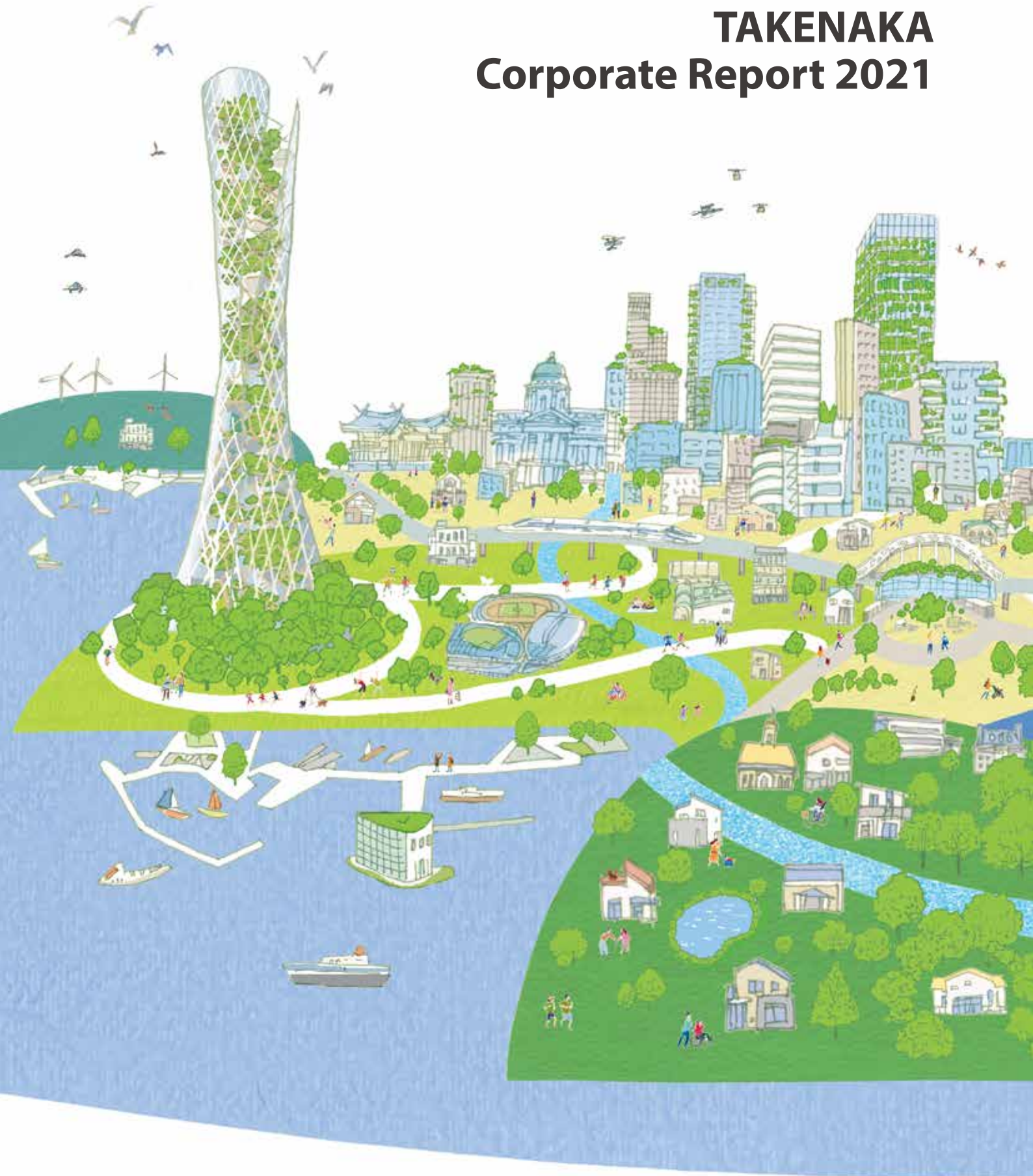


TAKENAKA Corporate Report 2021



Dreams into Reality for a Sustainable Future



We will inform all of our stakeholders through our report and website about the operations and initiatives that the Takenaka Group is pursuing with the aim of realizing a sustainable society.

Editorial policy

We have compiled this Takenaka Corporate Report 2021 for the purpose of presenting the Takenaka Group CSR Vision and describing the projects undertaken by our corporate group as a whole with maximum clarity. Its contents primarily comprise details related to activities conducted by Takenaka Corporation. Contents, case examples and data that could not be covered in the report due to space constraints will be featured on the Takenaka Corporation website. This report integrates our corporate brochure (introductory overview of our businesses) and sustainability report (CSR activity report), which were formerly issued as separate publications. It also seeks to obtain the full understanding of our stakeholders by incorporating our medium-term management plan as well as our principal financial and nonfinancial data in order to present the business operations implemented by our group on a global scale.

Coverage of this report

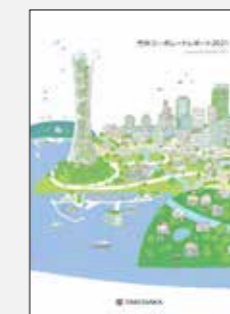
- **Period of coverage**
January–December 2020. Some contents concern activities conducted outside this period.
- **Scope of coverage**
Contents include activities of the Takenaka Group centered on activities of Takenaka Corporation.
- **Reference guidelines**
The GRI Sustainability Reporting Standards, Environmental Reporting Guidelines 2018 by the Ministry of the Environment, and the Japan Standards Association's draft translation of ISO26000 (Guidance on Social Responsibility), first edition published on November 1, 2010 were employed as references in compiling this report.
- **Date of issue**
Japanese: March 2021 (next issue March 2022).
English: May 2021 (next issue May 2022).
We have also published this report on our website to make it available to larger numbers of readers.
- **Inquiries**
https://www.takenaka.co.jp/takenaka_e/e_contact/inquiries/index.php

Corporate Website
(Japanese/English)
www.takenaka.co.jp



- Major Works
- Solutions
- Corporate Information
- CSR Activities

Corporate Publications (Japanese/English)



Corporate Report
(Japanese/English)



Major Works Report
(Parallel Japanese/English)



Financial Report
(English)

Financial and nonfinancial information concerning the company is presented in an integrated, compact format. Its business operations and results (works) are introduced in greater detail.
* Separate technology and solutions publications are also available.

The report provides detailed coverage of financial and nonfinancial information across a wide range.

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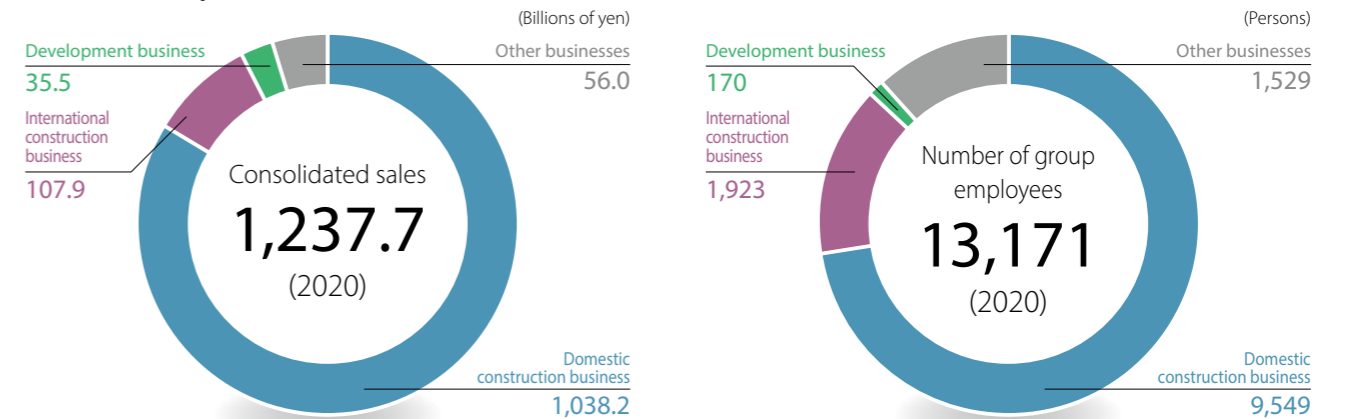
Financial and Nonfinancial Highlights



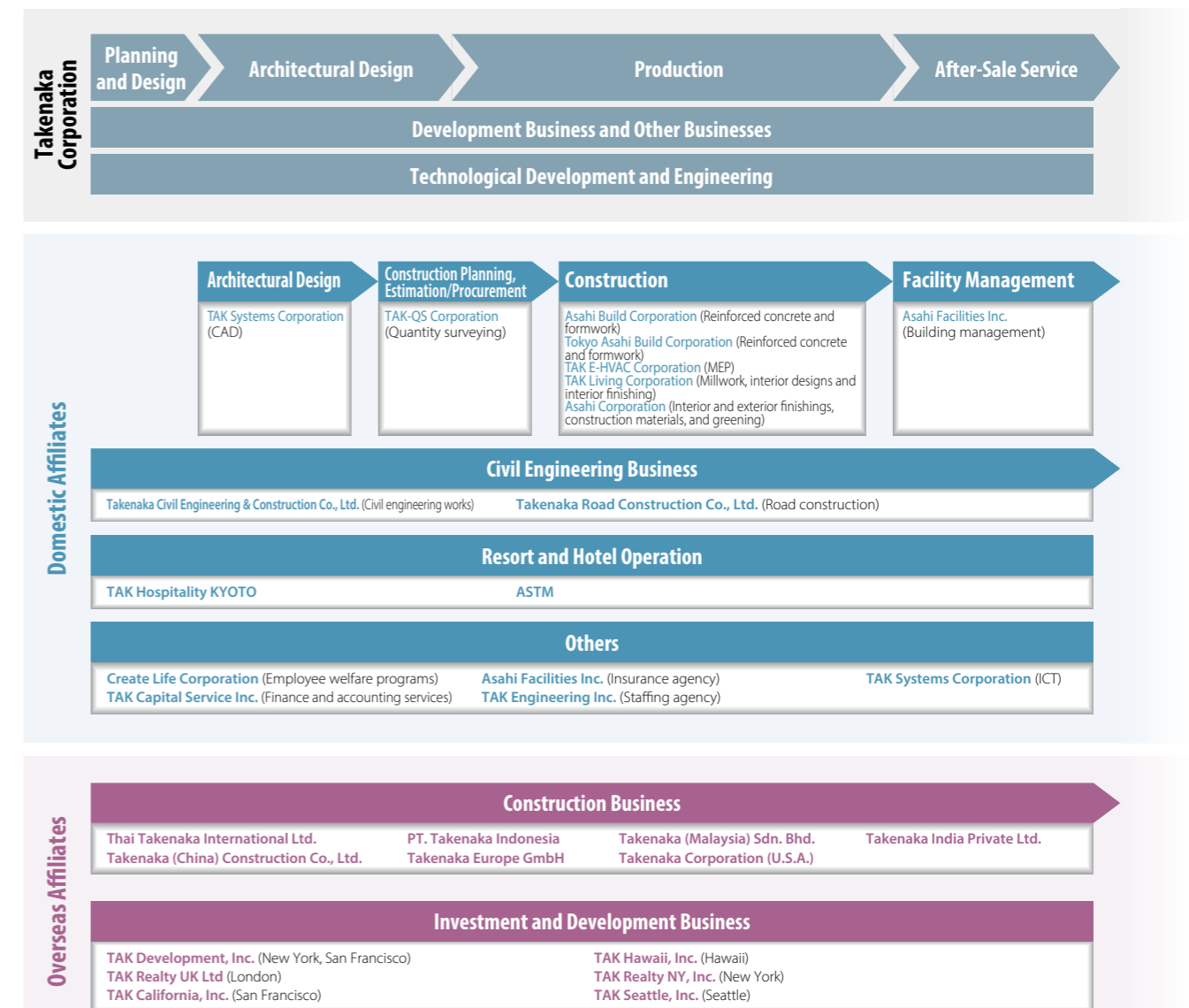
Group Overview

Our entire group will meet customer expectations at every stage of urban creation.

Takenaka Group's Business Size



Principle Operations of Main Affiliates



* Major consolidated subsidiaries, excluding indirectly owned companies

Takenaka, the Past and Future

Since its founding in 1610, Takenaka has specialized in architecture to produce a multitude of buildings that have become landmarks, and in this way, we have played a vital role in the development of our society. Architecture creates vessels to protect life and property that are at the same time social assets. These works carry the culture of their times and pass it on to future generations.

The pride inherent in such work permits us to refer to the buildings we are involved with as architectural "works." We have participated in projects that deeply affect Japan's society, economy and culture, and we have delivered a great number of these works and related engineering and technological developments to the world. From the days of our founder Tobei-Masataka Takenaka, a master builder of shrines and temples, our philosophy as an architectural specialist of always placing our customers' dreams first and maintaining high levels of technology lives on. Today this spirit is embodied in all of our work, which has spread beyond the framework of architecture to urban creation, not only in Japan but all over the world.

We will continue to live up to the trust society places in us and contribute to prosperous urban creation, pursuing the best for everyone from a long-term perspective.

1610



1610

Tobei-Masataka Takenaka established a business in Nagoya to engage in shrine and temple construction.

1874

Nagoya Garrison barracks featuring Western-style architecture adapted to the postrestoration era completed.

1884

Mitsui Bank Nagoya branch completed.

1897

Mitsui Spinning Mill completed in Nagoya.

1899

14th-generation head of family Touemon Takenaka journeyed to Kobe, which marked the first year of the company's foundation.

1900

Mitsui Bank Warehouse completed in Onohama district of Kobe.



1909

Unlimited Partnership Takenaka Komuten established with headquarters in Kobe and a branch in Nagoya.

1910

1912

Takashimaya Kyoto Store completed as Japan's first retail store building.



1916

Osaka Asahi Shimbun Head Office Building, a steel reinforced concrete structure, completed.



1934

Meiji Seimeikan (Marunouchi, Tokyo) completed.

1937

Takenaka Corporation established. Capital ¥1,500,000.

1941

Takenaka Civil Engineering & Construction Co., Ltd. established.

1957

Antarctic Exploration Research Facilities produced. Patent acquired for Takenaka Caisson Process.

1958

333-meter high **Tokyo Tower** completed.



1960

1960

Takenaka & Associates, Inc. established in San Francisco, starting full overseas business operations.

1963

Takenaka awarded first prize in **National Theatre Design Competition**.



1969

Asahi Facilities, Inc. established, expanding our building management and insurance businesses.

1973

Takenaka Europe GmbH established, expanding business into Europe.

1974

Thai Takenaka International Ltd., PT. Takenaka Indonesia, and Takenaka Corporation Singapore Office established, expanding business into Southeast Asia.



1978 West Germany

Deutsch-Japanisches Center completed.

1979

Takenaka awarded Deming Application Prize.

Ashiyama Seaside Town, proposed by the ASTM Group, of which Takenaka was a member, completed.



1980

1981 Singapore

Changi International Airport Terminal 1 completed.



1983 Tokyo

Ote Center Building completed and opened.

1986

Takenaka awarded Best Design Prize in **New National Theatre, Tokyo International Design Competition**.

1987

Yurakucho Mullion completed.



1987 San Francisco

Hotel Nikko San Francisco completed and opened.

1988

Chairman Renichi Takenaka awarded the Deming Prize.

Tokyo Dome, Japan's first multipurpose stadium with an air-supported membrane structure completed.



1990

1990 Osaka

Crystal Tower completed and opened.

1990

Takenaka (Malaysia) Sdn. Bhd. established.

1991 Hawaii

Grand Hyatt Kauai Resort and Spa completed and opened.



1992

Takenaka awarded the Japan Quality Control Medal.

1993

Fukuoka PayPay Dome, Japan's first multipurpose stadium with a retractable roof, completed.



1993

PT. Takenaka Doboku Indonesia established.

1995

ACROS Fukuoka, a pioneering work in environmental architecture, completed.



1996 Thailand

Ayutaya Bank Main Office completed.

1997

Nagoya Dome completed.



2000

2001

Takenaka Corporation (U.S.A.) established.

2001

Oita Sports Park Showa Denko Dome Oita and Sapporo Dome completed.

2003

Takenaka (China) Construction Co., Ltd. established.

Germany

Hyundai Motor Europe R&D completed.



2006

World's tallest superhigh-rise base-isolation condominium **City Tower Nishi-Umeda** completed.

2007

Chubu region's tallest skyscraper **Midland Square** completed. Large-scale integrated **Tokyo Midtown** and **Shin-Marunouchi Building** completed in central Tokyo.



2008

World's first high-rise condominium comprising three interconnected skyscrapers, **Island Tower Sky Club**, completed.

2009

Mitsubishi Ichigokan and Marunouchi Park Building completed.



Domestic: Establishing companies and construction business in Japan
Overseas: Establishing companies and construction business abroad
Development: Development business in Japan and abroad

2010

2010

Takenaka India Private Ltd. established.

2013

Osaka Timber Association Building, constructed in Moen-Wood, completed.



2014

Abeno Harukas, the tallest building in Japan, completed in a high-density urban environment.



Takenaka awarded Architectural Institute of Japan Award (Architectural Design) for **Meiji Yasuda Life Insurance New Toyokocho Building**.



2017

Takenaka Vietnam Co., Ltd. established.

Singapore

Changi International Airport Terminal 4 completed to handle the flow of people and economic activities as Southeast Asia's hub airport.



Indonesia

Pacific Century Place Jakarta completed and distinguished for outstanding environmental features with LEED Platinum certification.



2019

2019 Kyoto

Kyoto Higashiyama Project (Kyoyamato & Park Hyatt Kyoto) opened.



2019

Ariake Arena, a sports event venue completed.



Shibuya PARCO • HULIC building completed as an urban and cultural development center.

National Cerebral and Cardiovascular Center completed as a center for leading-edge medical services.



2020

FLATS WOODS KIBA completed to accelerate the Forest Grand Cycle.



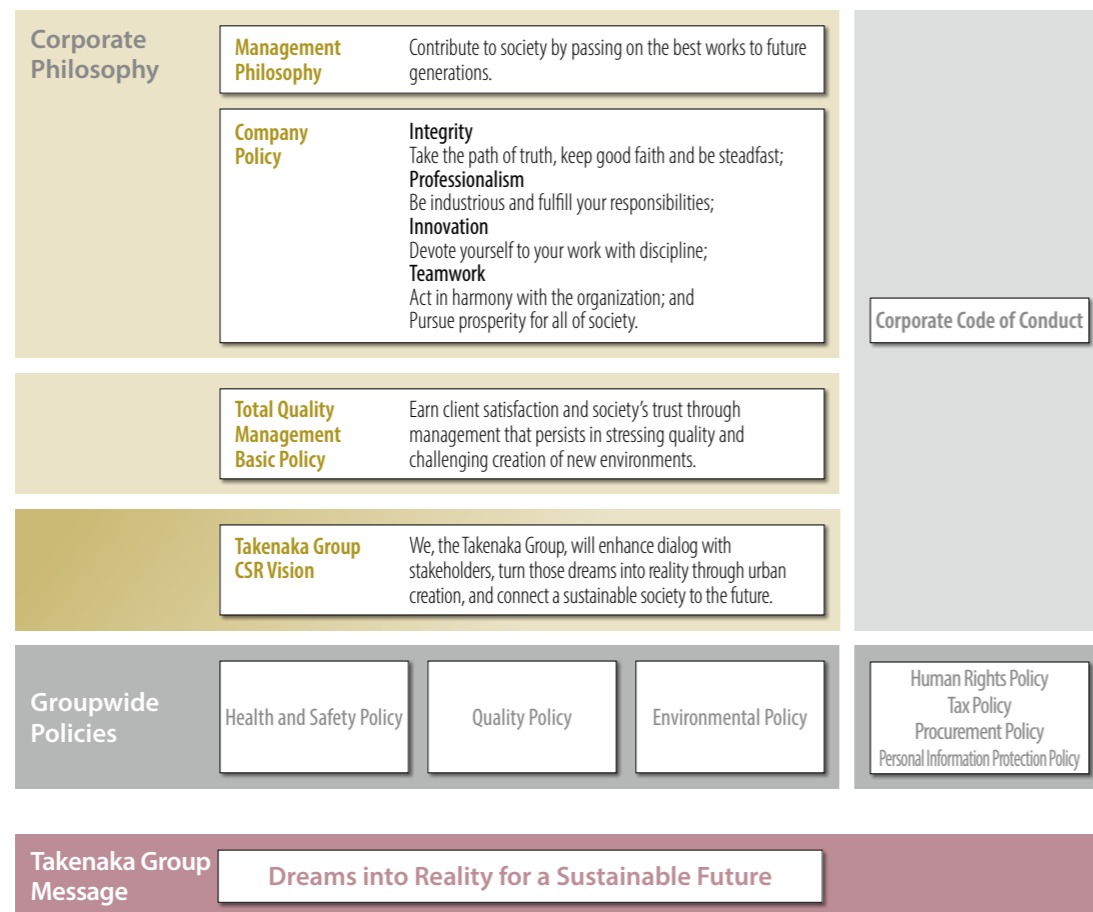
Yokohama City Hall completed as a city hall open to citizens.

PACIFICO Yokohama North completed. PFI projects contribute to the Yokohama landscape.

Dreams into Reality for a Sustainable Future

We consider our Management Philosophy, "Contribute to society by passing on the best works to future generations," to be our corporate mission. To achieve it we follow our Company Policy and handle every architectural project we undertake with the utmost care. This ensures Total Quality Management, which earns customer satisfaction and society's trust, and raises the company's value to society. More than ever before, we are required to engage in many activities that share our corporate values with society as stakeholders diversify and the functions of architecture change. Moreover, society is facing various problems, such as global warming and climate change, safety and security, an aging social infrastructure, and a declining birthrate and aging population.

