arbitration processes.

In addition, to fulfill its obligations under the contract with the Client, JKC awarded a fixed-price EPC contract to a subcontractor for the design, procurement, construction and commissioning of the combined cycle power plant (hereinafter referred to as the "Power Plant"). The subcontractor was a consortium consisting of General Electric Company, General Electric International, Inc., UGL Engineering Pty Limited and CH2M Hill Australia Pty. Limited (hereinafter referred to as the "Consortium"). During the execution of the project, the Consortium unilaterally repudiated the contract and entered into an arbitration demanding damages. While JKC having hired another subcontractor and paid costs to complete the Power Plant, JKC is making a counter-claim under the arbitration, pursuing recourse against the Consortium to recover all of the costs.

In view of the above overall, if the arbitrations against the Client or the Consortium result in a disadvantageous result for JKC, this could have a negative impact on the Company's consolidated financial position.

Independent Auditor's Report

To the Board of Directors of JGC Corporation:

We have audited the accompanying consolidated financial statements of JGC Corporation and its consolidated subsidiaries, which comprise the consolidated balance sheets as at March 31, 2019 and 2018, and the consolidated statements of income, statements of comprehensive income, statements of changes in net assets and statements of cash flows for the years then ended, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with accounting principles generally accepted in Japan, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatements, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in Japan. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, while the objective of the financial statement audit is not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of JGC Corporation and its consolidated subsidiaries as at March 31, 2019 and 2018, and their financial performance and cash flows for the years then ended in accordance with accounting principles generally accepted in Japan.

Convenience Translation

The U.S. dollar amounts in the accompanying consolidated financial statements with respect to the year ended March 31, 2019 are presented solely for convenience. Our audit also included the translation of yen amounts into U.S. dollar amounts and, in our opinion, such translation has been made on the basis described in Note 1 to the consolidated financial statements.

KPMG AZSA LLC

KPMG AZSA LLC
June 27, 2019
Tokyo, Japan

Supplemental Explanation

Internal Control over Financial Reporting in Japan

Under the Financial Instruments and Exchange Act in Japan ("the Act"), which was enacted in June 2006, the management of all listed companies in Japan are required to implement assessments of internal control over financial reporting ("ICOFR") as of the end of the fiscal year and the management assessment shall be audited by independent auditors, effective from the fiscal year beginning on or after April 1, 2008.

We have evaluated our ICOFR as of March 31, 2019, in accordance with "On the Revision of the Standards and Practice Standards for Management Assessment and Audit concerning Internal Control Over Financial Reporting (Council Opinions)" published by the Business Accounting Council on March 30, 2011.

As a result of conducting the evaluation of ICOFR for the year ended March 31, 2019, we concluded that our internal control system over financial reporting as of March 31, 2019 was operating effectively and reported as such in the Internal Control Report.

Independent Auditor, KPMG AZSA LLC, performed an audit of our management assessment on the effectiveness of ICOFR under the Act.

An English translation of the Internal Control Report and the Independent Auditor's Report filed under the Act is provided on the following pages.

JGC Corporation

Internal Control Report (Translation)

NOTE
The following is an English translation of the report on internal control over financial reporting filed under the Financial Instruments and Exchange Act in Japan ("ICOFR under the Act"). This report is presented merely as supplemental information.
There are differences between the management assessment of ICOFR under the Act and one conducted under the attestation standards established by the American Institute of Certified Public Accountants ("the AICPA").
In the management assessment of ICOFR under the Act, there is detailed guidance on the scope of the management assessment of ICOFR, such as quantitative guidance on business location selection and/or account selection. In the management assessment of ICOFR under the attestation standards established by the AICPA, there is no such guidance. Accordingly, based on the quantitative guidance which provides an approximate measure for the scope of assessment of internal control over business processes, we used a measure of approximately two-thirds of total sales and others for the selection of significant locations and business units.

[TRANSLATION]

Internal Control Report

1 Framework of Internal Control Over Financial Reporting

Masayuki Sato, Representative Director, Chairman and Chief Executive Officer (CEO), and Kiyotaka Terajima, Chief Financial Officer (CFO) of JGC Corporation ("the Company") are responsible for establishing and maintaining adequate internal control over financial reporting as defined in the rule "On the Revision of the Standards and Practice Standards for Management Assessment and Audit concerning Internal Control Over Financial Reporting (Council Opinions)".
Because of its inherent limitations, internal control over financial reporting ("ICOFR") may not completely prevent or detect misstatements.

