

TAKENAKA Corporate Report 2020



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 2020 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.

The coverage of this report

- **Period of coverage**
January–December 2019. Some contents concern activities conducted outside this period.
- **Scope of coverage**
The contents include the activities of the Takenaka Group centered on the 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**
May 2020 (next issue May 2021).
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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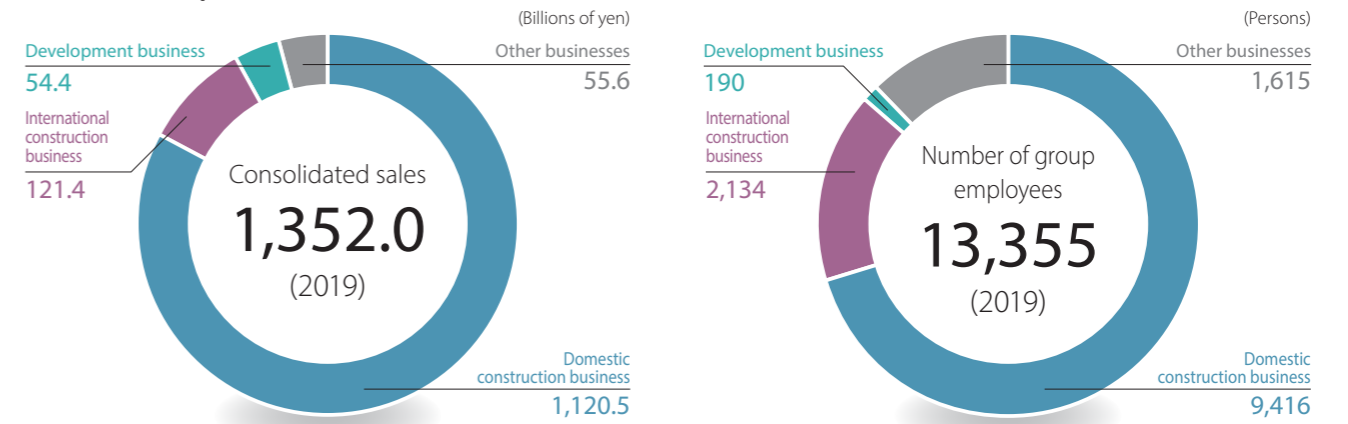
Financial and Nonfinancial Highlights



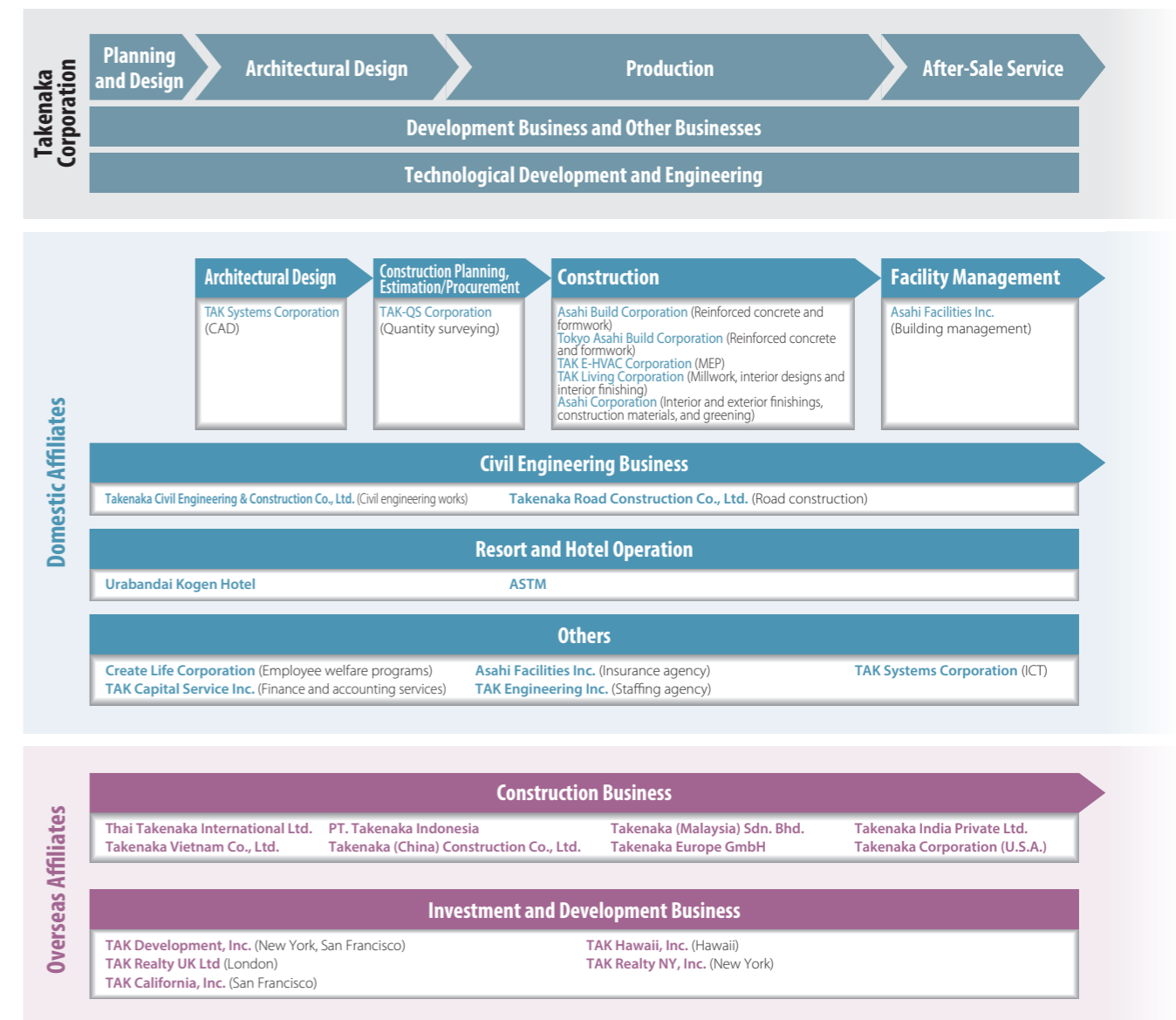
Group Overview

Working as a group to satisfy customer expectations at every stage of urban creation

Takenaka Group's Business Size



Principle Operations of Main Affiliates



About Us

Our Major Objectives

Business Activities

Initiatives for CSR and CSV Objectives

Financial and Nonfinancial Highlights

Takenaka up to Now

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 major 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.

Our philosophy of always placing our customers' dreams first and maintaining high technological levels as an architectural specialist lives on from the days of our founder Tobei-Masataka Takenaka, who was a master builder of shrines and temples. Today this spirit is embodied in a variety of works, not only in Japan, but all over the world.

1610



1610

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

1901

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.

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

1960

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

1941

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

1957

Antarctic Exploration Research Facilities produced. Patent acquired for Takenaka Caisson Construction Method.

1958

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



1961

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.

1963

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



1969

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

1979

Takenaka awarded Deming Application Prize. **Ashiyahama Seaside Town**, proposed by the ASTM Group, of which Takenaka was a member, completed.



Takenaka into the Future

We will provide the services and solutions that the times demand, and while adhering to our master builder spirit, works principle and Integrated Design-Build System, the "works" we handle will transcend architecture and extend to "urban creation." We will continue to live up to the trust society has placed in us and contribute to prosperous "urban creation" by pursuing the best for everyone from a long-term perspective.

1981

1981 Singapore

Changi International Airport Terminal 1 completed.



1990

Takenaka (Malaysia) Sdn. Bhd. established.

1983 Tokyo

Ote Center Building completed and opened.



1987 San Francisco

Hotel Nikko San Francisco completed and opened.

1990 Osaka

Crystal Tower completed and opened.

1986

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

1987

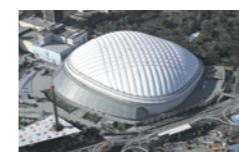
Yurakucho Marion completed.



1988

Chairman Renichi Takenaka awarded the Deming Prize.

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



1991

1993

PT. Takenaka Doboku Indonesia established.

1996 Thailand

Bank of Ayudhya Head Office Building completed.

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.



1997

Nagoya Dome completed.

2001

2001

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

2003

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

2003 Germany

Hyundai Motor Europe R&D Center completed.



2010

Takenaka India Private Ltd. established.

2001

Oita Sports Park Oita Bank Dome and Sapporo Dome 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.



2011

2017

Takenaka Vietnam Co., Ltd. established.

International Operations

→ P27

2017 Singapore

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



2017 Indonesia

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



Development

→ P29

2019 Kyoto

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



Architecture

→ P23

2013

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



2014

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



2017

Global Gate complex opened to serve as the core of Sasashima Live 24, a redevelopment project targeted as an international center for exchange and interaction with foreign visitors.



2019

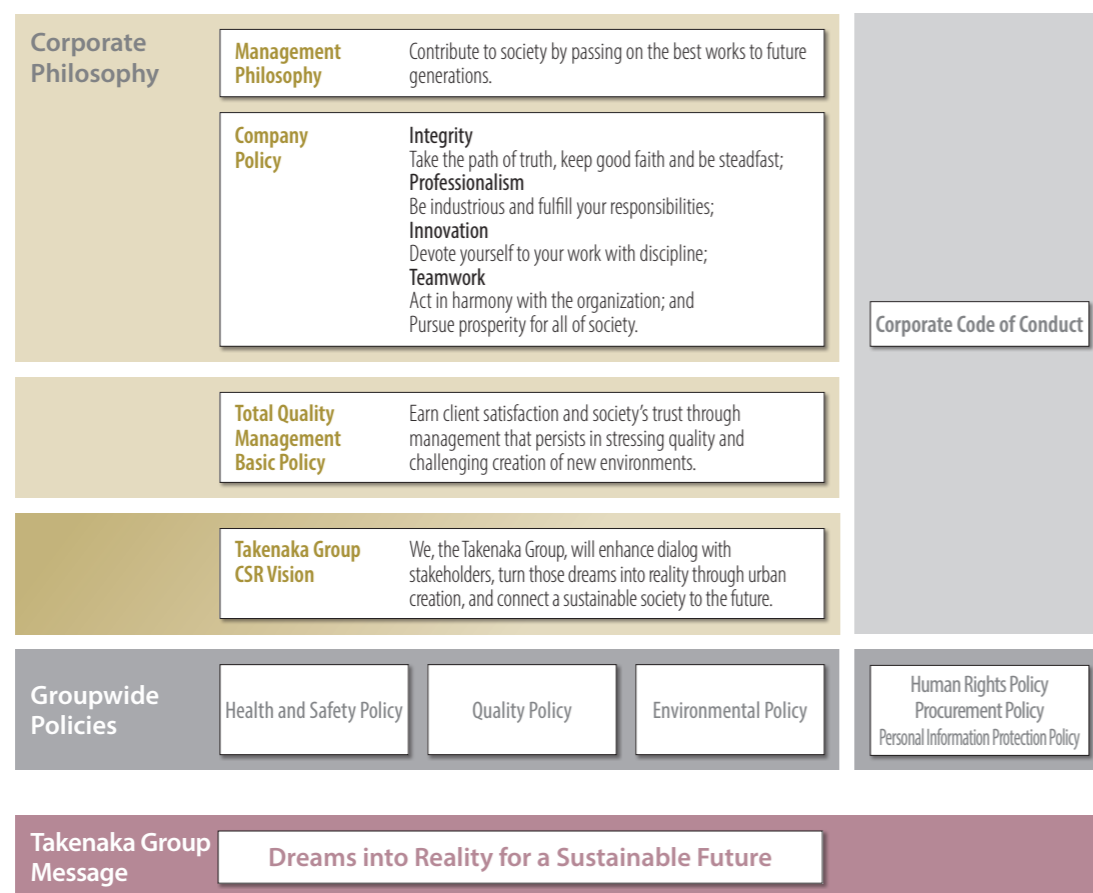
Ariake Arena, a sport events venue completed.



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, 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 they are being asked to contribute to solving large numbers of problems confronting our world on a global scale, including such issues as climate change and overpopulation. 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 leveraging 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 2020





We are making groupwide efforts in the field of urban creation to build a sustainable society, and we are enhancing our strengths in this area as an "integrated engineering firm for urban creation."