The potential impact of these issues requires today's corporations to shoulder more social responsibility. Accordingly, we formulated the Takenaka Group CSR Vision and the Takenaka Group Message, which incorporate this vision in communicating our Corporate Philosophy based on a concept of Total Quality Management, in order to express our commitment to deploying our group's concerted efforts and cooperating more closely with stakeholders and society to resolve social issues and realize a sustainable society. Each Takenaka employee will take our Corporate Philosophy, the cornerstone of our business, to heart and promote Total Quality Management in accordance with the CSR Activity Guidelines presented in our Corporate Code of Conduct in order to realize this vision.



Realizing the combined aspirations of the Takenaka Group CSR Vision and Takenaka Group Message

Besides responding to the expectations of our stakeholders, who include the global environment, local communities, customers, employees and partner companies in our efforts to realize a sustainable society, we believe that the cities in which they all gather and pursue their various activities must be safe, prosperous and easy to live in both today and tomorrow.

To assure this, we will enhance our dialog with stakeholders even further. We will combine the business capabilities of our corporate group in construction, civil engineering, real estate and development, facility management and urban renewal in order to realize a sustainable society of the future through urban creation with new added value.

Seeking realization of a sustainable society

Since the founding of our business, we have consistently provided architectural structures that respond to the expectations of our customers based on our Management Philosophy, "Contribute to society by passing on the best works to future generations." The role that corporations are called on to play in society changes with the times. Today, businesses are being urged to help resolve a number of existing issues, including climate change and overpopulation, as well as the social and economic impacts of the COVID-19 pandemic that has been sweeping the world. As we wish to maintain a sensitivity to change at all times, we will continue our ongoing dialog with people everywhere and our diligent efforts to improve our technologies with the aim of providing optimal solutions to meet the needs of the era. By harnessing the strengths of our entire corporate group, we will contribute to urban creation by building cities and towns where people can live in safety and security, and to achieving a sustainable society with the goal of establishing a path to a better future for the earth.

March 2021



Honorary Chairman of the Board

Chairman of the Board

Muneoyoshi Tawaratani



Aiming for the realization of a sustainable society, we are using our groupwide capabilities to play an active role in urban creation, and we will continue to improve our overall strength as an "integrated engineering firm for urban creation."

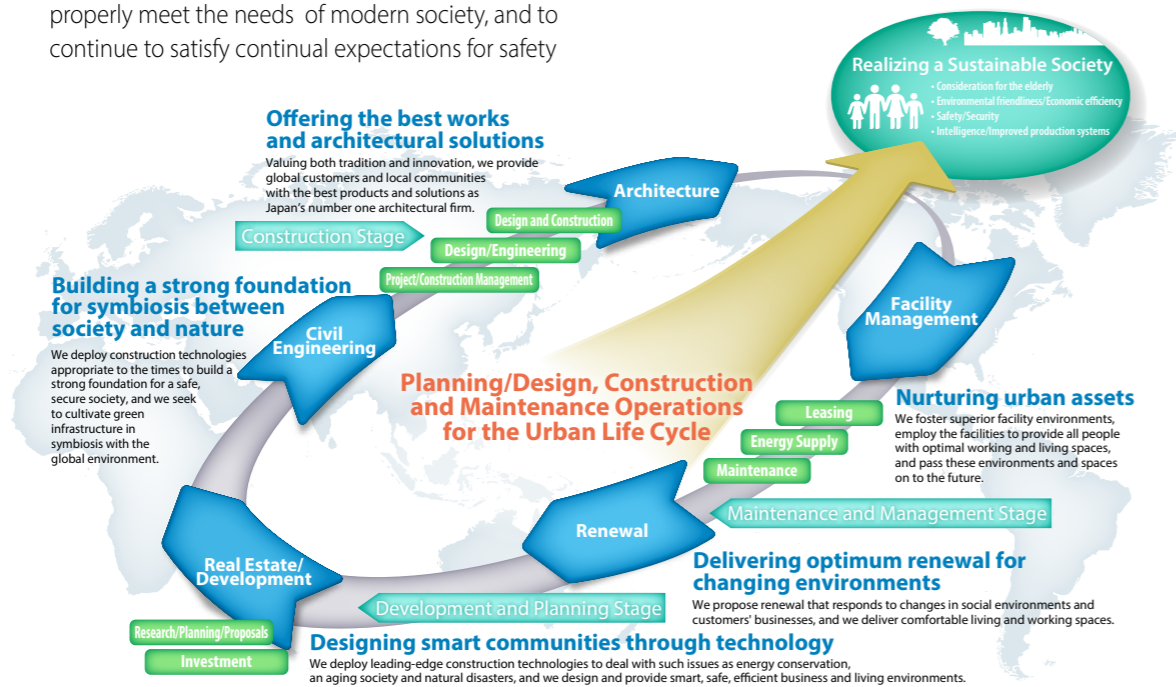
March 2021
President

Masato Sasaki

"Urban creation" with prosperity and peace of mind

Architectural companies such as ours are required to address a wide range of challenges. These include preparing for natural disasters, dealing with limits imposed on us by environmental and energy issues, developing more stable and abundant national lands, fostering regional revitalization and building cities and infrastructure around the world. Being a company engaged in the construction industry, we believe that it is our responsibility to properly meet the needs of modern society, and to continue to satisfy continual expectations for safety

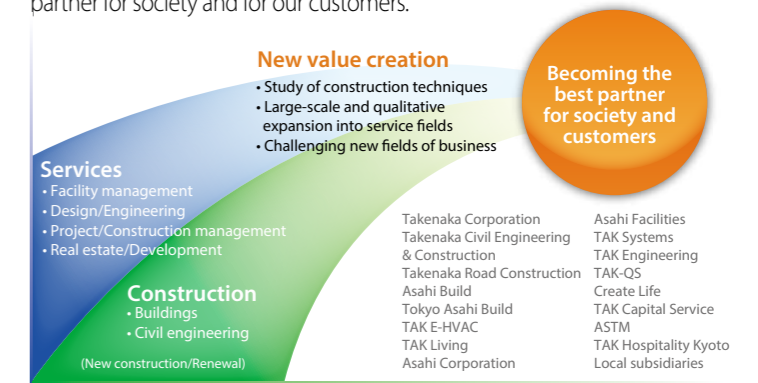
and security in an honest and reliable manner. We will persist in our pursuit of a management policy that focuses on quality and upgrading our business activities as a whole. We remain committed to promoting activities that contribute to achieving our SDGs and creating a sustainable society through "urban creation" with prosperity and peace of mind, thereby continuing to assist people in leading happy and fulfilling lives.



Group Growth Strategy: Participation as a group in urban creation on a global scale

In our activities at the Takenaka Group, we have been treating groupwide areas of our business as "cities." At every stage of urban creation and throughout the life cycles of these cities, from planning and design to construction, maintenance and operation, we will continue to deepen our dialog with our stakeholders, and work to meet numerous challenges both in Japan and abroad based on close collaboration between all our group companies. We will do this with an eye on building a sustainable society where people can live with peace of mind. For this purpose, we need to create new solutions that combine architectural technologies and services and provide new value to cities. To enhance the strengths of our entire corporate group as an integrated engineering firm for urban creation, we will expand our managerial resources to apply more expertise as well as technological and managerial

capabilities. In addition, we will work to establish functions and organizational systems, provide attractive workplaces, and make systematic investments in our businesses, human resources, skills and ICT so that we can become the best partner for society and for our customers.

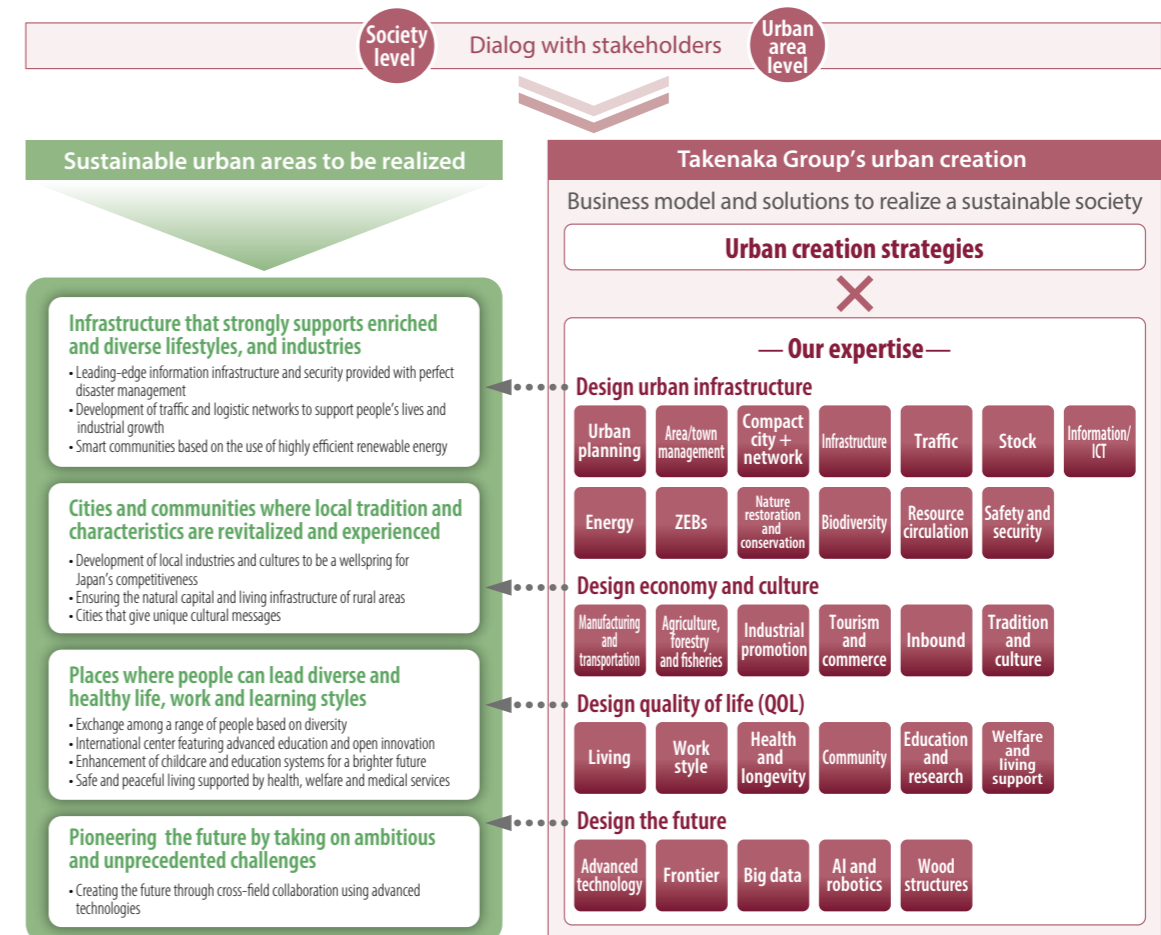


Promoting a sustainable society and urban creation

The social issues that need to be resolved, systems that need to be built, and paths for converting our cities to form a sustainable society will differ greatly from city to city. We will create new business models to achieve our plans for these cities from the viewpoints of urban

infrastructure, economy and culture, quality of life (QOL) and the needs of the future. These models will allow us to identify issues with cities through dialog in various areas, and to use the advanced engineering capabilities that form part of our expertise to promote urban creation.

Business Scope of an Integrated Engineering Firm for Urban Creation

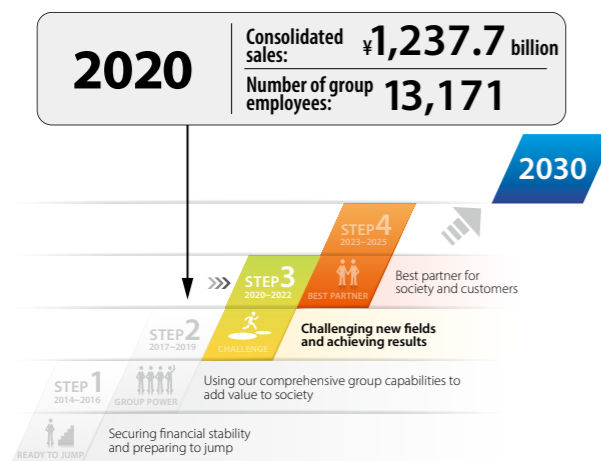


Steps toward growth and new milestones

In our urban creation, we must implement various initiatives to resolve a variety of social issues. As the year 2030 is the target year for our SDGs, we set "Group Milestones 2030," which at the same time mark a decade from the start of our growth strategy STEP 3.

We plan to manage our work, chiefly of our core construction business in Japan, in a more sustainable and stable way by developing our construction and civil engineering businesses, including technological innovations. In addition to our overseas construction and development businesses, we will expand new businesses and our service businesses to achieve consolidated sales of ¥1.6 trillion with the group organization

consisting of roughly 14,000 employees. At the same time, as we engage in sustainable activities, we must establish specific targets based on respect for human rights and on compliance. For sound corporate activities, we must create an environment where employees can maintain a good physical and mental state at work and implement fundamental improvements in productivity and work style reform. Further, we will improve work-life balance, and visualize the KPIs indicating the results of employee satisfaction surveys, average work hours, governance reinforcement and the status of site closures, using them to monitor accomplishment of our targets.

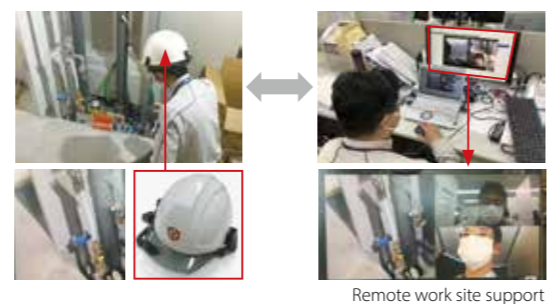


Impact of COVID-19 and Takenaka's response

The impact of the COVID-19 pandemic on social and economic activities has grown on an unprecedented scale with no prospects in sight for the pandemic to subside. Ever since the first outbreak of COVID-19, we have placed top priority on protecting the lives, health and safety of the people involved in our businesses and their families, and have been running our businesses paying close attention to preventing infection, while at the same time contributing to customer business activities, maintaining socioeconomic infrastructure and protecting the livelihood base for all related parties.

Underpinning this, we plan to eliminate the "3 Cs" (closed spaces, crowded places and close contact settings) and to reinforce measures to prevent infection in our business operations, including staggered commuting hours, working in shifts and working from home.

At the same time, some measures brought in to address the COVID-19 situation may lead to progress in addressing existing issues such as digitization of business and improvements in productivity. We will continue to make solid advances with a firm resolve to create a sustainable society while dealing with immediate changes in the environment.



Remote work site support



Example of Sotocomi space design

Our Major Objectives (Materiality)

As an integrated engineering firm for urban creation, we have identified our major objectives (materiality) for resolving social issues and building a sustainable society. In our business activities we will integrate the major objectives for our growth strategies, and establish concrete action plans and targets to achieve those objectives. (Please refer to pages 35 and 36 for our 2020-2022 Action Plan for a Sustainable Society.)

Grouping of major objectives (materiality) and SDGs

Major objective groups	Major objectives	Relevant SDGs
Sustainable architecture and urban creation	<ul style="list-style-type: none"> Developing architecture and services that give consideration to the environment (zero-energy and decarbonization) and society Creating social systems for sustainable urban areas Improving the resilience of buildings and urban areas Extending building life spans, and improving stock maintenance and utilization Passing on traditional culture and recreating value 	11 Sustainable Cities and Communities, 3 Good Health and Well-being, 7 Affordable and Clean Energy, 13 Climate Action, 15 Life on Land
Harmonization with the environment	<ul style="list-style-type: none"> Reducing CO₂ emissions in business activities Responding to future climate change Consideration for biodiversity Resource recycling and waste reduction 	13 Climate Action, 15 Life on Land, 9 Industry, Innovation and Infrastructure, 12 Responsible Consumption and Production
Technical innovation and cocreation	<ul style="list-style-type: none"> Developing advanced technologies and promoting innovation Promoting cocreation activities* 	9 Industry, Innovation and Infrastructure, 17 Partnerships for the Goals
Work style and productivity reform	<ul style="list-style-type: none"> Guaranteeing appropriate working conditions, including work hours (employees and partner companies) Pursuing construction processes that are sustainable and highly productive Realizing healthy and rewarding workplace environments with a diversity of people Eradicating discrimination and harassment Securing, developing and retaining human resources (employees and partner companies) 	8 Decent Work and Economic Growth, 5 Gender Equality, 9 Industry, Innovation and Infrastructure, 10 Reduced Inequalities
Steady production processes	<ul style="list-style-type: none"> Providing safe architecture and services with high quality Realizing work sites without accidents or public disasters Realizing sustainable supply chains 	12 Responsible Consumption and Production, 11 Sustainable Cities and Communities
Sound organizational foundation	<ul style="list-style-type: none"> Building trusted governance Thorough compliance Improving organizational transparency by promoting information disclosure and dialog Establishing risk management Ensuring information security Respecting human rights 	16 Peace, Justice and Strong Institutions, 5 Gender Equality, 10 Reduced Inequalities

■: Society ●: Environment □: Society and environment ◆: Urban creation innovation ★: Organizational foundation

*Change in description of "Participating in communities and forming partnerships."

Relationships between SDGs and our business activities

We classify our major objectives into six groups according to their connection to our business activities. In addition, we established the relationship between each objective and the SDGs, alongside identifying and assessing social issues. We organized the relationship between SDGs and our approach, and summarized the result in the chart above. We will then implement our action plan after defining measures to resolve issues and setting targets and KPIs for measuring their progress and achievement. The diagram on the right shows a conceptual illustration of the structure that will allow us to conduct our activities to contribute to building a sustainable society and achieving our SDGs. Based on a sound organizational foundation, we plan to pursue the development of sustainable architecture and urban creation through technical innovation and cocreation, work style and productivity reform and by engaging in steady production processes alongside harmonization with the environment.



Takenaka's vision for a sustainable society

Initiatives with the Environment

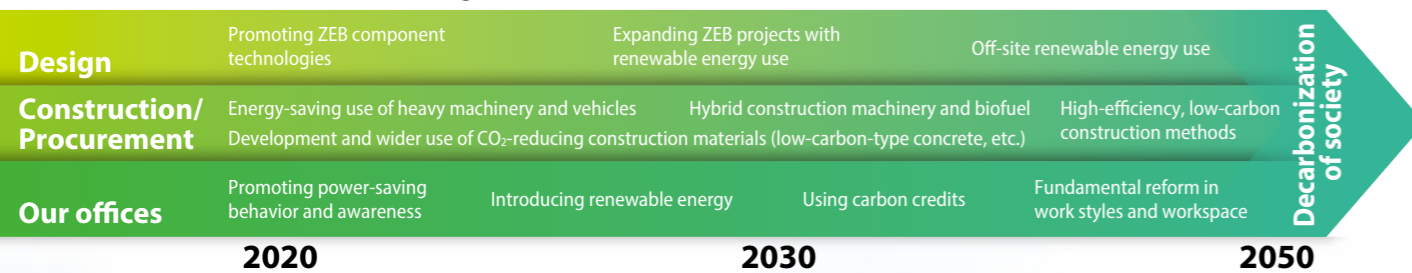
Based on our Environmental Policy, we have established a plan and set target values for our major environmental objectives to realize a society in symbiosis with nature that is also decarbonization and asset recycling, and we are introducing initiatives to achieve this.

Initiatives with the environment

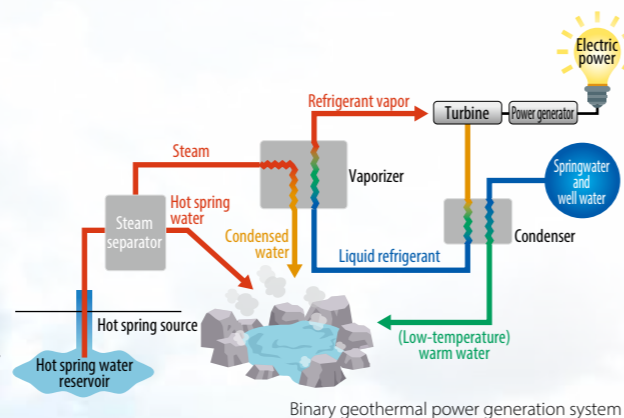
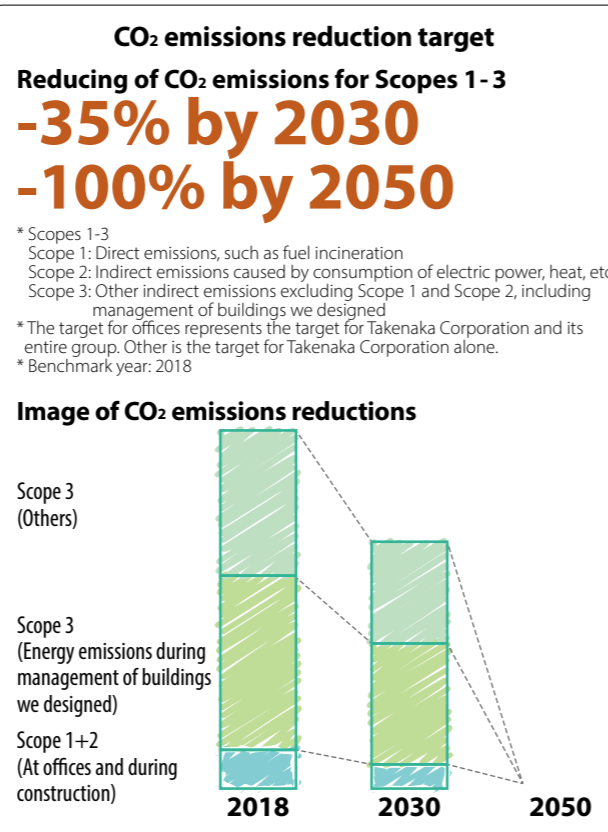
● Long-term targets for reducing CO₂ emissions
 In 2010, we introduced the environmental message, “Connecting people with nature” and our Environmental Concept for 2050, and we set a long-term goal to promote the spread of net-zero-energy buildings. In response to the accelerating global movement to achieve the goals of the Paris Agreement, in late 2019 we expanded the scope of our long-term targets and established new long-term CO₂ emissions reduction targets to cover all of our business activities. A more ambitious goal to build a carbon-neutral society by 2050 was established in 2021 along with a road map.