2 Assessment Scope, Timing and Procedures

We have assessed our ICOFR as of March 31, 2019 in accordance with assessment standards for internal control over financial reporting generally accepted in Japan.
We assessed the design and operation of our company-level control and based on this assessment, we analyzed business processes within the scope of the internal control to be assessed, identified a key control that would have a material impact on the reliability of financial reporting and assessed whether the basic components of internal control are operating with regard to the key control.
We assessed the effectiveness of ICOFR of the Company, consolidated subsidiaries and equity-method affiliates to the extent necessary in light of their degree of impact on the reliability of financial reporting.
In assessing the effectiveness of internal control, we decided on reasonable scope of assessment for the significant business processes in light of their degree of quantitative and qualitative impact on financial reporting based on the assessment of the company-level control.
Locations and business units that did not have a material effect on financial reporting were excluded from the scope of assessments.
In assessing the period-end financial reporting process, we decided on reasonable scope of assessment in light of its degree of quantitative and qualitative impact on financial reporting in a similar manner as company-level control.
In assessing the business processes other than described above, based on the assessment of the company-level controls, we assessed the significant business locations based on sales levels until combined sales amounts reach approximately two-thirds on a consolidated basis and the business processes which impact the accounts (sales, accounts receivable and inventory) that were closely associated with the significant business locations' business objectives.

3 Results of Assessment

As a result of the above assessment, the Company's management has concluded that, as of March 31, 2019, the Company's ICOFR was effective.

4 Supplementary Information

Not applicable.

5 Other

Not applicable.

Independent Auditor's Report (Translation)

NOTE
The following is an English translation of the Independent Auditor's Report filed under the Financial Instruments and Exchange Act in Japan ("the Act"). This report is presented merely as supplemental information.
There are differences between an audit of ICOFR under the Act and one conducted under the attestation standards established by the American Institute of Certified Public Accountants ("the AICPA").
In an audit of ICOFR under the Act, the auditor expresses an opinion on management's report on ICOFR and does not express an opinion on the company's ICOFR directly. In an audit of ICOFR under the attestation standards established by the AICPA, the auditor expresses an opinion on the company's ICOFR directly.
Also in an audit of ICOFR under the Act, there is detailed guidance on the scope of an audit of ICOFR, such as quantitative guidance on business location selection and/or account selection. In an audit of ICOFR under the attestation standards established by the AICPA, there is no such guidance. Accordingly, based on the quantitative guidance which provides an approximate measure for the scope of assessment of internal control over business processes, we used a measure of approximately two-thirds of total sales and others for the selection of significant locations and business units.

[TRANSLATION]

Independent Auditor's Report

June 27, 2019

To the Board of Directors of JGC Corporation

KPMG AZSA LLC

Designated Limited Liability Partner,
Engagement Partner,
Certified Public Accountant: Michitaka Shishido

Designated Limited Liability Partner,
Engagement Partner,
Certified Public Accountant: Takemitsu Nemoto

Designated Limited Liability Partner,
Engagement Partner,
Certified Public Accountant: Yoshinori Saito

Audit of Consolidated Financial Statements

Pursuant to the first paragraph of Article 193-2 of the Financial Instruments and Exchange Act in Japan ("the Act"), we have audited the consolidated financial statements of JGC Corporation (the "Company") and its consolidated subsidiaries included in the Financial Section, namely, the consolidated balance sheet as of March 31, 2019, the consolidated statement of income, consolidated statement of comprehensive income, consolidated statement of changes in net assets and consolidated statement of cash flows for the fiscal year from April 1, 2018 to March 31, 2019, and a summary of significant accounting policies, other explanatory information and consolidated supplementary schedules.

Management's Responsibility for the Consolidated Financial Statements
Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with accounting principles generally accepted in Japan, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatements, whether due to fraud or error.

Auditor's Responsibility
Our responsibility is to independently express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in Japan. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.
An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, while the objective of the financial statement audit is not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management as well as evaluating the overall presentation of the consolidated financial statements.
We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion
In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of JGC Corporation and its consolidated subsidiaries as of March 31, 2019 and their financial performance and cash flows for the year ended March 31, 2019, in accordance with accounting principles generally accepted in Japan.

