Yokogawa Bridge Holdings Corp.

Integrated Report 2023

Integrated Report



Connecting, Linking, Expanding: Toward the Future





Contents

Editorial Policy

In fiscal 2021, we began publishing an integrated report to communicate to stakeholders our efforts to realize the YBHD Group's corporate philosophy of "Contribution to society and the public, and sound management."

Going forward, we will continue to deepen our efforts and will enhance the content of the report, with the hope that it helps stakeholders to understand the YBHD Group.

Period

Fiscal 2022 (April 2022 to March 2023)

Published

September 2023

Scope

The YBHD Group's initiatives, focusing on the Group's financial and ESG information

Guidelines referenced

- International Integrated Reporting Council (IIRC) "International Integrated Reporting Framework"
- Ministry of Economy, Trade and Industry "Guidance for Integrated Corporate Disclosure and Company-Investor Dialogues for Collaborative Value Creation (Guidance for Collaborative Value Creation)"
- Global Reporting Initiative "GRI Global Standards for Sustainability Reporting"

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Kazuhiko Takata
Yokogawa Bridge Holdings Corp.
President and Representative Director

Looking a century ahead,
we will improve our corporate value,
in both financial and non-financial terms,
striving for sustainable corporate management,
to be a company that continues to grow

Reflecting on the First Year of the Sixth Medium-Term Management Plan

We achieved record-high sales amid drastic changes in the external environment.

Fiscal 2022, the first year of the Sixth Medium-Term Management Plan (“Sixth Plan”), was a year of major changes in the external environment, including the rapid depreciation of the yen as well as global supply chain disruptions and rising resource prices due to COVID-19 and geopolitical risks.

Among the risks that could have affected our performance, we needed to pay close attention to the rising price of steel, which is essential for all of our businesses. However, in the bridge business, which centers on public works projects, although there was a slight time lag, budget revisions reflecting the price hikes were accepted, so there was no major impact on performance over the full year. On the other hand, the engineered structure system business was affected not only by rising resource prices but also by global supply chain disruptions. However, this led to new market needs for warehouses and logistics centers that can cope with unforeseen business risks. Furthermore, the trend of bringing production bases back to Japan has been accelerating in recent years due to wage increases in emerging countries and the weak yen. As a result of capturing the demand for new plant construction in Japan, we were able to greatly expand our business.

Looking back on fiscal 2022, although there were various changes in the external environment, their impact was minor for the YBHD Group’s businesses as a whole. Despite it being only the first year of the Sixth Plan, we achieved record-high sales and other results surpassing our initial plans. Entering fiscal 2023, as the external environment appears to have stabilized compared to a year ago, we expect to maintain a growth trend.

*Please refer to pages 33–36 for details about the Sixth Medium-Term Management Plan.

Strategies for Further Growth

Alongside short-term profitability improvement, we will sow seeds for long-term growth.

I believe that for the YBHD Group to continue its growth trajectory, we need to operate our business based on concrete strategies for both the medium to long term and the short term.

Over the 116 years since its founding, the YBHD Group has expanded its business steadily, albeit quietly, taking “Contribution to society and the public, and sound management” as its corporate philosophy and people and technology as the sources of its growth. I firmly believe that for us to continue growing for the next 100 years, sustainable corporate management is crucial. This requires not only improving the financial aspects of corporate value such as business content and performance, but also enhancing ESG and other facets of non-financial corporate value.

I have heard that our founder, Dr. Tamisuke Yokogawa, lamented Japan’s heavy reliance on imported steel at the time, voicing at the company’s founding the need for domestic production of quality steel structure components to support the development of Japan’s construction industry. To uphold this foundational principle and remain a company that can solve societal issues, I see it as my duty at the helm of the organization to ensure that we practice “sustainable corporate management.” I am certain that if we can realize this corporate philosophy and founding spirit, we will naturally grow as a sustainable company.

As I have already mentioned, the YBHD Group has grown with people and technology as the two wheels driving it forward. As such, I am personally committed to expanding investment in human resource and technological development as a long-term strategy. I want to take the initiative as president to rally the entire company toward achieving our corporate philosophy and realizing our vision for the future a century from now. Positioning the three years of the Sixth Plan as a “period for laying the foundation to realize the four points in our management vision” is not unrelated to these ideas I have in mind.

On the other hand, as a strategy to improve short-term profitability, we will work to expand peripheral businesses around the bridge and engineered structure system businesses, which we will maintain as profit pillars. One recent tangible achievement is the development of “cusa” aluminum alloy permanent scaffolding essential for bridge maintenance. By developing scaffolding used for bridge inspection and maintenance from lightweight yet durable aluminum, we ensure a life cycle comparable to the bridges themselves while also simplifying construction. The exceptionally strong sales of “cusa” prompted us to upgrade it from a “department” to a “division,” which I believe has also boosted the motivation of the employees involved. Furthermore, in renovation work on aged bridges, there is a need to speed up the work to minimize the impact on local communities. Accordingly, we are also focusing on developing new bridge decks that can meet the demand for shorter construction timelines.

The Significance of Our Sustainable Management

Our business itself has an inseparable relationship with sustainability.

Since becoming president, I have been frequently asked questions like “What is the significance of Yokogawa Bridge Holdings Group’s engaging in sustainable management?” My answer is always “Because the YBHD Group’s business itself has an inseparable relationship with sustainability.” At its core, our primary business of infrastructure development contributes to realizing a sustainable society. In particular, as abnormal weather and natural disasters thought to be caused by climate change have been occurring more frequently in recent years, our new technology and product development is also based on the premise of risks from climate change, and aims to create structures that can withstand those risks. The SDGs of “Industry, Innovation and Infrastructure” and “Sustainable Cities and Communities” can indeed be said to be the very essence of our business.

If asked “What is indispensable for sustainable management?” I would answer without hesitation that it is people and technology. While investment in human capital including wage increases has been attracting attention across industries recently, I believe that investing in people should be conducted from a continuous, long-term perspective, not a short-term perspective just because it is demanded by the times, and that it is part of improving sustainable corporate value. This applies in exactly the same way to wage increases. In April 2023, we implemented a base pay increase separately from regular wage increases. While other companies have announced more eye-catching base pay raise amounts, ours may not have left much of an impression, but I am proud to say that our amount is not a sudden adjustment but is rather based on continuous base pay raises over time.

In addition to pay raises, investing in people includes developing educational and training systems to assist with employees’ skill development and reskilling. Along with employees’ motivation to improve their skills, we have enhanced systems to support the acquisition of academic degrees and qualifications, and offer e-learning with over 300 courses useful for reskilling.

Regarding technology development, another indispensable element for sustainable management, we are currently reorganizing our R&D structure. At present, there are three organizations: the Technical Research Laboratory, the Engineering Management Office, and the New Business Development Office. The Technical Research Laboratory conducts basic research and develops new products for each business, the Engineering Management Office connects each business horizontally and conducts R&D across business boundaries, and the New Business Development Office has the role of exploring new businesses that will contribute to future profitability improvement without being bound to immediate results. Among these, I envision reorganizing the Engineering Management Office and the New Business Development Office to conduct R&D aligned with long-term growth strategies by bringing together personnel from Group companies engaged in various businesses and collaborating across business lines.

Fiscal 2022 Results and Achievements

Carbon neutrality We launched full-scale promotion of carbon neutrality and investment in human capital.

To more efficiently implement climate change countermeasures, in December 2021 the YBHD Group expressed support for the TCFD recommendations and set the specific target of achieving carbon neutrality by 2050. In line with this objective, in fiscal 2022, we took steps toward zero greenhouse gas emissions, including installing solar panels for private consumption on the roof of the Technical Research Laboratory’s newly completed New Experimental Building and the Mobara Plant, and gradually switching purchased electricity to green energy. Through these initiatives, we reduced CO_2 emissions from our business operations (Scopes 1 and 2) in fiscal 2022 by 19% compared to fiscal 2020. In conjunction with our long-term growth strategies, we are also planning to enter the offshore wind power generation business and are participating in collaborative research with industry, government, and academia and joint projects with other companies, utilizing technology cultivated in our bridge business.

With respect to work-style reforms, we actively publicized and spread awareness of our new postnatal paternity leave system through internal news articles interviewing male employees who took the leave and other means. This had an immediate effect, with the male employee paternity leave uptake rate rising from 5.7% in fiscal 2021 to 34.4% in fiscal 2022, and we will continue working to improve it steadily. Under our YBHD Group Health Declaration, we are also focusing on health management. Various initiatives to support the health of employees and their families have earned us certification as a 2023 Health & Productivity Management Outstanding Organization in the large enterprise category.

Regarding employee career development and self-improvement support, the cultivation of DX specialists that I have been particularly concerned with since becoming president fully commenced in fiscal 2022. Some 100 employees selected for their outstanding DX-related skills and deep interest are currently undertaking the DX Specialists Development Course. The aim of this human resource development is not immediate performance-linked results, but to raise the DX level of the entire Group, centering on the employees taking the course. I believe DX is indispensable to the YBHD Group’s growth strategy and sustainable management, so I want to firmly invest in human resources who can be responsible for DX.

My Image of the Ideal Leader

“Harmony is to be valued.” Alone, I can accomplish nothing.

I am fully aware of the tremendous responsibility of my own role as the leader of this organization, whether in improving near-term profitability or devising long-term strategies spanning 100 years into the future. I am fond of the quote from the Analects, “Harmony is to be valued,” and deeply empathize with the idea that “cooperating in harmony while respecting and acknowledging each other is the most precious thing.” Especially after rising to a position above others as a business executive, I have come to strongly feel that “Alone, I can accomplish nothing.”

My image of the ideal leader is not one who stands alone at the front pulling everyone along, but one who trusts and listens to employees, sharing expectations with them and progressing together side by side. I believe this suits my personality, and I have continued aspiring to be that type of leader. However, given my position, which allows me a vantage point over others, I also recognize and am determined to fulfill my responsibility to steer the “Yokogawa Bridge Holdings Group” ship in the right direction—a better direction for us to move forward together.

Although the YBHD Group has built up over 100 years of history, our voyage has not always been smooth sailing. We have experienced misconduct and serious accidents where we missed our direction as a company, such as the 2005 bridge bid-rigging incident and the 2016 Arimagawa Bridge girder fall accident. However, I personally believe that exactly because we have such regrettable past experiences and have sincerely reflected on them each time to work toward regaining societal trust, we have been able to steadily expand our business with our feet on the ground. Heading toward our vision for the future a century from now, the Yokogawa Bridge Holdings Group will continue sustainable corporate management focused on tirelessly refining technology and pursuing the highest quality based on our policy of prioritizing safety. United as one, we will keep striving to be a company evaluated highly by society in both financial and non-financial terms.

History of the YBHD Group

1907
Founding, through the war years, to post-war recovery

1907
Dr. Tamisuke Yokogawa founded Yokogawa Bridge Works Ltd., the forerunner of Yokogawa Bridge Corp.

1913
The Yatsuyama Bridge, then the largest overpass bridge ever built in Japan

1938
The company was responsible for producing the steel frame used in the Dai-Ichi Life Insurance head office building, which was the most imposing building of its kind in Japan at the time. In the immediate post-war period, the General Headquarters (GHQ) of the Supreme Commander for the Allied Powers (SCAP) was located in this building.

1955
The Saikai Bridge, which heralded the trend towards larger, longer bridges.

1960
An era of rapid growth Yokogawa builds skyscrapers

1968
As a trailblazing manufacturer of steel structures, the company provided the structural framework for the Kasumigaseki Mitsui Building (now the Kasumigaseki Building), Japan's first skyscraper.

1970
World Trade Center Building (Tokyo)
Also in 1970: Keio Plaza Hotel

1974
Supporting skyscraper construction as a manufacturer of steel structures
Shinjuku Mitsui Building

1990
Linking Japan's transportation arteries

1993
A new Tokyo landmark: The Rainbow Bridge

1998
The world's longest suspension bridge at the time: the Akashi Kaikyo Bridge

1999
The world's first triple suspension bridge, consisting of three long successive suspension bridges: Kurushima Kaikyo Bridge

2000
Advanced technology

2001
Toyota Stadium, which was built using Yokogawa System Buildings Corporation's YMA moveable building system

2003
The Rokujizo section of the Kyoto Municipal Subway Tozai Line used composite segments supplied by Yokogawa NS Engineering Corp.

2009
Stonecutters Bridge in Hong Kong, the world's largest composite cable-stayed bridge

2010
Linking and connecting large spaces

2011
Spacious, beautiful, and comfortable – the new, completely transformed Osaka Station

2016
An engineered structure carefully tailored to suit its purpose and usage – Nasu no Megumi

2018
Japan's largest solid-rib arch bridge: Tenjo Bridge

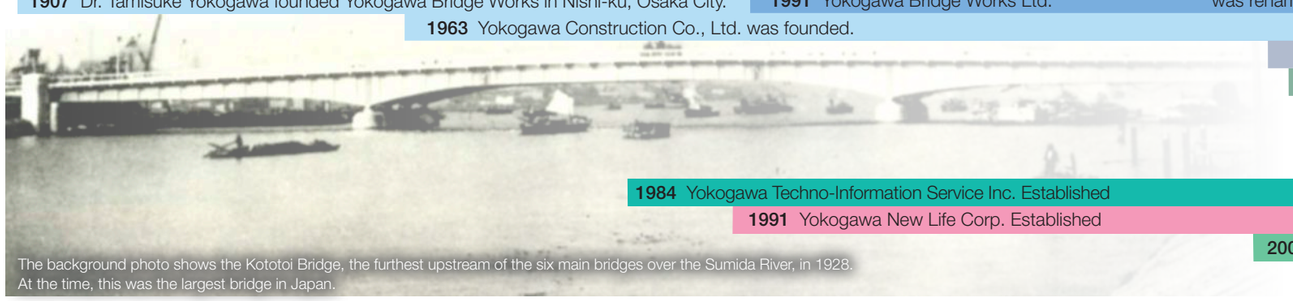
2020
Expanding into the future

2020
Rocket manufacturing plant made from a system structure: Interstellar Technologies Inc. headquarters plant and office

2022
Tama River Sky Bridge, which houses lighting in the railing to protect the precious estuary tidal flat ecosystem

2022
Konki Athletic Stadium, which received high praise for the steel frame roof erection method

1907 Dr. Tamisuke Yokogawa founded Yokogawa Bridge Works in Nishi-ku, Osaka City.
1963 Yokogawa Construction Co., Ltd. was founded.
1991 Yokogawa Bridge Works Ltd. was renamed Yokogawa Bridge Corp.
2001 Yokogawa System Buildings Corp. was founded.
2003 Yokogawa acquired a controlling share in Narasaki Seisakusyo Co., Ltd., which became a Group company.
2007 Yokogawa Bridge Holdings Corp. was founded.
2009 Yokogawa acquired a controlling share in Yokogawa Sumikin Bridge Corp., which became a Group company.
2015 Yokogawa Construction Co., Ltd. was merged into Yokogawa Bridge Corp. (with Yokogawa Bridge Corp. as the surviving company).
2019 Yokogawa Sumikin Bridge Corp. was renamed Yokogawa NS Engineering Corp.
1984 Yokogawa Techno-Information Service Inc. Established
1991 Yokogawa New Life Corp. Established
2000 YCE Corp. was founded.



The background photo shows the Kototoi Bridge, the furthest upstream of the six main bridges over the Sumida River, in 1928. At the time, this was the largest bridge in Japan.

Value Creation Process

Connecting, Linking, Expanding: Toward the Future

The YBHD Group has contributed to society through social infrastructure development and technological innovation. By further bolstering the Group's strengths, we will take on the challenge of creating new value adapted to the drastically changing social environment.

Business environment

Social change
- Declining birth rate and aging population
- Digitization
- Workstyle and lifestyle changes

Social issues
- Climate change
- Increasing natural disasters
- Aging infrastructure
- Decarbonized society
- Infectious disease outbreaks

Industry issues
- Shortage of workers
- Work-life balance
- Prevention of occupational accidents

Inputs

P.13-14

Manufacturing Capital

Production bases 7

Production capacity of the main plant

Osaka Plant 60,000 t/year

Chiba & Mobara Plants 90,000 t/year

Human capital*

Employees 2,017

Qualified personnel 1,244

*Including equity method affiliates.

Intellectual capital

Patents 180

R&D spending 500 million yen

Financial capital

Stockholders' equity 110.4 billion yen

Interest-bearing debt 21.4 billion yen

Natural capital

Power consumption 26.61 millionkWh

Steel consumption 143,000 tons

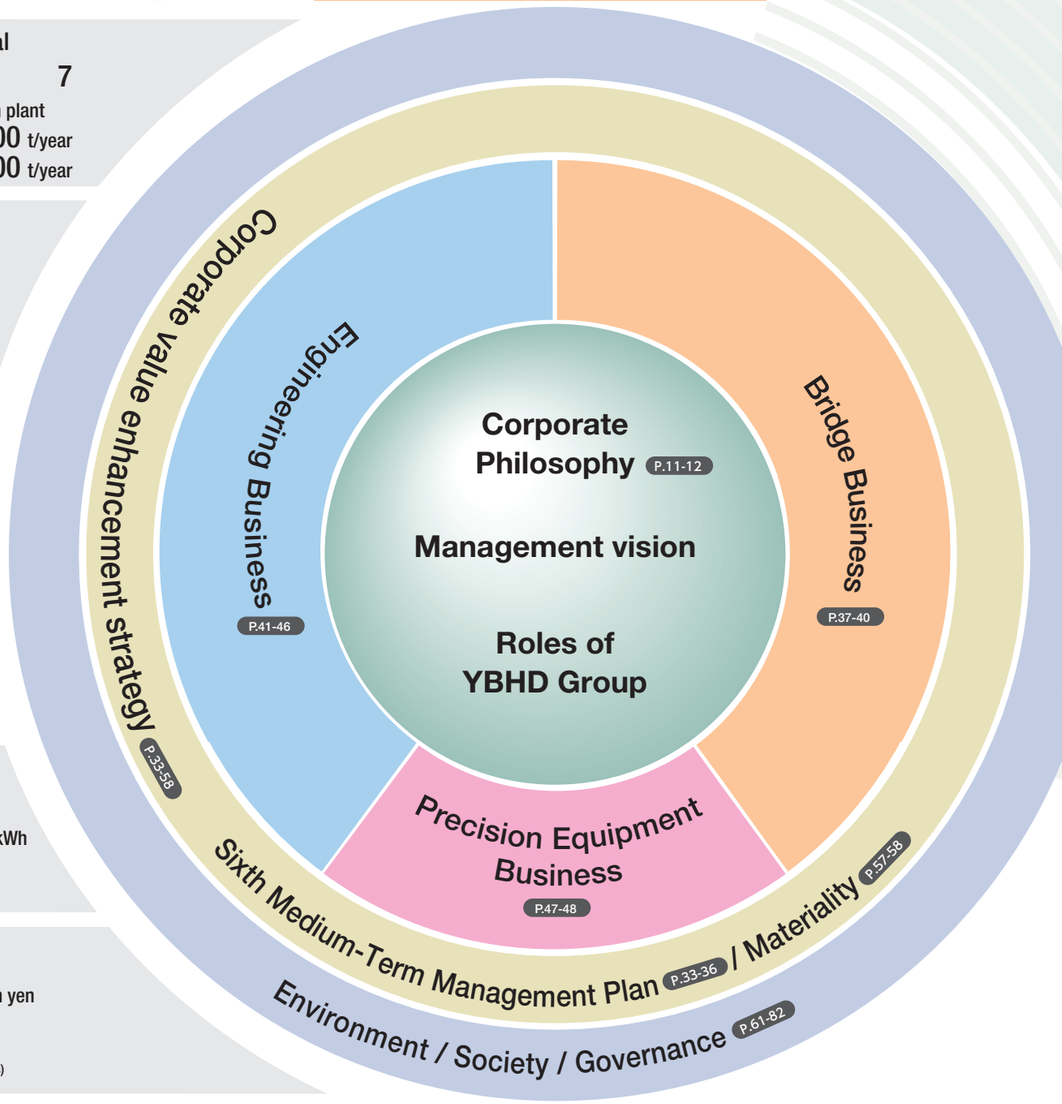
Social capital

Order value 156.9 billion yen

Sales and construction agents Over1,300

(Engineered structures affiliated builders)

Business activities



Outputs

P.15-16

Bridge Business

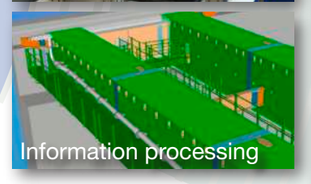

Bridges in Japan


Bridges outside Japan


Bridge attachments

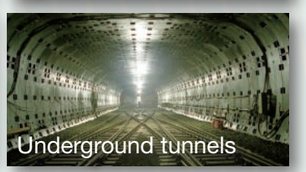
Precision Equipment Business


Precision machinery manufacturing equipment


Information processing

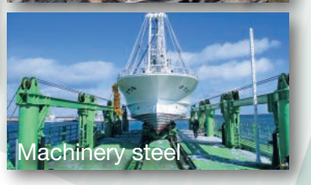
Engineering Business


Engineered structure system


Underground tunnels


Construction


Special-purpose buildings


Machinery steel

Outcomes

Economic value provided

P.83-86

Net sales	¥164.9 billion
Operating income	¥15.2 billion
Ordinary income	15.4 billion yen
Net income	11.2 billion yen
Earnings per share	273.36 yen
Equity ratio	58.8%
Payout ratio	31.1%

Social value provided

- Contribution to society through the development of social infrastructure, etc.
- Greater customer satisfaction
- Support for employee skill development
- Accumulation of technical capabilities and know-how
- Revitalization of local economies through employment
- Consideration for the global environment

SDGs

Stakeholders

Shareholders and investors

Customers

Business partners

Employees

Partner companies

Local communities

Philosophy Framework ofthe Yokogawa Bridge Holdings Group

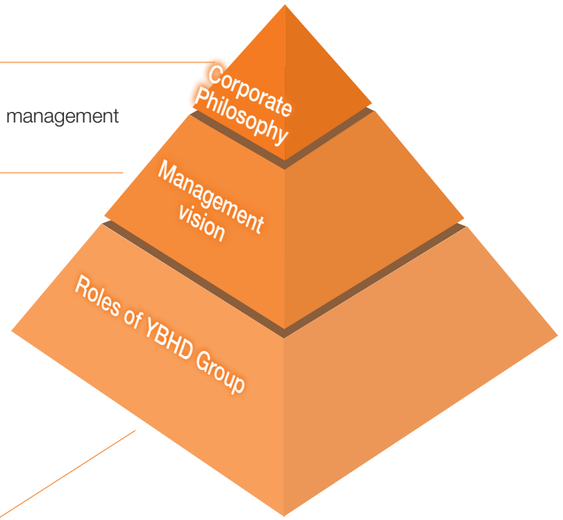
Corporate Philosophy

Contribution to society and the public, and sound management

Management vision

Realization of

- long-term protection of bridges
- multifaceted steel structure engineering
- creation of a resilient social environment and harmonious coexistence with the natural environment
- construction of a robust operational foundation as well as the pursuit of sustained expansion



Roles of YBHD Group

- Creating value for society and the public by building and protecting high-quality products and connecting them to future generations
- Contributing to the improvement of regional convenience and the development of social life and logistics through infrastructure development
- Contributing to and driving the development of each business segment as a leading company
- Contributing to the development of the human talent that underpins national and regional economic development by transferring technology and knowledge through our overseas business

Group companies and their businesses

	Consolidated subsidiary	Equity method affiliate	Group management	Bridge Business	Engineering Business	Precision Equipment Business	Real Estate Business
Yokogawa Bridge Holdings	—		●				●
Yokogawa Bridge	○			●	●	●	
Yokogawa System Buildings	○				●		
Yokogawa NS Engineering	○			●	●		
Narasaki Seisakusyo	○			●	●		
Yokogawa Techno-Information Service	○					●	
Yokogawa New Life	○						●
YCE		○		●			
Yokogawa Techno Philippines	—	—		●	●		

Segment structure

Bridge Business	New bridge construction business	● Design, manufacture, and on-site construction of new bridges
	Maintenance business	● Maintenance and repair of existing bridges
	Overseas business	● Design, manufacture, and on-site construction of bridges outside Japan
Engineering Business	Engineered structure system	● Design, manufacture, and on-site construction of system structures (“yess buildings”)
	Civil engineering business	● Design and manufacture of tunnel segments ● Design and manufacture of offshore and port structures
	Construction and machinery steel business	● Construction of steel frameworks and forge work for high-rise buildings, etc. ● Design, manufacture, and on-site construction of moveable building systems (YMA) ● Water treatment business
Precision Equipment Business	Precision equipment manufacturing business	● Production of high-precision frames for manufacturing equipment for LCD panels, OLED panels, and semiconductors
	Information Processing business	● Software development
Real Estate Business		● Leasing some real estate owned as logistics warehouses, etc.









Management Resources (Inputs)

The YBHD Group's strengths include a workforce consisting of a large number of engineers, technical capabilities accumulated through abundant achievements and experience, and a corporate culture of embracing challenges as a leading company. In order to bolster these strengths further, we are working to enhance our management resources, such as human capital and intellectual capital.

Human capital

Employees group-wide **2,017***

Qualified personnel **1,244**

*Including equity method affiliates.

For the YBHD Group to achieve sustainable growth, it is essential to improve the technical capabilities of employees – our human talent. Orders for public works projects, in particular, require experienced, qualified personnel, so we need a large number of highly specialized engineers. In order to support and promote autonomous career development, the Group has a self-reporting system in which employees meet with the person in charge of their department to talk about transfer or skill development desires. We use this system to conduct job rotations and appropriate personnel assignments according to aptitude. We also actively provide support for employees who need to attend training sessions and seminars, including those needed to obtain related qualifications. The expertise of each and every employee, deepened in this way, is the source of the Group's high technical capabilities.

Qualified personnel — As of March 31, 2023

	Persons
Professional engineers	165
First-class architects	40
First-class civil engineering management engineers	753
First-class architectural construction management engineers	130
First-class construction accountants	21
Second-class construction accountants	135
Total	1,244

→ See P.53 and 54 for our human resource strategies.

Intellectual capital

Patents held **180**

R&D spending **500** million yen

The YBHD Group has built many pioneering buildings of various types. The Saikai Bridge, which we worked on in 1955, was Japan's first large and long fixed-arch bridge. The Kasumigaseki Mitsui Building (now the Kasumigaseki Building), which we built in 1968, was Japan's first skyscraper. In addition, as a leading bridge company, we have taken on the challenge of building other Japan-first and even world-first bridges, such as Kurushima Kaikyo Bridge, which is the world's first triple suspension bridge, and Akashi Kaikyo Bridge, which boasted the world's longest span at the time it was built.

To further enhance the technical capabilities accumulated through such abundant achievements and experience, our Technical Research Laboratory and operating companies work together, and we focus on R&D through joint research with universities and research institutes.

Joint research achievements — As of March 31, 2023

Period	Participants	Research topic
Nov. 2012 –Mar. 2024	Nippon Steel, Yokogawa Bridge Holdings, Yokogawa NS Engineering	Research on expansion devices used for bridges and other structures
Mar. 2013 –Mar. 2015	Geostr, Yokogawa NS Engineering	Development of steel/concrete composite embedded formwork for constructing large cross-section culvert top slabs
Dec. 2013 –Mar. 2016	Yokogawa Bridge, Metropolitan Expressway, Kawada Industries, Kawada Construction	Research on rapid construction updating techniques for existing RC slabs
Apr. 2014 –May 2015	Hazama Ando, Yokogawa NS Engineering	Development of segments for deep underground road confluences
Dec. 2014 –Mar. 2017	Hanshin Expressway, Hanshin Expressway Technology Center, YCE, Yokogawa Bridge	Joint research on structural improvement of closed cross-section ribbed steel plate reinforcement
Sept. 2015 –Dec. 2016	The University of Tokyo, Yokohama National University, Maebashi Institute of Technology, Yokogawa Bridge Holdings	Performance evaluation of blast furnace slag concrete for increased durability of steel bridge RC slabs
Dec. 2015 –Mar. 2019	Nippon Steel, Geostr, Yokogawa NS Engineering	Development of steel/concrete composite structure seawalls
Apr. 2016 –Mar. 2019	Nippon Steel Engineering, Yokogawa NS Engineering	Structure proposal for small and medium-span bridges and research on replacement and renewal techniques
Apr. 2016 –Mar. 2021	Yokogawa Bridge, Oxjack	Research on power dampers with bridge collapse prevention function
Apr. 2017 –Mar. 2021	Yokogawa Bridge, Oxjack	Development of earthquake-resistant equipment (grippers) in the direction of the bridge axis
July 2017 –July 2019	Yokogawa Bridge, Metropolitan Expressway	Research on the structure and construction method of slab connectors in existing RC slab renewal
Feb. 2018 –Mar. 2022	Nippon Steel, Yokogawa NS Engineering	Research on steel plate structure for rapid renewal of existing RC slab bridges
Apr. 2019 –Mar.2021	Yokogawa Bridge, Nikkei Engineering, Yokogawa Bridge Holdings	Research on floor panel span extension in "cusa" aluminum alloy permanent scaffolding
Apr. 2019 –Mar. 2022	Yokogawa Bridge, Nikkei Engineering, Yokogawa Bridge Holdings	Research on a reverse-side sound absorption feature for "cusa" aluminum alloy permanent scaffolding
July 2019 –Mar. 202	Tokyo Metro, Yokogawa NS Engineering	Product development of new tubular steel columns with stacked steel bearing plates
Nov. 2019 –Mar. 2023	Yokogawa Bridge, Ecomott	Development of AI-based management system for tightening high-strength bolts
Sept. 2020 –Mar. 2021	Yokogawa Bridge, Osaka Prefecture University	Development of damping assessment method for highly damped structures
Apr. 2021 –Mar. 2023	Yokogawa Bridge, Osaka Metropolitan University	Development of highly damped structures

→ See P.51 and 52 for our R&D initiatives.

Manufacturing Capital

Production bases **7**

Production capacity of the main plant

Osaka Plant **60,000** t/year

Chiba & Mobara Plants **90,000** t/year

The YBHD Group has its own production bases, such as large plants that manufacture bridge parts, where employees and skilled production department craftsmen fabricate and assemble parts.

The Osaka Plant, which is our main plant, is located in the Sakai Senboku Coastal Industrial Zone. As a plant with state-of-the-art equipment, it is responsible for the production of various large steel structures.

Osaka Plant

In the engineering business, we operate the industry's only plants dedicated to engineered structures (Chiba Plant and Mobara Plant) at full capacity to further increase our market share in the field of engineered structures. → See P.91 for information on our bases.

Social capital

Order value **156.9** billion yen

Sales and construction agents

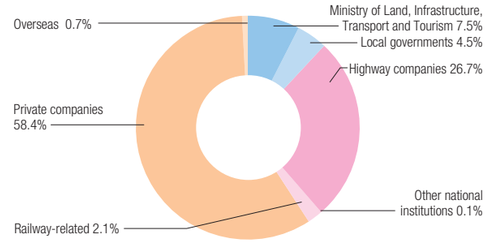
Over **1,300**

(Engineered structures affiliated builders)

In the bridge business, we have received orders for new construction, maintenance work, and overseas construction from various clients, such as the Ministry of Land, Infrastructure, Transport and Tourism (MLIT), local governments, highway companies, and private companies, based on the relationships of trust we have cultivated up to the present.

In the engineered structure system business, we are focusing on customer development and market expansion in collaboration with more than 1,300 affiliated builders nationwide.

Breakdown of consolidated orders received



Financial capital

As of March 31, 2023

Stockholders' equity **110.4** billion yen

Interest-bearing debt **21.4** billion yen

In order to support business continuity as a builder of bridges that require 100 years of durability, we strive to ensure financial soundness with a basic capital policy of maintaining a balance between financial trustworthiness and capital efficiency and a basic shareholder return policy of paying graduated dividends and flexibly acquiring treasury stock. We secure operating capital and funds for capital investment through free cash flow and indirect procurement, and financial stability and liquidity are supplemented by commitment line agreements.