● Endorsement of TCFD proposals
 In January 2021, we announced our endorsement of proposals by the Task Force on Climate-related Financial Disclosures (TCFD). Analysis of the impact on business activities related to climate change (risks and opportunities) has already started and is being incorporated in our business plan.

Road map to achieving our long-term CO₂ emissions reduction target



● Renewable energy business
 We are involved in developing geothermal power at Okuhida Onsen-go in Takayama City, Gifu Prefecture. Power is generated with a binary power generator, whose turbine is driven by steam from a thermal medium that is heated and vaporized with hot spring water. The project has been organized in cooperation with the local Okuhida Takara Onsen Association and is scheduled to start generating 50 kW of power around spring 2021. Geothermal power generation will be a major factor in our renewable energy business because it generates power with no CO₂ emissions, thus contributing to the decarbonization of society and helping to revitalize local communities.



Environmental Policy
 Contribute to the sustainable development of society by striving for the creation of architectural space that is in harmony with the environment.

- Action Guidelines**
1. Aggressively promote activities for the realization of a decarbonized society, a resources recycling society and a society in symbiosis with nature.
 2. Adhere to laws, regulations and internal rules related to environmental preservation, and promote measures against environmental risks.
 3. Implement reliable environmental management based on our quality assurance system.
 4. Improve awareness for the environment by implementing education.
 5. Implement detailed environmental communications.
 6. Actively participate in public environmental activities.

- Biodiversity Action Guidelines**
1. Be aware of the relationship between business and biodiversity, and share this inside the company.
 2. Position biodiversity as an important task for environmental management and ensure implementation.
 3. Accumulate knowledge on biodiversity, and promote related research and technological development.
 4. Aggressively propose plans that give consideration to biodiversity in the planning and design stage. Promote preservation of biodiversity together with cooperating companies in the procurement of materials and services. From the construction planning stage, avoid and reduce the impact on biodiversity during construction.
 5. Promote land use, operation and management of Takenaka facilities that give consideration to biodiversity.
 6. Promote education and increased awareness related to biodiversity for executives and employees of Takenaka and group companies, and at cooperating companies.
 7. Cooperate and collaborate with stakeholders who promote biodiversity.

Environmental Concept

We will enhance human sensitivity and creativity, make the best use of nature, and aspire to realize a carbon-neutral society by developing life-cycle CO₂-zero buildings.

Initiatives for a society in symbiosis with nature —Seiwadai Forest Building Project

In achieving Sustainable Development Goals (SDGs), preservation of biodiversity, which is a goal related to natural capital that lays the foundation for SDGs in the social and economic area, is an issue of global concern. As an integrated engineering firm for urban creation, we are working to upgrade our capabilities for resolving social issues, including the preservation of biodiversity. The Takenaka Biodiversity Facilitation Program, involving the practical application of our Environmental Policy and Biodiversity Action Guidelines, is our contribution to building a sustainable society. A leading example of these capabilities is the Seiwadai Forest Building Project at the Takenaka Training Center in Kawanishi City, Hyogo Prefecture. The Hokusetsu area in which our Training Center is situated is known as Japan's finest *satoyama* and is one of the very few regions that preserves the traditional “culture of *satoyama* use” found notably in the Kurokawa District of Kawanishi City. Utilizing the characteristics of that region, the following four activity policies were established to make Seiwadai Forest a model for the preservation of biodiversity and the ecosystem. At the same time, activities are underway to make it a venue for human resources development to

address a wide range of social issues. In addition to the existing forest building project, activities started in 2021 to use the venue as a field for research and development in green infrastructure and biodiversity preservation. Examples are the use of the Training Center grounds for a demonstration of Rainscape, a greenery space designed to reduce the risk of urban floods with a pilot urban agriculture program, introduction of wood structures and wooden construction and outdoor work trials.



- Four activities of Seiwadai Forest Building Project**
- Activity 1:** Forest maintenance and conservation led by employees
 - Activity 2:** Hands-on forest building workshop
 - Activity 3:** Workshop development and conveying environmental technologies
 - Activity 4:** Collaboration with stakeholders

We will continue to conduct research for today, as well as for our targets in 2030 and further toward 2050. In doing so, we will investigate the construction and development of the type of community required in a society where people and nature coalesce, and we will create new possibilities in building a sustainable society, employing Seiwadai Forest as a demonstration field for the resolution of social issues.

Related topic: *Considerations for biodiversity* (page 39)

Urban Creation for Resolving Social Issues

—Promoting MACHInnovation—

Represented by the Forest Grand Cycle*1, which was organized to connect local areas with urban areas, and with the development of "KENCHIKU*2, Towns for Physical and Mental Health utilizing farmlands, greenery and waterfronts," we envision a society with urban areas that utilize local resources and provide solutions to social issues. We then verify and implement projects while formulating plans to resolve issues and conducting demonstration tests with local citizens. We have named these activities "MACHInnovation," and we will spread them widely for urban creation and development of social systems through dialogs and partnerships with diverse stakeholders, including governments, local residents, corporations and NPOs.

*1 Forest Grand Cycle: Sustainable cycle of forest resources and local economies

*2 KENCHIKU: Activity transcending the legacy framework in construction, and urban creation that will create a place for active and healthy living for everyone

Developing the East Bay Project

We are currently engaged in development of the bay and canal area of Koto City to build the East Bay Project. It holds our future vision for this waterfront area where our Tokyo Main Office is located. The project is underway in cooperation with various stakeholders to improve the value of the land area through effective use and revitalization of this waterfront area. Attention is also being given to retaining the characteristics of the Koto area, which is made up of rivers and canals surrounded by water gates.

● Urban creation with wood

Monzen-Nakacho in the Fukagawa area was a center of the lumber industry in the past. We have been carrying out social demonstrations in the area to revitalize the waterfront area and create sightseeing spots by creating wooden riverside terraces at restaurants along the banks of the Ohyokogawa River. By making wooden structures along the river a commercial success with landscape design in the future, we plan to continue expanding wooden structures and generate vitality in the waterfront area. In addition, we are conducting resource recycling demonstration experiments between local and urban areas, using timber from Ogawa Town, Hiki-gun, Saitama Prefecture, an area upstream on the Arakawa River that produced and floated timber downstream by boat from the Edo period until the mid-Showa era.

● Fitness pedestrian path

In the hope of instilling joy and fun through a scheme that stimulates interest in physical fitness and in communities, the Fitness Road Shiohama Canal was created as a pedestrian path aimed at fitness. This was done in cooperation with community development councils along the Shiohama Canal in Toyo 1-chome and 2-chome, Koto City as well as with nearby

companies. Parts of the path have been designed to make walking enjoyable, including Step Walking for measuring one's stride length and herbs in planters along the path for a refreshing effect on strollers. The Shiohama Terrace, Container Café and landing pier were built in 2020. Its designation as a Canal Renaissance Promotion area by the Tokyo Metropolitan Bureau of Ports and Harbors will invigorate the area and make it more attractive.

We will continue social demonstrations to determine how these contents and schemes create ripple effects in revitalizing communities and promoting good health.



Shiohama Terrace

● Urban winery

Urban agriculture is drawing attention not only as a source of food production and supply but also as a tool in addressing social issues related to the environment, the economy, society and health. Employing practical methods to increase the value of unused land, such as the rooftops of urban buildings, and to help in building local communities and activities, a pilot vineyard has been created on top of a building in Koto City.

The Unnan Social Challenge Valley

In April 2019, we concluded a community partnership agreement with Unnan City in Shimane Prefecture, Yamaha Motor Co., Ltd., and ETIC, an NPO, to resolve issues in the city and enrich the lives of local residents. As part of the conclusion to the agreement, our employees have been dispatched to Unnan City's policy planning and promotion section as "community revitalization corporate citizens."

Unnan City has devised a regional revitalization strategy titled "Children x Youth x Adult x Corporate Challenge" to promote activities in which local residents and young people work to resolve local issues and entire communities work to instill in children the drive and strength to live active lives. In addition, it aims to encourage business corporations interested in resolving local issues, located both in and outside the city, to participate in a variety of challenges to resolve social issues and create new value. Our employees, who are "community revitalization corporate citizens," serve as the secretariat for the Corporate Challenge, assisting in building schemes and serving as liaisons between businesses and local communities.

Specifically, we are responsible for demonstrating and implementing the "smile" measuring system that supports community well-being. The Yamaha Motor Co., Ltd., is taking on the challenge of introducing Green Slow Mobility and Hitokara Media, which encourages the reuse of abandoned houses.

In the year from April 2019 to March 2020, 34 companies visited the city, and many are now studying how to organize challenges. In-depth activities will be organized in the future to promote the spread of Unnan City's urban creation schemes, social systems and new businesses to resolve social issues throughout Japan and the rest of the world.



"Smile" measuring system and Yamaha Motor's Green Slow Mobility (GSM) demonstration project

Future initiatives

Planning to make steady progress in these activities and widen their scope in the future, we concluded a partnership agreement with Ogawa Town, Hiki-gun, Saitama Prefecture and the NPO Akarie in November 2019, and a similar agreement with Shiojiri City, Nagano Prefecture, in January 2020. Through initiatives related to the Forest Grand Cycle, we plan to promote greater collaboration to contribute to building a sustainable society and resolving regional issues. We will also promote effective use of historic buildings and cultural resources in local communities and effective consumption of locally produced energy sources. Currently underway in Shiojiri City and in cooperation with the Shiojiri City Forest Association is introduction of the Forest Grand Cycle to revitalize Narai-juku, a post station on the Edo Period's Nakasendo known for its old, traditional streetscape. The plan is to make effective use of abandoned houses to generate an economic cycle linking urban areas with local cities.

In Ogawa Town, we are starting initiatives to resolve regional social issues such as renovation of a 100-year-old warehouse built in Oya stone to function as a new center for community revitalization, offering space for community residents and visitors to use.

Through these MACHInnovation initiatives, we plan to come up with problem-solving ideas in cooperation with local governments, local residents and various other stakeholders, and expand demonstration experiments into practical applications in order to be close to local community issues and local assets, share and exchange ideas, and take concrete action.



Regional partnership agreement concluded with Shiojiri City



View of Narai-juku, Shiojiri City

Innovating Construction Processes and Realizing Diverse Work Styles

Promotion of work-life balance (WLB) and improvement against declining population of construction workers are both pressing issues to resolve in order to sustain the construction industry. Accordingly, we are aiming to improve productivity by transforming entire work process from design to production while incorporating the latest technologies such as BIM* and ICT, mechanized construction and AI, robotics and so on.

* BIM: Building Information Modeling. A 3D digital building model.

Aiming at innovative construction sites for the next generation

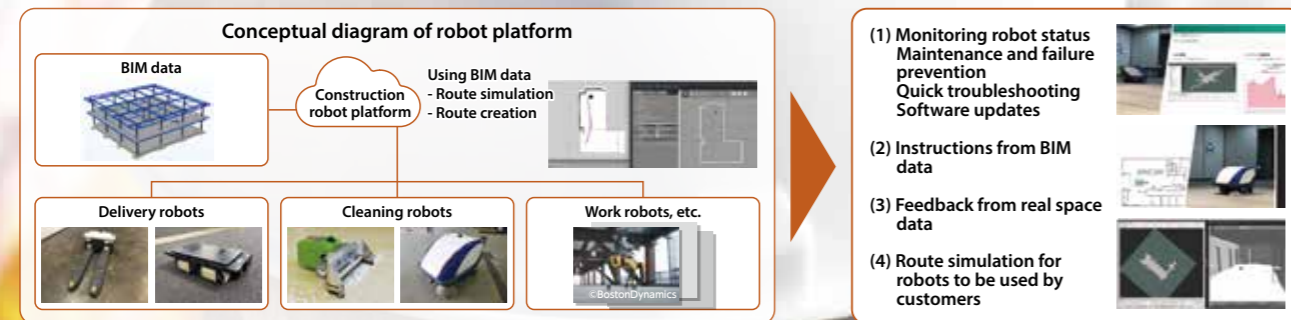
We are working to improve productivity and the attractiveness of the construction industry by employing "Takenaka Advanced Construction Integration" which suits the current situation where the number of construction workers is decreasing and work style reform is ongoing. Aiming to create a next-generation construction site using innovative digital technology, we are focusing on developing and utilizing robots, IoT, and other advanced technologies.

● Developing robots that meet the needs of work sites

To compensate for the aging and decreasing numbers of skilled construction workers, we are currently developing robots to be deployed particularly in work that is physically demanding or requires extended preparation time. One example is working at height. This must be carried out quickly and safely. To facilitate such work, we developed a lifter for ceiling-mounted equipment. We are also developing an expandable fall protection floor for different types of work. Such inventions should significantly improve the efficiency of any work performed at height. The robots we develop are not multipurpose robots that can handle different types of work, but rather for ease of installation and transportation they are robots with dedicated purposes, such as concrete casting, welding spraying fire retardant, cleaning and gypsum board cutting.

● Building a robot platform for easier operations

As robots become more widely used in construction sites, managing such robots brings a new challenge with their number and functional complexity increasing. To address this issue, we plan to build a single "construction robot platform," from which multiple types of robots can be operated, monitored, and managed.



This robot platform realizes remote monitoring of individual robots, including battery status, and simplified software updates. We can also use the monitoring data for maintenance and failure prevention to significantly reduce servicing time.

● Promoting remote crane operations (TawaRemo)

We are developing remote control technology for cranes to enable operators to work from a ground level cockpit at safe locations, such as near a supply point. This not only helps the operator visually confirm the correct slinging, but also reduces physical and mental burdens*, as well as greatly contributes to safety. The cockpits can be located at multiple points and then linked together. These networked cockpits can be used by a skilled operator to provide support, training, and instruction to inexperienced operators. This is an efficient way to transmit know-how to young operators and help them to improve their skills.

* Physical and mental burdens: Usually operators have to climb up a ladder inside a mast to the top of a tower crane where the operation cockpit is located.

● Building a communication infrastructure within a work site (TUNAGATE) (patent pending)

To make the best use of robots and IT, it is important to form an efficient communication infrastructure within the work site. For this purpose, we use a temporary switchboard with an Internet connection to configure a wireless LAN at the site. The Wi-Fi equipped switchboards can form a network, even in underground areas where signal transmission is difficult to be installed. The lighting in the area can also be controlled through this network. We plan to expand such remote construction management utilizing advanced IT, such as wearable cameras. Active use of this remote construction management will further improve both construction quality and work efficiency.

Background of our efforts

[Adapting to environmental changes]

(1) Decrease in skilled workers

- Decrease in new workers
- Aging of skilled workers
- Improve job satisfaction, diversity, and productivity

(2) Decreasing working days

- <Achieved "Closed for eight days every four weeks">
- 280 working days at the end of 2018
- Reduce to 250 by the end of 2021 (30 days/year less than 2018)

(3) Decreasing total working hours

- Nonstatutory working hours limited
- Revised Labor Standards Act to be enforced from April 2024

(4) Revised Construction Business Act

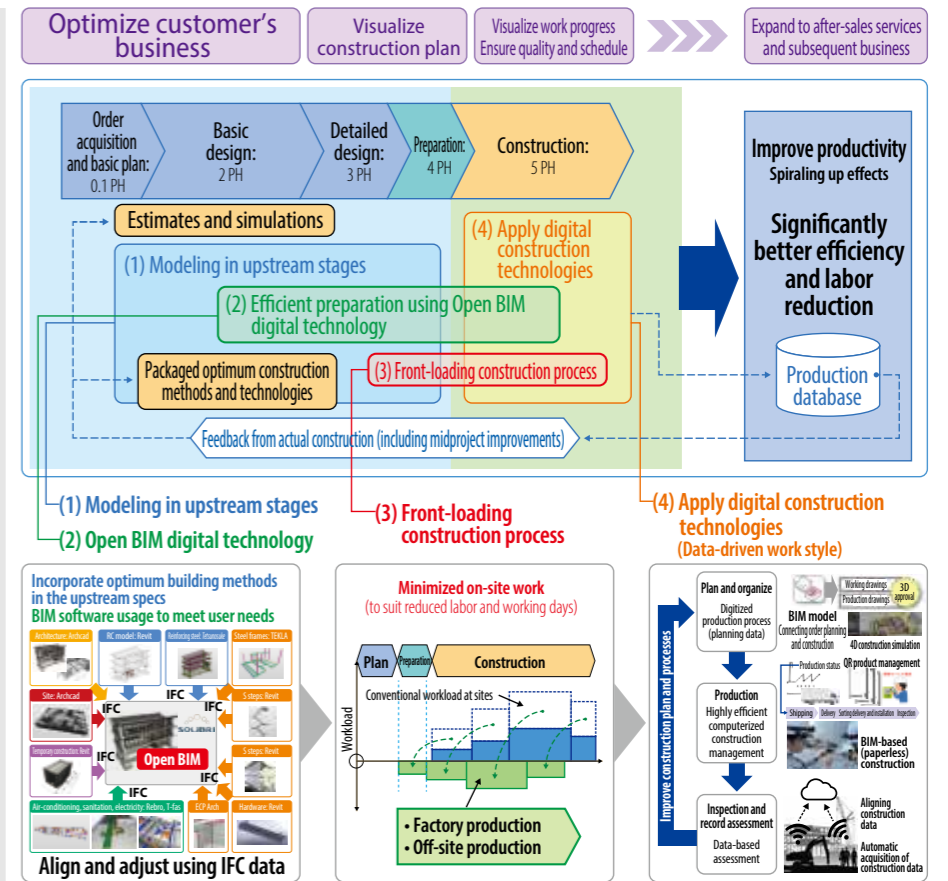
- Adhere to appropriate construction periods (Prohibition of extremely short construction periods)
- Enforced from October 2020

[Remove productivity obstacles]

Too many adjustments and changes after starting work

Resolve problems before starting work (Align and adjust using BIM)

Takenaka Advanced Construction Integration Work Processes



* Industry Foundation Classes (IFC): A neutral and open file format specification to achieve interoperability between software platforms

Improve productivity and increase job satisfaction while valuing diversity.

● WLB Committee

We started helping our employees to improve their work-life balance in 2017 with the Work-Life Balance Committee for Radical Productivity Improvements Companywide. The committee originally had a limited period, which has now been extended for three more years to improve work efficiency and increase job satisfaction while valuing diversity. The activity currently focuses on compliance, including a new regulation on overtime limits with potential penalties to be applied to the construction industry from April 2024, as well as eight-day site closure every four weeks.

● WLB Dialogs

One of the committee's important tasks is hosting the WLB Dialog, where employees and management exchange opinions in order to understand the current working situation and any issues to be resolved. Since 2017, a total of 753 young employees, line managers, and the president, held over 40 dialog sessions. Based on one issue identified through these dialogs, we set up a 2020 major target, through which site workers could actually feel WLB improvements. We are currently working to achieve this with clear identification of "practices to be changed or stopped." We also held a training program on communication skills that could be adopted immediately for managers to encourage behavioral changes in workplaces through interactive communications.

● Compliance with revised Construction Business Act

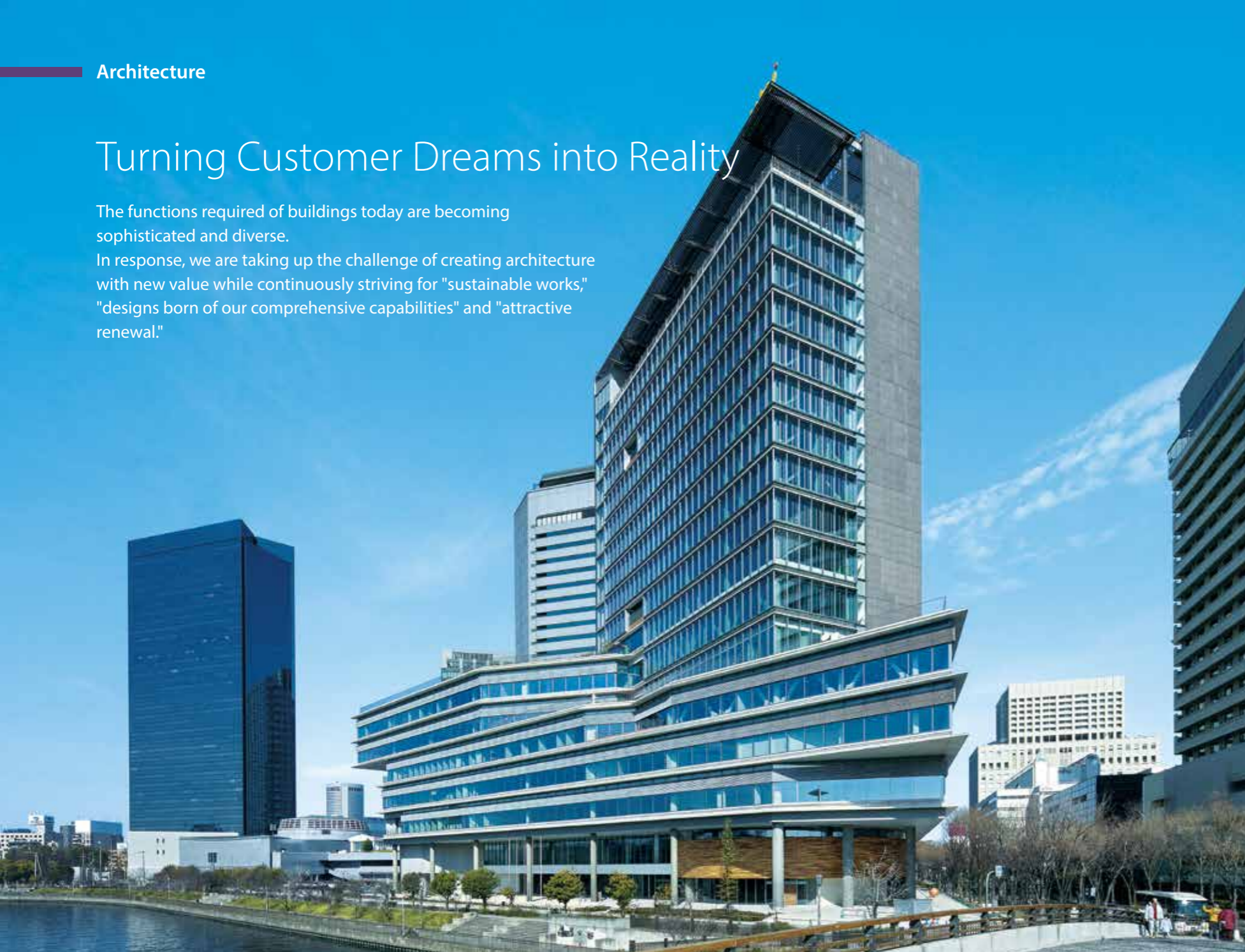
The revised Construction Business Act, which came into effect last year, "prohibits contracts with extremely short construction periods." Being fully aware of the significance of this change in our Work Style Reform and compliance with the limitations on overtime hours, we ensure agreement with our customers on appropriate construction periods when concluding contracts. At the same time, we have made this idea known throughout the company through FAQ information to ensure reasonable scheduling for our partner companies. We have also created leaflets and explanatory documents for partner companies and customers, and have sought their understanding through detailed explanations.