Audit of Internal Control
Pursuant to the second paragraph of Article 193-2 of the Financial Instruments and Exchange Act in Japan, we also have audited the Company's report on internal control over financial reporting of the consolidated financial statements of JGC Corporation as of March 31, 2019 ("Internal Control Report").

Management's Responsibility for the Internal Control Report
Management is responsible for the design and operation of internal control over financial reporting and the preparation and fair presentation of the Internal Control Report in conformity with assessment standards for internal control over financial reporting generally accepted in Japan. Internal control over financial reporting may not completely prevent or detect financial statement misstatements.

Auditor's Responsibility
Our responsibility is to express an opinion on the Internal Control Report based on our internal control audit. We conducted our internal control audit in accordance with auditing standards for internal control over financial reporting generally accepted in Japan. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the Internal Control Report is free from material misstatement.
An internal control audit involves performing procedures to obtain audit evidence about the assessment of internal control over financial reporting in the Internal Control Report. The procedures selected depend on the auditor's judgment, including significance of effect on the reliability of financial reporting. Also, an internal control audit includes evaluating the appropriateness of the scope, procedures and result of the assessment determined and presented by management as well as evaluating the overall internal control report presentation.
We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Opinion
In our opinion, the Internal Control Report, in which JGC Corporation states that internal control over financial reporting was effective as of March 31, 2019, presents fairly, in all material respects, the assessment of internal control over financial reporting in conformity with assessment standards for internal control over financial reporting generally accepted in Japan.

Interest
The firm and the engagement partners do not have any interest in the Company for which disclosure is required under the provisions of the Certified Public Accountants Act of Japan.

ESG Data Highlights

This table introduces our initiatives related to the environment, society, and governance (ESG) and our key performance indicators (KPI).

	JGC's main KPI	Units	Fiscal 2014	Fiscal 2015	Fiscal 2016	Fiscal 2017	Fiscal 2018
Report on Environmental Initiatives (E)							
Environment-related Initiatives • Contribution to environmental protection • Environmental Improvement Activities in Line with Our Business • Promotion of the Zero Emissions Initiative	Industrial waste recycling rate (Domestic construction sites)	%	94.1	96.3	98.1	97.7	**96.1**
	Number of incidents of leaks of hazardous substances, etc. (Domestic and overseas construction sites)	Incidents	0	0	0	1	**0**
	Energy-related CO_2 emissions (Domestic construction sites)	$kgCO_2/hr$	0.63	0.64	1.43	3.52	**2.39**
	Rate of diffusion of electronic manifests	%	–	79.4	96.0	64.2	**79.5**
	Energy consumption (Yokohama Head Office) *1	Crude oil equivalent (kl)	2,770	2,579	2,405	2,248	**2,224**
	Yokohama Head Office power consumption	1,000 kWh	7,308	6,720	5,974	5,571	**5,497**
	Consumption of chilled water by Yokohama Head Office	1,000 MJ	17,112	16,195	15,857	14,071	**15,353**
	Consumption of steam by Yokohama Head Office	1,000 MJ	8,252	8,021	8,886	9,153	**7,724**
	Volume of waste disposal by Yokohama Head Office	1,000 kg	258	224	209	212	**206**
	Rate of recycling of waste by Yokohama Head Office	%	63.2	66.6	64.9	65.7	**61.4**
Report on Social Initiatives (S)							
Initiatives related to human rights and labor practices • Promotion of diversity • Support for realization of work-life balance • Support for employee career formation	Number of women in management positions	Persons	11	15	17	19	**21**
	Rate of employment of people with disabilities	%	1.91	1.75	1.81	1.82	**1.87**
	Number of re-employed employees*2	Persons	209	208	189	159	**109**
	Number of non-Japanese employees *2	Persons	85	97	94	100	**89**
	Number of employees taking childcare leave (Male)	Persons	2	1	2	8	**11**
	Number of female employees taking childcare leave (Rate of reinstatement of female employees taking childcare leave)	Persons (%)	20 (100)	29 (100)	27 (96)	24 (100)	**24 (100)**
	Number of employees taking spousal childbirth leave	Persons	76	72	81	81	**64**
	Number of employees taking sick or injured childcare leave	Persons	113	125	115	123	**185**
	Number of employees taking nursing care leave	Persons	2	4	8	20	**22**
	Number of employees taking temporary retirement for nursing care	Persons	1	2	2	1	**0**
	Number of employees working reduced hours for childcare	Persons	33	37	44	42	**51**
	Number of employees working reduced hours for nursing care	Persons	0	1	1	2	**0**
	Rate of utilization of annual leave	%	50	53	53	57	**53**
	Number of employees dispatched for onsite training/ onsite instruction	Persons	125	98	62	72	**86**
	Number of employees dispatched to overseas companies, etc.	Persons	3	2	5	5	**2**
Initiatives related to health and safety • Fostering of culture of health and safety • HSSE leadership by top management • Enhancement of HSSE management system for investment projects • Ongoing implementation of traffic safety measures • Further development of in-house health and safety education • Enhancement of Head Office construction HSSE functions	Total project working hours	1,000 hrs.	206,831	185,433	128,036	81,072	**90,993**
	Number of fatal accidents	Accidents	0	0	3	2	**0**
	Number of accidents accompanied by lost work time	Accidents	12	14	8	9	**8**
	Number of restrictions on work	Restrictions	60	37	25	6	**11**
	Number of conditions requiring specialized treatment	Conditions	124	99	65	41	**31**
	Rate of frequency of accidents accompanied by lost work time*3		0.012	0.015	0.012	0.022	**0.018**
	Rate of frequency of recordable accidents *4		0.19	0.16	0.16	0.14	**0.11**
Report on Governance (G)							
Initiatives related to fair business practices • Realization of increased compliance awareness	Number of times compliance training implemented/number of employees receiving compliance training	Times (People)	8 (312)	18 (600)	12 (373)	13 (353)	**6 (199)**
Number of reports received by hotlines		Numbers	3	5	12	18	**28**
Initiatives related to the promotion of information security • Information management awareness verification surveys and voluntary inspections • Drills against targeted threats	Number of serious information security-related incidents	Incidents	0	0	0	0	**0**
Reinforcement of governance system	Number of outside directors	Persons	1	1	2	2	**2**