→ See P.83-90 for financial information.

Financial capital

As of March 31, 2023

Power consumption **26.61** million kWh

Steel consumption **143,000** tons

The YBHD Group strives to use resources efficiently by quantitatively ascertaining and scrutinizing resource and energy usage at its business sites in Japan.

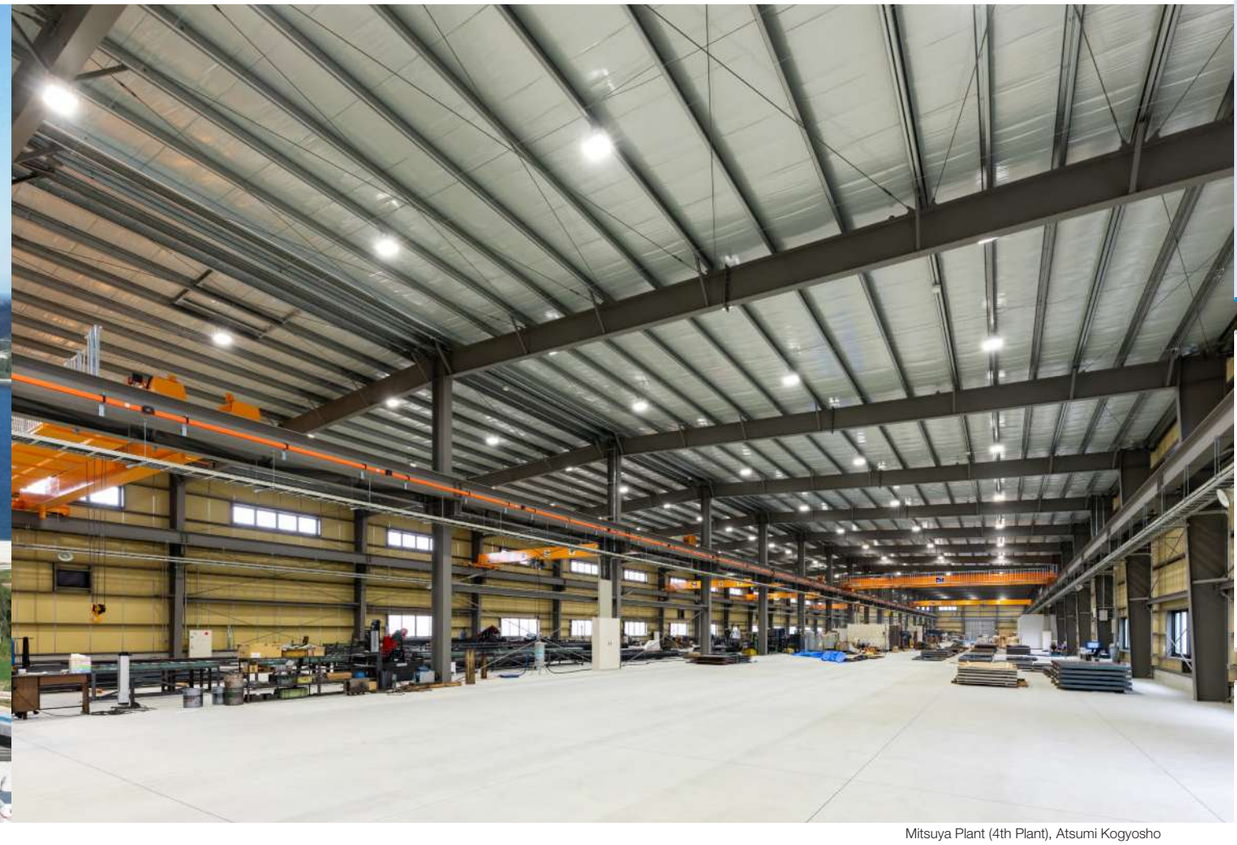
In addition, we will drive the reduction of environmental impact by actively working on the use of renewable energy and the development of environmentally friendly products and construction methods.

→ See P.61-64 for our environmental initiatives.

Services Provided (Outputs)

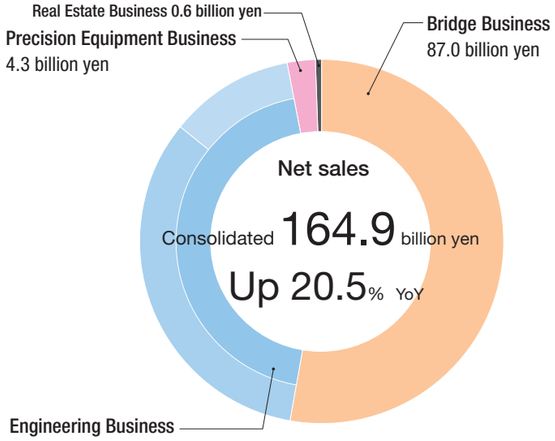
Centered on the bridge business, which leverages our strength of comprehensive technical proposal capabilities encompassing the entire process from design and fabrication to erection, construction, maintenance, and diagnostics, the YBHD Group is engaged in a wide range of businesses including the construction business such as engineered structures, civil engineering-related businesses such as steel segments, and the advanced technology business, which includes precision equipment manufacturing and information processing.

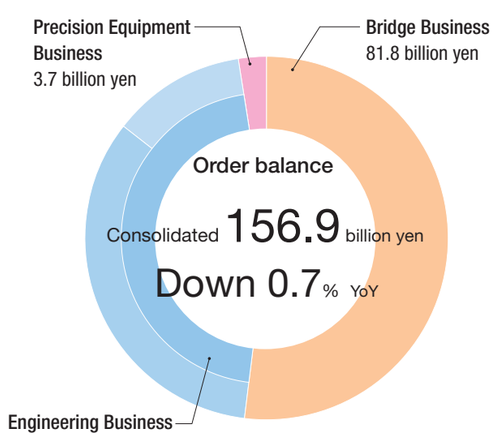
Kesennuma Bay Crossing Bridge (Nickname: Kanae Ohashi)



Mitsuya Plant (4th Plant), Atsumi Kogyosho

Net sales and orders received (FY2022)





Bridge Business

As a leading company in the bridge industry, we are constantly engaged in the development of cutting-edge technologies and have been involved in the construction of many of Japan's leading bridges. In response to the aging of existing facilities and the need to develop infrastructure that is resilient to natural disasters, we have established a total maintenance business system that covers everything from inspections and surveys to design, fabrication, and on-site construction in maintenance and repair work, thus contributing to the maintenance of safe and high-quality social infrastructure along with new bridge construction.

Engineering Business
Engineered structure system business

Our "yess" buildings, which utilize Yokogawa's proprietary steel structural technology, are engineered structures with first-rate design and flexibility. They range from buildings with standard dimensional specifications to highly flexible custom-made specifications, depending on the purpose and use. With high quality, low cost, and quick delivery, our engineered structure system business has steadily increased its share in the industry and continues to grow as our second core business after the bridge business.

Engineering Business
Civil engineering / Construction and machinery steel

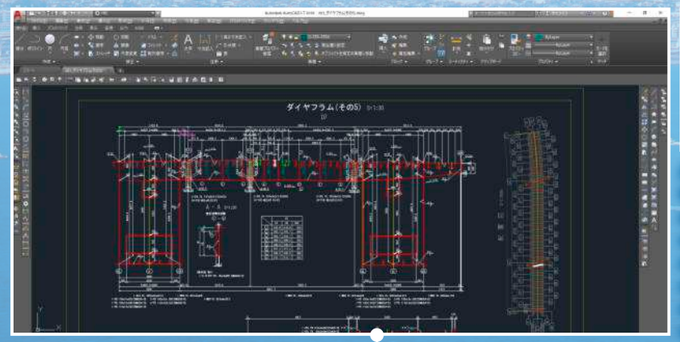
Our civil engineering business focuses on port and offshore structures for earthquake and tsunami protection, and the steel segment business addresses the utilization of underground space, such as major urban ring roads. In our special structures business, we are engaged in integrated design, construction, and maintenance services related to "movable buildings," such as retractable roofs for swimming pools and stadiums. We are also contributing to a variety of other fields related to the construction business, such as work on steel frameworks for high-rise buildings, etc., the construction of stadiums, and producing steel machinery structures for water gates (floodgates) and ship-lifting equipment.

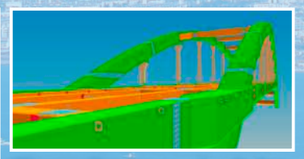
Precision Equipment Business

In the precision equipment manufacturing business, we provide a stable supply of high-precision products with excellent cost performance for use in the production of precision machinery manufacturing equipment for semiconductors, LCD panels, etc., through our integrated production management system from structural frame design to manufacturing. In the information processing business, our products, such as APOLLO, which is a total system for steel bridge design, and the CA* (Caster) series manufacturing simulation system, have gained the top share in the steel bridge industry.

Building Strong Bridges Bridge Building Process

The YBHD Group accurately meets diverse requests and contributes to the development of social infrastructure by exercising its comprehensive technical and management capabilities in all processes of bridge design, fabrication, and construction.





After creating comparative designs to select the form of the bridge most suited to the road plan and conditions, a detailed design is made, including the creation of detailed drawings. In addition, a design review is conducted to verify the validity of the design.

Order

Design

Fabrication
Arranging materials

Fabrication
Cutting / Machining

Fabrication
Welding / Assembly

Fabrication
Temporary assembly

Fabrication
Painting

Transportation

Materials are procured based on the design. The primary material is steel plate.

The procured steel plate is cut into the designed shape. Steel bridges are fabricated in blocks that can be transported from the plant to the construction site. It is common to use bolts as the method of joining the blocks that make up a bridge. For this reason, bolt holes are drilled at the joints of the cut steel plates.

Bridge blocks painted in the plant are transported to the construction site.

Assembled blocks are then fully or partially assembled temporarily into the bridge's finished shape to check that there are no errors in shape and dimensions, thus making sure that there will be no problems in on-site construction. There are two kinds of temporary assembly: actual temporary assembly, in which the blocks are actually assembled, and simulated temporary assembly using a computer-based 3D measurement system.

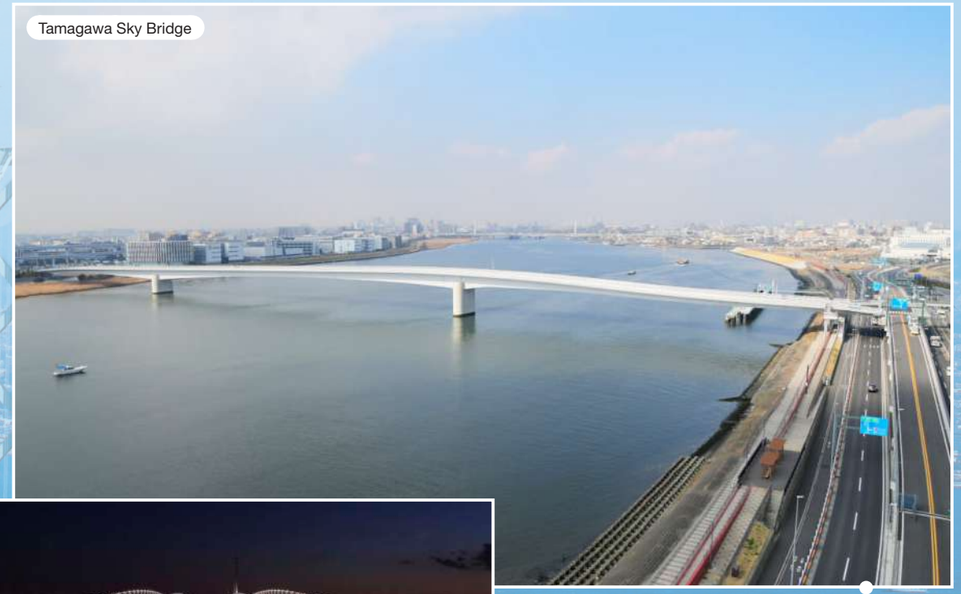
After temporary assembly, the blocks are dismantled and painted. Some bridges use weather-resistant steel materials that do not require painting.

Individual steel plates that have been machined, such as by drilling holes, are assembled by welding to create the shape of the blocks that will make up the finished bridge.

Bridge Building Process

Construction site experts gather to build the bridge with great care for safety. Depending on the type of bridge, topography, environment, and other conditions on site, the way the bridge is supported during construction and the block transportation equipment will change. Moreover, there are about 20 methods to erect bridges. In order to stick to the schedule for completion while ensuring safety as the top priority, it is necessary to respond quickly to daily changes in circumstances. Every time someone has a question, no matter how small, we stop the work and check and discuss it as many times as needed until everyone is satisfied.

Individual blocks are assembled on the ground or on temporary facilities into a size suitable for erection. The blocks are joined by welding and bolting.



Tamagawa Sky Bridge

Once completed, the bridge will provide a route over which people, goods, hearts, and cultures pass. It will continue to support safe and secure lives by connecting people and communities.

Construction
Erection

Construction
Deck

Construction
Painting

Completion

Temporary facilities

Temporary facilities are set up to support the bridge during construction. The temporary facilities are dismantled after all erection work is completed.

Ground assembly

Girder construction

Using cranes, etc., the assembled blocks are lifted into place one by one in the order in which they are to be installed and built into a bridge.

A deck is built on top of the erected steel girders so that vehicles can travel on it. The material is mainly reinforced concrete, but there are also steel decks fabricated from steel plate in plants.

The joints between the blocks are painted.

Building Large Spaces Factory and Warehouse

Engineered structure system

Yokogawa Engineered Structure System (“yess”) is an architectural brand that specializes in buildings with large, pillarless spaces that are manufactured and constructed by applying Yokogawa’s own structural specifications to the engineering of engineered structures. This enables the construction of high-quality buildings, mainly plants and warehouses, with short delivery times at low cost by standardizing parts such as beams, pillars, roofs, exterior walls, fittings, etc.

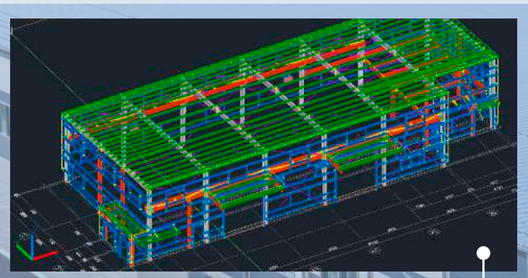
Client

Affiliated builder
(contact point)
Everything from estimates to construction

Yokogawa System Buildings
(manufacturer)
Design and production

In addition to direct sales activities,
we are developing this business by leveraging our network of more than 1,300 affiliated builders nationwide.

What are “yess” building sales and construction partners (affiliated builders)?
Affiliated builders nationwide serve as direct contacts for clients, and the YBHD Group’s Yokogawa System Buildings supports the builders. To facilitate clients’ business expansion and ensure that their capital investment goes smoothly, we provide support together with affiliated builders, from consultation to construction and maintenance.



The design and production system for “yess” buildings is based on the steel bridge structure technology we have cultivated in the bridge business. This is achieved through the Scapy3D & YMD System, which is a structural design and production design system exclusively for “yess” buildings that has been independently developed by Yokogawa System Buildings.

We have established a system to produce “yess” buildings in the only plant in Japan dedicated to system buildings. This allows us to provide a stable supply of high-quality materials in a short time and at a low cost.

Warehouse Building, New Kuki Shobu Sanga Logistics Facility, Yamashiro Rikuun

Head Office, Kikuta Iron Works Co., Ltd.

Uniqlo Maebashi Minami Interchange Store

Wam All Athlete Station

Rational construction methods that standardize members and joints enable construction in a short period. Moreover, since “yess” buildings can have pillarless spaces of up to 60 meters, they can be used in various fields, such as sports facilities and stores, in addition to factories and warehouses.

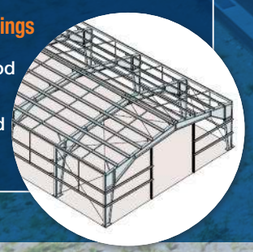
Mobara Plant, Yokogawa System Buildings

Order-taking → Design → Production → Construction → Completion

Four systems to create “yess” buildings

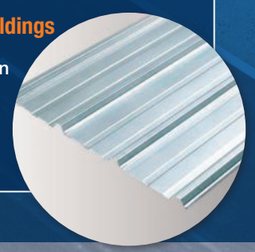
Frame system for “yess” buildings

Our proprietary design method enables weight savings and large spans in the frame used for pillars and beams.



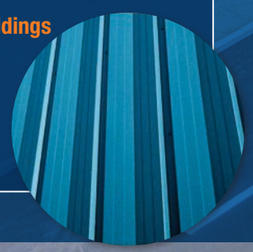
Roof system for “yess” buildings

Metal roofs set with insulation ensure high insulation at a low cost.



Wall system for “yess” buildings

We have a large lineup from which selections can be made according to the application and design.



Accessories for “yess” buildings

We provide a full range of accessories, such as shutters, doors, cranes, etc.

New Bridge Construction Business—Building Bridges

	Sales	Design	Fabrication	Construction
Overview/Department in Charge	Based on clients' project plans, we select and bid on projects to target for orders while analyzing factors such as our past project track record, the feasibility of proposing new technologies, and competitor trends. Our sales and engineering departments collaborate, gathering and researching information based on past analysis, to understand the technical specifications and expected price points that the client is looking for, aiming to win the contract. After being awarded a construction project, the sales department coordinates with relevant departments on initiatives to earn construction performance assessment points and respond to design changes accompanying additions and alterations to the construction scope. The department also proactively holds site tours and other events to contribute to the local community.	In our design work, we employ specialized engineering in order to safely construct and provide steel bridges with high safety and durability. Our design system complies with ISO 9001 and utilizes quality control with BIM/CIM to deliver high-quality products. We also believe contribution to environment conservation and sustainability is important. Accordingly, we continuously work to reduce CO_2 emissions in the bridge fabrication process, such as by reducing the amount of steel used and revising welding methods. We also collaborate with steelmakers in this effort. We strive for further quality enhancement by incorporating the latest ICT technologies and various technical information and continuously making improvements through the PDCA cycle.	Bridges are characterized not only by being large structures but also by the fact that no two are exactly alike. Our plants have dedicated bridge production lines to efficiently manufacture them. Machinery like processing machines and welding robots are linked to our proprietary bridge fabrication information system CastarJupiter. This enables an integrated bridge production system that delivers reliable, high-quality products. We also strongly promote DX in our plants. Efforts such as using tablet devices in plant work to implement paperless operations with electronic forms and vitalize communication with business chat are made to continuously improve productivity.	Our construction planning division leads the planning of construction methods based on the surrounding environment, construction conditions, and project timeline. If there are safer and higher-quality methods than the initial plan, we will propose them to the client and change the erection methods and equipment used. Once construction begins, we conduct optimal process control for safety, accurately assembling stable-quality factory-made products on site and completing structures on schedule. Recently, we have been conducting more site tours for nearby residents and schools, and this has been well received. When large natural disasters occur, we promptly respond to support requests from authorities to quickly restore damaged road bridges, railway bridges, and other vital infrastructure.
Yokogawa's Strengths	● We have accumulated diverse construction achievements since our founding and have numerous experienced engineers. ● We win contracts with our ability to propose new technologies backed by proof-of-concept tests conducted in collaboration with R&D. ● We have abundant human resources capable of handling large-scale projects. ● With sales offices and construction sites nationwide, we gather information leveraging our extensive network. ● Our technical capabilities and quality-driven brand strength garner high praise and trust from customers. (Designated as an Excellent Construction Company by the Regional Development Bureau of the Ministry of Land, Infrastructure, Transport and Tourism)	● As a group of engineers embodying the spirit of our founder to "Embody integrity! Create outstanding things!" we achieve quality improvement through teamwork, leveraging our abundant and versatile human resources. ● In collaboration with the Technical Research Laboratory, our designers develop and improve product lines including composite bridge decks, permanent aluminum scaffolding, and earthquake-resistant products. ● In addition to on-the-job training, our human resource development system aimed at multi-skilling maintains and enhances technical capabilities. ● Workflows adapted to diverse work styles create an environment where people can work long term. ● We are achieving operational efficiency and productivity improvements by utilizing BIM/CIM in collaboration with the Group's information processing business.	● Our main Osaka Plant has delivered many of Japan's celebrated bridges nationwide, cementing its reputation as Japan's leading bridge fabrication plant. ● We use proven manufacturing technologies, such as welding techniques accumulated over many years, to manufacture high-quality bridge components. ● Our proprietary automatic full-scale 3D tracing system and dedicated bridge production lines enable us to manufacture high-quality bridge products. ● With various processing machines, we achieve short delivery times and high productivity through 100% in-house steel plate processing. ● With 200-ton lifting capacity crane facilities, we can fabricate large bridge components. ● Our pier, enabling the docking of large marine cranes, allows marine transport of large block girders.	● The experience cultivated through our long history, from the dawn of steel bridge fabrication and erection to the present day, is passed down to employees as a track record of achievements and a sense of responsibility. ● From large-scale projects to local infrastructure development, we utilize our expertise and technical capabilities to meet customer needs. ● Using our proprietary BIM/CIM software and erection design programs, we simulate complex behavior during construction to build high-quality structures. ● We safely carry out challenging construction projects by leveraging our large inventory of specialized erection equipment and collaborating with highly skilled and experienced top-tier subcontractors.

Promoting DX in Factory Production

Takashi Fujimoto, Osaka Plant, Production Headquarters, Yokogawa Bridge

While communication between engineers and workers is essential in bridge fabrication, maintaining high productivity requires the rapid sharing and mutual understanding of various types of information. To enable this, we utilize tablet devices in our plant, allowing centralized management of information and rapid response by electronically issuing all kinds of production documents, such as drawings and work procedures.

For the cable-stayed bridge tower fabrication that I am involved in, we utilize tablets to promote mutual understanding with workers of the complex structure. Sharing visual information through video calls and photos allows me to give precise instructions remotely even for content that was previously difficult to convey through words and documents alone, greatly contributing to operational efficiency.

In the use of DX for safety, we have a system where safety patrol findings input directly into tablets on-site are automatically distributed to the departments in charge, enabling prompt and efficient improvement of unsafe conditions. We have also introduced a quadruped robot nicknamed "Y.LEAD" to help reduce manpower in safety patrols.

While leveraging our accumulated manufacturing expertise, we incorporate new technologies to pursue further quality and productivity improvements.

▲▶ Cable-stayed bridge tower under fabrication

◀ Safety patrol using the quadruped robot "Y.LEAD"

Maintenance Business — Protecting Bridges

	Sales	Surveying/Design	Planning	Construction
Overview/Department in Charge	Bridge repair and reinforcement work is carried out after damage is assessed through periodic inspections by the client. The target bridges are then selected and repair methods are examined and designed by consultants. For large-scale renewal projects, further considerations are taken into account, such as traffic impact, before the work is commissioned. We consider whether we have the capacity in terms of on-site personnel, design staff, material supply, and partner company arrangement, before bidding for a commissioned project. For increasingly diverse maintenance work, the ability to estimate costs and provide quotes based on accumulated data greatly affects whether contracts can be won. In maintenance projects, changes in conditions often arise after contracting due to discrepancies between initial plans and actual site conditions. We coordinate with relevant departments to address design changes, which take considerable time. We also provide on-site support, such as client handling.	Maintenance projects begin with a survey of the existing structure after contract award. Scaffolding enables close visual inspection, but members designed for repair based on design documents and inspection results sometimes cannot be installed due to factors such as structural degradation over time. Therefore, a detailed survey must be conducted promptly considering the project content. In recent years, the use of BIM/CIM to measure 3D point cloud data to grasp three-dimensional shapes and confirm workability has resulted in quality and productivity improvements. Furthermore, in addition to conventional maintenance work such as crack repair, we are strategically strengthening our technical capabilities and systems to handle diversifying projects, such as bridge deck replacement and permanent scaffolding installation, as well as larger-scale projects.	For site construction, the planning department considers optimal combinations of safety, quality, schedule, cost, and other factors to determine the best construction method. Recently, there is demand from all quarters for construction that takes into account carbon neutrality and reduced environmental impact, and we actively adopt new technologies and techniques that contribute to these goals. Also, the use of BIM/CIM in construction planning has a major effect in maintenance work, with safety and productivity improvements pursued in each project. Materials used on-site are delivered after being arranged by the procurement division at reasonable prices and with on-time delivery. At the start of on-site work, members from each division, including sales, design, planning, procurement, construction, and safety, meet to share points requiring attention in carrying out the work.	In on-site construction, the construction division takes the lead in daily safety management, quality control, progress monitoring, and cost management. Selecting the right partner companies for the construction project is also important. The role of partner companies is becoming increasingly important in the maintenance business as the variety of work diversifies and projects become larger. The safety division periodically patrols sites, checking the status of safety management and legal compliance, and requires the construction division to rectify any problems. When technical problems or issues are found on-site, specialist engineers from each division are called together to collaboratively resolve the problems and complete the work within the deadline while ensuring the required quality.
Yokogawa's Strengths	● We have the ability to handle diverse projects based on our strong information-gathering capabilities and extensive construction experience. ● We have many experienced site engineers and excel in highly challenging construction work such as special bridges. ● Our well-developed cost estimating system enables meticulous response to clients, even amid design changes. ● The high acclaim and trust we receive from clients has earned us numerous construction awards. ● Leveraging extensive achievements and experience, we will lead the bridge maintenance business.	● We possess advanced technical capabilities in the maintenance business, built up through many years of achievement. ● We thoroughly understand and reliably respond to client needs based on our corporate culture of valuing integrity. ● We achieve continuous evolution in the maintenance business by actively utilizing cutting-edge technologies. ● We have established BIM/CIM-compatible design skills and systems, contributing to productivity improvement. ● We realize rational, effective design and construction through close coordination between surveying, design, fabrication, planning, and construction. ● Responding to a diversified work environment, we systematically cultivate versatile engineers by actively rotating staff between new bridge construction and maintenance and promoting work-style reforms.	● We have a long history and wealth of construction experience, having inherited the advanced technical capabilities of Yokogawa Maintenance Technology Co. (now Yokogawa Bridge), established in 1988 as a specialist bridge maintenance company. ● In maintenance work, we have been awarded many project and engineer awards, earning deep trust from various ordering agencies and road administrators. ● In addition to our inherent steel structure technology, we have many engineers with diverse skills, including expertise in concrete technology, and have established construction systems capable of handling many types of large-scale and difficult projects. ● We have a wide variety of construction machinery and equipment, along with several of our own plants in Japan for their maintenance, and are working to improve the safety and productivity of on-site construction.	● We promote technological development related to bridge maintenance construction through coordination within our company, with Group companies, and with external institutions, making us highly competitive in the bridge maintenance market. ● We possess many bridge-related products, such as seismic control devices and permanent aluminum alloy scaffolding that can generate synergy with the maintenance business, as well as high technical and proposal capabilities combining these products with various construction techniques. ● In collaboration with a department specialized in ICT construction, we actively engage in the "i-Construction" promoted by Japan's Ministry of Land, Infrastructure, Transport and Tourism. ● We have established a network among partner companies with high technical capabilities, promoting information sharing and strengthened coordination.

Large-Scale Repair Work on the Metropolitan Expressway Kanagawa Route No. 2 Mitsuzawa Line

Toshiya Ozaki, Tokyo Construction Dept. 2, Tokyo Construction Headquarters, Yokogawa Bridge

This project involves large-scale repair work on the Metropolitan Expressway Mitsuzawa Route near the west exit of Yokohama Station. It includes permanent scaffolding installation, structural improvement, and repainting. The existing bridge's underside was fitted with exterior louvers, making close inspection difficult, even with mechanical scaffolding. Damage to the exterior louvers was also reported, increasing the need for renewal. Permanent scaffolding was installed in consideration of safety, maintainability, and cost performance.

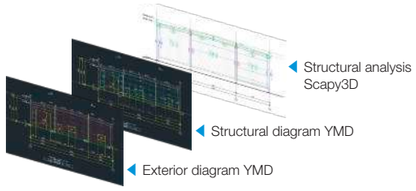
The site employs about 20 staff members, including a wide range of ages from young to veteran members, women, and foreign nationals. Around 10% of the approximately 100 people working on-site are foreign nationals, making for a diverse construction site.

The construction area is located in a busy downtown area densely packed with buildings and commercial facilities, with high pedestrian traffic day and night. The subject bridge has a two-level structure. When working on the upper level, traffic on the lower-level highway is regulated at night. When working on the lower level, we occupy the waterway and public roads, making safety management for general vehicles and pedestrians important. Working day and night without interruption, we are progressing with construction as a team while taking meticulous care to achieve accident- and disaster-free completion.

▲ Continuous connection of Gerber girders

▲▶ Installed "cusa" permanent scaffolding

Engineered Structure System Business —— Building Large-Scale Structures

	Sales	Design	Production	Construction
Overview/Department in Charge	We provide clients with optimal buildings that meet needs for cost, construction timeline, space utilization, etc., by switching from conventional to engineered structure system construction methods to having warehouses and factory buildings across Japan. Our sales and construction agency builders and internal engineering departments collaborate to put together plans to realize this. Demand ranges from 200 m^2 to over 20,000 m^2 depending on the building's intended use, but no matter the plan, we put together proposals that capture the clients' visions. To bring the visions of many clients to life, we are also expanding into building applications such as offices, stores, and sports facilities to provide products essential for urban development.	The design department supports technologies enabling streamlining and weight reduction in "yess" building design through construction, providing optimal plans capturing clients' building visions. While specialized in warehouses and plants, "yess" buildings are also used for various other applications such as offices, stores, and sports facilities. We have built over 10,000 buildings that meet the expectations of clients by realizing the functions and designs they have requested. We also thoroughly pursue standardization in design, fabrication, and on-site construction for labor and operational efficiency, playing a central role in improvement activities for product quality, cost performance, and short delivery times.	Production takes place at two plants, the Chiba Plant located in Sodegaura City, Chiba Prefecture, and the Mobara Plant in Mobara City, Chiba Prefecture. The Chiba Plant specializes in producing steel framing materials for purlin and furring strips and exterior materials for roofs and walls. The Mobara Plant specializes in BH members for main pillars and large beams. Automatic dedicated production lines at both plants greatly contribute to production efficiency and product quality assurance.	We construct approximately 600 buildings annually while considering safety and the environment and achieving short construction periods. Steel framework erection involves lightweight, standardized members, enabling better workability than conventional steel frameworks and allowing construction with fewer workers. Amid an intensifying labor shortage in the construction industry, we are addressing the lack of engineers and workers. Our construction site system comprises our own exceptional engineers at the core, along with partner companies with abundant experience.
Yokogawa's Strengths	In addition to direct sales activities, we leverage a network of over 1,300 affiliated builders nationwide to expand our business. **Yokogawa Engineered Structure System ("yess") Buildings Sales and Construction Agency Builders (affiliated builders)** Affiliated builders nationwide serve as direct contacts for clients, and the YBHD Group's Yokogawa System Buildings supports the builders. To facilitate clients' business expansion and ensure that their capital investment goes smoothly, we provide support together with affiliated builders, from consultation to construction and maintenance.	A feature of "yess" buildings is a design method for achieving weight and labor reductions through a construction method that has acquired structure general appraisal certification. Based on advanced design technology, the design and production system for "yess" buildings is grounded on Yokogawa's proprietary steel structure technology cultivated in our bridge business and achieved by combining this with the "Scapy3D & YMD System," a structural and production design system independently developed by Yokogawa System Buildings for "yess" buildings.  	In addition to owning specialized plants, we stock materials to ensure that the lead time for arranging materials is essentially zero, in order to efficiently produce "yess" buildings' unique steel members and roofing/exterior wall materials. Stable production and quality assurance are possible with dedicated production lines, allowing us to supply products responsibly and confidently. While emphasizing product quality assurance, we aim to further improve production capabilities by enhancing production efficiency at both specialized plants in response to the increasing demand for "yess" buildings in recent years.	Rational construction methods that standardize members and joints enable construction in a short period. Moreover, since "yess" buildings can have pillarless spaces of up to 60 meters, they are used for buildings in various fields beyond warehouses, such as sports facilities and stores.