● Takenaka Advanced Construction Integration

We started full operation of Takenaka Advanced Construction Integration in 2020. The renovation projects of our Shizuoka Regional Branch and Okayama Regional Branch received grants as "Model BIM Project for Smooth Building Production, Construction, and Management" from the Ministry of Land, Infrastructure, Transport and Tourism. We are utilizing BIM data from design and production through to facility management in these buildings, and we will publish the project report both internally and outside the company. Working together with partner companies and utilizing BIM, we attempt to determine and build necessary things into upstream stages before starting construction. During construction, we minimize the labor required at the site through the latest digital work management technology, aiming to build a model construction site management that can be applied to future projects.

Turning Customer Dreams into Reality

The functions required of buildings today are becoming sophisticated and diverse. In response, we are taking up the challenge of creating architecture with new value while continuously striving for "sustainable works," "designs born of our comprehensive capabilities" and "attractive renewal."



Sustainable works

Our advocacy of "sustainable works" refers to "activities aimed at creating architectural spaces that are in harmony with the environment in collaboration with our customers." We have adopted this approach to architecture in order to pass on a sustainable society to future generations and as a means of helping customers, who desire to contribute to the global environment and society, and to turn customer dreams into reality.

Yomiuri Telecasting Corporation New Head Office

—Broadcasting programs from western Japan to the world—

Design and construction by Takenaka Corporation (2019)

Yomiuri Telecasting Corporation (Chuo-ku, Osaka City) relocated to its new head office building in the OBP area facing the expansive greenery of Osaka Castle Park. The first and second floors incorporate a spacious entrance approach supported by outdoor pilotis and circular-shaped lobbies, which are used as an urban open square to welcome visitors and realize "a TV station open to the people." The roof area features a garden, offering dynamic scenery that reaches toward the large woodland of Osaka Castle Park located on the opposite bank of the river that flows by the building. We continue to make contributions to the creation of buildings that offer special added value through fusing design, technology and the environment.



12 RESPONSIBLE CONSUMPTION AND PRODUCTION
An area made to thrive by its people, the town and media

Open square with wooden features
 An urban open square—created by outdoor pilotis and open to the public—spreads across the first and second floors, including circular-shaped lobbies, and incorporates a wooden warm color scheme. The use of various types of timber, such as tonka giallo in the curved wall, and succupira, with its sawtooth pattern for the flooring, and the reinforced concrete columns with a cypress grain finish, all create a welcoming feeling for visitors.



15 LIFE ON LAND
Symbolic appearance that connects urban areas and Osaka Castle greenery

Green roof offering an overlook of Osaka Castle Park
 The roof garden, with its various features, is created on an axis that connects the urban area, the river, and Osaka Castle. Its landscape design visually links the garden green with the expansive woodland in Osaka Castle Park. The south-facing offices of the building feature glass walls, entertaining the eyes of those in the building, employees and performers with the greenery of Osaka Castle Park.



11 SUSTAINABLE CONSUMPTION
Robust risk-proof building

Equipped with antidisaster BCM measures
 A wide range of BCM measures is incorporated in this head office building to enable continuous broadcasting regardless of any natural disaster that might occur, such as a powerful earthquake or a strong typhoon. As well as having a facility to archive recordings in a managed manner, the building is equipped with a large display in the entrance lobby that can provide emergency information in the event of a disaster. The lobby area can also be used as a community emergency hub.



3 GOOD HEALTH AND WELL-BEING
Extended amenity areas enhance employee comfort.

Various working areas for diverse work styles
 This building is designed to offer opportunities for employees to work in a variety of amenity areas spread across the premises, including the roof garden, view terrace, cafeteria, and café. These attractive amenity areas are often used for shooting TV programs.



8 DECENT WORK AND LIVING CONDITIONS
Communication platform that enables the exchange of information vertically and horizontally, and internally and externally

Supercreative workshop to encourage communications
 This building's design features offices located in the outer area next to the windows of the building, and the remaining internal space forms a stairwell surrounded by stairs. Having no floor in the central area allows external light to reach into the stairwell and highlights the flow of people throughout the building. The stairwell connects the entrances to each floor and the roof garden, functioning as a stem for communications.



13 CLIMATE ACTION
Environmentally friendly performance that gives consideration to life cycle costs

Smart wellness functions and CO₂ emissions reduction technologies
 To offset large energy consumption from broadcasting operations, CO₂ emissions reduction technologies include heater control to supply cold water at low or medium temperature, variable air-conditioning in studios, air-conditioning using fire-retardant fabric ducts in production control rooms (patented), variable airflow control for individuals in rooms, lighting controls for brighter effects, and energy-saving kitchen air-conditioning and ventilation. S rank was obtained for the CASBEE building certificate with 26 percent reduction in CO₂ emissions.



Turning Customer Dreams into Reality

Design born of our comprehensive capabilities

As a reflection of the hilly streets that characterize Shibuya, a three-dimensional street from Spain-zaka (Spanish slope) was connected from the ground to the rooftop as if a stack of white cubes had been sewn around the building exterior. Stores and theaters were arranged along this "vertical street," and by attracting a lively flow of people, we have created a layered street that possesses the neighborhood characteristics of Shibuya.



Shibuya PARCO • HULIC building

Preserving the street culture for future generations

Design and Construction: Takenaka Corporation (2019)



Resembling parks and squares found along streets, open-air plazas that serve as venues for relaxation or special events can be found along the vertical street, serving as spaces that generate lively activities.



At the top of the vertical street on the 10th floor is a rooftop plaza, housing a special event space, café and coworking offices facing the plaza for interactions between people who are there for differing purposes.



Shibuya PARCO's cultural creativity and communication function centers on the PARCO Theater on the 8th floor. It preserves the old theater's perspective, retaining a cozy distance between the performers and the audience. It has been renovated into a 636-seat premium theater that maintains a sense of solidarity with the stage.

Attractive renewal

Architecture creates vessels to protect life and property that are at the same time social assets. Our concept of "attractive renewal" aims to restore the functions and beauty of older buildings. Not only that, its goal is to increase the value of the property by adding new functions and enhancing its business functionality. From the viewpoint of SDGs, a transition in value "from scrap and build to housing stock utilization" is beginning to spread widely today. In addition to upgrading the functions and performance of buildings that no longer satisfy contemporary needs, the concept aims to preserve and restore structures with historic significance and create new values based on building conversions that adapt to the diversification and sophistication of social needs. The Attractive Renewal project gained outstanding recognition for its contributions to society that utilize our unique capabilities in design and technology, winning the BELCA Award (from the Building and Equipment Long-Life Cycle Association), among others. (72 awards received as of January 2021)



kudan house

The former Mankichi Yamaguchi residence located in Kudankita, Chiyoda-ku, Tokyo, is a Spanish-style mansion completed in 1927. This historical building was restored to preserve its heritage. We participated in the restoration project and managed the erstwhile privately owned property into a membership-based business innovation site. Through this "legacy utilization project," which is aimed at the preservation and effective use of historic structures while paying due attention to economic viability, we are contributing to the creation of a sustainable society.

National Registered Tangible Cultural Properties (2018)

Renovation design: Takenaka Corporation (2017)

Renovation construction: Tokyo riken.Co.,Ltd. (2018)



Rebuilding Main Building of Daimaru Shinsaibashi Store

This department store, designed by William Merrell Vories, was rebuilt to preserve the structure's original exterior wall design and at the same time to reuse the Art Deco interiors with their outstanding design value. Integration of the main building with Shinsaibashi PARCO (the old North Annex of Daimaru Shinsaibashi Store) using a novel spatial approach, and creation of a new architectural space resulting from contrast and harmony with the preserved portions has strengthened the department store's competitiveness and facilitated pedestrian flow in the Shinsaibashi area.

38th Japan Lighting Award
MIPIM Asia Awards 2020 Silver Award
CFT Award 2020

Basic design and supervision: Nikken Sekkei Ltd.
Design, management and construction: Takenaka Corporation (2019)



Mido-Building Innovation Space Step-up Project

We improved our Osaka HQ, a 50-year-old building, into a modern workplace to let us continuously create new value acquiring changes of the time. We installed a new five-story open stairs inside working areas to increase chances of casual encounters and information sharing. We provided various types of spaces based on work activities as well. We are also endeavoring to find "new ways to design and construct buildings" using BIM.

Award in the Long Life Category at the 28th BELCA Awards in 2018
New Office Promotion Award in the 31st Nikkei New Office Awards
Design and construction: Takenaka Corporation



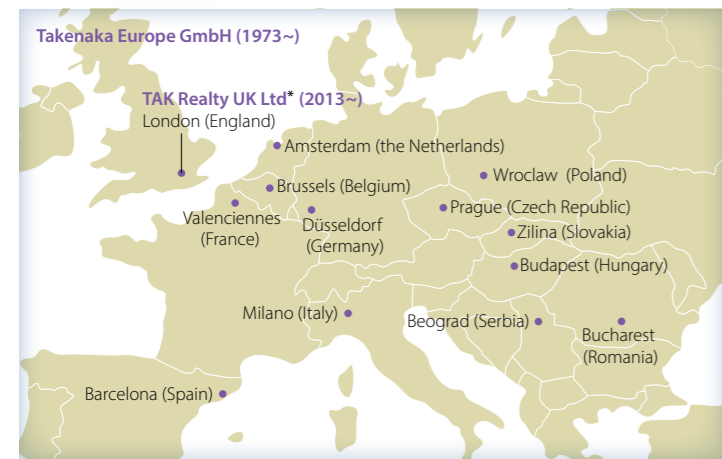
Supporting the Business Activities of Our Customers –Contributions in each country and region–

Our international operations began in earnest with our entry into the U.S. market in 1960, and our network now spreads around the world. We have participated in a diverse range of projects in support of our customers, which include Japanese businesses launching overseas operations and public institutions in various countries as well as local business enterprises developing projects across a wide spectrum from airports to high-rise office buildings, hotels, manufacturing plants and museums. Our activities also span a diverse range comprising not only architectural design and construction works but also technical guidance and consultation services as well as materials procurement.

Locations of main overseas business offices

Europe

Forty-eight years have passed since the company opened a business office in Düsseldorf, Germany in 1973. During that time, Takenaka Europe has undertaken over 1,500 construction projects. Today about 60 employees dispatched from Japan and some 570 local employees working at operating bases in 13 countries collaborate closely to support customers who are considering establishing operations in Europe.



* Development business

Europe

Asia/China

Asia/China

This year marks the 47th year since Takenaka opened offices in Thailand, Singapore and Indonesia. In Malaysia, we will celebrate the 30th anniversary of our office opening in 2020. In 2017, we set up an office in Vietnam, and at present are operating in eight Asian countries. Some 130 expat employees have been assigned to China and other countries along with the support of roughly 1,700 local employees. Together they handle construction projects of all sizes and types.

Changi International Airport Terminal 2 Expansion Project in Singapore

Singapore's Changi International Airport is a leading hub airport in Asia. Since its opening in 1981, we have been involved in the construction of Terminal 1 and various other new construction and expansion projects for the airport. In 2017, we began construction of Terminal 4. The latest expansion project involves reconfiguring the layout for the departure and arrival halls, upgrading the baggage claim area and transit hall, as well as upgrading the automated check-in kiosks and bag-drop machines. The project is scheduled to be completed around 2024.



IMAGE: CHANGI AIRPORT GROUP
Departure Transit Hall



* Development business

United States

Takenaka began laying the foundation for its overseas operations in 1960 after extending its business to the United States where it mainly provided development and consultation services.



Jaguar Land Rover Slovakia new plant (Slovakia, 2018)



AEON MALL Jakarta Garden City (Indonesia, 2017)



Changi Airport Terminal 4 (Singapore, 2017)



Pacific Century Place Jakarta (Indonesia, 2017)



CapitaGreen (Singapore, 2014)



Nexen Tire Europe Technical Center (Germany, 2018)



Yankee Candle Czech New Factory (Czech, 2017)



Continental Tire Thai New Factory (Thailand, 2018)



IKEA Distribution Centre Port Klang (Malaysia, 2020)



Sanko Gosei Gujarat New Factory (India, 2018)



Wuxi Murata Electronics Second Factory (China, 2020)



National Gallery Singapore (Singapore, 2015)



Hamad International Airport Emiri (Royal) Terminal (Qatar, 2013)

Creating New Value Through Urban Creation

We have participated in planning, design and construction of numerous urban redevelopment projects, including projects in metropolitan districts in Tokyo, Yokohama, the Nagoya Station area, and central Osaka. We are also engaging in urban redevelopment, and PPP and PFI projects while actively pursuing proprietary development projects and participating in urban creation organizations. Contributions made through our various urban creation activities also include enhancement of competitive capabilities in international arenas, improvement of safety and security, symbiosis with the environment, and solutions for a variety of other problems and needs facing cities today.



Urban redevelopment projects

Shibuya PARCO • HULIC building

We worked as an agent to offer advice and conduct designated tasks. While managing the project in general, we also designed and constructed the building, which has helped improve urban areas around Shibuya Station, as well as provided support for area management operations. The new PARCO • HULIC building was opened in November 2019. This building incorporates existing slopes and pedestrian zones surrounding it as part of three-dimensional streets going into it. The building also organically accommodates PARCO-specific designers' brand shops, a theater, a business incubation facility, modern offices, and a square. The project contributed to invigorating the area as a creation and information hub for fashion, art, theatrical culture and innovation.

Shibuya PARCO • HULIC building
Design and construction: Takenaka Corporation



PPP and PFI projects

Yokohama Minato Mirai International Convention Center (PACIFICO Yokohama North)

Under this project implemented by the City of Yokohama, which aims to be a "global MICE strategic city," a group of companies led by Takenaka was awarded a contract in 2015 to design, build and operate a new MICE facility (as a PFI project) and a hotel (as a private for-profit project). These facilities are expected to improve urban amenities for pedestrians as well as enhance the landscape of this port city. They were completed in spring of 2020.

* MICE concept (Meeting, Incentive, Conference/Convention, Exhibition)

MICE Design: Takenaka Corporation (joint venture)
MICE Construction: Takenaka Corporation (joint venture)
Hotel Basic concept: Takenaka Corporation



Domestic development projects

Kyoto Higashiyama Project (Kyoyama & Park Hyatt Kyoto)

This was one of our exclusive projects in which we managed the entire process from development, to design and construction, and on through to operation. In October 2019, a luxury hotel with 70 rooms opened in this prime location, where guests could enjoy views of Kyoto City and the pagoda of Hokanji Temple, known as the Tower of Yasaka. By saving and restoring the historical buildings and gardens, which continue to serve as a restaurant for Villa Kyoyama, we incorporated the uniqueness of Kyoto with a fusion of tradition and new culture.

Design and construction: Takenaka Corporation
Interior design: Tony Chi + Takenaka Corporation
Landscape Architect: Yasuo Kitayama



Yokohama City Hall

The new city hall is expected not only to provide Yokohama City with administrative and legislative functions, but also to provide an atrium for cultural and fine arts events and programs. As the architect and construction contractor responsible from the basic design stage, Takenaka worked on the creation of an open city hall and a new urban landscape that was in the public interest and contributed to the community through workshops and symposiums.

Design and engineering: Takenaka Corporation, Maki and Associates, NTT Facilities, Inc.
Construction: Takenaka Corporation (joint venture)



OSAKA UMEDA TWIN TOWERS • SOUTH (To be completed in 2022)

This is a complex that accommodates offices, conference halls and department stores, located in the busiest shopping district in western Japan. The buildings are integrated with two neighboring blocks redeveloping an existing road running under the new complex. The outer area of the complex provides public facilities, including sidewalks and pedestrian decks. In this project, we are responsible for the design development, various applications, construction, planning support, and management of surrounding areas.

Basic design: NIHON SEKKEI, INC.
Design and construction: Takenaka Corporation



ABENO HARUKAS and Tenshiba

Japan's tallest building, ABENO HARUKAS, and the Tenshiba park renewal project, which include huge grassy spaces, had a great impact on the local area. Takenaka engaged in planning support, design and construction, which contributed to increasing the appeal of the area and attracting more people.

ABENO HARUKAS
Design and supervision: Takenaka Corporation
Exterior design: Takenaka Corporation and Pelli Clarke Pelli Architects
Construction: Takenaka Corporation (joint venture)
Tenshiba
Design and construction: Takenaka Corporation



Umekita Development Project

An urban creation project covering a zone area of 24 hectares and total development land area of 1,000,000 square meters for two construction phases combined is currently underway in the area north of JR Osaka Station. For Grand Front Osaka (Phase 1), Takenaka has been engaged in planning, design and construction, and we were a joint developer.

Grand Front Osaka (Phase 1)

This large-scale urban development project, which was completed in 2013, involved a total floor area of some 570,000 square meters.

Basic design: Nikken Sekkei Ltd., Mitsubishi Jisho Sekkei Inc., NTT Facilities, Inc.
Construction design: Nikken Sekkei Ltd., Mitsubishi Jisho Sekkei Inc., NTT Facilities, Inc., Takenaka Corporation, Obayashi Corporation
Construction: Takenaka Corporation (joint venture)

The Second Development Zone in the Umekita Area

A new urban creation project is being promoted for integrated development, administration and management of an urban park (4.5 hectares), which is located at the center of the project zone and combined with a residential area created by land developers.

Consortium
Mitsubishi Estate, Osaka Gas Urban Development, ORIX Real Estate, Kanden Realty & Development, Sekisui House, Takenaka Corporation, Hankyu Corporation, Mitsubishi Jisho Residence and Umekita Development SPC



Ote Center Building

This is our own development project at Otemachi, the most prestigious central business district (CBD) in the heart of Tokyo. Through major improvement works we are providing significant new value and a comfortable business environment.

Design and construction: Takenaka Corporation



400/430 California

This building is in the center of the financial district of the City of San Francisco, and is also designated as the city's historical landmark. We have completed major renovation including a seismic retrofit, and preservation of the historical landmark.

This is a great "Value Add" example of the synergy effect from our expertise in design, construction and real estate investment.

* The underlined projects are initiatives implemented through special purpose companies (SPCs) or independently by Takenaka.

Delivering the Best Solutions to Resolve Customer Issues

Our customers require speedy responses that correspond to market changes, advanced building environments, and various safety and security concerns. We are responding to these customer needs with total engineering from the project planning stage to building plan development, design, construction and aftercare.



Wooden structures and buildings

We are promoting urban creation that supports rural revitalization and the realization of a decarbonized society by utilizing domestic wood materials combined with technological innovation. Our “urban wooden structures” are high-rise buildings incorporating timber in an urban area and are expected to act as a kind of mediator between urban areas and forests. We are promoting urban wooden structures through advanced wood material technologies, including Moen-Wood, a fire-resistant laminated timber developed and promoted by us, our wooden aseismic reinforcement, T-FoRest, and CLT utilization technologies aimed at realizing a sustainable society that links urban areas and forests. We will continue to contribute to our customers' businesses and the realization of a sustainable society through our various wooden construction solutions. We presented a high-rise wooden structure model, Alta Ligna Tower (20-story building), which is a hybrid building made of steel frames, concrete, and wood (including Moen-Wood) and CLTs as appropriate to secure aseismic performance. In realizing this building by 2025, we aim to further expand the high-rise wood construction market. We have already announced a project to build a 17-story rental office building utilizing timber. We plan to further promote our Forest Grand Cycle, sustainable cycle of forest resources and local economies, while at the same time aiming to resolve social issues concerning buildings together with customers and other stakeholders.