*1 Energy consumption (Yokohama Head Office): Targets for fiscal 2015 and fiscal 2016 have been set as an average annual reduction of 1%, with 2013 as the base year.
*2 Number of re-employed employees and number of non-Japanese employees = (Number of employees in April + Number of employees in March) ÷ 2
*3 Rate of frequency of accidents accompanied by lost work time = Number of accidents accompanied by lost work time × 200,000 ÷ Total project working hours
*4 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

JGC Group

As of March 31, 2019

Others

Equipment Procurement
○ JGC Trading & Services Co., Ltd.

Specialized Consulting Services
■ JAPAN NUS CO., LTD.

Office Support Services
■ NIKKI BUSINESS SERVICES CO., LTD.

Water & Power Generation Business
■ JGC Mirai Solar Co., Ltd.
● Rabigh Arabian Water and Electricity Company

Oil & Gas Production and Sales Business
■ JGC (GULF COAST), LLC
■ JGC Exploration Eagle Ford LLC
■ JGC EXPLORATION CANADA LTD.

Total Engineering

JGC CORPORATION

■ JGC PLANT INNOVATION CO., LTD.
■ JGC PLANTECH AOMORI Co., Ltd.
● Nikki-Universal Co., Ltd.
■ JGC SINGAPORE PTE LTD
■ JGC PHILIPPINES, INC.
■ PT. JGC INDONESIA
■ JGC Gulf International Co., Ltd.
■ JGC OCEANIA PTY LTD
■ JGC America, Inc.
■ JGC Gulf Engineering Co. Ltd.
JGC Vietnam Co., Ltd.
JGC Algeria S.p.A.

Functional Materials Manufacturing

■ JGC Catalysts and Chemicals Ltd.
■ JAPAN FINE CERAMICS CO., LTD.
● Nikki-Universal Co., Ltd.