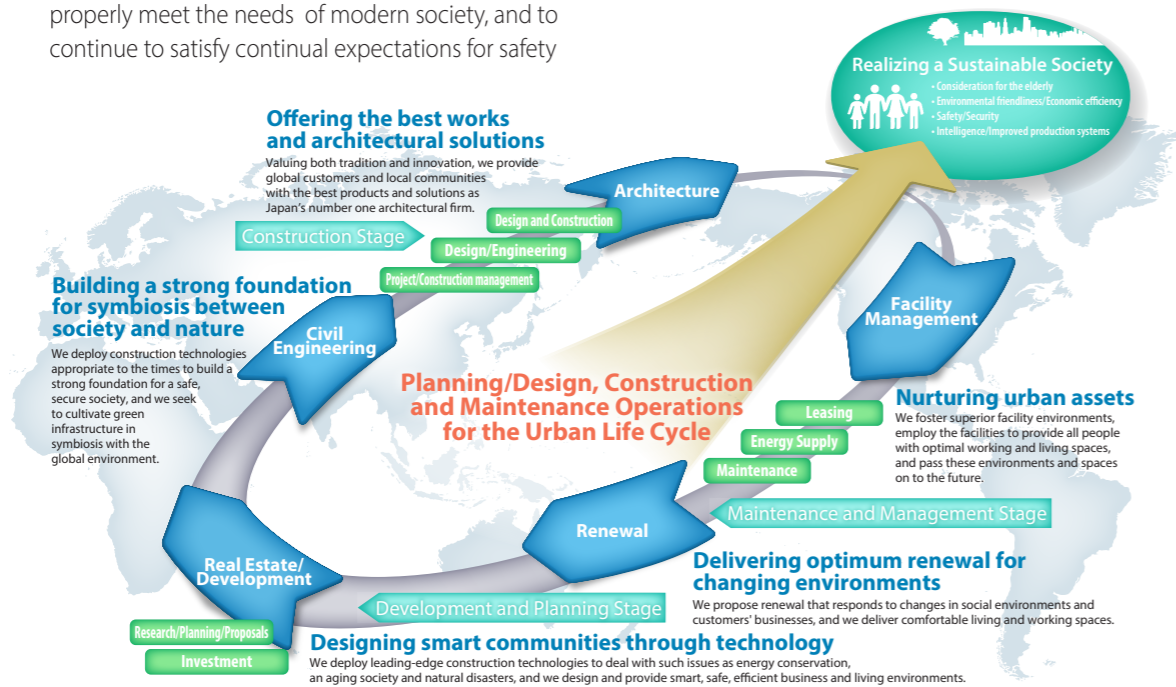
March 2020
President

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 constructing 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.

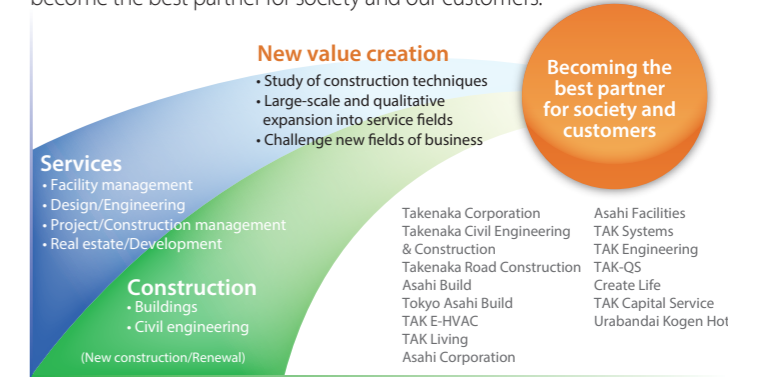


Group Growth Strategy: Participation as a group in urban creation on a global scale

With Takenaka Group activities, we have been treating groupwide areas of our business as "cities." In every stage of urban creation and throughout the life cycle 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. Additionally, 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 our customers.

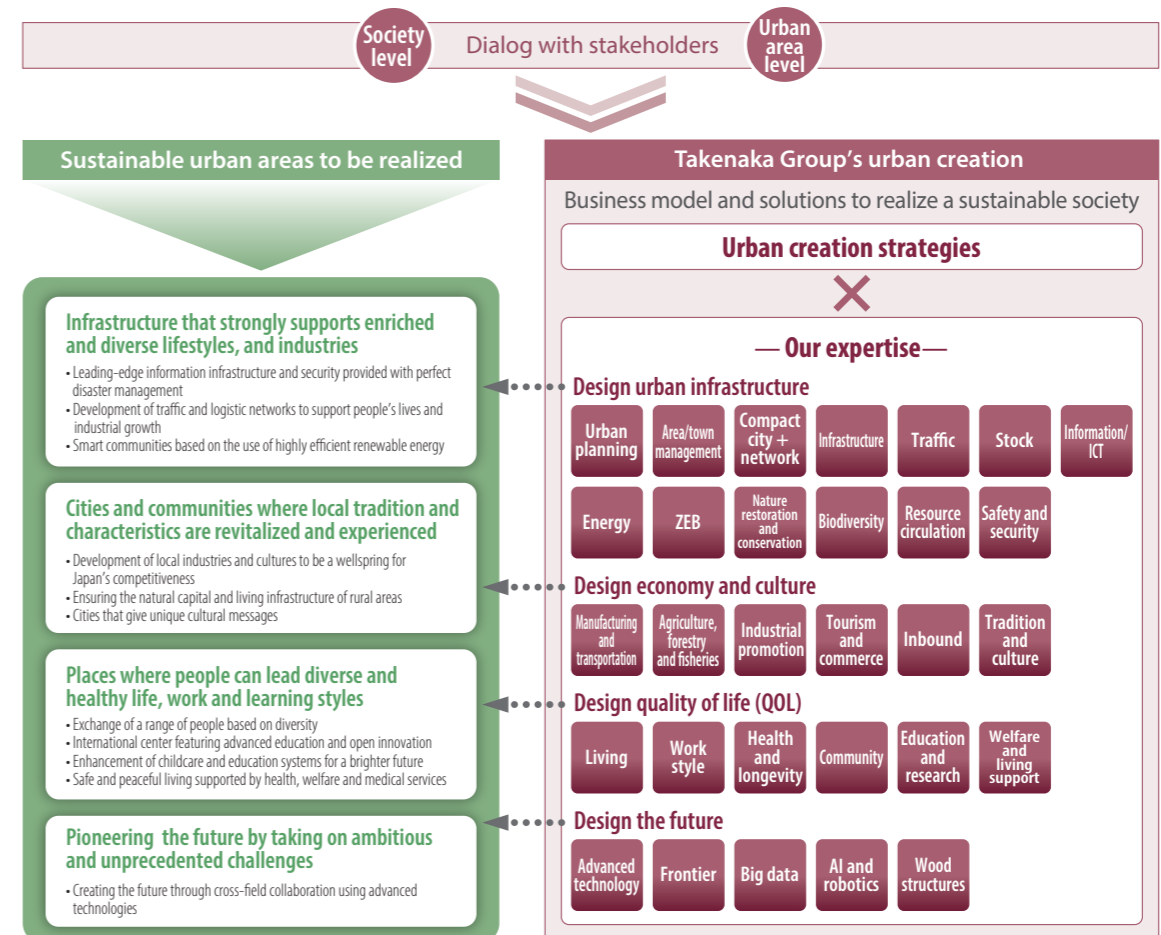


Promoting a sustainable society and urban creation

The social issues that need to be resolved, social 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 the 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 the Integrated Engineering Firm for Urban Creation

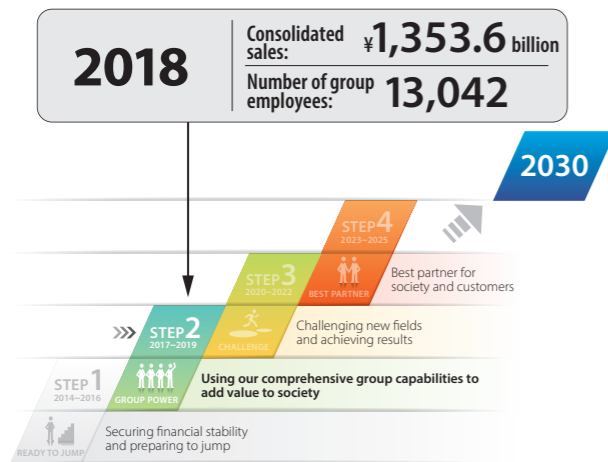


Steps toward growth and new milestones

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 SDG goals, we have set "Group Milestones 2030," which at the same time will 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 concrete 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, implement the results of employee satisfaction surveys, average work hours, governance reinforcement and status of site closures.



Identifying our major objectives (materiality)

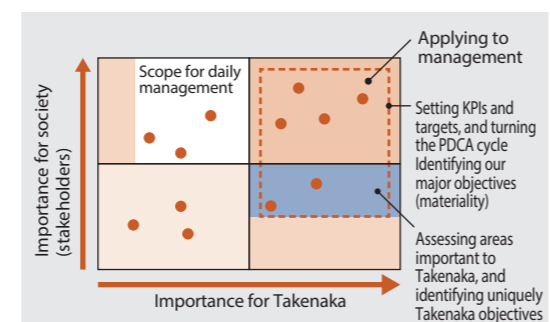
Based on the need to actively fulfill our corporate social responsibilities as we engage in sustainable activities, we have been examining the challenges that our CSR activities present us with and will select them after examining their viability. In starting a new three-year plan from 2020, we are placing importance on an external perspective. For this purpose, we have decided to identify major objectives (materiality) from the viewpoint

of society and our company, and to put in place a new action plan for a sustainable society based on the findings. In the future, we plan to clarify our recognition of these major objectives for both society and the company, including "supplying high-quality and safe architecture and services," which is one of our priorities, and to work to create sustainable corporate value over a long period.

Information sources used in developing our major objectives

Sustainable Development Goals (SDGs)	GRI sustainability reporting standards
ISO26000	10 Principles of the UN Global Compact
SASB industry-specific standards	Indices of ESG rating agencies

Takenaka's approach to mapping major objectives



Basic approach of Total Quality Management

Our basic approach to realize an action plan for this kind of sustainable society and promote sustainable business activities is Total Quality Management (TQM). This is due to the fact that since its founding the mainstay of our company, which has been specializing in building construction and integration of design and build, originated from the *toryo* (master builder) spirit of the shrine and temple carpenter. This spirit was not only the knowledge and technology to construct a building, but it was also the procurement of a wide variety of materials, having the capability to both lead an organization and accomplish big tasks. It also meant "being responsible for contracted work to the end once a job has been contracted for." These are the fundamentals of TQM. More specifically, TQM means "Earn client satisfaction and society's trust through management that persists in stressing quality and challenging the creation of new

environments. (Total Quality Management Basic Policy)" at Takenaka. The "quality" here refers not only to simple quality of the building but also refers to "quality of corporate activities" as a social entity. Moving forward, Takenaka will strive to improve "quality," and continue TQM that can contribute to a sustainable society.



Illustrated scrolls of the origins of Matsuzaki Tenjin Shrine, Hofu Tenmangu Shrine, Yamaguchi Prefecture

Total Quality Management Basic Policy Earn client satisfaction and society's trust through management that persists in stressing quality and challenging the creation of new environments.

Review of the past three years and future activities

In our three-year plan from 2017 to 2019, our activities were designed to employ our comprehensive group capabilities to add value to society. We clearly envisioned our group as an "integrated engineering firm for urban creation" and built a foundation that could contribute to creating a sustainable society through new value creation. In the meantime, we have been engaging in groupwide efforts for work style reform. With the

Work-Life Balance Committee for Radical Productivity Improvements Companywide as the hub, we have formulated 11 work-life balance promotion measures, organized dialogs at all offices, created a model construction project office for work-life balance, implemented two-day weekends at district FM centers and various other initiatives.