Tomomasu Drink Co., Ltd. Warehouse and Office

Yoshinori Murakami, Fukuoka Branch Manager, Osaka Sales Department, Sales Division, Yokogawa System Buildings

I will introduce the warehouse and office for Tomomasu Drink Co., Ltd. completed in March 2023.

Tomomasu Drink Co., Ltd. is a beverage maker in Saga Prefecture with a history spanning over 120 years since its establishment in 1902. It manufactures and sells a wide range of beverages, especially cider and carbonated water but also including fruit juices, sports drinks, and alcoholic beverages. It has also recently produced many products with a playful spirit, such as Kodomo Beer (Kids' Beer), so please check them out in stores or online shops.

To respond to growing product demand, the company decided to build a new logistics center on land adjacent to its Ogi Plant and head office in Ogi City, Saga Prefecture—one of two production sites, the other being the Fujisan Plant in Fujiyoshida City, Yamanashi Prefecture. It chose a "yess" building, a system structure product of the YBHD Group, for this project.

It is a large logistics warehouse with a building width of 80 meters, a building length of 170 meters, an eaves height of 12 meters, and a total floor area of 9,698m^2.

The design and construction conditions were challenging, involving a logistics warehouse with a second-floor office space and two other warehouses placed in tandem on a slope. However, "yess" buildings offer high design freedom despite being system structures, and can be combined with conventional construction methods. This allowed us to fully demonstrate "yess" buildings' strengths and provide a building that met expectations for price, construction timeline, and quality.

Going forward, "yess" buildings will continue contributing to construction investment nationwide.

Project Name: Tomomasu Drink Co., Ltd. Warehouse Building
Location: 2575-3 Iwakura, Ogi-machi, Ogi City, Saga Prefecture
Building Overview: Total floor area 9,698 m^2
80 meters wide × 170 meters long × 12-meter eaves height

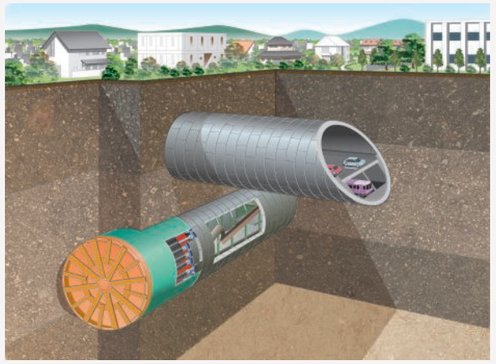
Civil Engineering Business (Tunnel Segments) —— Manufacturing Tunnel Segments

What are Tunnel Segments?

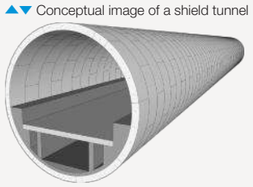
Tunnel segments are structures forming underground spaces constructed using the shield method, serving as important walls bearing the weight of soil and water.

The shield method involves excavating through the ground with a shield machine while assembling segments inside the tunnel. Segments are products created by dividing the tunnel wall into sections.

In Japan, this shield method is widely used for the construction of road and railway tunnels, mainly in Tokyo and other urban areas.



▲▼ Conceptual image of a shield tunnel



Segment ▶

Overview/Department in Charge

Sales

The tunnel segments the YBHD Group manufactures are sold as products to primary contractors carrying out construction projects. While there are general-purpose segments for shield tunnels, the YBHD Group targets large construction projects such as roads and railways where the tunnels themselves are large in scale, with circular to rectangular and other diverse cross-sectional shapes and various ground conditions. Therefore, from the project planning stage, we explain our technical capabilities and product features/advantages to clients and make technical proposals encompassing design. Only when our proposals align with client needs do we receive an order. While technical proposals for large projects are extremely difficult and time-consuming, we are proud of the YBHD Group's role in accomplishing this.

Design

Tunnel segment design conditions vary enormously depending on the construction site, including natural conditions such as groundwater and geology as well as tunnel use, construction methods, ground surface conditions, surrounding existing underground structures, etc. We work with clients to solve these challenges and determine optimal safe, secure, and economical segment structures.

While our designs adhere to guidelines from institutions like the Japan Society of Civil Engineers, advanced technical design adopts many other standards. In some cases, we use a 3D development system in collaboration with Yokogawa Techno-Information Service when special geometries need to be verified. For development and performance confirmation, we work with Yokogawa Bridge Holdings' Technical Research Laboratory.

Fabrication

Steel shell fabrication for segments is primarily performed at our Kashima Plant in Kamisu City, Ibaraki Prefecture. Since beginning operations in April 1999, the Kashima Plant has fabricated many segments and bridges with approximately 200 plant staff. After receiving material delivery, it handles fabrication, in-factory painting, and product transport. Leveraging long years of accumulated experience and high technical capabilities, the plant delivers high-quality products with reduced fabrication and inspection costs achieved by advancing automation with welding robots and digitization of inspection.

For composite segments where the steel shell is filled with concrete, we have selected high-quality concrete plants with proven track records.

Yokogawa's Strengths

Segments account for a high proportion of tunnel construction costs as the only permanent structures, leading to high client requirements for performance and quality. By handling design, fabrication, and delivery together and by bringing the advanced technical capabilities we have cultivated to bear in projects, we have gained deep client trust.

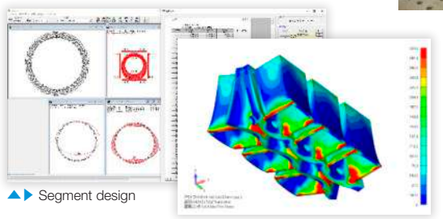
- We have many years of experience and knowledge regarding the shield method and tunnel segments.
- We possess broad knowledge and technical capabilities encompassing everything from materials to engineering for steel structures as well as high technical capabilities regarding steel–concrete composite structures.
- We offer optimal one-of-a-kind products such as six-sided steel shell composite segments and TUF segments that are ideal for tunnels requiring high bearing capacity, such as those at great depths and with large cross sections.
- We have over 50 years of tunnel segment design and manufacturing experience, with extensive achievements ranging from medium-sized tunnels with an external diameter of around 5 meters to large ones exceeding 15 meters in external diameter.

While tunnel segment projects involve large production volumes, we achieve high-quality, stable fabrication and production plans tailored to customer requirements through collaboration within the YBHD Group, including the Technical Research Laboratory and our production plants in the Kansai, Kanto, and Hokkaido regions. We also proactively engage in joint research and development with project owners and primary contractors, aiming for promising business development.

▲ Segment fabrication

Segment loading test ▶

After assembly completion ▶



▲▶ Segment design

Designing Shield Tunnel Segments

Shunsuke Nakamura, Underground Space Engineering Department, Yokogawa NS Engineering Corp.

Shield tunneling methods range from small-diameter tunnels for water and gas pipelines to large road and railway tunnels. Yokogawa NS Engineering specializes in large-diameter shield tunnel segments between 7 and 16 meters, used for roads and railways.

Required performance and functionality vary enormously based on ground conditions at the construction site, crossing conditions, construction methods, and use (roads, railways, walkways, etc.). The railway tunnel I am currently working on is situated in soft ground in an area with a high risk of major earthquakes. This is a challenging setting, but I find it interesting to solve the various design challenges through repeated communication with clients and people outside and inside the company.

The way we work has changed considerably over the past few years with remote work and online meetings and inspections. Going forward, we will continue to actively adopt new technologies such as ICT and AI to improve productivity.

With various large-scale underground road and railway projects underway in urban areas, we will contribute to social infrastructure development through the safe, secure design and fabrication of shield tunnel segments.

Corporate Value Enhancement Strategy

Sixth Medium-Term Management Plan

The period of the Sixth Medium-Term Management Plan – Moving to the Next Phase of Growth – for the three-year period from fiscal 2022 to fiscal 2024 (“Sixth Medium-Term Plan”) is a time to lay the foundation for the realization of our management vision. Under the plan, we will do more to bolster our bridge business and expand our engineering business. We will also prepare to create new businesses that anticipate medium- to long-term market trends in the years ahead and will spend these three years building a highly resilient business base that can flexibly respond to drastically changing social conditions. The Sixth Medium-Term Plan designates the bridge business and the engineered structure system business as our two core businesses, and we will reinforce and grow both of them. We will also make efforts to move into new civil engineering business fields, develop technologies to reduce environmental impact, promote DX, and further build up our business base.

Basic Policies Build a highly resilient business base

1 Further reinforce core businesses
Bridge business: Reinforce maintenance services, secure orders for major new projects
Engineered structure system business: Develop various management systems to improve coordination between orders and production and make additional capital investments to improve productivity

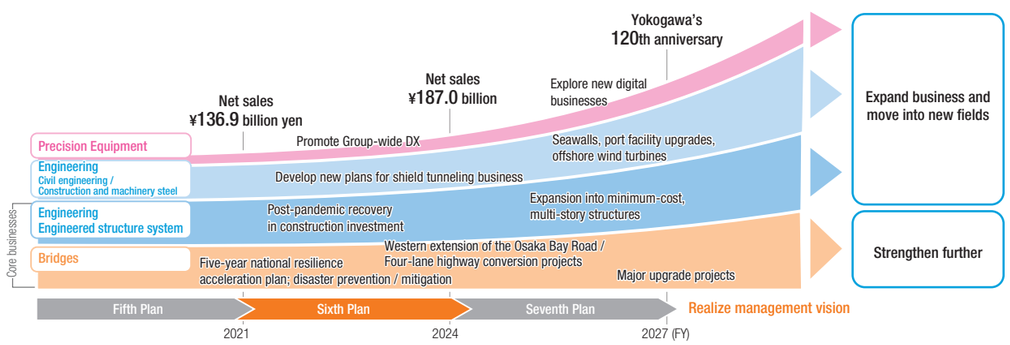
2 Create and develop diverse businesses
Move into new fields such as seawalls, port facility upgrades, and offshore wind turbines

3 Establish a robust business base for the next 100 years
Develop new materials, construction methods, and other technologies with low environmental impact, promote wider use of renewable energy, double investment in IT, and accelerate DX measures

Business Strategy

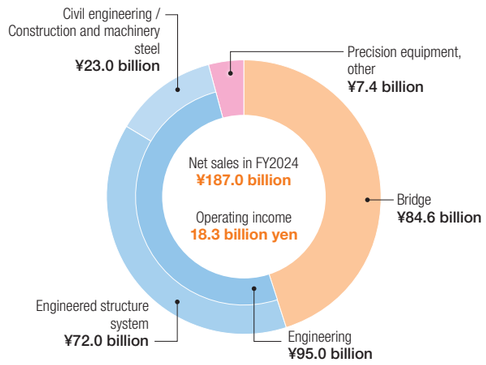
Core businesses
- Bridge business P.37-40
- Engineering business Engineered structure system P.41-43
- Engineering business Civil engineering / Construction and machinery steel P.44-46
- Precision equipment business P.47-48

Business Base Strategies
- DX Strategy P.49-50
- Technology Strategy P.51-52
- Human Resources Strategy P.53-54
- ESG Initiatives P.55-58



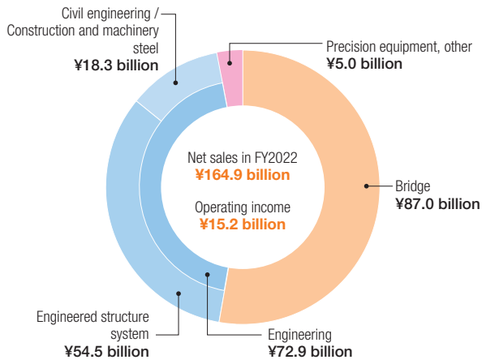
Earnings Targets

We have set the following earnings targets for fiscal 2024, the final year of the Sixth Medium-Term Plan: net sales of 187 billion yen, operating profit of 18.3 billion yen, and earnings per share (EPS) of 290 yen. Sales targets by segment are: 84.6 billion yen for the bridge business; 72 billion yen for the engineered structure system business of the engineering business; 23 billion yen for the civil engineering and construction and machinery steel businesses, and 7.4 billion yen for the precision equipment and other businesses. We will strive to expand the performance of all of our businesses, but in particular, we will aim to achieve our targets by significantly increasing growth in the engineered structure system business.



Review of Fiscal 2022

Performance in fiscal 2022, the first year of the Sixth Medium-Term Plan, was generally on track for achieving the final year targets. Net sales grew substantially to 164.9 billion yen, breaking free of the flat trend from fiscal 2017. Operating profit reached 15.2 billion yen for increased sales and profit. Orders received totaled 156.9 billion yen, on a par with the previous fiscal year.



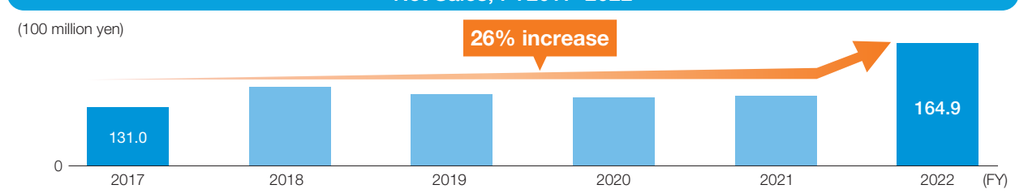
Bridge business

Net sales rose to a record high of 87 billion yen, as construction work for ongoing projects steadily progressed. Despite sluggish growth in orders for new bridges and large-scale maintenance projects, strong orders for new bridge construction, including expansion of highways to four lanes, offset the decrease in maintenance orders, resulting in an order balance of 81.8 billion yen, achieving the initial fiscal year plan target of 79 billion yen.

Engineered structure system business

While there was some movement toward revision of capital investment plans due to construction cost increases, net sales rose to a record 54.5 billion yen and orders also hit a new high of 52.6 billion yen thanks to the impact of price revisions.

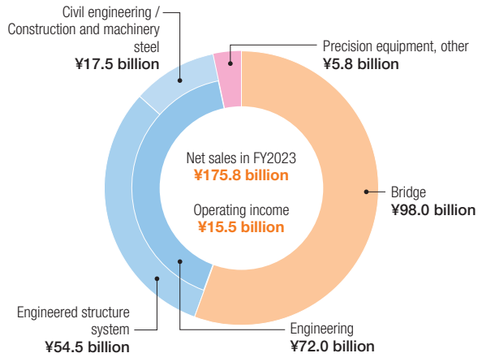
Net Sales, FY2017–2022



Sixth Medium-Term Management Plan

Outlook for Fiscal 2023

In the current fiscal year, the second year of the Sixth Medium-Term Plan, we forecast increased sales and profit, with net sales of 175.8 billion yen, orders of 175.7 billion yen, and operating profit of 15.5 billion yen. We will advance initiatives in each business to achieve our final year performance targets.



Bridge business

Anticipating progress on abundant ongoing construction projects, we forecast sales of 98 billion yen. With orders having remained in the 80 billion yen range for two consecutive years, we aim to reach the 90 billion yen range this fiscal year, expecting an expansion in maintenance orders.

Engineered structure system business

Assuming demand recovery from the second half, net sales will remain flat, but we aim to increase orders by 10 billion yen year on year to 62.6 billion yen.

In addition to firmly capturing demand for plants and warehouses driven by bringing supply chains back to Japan and the 2024 issue facing the logistics industry, we will increase orders by expanding into markets beyond plants and warehouses, such as stores and offices.

Capital Policy and Shareholder Returns

Under the Sixth Medium-Term Plan, our policy is to “expand shareholder returns while maintaining a dividend payout ratio of 30% or higher, continue to increase dividends, and flexibly buy back treasury shares, to maintain and improve ROE.” In fiscal 2022, we increased annual dividends by 10 yen and acquired 1 billion yen in treasury shares. We also aim to raise dividends in fiscal 2023. ROE has exceeded 10% for four consecutive fiscal years since fiscal 2019.

We believe we are achieving capital profitability surpassing shareholders’ cost of equity, but will continue to analyze and evaluate the current situation to improve the YBHD Group’s market valuation. Based on proactive dialogue with investors, we will steadily work on business base strategies and business strategy, including shareholder returns, to build a foundation for sustainable growth and achieve increasing performance.

Sixth Medium-Term Management Plan (FY2022-2024)

	FY2022 results	FY2023 forecast	FY2024 targets
Net sales	164.9 billion yen	175.8 billion yen	187.0 billion yen
Operating income	15.2 billion yen	15.5 billion yen	18.3 billion yen
EPS	273 yen	259 yen	290 yen
ROE	10.1%	Approx. 9%	9% or higher
Payout ratio	31.1%	34.7%	30% or higher

*Cost of equity assumption is roughly 7.3%.

Smooth start for the Sixth Medium-Term Plan
Strengthening business base through proactive investment in digital technology and human resource development
ROE maintained around 10%, and progressive dividend policy is introduced

Hidenori Miyamoto, Director & Managing Executive Officer, in charge of Finance & IR Office and Accounting Department

Business Environment and Performance Outlook

In the bridge business, we have an abundant backlog of orders, and we expect orders for large projects like the western extension of the Osaka Bay Road in addition to steady underlying demand such as for major upgrade projects on highways. Given this, performance is projected to continue at a high level for the time being.

In the engineered structure system business, the impact of the COVID-19 pandemic is waning, and we are seeing a resumption of projects postponed due to decreased inbound tourism demand as well as new plant construction associated with shifts of manufacturing bases from overseas to Japan. In addition, results are starting to emerge from recent sales expansion efforts, including receiving orders for new large-scale store projects, which should enable accelerating business growth.

Progress in fiscal 2022, the first year of the Sixth Medium-Term Plan, got off to a good start, with record-high net sales surpassing the initial fiscal year plan at 164.9 billion yen. This represented over 20% growth year on year, breaking free of the flat trend since fiscal 2017.

By segment, the bridge business in Japan functioned steadily as an earnings pillar, achieving both net sales and operating profit targets, while the engineered structure system business, positioned as a growth driver, significantly exceeded expectations with record-high net sales and operating profit.

Given that fiscal 2022 performance broadly met the plan despite the still challenging external environment, we are confident about achieving our targets for fiscal 2023, when further improvement can be expected. We aim to sustain this growth trend and achieve the final fiscal-year targets of 187 billion yen in net sales and 18.3 billion yen in operating profit.

Investment Strategy and Profit Distribution

Regarding cash flow over the three years of the Sixth Medium-Term Plan, we forecast 31 billion yen in operating cash flow as cash inflow, against which we anticipate cash outflows of 18 billion yen in capital investment and around 13 billion yen returned to shareholders. Of the 18 billion yen in capital investment, 7 billion yen, the largest portion, is IT/DX-related. This includes upgrading the Group-wide core information system, rebuilding the production management system for the engineered structure system business, and other investments towards digitization.

Improving productivity through DX is an urgent task to address the approaching 2024 issue. Also, recognizing that the greatest risk for the YBHD Group is the occurrence of a serious accident, we will promote the introduction of DX measures to improve worksite safety. Concurrently, as training digital-savvy human resources is essential to realize DX, about 100 members selected from each division are currently undertaking specialized study as part of their duties this fiscal year.

For capital efficiency, we use return on equity (ROE) as an indicator, with the Sixth Medium-Term Plan establishing a minimum target of 9% ROE, which exceeds our estimated cost of shareholders’ equity of around 7.3%. However, we aim to maintain the actual ROE at around 10% by improving performance and enhancing shareholder returns. In terms of shareholder returns, we have set a dividend payout ratio of 30% or more, maintain continuous dividend increases, and buy back a certain amount of treasury shares, but from fiscal 2023, we changed our basic dividend policy from “stable dividends” to “progressive dividends.” For the past 16 years, Yokogawa Bridge Holdings has never reduced annual dividends, and has increased them 13 times. We will continue this track record with the introduction of progressive dividends.

In closing, as a builder of bridges that must last for 100 years, we recognize that while aiming for sustainable growth it is also important to earn high regard in the capital market. Accordingly, we will continue our efforts to communicate the state of the YBHD Group in an easy-to-understand manner.

Bridge Business

As the top player in steel bridges in Japan, the YBHD Group has focused sincerely on refining its technical capabilities and strengthening its order-receipt and production systems for over 100 years, contributing to society by delivering high-quality products and safe construction. Our bridge business consists of four businesses: the new bridge construction business, the maintenance business, the overseas business, and the bridge peripheral business.

Strengths

- Workforce consisting of a large number of qualified personnel
- Advanced technical capabilities accumulated over many years
- Corporate culture of taking on challenges
- Active use of state-of-the-art technology
- Ability to respond to customer needs
- State-of-the-art production plant (Osaka Plant) with annual production capacity of 60,000 tons
- Possession of a full range of construction equipment
- Specialized department for BIM/CIM
- Integrated management system from material procurement to design, production, and on-site construction
- Proposal sales capabilities that take advantage of synergies across the Group
- Industry's largest R&D facility (Technical Research Laboratory)

Risks

- Decrease in demand for new bridges
- Safety risks such as disasters and accidents
- Quality defects
- Shortage of field engineers
- Foreign exchange risk, country risk
- 2024 problem facing the construction industry

Opportunities

- Increase in demand for bridge maintenance
- Progress on the Osaka Bay Road Western Extension project
- Expansion of BIM/CIM application
- Ongoing railway continuous grade-separation projects
- Demand for transportation infrastructure in emerging countries
- Increasing needs for maintenance and extended life spans

Business overview

Over the medium to long term, the new bridge construction market is on a declining trend, but with the aging of social infrastructure, demand is expected to remain strong for maintenance and upgrading projects. Industry-wide, the shift from new construction to maintenance is projected to accelerate further.

Orders in Japan for new bridges in fiscal 2022 totaled around 160,000 tons, recovering from around 130,000 tons in fiscal 2019 but remaining sluggish at less than 20% of peak levels. However, the YBHD Group has steadily maintained and expanded its market share, retaining the No. 1 position in Japan for bridge orders, by refining its technical prowess and strengthening its order-receiving and production systems. In 2024, the new bridge market is expected to temporarily recover as large projects get underway, including the Osaka Bay Road Western Extension.

In the maintenance business, orders are increasing substantially for major upgrades and earthquake-proofing projects, spurring rapid market growth. Around 50% of bridges in Japan will be at least 50 years old in 2029. Backed by central government initiatives to enhance national resilience and disaster prevention/mitigation, demand for repairing and upgrading such aging bridges is expected to remain steady in the medium to long term. Leveraging the YBHD Group's strengths in design and construction, we will take on challenging projects such as repair and reinforcement of special bridges like arch and truss bridges and large-scale upgrading and repair including deck replacement.

In our overseas business, strong investment appetite for transportation infrastructure in the rapidly growing economy of Southeast Asia is driving the YBHD Group's preparations to bid on large-scale ODA projects and establish new overseas bases in countries like the Philippines and Bangladesh. While vigilantly planning for various country risks stemming from local political and economic conditions, we will proactively take on challenges, aiming to contribute to the economic development of these countries and regions.

In the bridge peripheral business, amid rising needs for infrastructure maintenance and extended life spans, "cusa" aluminum alloy permanent scaffolding is seeing increased adoption, mainly on intra-city highways. Going forward, we will continue providing new added value tailored to customer needs, such as a sound absorption feature and landscape improvement, to reduce the burden on administrators and contribute to extended infrastructure life spans.

Towards achieving the Sixth Medium-Term Management Plan (2022–2024)

Akihito Yoshida, President and Representative Director, Executive Officer, Yokogawa Bridge

The Sixth Medium-Term Management Plan aims to achieve higher productivity and profitability compared to the previous plan. We got off to a good start, with record-high net sales in the first year. Going forward, we will continue striving tirelessly for further improvement without relaxing our efforts.

We have also positioned the period of this medium-term plan as one for preparing various measures in anticipation of market environment changes expected over the long term. Leveraging the wisdom gained from overcoming adversity many times in the past, we will flexibly address diversifying societal needs and evolve our business.

New bridge construction business

Review of fiscal 2022

The volume of new bridge construction orders in Japan totaled around 160,000 tons, down about 20,000 tons year on year due to delays and postponements, marking a sluggish year. However, with steady orders from a wide range of clients, including six regional development bureaus of the Ministry of Land, Infrastructure, Transport and Tourism, highway companies in eastern and western Japan, local governments, and railway companies, the YBHD Group's order volume was favorable. Major contracts include the Shin-Tonegawa Bridge West construction on the Ken-O Expressway (East Nippon Expressway) and the Nagaidani Junction Overpass construction on the Daini Shinmei Road (West Nippon Expressway).

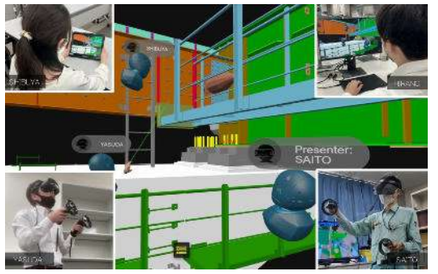
Completed projects earning accolades include the Shinmachi River Bridge Superstructure construction ordered by the Shikoku Regional Development Bureau, which received the bureau chief's award, and projects for the Kanto Regional Development Bureau, Okinawa General Bureau, and West Nippon Expressway Co., Ltd. that received excellent construction awards. The YBHD Group's safety management and quality improvement efforts are reflected in construction performance assessment scores, resulting in high praise and trust from clients.

Fiscal 2023 business policy

With no anticipation of major increases, new bridge construction order volume in Japan is projected to remain flat. However, orders are expected soon for major new construction projects like the Osaka Bay Road West Extension, Shin-Omiya Ageo Road (extension of the Omiya Route of the Metropolitan Expressway), and the Tama River Bridge in Tokyo. We will move ahead with preparations to participate in these projects. We will continue requesting and encouraging clients to adopt ordering methods where our technical strengths differentiate us from competitors, such as those with detailed design and construction plans.

Furthermore, given the rise in joint ventures transcending industry boundaries against the backdrop of diversifying ordering methods like ECI, we have an active policy of alliance building with other industries, particularly with major and semi-major construction and PC companies, without being constrained by the conventional framework of the traditional steel bridge industry.

Regarding technology development, expectations for DX keep growing to solve various issues in the bridge business such as ensuring safety and quality, passing on expertise, reforming work practices, and improving productivity. The YBHD Group links advanced technologies, including BIM/CIM using 3D steel bridge data, XR, AI, and robotics, to maximize digital technology use throughout every production process, leading to streamlining and labor-saving versus conventional methods. As a general engineering company undertaking everything from steel bridge design, fabrication, and erection to maintenance, we will keep leveraging our strengths to further promote DX going forward.



Examining a 3D structure using VR and an avatar conference system

Bridge Business

Maintenance business

Review of fiscal 2022

In the maintenance business, we carried out deck replacement, earthquake-proofing, and bridge repair work. As the bridge maintenance market has become more active, driven by large-scale upgrading projects, the entrance of other manufacturers and construction companies has made the market environment challenging. Even under these conditions, we won major contracts including deck replacement on the Takigawa Bridge on the Tohoku Expressway (East Nippon Expressway) and earthquake-proofing of the Nakatani Bridge (outbound line) and one other bridge (West Nippon Expressway).

For completed projects, we received a branch manager award from West Nippon Expressway Co., Ltd. for two projects and an excellent construction award from Metropolitan Expressway Co., Ltd., earning high esteem from clients for our serious commitment to quality and safety management in challenging maintenance work.

Fiscal 2023 business policy

The bridge maintenance market is growing rapidly, with the contracting of major upgrading and earthquake-proofing projects now in full swing. This fiscal year, we will again focus mainly on deck replacement, earthquake-proofing, and bridge repair. For upgrading projects (deck replacement) in particular, additional upgrading plans have been announced by highway companies. The YBHD Group will further reinforce internal systems to participate even more actively in these projects going forward.

To maximize results with limited resources, we will optimize the balance between new construction and maintenance, carefully selecting large-scale upgrading and repair projects to bid on based on project details and aggressively seeking to win orders. We will also continue undertaking demanding earthquake-proofing and repair of special bridges, where we can leverage the YBHD Group's technical strengths.

To improve our competitiveness in the maintenance business, we will also proactively engage in related R&D. We are continuing development of a precast wall balustrade (product name: Rapid Guard Fence) to improve construction efficiency and enable rapid construction in large-scale upgrading of existing RC decks. While the standard sections and vertical joints had already passed precast product standard tests, since demand had also increased for precast end sections, which are generally cast-in-place, we improved the structure for precasting and passed collision performance testing simulating vehicle impact. This will further enhance the product's specifications. With adoption of the Rapid Guard Fence already decided for some projects, we will continue development with a view to wider application. We also partner with companies in other industries, including PC manufacturers, construction companies, and steel makers, to jointly advance R&D in technologies such as those needed in deck replacement.

Large-scale upgrading between the Chugoku-Ikeda and Takarazuka interchanges

Removal work on the arch rib of the Tenno Bridge (Ishinomaki City, Miyagi Prefecture)

Overseas business

Review of fiscal 2022

In fiscal 2022, as the COVID-19 pandemic subsided, multiple overseas projects made substantial progress and were completed. In Tanzania, the Gerezani Bridge, Africa's first composite deck bridge, was completed. Also, in Bangladesh, the Modhumoti Bridge (project name: Kalna Bridge), one of the largest Nielsen-Lohse bridges in South Asia, was completed. Both bridges eliminate bottlenecks on important routes, and are expected to make significant contributions to international logistics going forward.

Fiscal 2023 business policy

In fiscal 2023, while advancing ongoing projects in our overseas business, for new projects we are focusing on ODA construction in fast-growing regions from Southeast Asia to the African continent. In particular, we will actively pursue orders in Bangladesh and the Philippines, where large bridge projects are expected, and are even considering establishing local bases. We will also examine our approach for the medium to long term regarding the potential for expanding our maintenance business overseas in response to expected higher future demand.

Completed the Gerezani Bridge (Tanzania)

Bridge peripheral business

Review of fiscal 2022

Permanent scaffolding that makes bridge inspections and maintenance easier has gained attention, and installation is progressing, driven mainly by highway companies. The YBHD Group sells the "cusa" aluminum alloy permanent scaffolding, the adoption of which is increasing. On the Metropolitan Expressway, long-span installation projects have advanced on the Kanagawa Route No. 2 Mitsuzawa Line and the No. 10 Daiba Route. Adoption has also progressed on expressways including NEXCO and the Kitakyushu Expressway in Fukuoka.

Fiscal 2023 business policy

Bridge permanent scaffolding can help reduce road management costs, and the market has grown over the past few years. We will improve product quality and develop attractive features and options to aim for expanded orders. We will also promote sales of the reverse-side sound absorption panel, developed as an option in fiscal 2022. In fiscal 2023, we will continue developing the landscape-improving side members that we started working on last fiscal year and aim for product commercialization. We will also focus efforts on promotional activities to further expand the market.

Conceptual image of "cusa" with sound-absorbing feature

"cusa" on the Higashi Ogishima Bridge (Metropolitan Expressway)

Engineering Business

Applying the technologies cultivated in our bridge business, the YBHD Group engages in three engineering businesses: the engineered structure system business, the civil engineering business, and the construction and machinery steel business. The engineered structure system business has established itself as the No. 1 in the industry through production at a dedicated plant and by realizing short construction periods.

Strengths

- Workforce consisting of a large number of qualified personnel
- Active use of state-of-the-art technology
- Ability to respond to customer needs
- High productivity through use of robots
- Development and design capabilities in new fields, such as offshore wind turbines and port facility upgrades
- Advanced technical capabilities accumulated over many years
- Corporate culture of taking on challenges Active use of state-of-the-art technology
- Collaboration with more than 1,300 affiliated “yess” builders nationwide
- Plant dedicated to engineered structures with annual production capacity of 90,000 tons

Risks

- Safety risks such as accidents
- Building market trends
- Shortage of field engineers
- Political and economic situation at overseas bases
- Increasing construction costs

Opportunities

- Market expansion of sports business
- Underground use in metropolitan areas
- Growing need for port facility upgrades
- Growing need for technologies related to carbon neutrality
- Growing need for disaster prevention facilities and flood control techniques due to the intensification of natural disasters

Business overview

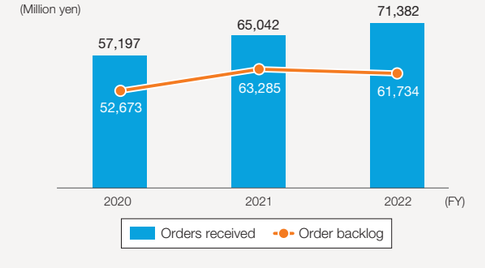
While domestic demand in the construction market is on a recovery trend with the improvement in corporate earnings providing underlying support, the situation remains uncertain due to global financial tightening and price hikes.