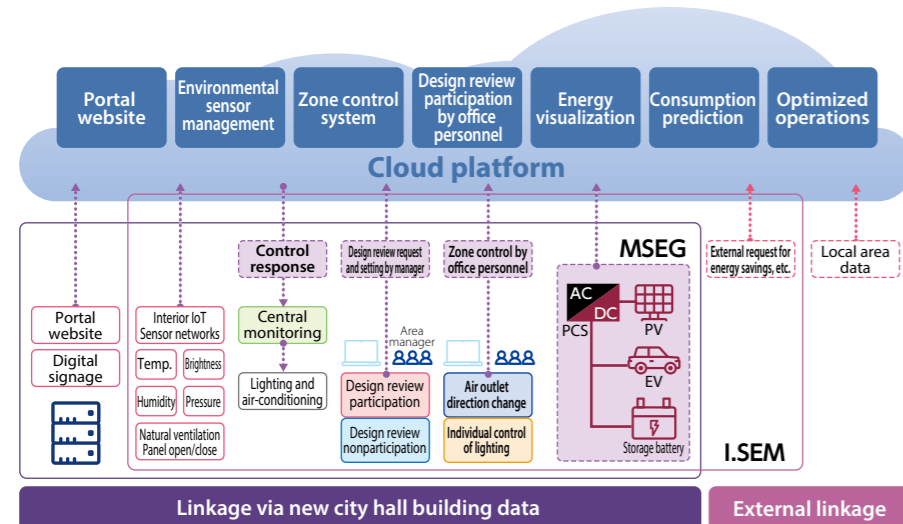


Alta Ligna Tower—high-rise wooden structure model



Achieving comfort and energy savings through IoT and energy management

In the project to build a new Yokohama City Hall, we installed a high-performance Building Energy Management System (BEMS) on a cloud platform to offer energy usage visualization, consumption predictions, and facility operation optimization. The offices are equipped with IoT sensor networks to enable visual monitoring of office environment conditions and the status of external natural ventilation panels. Aiming at simultaneously achieving comfort and energy conservation, the building also provides personal level energy control functions to improve office comfort and encourage energy-saving activities by all office personnel. The computer networks are configured with Internet connections to operate the portal website, while also providing a digital signage function protected by effective cyber security.

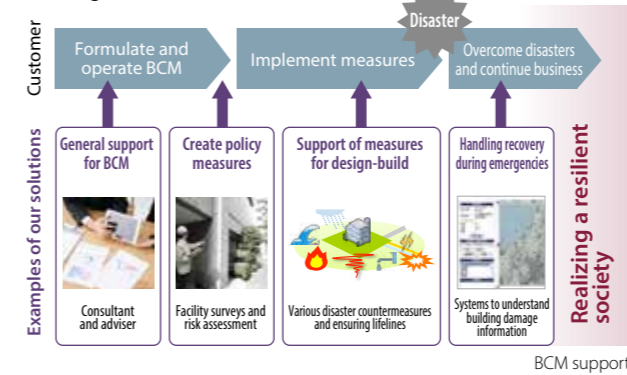


Yokohama City Hall



BCM and risk management

In response to frequent disasters and the ongoing pandemic, BCM and risk management measures have become a focus of attention. We can offer risk-resilient buildings with a wide hazard coverage, including natural disasters such as earthquakes and flooding, infectious diseases, lifeline shutdown, as well as security against physical theft and virtual theft of information. For customers who are simply interested in BCM without specific plans for building restoration or renovation, our dedicated BCM team can offer support from the aspect of both management and implementation. Forming close partnerships with our customers, we respond to a range of risk management needs and contribute to realization of resilient buildings and urban areas.

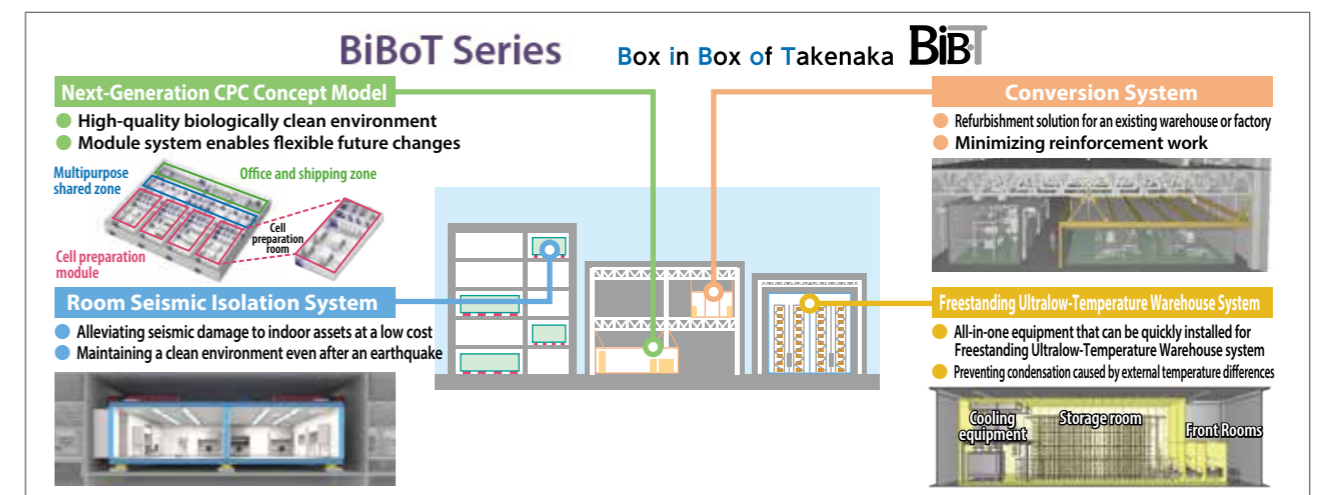


Flood shutter installation



BiBoT Series quickly constructs high-tech facilities

To respond to rapidly advancing social needs, laboratories and production sites must keep their facilities and production lines fully up to date through quick and flexible performance upgrades and expansion. Takenaka offers the BiBoT (Box in Box of Takenaka) Series, new construction packages that deliver quick setup of high-tech facilities, such as clean rooms. The series comprises the CPC Concept Model, the Room Seismic Isolation System, the Freestanding Ultralow-Temperature Warehouse System, and the Conversion System. These product packages can respond to various customers needs, including research and production facilities for regenerative medicine, biomedicine, and electronic devices, as well as healthcare facilities and data centers. The packages can also be used to refurbish existing buildings, such as unused factories and warehouses.

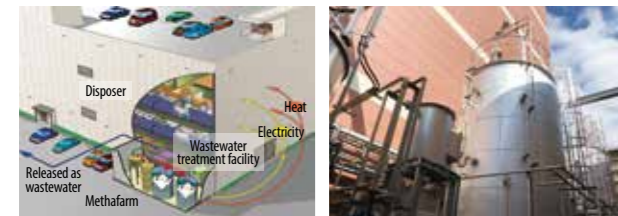


Delivering the Best Solutions to Resolve Customer Issues



Initiatives for the field of recycling resources

One of the urgent issues facing corporations is achieving SDGs and shifting to a circular economy. In this trend, our new recycling technology, Methafarm, is drawing attention as a means to convert food waste into energy within corporate premises. Abeno Harukas is equipped with this technology, processing three tons of food waste per day since its opening in 2014. Based on this first project, we have developed a more compact model that processes one ton per day. This second model will start operations in a shopping center in December 2021. We continue to respond to customer requests through improving the food waste recycling ratio and CO₂ emissions reduction.



Conceptual diagram of Methafarm installed in a commercial complex

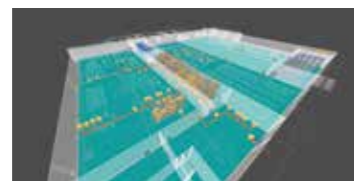


Methafarm in an eco-friendly shopping center



Productivity improvement through automation and labor reduction in factories and warehouses

In response to decreasing numbers of workers and the demand for productivity improvement, IoT and other technologies are being progressively installed in production and logistics facilities to automate them and reduce labor. Our exclusive logistics engineering offers automation and labor reduction through quantitative and objective data analysis, including an estimate of working hours reduction. Making the best use of the know-how that we have cultivated over the years, combined with the latest technology, we offer design and facility planning toward the "New Normal era," aiming to contribute to productivity improvement and automation.



3D simulator for optimum layout efficiency



Automated storage/distribution system (right and left)



Stadiums and arenas evolving with time

We have constructed a large number of stadiums including the five major baseball stadiums in Japan, as well as other concert and exhibition arenas. We provide numerous solutions to adapt the buildings to changing social needs, such as pandemic prevention, evolving telecommunication technologies, and multipurpose usage for better profitability, in order for these stadiums to be used over a long period. We also take into consideration that such stadiums can contribute to the safety of their local areas by allowing them to be used as community emergency hubs. In this way, our comprehensive urban creation can contribute to community revitalization. We continue building stadiums and arenas that can serve users through changing times.



Tokyo Dome City



Panasonic Stadium Suita (AJU Prize 2020 (Architectural Design Division))



Radiation protection technology

As the application of radioactive technologies has widened in recent years, radiation protection devices have become indispensable, particularly in modern medical fields. Ahead of competitors, we began research on radiation protection technology and successfully developed RadBoard (patent pending), a lead-free radiation shielding board made from eco-friendly, natural nonorganic materials. This recyclable product has a low environmental impact and is already in use at a number of radiation facilities, including the East Japan Heavy Ion Center, Faculty of Medicine, Yamagata University. The number of advanced medical facilities using radiation is expected to increase, and we are keeping our technology up to date to match the characteristics of such facilities. We continue to contribute to realizing eco-friendly and safe medical facilities through our abundant experience and solutions.



East Japan Heavy Ion Center, Faculty of Medicine, Yamagata University



CT simulation room installed with RadBoard-X

New Normal—Initiatives during COVID-19 and post-COVID-19

Seven tips for the future

In response to the COVID-19 pandemic, we have offered and implemented various infection prevention and control measures in medical and other institutions. Amid a situation where we will continue to live with corona viruses into the future, what can our company do? Under the theme of "spaces for working," which is an indispensable part of urban life, experts in fields such as IT, urban creation, building design, workplaces and equipment examined hypotheses and measures from two perspectives, "with" and "after." The results of these discussions were compiled and published on our website as New Possibilities for Workplaces During COVID-19 and Post-COVID-19—Seven Tips for the Future. We outlined possible issues faced by our stakeholders and proposed a range of specific solutions.



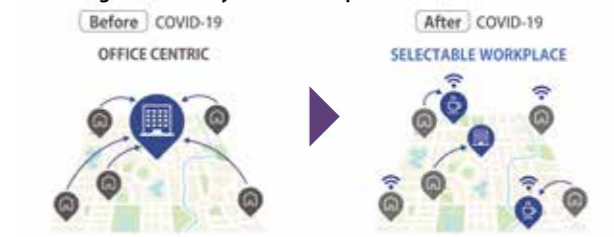
Experts in the workshop

Index sheet

Redefining "work styles" and "workplaces"

The COVID-19 pandemic has significantly changed the sense of value of "work styles" and "workplaces," and choices have expanded quickly. Places to work can now be selected depending on the type of work, and this has changed the expected roles of existing offices. We will respond to changes in work styles and workplaces together with our customers, looking toward the end of the pandemic and proposing solutions that can also further improve corporate value.

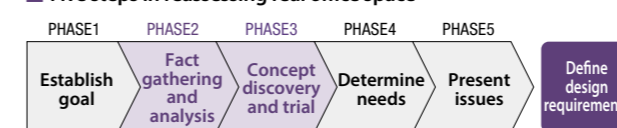
Changes in work styles and workplaces



Nine roles required of a real office



Five steps in reassessing real office space



Reassess real office space considering office functions, number of people, and expansibility. changes due to COVID-19
Phases 2 and 3 reassess (1) Required functions of the office, (2) Percentage of employees present at the office, and (3) Required social distancing in the office.

Five solutions to resolve customer issues

We organized customer issues related to the COVID-19 pandemic into five areas and proposed solutions. As well as utilizing existing technologies to resolve such issues, we are also developing new technologies.

(1) Purify the air

Our airflow simulation visualizes air ventilation within a building during the planning stage to optimize air-conditioning control.

(2) Change work styles and usages for facilities

Together with our customers through workshops and so on, we will examine new work styles and usages for facilities in the era of COVID-19 and post-COVID-19.



Office activity card

(3) Reduce human contacts

Utilizing technologies to predict the flow of people and real-time distance measurements, we offer floor plans that can control human contacts.

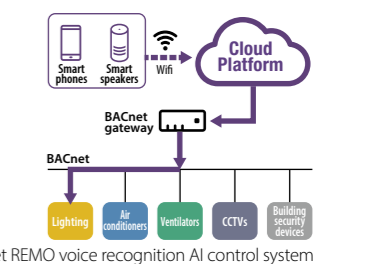
(4) Distancing

We aim to reduce infection risks by visualizing human locations and environmental data within an office. This function can support seat allocation in a free address office.



(5) Reduce virus exposure

Utilizing IoT and cloud technology, we centrally control equipment inside and outside of facilities remotely without touching things (equipment, etc.)



Tweet REMO voice recognition AI control system

Accelerating Technological Development Through Open Innovation

Today technological advancement is dramatic. To respond to diverse demands from our customers, we seek to accelerate our technological development utilizing external expertise and technologies. We actively promote open innovation to develop technologies for future society and the environment, and promote digital transformation in the construction industry, always aiming to contribute to society.



<https://www.takenaka.co.jp/rd/>

Promoting open innovation

We are expanding our businesses with a focus on increasing corporate value, pushing beyond the borders of the traditional construction industry. Such areas include a business acceleration service that helps specialist start-up companies by sponsoring business networks, offering tangible assets, and providing funding. We also plan to reinforce our research areas and establish a new site for new value creation. In this way, we continue to propel and increase corporate value.

Takenaka Accelerator Program

The Takenaka Accelerator Program was established to boost new business creation working together with start-up companies. The first program was hosted with 01Booster Inc. under the theme of Connect with Urban Areas, Connect to the Future. We solicited applications from potential partner companies with whom we could create novel value through open innovation that would connect people, people and towns, past and future, real and virtual, work and life, people and skills, and local and urban areas.



Result presentation for the Takenaka Accelerator Program

CO-creation Takenaka-Lab, Otemachi

We established an open laboratory within Inspired.Lab, which is a collaborative office for start-up companies located in Otemachi, Tokyo. Our research and development efforts to resolve various social issues have so far been limited to the members of our own laboratories and institutions. We opened this laboratory to the public to materialize such efforts as our Urban Creation Business that can lead to a sustainable society of the future through open innovation.



CO-creation Takenaka-Lab, Otemachi

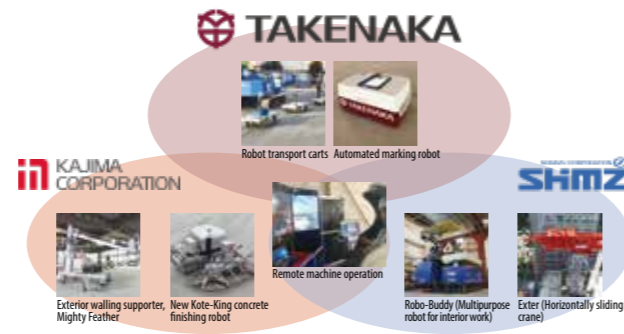
Open innovation in the construction industry

Digital transformation in the construction industry is urgently needed due to social changes and a decreasing population. Open innovation is an effective means to achieve this, and from here we need to be willing to work together to realize our dream of changing the construction industry, or our entire industry could be left behind by society. This section shows some of the initiatives we are making to advance digital transformation in construction and promote open innovation. There are ongoing joint endeavors with other companies, which possess technologies that can revolutionize construction itself and the industry as a whole.

Technological alliance utilizing construction robots

Takenaka and two other construction companies jointly formed a technological alliance and started the Construction RX* Project. Based on a memorandum of understanding for technological alliance, we plan to drive forward the development and mutual usage of technologies. We will expand this joint effort across the industry in order to resolve a range of difficulties that the industry is experiencing and to contribute to society.

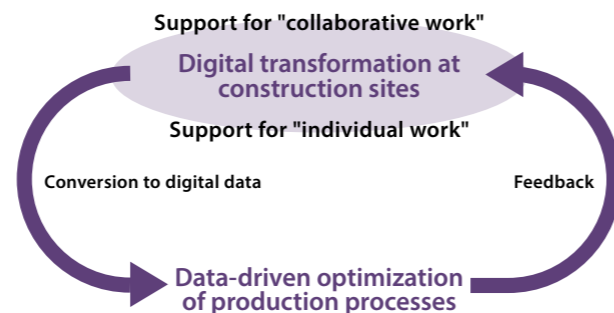
*RX: Robotics Transformation, following on from Digital Transformation (DX).



* Targets for technological collaboration among companies is currently being examined.

Digital transformation at construction sites

Takenaka and NTT Docomo are working together to optimize production processes through "business reform at construction sites by utilizing digital technology." The companies plan to change communication methods at construction sites, where many people often work together as a team.



Open innovation in areas of the environment and future society

Some of the priority development and research areas on which we should focus are those of future society and the environment. These areas overlap with our core business—construction—but we feel that we do not yet have sufficient expertise in them. To address this issue without delay, we are collaborating with researchers, technicians, and academics in these areas to produce practical results to keep up with social demands. The following are some of our open innovation research projects, including those with results, ongoing projects, and others that we have just started.



Town visualization (Social Heat Map)

This is a tool to visualize the qualitative evaluation* of a city by analyzing the contents of SNS posts with AI (patent pending). We are supposing utilization scenarios such as extracting new appeal and issues for towns, impact assessments before and after events and redevelopment, and analysis of commercial areas.

* As shown in the figure on the right, for example, areas where people have positive/negative feelings in a city are evaluated.



Social Heat Map



Space frontier

The whole world is now advancing toward realization of a space dream—human exploration of the moon, trips into space, and even living in space. In collaboration with external organizations, the Takenaka Research & Development Institute is making progress in space research in three different areas toward a sustainable future life. We are contributing to Japan's competence in space technology through our research activities.

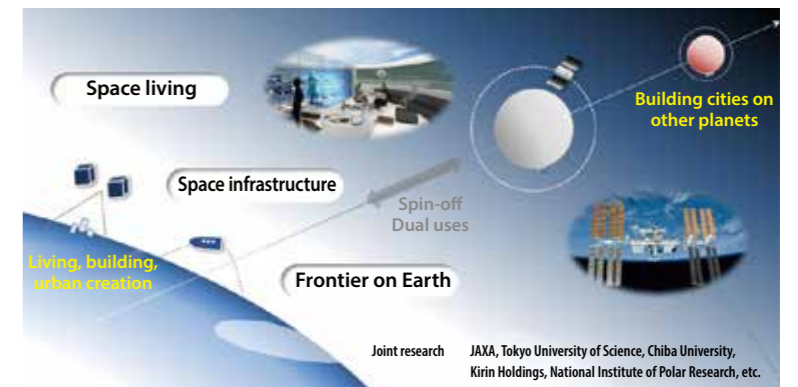


Diagram of activity areas for space and frontier fields



Biodiversity and green infrastructure (SHIRABENOMORI SHI-RA-BE)

We are actively promoting collaboration with researchers and engineers inside and outside the company as well as people in local communities. At the same time, we are advancing research and development in the fields of green infrastructure and biodiversity preservation as multipurpose and innovative solutions that restore nature. Through these activities, we are contributing to the creation of a sustainable society.



SHIRABENOMORI SHI-RA-BE at the Takenaka Research & Development Institute

Business Activities of Major Domestic Affiliates

Takenaka and its affiliates are committed to meeting the diverse needs of our customers at every stage of the urban life cycle.

■ Takenaka Civil Engineering & Construction Co., Ltd.

Becoming a vibrant company by making things that are people friendly and environmentally friendly

Established in 1941 as a Takenaka Group company responsible for civil engineering works, Takenaka Civil Engineering & Construction marks its 80th anniversary this year. Under the group's Management Philosophy, "Contribute to society by passing on the best works to future generations," the company is striving to enrich people's lives by developing safe and secure social overhead capital. In light of the recent social environment, moreover, it is working on national resilience and disaster prevention and mitigation. Then, with a mind to build infrastructure that coexists with the environment, the company is aiming to further improve its corporate value by extending the life of social overhead capital stock and reshaping productivity through the use of ICT. The company established its 2025 Vision on the its 75th anniversary in 2016. Activities are underway to strengthen the company's business foundation and technological capabilities, and to increase employee satisfaction by improving workplace conditions and enriching work-life balance as a way to unify the vision of the company's top management with its employees. In addition, with its corporate message "Bridge between people and the earth" shared by all of its employees, the company will strive for sustainable development by challenging new business areas with a sensitivity to contemporary developments, and it will evolve into a "vibrant company brimming with appeal" while fulfilling its social responsibility.



Kuzuha River Bridge, Shin-Tomei Expressway



East Neguma Tunnel, Chubu-Odan Expressway



Korekawa Solar Power Plant, Hachinohe City

■ Asahi Corporation

Providing the best products and services with thoughtfulness and flexibility

Asahi Corporation provides quality construction materials and related products from its procurement network covering Japan and other countries, and it employs its original technologies in construction to contribute to smooth management at work sites. The company has an extensive track record in greening with its integrated construction technologies, and it offers a comprehensive service that includes urban landscape design and garden planning, construction and maintenance. It is committed to exploring new business fields as a specialist group with capabilities in trading, civil engineering and procurement. This will enable it to become a partner that can open up the future, showing consideration and flexibility to its customers, and become an outstanding company with value that can advance the growth of the Takenaka Group.



Aichi International Exhibition Center: Vertical Forest Light

■ TAK E-HVAC Corporation

Building people-friendly and earth-friendly environments

TAK E-HVAC is a general facilities services company that improves the environment and spaces through total engineering that cover electric power, water and wastewater and air-conditioning facilities. From planning proposals to carrying out construction as well as after-sales service, the company demonstrates consistent, high-level engineering capabilities to provide facility environments meeting all needs. In contributing to a decarbonized society and bringing greater comfort to the office environment, the company has introduced the latest energy-saving technology to its new projects and is involved in renovations that result in zero-energy buildings (ZEBs). As the Takenaka Group company responsible for engineering services that serve customers by creating people-friendly and earth-friendly environments, it will continue to create better environmental spaces in the transition to a sustainable society.



MEGURO CENTRAL SQUARE

■ Asahi Facilities Inc.