We have also strengthened work reform measures and developed technologies to digitize all business operations, chiefly in design and construction. As a result of greater productivity improvements, we were able to achieve most of our business targets with a robust domestic construction market as a background. Because this year is the start of STEP 3 in our Growth Strategy, the target for our group is "challenging new fields and achieving results." Now we must accelerate measures to develop the environment and improve systems for work style reform, which is a social issue. With our business activities, competitiveness is intensifying in the Japanese construction market. The business environment has also become severe for promoting our development business. Accordingly, we intend to make further advances in developing our construction business based on safety and quality, and provide solutions to various social issues through our urban creation business activities and expansion of our business fields.



Identifying Our Major Objectives (Materiality)

As an "integrated engineering firm for urban creation," we have identified our major objectives (materiality) in resolving social issues and building a sustainable society. In our business activities, we will integrate the major objectives for our future long-term growth strategies, and establish specific action plans and targets to achieve those objectives.

Identifying processes for our major objectives (materiality)

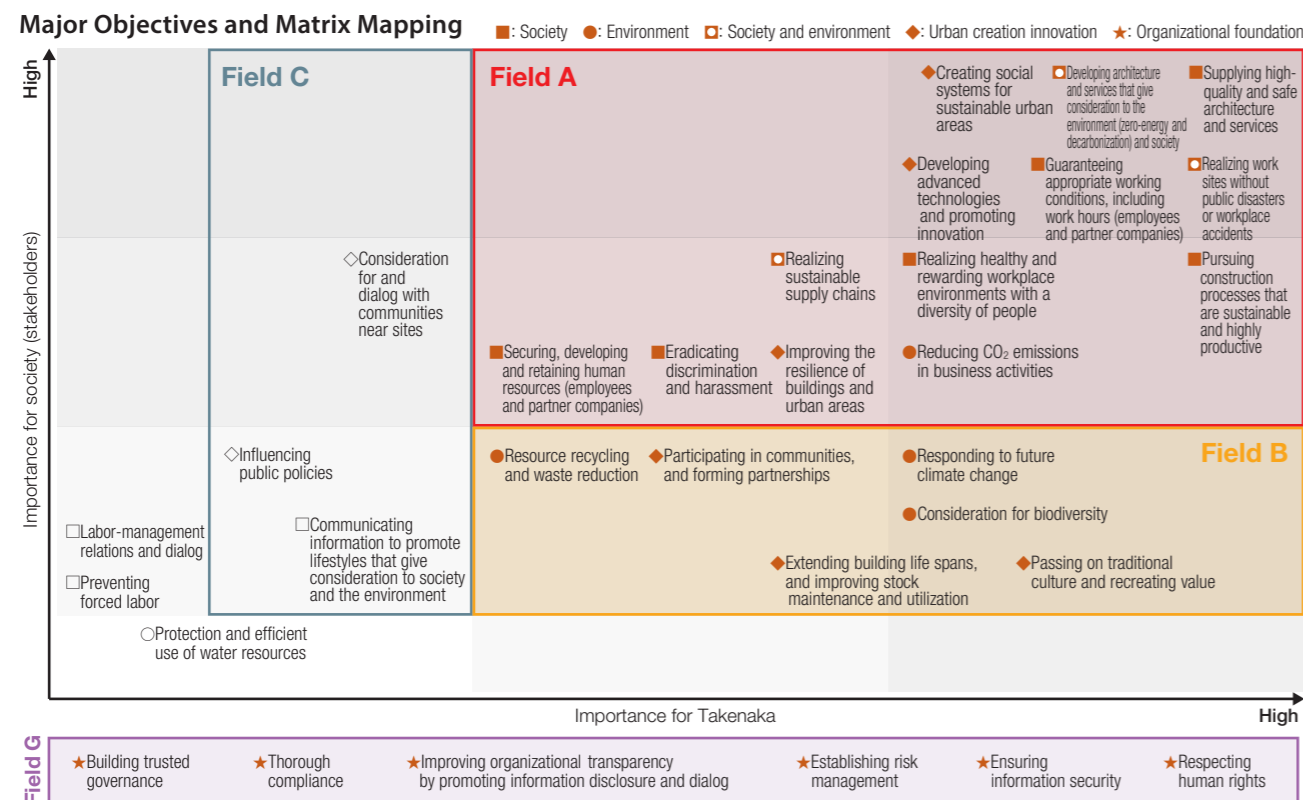
To identify our major objectives (materiality), we have been organizing workshops with outside specialists and relevant departments and organizing dialogs with experts to ensure adequate attention is given to external perspectives.



Assessing the importance of social objectives that have been identified

Social objectives are identified for evaluation from the perspective of society (stakeholders) and our company. Then, as shown in the figure below, we determined issues in the most important fields (fields in great demand by society and most strongly related to short-, medium-, and long-term business opportunities and risks = **Field A**) and issues in important fields (fields presently

at a certain level with social demands and being actively proposed to society through our business = **Field B**). Objectives important for our organizational foundation (**Field G**) have been determined separately. Additionally, issues in Field C and others, which did not become major objectives but will involve everyday activities and monitoring will be continually addressed.



Grouping of major objectives (materiality) and SDGs

Major objective groups	Major objectives	Relevant SDG goals
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 Participating in communities, and forming partnerships 	9 Industry, Innovation and Infrastructure, 17 Partnerships for 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"> Supplying high-quality and safe architecture and services Realizing work sites without public disasters or workplace accidents 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

Relationships between SDGs and our business activities

We classified our major objectives into six groups according to their relationship to our business activities. In addition, we established the relationship between each objective and the SDGs, alongside identifying and assessing social issues. Finally, 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 (pages 15 and 16). 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 structures 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

2020-2022 Action Plan for a Sustainable Society



Regarding the major objectives (materiality) that have been identified, the CSR Promotion Central Committee consisting of top executive officers deliberated and issued decisions on the scope of impact (environment and society/customers/employees/partner companies), major measures to be implemented in resolving issues, indicators (KPIs) for measuring progress and achieving results, and targets for the next three years starting in 2020. This was done in collaboration with the relevant departments at the Head Office. The 2020-2022 Action Plan for a Sustainable Society will be applied to the individual three-year plans of each department at the Head Office and the various main/branch offices. We will check and follow the state of progress by the CSR Promotion Central Committee as a groupwide effort.

Major objectives groups	Major objectives (materiality)	Scope of impact				Measures	Indicators (KPIs)	Targets			Contributed SDG goals
		ES	C	E	S			2020	2021	2022	
Sustainable architecture and urban creation	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	13	15	
		○	○			Promote zero energy buildings (ZEB) and energy management.	Number of ZEB projects/energy management proposals	10/10	15/13	20/15	
		○	○			Promote "wellness" construction.	Number of wellness construction certification	10	13	15	
	Creating social systems for sustainable urban areas	○	○			Pursue urban social problems and examine social systems to resolve these problems.	Number of social system demonstration tests and other activities	9	10	11	
		○	○			Promote business operations by building social systems.	Number of new business operations	2 or more in three years			
		○	○			Create projects that serve as starting points for urban creation.	Number of project proposals	3	5	5	
Improving the resilience of buildings and urban areas	○	○			Expand and apply disaster countermeasures/support menu.	Degree of progress	Developing new menus and starting application to projects*1				
	○	○			Strengthen research and proposal technologies for asset management and facilities operation that will continue to create value.	Degree of progress	Reinforcing technology and promoting application to projects*1				
Extending building life spans, and improving stock maintenance and utilization	○	○			Promote preservation, restoration and use of traditional architecture and historical buildings.	Number of traditional architecture preservation and renewal projects	3/5	3/5	3/5		
Passing on traditional culture and recreating value	○	○									
Harmony with the environment	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	9.7 CO ₂ tons/100 million	
		○	○	○	○	Develop and implement design-build technologies in response to climate change.	Office energy consumption reduction rate (YoY)	1% or more	1% or more	1% or more	
	○	○	○	○	Promote biodiversity improvement projects.	Number of biodiversity improvement projects	10	12	15		
	○	○	○	○	Examine resource recycling and waste reduction from the design and procurement stage. Promote waste recycling at new construction sites.	Recycling rate (per volume)	93.0%	93.5%	94.0%		
Responding to future climate change	○	○	○	○	Develop and implement design-build technologies in response to climate change.	Degree of progress	Developing new technology and promoting application to projects*1				
	○	○	○	○	Promote biodiversity improvement projects.	Number of biodiversity improvement projects	10	12	15		
Consideration for biodiversity	○	○	○	○	Examine resource recycling and waste reduction from the design and procurement stage. Promote waste recycling at new construction sites.	Recycling rate (per volume)	93.0%	93.5%	94.0%		
	○	○	○	○	Promote biodiversity improvement projects.	Number of biodiversity improvement projects	10	12	15		
Resource recycling and waste reduction	○	○	○	○	Examine resource recycling and waste reduction from the design and procurement stage. Promote waste recycling at new construction sites.	Recycling rate (per volume)	93.0%	93.5%	94.0%		
	○	○	○	○	Promote biodiversity improvement projects.	Number of biodiversity improvement projects	10	12	15		
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	12	15		
	○	○	○	○	Create venues and schemes for exchange by diverse people. Promote partnership development and participation in noteworthy fields.	Number of exchange venues and events	Performance management*1	Same as last year or better	Same as last year or better		
Participating in communities, and forming partnerships	○	○	○	○	Create venues and schemes for exchange by diverse people. Promote partnership development and participation in noteworthy fields.	Number of exchange venues and events	Performance management*1	Same as last year or better	Same as last year or better		
	○	○	○	○	Ensure appropriate construction periods and human resources. Reduce work after project startup by frontloading work.	Site closure achievement rate	Closed for seven days every four weeks: 100%	Closed for eight days every four weeks: 100%	Closed for eight days every four weeks: 100%		
Work style and productivity reform	Guaranteeing appropriate working conditions, including work hours	○	○	○	○	Ensure appropriate construction periods and human resources. Reduce work after project startup by frontloading work.	Site closure achievement rate	Closed for seven days every four weeks: 100%	Closed for eight days every four weeks: 100%	Closed for eight days every four weeks: 100%	
		○	○	○	○	Reduce labor hours by incorporating design of industrialization and highly efficient construction methods. Reduce rework and optimizing processes by BIM and digital fabrication.	Value of completed work rate	¥18,100/man-hours	¥18,800/man-hours	¥19,600/man-hours	
	Pursuing construction processes that are sustainable and highly productive	○	○	○	○	Reduce labor hours by incorporating design of industrialization and highly efficient construction methods. Reduce rework and optimizing processes by BIM and digital fabrication.	Value of completed work management rate	¥116,000/man-hours	¥121,000/man-hours	¥126,000/man-hours	
		○	○	○	○	Introduce diverse work styles by promoting work-life balance (WLB).	Employee satisfaction	3.60 or higher	3.65 or higher	3.70 or higher	
	Realizing healthy and rewarding workplace environments with a diversity of people	○	○	○	○	Promote diversity.	Percentage of women in managerial positions	4.5% or more	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	500 or more	500 or more	
Eradicating discrimination and harassment	○	○	○	○	Implement harassment environment survey and promoting education.	Education rate	100%	100%	100%		
	○	○	○	○	[Employees] Review young employee training in response to environmental changes.	New graduate turnover rate (in third year with company)	3.5% or less	3.0% or less	3.0% or less		
Securing, developing and retaining human resources	○	○	○	○	[Partner companies] Review recruitment activities and payments in tandem with partner companies. Training of skilled workers and developing programs to pass on skills.	Number of new skilled workers	720	720	720		
	○	○	○	○	Strengthen quality integration from the design stage, including at partner companies.	Number of serious quality incidents	0	0	0		
Steady production processes	Supplying high-quality and safe architecture and services	○	○	○	○	Strengthen quality integration from the design stage, including at partner companies.	Number of serious quality incidents	0	0	0	
		○	○	○	○	Promote safety-oriented planning, and improve knowledge and awareness of diversified workers.	Number of significant public disasters or workplace accidents	0	0	0	
	Realizing work sites without public disasters or workplace accidents	○	○	○	○	Promote safety-oriented planning, and improve knowledge and awareness of diversified workers.	Number of significant public disasters or workplace accidents	0	0	0	
Realizing sustainable supply chains		○	○	○	○	Disseminate and applying CSR procurement guidelines.	Dissemination and application rate	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	10 items or more	10 items or more		
Building trusted governance	Thorough compliance	○	○	○	○	Control and manage with CSR Promotion Central Committee and Compliance/Risk Management Committee.	Major compliance incidents	0	0	0	
		○	○	○	○	Control and manage with CSR Promotion Central Committee and Compliance/Risk Management Committee.	Major compliance incidents	0	0	0	
Improving organizational transparency by promoting information disclosure and dialog	Establishing risk management	○	○	○	○	Control and manage with CSR Promotion Central Committee and Compliance/Risk Management Committee.	Major compliance incidents	0	0	0	
		○	○	○	○	Control and manage with CSR Promotion Central Committee and Compliance/Risk Management Committee.	Major compliance incidents	0	0	0	
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	
		○	○	○	○	Control and manage with CSR Promotion Central Committee and Compliance/Risk Management Committee.	Major compliance incidents	0	0	0	

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

*1 Establishing quantitative targets by the end of 2020

Initiatives with the Environment

Based on our Environmental Policy, we have aggressively promoted activities for the realization of a society in symbiosis with nature, a low-carbon society and an asset recycling society. Additionally, major objectives (materiality) have been established by adding a new perspective. At the same time, we have defined long-term targets for CO₂ reductions in the activities of the entire group, and we will promote initiatives to resolve these objectives and achieve our targets.