In our main business, the engineered structure system business, there were some moves to postpone or revise plans due mainly to rising construction costs, but we were nevertheless able to set a record high for order amount thanks to the impact of price revisions.

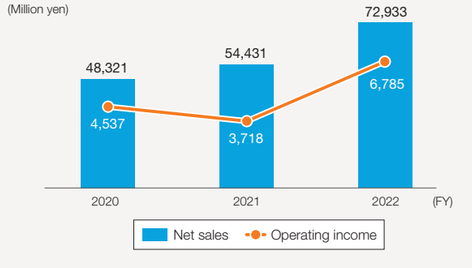
Full-year orders received for the engineering business as a whole also reached a record high of 71.4 billion yen.

Earnings-wise, the engineered structure system business saw improved profitability, as production of projects that reflected surging steel prices progressed, and production recovered in the civil engineering business. As a result, net sales for the full-year entire business reached 72.9 billion yen and operating profit totaled 6.8 billion yen, significantly updating the previous record highs for both. In the engineered structure system business, we will work to expand orders to achieve the final fiscal year targets under the Sixth Medium-Term Plan by capturing demand for factories and warehouses due to the reshoring of supply chains and the 2024 problem in the logistics industry, while also strengthening efforts targeting stores and offices.

Orders received / Order backlog



Net sales / Operating income



Engineered structure system

Aiming for an engineered structure system business that is resilient to changes in the business environment

Kazuya Kuwahara, Representative Director, President and Executive Officer, Yokogawa System Buildings Corp.

We have been promoting DX reforms since fiscal 2020. The ICT infrastructure within the company will be completed by the end of fiscal 2023, and we will embark on the first year of full-fledged DX activities in fiscal 2024. Effects are already emerging, further enhancing the strengths of our products: speed, cost competitiveness, high quality.

We have also made progress in developing products for stores and offices, which had been an area of weakness. In fiscal 2024, we will have a system in place to support rapid growth. Together with sales reforms we are implementing in parallel, this will establish a robust management foundation.

Review of fiscal 2022

In fiscal 2022, the Japanese economy saw a stark divergence from initial expectations, as the rapid spread of the Omicron variant of COVID-19 along with global inflation and economic slowdown resulting from Russia’s invasion of Ukraine were compounded domestically by sharp depreciation of the yen driving price hikes. Despite this environment, steady private-sector capital investment provided underlying support for the economy.

In the construction industry, while large-cap and mid-cap companies vigorously pursued capital investments, investment was sluggish among small to medium-sized enterprises that are the core of the market. As a result, the number of construction starts for “non-residential steel-frame buildings,”* a market size indicator, was around 8% lower than the previous fiscal year.

Given this market environment, we changed our sales policy. From the second half, we reflected surging material costs in pricing and took into account cost predictions based on the accurate cost awareness we had built up in each department. Together with proactive cost-reduction measures such as revising workflows and improving business software, this allowed us to secure appropriate profits in contracts. Consequently, while orders for the period were down 15% year on year in terms of area at 860,000 m^2, order amount reached a record high of 52.5 billion yen, up 4.2 billion yen.

Earnings also achieved record highs, with completed construction revenue reaching 54.5 billion yen (up 15.7 billion yen), as we absorbed increased costs from surging prices of steel and other materials, resulting in increased operating profit.

* Ministry of Land, Infrastructure, Transport and Tourism, “Fiscal 2022 Statistics on Building Construction Started”

Mitsuya Plant (4th Plant), Atsumi Kogyosho

Junpei Ito, Nagoya Sales Office, Osaka Sales Department, Sales Division, Yokogawa System Buildings

Atsumi Kogyosho, based in Toyohashi City, Aichi Prefecture, is the only company nationwide specializing in manufacturing inspection walkways for bridges and highways. For the major project of relocating its head office and building a new head office plant on the occasion of its 50th anniversary, the company adopted our engineered structure system product “yess” building for the head office plant. The large plant, 36 meters wide by 135 meters long, totaling 4,860m^2 in area, is impressively suited to demonstrate one of the features of “yess” buildings, large open spaces, with eight ceiling cranes traversing the 135-meter space (see P.16). It is my understanding that Atsumi Kogyosho’s deep ties with Yokogawa Bridge and tremendous trust in the YBHD Group’s technology and history were also factors in choosing the “yess” building. We will continue to work together as a Group to vigorously pursue more orders.

Engineering Business

Fiscal 2023 business policy

There are signs of market recovery, including economic bounce-back after COVID, reshoring of supply chains, and demand for logistics bases due to the 2024 problem in the transportation industry. Given this situation, in fiscal 2023 we will focus on the initiatives below.

Initiatives to increase orders

We started collaborating with specialized agencies on advertising campaigns two years ago and will step up this effort while confirming its effectiveness. At the same time, we need to broaden awareness of the range of applications for our products. We will seek to increase inquiries from customers by aggressively advertising new products we are focusing on, such as two-story buildings as well as stores and offices.

On top of increasing the number of inquiries, we need to improve the rate of securing contracts. Since fiscal 2022, sales and design have been conducting integrated sales activities based on an SFA (sales force automation) system. We will promptly and accurately identify customer needs and carry out proposal-based sales that leverage the features of our products and product development capabilities.

Further improvement to establish systems for continuous growth

With steel prices stabilizing, securing appropriate profits while enhancing competitiveness will require continuous efforts to reduce costs by improving operational efficiency within the company. We will revise workflows and promote the establishment of core systems utilizing ICT aligned with the new flows to further enhance the strengths of our products: speed and cost competitiveness. In fiscal 2023, we aim to complete new production management systems. Through active utilization of such DX, we will continue working to enable simple workflow execution and more efficient coordination between departments.

As described above, fiscal 2023 is an important year as the final stage of laying the groundwork for the coming fiscal year, which marks the final year of the Sixth Medium-Term Plan. The entire company will unite efforts to achieve each target one step at a time.

Advertising coordinated with the campaign site is deployed on news sites, social media, magazines, billboards, etc.


Tama Sales Office, Seikitokyu Kogyo Co., Ltd. (Tokyo)

Civil engineering business

Working to expand existing businesses and create diverse businesses

Kiyotsugu Takagi, Representative Director, President and Executive Officer, Yokogawa NS Engineering

We are working to expand the civil engineering business, which is a core business alongside the bridge business, in order to realize “multifaceted steel structure engineering,” part of the YBHD Group’s management vision, and to “create and develop diverse businesses,” an aspect of the basic policy under our Sixth Medium-Term Plan.

For tunnel segments, following the Tokyo Outer Ring Road and Hokkaido Shinkansen, we aim to receive orders for and produce segments for new rail lines planned in major cities. Also, at our production site, the Kashima Plant, we will invest in tunnel segment production equipment to improve productivity in large-diameter tunnel segments in Japan.

Regarding civil engineering steel structures, we are harnessing the collective strength of the YBHD Group to ensure the successful completion of ongoing tsunami countermeasure projects for electric power companies. We are also pushing forward joint development with other companies, aiming to commercialize offshore wind turbines in the future in a bid to create diverse businesses.

Review of fiscal 2022

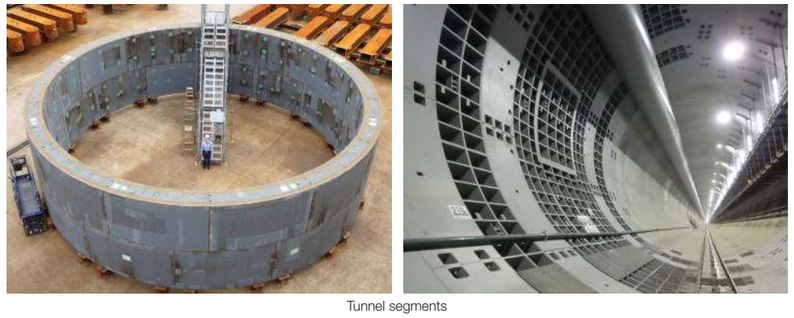
The civil engineering business is focused on expanding the scale of the tunnel segment business and securing stable earnings through the production and construction of seawalls for electric power companies’ tsunami countermeasure projects. We are also working on offshore wind turbines and port facility upgrades, fields with good growth prospects, aiming to rapidly launch businesses.

In fiscal 2022, we carried out tunnel segment production systematically, focusing primarily on the Tokyo Outer Ring Road and railway segments for the Hokkaido Shinkansen. Production at the plant for the tsunami countermeasure project is progressing smoothly.

Fiscal 2023 business policy

For tunnel segments, while focusing on production for the Tokyo Outer Ring Road, we will also engage in sales activities targeting orders for new rail lines in urban areas. In line with the Sixth Medium-Term Plan, we will move ahead with upgrading tunnel segment production equipment at our Kashima Plant to improve productivity, and will advance development aimed at expanding business scale.

On-site construction for the tsunami countermeasure project is scheduled to start this fiscal year. Production at plants across the YBHD Group is underway and progressing smoothly to ensure completion. We will also make efforts to win orders for ongoing harbor structure projects. Regarding offshore wind turbines, an area in which we aim to rapidly launch business, we will continue examinations in fiscal 2023, working together with construction companies toward participating in the business.


Tunnel segments

Engineering Business

Construction and machinery steel business

Construction business

Review of fiscal 2022

In fiscal 2022, performance exceeded initial forecasts thanks to progress on large-scale redevelopment projects in the Tokyo metropolitan area and construction of gymnasiums and stadiums.

Large-space structures like high-rise buildings, gymnasiums, and stadiums are areas in which the YBHD Group excels. We have also earned high praise and trust from clients in earthquake-proofing and railway-related construction projects.

The Kudan Kaikan reconstruction project involved seismically isolating the existing building and revitalizing it by integrating it with a new high-rise building. For this project, we contributed with our expertise in seismic isolation retrofitting and steel frame construction for high-rise buildings.

At Konki Athletic Stadium, we participated in the erection of a steel frame roof. By assembling the roof's 25-meter-high steel frame on the ground, we were able to complete construction without using temporary supports, earning high praise from the client for safety and quality.

In railway-related construction, we have participated in renovation work at many train stations, including Ochanomizu, Shibuya, Shinagawa, and Nakano stations. Work must be completed within the limited nighttime hours, so by thoroughly reviewing construction plans in advance, we were able to earn an exceptional level of trust from clients.

Fiscal 2023 business policy

While construction market activity may settle down slightly in the second half of fiscal 2023, numerous large projects including high-rise buildings and stadiums are planned from fiscal 2024 onward, so we need to start early on construction planning and review operations. By making high-quality construction proposals, we will aim to gain client trust and win orders for these projects.

With the construction market expected to remain active for years to come and abundant large projects in the pipeline, we see this as an opportunity to expand our construction capacity. We will carefully tackle each construction project, enhance our capabilities beyond current levels, and work to expand the business.

Business expansion will require not only increasing personnel and partner companies but also boosting employees' skills. Building on the skills enhancement training introduced last fiscal year, we intend to further improve skills.

Special structures business

Review of fiscal 2022

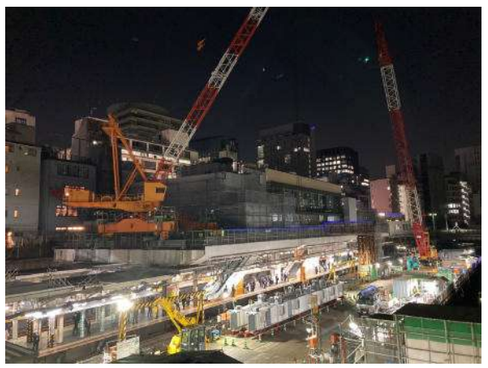
While no large project orders were received this period due to delays and reviews of large projects, the number of orders increased from the previous fiscal year thanks to acquired design changes for a large overseas project. However, earnings made little progress due to a temporary decline in profitability.

Fiscal 2023 business policy

While the harsh order environment looks set to continue, with delays and reviews of large projects, we will aim to expand orders by stepping up information dissemination and sales activities targeting private-sector sponsors, teams, and other investing companies as well as management/planning organizations.

As aging facilities require more large-scale repairs for extending life spans, the maintenance and repair market is expected to expand. By accurately proposing and carrying out repairs tailored to the different environments and deterioration conditions of each facility, we will contribute to enabling long-term continued use.

For the large overseas project currently underway, installation of the drive system is entering the final stage toward completion in autumn 2024. Despite the challenging overseas work, we are advancing construction safely with a view to quality.



Ochanomizu Station

Machinery steel business

Leveraging our location and machinery manufacturing technologies to further expand orders

Hirohito Kaji, Representative Director, President and Executive Officer, Narasaki Seisakusyo

With an 88-year history since it was founded in Hokkaido, Narasaki Seisakusyo has one of the largest plants in Hokkaido, specializing in manufacturing large steel structures. Our location adjacent to Muroran Port, a good natural harbor, provides ideal access for marine transport. We also possess proprietary steel pipe manufacturing technology and machinery manufacturing technologies encompassing electrical control design. With the progress on offshore wind farms and many other development projects in Hokkaido, I am confident that our technologies will find application.

In addition, we plan to establish a new sales base in Tokyo. This will strengthen our sales to major construction companies headquartered in the metropolitan area and enable us to pursue further order expansion.

Review of fiscal 2022

In fiscal 2022, we relocated the sales base for the machinery steel department to Sapporo and boosted staff to aim for further order expansion. As a result, we increased orders to about 1.5 times the annual volume. In addition to orders for conventional products such as penstocks and water treatment systems, we received an order from the Hokkaido Bureau of Public Enterprises for the first time in nine years for the Horobetsu Dam Earthquake-proofing Project, involving dam floodgate work. We also won three orders for our original ship-lifting equipment, including the new lift-type lifting equipment we have been developing since 2021. Furthermore, we commenced sales of biomass plants, which are attracting attention in dairy farming-intensive Hokkaido, and stainless-steel flap gate tidal barriers to help improve national resilience, as new products.

Fiscal 2023 business policy

Major projects are underway in Hokkaido in fiscal 2023, including redevelopment around Sapporo Station, construction of a new semiconductor plant, and offshore wind turbine-related projects. In addition to existing sales activities, we will focus efforts on participating in these projects by enhancing coordination with general contractors and consultant companies. Particularly for offshore wind farms, a major construction company has decided to use Muroran Port as the home port for its self-elevating platform (SEP) ship. Furthermore, plans for specific projects are emerging, including for manufacturing bases for floating structures. We established an offshore wind farm project office last fiscal year to ensure that we capitalize on these developments. Along with the increase in production volume, we will resume operations at the temporarily closed Shukutsu Plant (approx. 30,000 m^2) and are developing new partner companies.

(Left) Dam floodgate
(Right) Ship-lifting equipment

Precision Equipment Business

In the precision equipment manufacturing business, we design and manufacture high-precision, large-scale, high-damping welded structural body frameworks. In the information processing business, we provide a wide range of systems and services associated with steel bridge design, including preliminary design, detailed design, and reconstruction design.

Precision equipment manufacturing business

Review of fiscal 2022

Leveraging our strengths in steel framework design, technological development, high-precision processing, and high-quality assurance systems, the precision equipment manufacturing business has continued to steadily secure orders for existing products while also actively engaging in equipment development design and focusing on securing orders for next-generation equipment framework products.

In fiscal 2022, amid growing uncertainty about the global economy, there was a decline in the LCD and OLED panel manufacturing equipment market. However, orders and production remained firm for framework products for semiconductor manufacturing equipment. We also received orders for and produced framework products we had been working on previously for new equipment development platforms, with mass production expected soon. Additionally, we advanced technological development to further improve our proprietary high-damping structure frameworks and strengthened our mass production system by enhancing manufacturing efficiency and reducing labor.

Fiscal 2023 business policy

In fiscal 2023, with the LCD and OLED panel manufacturing equipment market expected to gradually recover from the second half, we will secure steady order receipts and production of existing products. We are also advancing development design and prototypes for several new framework products to improve equipment performance, aiming for new orders and mass production. Further, in addition to past initiatives, we will expand our mass production system to flexibly meet customers' diverse product requirements and fluctuations in demand, working to achieve continued business growth.


Ultra-precision coordinate measuring machine

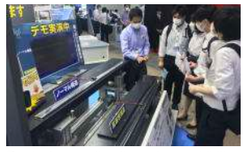

Small precision 5-axis machining center


Automatic blasting machine

Yokogawa's products contribute to the precision equipment industry!

Tsugumasa Takashima, Technology Department, Advanced Engineering Division, Yokogawa Bridge Corp.

My department handles sales, design, and technology development. We promote our products and technologies at exhibitions while carefully listening to customer requests to propose optimal framework solutions. Our proprietary high-damping structure frameworks, which provide excellent vibration damping, are attracting many inquiries and much interest from customers who expect them to help improve the performance of LCD/OLED panel and semiconductor manufacturing equipment, which require miniaturization and higher speeds. Going forward, we will continue to provide high value-added products leveraging our unmatched design and technology development capabilities, thereby contributing to the precision equipment field.


Product promotion through an exhibition


(Normal framework) (High-damping framework)
Example of vibration damping effect of high-damping structure framework (wafer microscope image)

Information processing business

Promoting DX for the YBHD Group and growing the information processing business

Akira Kobayashi, Representative Director, President and Executive Officer, Yokogawa Techno-Information Service Inc.

Yokogawa Techno-Information Service was established in 1984 when the R&D division for information systems was spun off as an independent company to commercialize, as a service for the industry, the integrated steel bridge design and production system Yokogawa Bridge Works had been developing since the 1970s.

With these origins, our company fulfills two roles: promoting the information processing business and serving as the information systems department for the YBHD Group.

Guided by the information strategy of the Sixth Medium-Term Management Plan, the YBHD Group is undertaking diverse DX projects. We intend to successfully guide these projects and leverage the results to grow the information processing business.

Review of fiscal 2022

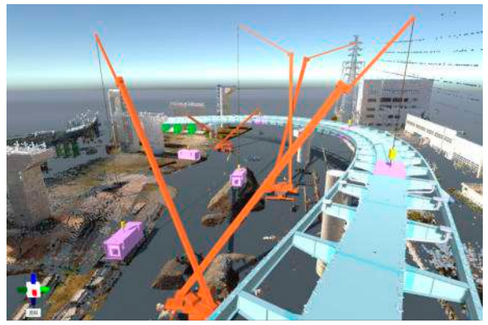
While the YBHD Group has been utilizing IT and promoting DX mainly in production departments, DX initiatives encompassing various departments including administrative departments have become much more active, mirroring how new IT is enabling DX in the civil engineering and construction industries.

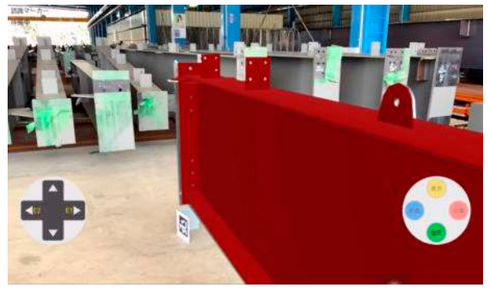
In fiscal 2022, we advanced joint development of systems with Group companies, building on initiatives started in previous years, aiming at practical application centering on BIM/CIM features utilizing 3D models and VR technologies as well as quality/construction management features leveraging AR and AI.

Fiscal 2023 business policy

In fiscal 2023, we will continue past efforts to generate concrete results, while also focusing on DX for safety management. As safety management is a universal issue for the entire industry, we intend to examine and develop specific measures jointly with Group companies not only to increase corporate competitiveness, but also to contribute to the industry and maintain/expand business by commercializing the results as products.

Meanwhile, for our steel bridge design/production system that is widely used in the steel bridge industry and our structural analysis that is in increasing demand due to the increase in maintenance work, we will continue to expand features and improve services to meet customer needs.


<Steel bridge construction simulator>
Simulations considering crane capabilities assist in selecting which cranes to use, positioning, ground assembly point decisions, etc.

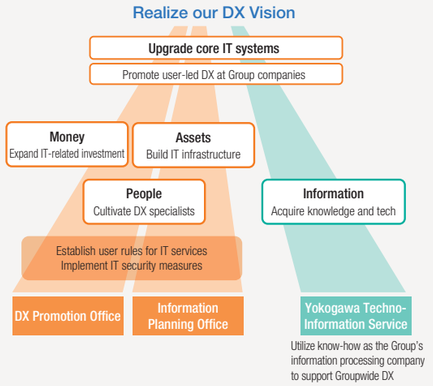

<Column-beam assembly inspection system>
Uses AR (augmented reality) to overlay 3D models on actual members, aiding inspection tasks like confirming attachment positions for small parts.

DX Strategy

In order to achieve sustainable corporate growth and create new value in the midst of the drastically changing social conditions around the YBHD Group, we will seek to achieve our vision by developing a DX platform through the concentrated investment of management resources and the establishment of an implementation system under the slogan “Harnessing Digital Tools to Transform, Grow, and Support.”

DX Vision

a) Use DX to reform work practices, improve productivity, and deliver the new “3Ks” at worksites (kyuryo [wages], kyuka [time off], and kibo [prospects])
b) Use digital tools to reinforce safety measures
c) Use digital tools to preserve and utilize the skills of Yokogawa’s master engineers
d) Use DX to support and accelerate growth in the engineered structure systems business
e) Use DX to explore new business opportunities



Review of fiscal 2022

- To develop “DX specialists,” we conducted DX assessments (to visualize skills and knowledge) and IT literacy education via e-learning for around 1,000 back office department employees.
- We worked on reducing labor and improving productivity at worksites by applying new technologies such as simulations of full-scale implementation of deck bar arrangement inspection using digital data.
- We started consideration of the use of AI, robots, and other technologies to improve safety.
- With the aim of “standardizing business processing and management,” “streamlining, digitizing, and visualizing information,” and “passing on the knowledge and skills of predecessors,” we started upgrading core IT systems to “build a foundation for resilient business operations.”
- We began trials for introducing electronic services for ordering, invoicing, and other order-related tasks.
- We decided to introduce an integrated BI platform and started trials aimed at realizing data-driven management.

Efforts in fiscal 2023

- For the approximately 100 personnel identified in the fiscal 2022 DX assessment as possessing a certain level of DX skills and knowledge, we will provide specialized education in problem-solving training, data science, cutting-edge technologies like AI, practical skills in planning/promoting/managing DX projects, Python, databases, no-code/low-code development, and more.
- In fiscal 2023, we will continue initiatives such as reducing labor at worksites through new technology adoption and making use of AI.
- We plan to complete requirements definition and basic design for the new core information system in fiscal 2023.
- To comply with the Invoice System and amended Electronic Bookkeeping Act, we will proceed with trials and commence full-scale introduction in some departments of electronic services for ordering and invoicing operations.
- To roll out the integrated BI platform across the YBHD Group, we will examine utilization scenarios and confirm and evaluate the effects of introduction.

DX Certification acquired

In August 2023, we were certified by the Ministry of Economy, Trade and Industry as a “DX Certified Company.”

We will continue setting up base for DX promotion in each department to support achievement of work-style reforms and improved productivity.

Case Study 1 Digitization of manufacturing documents and inspection sheets and utilization of tablets

The Osaka Plant of Yokogawa Bridge issues electronic manufacturing documents, and fills out inspection sheets and management sheets electronically using tablets. Documents created in Excel can be directly migrated to electronic documents, enabling a shift to paperless systems of safety and machinery inspection records. Photos can be attached to inspection sheets and inspection records can be emailed, eliminating the hassle of recreating documents at the office. Tablets enable viewing, sharing, and writing of documents, allowing immediate confirmation of necessary information anywhere, leading to improved productivity and quality.


Entering identified issues during a patrol into a tablet


Checking drawings on a tablet

Case Study 2 Utilizing the video software “tebiki” to pass on skills and standardize work

The software enables easy creation of operation standard videos by automatically generating captions using speech recognition and editing videos from smartphone-recorded operation videos. Visual verification by watching the videos on a smartphone or tablet makes work more efficient compared to conventional paper-based operation standards.

Adoption is increasing in each department, with over 300 video manuals completed so far. In addition to using them in new employee training, we intend to use the videos for standardizing operations externally with partner companies in the future, as well as across the YBHD Group, and for passing on the skills, techniques, and know-how of veteran employees, which is a common Group-wide challenge.


Example of a video manual

Case Study 3 DX specialist development: Implementation of specialized education

Our specialized DX specialist development training started in May 2023. Upon its commencement, President Takata sent the following message to participants:

“While DX is extremely broad, I want us all to consider ‘What DX means for the Yokogawa Bridge Holdings Group’ and promote it accordingly. For the entire company to move forward using DX, raising the overall level is necessary, not just a small number of specialized personnel taking action. Company commitment, cooperation between departments, and your understanding are all indispensable to realize this. I ask you 104 members taking this specialized DX course to reflect what you learn in your departments, spur changes in workplace atmosphere, and seek cooperation for DX. I expect that this will drive the YBHD Group’s DX adoption.”


Opening ceremony for DX specialist development specialized training (online)

Technology Strategy

Under the Sixth Medium-Term Plan, we are working on R&D that contributes to the goals of strengthening competitiveness in existing markets, expanding into new markets, being environmentally friendly, and promoting construction DX.

Basic Policies

The YBHD Group conducts R&D with the objective of "creating technologies that enhance the Group's corporate value and contribute to sustainable growth, thereby leading to business expansion." Our units for conducting R&D are the Technical Research Laboratory and the development and engineering departments of each operating company. The Technical Research Laboratory is mainly responsible for basic technology research and high-priority research, while each operating company develops new construction methods and adds or improves the functionality of existing products related to its own business. The Engineering Management Office oversees all of these technology development efforts, but to further improve efficiency, we newly established the Technology Committee in fiscal 2023 to spearhead our medium- to long-term technology strategy across the Group. We intend to respond more promptly and accurately to societal demands while making maximum use of the YBHD Group's entire gamut of human resources and technical capabilities related to R&D.

Review of fiscal 2022

In the bridge business, we developed "precast composite decks" to improve on-site construction efficiency and quality, and achieved commercialization. We also developed technologies related to maintaining and upgrading aging bridges: the Submarine Slicer deck removal method, the Rapid Guard Fence precast wall balustrade, and the STEEL-C.A.P. deck replacement method, achieving commercialization of all three. With the market for bridge-related products like "cusa" expanding, we continued development and improvements tailored to customer needs, completing a product with sound absorption capabilities.

In the engineering business, our engineered structure system business conducted R&D to reduce costs through streamlining design and manufacturing in order to improve product competitiveness and increase market share. Our civil engineering business and construction and machinery steel business worked to commercialize and launch products for civil engineering and building structures like port facility upgrades, underground rivers, and offshore wind turbines, as well as environment-related technologies like next-generation water processing facilities, in order to meet social demands for disaster prevention/mitigation, greater national resilience, and reduced environmental impact.

In the precision equipment business, we enhanced product value by improving existing products and adding functions based on the latest market and customer needs, while intensively tackling Group-wide DX support, a key issue in the Sixth Medium-Term Plan.

Efforts in fiscal 2023

Building on last year's efforts, we will continue initiatives to achieve the goals set out in the Sixth Medium-Term Plan.

In the bridge business, we will focus R&D on the expanding bridge maintenance and upgrade business. For "precast composite decks," we will examine structures and construction methods for applying this technology in deck upgrading projects. We will also continue to study and make improvements to the "Rapid Guard Fence" and "STEEL-C.A.P." method with a view to further rationalization and their practical application to actual bridges. Additionally, we will work on developing technologies to make sectional use of stainless steel to prevent localized corrosion damage, which is problematic in steel bridges. We will continue developing and improving "cusa" and other bridge-related products to meet customer needs. For construction DX, we will work on developing systems that enable sharing BIM/CIM models and 3D data in the design, production, and erection phases to improve productivity, and will work on developing safety monitoring systems utilizing images and AI.

In the engineering business, the engineered structure system business will continue R&D to reduce costs, and will develop technologies to improve two-story product competitiveness. We will also work on development to enter new markets, such as the "Phovare" pitch hovering arena as a special structure.

Our civil engineering business and construction and machinery steel business will engage in development to expand tunnel segment orders. As in the previous year, we will also work on developing civil engineering and building structures like port facility upgrades, underground rivers, and offshore wind turbines.

Common issues throughout the Group include the promotion of Construction DX at production sites and the reduction of environmental impact in business activities. We will aggressively pursue this in all of our business segments, including the use of new ICT and new materials.

Crash tests of Rapid Guard Fence

Case Study 1 Development of "Precast Power Slab"

In recent years, there has been growing demand for precast concrete members to improve quality and reduce labor at construction sites. To address this need, we worked on precasting Power Slabs, which are steel–concrete composite decks. The Precast Power Slab is based on the structure of the conventional cast-in-place Power Slab, but uses a rationalized joint at the perpendicular transverse joint between adjacent precast decks, taking workability at the site into consideration.

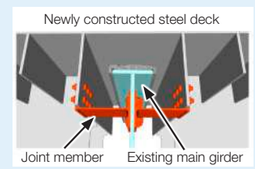
Verification of durability through wheel load running test

Verification of workability through actual-scale construction test

To verify the load performance, durability, and workability of the proposed structure, we conducted joint strength tests, wheel load running tests, and loading tests on beam models focused on main girder behavior. We also carried out actual-scale construction testing to confirm workability. These tests confirmed that there were no issues with the structure or workability. The results of this series of studies were recognized, resulting in adoption on an actual bridge.

Case Study 2 Development of STEEL-C.A.P. Method

RC decks on highways built during Japan's high economic growth period are deteriorating with age, and RC deck upgrading projects are underway nationwide. However, as these bridges are subject to long-term traffic control, streamlining the structure and construction to shorten traffic control times is desired. The STEEL-C.A.P. Method minimizes removal of the existing concrete on the top flange of the main girder, a process bottleneck, enabling replacement of existing RC decks with steel decks. It is expected to greatly reduce traffic control periods. Through fiscal 2021, we conducted various tests including full-scale replacement construction tests, element tests on joints, and loading tests on main girder models to confirm structural viability and construction rationality.



Steel deck joint structure

Replacement with steel deck

In fiscal 2022, we carried out a project applying this method to replace the existing RC deck of a composite girder with a steel deck on the Midorikawa Bridge in Kitakyushu City. In addition to confirming workability of the method on an actual bridge, loading tests using heavy vehicles verified the structural adequacy. We expect that this method will be adopted on many bridges, including on highways, in the future.

Human Resources Strategy

Vision for the Future

In addition to maintaining and enhancing our high level of technical skill accumulated over 100 years of history, we aim to strengthen the human skills that allow us to work cooperatively with various internal and external stakeholders with a sense of mission as a leading company in the industry.

YBHD's characteristics

In considering our human resources strategy, we have organized the characteristics and strengths of our business as follows:

- Under our corporate philosophy of "Contribution to society and the public, and sound management," we have long been engaged in creating products that support the world, with safety and quality as the foundations on which our company was built.
- Driven by the desire to safely and securely support the lives of as many people as possible, we have worked diligently in "monozukuri" manufacturing to meet the needs of customers and expectations of local residents. As an industry leader, we have proactively pioneered the development of new technologies and construction methods.
- Amid changes in society, we have pursued growth by leveraging our existing strengths while seizing new business opportunities and actively taking on challenges.