Preserving the value and safety of customer buildings

Ever since its establishment in 1969, Asahi Facilities has served its customers by protecting the value and safety of their assets. As the best possible partner, the company provides one-stop services in building management, including structural and facility maintenance, security management, cleaning, etc., for office buildings, hospitals, hotels and commercial facilities throughout Japan; property management services designed to increase asset revenues; and insurance agency services in mainly nonlife insurance. A building becomes a quality asset only through the extended life of its functions. As professionals in building management, the company utilizes its technology to provide swift responses, and it proposes solutions optimized with cutting-edge ICT to meet building management needs that are growing in sophistication and diversity to include environmental protection, energy conservation and waste reduction in order to protect its customer buildings as quality assets. The company will continue to offer the best in building management and solutions through quality work to protect the lives of people and pass "cities" to the future.



Rooftop facility inspection



Centralized facility monitoring



Power generator inspection

■ TAK-QS Corporation

Supporting construction through accurate quantity surveying

TAK-QS was established in 2003. It is the company responsible for Takenaka Corporation's quantity surveying on construction projects, and it receives commissions mainly from Takenaka Corporation for quantity surveying on finishings, building structures, steel structures and M&E. Recently, it has started receiving commissions from companies outside the group. It has business offices in Tokyo, Nagoya and Osaka with roughly 100 employees, using the latest quantity surveying systems to provide its services. The company will continue to offer speedy quantity surveying data of outstanding accuracy at all stages of construction. It plans to expand the scope of its business with the technological capabilities it has developed in quantity surveying engineering to improve the quality and productivity of the entire group.



Quantity surveying plan meeting with construction drawings

■ Urabandai Kogen Hotel

A hotel where guests can enjoy "treasured moments" to the fullest

Located on the north side of Mount Bandai, this hotel has served a large number of customers since its opening in 1958. From 2009 it has added new attractions that include hot spring baths, expansion of the baths and renovation of guest rooms into Western-style rooms. It received recognition as an outstanding work of architecture, winning the BELCA Award in 2014 and the JIA 25 Award in 2017. Combined with enhanced hospitality, including its friendly and welcoming customer service and the best cuisine created with local ingredients, the hotel continues to enjoy a devoted patronage. It offers customers "treasured moments" during their stay along with the scenic view from a hotel known as the treasure of Mount Bandai.

* The hotel is a wholly owned subsidiary of Asahi Properties Inc., a Takenaka Group company.



Exterior view of the hotel from the Yarokunuma Nature Trail

2020-2022 Action Plan for a Sustainable Society

To build a sustainable society through architecture and urban creation, our company has outlined goals that are designed to meet the expectations of our stakeholders in the form of "dreams." Such stakeholders include the "global environment," "local communities," "markets (customers, users, etc.)" and "employees and partner companies." To realize these dreams, we identified the major objectives (materiality) that must be resolved through our corporate activities (business and nonbusiness) based on our Group CSR Vision and Group Growth Strategy in 2020. We then established targets and KPIs based on

implementation measures in our "2020-2022 Action Plan for a Sustainable Society" As the first year of the three-year plan, action to achieve the targets and KPIs began in 2020. The results for 2020 and the principal initiatives are reported on page 37 and subsequent pages. We plan to engage our stakeholders and experts in discussions over the 2020-2022 Action Plan for a Sustainable Society in order to refine the plan, achieve our targets and work as an integrated engineering firm for urban creation, thereby contributing to building a sustainable society.



Major objectives groups	Major objectives (materiality)	Scope of impact				Measures	Indicators (KPIs)	Targets		Results		Contributed SDGs
		ES	C	E	S			2020	2021	2022		
Sustainable architecture and urban creation Pages 15~16, Pages 37~38	Developing architecture and services that give consideration to the environment (zero energy and decarbonization) and society	○	○			Promote wooden structures and buildings.	Number of wooden structures and buildings projects	11	9	13	15	11 SUSTAINABLE CITIES AND COMMUNITIES 3 HEALTHY PLANES 7 AFFORDABLE AND CLEAN ENERGY 13 CLIMATE ACTION 15 LIFE ON LAND
						Promote zero-energy buildings (ZEBs) and energy management.	Number of ZEB projects/energy management proposals	10/10	13/24	15/13	20/15	
						Promote "wellness" buildings.	Number of wellness construction certification	5	5	7	9	
	Creating social systems for sustainable urban areas	○	○			Define urban creation activity fields and implement concrete action to resolve social issues.*1	Number of social system demonstration tests and other activities	9	9	10	10	
						Promote business operations by building social systems.	Number of new business operations	2 or more in 3 years	1	2 or more in 3 years		
						Create projects that serve as starting points for urban creation.	Number of project proposals	3	5	5	5	
						Improving the resilience of buildings and urban areas	Expand and apply disaster countermeasures/support menu.	Expanding the support menu (number of cases in development and application)	Studying menu expansion	4 in expansion	Starting 2 pilots from 4 ongoing development projects	
Extending building life spans and improving stock maintenance and utilization	○	○			Strengthen research and proposal technologies for asset management and facility operation that will continue to create value.	Number of cases in which promoted component technologies were applied Number of proposals contributing to extending property life	Survey and research Studying proposal materials	Identifying component technologies Studying proposal materials	3 2	6 4		
					Passing on traditional culture and recreating value	Promote preservation, restoration and use of traditional architecture and historical buildings.	Number of traditional architecture preservation and renewal projects	3/5	5/6	3/5	3/5	
Harmony with the environment Pages 13~14, Page 39	Reducing CO ₂ emissions in our business activities	○	○	○	○	Promote reduction of CO ₂ at work sites and offices (Scopes 1 and 2) Intensity.	Emissions during construction work (JPY)	10.1 CO ₂ tons/100 million	9.9 CO ₂ tons/100 million	9.9 CO ₂ tons/100 million	9.7 CO ₂ tons/100 million	13 CLIMATE ACTION 15 LIFE ON LAND 9 AFFORDABLE AND CLEAN ENERGY 12 RESPONSIBLE CONSUMPTION AND PRODUCTION
						Office energy consumption reduction rate (YoY)	1% or more	-0.5%	1% or more	1% or more		
	Responding to future climate change	Design: Establish guidelines for adapting planning to climate change.*1 Construction: Develop and implement construction technologies in response to climate change.*1	Degree of progress	Design: Gathering Information Execution: Studying component technologies	Gathering information and organizing issues Studying component technologies	Forecast and planning Developing technologies to address rising temperatures	Establishing guidelines for applicable plans Starting pilots for applicable technology to address rising temperatures					
	Consideration for biodiversity	Promote biodiversity improvement projects.	Number of biodiversity improvement projects	10	10	12	15					
Resource recycling and waste reduction	○	○	○	○	Examine resource recycling and waste reduction from the upstream stage of design and procurement. Promote waste recycling at new construction sites.	Construction by-products recycling rate (per volume)	93.0%	94.9%	93.5%	94.0%		
					Developing advanced technologies and promoting innovation	○	○	○	○	Promote robotics, AI and digital data utilization, and develop advanced technologies such as new materials.	Frequency of application and commercialization	10
Promoting cocreation activities*2	○	○	○							Create venues and schemes for exchange by diverse people.	Number of exchange venues and events	Managing performance
					Implement total urban creation development activities through area management and community design.	Number of activities through area management and community design	Managing performance	5	5	5		
Work style and productivity reform Pages 17~18, Pages 40~41	Guaranteeing appropriate working conditions, including work hours	○	○	○	○	Ensure appropriate construction periods and human resources. Reduce work after project start-up by front-loading work.	Site closure achievement rate	Closed for 7 days every 4 weeks: 100%	Closed for 7 days every 4 weeks: 28.9%	Closed for 8 days every 4 weeks: 100%	Closed for 8 days every 4 weeks: 100%	8 DECENT WORK AND ECONOMIC GROWTH 5 GENDER EQUALITY 9 AFFORDABLE AND CLEAN ENERGY 10 AFFORDABLE AND CLEAN ENERGY
						Pursuing construction processes that are sustainable and highly productive	Reduce labor hours by incorporating design with industrialization and highly efficient construction methods. Optimize processes through BIM and digital fabrication, and reduce unnecessary rework.	Value of completed work rate Value of completed work management rate	¥18,100/man-hours ¥116,000/man-hours	¥17,800/man-hours ¥97,000/man-hours	¥18,800/man-hours ¥121,000/man-hours	
	Realizing healthy and rewarding workplace environments with a diversity of people	○	○			Introduce diverse work styles by promoting work-life balance (WLB).	Employee satisfaction	3.60 or higher	3.55	3.65 or higher	3.70 or higher	
						Promote diversity.	Percentage of women in managerial positions	4.5% or more	4.5%	5.0% or more	5.5% or more	
						Implement PDCA management based on healthy management guidelines, etc.	Total evaluation score of survey on health and productivity management	500 or more	537	500 or more	500 or more	
	Eradicating discrimination and harassment	Implement harassment environment survey, and education and instruction.	Education rate	100%	100%	100%	100%					
	Securing, developing and retaining human resources	○	○			[Employees] Review young employee training in response to environmental changes.	New graduate turnover rate (in third year with company)	3.5% or less	3.40%	3.0% or less	3.0% or less	
[Partner companies] Review recruitment activities and payments in tandem with partner companies. Train skilled workers and develop programs to pass on skills.						Number of new skilled workers	720	888	720	720		
Steady production processes Page 42	Providing safe architecture and services with high quality	○	○	○	○	Building in quality from the design stage including our partner companies.	Number of serious quality problems	0	1	0	0	12 RESPONSIBLE CONSUMPTION AND PRODUCTION 11 AFFORDABLE AND CLEAN ENERGY
	Realizing work sites without accidents or public disasters	○	○	○	○	Promote safety-oriented planning, and improve knowledge and awareness among a diverse workforce.	Number of significant workplace accidents or public disasters	0	1	0	0	
	Realizing sustainable supply chains	○	○	○	○	Disseminate and apply CSR procurement guidelines.	Dissemination and application rate	Dissemination rate 100%	Dissemination rate 100%	Application rate 100%	Application rate 100%	
Continue environmentally conscious green procurement.						Number of major green procurement items/1 project	10 items or more	Design: 15.4 items/ Work sites: 13.5 items	10 items or more	10 items or more		
Sound organizational foundation Pages 43~44	Building trusted governance Thorough compliance Improving organizational transparency by promoting information disclosure and dialog Establishing risk management Ensuring information security Respecting human rights	○	○	○	○	Control and manage with CSR Promotion Central Committee and Compliance/Risk Management Committee.	Major compliance incidents	0	0	0	0	16 PEACE, JUSTICE AND STRONG INSTITUTIONS 5 GENDER EQUALITY 10 AFFORDABLE AND CLEAN ENERGY

ES: Environment and society C: Customers E: Employees S: Partner companies

*1 Description of policy revised *2 Change in description *Participating in communities and forming partnerships* and review measures and indicators (KPIs).

Sustainable Architecture and Urban Creation



Having committed ourselves to resolving social issues through our business activities, we are promoting sustainable architecture and urban creation by creating social systems for sustainable urban areas and improving resilience while giving consideration to local communities and the global environment in order to continue to grow while earning trust from society.

Developing architecture and services that give consideration to the environment (zero energy and decarbonization) and society

Promote wooden structures and buildings.

Related topic: Engineering > Wooden structures and buildings (Page 27)

We are promoting wooden structures and buildings, and utilization of Japanese timber by developing fire-resistant laminated timber, Moen-Wood (patented) and various application technologies for cross-laminated timber (CLT). Using more timber in construction helps maintain and care for forests, as well as invigorates the forestry industry and local communities. We are actively disseminating our Forest Grand Cycle concept, which promotes sustainable timber utilization.

FLATS WOODS KIBA (Koto-ku, Tokyo) is a studio apartment complex that was completed in February 2020. Amid a global trend of timber utilization in urban buildings, this is a pilot project that provides a new option of "wooden construction" for a high-rise building in Japan, where high fire-resistance and earthquake resistance is required. The apartment complex is an embodiment of the advanced technologies that we have developed, including Moen-Wood beams reinforced by steel frames, Moen-Wood columns for exterior use, and aseismic walls made from layered CLT blocks. At completion of the building, we held a "pre-experience" session inviting a number of customers to see a range of our technologies, as well as experiencing the comforts of a wooden space and learning about our Forest Grand Cycle activities. (Good Design Award 2020)



FLATS WOODS KIBA, a pre-experience session

KPI Number of wooden structures and buildings projects

Result: 9 (Target: 11)

Promote zero-energy buildings (ZEBs) and energy management.

Related topic: Engineering>Achieving comfort and energy savings through IoT and energy management (Page 27)

We are promoting the expansion of zero-energy buildings (ZEBs) and energy management systems, which contribute to a decarbonized society.

In Yokohama City Hall's new building, which we completed in January 2020, we installed a range of energy-saving technologies, including a natural air supply from all around the building, natural ventilation through void spaces, ceiling radiant heating and cooling, desiccant air conditioners (patented), a geothermal utilization system and fuel cells. With these installations, the building achieved ZEB Ready* (planned values). As a means of energy management, we installed a demand response system that could be controlled by individual office personnel. We also achieved ZEB Ready in the actual operations of the Optage Building (Osaka), an office complex we completed in 2017. In this building, we installed natural ventilation through void spaces (patented), a personal air-conditioning system with radiant cooling, the Vapor Crystal System using medium temperature cold water, and an energy management system.

* ZEB Ready: A building that provides energy savings of more than 50 percent of the primary energy consumption.

KPI Number of ZEB projects

Result: 13 (Target: 10)

KPI Number of energy management proposals

Result: 24 (Target: 10)



Yokohama City Hall

OPTAGE Building

Details on the Internet

- Creating social systems for sustainable urban areas*
 - Extending building life spans, and improving stock maintenance and utilization
- Please check our website for more information on the above. *1 Please refer to pages 15 and 16 for details.

https://www.takenaka.co.jp/takenaka_e/library/es_report/



Promote "wellness" buildings.

Related topic: Engineering > Achieving comfort and energy savings through IoT and energy management (Page 27)

Aiming to create spaces to make people healthier, we are promoting "wellness" buildings. One example is the renovation of our Tokyo Main Office. The renovated building was awarded Gold level under U.S. WELL certification. In this building, office compartments were placed around the courtyard of the original building, incorporating a stairwell that delivers natural light and natural air ventilation. It is an activity-based working (ABW) office equipped with height-adjustable desks and spaces for concentrated work, where workers can choose a location to work depending on their tasks. The rooms feature indoor greenery and water scenery, and the employee cafeteria offers varied menus, promoting healthy eating. In addition, a lounge was newly established as a relaxation space. An even more sophisticated ABW approach was adopted on the renovation project for the Takenaka Research & Development Institute (obtained an S rank in the CASBEE Wellness Office Certification). The entire building is three-dimensionally connected via a large central staircase and suspended staircases, encouraging communication and exercise.



Work lounge KOMOREBI surrounded by water and greenery (Takenaka Corporation Tokyo Main Office)



Office space centered around a large staircase and suspended staircases (Takenaka Research & Development Institute)

KPI Number of wellness construction certification (WELL certification, CASBEE-Wellness Office certification)

Result: 5 (Target: 5)

Improving the resilience of buildings and urban areas

Expand and apply disaster countermeasures/support menu.

The importance of a disaster-resilient society is rising against the backdrop of frequent large-scale flooding and future climate change risks. In order to make the buildings we produce more resilient to various disasters, including earthquakes, we are enhancing our coverage of disaster control measures and supports. In 2020, we helped customers identify their disaster risks by proactively offering a premises assessment service. We particularly focused on creating a comprehensive flood control menu that covered from risk identification through to control

measure implementation, aiming to support our customers' BCM in the event of a disaster. In addition to flood control, we continue developing other disaster control technologies according to the building type, such as a risk assessment for smart biofacilities and emergency measures for stadiums and arenas.

KPI Expanding the support menu (number of cases in development and application)

Result: 4 in expansion menu, starting development (Target: Studying menu expansion)

Passing on traditional culture and recreating value

Related topic: Architecture>Attractive renewal (Page 21)

Promote preservation, restoration and use of traditional architecture and historical buildings.

We have been working to create new value with traditional architecture and historical buildings, and we are continuing efforts to preserve traditional architecture through the transmission of technologies that we have cultivated over the years, and the utilization of such skills in both new construction and restoration work. As for cultural-property-class historical buildings, not only do we offer design and renovation work for better functionality, but we also offer a service to utilize them for new purposes. Then we provide a consultation and advisory service utilizing our design solutions for such buildings. We also started a Legacy Asset Utilization Business, making the best use of our experience with historical buildings. This includes a master lease option whereby we lease an entire property as a single tenant and then sublease it to other tenants as our active involvement in the scheme. The first project in this business was the restoration in 2018 of the former house of Mankichi Yamaguchi (a registered tangible cultural asset located in Kudanshita, Tokyo). In 2020, we commenced restoration of the Hori Building (a registered tangible cultural asset in Shinbashi, Tokyo). We plan to use it as a shared rental office that will induce innovation.



Hori Building

KPI Number of traditional architecture preservation and renewal projects

Result: Preservation 5/Projects 6 (Target: Preservation 3/Projects 5)

Harmony with the Environment



Based on our Environmental Policy, we are promoting environmental contribution activities according to an ISO 14001-certified environmental management system, which is aimed at building a decarbonized resource-recycling society in harmony with nature.

Consideration for biodiversity

Promote biodiversity improvement projects.

Related topic: Technological Development > Biodiversity and green infrastructure (SHIRABENOMORI SHI-RA-BE) (Page 32)

We aim to consider biodiversity in all of our works, and create and select advanced projects in particular as pilot projects. In the future, we will attempt to increase the number of projects where we apply the following as selection indices: consideration for local natural vegetation and historical land use, creation of ecological networks, and cocreation through stakeholder participation, which will take their input into account from the design stage through to the postcompletion maintenance management and operations stages.

KPI Number of biodiversity improvement projects

Result: 10 (Target: 10 or more)

Ibaraki City New Civic Center

This is a project to build a new civic center in a park next to Ibaraki City Hall, which is located in the center of Ibaraki City, Osaka. We are now holding workshops and discussions with local residents concerning utilization of the civic center and the park. The center's design incorporates the neighboring roads, streams and green areas, and it features existing trees and plants. We are aiming to create a community space that expands over multiple blocks.

Resource recycling and waste reduction

Related topic: Engineering > Initiatives toward the field of recycling resources (Page 29)

Examine resource recycling and waste reduction from the upstream stage of design and procurement. Promote waste recycling at new construction sites.

We are promoting 3R activities (Reduce, Reuse, Recycle) for waste produced in our construction work. In the project of building "mother's+" in Hokkaido, we recycled by-products and implemented thorough waste reduction practices taking into account the building's entire life cycle from design to disposal. We also utilized materials from Hokkaido to represent the customer's aim of "living in harmony with nature and contributing to the local community." Our focus was on the priority 3R issue—waste reduction—as well as recycling. We also actively adopted locally produced materials. Specifically, we (1) reduced waste by factory precutting timber using BIM*; (2) used larch and Sakhalin fir from Hokkaido as timber; (3) used local stone materials as coarse aggregate and crushed stone in concrete, and as finishing stones; and (4) incorporated a plan to recycle more than 80 percent of the timber in major components when dismantling the building. Our efforts received the Ministry of Land, Infrastructure, Transport and Tourism Minister's Prize under the 2020 3Rs Promotion Merit Awards.

* BIM: Building Information Modeling. A 3D digital model to represent a building.



Building structural frame made of larch from Hokkaido

KPI Construction by-products recycling rate (per volume)

Result: 94.9% (Target 93.0%)

Details on the Internet

- Reducing CO₂ emissions in our business activities
- Responding to future climate change

Please check our website for more information on the above.

https://www.takenaka.co.jp/takenaka_e/library/es_report/



Technical innovation and cocreation



We participate in technological communities, forming partnerships with various stakeholders to actively develop advanced innovative technologies, such as robotics, AI applications, and data digitalization in construction.

Details on the Internet

- Developing advanced technologies and promoting innovation
- Promoting cocreation activities

Please refer to pages 27-32 and check our website on the above.

https://www.takenaka.co.jp/takenaka_e/library/es_report/



Work Style and Productivity Reform



For a sustainable construction industry, we pursue highly efficient construction procedures and secure human resources by ensuring appropriate working conditions and training. We aim to realize a sound and rewarding workplace for a diverse range of people.

Guaranteeing appropriate working conditions, including work hours

Ensure appropriate construction periods and human resources. Reduce work after project start-up by front-loading work.

The long-term plans for work style reform and securing construction workers are progressing under the joint efforts of the government, construction industry, and customers. Such efforts include the Action Plan to Realize Two-Day Weekends, which started in April 2018 by the Japan Federation of Construction Contractors; the revised Construction Business Act (prohibition of extremely short construction periods), which came into effect in October 2020; and the revised Labor Standards Act (regulations

on long working hours), which will come into effect in April 2024. We have published and distributed a leaflet to clarify the various issues to our employees, and to gain the understanding of our stakeholders, such as customers and partner companies.

KPI Site closure achievement rate

Result: Closed for seven days every four weeks 28.9% (Target: Closed for seven days every four weeks 100%)

Pursuing construction processes that are sustainable and highly productive

Reduce labor hours by incorporating design with industrialization and highly efficient construction methods. Optimize processes through BIM and digital fabrication, and reduce unnecessary rework.

In the Honmachi Sankei Building project, we had made detailed adjustments before the actual work began. By matching BIM data in various stages together with architects, work sites, and partner companies, we coordinated the complicated process of fitting external cladding to standard floors. In this way, we ensured constructability to prevent misfits at cladding joints and any rework. We also worked on ceiling installation in the office area

with the related partner companies at an early stage to eliminate interference between joists and piping, which successfully reduced the actual labor hours.



Standard floor construction model

KPI Value of completed work rate/ Value of completed work management rate

Result: ¥17,800/man-hour/ ¥97,000/man-hour (Target: ¥18,100/man-hour/ ¥116,000/man-hour)

Realizing healthy and rewarding workplace environments with a diversity of people

Promote diversity.