■ Consolidated subsidiary
● Equity-method subsidiary or affiliate
○ Non-equity-method subsidiary or affiliate

Total Engineering

Business	Company	Country	Capital	Capital Share	Other
Engineering & Construction Services	JGC PLANT INNOVATION CO., LTD.	Japan	¥830,000,000	100%	
	JGC SINGAPORE PTE LTD	Singapore	S$2,100,000	100%	
	JGC PHILIPPINES, INC.	Philippines	PHP1,300,000,000	100%	
	PT. JGC INDONESIA	Indonesia	US$1,600,000	100%	JGC 70% JGC PLANT INNOVATION 30%
	JGC Gulf International Co. Ltd.	Saudi Arabia	SAR262,500,000	100%	JGC 94.29% JGC SINGAPORE 5.71%
	JGC OCEANIA PTY LTD	Australia	A$711,000,000	100%	
	JGC America, Inc.	U.S.A.	US$519,700,000	100%	
	JGC Gulf Engineering Co. Ltd.	Saudi Arabia	SAR500,000	75%	JGC 94.29% JGC SINGAPORE 5.71%
Maintenance Services	JGC PLANTECH AOMORI Co., Ltd.	Japan	¥50,000,000	100%	JGC PLANT INNOVATION 100%
Process Licensing Services	Nikki-Universal Co., Ltd.	Japan	¥1,000,000,000	50%	

Functional Materials Manufacturing

Company	Country	Capital	Capital Share
JGC Catalysts and Chemicals Ltd.	Japan	¥1,800,000,000	100%
JAPAN FINE CERAMICS CO., LTD.	Japan	¥300,000,000	100%
Nikki-Universal Co., Ltd.	Japan	¥1,000,000,000	50%

Others

Business	Company	Country	Capital	Capital Share
Equipment Procurement	JGC Trading and Services Co., Ltd.	Japan	¥40,000,000	24.5%
Specialized Consulting Services	JAPAN NUS CO., LTD.	Japan	¥50,000,000	88.8%
Office Support Services	NIKKI BUSINESS SERVICES CO., LTD.	Japan	¥1,455,000,000	100%
Water & Power Generation Business	Rabigh Arabian Water and Electricity Company	Saudi Arabia	SAR1,757,446,000	25%
	JGC Mirai Solar Co., Ltd.	Japan	¥8,000,000	51%
Oil & Gas Production and Sales Business	JGC (GULF COAST), LLC	U.S.A.	US$77,350,000	100%
	JGC Exploration Eagle Ford LLC	U.S.A.	US$65,000,000	100%
	JGC EXPLORATION CANADA LTD.	Canada	C$160,885,000	100%

Outline of JGC

As of March 31, 2019

Established	October 25, 1928
Capital	¥23,511,189,612
Number of Employees	2,562 (Consolidated: 7,841)

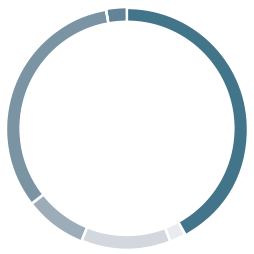
Major Shareholders

	Number of shares (Thousands)	Percentage of total (%)
The Master Trust Bank of Japan, Ltd. (Trust Account)	37,933	15.03
Japan Trustee Services Bank, Ltd. (Trust Account)	24,509	9.71
JGC Trading and Services Co., Ltd.	12,112	4.80
JGC-S SCHOLARSHIP FOUNDATION	8,433	3.34
Japan Trustee Services Bank, Ltd. (Trust Account 9)	5,532	2.19
Sumitomo Mitsui Banking Corporation	5,500	2.17
Trust & Custody Services Bank, Ltd. (Securities Investment Trust Account)	4,999	1.98
JP MORGAN CHASE BANK 385635	3,863	1.53
Japan Trustee Services Bank, Ltd. (Trust Account 5)	3,786	1.50
DEUTSCHE BANK TRUST COMPANY AMERICAS	3,480	1.37

(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 6,746 thousand shares (2.60%, 5th largest) of treasury stock, but this is excluded from the above list of major shareholders.
3. Percentage of total is calculated excluding treasury stock.

Authorized Shares	600,000,000
Issued and Outstanding Shares	259,052,929
Number of Shareholders	17,765
Administrator of the Shareholders' Register	Mitsubishi UFJ Trust and Banking Corp. 1-4-5, Marunouchi, Chiyoda-ku, Tokyo 100-8212, Japan

Distribution of Shareholders (%)



Financial institutions	42.19
Financial instruments firms	2.13
Other domestic corporations	11.88
Individuals and others	8.33
Foreign investors	32.87
Treasury stock	2.60

Figures have been rounded to two decimal places.

Stock Price