Basic Policies

Based on the above characteristics, our policies regarding human capital are as follows:

a) Human Resources Development Policy

Under our basic policy on sustainability, we are committed to "contributing to the development of society by creating and protecting high-quality products and passing them on to future generations." We also regard people as the most important factor in running a company. Given that, we believe that to achieve sustainable corporate growth and increase corporate value, it is extremely important to develop personnel with a wide range of experiences and skills who can respond to increasingly diverse and advanced needs. Therefore, our policy is to foster the continuous growth of each diverse employee from a medium- to long-term perspective so that they acquire a high level of expertise.

b) Workplace Environment Development Policy

For a company like YBHD that engages in "monozukuri" manufacturing, securing the safety and security of employees is a vital issue for sustainable business activities. Building a company culture where employees can collaborate beyond their departments, fostered by the psychological and physical sense of security that comes from accumulated safety awareness, is also crucial. We believe that such a corporate culture leads to the construction of high-quality structures and has ripple effects in delivering safety and security to society. Therefore, our policy is to protect the safety and mental and physical health of employees, respect human rights, and ensure a discrimination-free, healthy workplace environment.

Indicators to Monitor the Outcomes of Human Capital Initiatives

	Indicators	FY2022 results	FY2023 target
Train human resources	Number of qualified personnel*	1,244	1,320
	Qualification acquisition support rate	100%	100%
Improve company environment	Number of accidents causing four or more days of lost worktime	7	0
	Compliance and anti-harassment training rate	97.1%	100%
	Retention rate (three years after joining as a fresh graduate)	90.5%	100%

* Total number of employees certified as Professional engineer / First-class architect / First-class civil engineering management engineer / First-class architectural construction management engineer / Construction accountant (1st and 2nd classes)

Four Pillars to Achieve Our Vision for the Future

With the goal of realizing our vision and further expanding our business, we have identified four key points. We will steadily execute them while monitoring progress of each initiative.

a) As a leading company in the industry, systematically accumulate a wide range of experiences and skills to swiftly respond to increasingly diverse and advanced technical needs.

Specific initiatives

- Long-term development of personnel sympathetic to our corporate philosophy and business
- Systematic training tailored to job level and role
- Visualization of skills and experience using a talent management system
- Personnel exchanges and job rotations to foster broad business understanding and assignment of the right people in the right jobs

b) Create an environment where each employee can accumulate diverse experiences and achieve continuous growth.

Specific initiatives

- Acquiring qualifications to improve skills
- Personal career development and job rotation using a self-directed application system
- Making use of HR systems in view of life events

c) Further cultivate a corporate culture where it is easy to cooperate across departments by fostering a sense of psychological and physical security through accumulation of safety awareness.

Specific initiatives

- Ongoing safety improvement activities
- Compliance and anti-harassment training
- Correcting long working hours
- Enhancing and promoting utilization of various types of leave system
- Personnel exchange and job rotation to support collaboration across departments

d) Develop DX specialists to enable more efficient business operations and greater safety.

Specific initiatives

- Selective development of personnel with high IT literacy

Feature in company newsletter:
Support programs for balancing work and parenting

ESG Initiatives

Seeking to realize a sustainable society, we will advance the development of sustainable cities and communities through the improvement of social infrastructure, which is the YBHD Group's business, in an effort to solve various issues faced by local communities. Furthermore, we will help to solve social issues such as global warming, effective use of limited resources, declining birth rate and aging population, and reform of work practices, which are required regardless of industry.

Focus initiatives under the Sixth Medium-Term Plan

1 Environment

To achieve carbon neutrality by 2050, we will switch to a CO_2 emission reduction plan for purchased electricity and install solar power facilities. By carrying out these climate change countermeasures, we plan to reduce CO_2 emissions in our business activities (Scopes 1 and 2) by 20% from the fiscal 2020 level by fiscal 2024. We will also work with relevant parties to reduce CO_2 emissions during the manufacturing process of steel and other raw materials (Scope 3). As part of our long-term efforts, we will actively engage in the development of technologies for reducing environmental impacts, including the effective use of low-carbon materials, offshore wind power facilities, and more efficient water processing facilities.

Furthermore, as a countermeasure against natural disasters, which have been increasing in recent years, we will focus on developing disaster-resistant products and providing upgrading services and maintenance for urban infrastructure.

2 Social

As the aging of urban and transportation infrastructure becomes a social issue, we will contribute to safe and secure city and community development and maintenance by providing high-quality and highly durable infrastructure. We also help to build a strong, risk-resistant economic foundation by providing and maintaining a high-quality logistics network to prepare for new risks that could have a significant impact on economic activities. In the event of large-scale natural disasters, in particular, such as an earthquake or torrential rain, we will conduct emergency inspections of our products, and we will also establish a system to provide prompt support to affected areas based on disaster-relief support agreements.

Meanwhile, in light of the fact that new working practices, such as teleworking, have taken root due to the spread of COVID-19, we will examine ways of working that can cope with various situations, as well as develop an environment and systems that enable diverse human resources to play active roles.

3 Governance

As a Prime Market-listed company, we will establish a strong governance system that complies with the Corporate Governance Code, including implementation of board effectiveness evaluations and enhancement of cooperation with outside directors.

In addition, in order to respond to the accelerating digitalization of society, we will actively promote DX and expand the adoption of new IT services while re-examining and continuously strengthening our measures for information security, the risks of which are feared will increase.

Environment

- **Capture demand from national resilience plans**
  Develop underground river structures, seawalls, and bridge deck replacement methods
- **Develop green energy and technologies with low environmental impact**
  Make effective use of offshore wind turbines, next-generation water treatment facilities, low-carbon materials, etc.
- **Reduce CO_2 emissions**
  Switch to renewable energy, install solar power facilities, etc.
  FY2024 20% reduction
  FY2030 50% reduction
  FY2050 Carbon neutral
  * vs. FY2020, Scopes 1 & 2
- **TCFD-based information disclosure**

Social

- **Promote diversity**
- **Reform work practices**
- **Train human resources, pass on technical skills**
- **Support disaster recovery**
  Carry out emergency checks and provide temporary bridges
- **Eliminate serious workplace accidents and incidents**
  Enforce safety measures, improve on-site installations, and use DX to improve safety

Governance

- **Reinforce risk management**
  Group internal control system, voluntary audits
- **Enforce compliance**
  Compliance Committee, internal whistleblower system
- **Strengthen the corporate governance system**
  Evaluate board effectiveness, improve cooperation with outside directors
- **Implement IT security measures**
  Reevaluate and strengthen current measures

Basic Sustainability Policy

Basic Approach

Under the corporate philosophy of "Contribution to society and the public, and sound management," the YBHD Group aims to realize its management vision of "long-term protection of bridges," "multifaceted steel structure engineering," "creation of a resilient social environment and harmonious coexistence with the natural environment," and "construction of a robust operational foundation," as well as the pursuit of sustained expansion. Based on this vision, our basic sustainability policy is to contribute to the development of society by creating and protecting high-quality products and passing them on to future generations.

We will actively and proactively work to resolve social, environmental, and other sustainability issues with a view to not only reducing risk but also increasing corporate value over the medium to long term, based on our recognition that this will lead to new revenue opportunities.

Sustainability Promotion Structure

(1) Among the various sustainability issues, we will identify those that the YBHD Group should give priority to as materiality (key issues) and reflect them in our medium-term management plan. Each materiality will be reviewed as necessary.
(2) Materiality identification will be discussed by the Sustainability Committee and approved and monitored by the Board of Directors.
(3) The Board of Directors will monitor the progress of goals and initiatives with respect to individual sustainability issues.

Disclosure of Information

We will strive to disclose information to stakeholders in a timely and appropriate manner and ensure transparency.

Assigning of priority order to materiality candidate items

Blue: Opportunities **Black: Risks**

Environment

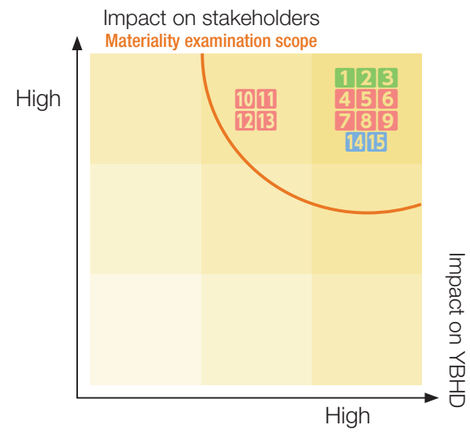
1 Responding to the material risk associated with climate change and natural disasters
2 Responding to demand for the development of disaster-resistant products
3 Responding to demand for retrofitting services and maintenance associated with National Resilience Promotion

Social

4 Ensuring the stable supply of products
5 Quality assurance
6 Support for disaster recovery
7 Safeguarding occupational health and safety
8 Responding to global health issues
9 Securing talent and promoting diversity
10 Strengthening of talent management
11 Labor productivity enhancement
12 Respecting the human rights of our employees, and the employees of partner companies and suppliers
13 Prevention of overwork and promotion of work-life balance, and realizing equivalent compensation for equivalent work

Governance

14 Fair transactions and prevention of corruption
15 Information security management

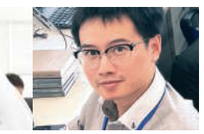


List of Materiality Items and KPIs

From an ESG viewpoint and in light of the various Sustainable Development Goals (SDGs) and the direction of the YBHD Group's business, we have identified materiality (key issues) that should be prioritized by the Group and are working actively to resolve various issues in society to help realize a sustainable society.

ESG	Materiality (Key Issues)	Measures	Specific Content	KPI (Key Performance Indicator)	FY2022 Target	FY2022 Results	FY2023 Target
Environment	1 Responding to the material risk associated with climate change and natural disasters	Establishing systems to facilitate business continuity	● BCP formulation and continued effective utilization and training	Implementation of BCP training	20 or more times per year	20 times per year	20 or more times per year
		Reducing the environmental footprint of business activities	● CO_2 emissions reduction	CO_2 emission reduction rate, short-term target (20% in FY2024) (Base year: FY2020, Scopes 1 and 2)	—	Down 19%	—
			● Promoting the adoption of renewable energy				
			● Reducing wastage of materials and improving the recycling rate	Continuation of a 100% steel recycling rate	100%	100%	100%
			● Developing products with minimal environmental footprint and providing related technologies				
			● Reusing materials and reducing electricity consumption at all facilities				
	2 Responding to demand for the development of disaster-resistant products	Developing products and construction methods that will contribute toward reducing the damage suffered in a natural disaster	● Development of earthquake-resistant products	R&D expenses	0.8 billion yen	0.5 billion yen	0.9 billion yen
			● Development of products and construction methods that facilitate early recovery in the event of an unanticipated disaster				
	3 Responding to demand for retrofitting services and maintenance associated with National Resilience Promotion	Developing technologies and products relating to the improvement, maintenance, and upgrading of the highway network	● Development of technologies for enhancing and upgrading the functionality of existing infrastructure	Bridge maintenance business net sales	24.0 billion yen or more	26.7 billion yen	26.0 billion yen or more
			● Development of maintenance-friendly aluminum and stainless steel products				
Social	4 Ensuring the stable supply of products	Strengthening production and construction systems	● Strengthening BCP-related investment, facilities, and personnel	Capital expenditures (totaling at least 18.0 billion yen in FY2022–2024)	—	3.4 billion yen	—
				Personnel (2,150 in FY2024)	—	2,017* *Including equity method affiliates.	—
	5 Quality assurance	Preventing the reoccurrence of quality non-conformance incidents	● Quality management system utilization and continuous improvement	Construction grades for bridge business	Average of 80 points or higher	Average of 83.8 points	Average of 80 points or higher
			● Reflecting information obtained at every stage, from planning and design through to manufacturing and construction, and information obtained through inspections and diagnostics				
	6 Support for disaster recovery	Strengthening systems for providing rapid support	● Building the systems needed to allow high-priority response in the event of an incident and the provision of related equipment	Conducting disaster response training	Once a year	Response training: once a year Support for disaster recovery: 3 cases	Once a year
	7 Safeguarding occupational health and safety	Thorough prevention of serious accidents	● Reducing the incidence of fatal accidents to zero through measures to eliminate the danger from tasks that involve working at heights	Fatal accidents	0	0	0
				Number of accidents causing four or more days of lost worktime	0	7	0
				Frequency rate	—	0.98	—
				Severity rate	—	0.06	—
				Average number of lost workdays per casualty	—	63.9	—
	8 Responding to global health issues	Infectious disease response measures and putting in place the environment needed for employees to maintain and improve their health	● Putting in place the environment needed for teleworking and flexible work hours and implementing these measures	Application for the Health & Productivity Management Outstanding Organization Recognition Program	Apply	Certified	Certified
			● Promoting health management that makes effective use of "collabohealth" (collaboration between Health Insurance Society providers, companies, and employees)				
	9 Securing talent and promoting diversity	Promotion of recruitment activities	● Effective utilization of site visits, internships, and the holding of seminars in schools and colleges	Achievement of recruitment plan for the fiscal year	Recruitment plan: 55 hires Achievement rate: 100%	Recruitment plan: 53 hires Actual: 58 hires Achievement rate: 109.4%	Recruitment plan: 64 hires Achievement rate: 100%
		Effective utilization of diverse human talent	● Proactive recruitment and effective utilization of human talent regardless of nationality, gender, or age, including persons with disabilities and senior citizens	Employment rate of persons with disabilities (average for 5 operating companies)	2.3% or higher	2.39%	2.3% or higher
				Percentage of female employees out of all employees	15% or higher	15.3%	15% or higher
				Steady increase in the rate of male employees taking childcare leave	—	34.4%	—
				Return-to-work rate after childcare leave	100%	100%	100%
				Utilization of foreign human resources (including transfers and trainees from Group companies)	36 or more	42	42 or more
	10 Strengthening of talent management	Support for self-directed career development	● Job rotation using a self-directed application system, and appropriate personnel allocation	Support for acquisition of necessary qualifications according to the type of job (Professional engineer / First-class architect / First-class civil engineering management engineer / First-class architectural construction management engineer / Construction accountant (1st and 2nd classes))	Target: 267 people Support implementation rate: 100%	Target: 243 people Support implementation rate: 100%	Target: 324 people Support implementation rate: 100%
			● Support to help employees secure professional qualifications and implement various types of training				
	11 Labor productivity enhancement	Effective utilization of technology (with ICT as the core element) and business process improvement	● Development of new, labor-saving construction methods, promotion of R&D, and promotion of digital transformation (DX)	Establishment of an internal certification system for DX personnel and certification of about 50 employees (50 in FY2024)	—	0	—
				Expansion of the area of ordered engineered structures through promotion of DX (1.3 million m^2 or more in FY2024)	—	0.86 million m^2	—
	12 Respecting the human rights of our employees, and the employees of partner companies and suppliers	Thorough implementation of mutual respect	● Implementation of the YBHD Code of Corporate Behavior and continuing education	Percentage of harassment training provided through e-learning	100%	97.1%	100%
	13 Prevention of overwork and promotion of work-life balance, and realizing equivalent compensation for equivalent work	Steady efforts to reduce working hours, and promotion of leave-taking	● Active promotion of incentive systems and of the various types of leave system	Percentage of construction sites implementing 7 days off in a 4-week schedule: 100% (FY2022), 8 days off in a 4-week schedule: 100% (FY2023 and FY2024)	7 days off in 4 weeks implementation rate: 100%	7 days off in 4 weeks implementation rate: 85%	8 days off in 4 weeks implementation rate: 100%
		Commitment to fair remuneration	● Establishment of internal systems in relation to various laws				
Governance	14 Fair transactions and prevention of corruption	Thorough implementation of compliance and transaction record management, thorough implementation of effective corporate governance and risk management	● Formulation of manuals and rules, compliance with their stipulations, and related education	Number of serious noncompliance incidents	0	0	0
			● Auditing of compliance status and appropriate utilization of the internal whistleblowing system	Conducting independent audits in all departments of each Group company based on the Group's internal control system and auditing regulations, as well as identification of events and implementation of preventive, remedial, and recurrence-prevention measures	Once a year	Once a year	Once a year
			● Appropriate operation of the Compliance Committee and Sustainability Committee	Auditing department personnel and implementation of education on internal controls	Personnel: 31 Education implementation rate: 100%	Personnel: 38 Education implementation rate: 100%	Personnel: 41 Education implementation rate: 100%
			● Further improvement of the system for appropriate risk management	Conducting meetings between the Group's auditors and the head of the Audit Office	Twice a year	Twice a year	Twice a year
	15 Information security management	Preventing the leakage of corporate business secrets	● Improvement of the rules for preventing data leaks, and implementation of related training	Number of serious information security incidents	0	0	0
				Implementation of training on data preservation in the event of a disaster	Once a year	Once a year	Once a year

Striving to Help Realize a Sustainable Society



Environmental Initiatives

The YBHD Group has established "creation of a resilient social environment and harmonious coexistence with the natural environment" as one of its management vision pillars. While striving to build resilient infrastructure to safeguard both people's lives and business activity from the impact of natural disasters such as earthquakes, mega-typhoons, torrential rains, etc., we also minimize the impact of our own business activities on the natural environment. In response to climate change, the YBHD Group aims to contribute to the transition to a low-carbon economy and has incorporated reduction of CO_2 emissions and efficient management of resources into its business activity goals.

Main initiatives

Working to reduce CO_2 emissions

For Scope 1 emissions, we have introduced hydrogen vehicles as company cars to reduce our environmental impact. For Scope 2, in addition to switching to an electric power plan that reduces CO_2 emissions, we are steadily installing solar power systems. In fiscal 2022, we installed solar power systems for self-consumption at our Technical Research Laboratory and the Mobara Plant of Yokogawa System Buildings, and have started utilizing the solar power they generate. We also switched the electric power used at four business sites and three plants in the Kanto region to a CO_2 emissions reduction plan.

Through these efforts, we were able to reduce CO_2 emissions (Scopes 1 and 2) from business activities in fiscal 2022 by 19% compared to the base year of fiscal 2020.

We will also work with relevant parties to reduce CO_2 emissions during the manufacturing process of steel and other raw materials (Scope 3).

A solar power system installed at the Yokogawa System Buildings' Mobara Plant

CO_2 emissions reduction target

Scope	Base year	Target year	Target
Scopes 1 & 2	FY2020	FY2024	20% reduction
		FY2030	50% reduction
		FY2050	Carbon neutrality

CO_2 emissions

(t-CO_2)

	FY2020	FY2021	FY2022
Scope 1	2,539	4,856	4,508
Scope 2	10,779	10,647	6,241
Scopes 1 & 2 total	13,318	15,503	10,749
Scope 3	332,518	361,007	431,556
Scopes 1-3 total	345,836	376,510	442,305

Quality and Environmental Strategy (Yokogawa Bridge Corp.)

Basic Principles

Yokogawa Bridge Corp. will contribute towards the realization of a sustainable society through the provision of high-quality infrastructure-related products and by reducing the environmental footprint of our business activities, in line with our corporate philosophy of "Contribution to society and the public, and sound management."

Basic Policies

1. We will meet customers' needs and comply with relevant laws and regulations in regard to products.
2. We will identify and comply with applicable laws, regulations, and agreements in regard to the environment.
3. We will help to safeguard the environment in our business activities by formulating measures with respect to the prevention of global warming, prevention of pollution that might affect neighboring residents or the natural environment, the three "Rs" (Reduce, Reuse, and Recycle), and appropriate disposal of waste, etc.
4. We will continuously work to improve our quality and environmental management systems in order to enhance our operations, the quality of our products and customer satisfaction, and to reduce our environmental footprint.

Materials flow (as of FY2022)

Business activities consume energy (including electric power) and resources, and generate both greenhouse gas emissions and waste. We have been working to clarify this environmental footprint in terms of inputs and outputs as a basis for implementing activities to reduce our environmental footprint.

Inputs	
Energy	
● Electric power	26.61 million kWh
● Gasoline	607 kL
● Diesel	500 kL
● Kerosene	132 kL
● Gas	711,000 m³
Water	68,000 m³
Main construction materials (steel)	143,000 t

Yokogawa Bridge Holdings Corp.

Bridge business
Engineering business
Precision equipment business
Real estate business

Outputs	
CO_2 emissions	10,749 t
Construction waste	6,979 t
Steel-related emissions	12,125 t
Steel reuse rate	100 %

Responding to demand for the development of disaster-resistant products

The YBHD Group is working to develop products and construction methods that will help reduce damage in disasters. (See pages 51–52 for information on R&D initiatives.)

Responding to demand for retrofitting services and maintenance associated with National Resilience Promotion

In our bridge business, we are involved in the maintenance business and bridge peripheral business, viewing national resilience enhancement measures and the western extension of Osaka Bay Road as future opportunities in addition to large-scale renewals and repairs of highway bridges. (See pages 37–40 for information on bridge business initiatives.)

Initiatives for biodiversity

The YBHD Group's activities have the potential to impact the natural environment in all kinds of locales and settings where there are diverse ecosystems. Under these circumstances, we make efforts to minimize the impact on biodiversity.

Case Study 1 New construction method considerate of biodiversity on the New Nobi Bridge (tentative name) P5-A2

The New Nobi Bridge (tentative name), crossing the Kiso River, a class A river, from Hashima City, Gifu Prefecture, to Ichinomiya City, Aichi Prefecture, is a road bridge located about 1 km downstream from the Tokaido Shinkansen. The freshwater fish Itasenpara bitterling, a species endemic to Japan and only found in the waters of three areas including the Nobi Plain, has been confirmed near the bridge site. Designated as a protected species in Japan, it is listed as Critically Endangered on the Regional Red List compiled by Japan's Ministry of the Environment. For this construction project, a superstructure launching bridge erection method was adopted that does not require temporary facilities to be installed in the waters, so that construction would not impact the Itasenpara bitterling habitat. Considering biodiversity and with a view to sustainable development, we devised the following construction methods that did not require entering the waters: 1) new development of equipment to rotate and remove the launching nose that needed to be removed from the middle of the river; and 2) devising a construction method to transport for installation 11-ton bearings (members that support the bridge on the piers) from land 75 meters away to the bridge piers in the river. Through the use of these new construction methods, and by applying the on-site coating in advance to prevent paint runoff in the river, continuous environmental surveys have confirmed that the Itasenpara bitterling habitat has been maintained without being affected by the long-term construction work.

Rotating the launching nose

Launching nose rotating equipment

Transporting the P6 bearing

Case Study 2 Initiatives considerate of rare fish species during construction of the New Oigawa Bridge (P9-A2)

The New Oigawa Bridge in Shimada City, Shizuoka Prefecture, is a road bridge crossing the Oi River, a class A river. Located in the lower reaches of the Oi River water system (about 16 km upstream from the river mouth), the waters here are home to endangered species such as Liobagrus reinii and the fourspine sculpin, as well as many other rare fish. However, due to constraints on construction conditions, it was unavoidable to carry out construction in the river for this project, raising concerns about the impact on the ecology of rare fish species from water pollution caused by the construction work.

Therefore, on days when construction was carried out in the river, we measured water turbidity three times a day, reported the measurements, visual conditions, and work details to the project owner, and thoroughly managed the pace of construction based on the measured turbidity, in an effort to prevent water pollution. Turbidity quantifies the cloudiness of river water caused by suspended sediment, etc., and is commonly used as an indicator for river water quality management.

In this way, by thoroughly informing not only Yokogawa employees but also each and every worker involved in the construction about the impact on rare fish species and their conservation in relation to bridge construction, and also by seeking advice from experts as well as the project owner, we made concerted efforts as stakeholders to minimize the impact on rare fish species.

Erecting bridge girders in the river

Initiatives to address climate change

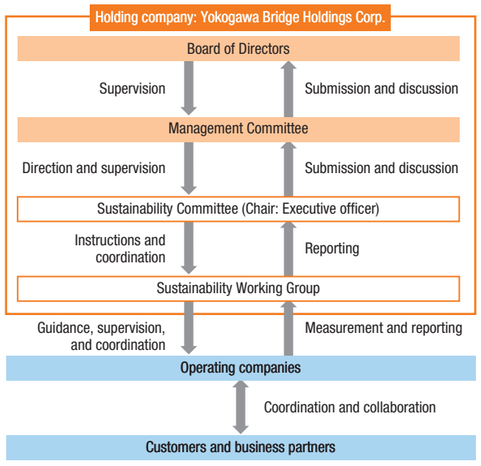
The YBHD Group recognizes climate change as an important management issue, and in 2020, identified “Responding to the material risk associated with climate change and natural disasters” as a materiality (key issue).

To contribute to the transition to a low-carbon society, we will further promote initiatives aimed at achieving carbon neutrality and make disclosures aligned with the TCFD recommendations.

Governance

The Sustainability Committee, an advisory body to the Board of Directors, reviews agenda items on basic management policies, business activities, and corporate governance policies and strategies related to sustainability, including climate change, and ESG more broadly. Important policies and measures are reported to the Board of Directors for deliberation and decision-making after discussion by the Management Committee.

The Sustainability Working Group, which is a subordinate body of the Sustainability Committee, incorporates the decided policies and measures into business activities and promotes specific initiatives in coordination and collaboration with operating companies as well as customers and business partners.



Composition and activities of the Sustainability Committee

Committee members	Chair	Executive officers of major operating companies
	Members	Audit & Supervisory Board Member, executive officers and senior staff of operating companies
Activities in FY2022	3 meetings	● Identification of materialities (key issues) and setting KPIs ● Calculation of CO_2emissions (Scopes 1, 2, and 3) and measures for reduction ● Responses to TCFD disclosure, etc.

Risk management

The effectiveness of the internal control system is monitored based on reports from operating companies regarding the identification of business risks, including materialities, and the implementation, evaluation, and improvement of response measures. The risk management department consolidates and evaluates this information at a company-wide level and reports to both the Board of Directors and the Audit & Supervisory Board.

The Sustainability Committee identifies immediate to medium- to long-term risks arising from climate change and assesses their impact on our business. The identified risks, as well as countermeasures, are examined by the Sustainability Committee and the Sustainability Working Group, which is in charge of practical matters, working together. Particularly important issues are deliberated by the Board of Directors.

Indicators and targets

We set out a goal of achieving carbon neutrality by reducing CO_2 emissions (Scopes 1 and 2) in our business activities to zero by fiscal 2050. To achieve this goal, we have established a mid-term target of a 50% reduction* in Scopes 1 and 2 CO_2 emissions in fiscal 2030 and a short-term target of a 20% reduction* in fiscal 2024. (*The base year is fiscal 2020)

CO_2 emissions reduction target

Scope	Base year	Target year	Target
Scopes 1 & 2	FY2020	FY2024	20% reduction
		FY2030	50% reduction
		FY2050	Carbon neutrality

Strategy

We conducted an analysis to determine how climate change would affect the Group’s operations and finances. The scope of the analysis covered the Company’s major businesses (Bridges, Engineering, and Precision Equipment), and the period of the analysis was from the present to around 2050.

The bridges and engineered structures provided by the YBHD Group use steel, cement, and other materials that emit a large amount of CO_2 during their manufacture. CO_2 emissions are also generated from the transportation of these raw materials and building materials, and from the operation of heavy machinery during construction.

In addition, as requests for environmental consideration from local governments and private-sector companies, which are our main customers, are increasing year by year, we are developing technologies such as low-carbon construction methods and low-maintenance products, and pursuing a 100% recycling rate for steel materials throughout the Group.

Given these business characteristics, we have identified the following as major risks: price increases and shortages of steel due to tighter regulations on CO_2 emissions and the introduction of a carbon tax; a decline in labor productivity at construction sites due to chronic temperature increases; and supply chain disruptions and damage to our own facilities due to increased and more severe extreme weather events.

As for opportunities, we have identified the expansion of the market for national resilience, disaster prevention, disaster mitigation, and maintenance.

Major risks and opportunities arising from climate change, their impact on business, and our responses

Category	Risks/opportunities and impact on business	Affected businesses*1	Time frame*2	Magnitude of impact	Measures
Risks	Increase in steel prices and shortages due to introduction of low-carbon technologies	B, E	Long term	Large	● Cooperation with steel manufacturers in the development of decarbonization technologies ● Application of new materials such as FRP-balsa materials, lumber, and low-carbon concrete to the Group’s business fields
	Increased incidents of heatstroke and reduced work efficiency due to rising temperatures, and increased costs for heatstroke countermeasures	B, E	Now	Large	● Introduction and use of ICT for working environments and health management ● Promotion of labor savings through robotization of welding operations and use of ICT ● Provision of air-conditioned clothing, etc., in the workplace ● Strengthening BCP-related investment, facilities, and personnel ● BCP formulation and continued effective utilization and training ● Utilization of products and construction methods that facilitate early recovery in the event of an unanticipated disaster
	Extreme weather conditions impacting procurement networks, disrupting or delaying construction	B, E, PE	Now	Large	
	Damage to own facilities due to extreme weather	B, E	Now	Large	
Opportunities	Expansion of national resilience, disaster prevention, mitigation, and maintenance markets	B, E	Now	Large	● Responding to increased orders and production expansion by developing a DX-based production management system and sales management system ● Accurately identifying demand for bridge replacement and facility relocation, and strengthening technical proposal capabilities ● Development of technologies that contribute to improving safety and workability at disaster sites by promoting construction DX ● Provision of Disaster-prevention Pre-cast Sea-walls to reduce the damage caused by tsunamis and storm surges ● Provision of internal water pressure-compatible tunnel segments for underground rivers that are prepared for heavy rainfall disasters ● Provision of technology for replacing aging road bridge decks ● Provision of maintenance-related products made of aluminum and stainless steel ● Provision of hybrid steel and wood products ● Application of effective elemental technologies such as electric furnace steel, low-carbon concrete, and environmentally friendly paints ● Use of the new technology of decarbonized processing machinery (electric and hydrogen) ● Promotion of technological developments such as pre-casting and rapid construction methods to shorten construction periods on-site

*1: B: Bridge Business, E: Engineering Business, PE: Precision Equipment Business
*2: Time frames considered are now, short term (2-3 years), medium term (around 2030), and long term (around 2050).

Social Initiatives

The YBHD Group recognizes its roles as including “Creating value for society and the public by building and protecting high-quality products and connecting them to future generations,” and “Contributing to the improvement of regional convenience and the development of social life and logistics through infrastructure development.” To sustain growth driven jointly by people and technology, the YBHD Group focuses on developing the specialized skills of its employees while also working to improve labor conditions and occupational safety and health.

Initiatives to ensure safety and quality

FY2022 Company-wide Health and Safety Policy (Yokogawa Bridge Corp.)

“Safety and quality” are the foundations on which our company was built.

The health and safety policy outlined below has been announced with the aim of ensuring safety and creating a comfortable working environment based on the principle of respect for human rights and the principle of compliance with relevant laws and regulations.

1. Eliminating serious accidents and incidents
2. Compliance with occupational health and safety legislation and internal rules
3. Creating a healthy and comfortable working environment

The YBHD Group has operated the Group Safety and Quality Committee, a voluntary committee of the Board of Directors, since fiscal 2022. The objectives of this committee are to analyze the safety and quality management operations of each operating company, verify the feasibility of various measures, and make proposals for improvement to the Board of Directors.

Enhancing safety through DX

Based on the Sixth Medium-Term Plan, the entire YBHD Group is working to “reinforce safety measures through DX.” Yokogawa Bridge is currently trialing a “remote safety management system” at bridge construction sites.

In October, Yokogawa NS Engineering plans to introduce “AI-based detection of entry into hazardous areas” at its Kashima Plant. We will share these initiatives across the Group and consider expanding their application.

Support for disaster recovery

To prepare for increasingly severe damage from abnormal weather and earthquakes, the YBHD Group has established a system for swift support through disaster management cooperation agreements.

Joint safety patrols

Joint safety patrols

To verify the status of safety management at each operating company and enhance employees’ and workers’ safety awareness, committee members and auditors conduct mutual safety patrols across operating companies. In fiscal 2022, patrols were carried out at three sites in December.

Sharing and analyzing quality-related information

Each YBHD Group operating company has established a quality management system with a dedicated department. The committee aggregates quality management information from each operating company and analyzes it based on unified Group standards. Information about all measures to prevent quality nonconformities is shared across the Group.

Case Study **Rebuilding Okitsuru Bridge Superstructure for Disaster Recovery on the Okitsuru Route of Kuma Village Road**

The YBHD Group was awarded the contract to rebuild Okitsuru Bridge in Kuma Village, Kumamoto Prefecture, which was washed away by torrential rains in July 2020. The loss of Okitsuru Bridge cut off the key local transportation artery in the Sangaura area of the Kuma River basin, leaving people eagerly awaiting rapid restoration. To meet these expectations, we will swiftly and safely build it.