We are committed to the broader engagement of women and widening the scope of their job functions, including training programs to improve skills of the next generation of leaders and to promote our Komachi construction work team as well as incessant efforts to support women working at our project sites. In order to support employees in simultaneously managing childcare and work, we introduced a work-at-home or flextime system for childcare and family care, variable hours for those with outside duties, and an hourly time-off system for all employees in 2020. For senior employees, we revised our reemployment system in 2018 to enhance work opportunities for senior employees and offer better working conditions and multiple-year contracts. At the same time, we provide a support program to summarize their career, knowledge and skills prior to reemployment.



Komachi construction work team OMJ (Oyodo Minami Joshi)

KPI Percentage of women in managerial positions

Result: 4.5% (Target 4.5% or more)

Eradicating discrimination and harassment

Implement harassment environment survey, and education and instruction.

In our efforts to create a comfortable workplace environment, we are actively working to eradicate harassment under our policy not to tolerate unfair behavior. To assess working conditions, we regularly conduct surveys of the workplace environments of all our employees. The findings are used to update training programs (for managers) that are held annually for all line leaders in management positions who could potentially be involved in power harassment. The revised Act on the Comprehensive Promotion of Labor Policies came into effect in June 2020, requiring corporations to prevent power harassment. We are providing e-learning programs for all employees to increase

awareness of harassment and to disseminate detailed knowledge of the amendment, thus ensuring a safe and healthy workplace environment, and support for the sound mental and physical health of our employees.



Training program for managers

KPI Education rate

Result: 100% (Target: 100%)

Securing, developing and retaining human resources

Review young employee training in response to environmental changes.

For their first year, our employees stay in the Fukae Chikuyu Dormitory, which is exclusively for new employees, to gain OJT and other work experience in multiple business departments. Through these experiences, they acquire the necessary knowledge and professional mindset for personal growth, and they gain an understanding of our traditional spirit. In 2019, we rebuilt the dormitory and reorganized the employee training program, making improvements in both the facility and the program. In addition, employee training programs for young and mid-level employees underwent a comprehensive review to make human resources development more effective. The new programs will be implemented from 2022.



Workshop production by new employees

KPI New graduate turnover rate (in third year with company)

Result: 3.40% (Target: 3.5 or less)

Review recruitment activities and payments in tandem with partner companies. Train skilled workers and develop programs to pass on skills.

We have published a pamphlet to convey the attractiveness of the construction industry to our new recruits. It explains in an easy-to-understand style the construction work process and appealing features of the industry, including the distinctive characteristics of each specialty construction company. It also answers questions that the parents of recruits may have. We distribute this to new recruits who are considering to join the company, and we use it as a tool to educate them about the construction industry and work styles. In addition, we have a

Takenaka Meister Certification program that gives recognition to outstanding managers and workers with a certificate and an award. Besides contributing to increased motivation, the program also promotes the development of skilled workers and the passing on of techniques to future generations by having them take on various roles within the workshop.

KPI Number of new skilled workers

Result: 888 (Target: 720)

Details on the Internet

- Introduce diverse work styles by promoting work-life balance (WLB)*1.
- Implement PDCA management based on healthy management guidelines, etc.

Please check our website for more information on the above. *1 Please refer to page 18 for details.

https://www.takenaka.co.jp/takenaka_e/library/es_report/



Steady Production Processes

With our Safety Policy and Quality Policy as a foundation, we work together with our partner companies to promote high-quality craftsmanship that meets customer expectations.

Providing safe architecture and services with high quality

Building in quality from the design stage including our partner companies.

Having standardized a workflow, which capitalizes on the merits of integrated design-build, as our Quality Assurance System (ISO9001 certified), our construction department and major partner companies work together to build in quality assurance from the upstream design stage.

At a work site of Kazo Logistics Center, we completed a 3D BIM construction model two months prior to arranging mat slab rebar work. Then using this model, we conducted inspections with designers, supervisors, work site people and partner companies, and preliminary checks on all fittings were completed before rebar work on site. During inspection of the actual rebars at the site, no issues were found

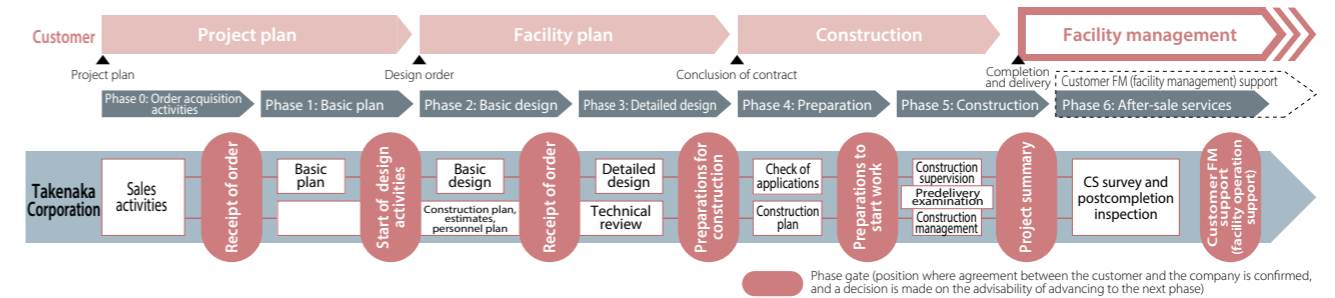
with the fittings, so high-quality rebar assembling work had been done, and this also led to improved productivity.

In addition, devising an erection method that adopted a structure of PC columns and S beams had the following advantages: (1) Temporary equipment, which is normally required (such as suspended work cages, columns, horizontal nets) were unnecessary. (2) Postconstruction work around the columns after erection was reduced, (3) The merit of being able to cast concrete in any weather was obtained with the roof going up first.

KPI Number of serious quality problems

Result: 1 (Target: 0)

Quality assurance system for architectural design and construction projects



Realizing work sites without accidents or public disasters

Promote safety-oriented planning, and improve knowledge and awareness among a diverse workforce.

We are promoting uniform safety activities at all branches in accordance with a companywide safety and health management plan, which is being established at the beginning of each year. For falling accidents in particular, which can lead to serious disasters, we always hold safety meetings before any dangerous work, and we are promoting preemptive safety planning by prior checking of work procedure manuals through which work plans and risk assessment are implemented. At the Takenaka Practical Technology Training Center, "Omoi," young employees as well as outside workers undergo safety training with real experiences based on sensory detection with the eyes, ears and hands. This hands-on training enables participants to refine and improve their awareness of safety, and prevent accidents before they happen. We also provide education for foreign technical trainees at the Safety Active Training Center (SAT-C), which opened in 2016 at our Tokyo Main Office. Through these efforts, we are working to realize workplaces free from accidents and public disasters by improving knowledge and awareness of safety among an increasingly diverse workforce.



Hands-on, sensory training by foreign technical trainees

Details on the Internet

- Realizing sustainable supply chains

Please check our website for more information on the above.

https://www.takenaka.co.jp/takenaka_e/library/es_report/



KPI Number of significant workplace accidents or public disasters

Result: 1 (Target: 0)

Sound Organizational Foundation



Based on our Corporate Philosophy, we practice Total Quality Management to earn customer satisfaction and society's trust. In doing so, we will fulfill our social responsibility as well as increase our social value as a corporation.

Control and manage with CSR Promotion Central Committee and Compliance/Risk Management Committee.

Building trusted governance

Based on our Internal Controls Basic Policy, we have established a Central Committee for Corporate Ethics to promote CSR activities including compliance, avoid and mitigate risk should a crisis occur, and promote crisis management activities in normal times. Then we are implementing system development, instruction and training for the entire group. In addition, we also direct our group companies to develop management systems, which conform to ours and are based on our Corporate Code of Conduct, and to put this code into practice.

Takenaka Corporate Code of Conduct	
Article 1	Realization of a sustainable society through customer satisfaction and urban creation
Article 2	Compliance with laws and social norms
Article 3	Disclosure and protection of information
Article 4	Respect for human rights
Article 5	Creation of workplace environments where it is easy to work
Article 6	Contribution to global environment
Article 7	Contribution to society
Article 8	Comprehensive crisis management
Article 9	Respect for international norms and contributions to each country and region
Article 10	Implementation system, and response to violations

Thorough compliance

● Building compliance systems

We established a Compliance Committee under the CSR Promotion Central Committee as a system to promote thorough compliance. In addition to checking the response status of individual cases and giving instructions on recurrence prevention measures, this committee identifies critical risks, establishes action policies, and checks the implementation status of programs.

We have also set up committees at branches, and we are attempting to develop policies and programs. In addition, we have set up multiple contact points for consultations and whistleblowing from within our company, group companies and business partners as well as a window to accept inquiries from the general public. These activities enable us to ensure that our businesses are functioning in an ethical manner.



CSR and Compliance News

● Continuous implementation of awareness activities

We are promoting training and awareness activities not only in the form of our job classification education program, but also since 2009 through the monthly releases of CSR and Compliance News for all employees. The Takenaka Group's CSR and Compliance Awareness Month, every November, involves groupwide messages, CSR executive seminars by guest speakers, workplace meetings, promotion of the various counseling and whistleblowing systems, self-monitoring e-learning quizzes and other activities. In addition, various group companies organize programs for Fair Construction Transactions Promotion Month. Through these activities, we are continuously promoting awareness to achieve a deeper and clearer understanding of compliance.



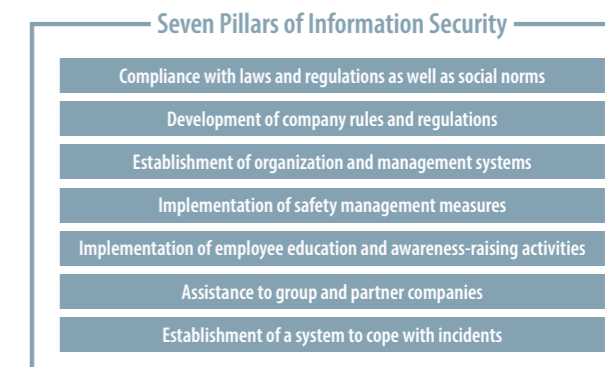
CSR and Compliance Meetings

Establishing risk management

We have developed systematic risk management with our Risk Control Committee, which is under the Corporate Ethics Central Committee, to deal with terrorism, cyberattacks, natural disasters, other accidents and antisocial activities that may threaten civic life and our business activities.

● Strengthening information security

We have established Seven Pillars of Information Security to increase the level of our information security and to protect the information assets of our customers. Especially with the growing threat of cyberattacks in recent years, we have introduced systems for early detection of external attacks and unauthorized entry to keep damage to a minimum. At the same time, we have developed an incident response system called TAKENAKA-SIRT. We organize training and awareness activities for all employees of the Takenaka Group across the world. These activities are also made available to our business partners to strengthen security throughout the supply chain.



● Developing and strengthening disaster response systems

Each year, disaster simulation drills are conducted as part of initial response training, and our earthquake disaster training is adapted to suit regional characteristics. Training in joint disaster measures involving employees of group companies is organized to verify the effectiveness of the companywide mutual cooperation system.

In view of the increasing number of disasters caused by typhoons and rainstorms in various parts of Japan in recent years, we have identified action items required in the event of a storm or flooding, and these are listed in a manual in preparation for such emergencies.

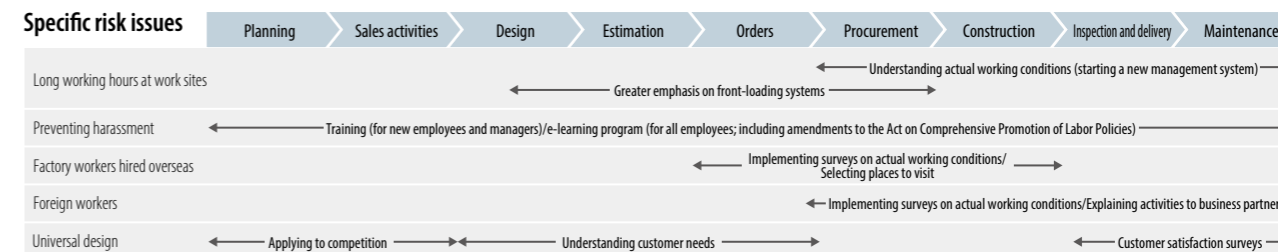
Promoting human rights

Based on the UN Guiding Principles on Business and Human Rights and in compliance with our Corporate Philosophy and Corporate Code of Conduct, we are promoting respect for human rights in our business activities. In 2020, we continued to work on five high-risk issues. On reducing long working hours, we have been working to increase productivity and to assess real conditions through dialog. In response to the revised Construction Industry Act, we have been promoting greater awareness of changes among employees. Efforts are underway together with our customers and business partners to ensure that construction periods are appropriate. In the area of harassment, we have organized e-learning programs for all employees in step with amendments to the Act on Comprehensive Promotion of Labor Policies to increase awareness of changes in the law. During Human Rights Week, we promoted employee awareness and understanding of

actions by administrative authorities, and we disseminated materials, videos and information about those activities. In December 2020, Mr. Hidemi Tomita of Lloyd's Register Japan was invited as guest speaker to review our activities and to provide suggestions on stakeholder dialog, recent local risks, etc. from a variety of perspectives. We will include these suggestions in our future initiatives.



Human rights activity review



KPI Major compliance incidents

Result: 0 (Target: 0)

Details on the Internet

• Improving organizational transparency by promoting information disclosure and dialog
Please check our website for more information on the above.

https://www.takenaka.co.jp/takenaka_e/library/es_report/



Promotion of Social Contribution Activities

Under the slogan, "With the local community," we will cooperate with various local stakeholders, and while conducting activities to contribute to local communities, we will strive to foster next-generation human resources and develop these communities by nurturing leaders who can resolve social issues with a sensitivity to social origins. In 2020, we developed and implemented various safety measures and ideas amid COVID-19.

● **Support for community educational activities**

The TAKENAKA kids' program *Tatemono Tankentai* (Building Explorers) was held at the new city hall construction site in Yonezawa City, Yamagata Prefecture. The program invites children to buildings to give them hands-on experience with distinctive characteristics of buildings. On the day of the program, a total of 70 children made up of third and fourth graders, and their parents participated in learning about the latest base-isolated technology used in buildings to protect them from earthquakes through quizzes, mock-up models, a base isolation simulation vehicle and other activities. This experience gave them a greater understanding of and stimulated their interest in architecture.



Children answering the base-isolated technology quiz

Experience via a mock-up model

● **Exchanges with and contributions to local communities**

Open House Osaka 2020, Japan's greatest civil engineering event, marked its seventh anniversary this year, which for the first time was an online event. To communicate the appeal of architecture, we participated by providing a video presentation of our works being planned by young employees who participated in these projects and an online tour of our Osaka Main Office using 360° camera technology.

● **Opening of a restored Chochikukyo, an important cultural property**

This residential wooden structure, located in Oyamazaki-cho, Kyoto Prefecture, symbolizes modernism in the early Showa period. It was the home of the late Koji Fujii, who belonged to our design group and later became a professor at Kyoto University. It was his project of experimentation in architectural design. Amid the COVID-19 pandemic, conservation work has been carried out on three of the closed buildings (main building, pavilion and tearoom), alongside reorganization of the Fujii archives that are a property of the house. The restored main house is scheduled to open to the public again in the spring of 2021. (Grand Mécénat Award in 2019)



Exterior of the main building after completion of restoration work



Sketchbook showing Chochikukyo design



Electrical stove and heating device (for use as a tea kettle) that Fujii designed and produced

● **Support for charitable foundations**

Through support of public interest foundations, we have been expanding our corporate patronage and scholarship programs, which are connected to the past, present and future. The mainstay of these activities is formed by the trio of the Takenaka Carpentry Tools Museum (passing on traditional technology to present and future generations), Gallery A4 (conveying modern architectural culture to the present generation), and the Takenaka Scholarship Foundation (nurturing future leaders). From January to March 2020, an exhibition titled *Chronicles of Architecture and Society: The 400-Year History of Takenaka Corporation* was held at Kobe City Museum. This was a commemorative project to mark the 120th anniversary of our company, and it was held in the city where our company was founded. We contributed by providing special support alongside our three charitable foundations for this public exhibition of architectural culture.



Exhibition for *Chronicles of Architecture and Society: The 400-Year History of Takenaka Corporation*

● **Takenaka Scholarship Foundation**

The Takenaka Scholarship Foundation, which was established in 1961 and based on our founder and first chairman Touemon Takenaka's philosophy of *kanon-hosha* (literally "gratitude for kindness" or his desire to repay society for the blessings he received from it), continues to be involved in efforts that include a scholarship program for the further development and education of young people. In addition to education and research subsidies, represented by a nonrepayable scholarship fund, from 2012 the foundation introduced projects in support of cultural and artistic advancement. This included the organization of exhibitions, and the foundation is also expanding its scope of activities for youth development.

● **Takenaka Carpentry Tools Museum**

The museum was opened in Nakayamate, Kobe City in 1984 with the purpose of "collection and preservation of carpentry tools, handing down the spirit of the master carpenter to future generations, and following the development of carpentry tools through research and an exhibition." In 2014, the museum was moved to a location near Shin-Kobe Station and housed in a structure that has a distinctly Japanese atmosphere and is filled with the scent of wood. It is attracting many visitors, including foreigners who are interested in Japan's traditional culture. The museum is also engaged in educational support and cultural promotion in the form of dispatching speakers to events and accepting trainees from universities.

● **Gallery A4**

Gallery A4 marks its 15th anniversary in 2020. It is organizing exhibitions on the concept of "architecture and enjoyment" and representing society through architecture. It offers many paths to experience architectural culture, as well as entertaining presentations that direct visitors' attention to urban development and environmental issues, topics related to nature and the environment, lifestyles and everyday living, and other opportunities for new discoveries and deeper understanding.

Corporate Governance

Organizational governance

—Improving management quality and confirming governance for rapid, accurate decision-making

● **Basic approach to corporate governance**

We are working to develop a corporate governance organization and effective management of the system through efforts aimed at improving the quality of our overall corporate activities to satisfy the demands of our customers, earn the trust of society as a whole, and raise our social value.

● **Preparation of company organization details and internal control systems**

● **System of Board of Directors and Corporate Officers**

The board of directors meets once a month or more often as needed in its capacity as a supervisory body for decisions concerning corporate management and business administration. The corporate officer system was also adopted in 2010 to accelerate the management decision-making process and enhance business administration and supervisory functions.

● **Board of Corporate Auditors**

The Board of Corporate Auditors, which consists of four corporate auditors, including two from outside, audits the execution of duties by the directors, including attendance at Board of Directors meetings.

● **Corporate Ethics Central Committee**

For further compliance with social ethics and regulations, we have created a new Corporate Ethics Central Committee headed by the president. Acting in unison with the already established Compliance Committee and Risk Control Committee, the new committee is promoting a corporate governance system.

● **Compliance Committee**

Headed by the executive officer in charge of compliance, this committee engages in training and greater awareness of compliance as well as exhaustive guidance for recurrence prevention.

● **Risk Control Committee**

Headed by the president, this committee responds to natural disasters and other risk events in a quick, prompt and reliable manner. At the same time, it promotes risk control activities during normal times.

● **Audit Office**

The Audit Office was set up as an internal audit organization to serve as a self-regulatory body for our business management activities to monitor the accuracy and validity of our business operations, financial accounting and the state of the group's assets.

● **CSR Promotion Department**

The CSR Promotion Department was set up at the Head Office to promote compliance education. Then, we have appointed CSR and compliance promotion officers, CSR compliance leaders, compliance officers and compliance subleaders at all business offices companywide to promote education and awareness.

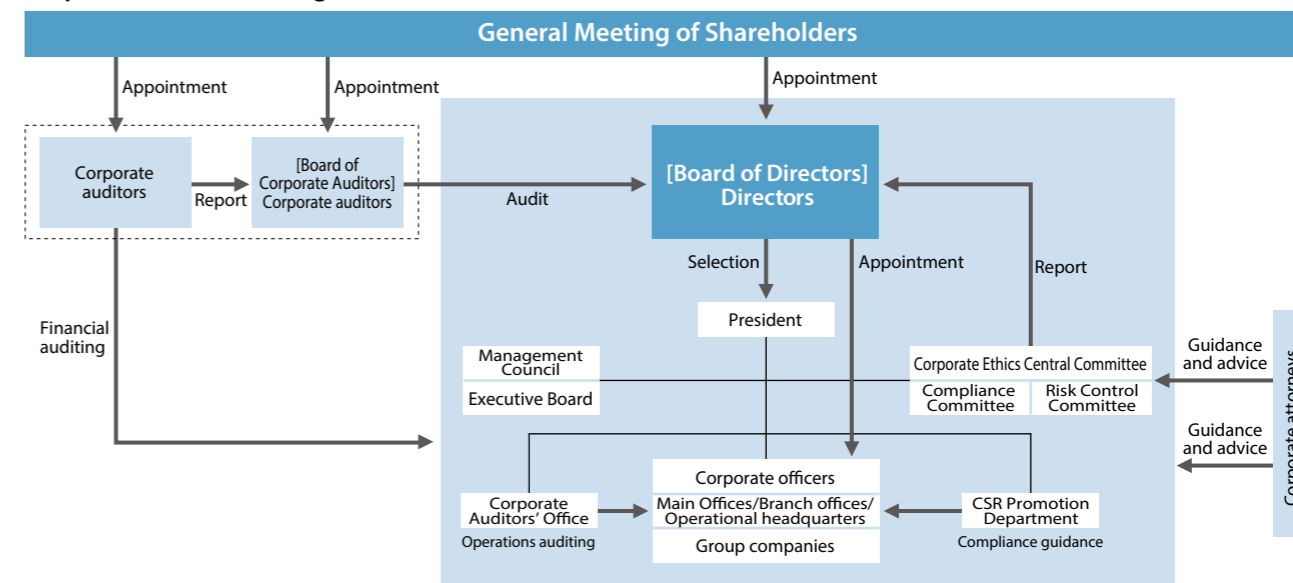
● **Corporate auditors**

In line with the Companies Act and the Financial Instruments and Exchange Act, the company is audited by an independent auditing firm from a fair and impartial standpoint.