Major objectives (materiality) regarding the environment

We established six items related to the environment as major objectives in the action plan from 2020. In addition to the theme of building a low-carbon and asset recycling society in symbiosis with nature under the action guidelines in our Environmental Policy, we have included appropriate responses to climate change, sustainable supply chains and others as perspectives on action as well.

- Developing architecture and services that give consideration to the environment and society
 - ◆ Promoting wooden structures and buildings
 - ◆ Promoting zero-energy buildings
- Reducing CO₂ emissions in our business activities
- Responding to future climate change
 - Consideration for biodiversity
 - Resource recycling and waste reduction
 - Realizing sustainable supply chains
 - ◆ Promoting green procurement

● Developing architecture and services that give consideration to the environment and society

We aim to promote wooden structures and buildings that contribute to many aspects of the environment and society, and zero-energy buildings, energy management systems, etc. toward a low-carbon society.



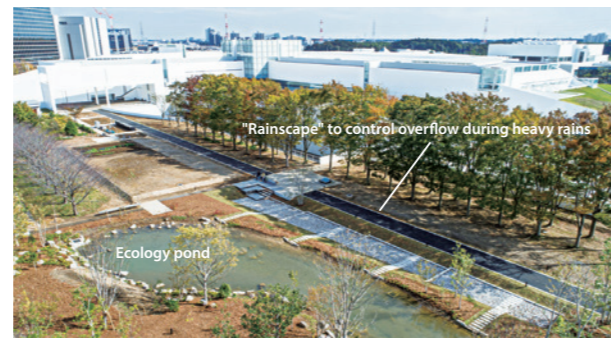
Promoting wooden structures and buildings



Promoting zero-energy buildings

● Consideration for biodiversity

We plan to create more projects that contribute to improvements in biodiversity, such as water recycling improvements that make use of the functions of nature and the development of technologies related to green infrastructure to prevent and reduce disasters.



SHI-RA-BE Forest, a technical demonstration field at the Takenaka Research and Development Institute

● Recycling resources and reducing waste

In addition to continuing to promote the 3Rs (reduce, reuse and recycle) at work sites, we will promote initiatives to reduce construction waste from various perspectives, by utilization of building information modeling (BIM), reducing scrap material resulting from construction material processing at plants and reducing waste from dismantling at the design stage.



Factory production of pipes based on BIM 3-D data

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

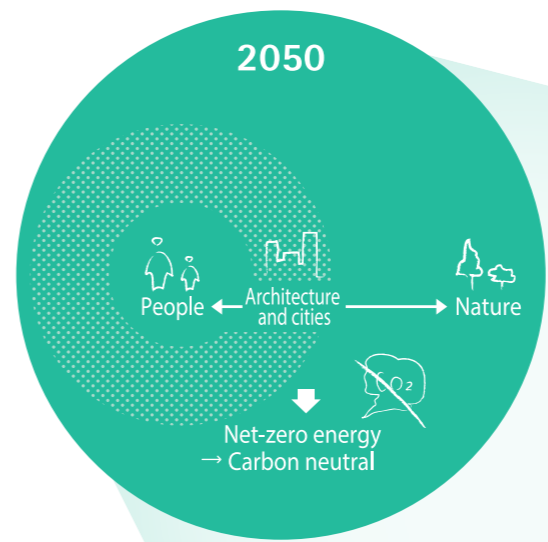
- Action Guidelines**
1. Aggressively promote activities for the realization of a society in symbiosis with nature, a low-carbon society and an asset recycling society.
 2. Adhere to laws, regulations and internal rules related to environmental preservation, and promote measures against environmental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

Long-term targets for CO₂ emissions reductions

In 2010, we established an environmental message, "Connecting people with nature," and our Environmental Concept for 2050. At the same time, we plan to promote dissemination of net-zero energy buildings based on our long-term targets. In response to the acceleration of global movements to achieve the goals of the Paris Agreement, we have expanded the scope of our long-term targets to set groupwide CO₂ emissions reduction targets that cover energy-saving activities at our offices and work sites, application of technologies, green procurement, etc. With the entire Takenaka group banding together as one, we intend to continue groupwide efforts to reduce CO₂ emissions in all of our business activities.

<Environmental Message>
Connecting People with Nature

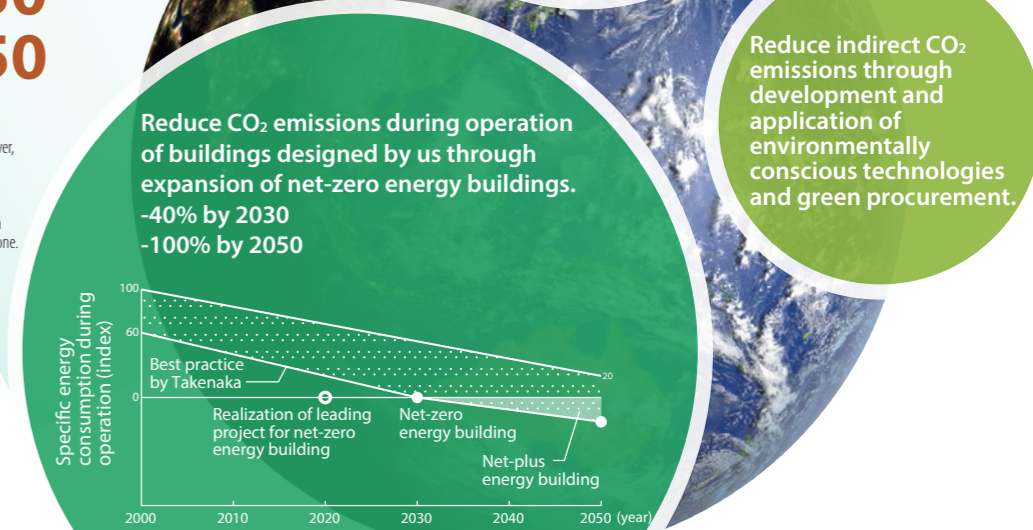
<Environmental Concept>
Realizing a carbon-neutral society from zero-energy buildings



Reducing of CO₂ emissions for Scopes 1-3
-35% by 2030
-80% by 2050

* Scopes 1-3
Scope 1: Direct emissions, such as fuel incineration
Scope 2: Indirect emissions caused by consumption of electric power, heat, etc.
Scope 3: Other indirect emissions excluding Scope 1 and Scope 2, including management of buildings we designed
* The target for offices represents the target for Takenaka Corporation and its entire group. Other is the target for Takenaka Corporation alone.
* Benchmark year: 2018

- Reduce CO₂ emissions from our offices and construction project offices.**
- Offices
-30% by 2030
-80% by 2050
- Construction project offices
-20% by 2030
-60% by 2050



Reduce indirect CO₂ emissions through development and application of environmentally conscious technologies and green procurement.

Urban creation for Resolving Social Issues

—Promoting MACHInnovation—

Represented by the Forest Grand Cycle*1, which was organized to connect local mountains and urban areas, and by the development of "KENCHIKU"*2, Town for Health of the Mind and Body utilizing farmlands, greenery and waterfront," we envision the image of a society and urban areas that will utilize local resources and resolve 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 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: Activities aimed at connecting forests and urban areas, creating a local economy cycle that utilizes timber and a forest resources cycle
*2 KENCHIKU: Activities that create spaces in which people can live actively and healthily, from the viewpoint of communication, physical activity and sensibility



Developing the East Bay Project

We are currently engaged in development of the bay and canal area of Koto Ward to build the East Bay Project. It holds our future vision for this waterfront area where our Tokyo Main Office is located, and it is expected to undergo development following the events in 2020. The project is underway in cooperation with various stakeholders to improve the value of the land area through effective use and revitalization of the 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 in 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



Wooden riverside terraces project



Stride measurement on Fitness Road Shiohama Canal

demonstration experiments, using timber from Ogawa-cho, 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 period.

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

Promotion of 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." The city has formulated a regional revitalization strategy titled "Children x Youth x Adult 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. From this strategy, the new Unnan Social Challenge Valley concept was created. As part of this concept, a Corporate Challenge was set up for businesses in the city and elsewhere, which were interested in resolving local issues, to work together with local communities to take on a variety of challenges that would lead to resolving social issues, creating new value and ultimately for application in society.



Signing ceremony for a community partnership agreement

Our employees dispatched to the city are fulfilling the function of a secretariat for the Corporate Challenge in the development of a scheme and interaction between businesses and communities. Specifically, Yamaha Motor is conducting a demonstration project involving its Green Slow Mobility for community development and revitalization. We are also working on the creation of social systems and business projects that aid in supporting the good health of

communities. To integrate social data on the community and build a scheme for supporting the sound health of the community through data, we measured "smiles" in community centers and Yamaha Motor's demonstration project, and studies will be conducted on the relationship between the vitality level of communities and activities and the level of health. We plan to explore urban creation, social systems and new business projects that are created in Unnan City in greater depth to resolve social issues for dissemination widely into communities and societies in Japan and overseas.



Yamaha Motor's Green Slow Mobility demonstration project and measuring "smiles" in community centers

Future initiatives

Planning to make steady progress in these activities and widen their scope in the future, we concluded a partnership agreement with Ogawa-cho, Hiki-gun, Saitama Prefecture and the NPO Akarie in November 2019, and a similar agreement with Shiojiri City, Nagano Prefecture, in January 2020. In 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. 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.

Innovating Construction Processes and Realizing Diverse Work Styles

Improving Work-Life Balance (WLB) and decreasing the number of construction workers are pressing issues to resolve in order to sustain the construction industry. Accordingly, we are aiming to improve productivity by transforming entire business processes 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.



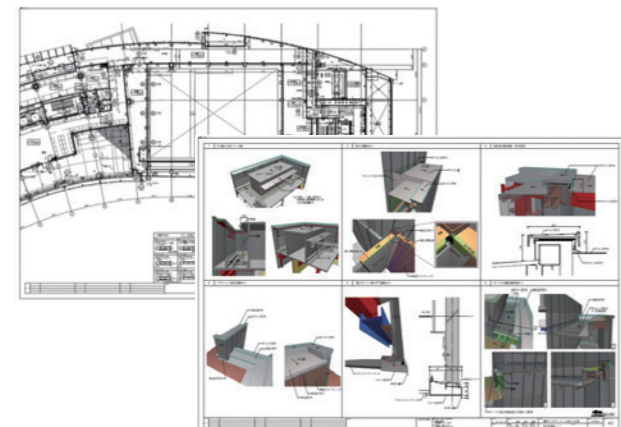
Roof installation of the Ariake Arena sports facility using the Traveling Construction Method

BIM Integrated Design-Build System and promotion of digital fabrication

Having inherited the spirit of a master builder, construction projects are now managed under our Integrated Design-Build System, which extends from sales activities to after-sales services. As for BIM, we have also established a front-loading construction process, in which our production departments and partner companies work together from the design stage. BIM has been used to retain consistency among structural and facility models. It then evolved to integrate frame and production models into the design stage. Finally, it grew into software to provide digital fabrication data that connects models to enable factory production of steel frames and precast pipes. To make better use of BIM by reinforcing the connections between design and the production model, we established a Production Department in 2018 to promote front-loading in the construction process.