Making full use of our technological capabilities, the YBHD Group will continue contributing to disaster recovery work.

From an article contributed to the October 24, 2021, issue of the journal Construction Graph by Koichiro Tokuda of the Yatsushiro Reconstruction Project Office, Kyushu Regional Development Bureau

3D rendering of the completed bridge

Responding to health issues

Group Health Declaration

In the midst of severe changes in its business environment, the YBHD Group views the health of employees as one of its most important management resources and promotes initiatives to support the health of employees and the families who support them. The Group aims to develop its business and contribute to society through workplaces where employees can work vigorously and reach their full potential.

Yokogawa Bridge Holdings was certified as a 2023 Health & Productivity Management Outstanding Organization in the large enterprise category. This certification program was established by Japan’s Ministry of Economy, Trade and Industry to visualize and evaluate large companies, SMEs, and other organizations that have implemented especially excellent health and productivity management practices. Certification is conducted by the Nippon Kenko Kaigi (Japan Health Council). Going forward, the YBHD Group will continue to promote initiatives for the health of employees and their families based on the Group Health Declaration.

Prevention of overwork and promotion of work-life balance

The YBHD Group has formulated a 2-day Weekend Action Plan to rectify the problem of excessively long working hours at construction sites, and provides training to prevent overwork.

We have also implemented work–life balance measures (accommodation expenses subsidy system, a travel expenses subsidy system for employees returning home, commemorative holidays, a telecommuting system, a reduced working hours system, implementation of “No Overtime Days,” etc.) to support all employees in enriching both their work and private lives.

Labor productivity enhancement

The YBHD Group is promoting digital transformation (DX) and working to improve labor productivity by utilizing ICT-based technologies and improving business processes. (See pages 49–50 for information on DX initiatives.)

Securing talent and promoting diversity

We proactively employ diverse human talent regardless of nationality, gender, or age, and implement various support measures and initiatives for their development and retention.

Aspiring to be an engineer

Ei Ei Phyoe, Osaka Construction Dept. 1, Osaka Construction Headquarters, Yokogawa Bridge

I currently work as a construction manager at the site of the Okishin Viaduct construction project in Sasebo City, Nagasaki Prefecture. I am from Myanmar, and ever since I was a child, I dreamed of becoming an engineer. I chose Japan as a place to challenge myself in this endeavor. I had no prior site experience when I was assigned to the Okishin Viaduct site in May 2021, and it has been over two years since then. Through hands-on experience in on-site construction work, I have gradually come to understand the work involved and technical aspects. Senior staff and skilled workers listen to and understand my opinions more now, which gives me a real sense of my own growth. This project involves a wide variety of construction types, and I feel it is a site where I can grow by gaining knowledge in diverse areas. Going forward, I want to proactively acquire qualifications such as certification as a civil engineering management engineer and be active in Japan as a civil engineering professional.

Okishin Viaduct, Sasebo Road

Respecting the human rights of our employees, and the employees of partner companies and suppliers

The Group’s Charter of Corporate Behavior clearly stipulates the requirement to respect the human rights of each individual employee, and prohibits discrimination on unreasonable grounds that do not relate to the conducting of business, such as discrimination on the grounds of place of origin, nationality, race, ethnic background, beliefs, religious faith, gender, age, disability, or academic background.

Strengthening of talent management

The YBHD Group has expanded its business, with people and technology as the sources of growth. Engineers who have grown by making use of company systems to support self-directed career development are active across various departments. (See P.53-54 for our human resource strategies.)

Knowledge Gained from Experience Is a Treasure

Hirofumi Kamegawa , Manager, Tokyo Technical Planning Department, Technical Planning Office, Yokogawa Bridge Corp.

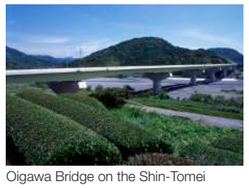
It has already been 33 years since I joined Yokogawa Bridge Works Ltd. (now Yokogawa Bridge Corp.) in April 1990. I'm currently the manager of the Tokyo Technical Planning Department in the company's Technical Planning Office. The Technical Planning Office mainly creates technical proposal documents for competitive bidding projects that use comprehensive evaluation. It's a high-pressure job, as evaluation scores on technical proposals greatly impact the winning of project contracts. The technical proposals require broad knowledge to address diverse issues such as improving bridge quality and durability, enhancing safety and efficiency during erection, and measures to reduce noise and vibration in consideration of local residents. I believe I am able to play an active role now thanks to the knowledge gained through my experience in various departments over the years. In this article, I will briefly introduce my career history and the experience and knowledge I acquired in each position. I hope it serves as a reference for younger engineers working to build their careers.

My first assignment after joining the company was a two-year stint in the Construction System Department at Yokogawa Techno-Information Service Inc., another YBHD Group company. There, I was assigned to program HI-CAD, a road design system, and learned programming from scratch. This skill continues to be extremely useful when developing systems for technical proposals.

After completing that assignment, I spent seven years in design-related departments at Yokogawa Bridge. One particularly memorable detailed design project was Tadami River Bridge on the Ban-etsu Expressway. The bridge is an arch bridge (upper deck Lohse bridge), but the arch was low and flat, requiring diagonal bracing members in an unusual structure, making it a challenging design. In the Design Department, I learned structural analysis techniques (methods to calculate structural forces and deformations using computer programs), which later helped me pass the national certification exam for a Professional Engineer in the construction field.

After my experience in the Design Department, I spent five years assigned to the construction site of Oigawa Bridge on the Shin-Tomei Expressway. This is an enormous 704-meter-long composite box girder bridge with some of the largest PC decks in Japan. The erection method used was incremental launching. At this site, I was responsible for managing aspects such as reaction control and shape management during incremental launching and managing the casting of the PC decks, giving me a real sense of the difficulties of on-site construction. I also had opportunities to contribute many papers and articles to professional journals, which helped broaden the scope of my work.

Tadami River Bridge on the Ban-etsu Expressway
(length: 311 meters)



Oigawa Bridge on the Shin-Tomei Expressway
(length: 704 meters)

After returning from on-site work, I spent four years in the Technology Development Department (now the Technical Research Laboratory of Yokogawa Bridge Holdings). There I learned techniques for simulating bridge behavior during earthquakes using dynamic analysis and techniques for accurate analysis of complex structure deformation and stress using FEM.

After my stint in the Technology Development Department, I served as manager of the Construction Department's Planning Section for two years. My main duties were formulating erection plans and preparing construction plan documents. Developing erection plans requires comprehensive consideration of safety, work processes, the surrounding environment, costs, and other factors, offering a great opportunity to hone my erection planning skills.

In October 2010, the Technical Planning Office, where I currently work, was established, and I was assigned as an initial member. I have remained here without transfer until now, a period of 13 years.

As described above, I have experience in a wide variety of departments. All the knowledge I gained has been invaluable. Combining knowledge sparks new ideas and solutions, and is useful in all kinds of situations. I intend to continue diligently to apply myself to daily tasks and gain more of this treasure called "knowledge." Let's all work hard together!

Date	Career History
Apr. 1990	Joined Yokogawa Bridge Works, Ltd.
Oct. 1990	Assigned to Construction System Dept., Yokogawa Techno-Information Service Inc.
Oct. 1992	Bridge Design Section III, Design Dept., Yokogawa Bridge Corp.
Oct. 1994	Section I, Tokyo Production Technology Dept., Yokogawa Bridge Corp.
Apr. 1999	Assigned to Shin-Tomei Expressway Oigawa Bridge West Construction Site
Apr. 2004	Section II, Technical Research Laboratory, Technology Development Dept., Yokogawa Bridge Corp.
Oct. 2008	Planning Section, Construction Dept., Yokogawa Bridge Corp.
Oct. 2010	Tokyo Technical Planning Dept., Technical Planning Office, Yokogawa Bridge Corp. (to the present)

Social contribution activities

To fulfill our roles and responsibilities as an enterprise engaged in providing society with infrastructure and the foundations for daily life as well as a corporate citizen that seeks to work in harmony with the local community, we implement measures to invigorate local communities with the goal of helping to create a society in which people can live safely and with peace of mind.

Case Study 1 Site visits

To give students a hands-on sense of the appeal of the construction industry, in fiscal 2022 we held bridge construction site visits for nearby elementary school students and their guardians a total of eight times at the Higashiharima Nanboku Road site in Kakogawa City, Hyogo Prefecture. A total of 500 people participated. Through experiences such as tightening high-strength bolts, tying rebar, and riding in construction equipment, we stimulated interest in bridge construction and provided an opportunity to learn about roads.

Students gain hands-on experience at a construction site.

Case Study 2 Sponsorship: Tokyo National Museum

We sponsored the Tokyo National Museum's 150th Anniversary Special Exhibition "Tokyo National Museum: Its History and National Treasures," held from October 18 to December 18, 2022. The museum houses over 1,100 pieces in the Yokogawa Collection of ancient pottery and porcelain donated by the YBHD Group's founder, Dr. Tamisuke Yokogawa. Our sponsorship was tied to the exhibition of a work from the collection, a celadon glazed foliate bowl. The exhibition was so popular that its run was extended, allowing us to support the opportunity for many people to experience Japan's culture.

Important Cultural Property: Celadon Glazed Foliate Bowl
Chinese Guan Ware, Southern Song Dynasty, 12th–13th century
Gift of Tamisuke Yokogawa, Tokyo National Museum collection
*Photographed with special permission

Case Study 3 Supporting Fujikawaguchiko Town's Music Town Development Project

The Mt. Fuji Kawaguchiko Piano Festival 2022 was held in Fujikawaguchiko Town, Yamanashi Prefecture, from September 22 to 25, 2022. This festival, held for the second time following its debut in 2021, is part of the town's Music Town Development Project. World-renowned pianist Nobuyuki Tsujii was the pianist-in-residence, with performances by other distinguished pianists as well.

The well-received music class at a local elementary school and free picnic concert in a municipal park (Photo ①) from the first festival were held again, contributing to the promotion of local culture, education, and the arts together with local volunteer staff. As the first festival was covered by media outlets, the attendance was higher this time. The event draws classical music fans from across Japan, benefiting the local economy as well.

In fiscal 2023, we will continue supporting this project through a corporate hometown tax payment (a donation), which was inspired by our construction of a retractable roof for Kawaguchiko Stellar Theater (Photo ②), the main venue of the festival.

Mt. Fuji Kawaguchiko Piano Festival 2023 was held September 15–18, 2023.

https://pianofes.stellartheater.jp/

①

②

Corporate Governance

In line with our corporate philosophy of “Contribution to society and the public, and sound management,” the YBHD Group aims to make a positive contribution to society by carrying out “monozukuri” manufacturing with integrity and by providing high-quality, safe social infrastructure.

Utilizing the YBHD Group’s wealth of human talent and high-level technological capabilities to realize sustainable growth and enhance corporate value over the medium to long term has won us the trust of our stakeholders. In continuing to implement our corporate activities going forward, while remaining aware of our responsibilities as a good corporate citizen, complying with laws, regulations, social norms, etc., and earning the trust of the people who work for us, we will strive to make ourselves an enterprise that helps people to live with safety and peace of mind. To achieve this, we will work to enhance corporate governance based on the five basic policies on the right.

Basic Policies

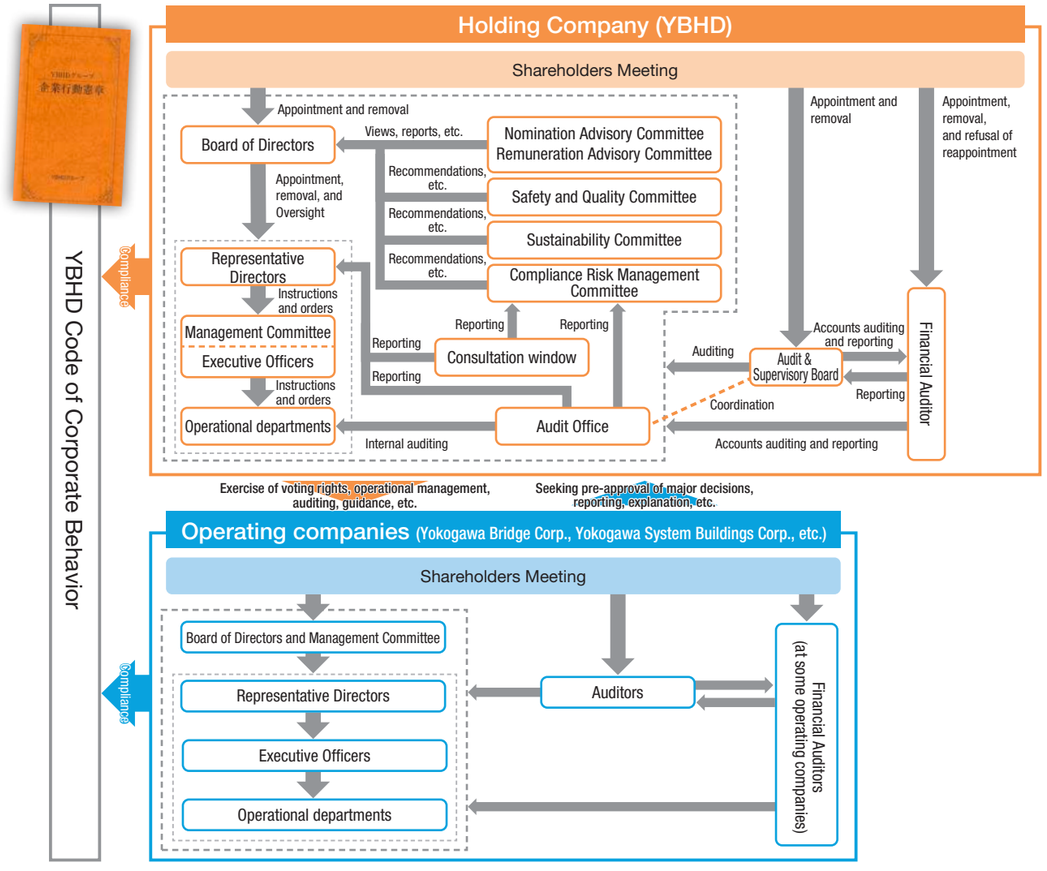
① Respecting shareholder rights and ensuring meaningful shareholder equality.

② Striving to engage in appropriate consultation with shareholders and other stakeholders.

③ Disclosing corporate information in an appropriate manner and ensuring transparency.

④ Ensuring that the Board of Directors fulfills its roles and responsibilities appropriately, and implements transparent, responsive decision-making.

⑤ Striving to engage in constructive dialog with shareholders regarding the company’s strategy for long-term, stable growth.



Governance Structure

Holding company system

We operate as a corporate group under a holding company system with YBHD as the holding company. Regarding business operations, we receive prior approval requests for important matters and periodic reports on the status of business execution from each operating company. By coordinating between operating companies and exercising management control, we strive to develop the Group and increase corporate value.

Reasons for choosing the current system

Under our current corporate governance system with a Board of Directors including outside directors and an Audit & Supervisory Board, we are able to make swift and appropriate management decisions. In addition, auditors, including outside auditors, audit the Board of Directors’ decision-making process and the status of duty execution by each director. We believe that managerial decision-making and auditing are fully functional under the current management system.

Executive officer system

We have adopted an executive officer system to clearly separate oversight from business operations, increase the flexibility and adaptability of business operations, and respond quickly and flexibly to changes in the business environment, while also reinforcing the Group’s governance.

Committees and meetings related to governance

Board of Directors

The Board of Directors meets, in principle, on a monthly basis to carry out decision-making in relation to Group management. The Board formulates the Group’s overall operational strategy and plans, evaluates performance implementation, reviews, and makes decisions regarding important managerial matters at operating companies and other important operational issues, and oversees individual Directors’ fulfillment of their duties.

Three of YBHD’s Directors also serve concurrently as the Presidents of Group operating companies. In addition, four Presidents of Group operating companies who are not YBHD Directors are present at YBHD Board meetings. Furthermore, the Board’s three Outside Directors have the status of independent corporate officers in accordance with Tokyo Stock Exchange (TSE) regulations.

Management Committee

To help ensure that the company’s operations proceed smoothly, the Management Committee, whose membership comprises all Board members other than Outside Directors, as well as the Standing Audit & Supervisory Board Members, Executive Officers, and the Presidents of operating companies, meets, in principle, once a month, to receive and deliberate on reports regarding important managerial matters at individual operating companies and other important matters relating to the implementation of business activities. Important documents, including minutes of Management Committee meetings, are distributed to Outside Directors and Outside Audit & Supervisory Board Members in order to provide sufficient information to enable them to confirm the current status of the company.

Nomination Advisory Committee

With the aim of strengthening the independence, objectivity, and accountability of the functioning of the Board of Directors in relation to the nomination of Representative Directors, Directors, Members of the Audit & Supervisory Board, and Executive Officers, based on consultation with the Board of Directors, the Nomination Advisory Committee deliberates nominations of candidates for the positions of Director, Member of the Audit & Supervisory Board, and Executive Officer and the appointment of Representative Directors, Executive Directors, and Executive Officers as well as matters relating to succession planning for the President, and submits its views, reports, etc., to the Board of Directors. The Remuneration Advisory Committee consists of one Representative Director and three independent Outside Directors.

Remuneration Advisory Committee

With the aim of strengthening the independence, objectivity, and accountability of the functioning of the Board of Directors in relation to matters relating to Directors’ remuneration, based on consultation with the Board of Directors, the Remuneration Advisory Committee deliberates and makes decisions relating to the remuneration, etc., of Directors and Executive Officers, and submits its views, reports, etc., to the Board of Directors. The Nomination Advisory Committee consists of one Representative Director and three independent Outside Directors.

Audit & Supervisory Board

The Audit & Supervisory Board, whose membership comprises two Standing Audit & Supervisory Board Members and three Outside Audit & Supervisory Board Members, for a total of five members, meets, in principle, once a month.

The Audit & Supervisory Board Members attend important meetings, such as regular meetings to exchange views with the Board of Directors, the Management Committee, and the Representative Directors, and exchange information with the Audit Office (which functions as the internal auditing department) and the Financial Auditor, in order to develop a clear picture of the decision-making process. They express their views when necessary, and they receive reports on the current state of operational implementation, finance, compliance, internal auditing, etc. Furthermore, the Audit & Supervisory Board’s three Outside Audit & Supervisory Board Members have the status of independent corporate officers in compliance with Tokyo Stock Exchange (TSE) regulations.

Directors, Auditors, and Executive Officers

1 Kazuhiko Takata
President and Representative Director

2 Hidenori Miyamoto
Director & Managing Executive Officer

3 Reiko Amano
Outside Director

4 Kazunori Kuromoto
Outside Director

5 Kazuya Kuwahara
Director & Executive Officer

President and Representative Director, Yokogawa System Buildings Corp.

6 Akira Kobayashi
Director & Managing Executive Officer

President and Representative Director, Yokogawa Techno-Information Service Inc.

7 Akihito Yoshida
Director & Executive Officer

President and Representative Director, Yokogawa Bridge Corp.

8 Yuzuru Nakamura
Director & Executive Officer

9 Hidema Jinno
Outside Director

10 Hirohito Kaji
Executive Officer

President and Representative Director, Narasaki Seisakusyo Co.,Ltd.

11 Shoji Osaki
Outside Audit & Supervisory Board Member

12 Masashi Shishime
Outside Audit & Supervisory Board Member

13 Ryogo Hirokawa
Standing Audit & Supervisory Board Member

14 Teruhiko Oshima
Standing Audit & Supervisory Board Member

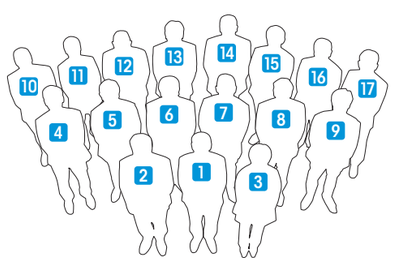
15 Tomozo Yoshikawa
Outside Audit & Supervisory Board Member

16 Kiyotsugu Takagi
Senior Managing Executive Officer

President and Representative Director, Yokogawa NS Engineering Corp.

President and Representative Director, Yokogawa New Life Corp.

17 Masayuki Yukawa
Executive Officer



Skills Matrix

Name	Position	Skills, Experience, and Expertise							
		Corporate Management	Finance & Accounting	Legal & Risk Management	Human Resources & Labor	Sustainability	Sales & Marketing	R&D and DX	Safety, Quality & Production
Kazuhiko Takata	President and Representative Director	○					○	○	○
Hidenori Miyamoto	Director & Managing Executive Officer	○	○				○	○	
Akira Kobayashi	Director & Managing Executive Officer	○		○			○	○	
Akihito Yoshida	Director & Executive Officer	○			○			○	○
Kazuya Kuwahara	Director & Executive Officer	○	○				○	○	
Yuzuru Nakamura	Director & Executive Officer	○					○	○	○
Kazunori Kuromoto	Outside Director	○					○	○	○
Reiko Amano	Outside Director	○				○		○	○
Hidema Jinno	Outside Director	○	○	○					
Ryogo Hirokawa	Standing Audit & Supervisory Board Member			○		○	○		
Teruhiko Oshima	Standing Audit & Supervisory Board Member	○						○	○
Masashi Shishime	Outside Audit & Supervisory Board Member			○					
Tomozo Yoshikawa	Outside Audit & Supervisory Board Member	○	○	○					
Shoji Osaki	Outside Audit & Supervisory Board Member	○		○			○		
Kiyotsugu Takagi	Senior Managing Executive Officer	○		○	○	○			
Hirohito Kaji	Executive Officer	○			○		○		○
Masayuki Yukawa	Executive Officer	○				○	○	○	

Appointment of Directors and Audit & Supervisory Board Members

Our approach to appointing directors

The Representative Director drafts a proposal, taking into comprehensive consideration the capabilities, character, health, and other qualities needed in management executives. The Board of Directors then makes the final decision after receiving the views, reports, etc., of the Nomination Advisory Committee, which mainly consists of independent outside directors.

Our approach to appointing auditors

Taking into comprehensive consideration the capabilities, character, health, and other qualities needed in management auditors, appointments are ultimately decided by the Board of Directors in light of opinions, etc., from the Audit & Supervisory Board.

Appointment of Directors

Name and position	Career summary, significant concurrent positions outside the Company, and responsibilities in the Company	Reasons for appointment
Kazuhiko Takata President and Representative Director	Apr. 1985 Joined the Company June 2011 Directors in charge of General Technology Research Laboratory of the Company Director, Head of Design Center, Senior General Manager of Technology Headquarters, and in charge of Safety and Quality Control Office of Yokogawa Bridge Corp. June 2016 Managing Director, Senior General Manager of Operations Headquarters, General Manager of General Affairs Division I, Senior General Manager of Technology Headquarters, and Head of Safety and Quality Control Office of Yokogawa Bridge Corp. Oct. 2017 Managing Director, Senior General Manager of Operations Headquarters, and Senior General Manager of Technology Headquarters of Yokogawa Bridge Corp. June 2018 President and Representative Director of Yokogawa Bridge Corp. June 2020 President and Representative Director of the Company (current position) President and Representative Director, and Executive Officer of Yokogawa Bridge Corp. June 2022 Director of Yokogawa Bridge Corp. (current position)	Kazuhiko Takata has been involved in the management of the bridge business for many years as President and Representative Director of the Company, and has a wealth of experience and achievements in technology and broad knowledge of overall management.
Hidenori Miyamoto Director & Managing Executive Officer	Apr. 1984 Joined the Company June 2016 Director and General Manager of Accounting Division Oct. 2018 Director, Head of Finance and IR Office, and in charge of Accounting Division June 2020 Managing Director and in charge of Finance and IR Office, Accounting Division, and Information Planning Office Apr. 2021 Managing Director, Head of DX Promotion Office, and in charge of Finance and IR Office and Accounting Division Apr. 2022 Director, Managing Executive Officer, Head of DX Promotion Office, and in charge of Finance and IR Office and Accounting Division (current position)	Hidenori Miyamoto has been involved in the management of the Company in such Divisions as accounting and finance for many years as Director of the Company, and has a wealth of experience, achievements, and broad knowledge of overall management.
Akira Kobayashi Director & Managing Executive Officer	Apr. 1982 Joined the Company June 2014 Director and General Manager of Information System Division of Yokogawa New Life Corp. June 2016 Director of Yokogawa Techno-Information Service Inc. June 2017 Director of the Company President and Representative Director of Yokogawa Techno-Information Service Inc. June 2020 Representative Director, President and Executive Officer of Yokogawa Techno-Information Service Inc. (current position) Apr. 2021 Director and Head of Information Planning Office Apr. 2023 Managing Executive Officer, Head of Information Planning Office, and in charge of Engineering Management Office, General Technology Research Laboratory, New Business Development Office (current position)	Akira Kobayashi has been involved in the management of the advanced technology business for many years as Director of the Company and Representative Director, President, and Executive Officer of a Group company, and has a wealth of experience and achievements in information processing and broad knowledge of overall management.
Akihito Yoshida Director & Executive Officer	Apr. 1987 Joined the Company June 2016 Director and Senior General Manager of Design Headquarters of Yokogawa Bridge Corp. June 2020 Director, Managing Executive Officer, Senior General Manager of General Affairs Headquarters, Senior General Manager of Technology Headquarters, and in charge of Advanced Engineering Business Division of Yokogawa Bridge Corp. Apr. 2022 Executive Officer of the Company Director and President, Executive Officer of Yokogawa Bridge Corp. June 2022 Director and Executive Officer of the Company President and Representative Director, and Executive Officer of Yokogawa Bridge Corp. (current position) Apr. 2023 Director, Executive Officer, and in charge of the General Affairs Division of the Company (current position)	Akihito Yoshida has been involved in the management of the bridge business as Director of the Company and Representative Director, President and Executive Officer of a Group company, and has a wealth of experience, achievements, and broad knowledge of overall management.
Kazuya Kuwahara Director & Executive Officer	Apr. 1982 Joined the Company June 2017 Director, Head of Audit Office and General Manager of General Affairs Division of Yokogawa Techno-Information Service Inc. June 2019 Managing Director of Yokogawa System Buildings Corp. Apr. 2020 Managing Director and Head of ICT Promotion Office of Yokogawa System Buildings Corp. June 2020 Director of the Company Representative Director, President and Executive Officer of Yokogawa System Buildings Corp. (current position) Apr. 2022 Director and Executive Officer of the Company (current position)	Kazuya Kuwahara has been involved in the management of the engineering-related business as Director of the Company and Representative Director, President and Executive Officer of a Group company, and has a wealth of experience, achievements, and broad knowledge of overall management.

Name and position	Career summary, significant concurrent positions outside the Company, and responsibilities in the Company	Reasons for appointment
Yuzuru Nakamura Director & Executive Officer	Apr. 1984 Joined Yokogawa Construction Co., Ltd. (currently Yokogawa Bridge Corp.) June 2012 Director, Deputy General Manager of Tokyo Construction Headquarters and General Manager of Civil Engineering Department of Yokogawa Construction Co., Ltd. Oct. 2012 Director, in charge of Design Department, Planning and Estimation Department, and Construction Department, Tokyo Branch of Yokogawa Construction Co., Ltd. Oct. 2015 Director, Deputy General Manager of Bridge Construction Headquarters of Yokogawa Bridge Corp. June 2019 Managing Director and General Manager, Tokyo Construction Division of Yokogawa Bridge Corp. Apr. 2022 Executive Officer of the Company Director, Executive Vice President, General Manager of Tokyo Construction Division and General Manager of Overseas Business Dept. of Yokogawa Bridge Corp. (current position) June 2023 Director and Executive Officer, in charge of Procurement Office and overall safety and quality management of the Company (current position)	Yuzuru Nakamura has been involved in the management of the Company in the bridge business as Director and Executive Vice President of a Group company, and has a wealth of experience, achievements, and broad knowledge of overall management.
Kazunori Kuromoto Outside Director	Apr. 1980 Joined Komatsu Ltd. Apr. 2008 Executive Officer, and President of Construction Equipment Marketing Division, AHS Business Unit of Komatsu Ltd. Apr. 2012 Senior Executive Officer (Jomu), and President of ICT Business Unit of Komatsu Ltd. June 2013 Director, Senior Executive Officer (Jomu), and President of Mining Business Unit and ICT Business Unit of Komatsu Ltd. Apr. 2016 Director and Senior Executive Officer (Senmu) of Komatsu Ltd. June 2018 Advisor of Komatsu Ltd. (current position) Apr. 2020 Trustee, Kanazawa University, a national university corporation (part-time) (current position) June 2020 Director of the Company (current position)	Kazunori Kuromoto has served in a number of positions, including Executive Officer of Komatsu Ltd., during his career and has considerable business experience and extensive insight regarding technology.
Reiko Amano Outside Director	Apr. 1980 Joined Kajima Corporation Mar. 2004 Visiting Professor, International Center for Urban Safety Engineering, Institute of Industrial Science, The University of Tokyo Apr. 2005 Senior manager of Technology Development Department, Civil Engineering Management Division of Kajima Corporation Apr. 2011 General Manager of the Intellectual Property and License Department of Kajima Corporation Feb. 2014 Advisor of the Intellectual Property and License Department of Kajima Corporation Oct. 2014 Executive Director of Research Center for Reinforcement of Resilience Function, National Research Institute for Earth Science and Disaster Resilience (Independent Administrative Agency) (currently administered as National Research and Development Agency) Apr. 2015 Auditor of the National Institute for Environmental Studies (National Research and) June 2016 Outside Director of East Japan Railway Agency (current position) Sept. 2019 Auditor of Japan Atomic Energy Agency (National Research and Development Agency) June 2021 Director of the Company (current position) June 2023 Outside Director of Japan Post bank Co., Ltd. (current position)	Reiko Amano has served in a number of important positions in Kajima Corporation, National Research Institute for Earth Science and Disaster Resilience, National Institute for Environmental Studies, and Japan Atomic Energy Agency, and has considerable business experience and extensive insight regarding technology.
Hidema Jinno Outside Director	Apr. 1985 Joined Sumitomo Marine &Fire Insurance Co., Ltd. (currently Mitsui Sumitomo Insurance Company, Limited) Apr. 2015 Executive Officer, General Manager of Risk Management Dept. of MS&AD Insurance Group Holdings, Inc. Apr. 2019 Executive Officer of MS&AD Insurance Group Holdings, Inc. June 2019 Full-time Audit & Supervisory Board Member of MS&AD Insurance Group Holdings, Inc. June 2023 Director of the Company (current position)	Hidema Jinno has served in a number of positions, including Executive Officer of MS&AD Insurance Group Holdings, Inc. during his career and has considerable business experience and extensive insight regarding technology.

Appointment of Audit & Supervisory Board Members

Name and position	Reasons for appointment
Ryogo Hirokawa Standing Audit & Supervisory Board Member	Ryogo Hirokawa has worked in important position in the Sales Division of the Group for many years and has broad knowledge of the overall business operations of the Group. The Company, therefore, has appointed him in the expectation that he will utilize his knowledge and experience in strengthening its auditing system.
Teruhiko Oshima Standing Audit & Supervisory Board Member	Teruhiko Oshima has worked in important managerial positions of the Group for many years and has broad knowledge of overall management of the Company. The Company, therefore, has appointed him in the expectation of his fulfillment of the role including strengthening its auditing system.
Masashi Shishime Outside Audit & Supervisory Board Member	Masaki Shishime has profound knowledge about corporate legal matters. The Company, therefore, has appointed him in the expectation of his fulfillment of the role including strengthening its auditing system.
Tomozo Yoshikawa Outside Audit & Supervisory Board Member	Tomozo Yoshikawa has held important positions over the years including those related to finance and corporate planning in Mizuho Bank, Ltd., in addition to working in important managerial positions and serving as outside officer of other companies, and possesses considerable degree of insight into finance and accounting and broad expertise in management in general. The Company, therefore, has appointed him, expecting that he will utilize his expertise for strengthening the audit system of the Company.
Shoji Osaki Outside Audit & Supervisory Board Member	Shoji Osaki has served as an Officer of Sapporo Breweries, Ltd. and as an outside officer of other companies, and has extensive knowledge of management in general, which can be utilized in strengthening the Company's auditing systems.