● **Corporate attorneys**

We have concluded legal counseling service contracts with multiple law firms to receive guidance and advice as needed.

Corporate Governance Organization





ADACHI Naoki, PhD
CEO, Response Ability, Inc.

PhD in plant ecology from the Graduate School of Science, the University of Tokyo
After working for the National Institute for Environmental Studies (NIES) and the Forest Research Institute Malaysia (FRIM), he launched his own career, providing companies with guidance for establishing sustainable supply chains and sustainable management strategies, and sustainable branding. He serves as Executive Director for the Japan Business Initiative for Biodiversity (JBIB), Sustainability Producer for Sustainable Brands Japan, advisor for the Wild Bird Society of Japan and other posts. He is also a member of the Informal Advisory Group for Convention on Biological Diversity and various committees in government ministries. His writings include *Capitalizing on Biodiversity — a Sustainable Resource Strategy*.

The most noteworthy aspect of this report is the revised carbon emission reduction target, reducing 100 percent by 2050, which is a dramatic leap forward compared to past ones. Although it is mentioned briefly, reducing CO₂ emissions to zero is a challenging task, considering that it covers not only Takenaka's own emissions in business but also involves those from 30-year operation of the building.

In addition to maximizing the thermal insulation and energy efficiency of buildings, it will be necessary to ask owners to use renewable energy for their buildings. Therefore, Takenaka must propel a shift to renewable energy throughout society. For this purpose, the company is already engaged in renewable energy projects, and its engineering department has been strengthened to develop advanced building energy management systems. In these efforts, I feel the weight of Takenaka's commitment. Announcing such an ambitious target will certainly become a great incentive for employees, and this will also become a major stimulus for the construction industry as a whole.

In other areas, I was also impressed by the proactive use of engineering. There will be a great demand for more advanced technologies in both building management and the construction process. We also have the problem of the decline in the working population of Japan. Surprisingly, the company is engaged in developing technologies by itself to resolve such issues. I feel that Takenaka is already taking actions on its resolution to become an "integrated engineering firm for urban creation" by exceeding conventional boundaries of the construction industry.

When we look into what is necessary for urban creation, Japan in particular faces a problem with the maintenance and renewal of its aging infrastructure. We no longer live in an age of simply constructing large buildings on vacant sites. Especially with the ongoing COVID-19 pandemic, social changes are accelerating, and dispersing into areas outside metropolitan centers is becoming a realistic option for a sustainable society and its lifestyles. Nonconventional approaches are expected to gain greater importance both in architecture and town creation. Amid these developments, my interest was directed to the promotion of MACHInnovation (town innovation) and Attractive Renewal. The former concept aiming to solve actual social issues

departs from the existing business framework of a construction company. The latter one has not been popular in Japan due to issues of cost and efficiency. However, I believe that greater value will emerge from the restoration and renovation of historic buildings. I am impressed by the company's ability to identify these values and engage in the area of technology, and in operation and management of such buildings.

In terms of creating new value with technology, the concept of the "Urban Timber Building," represented by the wooden high-rise building illustration on the cover, greatly raises expectations. The warm atmosphere of wood improves quality of life and also leads to proactive use of Japan's woodlands, which contributes to conserve biodiversity. As for biodiversity, together with the climate crisis, it has become a major global issue. The construction industry is drawing expectations for more active involvement in this issue due to its large impact on raw materials, and on development and modification of land. One of the issues is the destruction of tropical forests for materials used in the interior and exterior of structures and for concrete formwork. Until recently, such an issue was said to be up to the policy of building owners or partners working on the ground, and it was considered that this could not be managed by construction companies. However, these issues would not be solved in this way. Especially because Takenaka aspires to engage in a more in-depth dialog with its stakeholders to create a sustainable society, I look forward to its active commitment to and actions on this issue.

In the area of urban creation, activities for biodiversity are not limited to conservation but also extend to its recovery and restoration, and further into learning from the mechanisms of ecosystems. Such efforts will lead to many business opportunities for the industry, such as the creation of a sustainable green infrastructure.

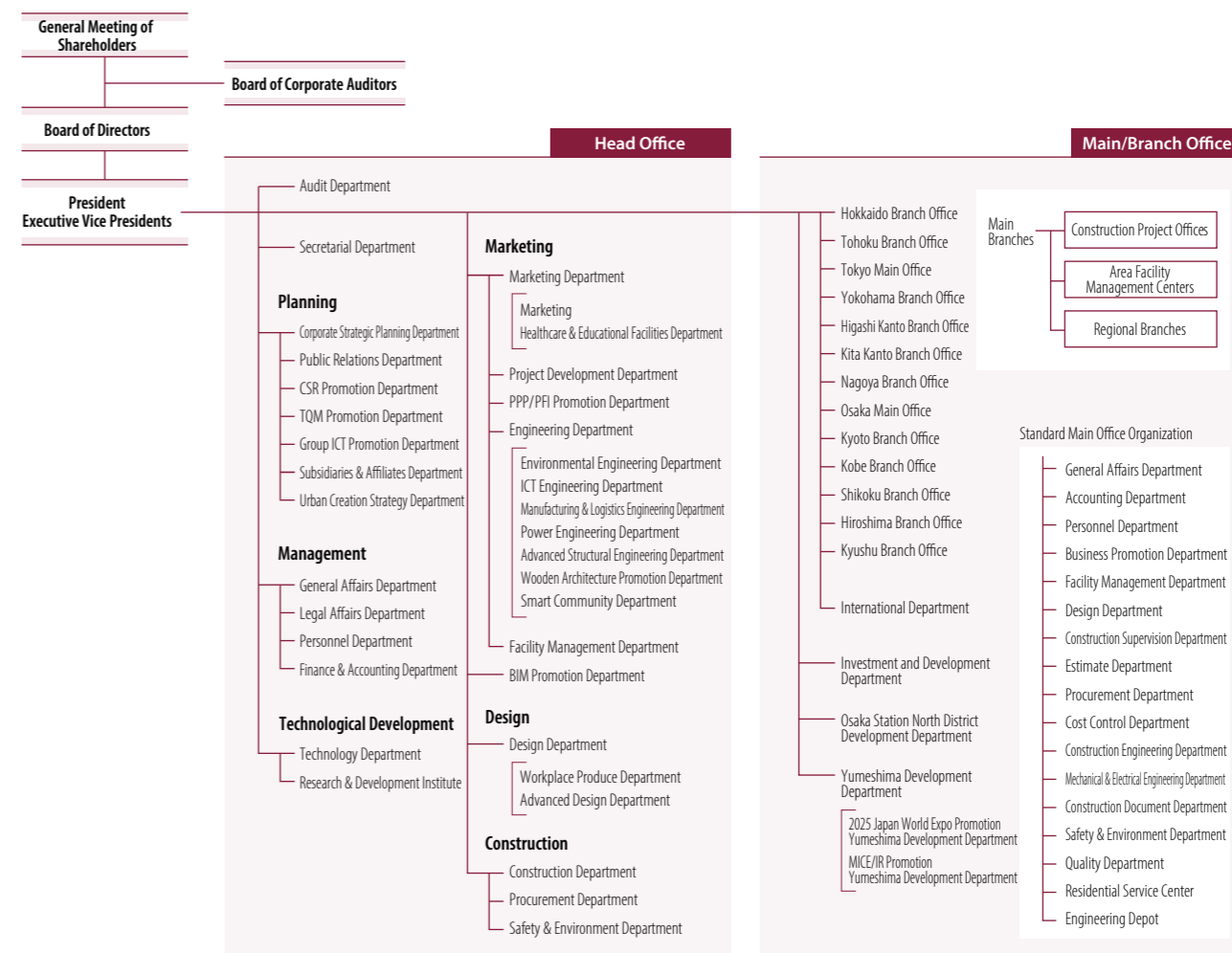
A great advantage to be an unlisted company is to be able to act from a long-term perspective, not to be trapped by the pursuit of immediate profits. I earnestly hope that Takenaka will exercise leadership in these areas, both within Japan and throughout the world, becoming a leader in urban creation and social development beyond the boundaries of its business categories.

Company Name	Takenaka Corporation
Head Office	1-13, 4-chome, Hommachi, Chuo-ku, Osaka, Japan
Capital	¥50 billion (as of March 31, 2021)
Construction Licenses	Ministry of Land, Infrastructure and Transport Construction License (Special-1, General-1) No. 2744
Number of Employees	7,741 (Takenaka Group: 13,171) (as of January 1, 2021)
Affiliates	55 subsidiaries, 12 affiliates, and 1 related company
License Holders	Licensed first-class architects.....2,407 Licensed first-class building works execution managers.....2,295 Licensed professional engineers191 Ph.D.s.....119 (as of January 1, 2021)

- Main Businesses**
1. Undertaking, design, and supervision of architectural and civil engineering works
 2. Studies, research, surveys, planning, evaluation, diagnosis, and other engineering and management services for construction, regional and urban development, ocean development, space development, energy supply, environmental improvements, and other projects
 3. Land preparation and housing construction
 4. Sales and purchasing, leasing, brokerage, maintenance, management, and appraisal of real estate as well as real estate investment management

- Main Banks**
- MUFG Bank, Ltd.
 - Mizuho Bank, Ltd.
 - Sumitomo Mitsui Banking Corporation
 - Resona Bank, Ltd.
 - Mitsubishi UFJ Trust and Banking Corporation
 - Sumitomo Mitsui Trust Bank, Ltd.
 - The Norinchukin Bank, others

Corporate Organization (as of April 1, 2021)



Income Statement and Balance Sheet (Consolidated)

(Millions of yen)

	79th term 2016	80th term 2017	81th term 2018	82th term 2019	83th term 2020
Orders received	1,291,682	1,391,442	1,397,818	1,419,121	1,238,508
Revenues	1,216,570	1,295,951	1,353,627	1,352,064	1,237,758
Operating income	91,367	107,988	85,063	80,235	39,788
Operating margin (%)	7.5	8.3	6.3	5.9	3.2
Ordinary income	93,572	115,304	93,977	89,502	46,954
Net income	61,432	75,762	63,638	68,918	30,528
Net assets	566,470	652,033	671,189	762,642	751,745
Total assets	1,318,055	1,450,191	1,468,850	1,519,771	1,442,958

Other Financial Data (Consolidated)

(Millions of yen)

	79th term 2016	80th term 2017	81th term 2018	82th term 2019	83th term 2020
Cash flow from operating activities	87,883	88,476	107,719	△45,512	△7,863
Cash flow from investing activities	△48,695	△42,847	△40,772	△15,448	△33,051
Cash flow from financing activities	△147	△14,235	△32,662	△14,509	23,054
Research and development expenses (Billions of yen)	7.0	7.7	8.4	9.3	9.3
Capital investment (Billions of yen)	62.3	56.5	27.0	41.7	43.2
Return on equity (ROE) (%)	11.4	12.6	9.7	9.7	4.1

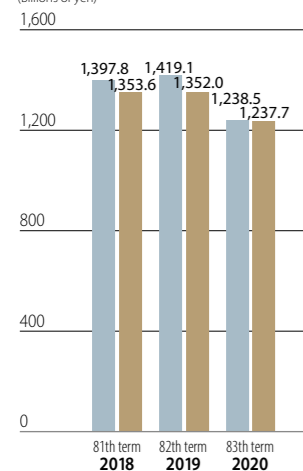
Revenues by Business (Consolidated)

(Millions of yen)

	79th term 2016	80th term 2017	81th term 2018	82th term 2019	83th term 2020
Construction business	1,104,999	1,193,475	1,241,868	1,241,923	1,146,184
Development business	59,868	49,653	59,045	54,448	35,571
Others	51,703	52,822	52,713	55,692	56,002

Orders Received/Revenues (Consolidated)

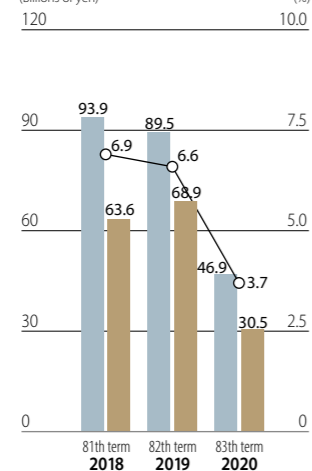
(Billions of yen)



Ordinary Income/Ordinary Income Ratio/Net Income (Consolidated)

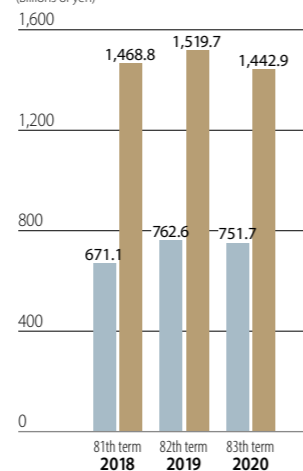
(Billions of yen)

(%)



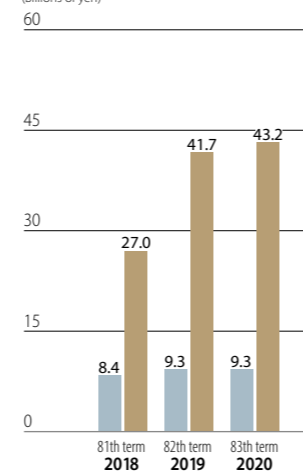
Net Assets/Total Assets (Consolidated)

(Billions of yen)



Research and Development Expenses/Capital Investment (Consolidated)

(Billions of yen)



Revenues by Region (Consolidated)

(Millions of yen)

	79th term 2016	80th term 2017	81th term 2018	82th term 2019	83th term 2020
Japan	1,043,880	1,128,429	1,180,889	1,198,630	1,117,451
Asia	117,939	91,847	87,339	74,534	64,605
Europe	26,114	46,353	52,678	48,315	44,605
North America	28,636	29,320	32,719	30,584	11,095
Others	—	—	—	—	—

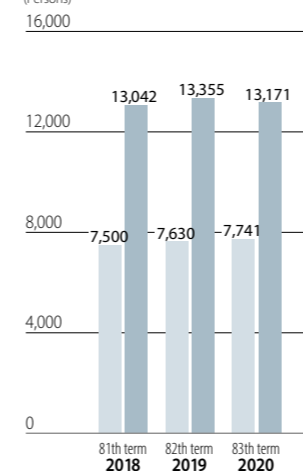
Nonfinancial Data (Nonconsolidated)

	79th term 2016	80th term 2017	81th term 2018	82th term 2019	83th term 2020
Number of employees (Consolidated)	7,307 (12,592)	7,400 (12,982)	7,500 (13,042)	7,630 (13,355)	7,741 (13,171)
Average age of employees	44.3	44.0	44.0	44.0	44.0
Average length of continuous employment (Years)	19.6	19.2	19.1	17.1	19.1
Number of women in managerial positions	86	100	121	131	146
Accident frequency rate (Accidents followed by absence of four days or more from work)*1	0.41	0.54	0.56	0.54	0.38
CO ₂ emissions intensity during construction work (t/100 million yen)*2	10.5	10.0	10.4	10.3	9.9
Construction by-products recycling rate (per volume) *3	95.7	94.7	91.6	92.0	94.9
Rate of number of CASBEE S- and A-rank projects (%)*4	67.1	77.3	85.7	89.2	91.7

*1 Percentage of the number of occupational injuries caused by industrial accidents accompanied by an absence of four days or more from work for every million man hours of labor
 *2 Per value of completed work
 *3 Does not include construction sludge and specially controlled industrial waste.
 *4 Total number of S- and A-rank projects among the company's design projects. The number for 2014 was revised.

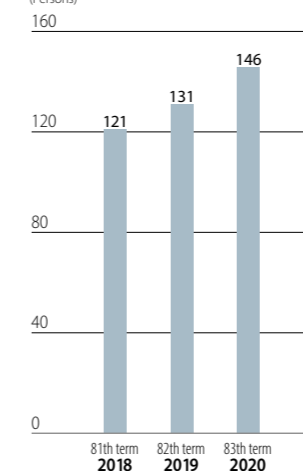
Number of Employees (Nonconsolidated and Consolidated)

(Persons)



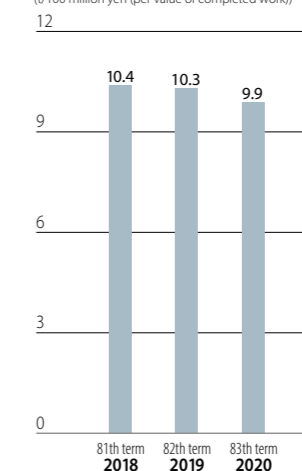
Number of Women in Managerial Positions (Nonconsolidated)

(Persons)



CO₂ Emissions Intensity During Construction Work (Nonconsolidated)

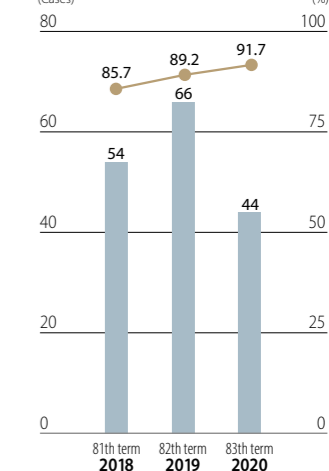
(t/100 million yen (per value of completed work))



Number of CASBEE S- and A-Rank Projects/Rate (Nonconsolidated)

(Cases)

(%)



Dreams into Reality for a Sustainable Future



TAKENAKA CORPORATION

HEAD OFFICE

OSAKA

1-13, 4-chome, Hommachi, Chuo-ku, Osaka 541-0053, Japan
Tel: 06-6252-1201 Fax: 06-6271-0398

MAIN OFFICES

TOKYO

1-1, 1-chome, Shinsuna, Koto-ku, Tokyo 136-0075, Japan
Tel: 03-6810-5000 Fax: 03-6660-6012

OSAKA

1-13, 4-chome, Hommachi, Chuo-ku, Osaka 541-0053, Japan
Tel: 06-6252-1201 Fax: 06-6266-0012

BRANCH OFFICE LOCATIONS

Sapporo, Sendai, Yokohama, Chiba, Saitama, Nagoya,
Kyoto, Kobe, Takamatsu, Hiroshima and Fukuoka

TAKENAKA RESEARCH & DEVELOPMENT INSTITUTE

5-1, 1-chome, Otsuka, Inzai-shi, Chiba 270-1395, Japan
Tel: 0476-47-1700 Fax: 0476-47-3050

OVERSEAS OFFICES AND SUBSIDIARIES

THAI TAKENAKA INTERNATIONAL LTD.

BANGKOK

Silom Complex, 26th Floor, 191 Silom Road, Bangrak,
Bangkok 10500, Thailand
Tel: 66-2-266-2800 Fax: 66-2-266-2808

THAI TAKENAKA INTERNATIONAL LTD.

MYANMAR BRANCH

YANGON

Room No.4(A),138(D), New University Avenue,
Bahan Township, Yangon, Myanmar
Tel: 95-9-771-371-169

PT. TAKENAKA INDONESIA

JAKARTA

MidPlaza 1, 18th Floor, Jl. Jend.
Sudirman Kav. 10-11, Jakarta 10220, Indonesia
Tel: 62-21-573-5660 Fax: 62-21-574-1684

TAKENAKA (MALAYSIA) SDN. BHD.

KUALA LUMPUR

E-17-08, Menara SUEZCAP 2, KL Gateway, No.2, Jalan Kerinchi,
Gerbang Kerinchi Lestari, 59200 Kuala Lumpur, Malaysia
Tel: 60-3-7931-6800 Fax: 60-3-7931-5800

TAKENAKA CORPORATION SINGAPORE OFFICE

SINGAPORE

15A Changi Business Park Central 1, Eightrium #03-04
Singapore 486035
Tel: 65-6899-8989 Fax: 65-6276-7333

TAKENAKA INDIA PRIVATE LTD.

GURGAON

1st Floor, Tower C, First India Place, Mehrauli Gurgaon Road,
Gurgaon 122002, Haryana, India
Tel: 91-124-483-5900 Fax: 91-124-483-5999

TAKENAKA VIETNAM CO., LTD.

HO CHI MINH CITY

4th floor, HD Tower, 25bis Nguyen Thi Minh Khai, District 1,
Ho Chi Minh City, Vietnam
Tel: 84-28-3822-7730 Fax: 84-28-3822-7740

TAKENAKA (CHINA) CONSTRUCTION CO., LTD.

SHANGHAI

Room 3902, 39F Longemont Yes Tower 399 Kaixuan Road,
Changning District, Shanghai, 200051 P.R. China
Tel: 86-21-6859-1201 Fax: 86-21-6859-1203

TAKENAKA EUROPE GmbH (European Headquarters)

DÜSSELDORF

Grafenberger Allee 136, D-40237 Düsseldorf, Germany
Tel: 49-211-167940 Fax: 49-211-1679444

TAKENAKA CORPORATION (U.S.A.)

CHICAGO

555 Pierce Road, Suite #190, Itasca, IL 60143, U.S.A.
Tel: 1-630-250-3400 Fax: 1-630-250-3433

TAK DEVELOPMENT, INC.

NEW YORK

70 East, 55th Street, 4th Floor, New York, NY 10022, U.S.A.
Tel: 1-212-489-6001 Fax: 1-212-489-6002

SAN FRANCISCO

222 Mason Street, 5th Floor, San Francisco, CA 94102, U.S.A.
Tel: 1-415-398-0232 Fax: 1-415-398-0322

TAK HAWAII, INC.

HONOLULU

Topa Financial Center-Fort Street Tower, 745 Fort Street, Suite
708 Honolulu, HI 96813, U.S.A.
Tel: 1-808-523-5899 Fax: 1-808-523-9082

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