● Linking design models and production models

At E-Zo Fukuoka, which is adjacent to the Fukuoka PayPay Dome, we are promoting digital construction centered on BIM data through flexible cooperation between internal departments and partner companies. Our front-loading construction process enables the design department to work together with those involved in the factory fabrication and actual building right from the earliest design stage. By incorporating fabrication data in the design model, such as accommodating exterior and waterproofing materials on the roof, we have established seamless construction processes. Further, during the construction stage, we utilized 4D-BIM (3D + time), which manages the construction scheduling and construction simulations, in order to share work information in an easy-to-understand and timely manner with customers and partner companies.



Examining accommodation of exterior and waterproofing materials using 3D data in the design



Scheduling meetings utilizing 4D-BIM

● Working with computational design

We were commissioned to build the head office for Rever Holdings Corporation, for which our design was arranged into a practical shape based on environmental and structural parameters, such as light intake and heat load. However, it still retained a rather complex shape that presented several challenges to us in its construction. We appointed a construction project office manager to be involved from the design stage to assess the steel frame distribution by BIM, molding methods, including their position markings, and structure of the scaffolding from an early stage to realize streamlined construction that avoided later rework.



Complicated building construction made up of curves



Examining scaffolding and temporary construction through a 3D sectional view

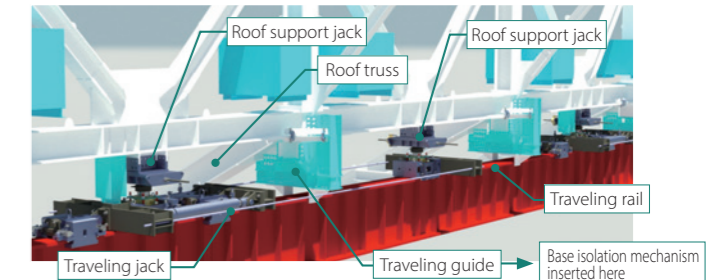
Promoting automated construction methods and enhancing ICT and AI usage

We have developed a range of automated construction methods. These include the Traveling Construction Method, in which a part of the structure (e.g., the roof) is built and laid out as a component with the working point travelling across the foundation beams (the method used with Yokohama Arena); and the Lift-Up Construction Method, in which the roof and other building components are built on the ground and raised to the destination floor (the method used with Nagoya Dome). At Ariake Arena, we are attempting the first base-isolated roof structure through our traveling method, which is also achieving significant labor savings. We are keen to further utilize advanced technologies and open innovation for productivity enhancement, such as by employing an integrated construction data management system that consists of BIM data and QR codes, and development of quality assurance technologies utilizing drones and AI.

● Development of a traveling mechanism for base-isolated roof structures

In the Ariake Arena project, construction of the roof that covers a large

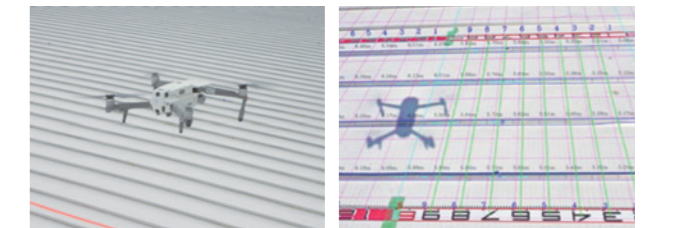
area was a critical phase within the overall construction. We therefore designed the construction process on the premise of using the Traveling Construction Method for the roofing. However, as the roof is designed to include a base-isolated structure, we needed to prepare a traveling mechanism that would not hinder the base isolation components. To achieve this, we built a new traveling mechanism containing the roof support jacks and multiple jacks for traveling, which would not obstruct these components, as well as a system to control the columns. The results were significant labor savings and enhanced safety.



Traveling mechanism for base-isolated roof construction

● Developing drone-based quality assurance technology

Up until now, the welded joints of a stainless steel roof have been visually checked by an experienced inspector totally relying on their expertise and manpower. In order to streamline this process, particularly in a project to build a large-scale convention complex, we have developed technology to inspect the welding quality of these joints using a drone (patent pending). This method enables us to record the inspection results with accurate location data, significantly enhancing the efficiency of the entire inspection process. We are also aiming to automate the fault identification process utilizing AI to further improve the process and standardize inspection quality.



Inspection by drone

Welding inspection screen

Realizing diverse work styles by promoting work-life balance

It has now been three years since we started revising how we work to make the construction industry more attractive to workers. In 2019, we established a touchdown office within a district Facility Management (FM) center located in central Tokyo to offer a compact work space for employees on the move and to conduct teleworking trials. We are also working to incorporate a company scheme to allow more freedom of choice concerning the place and time to work, such as by expanding the scope of workplaces where a flextime system is available.

As the core activity to improve work-life balance, we hold a WLB Dialog every year, where the company directors, including

the president, talk directly with employees. In 2019, the dialog was held in thirteen offices across Japan, including the main offices, and a total of 250 young employees and their supervisors attended. Further, a workshop to improve WLB and promote better communications in work places was held in various construction project offices and district FM centers. This workshop to discuss job satisfaction has been presented in 14 sites with 251 attendees to date. Some participants commented that their work became easier by sharing individual work values among workshop attendees. We are promoting our WLB activities by continuing to be closed eight days every four weeks in order to achieve better job satisfaction.



Job satisfaction workshop in an Okayama area construction project office



Touchdown office in the Otemachi District FM Center

Turning Customer Dreams into Reality

The functions required of buildings today are becoming sophisticated and diverse. We are also taking up the challenge of creating new architectural value while continuously pursuing sustainable works with designs born from 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 their dreams into reality.

PeptiDream Headquarters

—A laboratory open to the landscape—

Design and construction: Takenaka Corporation (2017)

This is the new corporate building of PeptiDream Inc., an innovative creator in the pharmaceutical industry. As their business shifted from the foundation phase to the expansion phase, they decided to establish a new head office away from their original office. In this project, we aimed to create a laboratory that enabled them to conduct the latest research, along with a nature-rich office environment unique to this location with an open view. Curved walls ensure its functions as a pharmaceutical laboratory and provide a panoramic view at the same time. Exterior louvers maximize the angle of view while reducing excess sunlight for working comfort in the office. Along with the minimum lighting required to emphasize the

design concept, these elements form a bright and spacious office area against the wide natural background seen through the windows. On the first floor, the existing slope of the land is utilized as the floor slope that leads to different shared spaces inside the building. Artworks of different sizes are displayed along the route to guide people’s movement from outside to inside. The louvers installed on the exterior wall gradually change their curved shape according to their position and angle. This creates the impression of a sailing ship, which symbolizes the corporate identity of PeptiDream, a company that is sailing into the commercial ocean of the world. The building now stands as a landmark to their new business frontier.

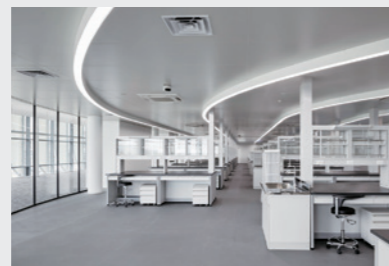
3 GOOD HEALTH AND WELL-BEING
Exterior appearance in concert with nature, and a comfortable and healthy environment

Exterior louvers reinforce connection between exterior and interior
 The louvers are directed toward the northeast, thereby shutting out direct sunlight from the east and the south while securing a view to the north. This design creates an airy office space with open views of the Tama River flowing next to the building and beyond. The sheeted louvers fill the office with reflected light, invigorating the office personnel.



11 SUSTAINABLE CELEBRATION
Business functionality and asset value

Functional ceiling cavity in laboratory floors
 The laboratory floors are large column-free spaces (12 x 40 meters) with the ceiling supported by 1,800-millimeter-high Vierendeel trusses. The cavity within the ceiling is utilized as a maintenance space for duct pipes and cables, and the ceiling panels are robust enough for service personnel to be able to walk on them making maintenance simpler. The cavity can also be used for other purposes, ensuring flexible functions for the laboratory.



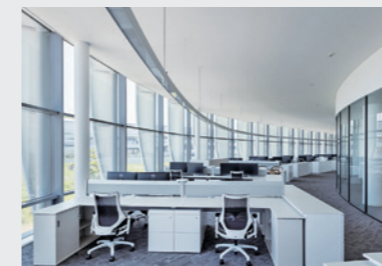
15 LIFE ON LAND
Local view and improvement of environmental quality

Open space that gives consideration to local characteristics and the wind environment
 The terrace area facing the Tama River was designed to provide comfort throughout the year based on airflow simulations that identified the best locations to plant trees to alleviate the prevailing winds over the river in each season. In addition, the trees planted were chosen to reflect the potential natural vegetation of the area to form a rich natural environment for the premises and surrounding area from a medium- to long-term view.



13 CLIMATE ACTION
Zero-energy orientation

Energy-saving ventilation and lighting systems for high ceiling spaces
 In the office floors with 3.7-meter-high ceilings, a floor vent air-conditioning system is employed to achieve comfort with lower energy. Lighting lines suspended at a height of 2,400 millimeters are adjusted by daylight sensors according to ambient conditions, helping create a bright office space with an airy feel.



8 DECENT WORK AND ECONOMIC GROWTH
Space that stimulates the senses and improves job satisfaction

Artwork that incorporates memories
 Artwork displayed in shared spaces was created by Mr. Satoshi Hirose. Each acrylic cube contains small and colorful items, such as models of molecules and a cuff with the company logo, all of which are closely related to the company. We hope that the memories created since the company’s foundation continue to live in the new building.



12 RESPONSIBLE CONSUMPTION AND PRODUCTION
Using ecomaterials

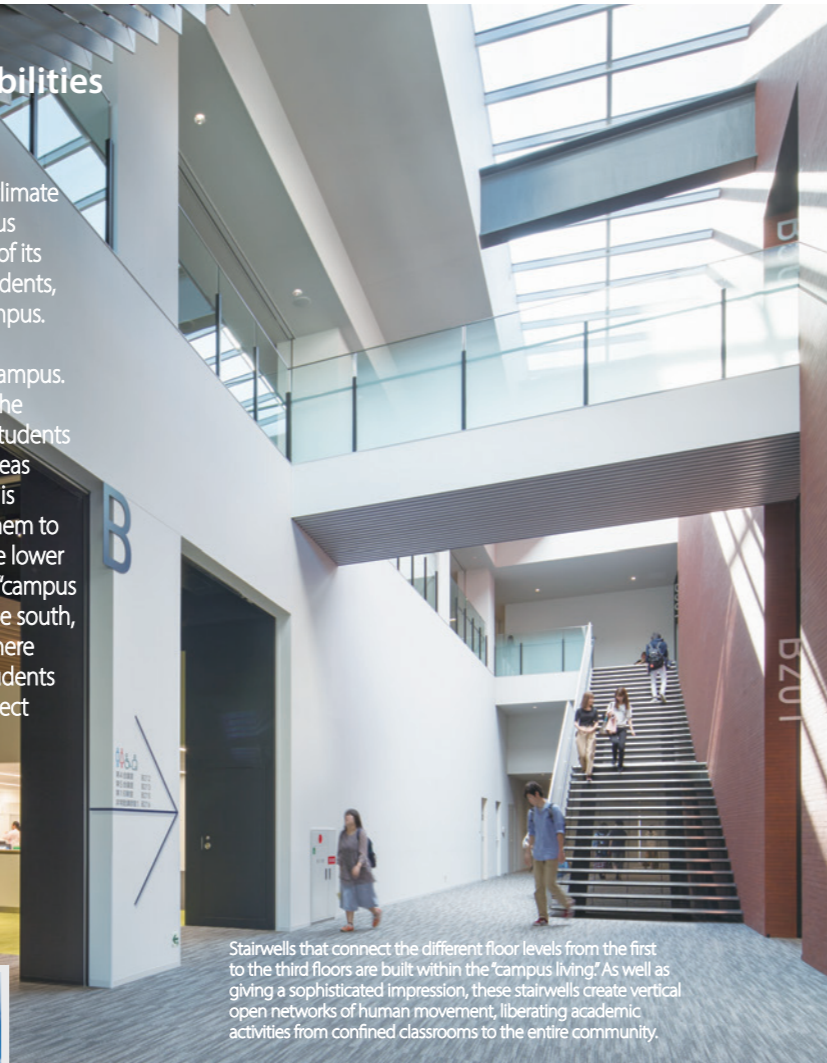
FSC-certified floor materials
 For the first floor lobby, Forest Stewardship Council (FSC)-certified composite oak materials were used. This certification is permitted for materials produced with consideration for conservation of forest environments, and it serves the interests of communities in the production area in an economically sustainable manner. We also worked on reducing environmental impact while contributing to global forest conservation by using certified materials.