Efforts to improve the effectiveness of the Board of Directors

The evaluation of Board effectiveness in fiscal 2022 confirmed, through the process below, that the Board of Directors had maintained its effectiveness. The results and future policy are as follows:

Process to confirm effectiveness

Each year, the company analyzes, evaluates, and discusses the effectiveness of the Board of Directors, improving its functioning through the PDCA cycle.

In fiscal 2022, we administered a questionnaire survey based on an advance interview with the President and questions tailored to the company's current situation. The results, along with an analysis and evaluation by an external evaluation organization, were reported to the Board of Directors, which deliberated and considered improvement measures.

Efforts in fiscal 2022

(1) Board of Directors

- Monitoring KPIs for the Sixth Medium-Term Plan
- Enhancing discussion on Group-wide topics such as R&D structure, procurement, safety/quality, and sustainability

(2) Outside the Board of Directors

- Sharing recognition of management issues through planned reports from operating companies
- Exchanging opinions between outside directors and middle managers / female employees

Summary of effectiveness evaluation results

The results confirmed that the Board of Directors is considered effective regarding aspects such as its discussions and composition. Praise was given for the lively exchanges of opinions conducted openly and promptly, directors and auditors fulfilling their respective roles and functions and participating in and contributing to discussions, and improvements in operation of the Board of Directors and committees, etc. As satisfaction was generally high, the Board was deemed to have maintained its effectiveness in terms of approving important managerial matters and exercising appropriate oversight of business execution.

On the other hand, issues going forward were identified as the need to continue and expand discussion on medium- to long-term sustainable growth strategies and to continue providing outside officers with more information that invigorates Board discussions. We also shared the recognition that continued consideration is important for further improving effectiveness of the Board of Directors, directors, and auditing bodies in areas such as speeding up business execution decision-making and strengthening the Board's oversight of management.

Future efforts

- Continue and expand in-depth discussion on medium- to long-term sustainable growth strategies
- Continue monitoring the Sixth Medium-Term Management Plan
- Continually deliberate on matters related to Group-wide issues such as compliance, risk management, R&D, procurement, safety/quality, and sustainability
- Continue providing outside officers with information that deepens their understanding of our business and invigorates Board discussions
- Plan opportunities to facilitate communication and information sharing between outside directors and auditors, including outside auditors.
- Consider specific ways to further improve governance effectiveness

Policy on cross-shareholdings

Yokogawa holds shares in other companies (cross-shareholdings) when doing so is deemed beneficial to increasing the Group's corporate value over the medium and long term by maintaining and strengthening business relationships and business alliances. On the other hand, we are working to reduce cross-shareholdings through dialogue with the companies in which Yokogawa holds shares.

The Board of Directors annually reviews the appropriateness of holding each individual security, including the possibility of selling it, by comprehensively considering the necessity of holding the security, investment efficiency, and other benefits and risks associated with holding the security.

Number of issues and value on balance sheet of cross-shareholdings

Category		FY2020	FY2021	FY2022
No. of issues	Listed	42	39	35
Value on balance sheet (million yen)	Listed	16,342	13,589	11,855

Remuneration for Directors and Audit & Supervisory Board Members

Basic Policies

The company's officer remuneration system is designed based on the following principles 1 through 5:

(1) The company officers remuneration system must allow the appropriate rewarding of outstanding management talent able to contribute towards the sustainable development of the company and long-term growth in corporate value.

(2) The company's officer remuneration system must facilitate the operation of a sound incentive function aimed at the company's sustainable growth, which not only provides motivation for the achievement of performance targets but also supports the steady implementation of medium-term management plans and further growth.

(3) The company's officer remuneration system must encourage the company's management team to maintain an ongoing equity stake in the company, steadily deepening a sustainable shared interest with shareholders and enabling the realization of enhanced long-term trust.

(4) The company officers remuneration system must provide support for encouraging the management team to work together with the aim of enhancing the company's sustainable corporate value and realizing company-wide strategic objectives.

(5) As decisions relating to the company officers remuneration system and determinations made regarding its utilization must be made through objective, transparent procedures, such decisions must be made following deliberation by an independent Remuneration Advisory Committee and on the basis of the reports received from this Committee.

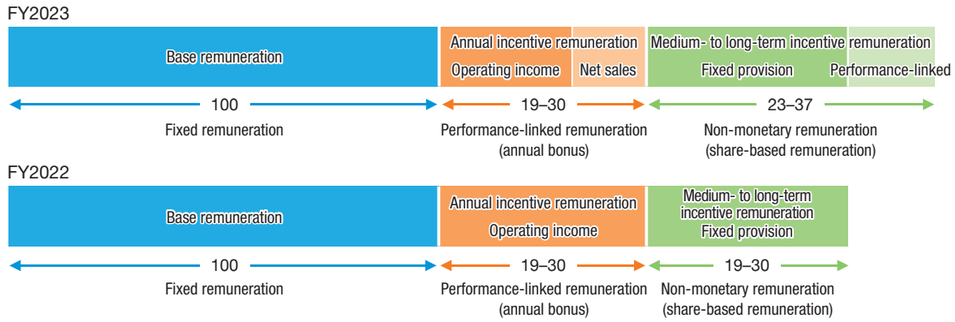
Remuneration system

The remuneration received by the company's Directors (excluding Outside Directors) comprises base remuneration (which is a fixed amount), annual incentive remuneration (performance-linked remuneration) linked to the company's performance in each fiscal year, and medium- to long-term incentive remuneration (non-monetary remuneration) that varies according to the level of achievement of the company's performance targets over three fiscal years.

Regarding the share of overall company officer remuneration in each category of remuneration, the standard amount of the annual bonus per fiscal year for each company officer position is set within a range of 19%–30% of base remuneration, and the basic amount of share-based remuneration granted annually for each position is set within a range of 23%–37% of base remuneration. By raising the share of the overall remuneration received by company officers in senior positions for performance-linked remuneration and non-monetary remuneration, the level of managerial responsibility can be reflected in the remuneration composition for each position. When deciding these ratios, remuneration benchmarking is performed each year using a management remuneration database operated by an external remuneration consulting firm, taking companies of similar scale to YBHD as comparable enterprises in order to verify the appropriateness of the decision, including the remuneration levels.

The remuneration received by Outside Directors and by Audit & Supervisory Board Members consists solely of base remuneration, in consideration of their roles.

Schematic diagram showing the share of overall remuneration for Directors (excluding Outside Directors) held by each category of remuneration



Procedure

The policy for determining the remuneration, etc., of individual YBHD Directors is decided by the Board of Directors based on deliberation and reports by the Remuneration Advisory Committee, which is chaired by an independent Outside Director and consists of a majority of independent Outside Directors. When deciding on remuneration, the company's Remuneration Advisory Committee deliberates appropriately on matters such as the basic policy governing the officer remuneration system, the remuneration system itself, the framework for performance-linked remuneration, and the amounts paid to individual company officers. Making effective use of information collected by and advice received from external remuneration consultants, the Committee's deliberations are based on objective, necessary, and sufficient information regarding the recent status of officer remuneration systems, key discussion trends, and trends in other companies' systems related to officer remuneration.

Outside Director

Kazunori Kuromoto, Outside Director

Reiko Amano, Outside Director

Hidema Jinno, Outside Director

Kazunori Kuromoto, Outside Director

Bridge construction, the core of the YBHD Group, involves building societal infrastructure that can withstand use for up to 100 years. Accordingly, the Group's own management perspective also sincerely aims at long-term sustainability, with an eye toward the next 100 years. Even as the COVID-19 pandemic subsides, the future remains difficult to foresee, but I feel the hallmark of YBHD appears in its daring to set management goals looking a century ahead even under such circumstances.

At the heart of the YBHD Group, the leader in new bridge construction in Japan, is a passionate desire to contribute to society through bridge infrastructure combined with the advanced skills of each individual to realize that goal and superb management capabilities to bring those individuals together. Just as more flexible organisms are more sustainable than the strongest, an organization that can accurately harness and manage talented individuals united by shared ideals can respond flexibly to changes in the environment.

In its decision-making, the Board of Directors makes efforts to understand environmental changes through the diverse outside perspectives of Outside Directors and Outside Auditors. To facilitate effective discussion based on detailed, meticulous real data with outside officers not directly involved in operations, the mornings on days with Board meetings are spent explaining documents beforehand to outside officers and holding free discussion. This allows outside officers to deepen their understanding of current conditions and issues, enabling them to actively speak up in the Board meetings held in the afternoon, elevating the quality of discussion with their deeper comprehension of situations. The meeting agendas and their manner of explanation are also improved as needed based on the results of annual evaluation of the effectiveness of the Board of Directors.

Despite social upheavals including the recent COVID-19 pandemic, YBHD has not reduced dividends once in the 16 years from fiscal 2008 to fiscal 2023, increasing them 13 times during that period. I believe this steady track record of corporate performance is a testament to YBHD's high sustainability capabilities. Large steel structures including bridges will continue to be essential societal infrastructure, and I look forward to YBHD's further development as a company possessing the human talent and technologies to continually propose and take responsibility for delivering optimal solutions for the next century's challenges following bridges, system structures, and tunnel segments.

Reiko Amano, Outside Director

Japan currently faces an aging society with a declining birth rate against the backdrop of increasingly severe natural disasters and aging infrastructure. Moreover, social life, especially the flow of information, people, and goods, has changed greatly due to the spread of COVID-19.

In this situation, the importance of the role of the YBHD Group, which upholds the corporate philosophy of "Contribution to society and the public, and sound management," will only increase.

Fiscal 2022 was the first year of the Sixth Medium-Term Management Plan. The core bridge business and engineered structure system business, among others, steadily advanced their respective operations. From fiscal 2023 onward, it will of course be crucial to fully implement the medium-term management plan, but we must also do more to promote business management looking further to the future.

To that end, we should further enhance the holding company management structure to flexibly address environmental changes while efficiently and aggressively advancing the Group's strength in technology development.

In the bridge business, the YBHD Group, which has a proven track record as a leading steel bridge company, must steadily tackle the maintenance business, whose relative importance will further increase going forward, in addition to new construction. This is crucial not only for the YBHD Group but also for the healthy life of people in Japan. Moreover, further honing the Group's high capability in restoring bridges after natural disasters will enhance its value in society.

We must also grow the engineered structure system business into a pillar supporting the YBHD Group's next stage of expansion, recognizing that the target is the private sector market, which differs from the infrastructure market. Actively addressing new markets will also be imperative.

As someone long involved in concrete bridge projects at construction companies, I find it extremely meaningful to participate in managing the YBHD Group, which centers on the bridge business, as an outside director. I am determined to firmly provide support, including promoting women's advancement.

Hidema Jinno, Outside Director

I assumed the position of outside director at the June 2023 Shareholders' Meeting. I was formerly an executive at an insurance holding company. Although I spent most of my career at a non-life insurance company and lack experience in the civil engineering/construction industry, I majored in civil engineering at university and have known for a long time that YBHD is a top company with superior technological prowess in the bridge field. I am therefore deeply honored to have been appointed to this position.

Before my appointment, I read the company's integrated reports, securities reports, internal newsletters, and other materials to learn about the YBHD Group. After my appointment, I toured plants and construction sites and heard various things from officers and employees. Through this, I learned that YBHD values its corporate philosophy, management vision, and roles, and focuses on building a resilient management foundation to realize them, while also seriously addressing ESG. I strongly empathize with the company cherishing people and technology and considering safety and quality most important.

On the other hand, I also learned that despite steady performance and a clear growth strategy, the PBR is below 1. Improving the PBR is an important issue for the Board of Directors. As an outside director, I hope to contribute to the company's sustainable growth and medium- to long-term enhancement of corporate value from the following stance:

1. Risk management for both defense and offense

At an insurance company and an insurance holding company, I worked to enhance risk management and promote ERM (Enterprise Risk Management, the integrated management of risks, returns, and capital).

In addition to implementing measures to reduce risks identified in light of future environmental changes, taking risks through investments in businesses and developing new technologies is necessary for growth. While considering the scale of risks and capital adequacy, I will support proactive risk-taking.

2. Strengthening group governance

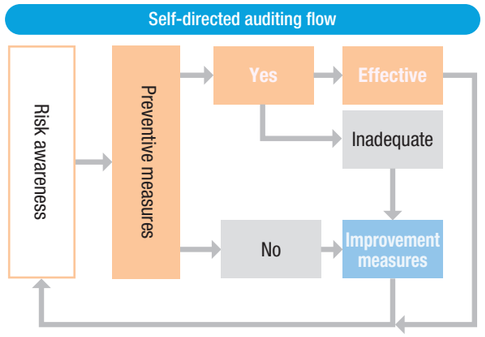
At an insurance holding company with numerous insurance companies in and outside Japan, I focused on enhancing group governance.

I will also actively engage in strengthening monitoring capabilities as a holding company, demonstrating leadership, and transforming the business portfolio for YBHD, which has many subsidiaries conducting diverse businesses.

Risk Management

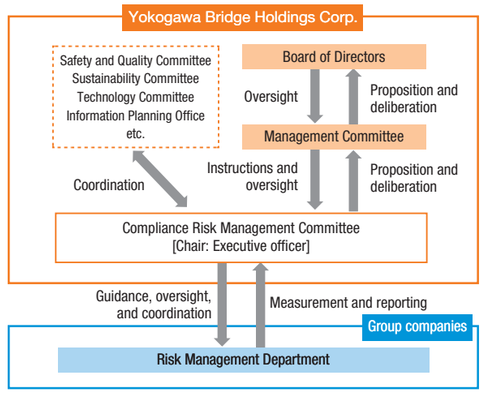
Our approach to risk management

We monitor the status of prevention and improvement for various risks concerning serious accidents, quality issues, legal violations, etc. that could occur in business activities, and provide timely notification and confirmation, etc. at Board of Directors meetings. When an incident is reported, thorough instructions are provided on measures to prevent recurrence. Additionally, by having all departments in all Group companies periodically identify risks in their own departments and audit the status of risk management through self-audits, we reinforce Group-wide efforts to prevent the occurrence of risks that could lead to losses and declining earnings.



Risk management system

The Compliance and Risk Management Committee established by YBHD's Board of Directors monitors the status of risk management across the YBHD Group as a whole, conducts overall assessment and review as a corporate group, and reports to the Board of Directors. While taking care to ensure comprehensive risk coverage and focusing on key risks, the Compliance and Risk Management Committee monitors the implementation status of measures and improvements targeting risks in coordination with the risk management departments of Group companies. Depending on the implementation status, it may make proposals to back office departments and spur improvements in countermeasures from an independent perspective. It also shares information with committees and organizations such as the Safety and Quality Committee, Sustainability Committee, Technology Committee, and Information Planning Office in an effort to build a risk management system incorporating diverse perspectives.



Key initiatives

(1) Initiatives to address safety risks relating to accidents, etc.

The process of constructing steel structures such as bridges can be broadly divided into three stages: fabrication at the factory, transportation, and on-site construction work. At each of these stages, the products that are being handled are very large and heavy, and if an accident were to occur, there is a risk that it could have a serious impact. In the unlikely event of an accident, not only would the accident cause direct damage, but it could also cause the Group to lose social credibility and be subject to administrative penalties, such as suspension from bidding, from various ordering agencies, which could have a serious impact on order receiving. To eliminate the danger of serious accidents, we are working continually to enhance the efficacy of our safety measures by disseminating case studies of past incidents and accidents, improving operational procedures, adopting innovative safety equipment, creating dual layers of safety provision, putting work monitoring on a systematic footing, etc.

Safety patrol

(2) Reliance on public infrastructure projects

The largest share of work in the bridge business, which is the YBHD Group's main business area, derives from tenders awarded by central or local government authorities. Consequently, a major change in societal infrastructure policy, a dramatic worsening in government finances, or other factors, could significantly impact our operational performance, such as a decrease in the volume of orders received and in our sales revenue, especially in the event of an unexpectedly large fall in orders for new bridges in the future. To reduce this kind of risk, we are aiming to maintain, expand, and optimize our bridge business by strengthening the responsiveness of our bridge maintenance business in combination with new construction while also proceeding with diversification in terms of our civil engineering business (particularly tunnel segments) and our steel structures business. At the same time, we are also working to expand the amount of business we do with private companies, with a particular focus on realizing growth in our system structures business.

(3) Risks relating to trends in the construction market

The system structures business is a key pillar of growth for the YBHD Group. Orders from private-sector companies account for the largest share of this business, so in the event that private-sector capital investment falls as a result of an economic downturn in Japan or overseas, this would result in a fall in the volume of orders received and in our sales revenue, which could significantly impact our operational performance. For this reason, we continually implement measures to expand our sales network and reduce costs.

(4) Risks relating to the regulatory framework

Although we conduct our business in accordance with relevant laws such as the Construction Business Act and the Antimonopoly Act, both within Japan and overseas, in the event of a violation of such laws, we could be liable to criminal penalties and administrative sanctions, which would result in a fall in the volume of orders received and in our sales revenue, which in turn could significantly impact our operational performance. To avoid this kind of situation, the YBHD Group positions compliance as the foundation for Group operation and is committed to engaging in business activities in an appropriate manner.

(5) Responding to defects

According to our contracts, we are statutorily liable for defects in steel structures constructed by the YBHD Group. In the event that a defect is discovered for any reason, we will take emergency measures to avoid any risk, regardless of whether or not the customer makes a defect warranty claim, and will focus on investigating the cause of the defect and preventing its recurrence. Thus, depending on the seriousness of the defect(s), there is a risk that YBHD could incur significant costs in remedying the situation. To avoid this kind of situation, as an enterprise entrusted with the construction of public assets, we are strongly aware of our responsibility to provide high-quality products at a reasonable cost, and in carrying out our business, we give painstaking attention to quality management, etc.

(6) Country risk

The YBHD Group has been expanding overseas, mainly in the Asia region, including in the bridge business through participation in Official Development Assistance (ODA) projects. In addition, part of the design work for our bridge business and system structure business is conducted by our subsidiaries in China and the Philippines. In the event of a dramatic change in the political or economic situation in one of these countries, it might become difficult to continue operations, which could significantly impact our operational performance. In order to be prepared for this type of risk, besides striving to put in place methods for ensuring the safety of our employees and establishing crisis management systems for use in emergencies, we have also established backup systems for our operations (including our domestic operations), and we undertake planning to ensure effective coordination with the Japanese government, the local Japanese embassy in other countries, and other related parties, as necessary.

(7) Large-scale disaster risk

In the event of a large-scale natural disaster such as an earthquake, tsunami, or damage from storms or floods, factories or work sites could suffer damage, which could significantly impact our operational performance. In order to be prepared for this type of risk and minimize negative impacts, we have formulated business continuity plans, and we implement training based on emergency scenarios.

BCP training

Compliance

(8) Risk relating to default
Although public-sector clients, where there is no risk of default, account for the largest share of business in the YBHD Group's bridge business, which is the Group's main business area, in the civil engineering and precision equipment businesses, most of the clients are private-sector companies. Therefore, there is a possibility of an adverse impact on earnings, such as the need to record bad debt losses or additional allowances, in the event that unexpected default risk materializes due to concerns regarding the creditworthiness of business partners. Before engaging in a business transaction with a private-sector company, the YBHD Group conducts thorough credit checks, and we also allocate an allowance for doubtful accounts in relation to accounts receivable.

(9) Responding to the risk associated with climate change and natural disasters
In the bridge business and the engineered structure system business, we use steel, cement, and other materials that emit a large amount of CO_2 during their manufacture. CO_2 emissions are also generated from the transportation of these raw materials and building materials, and from the operation of heavy machinery during construction. In addition, as requests for environmental consideration from local governments and private-sector companies, which are our main customers, are increasing year by year, we are developing technologies such as low-carbon construction methods and low-maintenance products, and pursuing a 100% recycling rate for steel materials throughout the Group. Given the characteristics of the Group's businesses, we are implementing appropriate measures to counter risks including increased construction and procurement costs due to tighter CO2 emissions regulations and introduction of carbon taxes, lower labor productivity at construction sites due to chronic temperature increases, and supply chain disruptions and damage to our own facilities due to increased and more severe extreme weather events.

(10) Cybersecurity risk
To ensure that business operations are not interrupted in the face of the sharp increase in cyberattacks, we devise management countermeasures with reference to security guidelines from Japan's Ministry of Economy, Trade and Industry and overseas organizations and disseminate them across the Group. While thoroughly managing information assets, we have also introduced cutting-edge security products to guard against unauthorized access to our intranet and prevent information leaks.

Our approach to compliance
All persons working in the YBHD Group, in the course of conducting corporate activities, are required to abide by the YBHD Code of Corporate Behavior and are expected to constantly be aware of their social responsibility and public mission. In order to win a high level of trust from society, we comply with all relevant laws and regulations, both in Japan and overseas, and we behave as an ethical enterprise that respects corporate ethics and social norms.

Compliance management system
Compliance Risk Management Committee
We established the Compliance Risk Management Committee and have put in place a system whereby the committee deliberates basic policies and important matters relating to compliance promotion, and the results of this deliberation are reported by the Compliance Risk Management Committee to the Board of Directors. Persons who violate the YBHD Code of Corporate Behavior or who allow others to violate the Code will be dealt with in accordance with the Companies Act or other relevant laws and with YBHD's Employment Rules.

Internal auditing
With regard to the state of compliance with the YBHD Code of Corporate Behavior and other internal rules, the Audit Office (which has been established as an internal auditing department independent of the company's operational departments), either acting on its own or in collaboration with the auditing department of one or more Group operating companies, implements efficient, effective auditing by performing compliance auditing, including attending meetings and verifying accounting slips, by performing self-directed auditing of all Group departments, and by implementing activities to promote the utilization of the internal whistleblowing system and responding to reports submitted through the whistleblowing system, etc. In addition, the company strives to strengthen the organization and authority of the Compliance Committee as necessary.


Meeting between Audit & Supervisory Board members and the Audit Office


Training on revised Whistleblower Protection Act

Internal whistleblowing system
YBHD's Directors promote the active utilization of the "Yellow Card System," which is an internal whistleblowing system that has been put in place for reporting and consultation in relation to violations of relevant laws, the company's Articles of Association, the YBHD Code of Corporate Behavior, or internal rules, and in relation to misconduct or other compliance issues, or the possibility thereof. Improvements are made to the system as necessary, and efforts are made to expand it. The system is also included in compliance training, with the aim of spreading awareness of the system.

In fiscal 2022, we provided training on revisions to Japan's Whistleblower Protection Act and created opportunities for deeper understanding of the act including the revisions.

Poster promoting use of Yellow Card System

Fair business practices
Fair transactions
The YBHD Group's YBHD Code of Corporate Behavior includes provisions that forbid, regardless of the circumstances, behavior that violates the Antimonopoly Act, such as cartels, bid-rigging, fixing the re-sale price, or abusing a dominant position, and that specify the need to engage in free, fair competition. We implement thorough compliance with relevant laws and regulations and perform thorough management of transaction records. More specifically, we implement compliance education through the formulation of various types of manuals and rules and the provision of compliance training, and we have the Audit Office implement audits and ensure the appropriate operation of the internal whistleblowing system and strive to safeguard its efficacy.

Compliance education using e-learning

In May 2005, Yokogawa Bridge was involved in a violation of the Antimonopoly Act relating to bid-rigging on bridge construction, which attracted strong criticism from society as a whole. The YBHD Group deeply regrets the occurrence of such a serious incident. The incident brought home to us the importance of compliance, and we have committed ourselves to ensuring that no incident of this kind will occur again in the future. Since then, we have worked to ensure comprehensive implementation of the YBHD Code of Corporate Behavior and to strengthen our internal auditing system, putting in place the systems needed to ensure that our business activities are in compliance with legal requirements. Going forward, the YBHD Group will continue to implement measures relating to compliance.

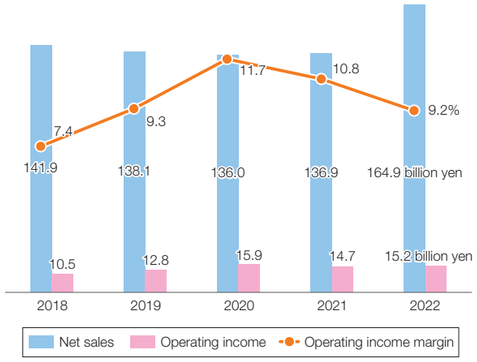
Prevention of corruption
When implementing political contributions or donations to various organizations, the YBHD Group complies with relevant laws such as the Public Offices Election Act and Political Funds Control Act and ensures, in advance, that internal rules such as the Rules Specifying the Scope of Authority are followed. Besides refusing to engage in bribery or illegal political contributions, YBHD has also clearly stipulated that employees must think carefully before engaging in any actions that could be misconstrued as indicating excessively close relations with politicians or government officials, and employees must not entertain or offer gifts to government officials or persons with equivalent status.

To ensure the effectiveness of these measures, we have put in place an appropriate risk management system, and we have been working to strengthen compliance and the related education and training system; for example, through effective utilization of the internal controls system, appropriate operation of the Compliance Risk Management Committee, and compilation of a manual outlining the rules to follow in relation to election campaigns and a manual on the prevention of bribery involving foreign government officials, etc.

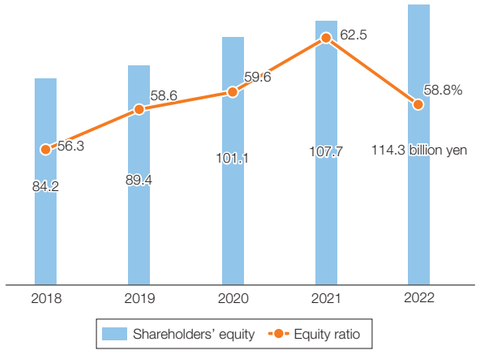
Financial and Non-Financial Highlights

(Items without notes are consolidated.)

Net sales / Operating profit / Operating margin

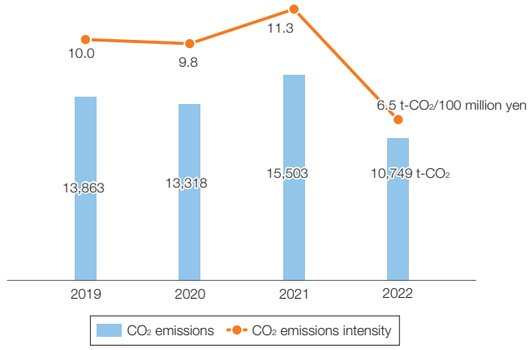


Equity / Equity ratio



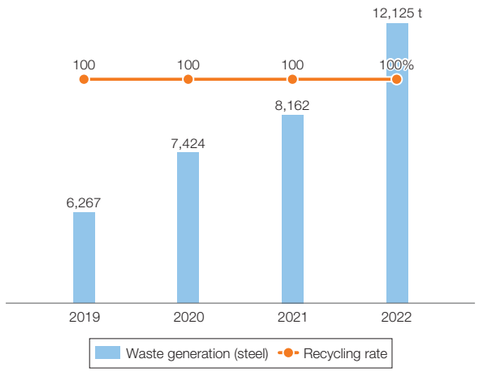
CO_2 emissions / CO_2 emissions intensity*

(Scopes 1 and 2 for bases and construction sites in Japan)

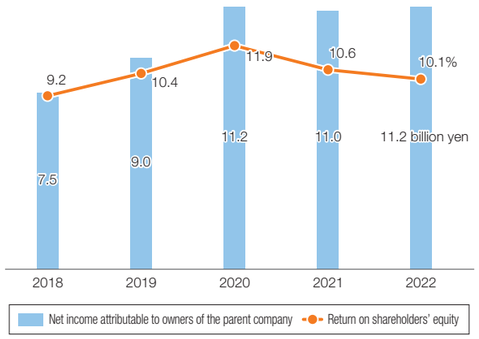


*CO_2 emissions per 100 million yen in sales

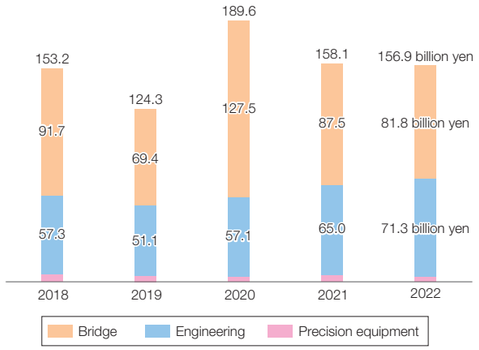
Waste generation (steel) / Recycling rate



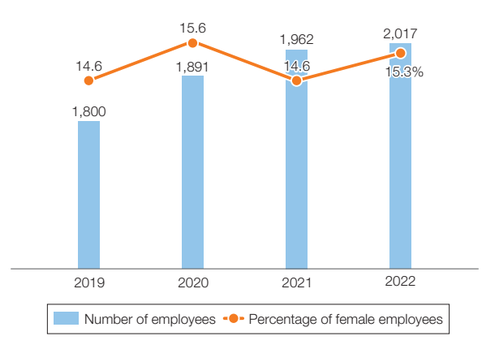
Net income attributable to owners of the parent company / Return on equity



Orders received

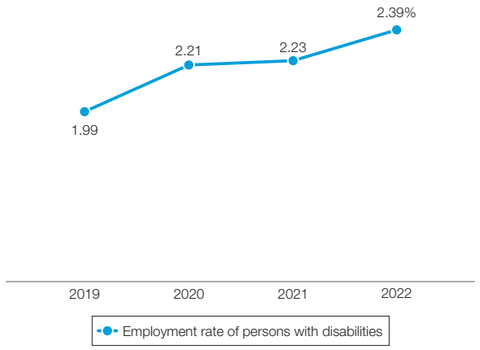


Number of employees / Percentage of female employees



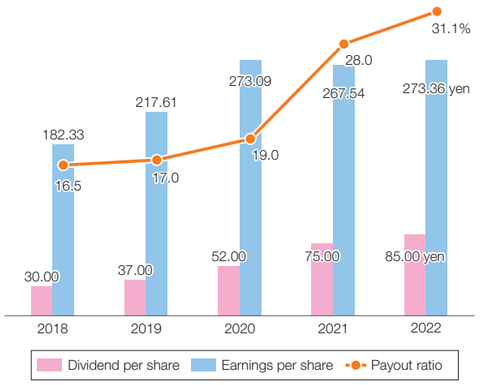
*Including equity method affiliates

Employment rate of persons with disabilities

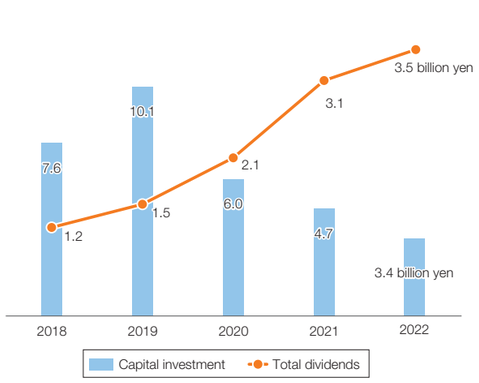


*Average for five operating companies

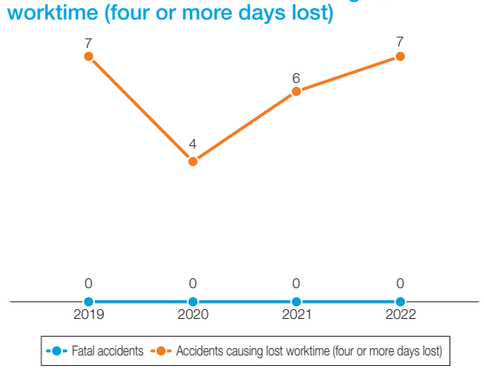
Dividend per share / Earnings per share / Payout ratio



Capital investment / Total dividends

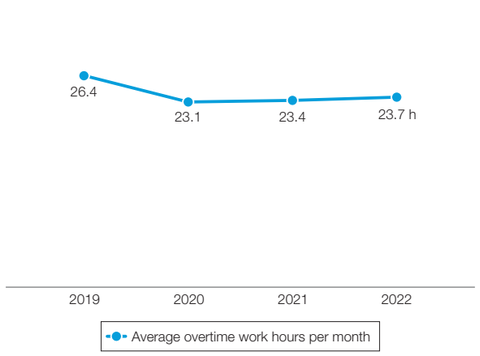


Fatal accidents / Accidents causing lost worktime (four or more days lost)



* Total for four operating companies involved in manufacturing

Average overtime work hours per month



* Average for five operating companies

Long-term financial results (ten years)

(100 million yen)

FY	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Net sales	882	1,027	1,057	1,134	1,310	1,419	1,381	1,360	1,369	1,649
Operating income	65	64	69	80	137	105	128	159	147	152
Operating income margin (%)	7.4	6.2	6.5	7.1	10.5	7.4	9.3	11.7	10.8	9.2
Ordinary income	65	66	69	81	138	106	129	160	149	154
Net income attributable to owners of the parent company	42	42	43	43	93	75	90	112	110	112
Net assets	595	641	655	698	806	865	920	1,039	1,107	1,176
Total assets	1,040	1,167	1,149	1,281	1,449	1,496	1,525	1,696	1,725	1,944
Net assets per share (yen)	1,370.27	1,485.09	1,532.44	1,650.17	1,907.50	2,037.61	2,159.88	2,451.96	2,608.54	2,794.45
Net income per share (yen)	99.50	98.40	103.19	102.98	226.93	182.33	217.61	273.09	267.54	273.36
Total dividends	4	5	6	6	9	12	15	21	31	35
Dividend (yen/share)	11.00	14.00	16.00	16.00	22.00	30.00	37.00	52.00	75.00	85.00
Dividend payout ratio (%)	11.1	14.2	15.5	15.5	9.7	16.5	17.0	19.0	28.0	31.1
Return on shareholders' equity (%)	7.7	6.9	6.9	6.5	12.8	9.2	10.4	11.9	10.6	10.1
Shareholders' equity	587	631	643	683	788	842	894	1,011	1,077	1,143
Shareholders' equity ratio (%)	56.5	54.1	56.0	53.3	54.4	56.3	58.6	59.6	62.5	58.8
Capital expenditure	11	16	24	33	73	76	101	60	47	34
Depreciation and amortization	13	13	15	16	17	21	28	34	36	38
R&D expenses	2	3	3	2	2	2	4	4	4	5
Number of employees (persons)	1,567	1,626	1,649	1,663	1,687	1,749	1,800	1,891	1,940	1,996
Segment information										
Net sales										
Bridge business	586	693	684	650	739	733	812	824	764	870
Engineering business	261	300	339	428	509	633	529	483	544	729
Precision equipment business	25	25	26	47	53	44	32	46	54	43
Real estate business	8	7	7	7	7	6	6	6	6	6
Operating income										
Bridge business	42	43	46	38	85	60	83	114	110	89
Engineering business	23	22	26	40	48	43	48	45	37	67
Precision equipment business	4	3	4	7	9	8	4	9	11	6
Real estate business	4	3	3	3	3	4	4	3	2	3
Order balance										
Bridge business	720	532	795	622	832	917	694	1,275	875	818
Engineering business	290	469	423	463	603	573	511	571	650	713
Precision equipment business	22	25	30	52	51	41	37	49	55	37

Consolidated financial statements, etc.

(1) Consolidated balance sheet

(Unit: million yen)

	Previous fiscal year (March 31, 2022)	Current fiscal year (March 31, 2023)
Assets		
Current assets		
Cash and deposits	23,458	25,143
Notes receivable, accounts receivable from completed construction contracts, and other	78,337	101,026
Inventory	3,562	3,745
Other	4,011	3,440
Allowance for doubtful accounts	(7)	(0)
Total current assets	**109,363**	**133,354**
Fixed assets		
Property, plant, and equipment		
Buildings and structures, net	14,523	14,497
Machinery, equipment, and vehicles, net	8,637	8,274
Land	15,143	15,143
Construction in progress	554	94
Other, net	596	596
Total property, plant, and equipment	**39,456**	**38,607**
Intangible fixed assets		
Software	2,091	2,405
Other	54	48
Total intangible fixed assets	**2,145**	**2,454**
Investments and other assets		
Investment securities	14,505	12,771
Shares of affiliates	474	539
Deferred tax assets	6,212	6,247
Other	391	482
Total investments and other assets	**21,583**	**20,040**
Total fixed assets	**63,186**	**61,101**
Total assets	**172,549**	**194,456**
Liabilities		
Current liabilities		
Notes payable, accounts payable for construction contracts, and other	21,827	26,343
Short-term borrowings	–	9,141
Current portion of bonds	2,300	300
Current portion of long-term borrowings	6,200	500
Income taxes payable, etc.	2,341	2,749
Advances received on uncompleted construction contracts	3,365	2,453
Provision for losses on construction contracts	3,848	3,777
Provision for bonuses	2,757	2,640
Other reserves	166	205
Other	3,107	2,548
Total current liabilities	**45,914**	**50,660**
Fixed liabilities		
Corporate bonds	300	3,100
Long-term borrowings	619	8,400
Deferred tax liabilities	1,603	1,409
Deferred tax liabilities for land revaluation	70	70
Allowance for executives' retirement benefits	74	69
Allowance for stock-based compensation	139	193
Retirement benefit liability	12,237	12,333
Other	798	567
Total fixed liabilities	**15,843**	**26,143**
Total liabilities	**61,758**	**76,803**
Net assets		
Shareholders' equity		
Capital	9,435	9,435
Capital surplus	10,299	9,150
Retained earnings	87,488	94,371
Treasury shares	(3,872)	(2,465)
Total shareholder's equity	**103,351**	**110,491**
Accumulated other comprehensive income		
Valuation difference on available-for-sale securities	4,273	3,649
Revaluation reserve for land	159	159
Total accumulated other comprehensive income	**4,432**	**3,809**
Non-controlling interests	**3,007**	**3,352**
Total net assets	**110,791**	**117,653**
Total liabilities and net assets	**172,549**	**194,456**

(2) Consolidated statement of income and consolidated statement of comprehensive income

Consolidated statement of income

(Unit: million yen)

	Previous fiscal year (From April 1, 2021, to March 31, 2022)	Current fiscal year (From April 1, 2022, to March 31, 2023)
Net sales	136,931	164,968
Cost of sales	112,743	139,496
Gross profit	**24,188**	**25,472**
Selling, general, and administrative expenses	**9,435**	**10,254**
Operating income	**14,752**	**15,218**
Non-operating income		
Interest income	6	2
Dividends income	294	324
Insurance income and dividends received	49	55
Equity in investment revenue of affiliates	76	66
Foreign exchange gains	41	69
Other	106	44
Total non-operating income	**575**	**563**
Non-operating expenses		
Interest expense	73	112
Commitment fee	103	79
Group term insurance premiums	69	69
Prepayment of guarantee fee	60	32
Other	25	34
Total non-operating expenses	**332**	**329**
Ordinary income	14,995	15,452
Extraordinary income		
Gain on sales of investment securities	1,310	1,135
Other	1	8
Total extraordinary income	1,312	1,144
Extraordinary loss		
Loss on disposal of non-current assets	38	69
Other	–	0
Total extraordinary loss	**38**	**69**
Income before income taxes	16,269	16,527
Corporate, inhabitant, and enterprise taxes	4,899	4,816
Deferred income taxes	63	46
Total corporate tax	4,962	4,862
Net income	11,306	11,665
Net income attributable to non-controlling interests	262	421
Net income attributable to owners of the parent company	11,043	11,243

Consolidated statements of comprehensive income

(Unit: million yen)

	Previous fiscal year (From April 1, 2021, to March 31, 2022)	Current fiscal year (From April 1, 2022, to March 31, 2023)
Net income	11,306	11,665
Other comprehensive income		
Valuation difference on available-for-sale securities	(1,837)	(623)
Total other comprehensive income	**(1,837)**	**(623)**
Comprehensive income	**9,469**	**11,041**
Total comprehensive income attributable to:		
Comprehensive income attributable to owners of the parent company	9,206	10,620
Comprehensive income attributable to non-controlling interests	262	421

Consolidated financial statements, etc.

(3) Consolidated statement of changes in shareholders' equity

Previous fiscal year (from Thursday, April 1, 2021, to Thursday, March 31, 2022) (Unit: million yen)

	Shareholders' equity				
	Capital	Capital surplus	Retained earnings	Treasury shares	Total shareholder's equity
Balance at the beginning of the current period	9,435	10,185	79,140	(3,900)	94,860
Cumulative effects of changes in accounting policies			(1)		(1)
Restated balance	9,435	10,185	79,139	(3,900)	94,859
Changes of items during period					
Dividends of surplus			(2,694)		(2,694)
Net income attributable to owners of the parent company			11,043		11,043
Acquisition of treasury shares				(180)	(180)
Disposal of treasury stock		114		209	323
Net changes of items other than shareholders' equity					
Total changes during period	–	114	8,349	28	8,491
Balance at the end of the period	9,435	10,299	87,488	(3,872)	103,351

	Accumulated other comprehensive income			Non-controlling interests	Total net assets
	Valuation difference on available-for-sale securities	Revaluation reserve for land	Total accumulated other comprehensive income		
Balance at the beginning of the current period	6,110	159	6,269	2,815	103,945
Cumulative effects of changes in accounting policies				(0)	(1)
Restated balance	6,110	159	6,269	2,815	103,944
Changes of items during period					
Dividends of surplus					(2,694)
Net income attributable to owners of the parent company					11,043
Acquisition of treasury shares					(180)
Disposal of treasury stock					323
Net changes of items other than shareholders' equity	(1,837)	–	(1,837)	191	(1,645)
Total changes during period	(1,837)	–	(1,837)	191	6,846
Balance at the end of the period	4,273	159	4,432	3,007	110,791

Current fiscal year (from April 1, 2022 to March 31, 2023) (Unit: million yen)

	Shareholders' equity				
	Capital	Capital surplus	Retained earnings	Treasury shares	Total shareholder's equity
Balance at the beginning of the current period	9,435	10,299	87,488	(3,872)	103,351
Changes of items during period					
Dividends of surplus			(3,311)		(3,311)
Net income attributable to owners of the parent company			11,243		11,243
Acquisition of treasury shares				(1,250)	(1,250)
Disposal of treasury stock		123		335	458
Cancellation of treasury shares		(2,321)		2,321	–
Transfer from retained earnings to capital surplus		1,048	(1,048)		–
Net changes of items other than shareholders' equity					
Total changes during period	–	(1,149)	6,883	1,406	7,139
Balance at the end of the period	9,435	9,150	94,371	(2,465)	110,491

	Accumulated other comprehensive income			Non-controlling interests	Total net assets
	Valuation difference on available-for-sale securities	Revaluation reserve for land	Total accumulated other comprehensive income		
Balance at the beginning of the current period	4,273	159	4,432	3,007	110,791
Changes of items during period					
Dividends of surplus					(3,311)
Net income attributable to owners of the parent company					11,243
Acquisition of treasury shares					(1,250)
Disposal of treasury stock					458
Cancellation of treasury shares					–
Transfer from retained earnings to capital surplus					–
Net changes of items other than shareholders' equity	(623)	–	(623)	345	(277)
Total changes during period	(623)	–	(623)	345	6,861
Balance at the end of the period	3,649	159	3,809	3,352	117,653

(4) Consolidated statement of cash flows

(Unit: million yen)

	Previous fiscal year (from April 1, 2021, to March 31, 2022)	Current fiscal year (from April 1, 2022, to March 31, 2023)
Cash flows from operating activities		
Income before income taxes	16,269	16,527
Depreciation and amortization	3,670	3,879
Increase (decrease) in retirement benefit liability	271	79
Increase (decrease) in allowance for executives' retirement benefits	139	(5)
Increase (decrease) in allowance for stock-based compensation	48	53
Increase (decrease) in provision for loss on construction contracts	(328)	(71)
Increase (decrease) in provision for bonuses	115	(116)
Increase (decrease) in other provisions	7	32
Interest and dividend income received	(301)	(327)
Interest expense	73	112
Loss (gain) on sales of investment securities	(1,310)	(1,135)
Loss (gain) on sales of property, plant, and equipment	(1)	(0)
Loss on disposal of fixed assets	18	65
Non-cash portion of other income and expenses, etc. (net)	(66)	(146)
Decrease (increase) in notes receivable, accounts receivable from completed construction contracts and other	1,771	(22,689)
Decrease (increase) in costs on uncompleted construction contracts and work in process	(379)	642
Decrease (increase) in accounts receivable-other	(525)	(317)
Increase (decrease) in notes payable, accounts payable for construction contracts and other	5,496	4,515
Increase (decrease) in advances received on uncompleted construction contracts	1,111	(912)
Increase (decrease) in accounts payable-other	(46)	15
Increase (decrease) in deposits received	(573)	142
Increase (decrease) in accrued consumption tax, etc.	(411)	(420)
Increase (decrease) in other assets and liabilities	(1,790)	(65)
Subtotal	**23,259**	**(142)**
Interest and dividends received	302	328
Interest expenses paid	(72)	(112)
Income taxes, etc., paid	(6,415)	(4,423)
Cash flow from operating activities	**17,074**	**(4,350)**
Cash flows from investing activities		
Purchase of property, plant, and equipment	(3,738)	(2,794)
Proceeds from sales of property, plant, and equipment	3	8
Purchases of intangible fixed assets	(1,170)	(984)
Expenditures on the purchase of investment securities	(154)	(3)
Proceeds from sales of investment securities	1,590	1,971
Other expenditures	(31)	(136)
Other proceeds	27	94
Cash flow from investing activities	**(3,474)**	**(1,844)**
Cash flows from financing activities		
Net increase (decrease) in short-term loans payable	(4,000)	9,141
Proceeds from long-term borrowings	–	8,400
Repayments of long-term debt	(3,165)	(6,319)
Proceeds from the issuance of bonds	–	3,100
Payments for the redemption of bonds	–	(2,300)
Payments for the purchase of treasury stock	(180)	(1,250)
Proceeds from sales of treasury stock	323	458
Dividends paid	(2,685)	(3,302)
Dividends paid to non-controlling interests	(70)	(76)
Cash flow from financing activities	**(9,779)**	**7,850**
Foreign currency translation adjustments on cash and cash equivalents	**45**	**28**
Net increase (decrease) in cash and cash equivalents	**3,866**	**1,684**
Cash and cash equivalents at the beginning of the period	**19,592**	**23,458**
Cash and cash equivalents at the end of the period	**23,458**	**25,143**

Yokogawa Bridge Holdings Corp.

“Embody integrity! Create outstanding things!”

This was the “monozukuri” approach to manufacturing espoused by our founder, Dr. Tamisuke Yokogawa, which has been handed down and maintained in our company for over a century.
This philosophy, which extends throughout the YBHD Group, helps to strengthen cohesion while also driving YBHD to create even better products and market them not only in Japan, but throughout the world.

By expanding our domestic and international business network, we are contributing to the improvement of societal infrastructure on a global scale.

Yokogawa Bridge Holdings Corp. (YBHD) came into being in August 2007 with the aim of integrating the YBHD Group’s multi-faceted capabilities in a flexible manner and making a substantial contribution to society. YBHD responds to customers’ diverse needs through our extensive domestic and international networks.

Main domestic business locations

Branches
Muroran City, Hokkaido
Kamisu City, Ibaraki Prefecture
Minato-ku, Tokyo
Funabashi City, Chiba Prefecture
Sakai City, Osaka Prefecture

Sales Offices
Sapporo City, Hokkaido
Sendai City, Miyagi Prefecture
Takasaki City, Gunma Prefecture
Nagoya City, Aichi Prefecture
Osaka City, Osaka Prefecture
Amagasaki City, Hyogo Prefecture
Okayama City, Okayama Prefecture
Hiroshima City, Hiroshima Prefecture
Fukuoka City, Fukuoka Prefecture
Naha City, Okinawa Prefecture

Plants
Muroran Plant (Hokkaido)
Shukutsu Plant (Hokkaido)
Kashima Plant (Ibaraki Prefecture)
Chiba Plant (Chiba Prefecture)
Mobara Plant (Chiba Prefecture)
Osaka Plant (Osaka Prefecture)
Izumi Plant (Osaka Prefecture)
Kishiwada Plant (Osaka Prefecture)

Equipment Centers
Hokkaido Equipment Center (Hokkaido)
Tone Equipment Center (Ibaraki Prefecture)
Harima Equipment Center (Hyogo Prefecture)

Research Facilities
Technical Research Laboratory (Chiba Prefecture)

Main overseas business locations

The Philippines
Pasig City
Yokogawa Techno Philippines, Inc.

Vietnam
Hanoi City
Hanoi Office

Myanmar
Yangon City
Yangon Branch

Yokogawa Bridge Corp.

Please see our website for details.

A long-standing contribution to social and economic development through the improvement and maintenance of social infrastructure

Founded in 1907, Yokogawa Bridge Corp. has played an important role in improving social infrastructure – including bridge construction, both within and outside Japan, and the manufacture of steel structures. Today, Yokogawa Bridge Corp. operates as an integrated general engineering company, offering total solutions that encompass every stage from design through to installation, repair and reinforcement, rebuilding, and renewal. The company is focused on the new bridge construction business, the bridge maintenance business (demand for which is forecasted to increase significantly), and the expressway large-scale upgrading and large-scale repair business. Other business areas include the construction of special-purpose buildings, such as high-rise buildings, domes, etc., the construction of large, high-precision structures using ultra-precise finishing technology, and the development of products that help to enhance the maintenance of existing bridges. In overseas markets, Yokogawa Bridge Corp. is focused on improving infrastructure in regions with significant growth potential, such as Africa and Southeast Asia.

Company History

1907 Dr. Tamisuke Yokogawa founded Yokogawa Bridge Works in Nishi-ku, Osaka City. The Osaka Plant was established (closed in 1943)
1918 Yokogawa Bridge Works was reorganized as a joint-stock company.
1922 The new Tokyo Plant was established in the Shibaura district of Tokyo (closed in 1969).
1964 The Osaka Branch was established, and the Osaka Plant began operation.
1969 The Tokyo Branch was established, and the Chiba Plant began operation (closed in 1999).
1991 Yokogawa Bridge Works Ltd. was renamed Yokogawa Bridge Corp.
2005 The Bridge Stage Izumi Plant, located in Izumi City, Osaka Prefecture, began operation.
2007 Yokogawa Bridge Holdings Corp. was established.
2007 Yokogawa Bridge Corp. became a wholly owned subsidiary of Yokogawa Bridge Holdings Corp.
2007 A ceremony was held to commemorate the 100th anniversary of the company’s founding.
2019 The Kishiwada Plant was established in Kishiwada City, Osaka Prefecture.

Yokogawa System Buildings Corp.

Please see our website for details.

Yokogawa Engineered Structure System (“yess”) buildings, which make effective use of Yokogawa’s unique steel structure technology, hold the highest share of the engineered structure market.

Yokogawa System Buildings Corp. was launched around a core business of engineered structures based on a new style of building. Under the brand name Yokogawa Engineered Structure System (“yess”), the company has been involved in the construction of over 10,000 buildings throughout Japan. What makes “yess” special is that Yokogawa System Buildings Corp. has Japan’s only dedicated engineered structure factory and a network of more than 1,300 sales and construction agents (builders) throughout Japan, thus enabling the company to rapidly supply high-quality products to any location. These structures are used in a wide variety of applications, from factories, warehouses, and shops, to offices, sports facilities, and final disposal sites. In its special-purpose buildings business, Yokogawa System Buildings Corp. has been a pioneer in retractable roofs for swimming pools, stadiums, etc., thereby providing total integrated solutions for movable buildings that includes design, installation, and maintenance. In the future, Yokogawa System Buildings Corp. will continue striving to realize further enhancements in the quality of its products and services; satisfying customer needs with an approach that emphasizes integrity while contributing to society.

Company History

1989 An engineered structure division, the forerunner of today’s Yokogawa System Buildings Corp., was established within Yokogawa Bridge Works (now Yokogawa Bridge Corp.)
1990 The Sodegaura Plant (now the Chiba Plant) was established.
2001 The division was spun off from Yokogawa Bridge Corp. It began operation as a separate company under the name Yokogawa System Buildings Corp.
2006 The facilities of the Chiba Plant were improved.
2008 The company acquired general appraisal certification from The Building Center of Japan (BCJ).
2019 The Mobara Plant was established.
2020 Expansion of painting/shipping yard building at Mobara Plant

Yokogawa NS Engineering Corp.

Please see our website for details.

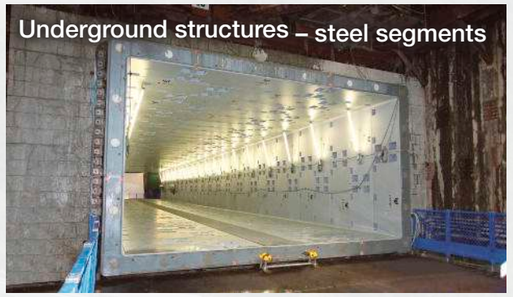
Industry-leading comprehensive capabilities that extend from materials development, design, and manufacturing through to installation

Yokogawa NS Engineering Corp. was established as an engineering company that would combine the technology solution capabilities of Yokogawa Bridge Holdings Corp. with the product development and production capabilities of Sumitomo Metal Industries (now Nippon Steel Corporation). By making full use of the operational assets of these two industry-leading companies, Yokogawa NS Engineering Corp. has been able to build an unrivalled high-level business framework that covers everything from materials development to design, manufacturing, and installation. Through bridge construction and related products, steel segments for road tunnels and other underground structures, harbor structures utilizing the jacket method, etc., Yokogawa NS Engineering Corp. contributes to the construction of resilient infrastructures in Japan with its advanced technology development capabilities, high productivity, and solid cost competitiveness.

Company History

1977 Founded as the Engineering Division of Sumitomo Metal Industries (now Nippon Steel Corporation).
1989 Began operation in the Kashima Works as the Kashima Bridge Girder Factory.
1999 The new Kashima Bridge Girder Factory was established in Kamisu City, Ibaraki Prefecture.
2009 Sumitomo Metal Industries' bridge business was spun off and absorbed into Sumikin Bridge Co., Ltd.
2009 Sumikin Bridge Co., Ltd. was renamed Yokogawa Sumikin Bridge Corp. to serve as a joint operating company for Yokogawa Bridge Holdings Corp. and Sumitomo Metal Industries.
2019 Yokogawa Sumikin Bridge Corp. was renamed Yokogawa NS Engineering Corp.


Bridge business


Underground structures – steel segments

Narasaki Seisakusyo Co.,Ltd.

Please see our website for details.

Aiming to use our advanced technological capabilities to create bridges that satisfy local communities and develop products to meet diverse needs

Founded in 1935 as a shipbuilding firm, Narasaki Seisakusyo Corp. used shipbuilding technology as a foundation for growing into a specialist manufacturer of steel bridges and machinery products (including steel tubes, ship-lifting equipment, water gates, water treatment facilities, etc.) and has expanded its business activities throughout Japan, with a focus on Hokkaido and the Tohoku region. Going forward, Narasaki Seisakusyo Corp. will strive to further enhance technology, safety, and quality in its bridge business, while continuing to expand its business operations as a leading Hokkaido-based company. In the machinery steel sector, the company will further refine its original products – including ship-lifting equipment and water treatment facilities – and will actively work to respond to diversifying needs on a nationwide basis.

Company History

1935 Narasaki Shipbuilding Ltd. was founded in Tsukiji-cho, Muroran City.
1975 The Sakimori Plant began operation.
1984 Yokogawa Bridge Works Ltd. was renamed Yokogawa Bridge Corp.
1986 The company's head office moved to its current location in Sakimori-cho, Muroran City.
2003 Narasaki Seisakusyo Co., Ltd. became a subsidiary of Yokogawa Bridge Corp.
2018 The new head office building was completed.


Ship-lifting equipment


Construction wastewater treatment facility (filter press)

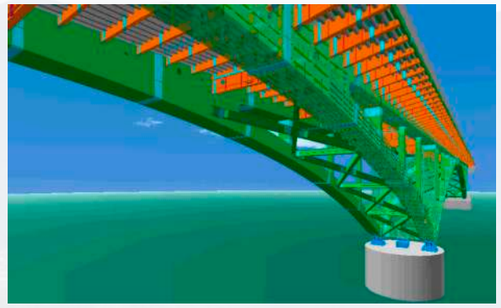

Water treatment and environmental products (thickener)

Yokogawa Techno-Information Service Inc.

Please see our website for details.

Bridge expertise combined with IT expertise

Since its founding in 1984, Yokogawa Techno-Information Service Inc. has focused on the development and sale of IT systems for the civil engineering and construction sector and the provision of information processing services. The application of information technology to the civil engineering and construction sector began in the 1970s with the adoption of CAD systems, progressed with the introduction of construction CALS systems in the 1990s, and continued through to the recent adoption of CIM and i-Construction. Yokogawa Techno-Information Service Inc. has kept pace with these developments and has continued to evolve while striving to stay one step ahead. The company's series of information systems for use in the design and manufacture of steel structures, with a specific focus on bridges, are favored by many users.



Steel bridge design

Provision of a comprehensive range of services relating to steel bridge design

Yokogawa Techno-Information Service Inc. provides a wide range of systems and services associated with steel bridge design, including preliminary design, detailed design, and reconstruction design. These products and services have proved very popular with architectural consultants, bridge manufacturers, and other customers involved in bridge design.

Structural analysis

Using our wealth of experience and superior technological capabilities to assist with structural analysis

We provide high-quality services covering everything from model building tailored to customers' needs to the creation of reports. We are able to assist with structural analysis for steel bridges and also in other fields.

Yokogawa New Life Corp.

Please see our website for details.

Putting in place powerful support systems for all Group companies

Yokogawa New Life Corp. provides high-quality back-office solutions for the YBHD Group, including real estate property management, human resource assignment, and salary calculation.

Real estate property management

Yokogawa New Life Corp. helps the YBHD Group to achieve stable earnings by playing an active role in the Group's real estate strategy in relation to the operational management of real estate owned and leased by the Group.

Human resources assignment

We utilize our high-level recruitment capabilities to provide human talent throughout Japan, both within and outside the Group. To respond effectively to the rapid pace of change in today's business world, we provide powerful support for staff skill enhancement and aim to provide companies with human talent that matches their needs.

Salary calculation operations

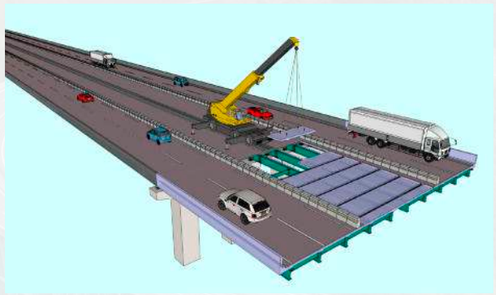
Yokogawa New Life Corp. undertakes salary calculation on behalf of all YBHD Group companies, thereby helping to reduce the burden on individual Group companies HR departments, and helping to enhance operational efficiency by allowing them to focus on their core competencies.

YCE Corp.

Please see our website for details.

Providing support for various aspects of bridge preservation as a team that offers specialist expertise in safeguarding bridges

YCE Corp. is a construction consultant firm for the YBHD Group. Since its establishment in 2000, it has continued to grow steadily, and as Japan moves away from the era of building new infrastructure to one focused on maintenance and upgrading existing infrastructure, the company is now advancing into a new stage of growth. Making effective use of our broad technical capabilities cultivated in areas spanning new bridge construction to the reinforcement and upgrading of existing bridges, we will continue working to fulfill our social mission as construction consultants.



Inspections, surveys, and diagnostic operations

To ensure that structure maintenance is managed appropriately, we perform inspections, surveys, and diagnostics to check for abnormalities, deterioration, damage, etc., on steel bridges, concrete bridges, and other highway structures. We also provide services ranging from third-party damage precautions in case of accidents to emergency inspections following earthquakes and other natural disasters.

Design, analysis, and review operations

With the goal of extending the lifespan of existing bridges and other structures, we conduct a wide range of planning and design work, from repair and reinforcement design as well as seismic reinforcement design aimed at improving earthquake resistance to large-scale renewal planning and preventive measure planning. We also undertake the 3D finite element analysis and time history response analysis that this design work requires.

Testing and measurement operations

In order to verify planning and designs and put new technologies into practical use, we implement laboratory testing using Group facilities and also perform on-site load testing and other related tasks. We also provide measurement services such as long-term remote monitoring via the Internet and three-dimensional measurement using 3D scanners.

Yokogawa Techno Philippines, Inc.

Please see our website for details.

Supporting the operations of Group companies from outside Japan

Yokogawa Techno Philippines began in 2005 with the purpose of undertaking some of the technical work related to the design, full-scale drawing, and structural analysis of steel bridges in the Philippines. In January 2018, it became the Group's eighth operating company. Currently, YTP supports the work of Group companies not only in steel bridges but also in a wide range of fields, such as engineered structure design and system development. Going forward, YTP will continue to collaborate in the Group's development from outside Japan through human resource development to cultivate many engineers based on the technologies and knowledge accumulated within the Group.

Company Profile

As of March 31, 2023

Company name	Yokogawa Bridge Holdings Corp.
Address	4-4-44 Shibaura, Minato-ku, Tokyo 108-0023, Japan
Established	August 2007
Capital	9.4 billion yen
Number of employees	1,996 (consolidated)
Stock exchange listing	Prime Market of the Tokyo Stock Exchange　Securities Code 5911
Administrator of Shareholder Registry	Sumitomo Mitsui Trust Bank, Limited

Information Related to the Company's Shares

As of March 31, 2023

Total number of authorized shares	180,000,000
Total number of issued shares	43,164,802
Number of shareholders	10,492

Major shareholders (top 10)

Shareholder	Shares (thousands)	Stake (%)
The Master Trust Bank of Japan, Ltd. (Trust Account)	6,089	14.80
Custody Bank of Japan, Ltd. (Trust Account)	4,019	9.77
Nippon Steel Corporation	1,987	4.83
Yokogawa Electric Corporation	1,676	4.07
SSBTC CLIENT OMNIBUS ACCOUNT	851	2.06
Yokogawa Bridge Holdings Employee Shareholding Association	700	1.70
Sumitomo Realty & Development Co., Ltd.	674	1.63
Nippon Life Insurance Company	543	1.32
NORTHERN TRUST CO. (AVFC) RE U.S. TAX EXEMPTED PENSION FUNDS SEC LENDING	518	1.25
Mizuho Bank, Ltd.	445	1.08

(Notes) 1. The Company, which holds 2,021,000 treasury shares, is excluded from the above major shareholders. Treasury shares (2,021,000 shares) do not include company shares owned by the Stock Granting Trust for Officers (241,104 shares).
2. Stakes are calculated, excluding treasury shares.

Yokogawa Bridge Holdings Corp.

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http://www.en.ybhd.co.jp/

Yokogawa Bridge Corp.

27 Yamano-cho, Funabashi City, Chiba Prefecture 273-0026, Japan
Tel: 047-437-8000　Fax: 047-495-2910
https://www.yokogawa-bridge.co.jp/

Yokogawa System Buildings Corp.

47-1 Yamano-cho, Funabashi City, Chiba Prefecture 273-0026, Japan
Tel: 047-410-3215　Fax: 047-410-3280
https://www.yokogawa-yess.co.jp/

Yokogawa NS Engineering Corp.

16-5 Sunayama, Kamisu City, Ibaraki Prefecture 314-0255, Japan
Tel: 0479-46-6688　Fax: 0479-46-6684
https://www.ynse.co.jp/

Narasaki Seisakusyo Co.,Ltd.

385 Sakimori-cho, Muroran City, Hokkaido 050-8570, Japan
Tel: 0143-59-3611　Fax: 0143-59-4688
https://www.narasaki-ss.co.jp/

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4-4-44 Shibaura, Minato-ku, Tokyo 108-0023, Japan
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4-4-44 Shibaura, Minato-ku, Tokyo 108-0023, Japan
Tel: 03-3453-4113　Fax: 03-3453-4117
https://www.ynl.jp/

YCE Corp.

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