Turning Customer Dreams into Reality

Design from our comprehensive capabilities

Shizuoka Kusanagi Campus of Tokoha University is located in a convenient site close to the center of Shizuoka City, yet it is surrounded with greenery and is blessed with a calm and mild climate throughout the year. We aimed to bring new value to the campus through creating an environment that maximized the potential of its location and the capacity of the premises, which holds 4,000 students, in the hope of invigorating academic possibilities within the campus. To realize the concept of being a university open to the local community, we decided not to build an outer wall around the campus. Instead, we created an entrance approach with columns along the national road. These are the front gates of the university where students and visitors enter. A good distance from the adjacent housing areas is maintained with the front open square. The building complex is segmented into four major buildings, retaining gaps between them to provide light and air intake. The building holds a large hall on the lower floor and the upper floors contain smaller specialized rooms. The "campus living," which runs through the second floor from the north to the south, enables the smooth movement of large numbers of students. There are relaxing "step terraces" between the four buildings, which students can access directly from the outside spaces. These terraces connect buildings outside and inside, creating a sense of unity.



Stairwells that connect the different floor levels from the first to the third floors are built within the "campus living." As well as giving a sophisticated impression, these stairwells create vertical open networks of human movement, liberating academic activities from confined classrooms to the entire community.



Tokoha University, Shizuoka Kusanagi Campus

A campus in a regional core city to function as a community hub for academic exchange surrounded by nature

Design and construction: Takenaka Corporation (2018)



The "campus living" runs through to a sports gym located at the far end of the campus. The large stairway in the gym not only helps the movement of students but can also be utilized for other purposes.



The "step terraces" guide student movements and offer a resting area with views of surrounding greenery and Mount Fuji. They also function to bring outside air into the buildings.



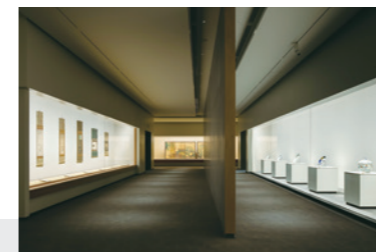
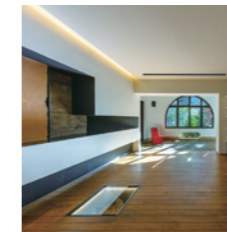
In the front open square, we installed four terraces and a promenade of cherry trees with the intention of connecting a variety of student activities with the local community and making the campus into "a bastion of open knowledge and land."



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



MOA Museum of Art

This is a 35-year-old art museum that stands on a hill overlooking Sagami Bay. Without touching the original exterior made of Indian sandstone, we completely renewed the building with an emphasis on the original features of the lobby and exhibition rooms. In the exhibition rooms, we utilized recycled timber and black plaster, which have typically been difficult to use in museums, to rejuvenate the viewing space but keep it suitable for exhibiting antique artworks.

Award at the 24th BCS Awards
Award in the Long Life Category at the 13th BELCA Awards
Award in the Best Renovation Category at the 28th BELCA Awards
Basic renovation design and design supervision: New Material Research Laboratory (NMRL)
Partial basic renovation design, final design, construction: Takenaka Corporation (2016)



Attractive renewal

Buildings, which are essentially receptacles that protect our lives and possessions, are transformed into social assets over time. Our concept of "attractive renewal" refers not only to recovering the functionality and beauty characterizing architectural structures at the time of their original construction, but it also extends to adding new functions to raise their asset value and improve their business operability. At the same time, another concept, "from scrap and build to stock utilization," which was formulated from the perspective of environmental conservation and sustainability, is becoming increasingly widespread today. The functions sought in architecture are also diversifying and growing in sophistication.

This means going beyond improvement of basic building functions and performance that no longer meet the needs of the times to include preserving buildings of historical significance while utilizing them efficiently by implementing changes in their functions (conversion) that create new value. The design and technological capabilities Takenaka has developed over many years are being deployed for "attractive renewal," for which we have received high acclaim, including in the form of awards from the Building and Equipment Long-Life Cycle Association (BELCA).



Mido-Building Innovation Space Step-up Project

We improved our Osaka HQ, 50-year-old building, as a modern workplace to let us continuously create new value acquiring changes of the time. We installed a new five-story open stairs inside of working area to increase chances of casual encounters and information sharing. We provided various types of spaces based on activities of work 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



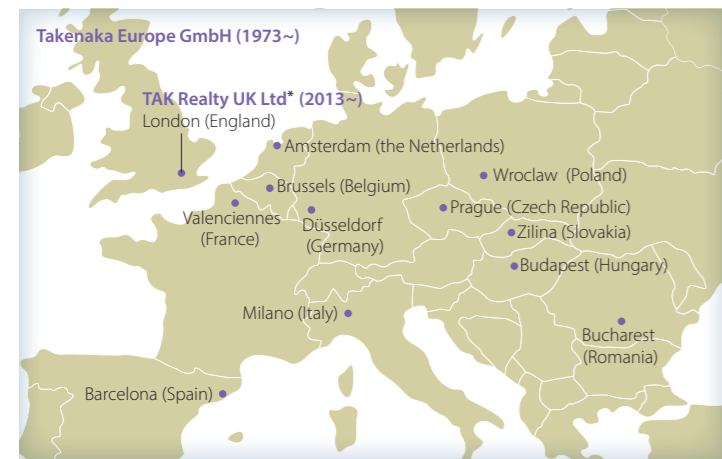
Supporting the Business Activities of Our Customers –Contributions in each country and region–

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-seven 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 550 local employees working at operating bases in 12 countries collaborate closely to support customers who are considering establishing operations in Europe.



* Development business

Europe

Asia/China

Asia/ China

This year marks the 46th 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 countries. Some 150 expat employees have been assigned to China and other Asian countries along with the support of roughly 1,700 local employees. Together they handle construction projects of all sizes and types.

Takenaka received the Gold Award from Jaguar Land Rover with its Global Supplier Excellence Awards

On May 14, 2019, Takenaka Europe became the first construction company to receive the Gold Award with the Jaguar Land Rover 2018 Supplier Excellence Awards. This accolade was given in recognition of our outstanding performance in handling projects for Jaguar Land Rover's new Slovakia Factory,* which was completed in 2018. We plan to continue providing construction work of outstanding value and attractiveness for customers around the world.

* Automotive factory of approx. 260,000 square meters constructed by Takenaka Europe in Nitra, a city in western Slovakia.

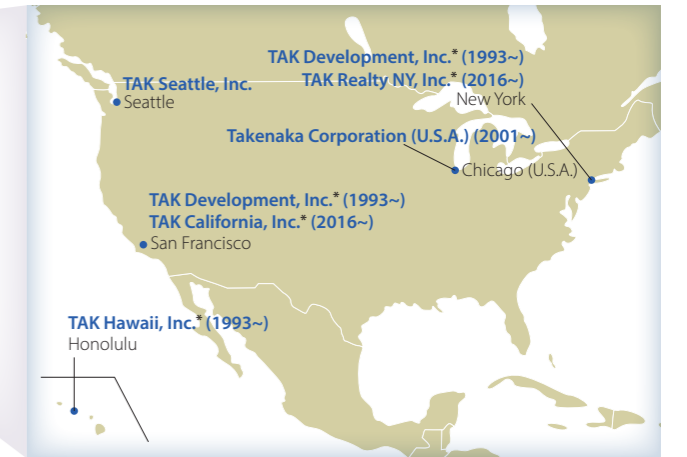


Jaguar Land Rover Slovakia New Factory (Slovakia, 2018)



Gold Award plaque, Global Supplier Excellence Awards 2018

United States



* 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.



Changi Airport Terminal 4 (Singapore, 2017)



AEON MALL Jakarta Garden City (Indonesia, 2017)



National Gallery Singapore (Singapore, 2015)



CapitaGreen (Singapore, 2014)



Pacific Century Place Jakarta (Indonesia, 2017)



Nexen Tire Europe Technical Center (Germany, 2018)



Nisshin Foods Hungary Factory (Hungary, 2017)



Continental Tyre Thailand New Plant (Thailand, 2018)



Wuxi Yakult Co., Ltd. (China, 2015)



Mitsubishi Elevator India New Factory (India, 2016)



FCC Gujarat New Factory (India, 2018)



Toyota Buzz Bangkok New Head Office (Thailand, 2018)



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, the Nagoya Station area, and Umeda, Nakanoshima and Abeno in 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

Udagawa-cho 14/15 District Redevelopment Project implemented as an urban renewal project

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 a part of three-dimensional pathways to 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

Minato Mirai 21 Central District 20 Block MICE Facility Project (Completed in 2020)

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). The facilities are expected to improve urban amenities for pedestrians as well as enhancing the landscape of the 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 can 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



Rendering

City of Yokohama New Government Building

(To be completed in 2020)

The new city hall is expected not only to provide Yokohama City with administrative and legislative functions, but also to provide a roofed public square 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)



Global Gate

This urban development complex, comprising office buildings and commercial facilities as well as a hotel and a conference center, forms the core of the Sasashima Live 24 district, which is a center for international exchange located one kilometer south of Nagoya Station. Since winning the competitive bid for the project in 2008, Takenaka was involved in the planning, design, and construction work with the project completed in 2017. At the same time, we acted as a consultant to administrative bodies on the establishment of a special urban redevelopment district, conducted an environmental assessment, and provided project promotional support for commercial tenant leasing.

Design and construction: Takenaka Corporation (joint venture)



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



Rendering

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 Estate 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 central business district of San Francisco. It represents a value-added project that made the best of our expertise in installing aseismic reinforcement mechanisms while preserving the building features. In 2018, it was registered under San Francisco's Designated Landmark List.

The scale of the photographs and actual buildings differ.

Delivering Best Solutions to Resolve Customers' 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.



Initiatives in the field of IoT

A society that creates new value by connecting things with IoT. Following the announcement of the "Society 5.0" initiative, the manufacturing method, "Digital Twin," which fuses virtual space and real space, has been drawing attention. Through our EQ House architecture, we aim to achieve optimization of natural light intake and energy conservation through computational designs, and realize future lifestyles by combining environmental controls and AI-learning based on sensor data. We will continue to contribute to the realization of smart buildings and smart cities by collecting digital twin information with our proprietary communication platform "Building Communication" for the architecture we develop and then analyzing information such as weather forecasts, electricity prices, customer attraction and busy periods, and the health condition of residents.



EQ House that aims to optimize automatic utility operations using IoT data and AI



Sports facilities and urban creation

We have built a variety of sports facilities, ranging from small arenas to large stadiums. From the perspective of urban creation rooted in communities, we have been providing several solutions that cover environmental issues, IoT features, and emergency procedures for disasters. In order to manage and support these sports facilities—including those for the events in Tokyo—to be future heritage, we will respond to the diversifying needs in accordance with the times.

Sports facilities rooted in the surrounding community



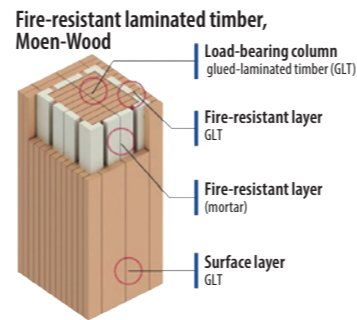
Tokyo Dome City

Panasonic Stadium Suita



Wooden structures and buildings

We are working to increase the number of buildings partly or entirely made from wood in order to reduce the LCCO₂* of buildings, and to encourage forest conservation and regional economic revitalization. We are one of Japan's leading builders of large-scale wooden buildings and high-rise wooden buildings. These buildings were realized through our advanced technologies, such as Takenaka's exclusive fire-resistant laminated timber, Moen-Wood (patent pending), and our skills in utilizing cross-laminated timber (CLT). We continue contributing to our customers' businesses and the realization of a sustainable society by offering a wide range of solutions.



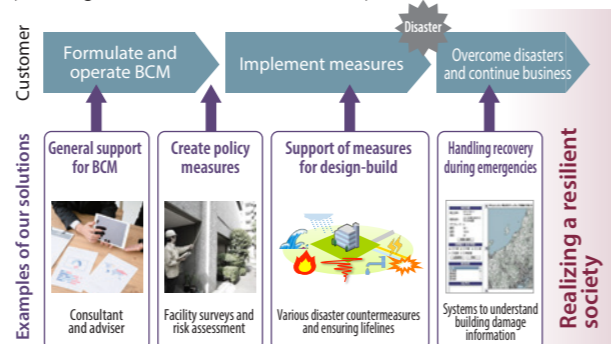
* CO₂ emitted throughout a building's life cycle from design, construction, and renovation, to demolition.

Roadmap of high-rise wooden structures



BCM and risk management

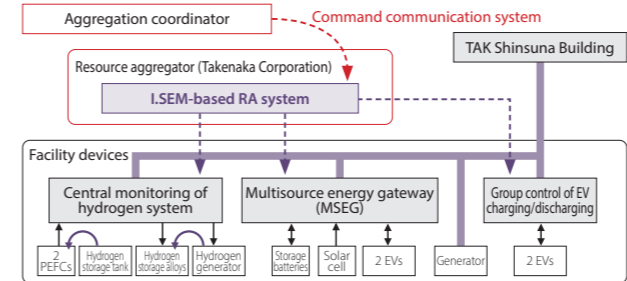
To protect our customers' businesses and assets, we can facilitate measures for emergency situations, such as earthquakes, flooding, fire, and lifeline disruptions, as well as for nonemergency solutions, such as security systems. We also provide support services for the entire process of business continuity management (BCM) from planning to implementation. We contribute to building a resilient society by providing assistance from BCM to disaster prevention.



Energy management

We are continuing our technical demonstrations to realize a Decarbonized Model Town centered around our own energy management system I.SEM. We participated in the Virtual Power Plant (VPP) verification project led by the Ministry of Economy, Trade and Industry, and conducted a variety of tests, including integrated management of storage batteries and a generator, hydrogen utilization, and group management of EVs. I.SEM is integrated within our EQ House and various other projects.

VPP configuration built into the TAK Shinsuna Building



EQ House (Minato City, Tokyo)



DC power LED lighting in the Kurihara Kogyo Building in Kita-Ku, Osaka Prefecture

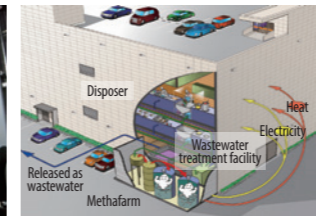


Initiatives toward the field of recycling resources

As society expects corporations to contribute to achieving SDGs and participating in a circular economy, new recycling technology has become a focus of attention. Our Methafarm is a methane gas generator inside the building, and it derives energy from kitchen waste. The system installed in the Abeno Harukas Building in Osaka in 2014 has been processing two tons of kitchen waste every day in a stable and economical manner. The system has now been downsized to be able to handle kitchen waste as small as one ton per day to cover a wider scope of customers. In the future, we will continue to respond to market demands through improved recycling rates and lower CO₂ emissions.



Methane fermentation tank on a basement floor of Abeno Harukas



Conceptual diagram of Methafarm installed in a commercial complex



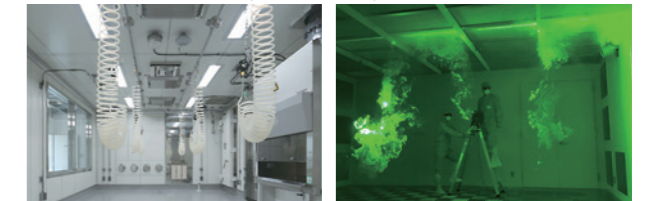
Bioclean and Biosafety Engineering

A research and production laboratory of biopharmaceutical and regenerative medicine must be built to be able to adapt to new research and production methods, and cope with rapidly progressing technological innovation. We have developed a CPC*¹ concept model that can provide this adaptability and a room seismic isolation system (patent pending). We offer a laboratory equipped with facilities of proven results in our BCR*² to enable research and production utilizing the latest technologies.

*1 CPC: Cell Processing Center.

*2 BCR: Bioclean Room. Takenaka's own bioclean and biosafety experiment facility.

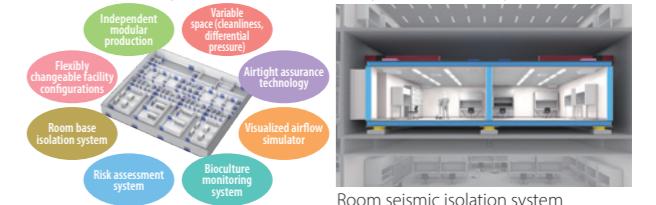
Bioclean and Biosafety technology



Takenaka's BCR experiment facility

Visualization of airflow and particles

Flexible facility planning for safety and security



Next-generation CPC concept model



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 an eco-friendly recyclable radiation shielding board, RadBoard (patented). In Japan, we have outstanding performance in construction of PET scan facilities (useful for early detection of cancer), and we are currently working to expand its use in heavy particle and proton beam therapy centers, including the East Japan Heavy Ion Center, Faculty of Medicine, Yamagata University.



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



CT simulation room installed with RadBoard-X

Forging the Future with Technology

The Takenaka Research and Development Institute is our group's principal supplier of leading-edge technologies that society requires in the areas of environmental preservation, safety and security as well as production innovations and research and development of innovative proprietary seed technologies. It is contributing to achievement of a sustainable society by providing the world with industry-leading technologies and solutions in every aspect of urban creation.

Takenaka Research and Development Institute

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



Since its establishment in 1953, the Takenaka Research and Development Institute has continuously provided value that meets customer needs. It does this by creating and assessing new technologies that respond to future requirements for the entire Takenaka Group. Specialists in a varied range of fields related to construction gather here to perform leading-edge research in collaboration with other research institutions in Japan and overseas. An exhibition zone in which visitors experience advanced technologies firsthand offers customers hints for discovering solutions and creating new businesses, and this zone plays a role in disseminating information that can uncover potential needs. Our focus on technological development covers the advancement and streamlining of design-build, realization of a safe and secure smart community filled with comfort and attractiveness, decreasing environmental impact from buildings and entire urban areas, and advancement of high functionality to support growing industries.



Aerial view of the Takenaka Research and Development Institute

A new research institute aiming for "improvement of new value creation capabilities"

In 2019, based on the following two concepts, we made a large-scale renewal of our office area by applying unconventional zoning and space design, and employing the latest technologies in construction, facilities and information. We are challenging social issues with our increased value creation skills to fulfill our customers' diverse needs.

(1) Creation – Environment to enhance individual creativity
We constructed different types of spaces that inspire creativity by combining "diversity engendered by furniture and interior design" and "diversity engendered by architectural design."

(2) Innovation – Environment to promote open innovation
With the aim of generating innovation inspired by external exchanges, we organized an environment to encourage "Deep discussion" and "open utilization of research resources" that have the potential to lead to identifying issues and finding solutions.



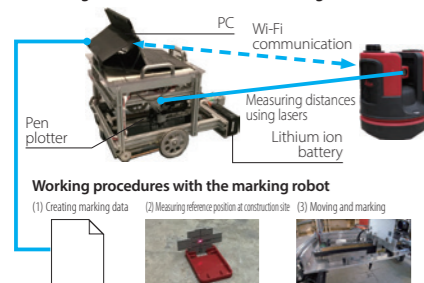
Courtyard converted into a large stairwell in the center of a building



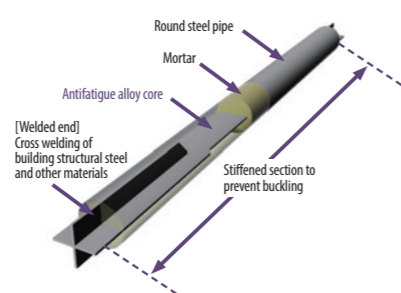
Leading-edge technology exhibition zone

Automated marking robot (patent pending)
After receiving the location data over Wi-Fi from a laser measuring instrument, our robot automatically moves to the target location and marks layout lines on the floor. This reasonably-priced and lightweight robot offers a wide range of applications at construction sites, and can improve productivity.

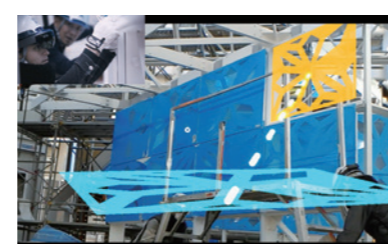
Marking robot (left) and laser measure (right)



Brace-type seismic damper using fatigue-resistant Fe-Mn-Si system alloy (patented)
A bracing damper was added to our lineup of panel dampers to cover a wider range of building specifications and customer requests. The bracing damper is also available for mass production, following improvements to our alloy production and development of new welding techniques.



Improving construction efficiency through MR technology
When we built the EQ House, a model house constructed by applying near-future technologies, we utilized Mixed Reality (MR) technology to achieve a lean construction procedure. Each of the wall panels has a slightly different design. Reading the 2D bar code on the panel, mixed reality device displays the target location of the panel.



View through the head-mounted display

Business Activities Conducted by Principal Domestic Takenaka Group Companies

Companies in the corporate group headed by Takenaka Corporation respond to the varied needs of customers through every stage of a building's life cycle.

■ Takenaka Civil Engineering and Construction Co., Ltd.

Creating civil works that are people friendly and environmentally friendly

Takenaka Civil Engineering and Construction is the Takenaka Group member company responsible for civil engineering works. Its role is to promote social progress and affluent lives for people by building social infrastructure in accordance with the group's Management Philosophy, "Contribute to society by passing on the best works to future generations." It also engages in corporate activities with a focus on being "people friendly," and aimed at responding accurately to such needs as environmental protection, energy conservation, urban renewal, declining birthrates, aging population, and a highly networked information society based on its Environmental Policy of "Striving to build social infrastructure that coexists harmoniously with the environment and contributes to sustainable development of society." The corporate message defining the company's mission, "Bridge between people and the earth," guides all its employees as they walk alongside their customers in an effort to create sustainable urban areas with a focus on the establishment of infrastructure that supports various industries and a diverse range of enriched lifestyles.



Chubu Odan Expressway Shiroyama Tunnel Project

■ Tokyo Asahi Build Corporation

Providing the best frameworks and the best services under the motto of "pride in craftsmanship."

With the mission of securing an internal workforce for Takenaka Corporation, Tokyo Asahi Build Corporation was established in 1972 as a specialty construction company to undertake framework construction as part of our integrated system. Even now, the company is continuously cultivating skilled workers mainly with framework and rebar while also developing business with PC (prestressed concrete), formwork improvement and construction management. In doing so, it contributes to highly skilled work at construction sites from the planning stage to the implementation stage based on experience and a track record that has been cultivated on-site. Additionally, in order to secure future leaders, the company is developing activities that broadly convey an interest in construction such as holding visiting classes at technical high schools. Serving as the framework construction partner that is responsible for future growth of the Takenaka Group, Tokyo Asahi Build will continue to "provide the best frameworks and the best services" that meet work site expectations for securing stable production capacity, and improving safety, quality and productivity.



Exposed exterior concrete wall of our company dormitory built by our employees

■ TAK Systems Corporation

Aiming to be a building data management professional

TAK Systems Corporation was established in 1990 as a CAD drafting specialist. The company celebrates its 30-year anniversary in 2020. The company's main work was originally ICT and CAD operations, and this gradually expanded to production design. With the use of BIM modeling, the company is now responsible for some 40 percent of the entire process of construction projects undertaken. To improve productivity in construction, which is a major issue in the Japanese building industry, the company has contributed to streamlining the Takenaka Group's work as a driving force of BIM-based construction. The company aims to realize a sustainable society and urban development by providing construction data accumulated as the DNA of our buildings.



Award of Excellence in the LUMION Competition Japan 2018 M0c Villas Takenaka Corporation and TAK Systems, Tokyo Office

■ Asahi Facilities Inc.

Preserving the value and safety of customer buildings

Since its establishment in 1969, Asahi Facilities has been engaged in maintenance operations throughout the life cycle of buildings. The longer a building's operating lifetime is extended, the higher its value as an asset will be. Asahi Facilities seeks to establish itself as its customers' best partner by helping them derive greater value from their buildings, and offering superior, more attentive services that are designed to protect and improve their property values. These include operation and maintenance services, security services and building management services that optimize care for buildings in conducting cleaning and other tasks as well as insurance agency services that cover risk management. The company will continue to provide new value that utilizes advanced technology, and it intends to live up to the trust customers have placed in it as a company brimming with hospitality that promptly provides them with the best one-stop solutions.



Daily facility checks

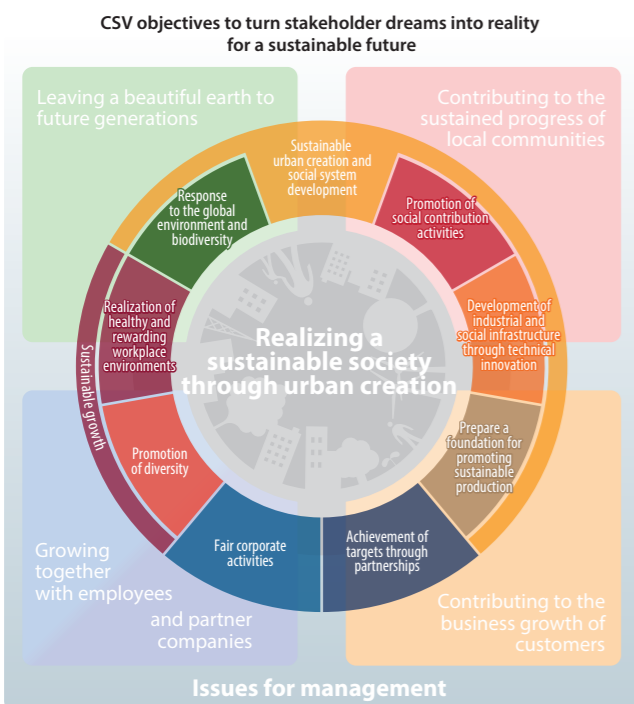
Activity Achievements Toward Realizing a Sustainable Society

Aiming to realize a sustainable society through architecture and urban creation, our company has captured its goals in the form of "dreams" so that we will be able to meet the expectations of stakeholders such as the global environment, local communities, markets (customers, users, etc.), employees and partner companies. In order to realize these dreams, we identified issues that should be resolved through our corporate activities (business and nonbusiness) based on our 2017 Group CSR Vision and 2025 Group Growth Strategy. We then established targets and KPIs based on 25 implementation measures as a CSR Action Plan. In 2019, which was the final year of our three-year plan, we proceeded with initiatives for achieving these targets and KPIs, and in this brochure, we report on major activities from page 37 along with showing the results for 2019. Efforts toward the future realization of these dreams have evolved into our "2020-2022 Action Plan for a Sustainable Society," which was newly established based on major objectives (materiality). Continuing this while having discussions with stakeholders and various experts, we will contribute to the realization of a sustainable society as an "integrated engineering firm for urban creation."

In 2019, the sustainability assessment agency, EcoVadis SAS, awarded its Gold Medal to Takenaka. EcoVadis provides buyers with a corporate social responsibility (CSR) rating of suppliers through an information sharing platform that registers buyers and suppliers across 200 industries in about 150 countries. In an assessment of the sustainability of the company based on four survey items, "environment," "labor and human rights," "ethics," and "sustainable procurement," we received the highest rating, which was in the top five percent of all companies evaluated.



CSR Action Plan and Results									
CSR/CSV objectives	Measures	Pages	Affected stakeholders	Indicators (KPIs)	2019 ¹⁾			Relevant SDG goals ²⁾	
					Targets	Results	Evaluation		
Sustainable urban creation and social system development	1. Identify social and urban issues through dialog and planning strategy.	WEB	●●	Number of fields in which dialogs and strategies have been developed to resolve issues	Social level: 1 or more areas Urban level: 3 or more areas	Social level: 1 area (continuing), 2 areas (new) Urban level: 7 areas (continuing), 2 areas (new)	○	9 RESILIENT INFRASTRUCTURE, 11 SUSTAINABLE CITIES AND COMMUNITIES	
	2. Promote innovation to resolve issues and build infrastructure.	WEB	●●	—	Implement activities.	Promoted activities to build social systems.	—	9 RESILIENT INFRASTRUCTURE, 11 SUSTAINABLE CITIES AND COMMUNITIES	
	Preparing a foundation for promoting sustainable production	3. Strengthen quality integration and education systems.	P37	●	Implementation rate of human resources education	100%	100%	○	4 QUALITY EDUCATION
		4. Prevent public disasters and give consideration to local environments.	P38	●●	Number of serious public disasters	0	0	○	12 RESPONSIBLE CONSUMPTION AND PRODUCTION
		5. Reduce and recycle construction by-products.	P38	●	Rate of mixed waste emissions in construction of new buildings (per volume)	15% or lower	13.9%	○	14 LIFE BELOW WATER, 15 LIFE ON LAND
	6. Promote green procurement.	WEB	●	Priority green procurement items Rate of projects that utilize nine or more priority green procurement items	87% or more	Design 91.5% Construction 91.9%	○	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	
	7. Build infrastructure for a sound and attractive construction industry.	WEB	●●	—	Continue to implement Takenaka Meister Certification.	Takenaka Meister Certification ³⁾ : 608	—	—	
	Response to the global environment and biodiversity	8. Promote environmentally conscious designs and energy conservation.	P39	●●	Rate of projects assessed as CASBEE ⁴⁾ S or A rank Number of ZEB projects ⁵⁾ Number of LSEM ⁶⁾ projects	70% or more 5 or more 4 or more	89.2% 8 2	△	7 AFFORDABLE AND CLEAN ENERGY
		9. Reduce CO ₂ emissions from the entire supply chain.	WEB	●●	—	Disclose information and establish targets accompanied by specific measures.	Decided long-term targets and measures.	—	13 CLIMATE ACTION, 15 LIFE ON LAND
		10. Promote initiatives for biodiversity.	P39	●●	—	Promote the "Takenaka Biodiversity Facilitation Program."	Promoted the "Takenaka Biodiversity Facilitation Program."	—	13 CLIMATE ACTION, 15 LIFE ON LAND
Promotion of social contribution activities	11. Pass on architectural culture and technology, and contribute to local communities.	P40	●●●	Number of community contribution programs	200 or more	311	○	4 QUALITY EDUCATION, 11 SUSTAINABLE CITIES AND COMMUNITIES	
	Development of industrial and social infrastructure through technical innovation	12. Develop and deploy technology focused on strengthening cities and buildings.	WEB	●●	—	Develop advanced technology and apply it to pilot projects.	Completed technology development and applied it to pilot projects.	—	9 RESILIENT INFRASTRUCTURE
		13. Popularize wooden structures and buildings, and promote the utilization of Japanese timber.	P41	●●	Number of wooden structures and building projects	9 or more	11	○	11 SUSTAINABLE CONSUMPTION AND PRODUCTION, 15 LIFE ON LAND
	14. Improve labor productivity through innovation of entire processes.	P42	●●●	Labor Productivity Index ⁷⁾	6.0% improvement (over 2015 level)	12.31% improvement	○	9 RESILIENT INFRASTRUCTURE, 15 LIFE ON LAND	
Sustainable growth	Realization of healthy and rewarding workplace environments	15. Improve work-life balance through drastic productivity improvement.	WEB	●●	—	Follow implementation items.	Employee satisfaction 3.6	—	3 GOOD HEALTH AND WELL-BEING
		16. Provide education and support aimed at improving employee growth and management skills.	P43	●	—	Implement measures for management training.	Reviewed training programs and configurations, and implemented management education.	—	8 DECENT WORK AND ECONOMIC GROWTH, 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
	17. Ensure safe, hygienic workplace environments at our work sites.	WEB	●●	Accident frequency rate (accidents followed by absence of four days or more from work) ⁸⁾	0.60 or less	0.54	○	8 DECENT WORK AND ECONOMIC GROWTH, 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	
	18. Facilitate health management that fosters healthy minds and bodies.	WEB	●●	—	Total evaluation score of survey on health and productivity management: 500 or more	Total evaluation score of survey on health and productivity management: 550.4	○	—	
Promotion of diversity	19. Facilitate active involvement of female and senior employees.	P43	●●●	Rate of women in managerial positions Status of activities of Komachi construction work team Conclusion rate for reemployment contracts	4.1% or more Continue implementation. 80% or more	4.1% 40 projects registered. 86.4%	○	5 GENDER EQUALITY, 10 REDUCED INEQUALITIES	
Fair corporate activities	20. Maintain and reinforce internal controls.	P44	●	—	—	Disseminated and instilled our Corporate Code of Conduct.	—	—	
	21. Promote CSR and compliance.	P44	●	Number of serious noncompliance cases	0	0	○	10 REDUCED INEQUALITIES	
	22. Promote initiatives for respecting human rights.	P45	●●●●	—	Develop measures based on human rights due diligence.	Implemented measures and reviews based on human rights due diligence.	—	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	
	23. Reinforce information security.	P45	●	Number of data breach incidents	0	0	○	—	
Achievement of targets through partnerships	24. Prepare and strengthen disaster response systems.	P45	●●	—	Revise business continuity plans (BCPs) on a continual basis, and follow up with exercises and drills.	Implemented joint earthquake disaster drills and reviewed coordination systems.	—	—	
	25. Understand social issues through dialog and check policy plans and measures.	WEB	●●●●	Number of dialogs, and measures and policy plans	Hold dialog with stakeholders and formulate measures and policies based on the results. 2 or more	Dialogs: 3 Proposals: 2	○	17 PARTNERSHIPS FOR GOALS	



¹⁾ The targets and results for 2019 as well as targets for 2020 are nonconsolidated targets for Takenaka Corporation. This is excluding a number of community contribution activities among which overseas subsidiaries are included.
²⁾ Icons at the far right side of the table indicate targets closely associated with SDG goals, which are international goals adopted at the United Nations Summit in 2015.
³⁾ The total number of certified individuals as of the end of 2019. Retired workers are not included.
⁴⁾ Comprehensive Assessment System for Building Environment Efficiency. The five ranks based on the assessment indicators are: S (Superior), A (Very good), B+ (Good), B- (Slightly poor) and C (Poor).
⁵⁾ ZEB-oriented projects are included in ZEB projects.
⁶⁾ The "L" in the acronym I. Smart Energy Management, which is a new energy management system capable of optimally controlling power demand, stands for Interconnection, Interoperability, Interface, and Interaction. This represents the concept of a cloud system that links a variety of hardware and software tools.
⁷⁾ A Takenaka-developed index calculates total actual labor hours against total standard labor hours between 2017-2019 using a regression equation (2015 reference) based on the amount of finished work and number of labor hours by type of construction from 2014 to 2016.
⁸⁾ Frequency of accidents requiring four or more days off work (including one manager). Number of victims from work-related accidents requiring four or more days off from work (including fatalities) per one million working hours.

● Global/local communities ● Markets ● Employees ● Partner companies

* Evaluation in (○/△/×), for quantitative targets

Sustainable Urban Creation and Building Social Systems

Promotion of sustainable production activities and improvement of infrastructure

In order for our company to resolve social issues through our building activities, earn society's trust, and continue sustainable growth, we will proceed with ensuring quality, preventing disasters, giving consideration to local communities and the global environment, and preparing a foundation for our construction industry.

- Measures
- 1: Identify social and urban issues through dialog and planning strategy.
 - 2: Promote innovation to resolve issues and build infrastructure.
 - 6: Promote green procurement.
 - 7: Build infrastructure for a sound and attractive construction industry.

* See our website for further details.

Measure 3 Strengthen quality integration and education system.

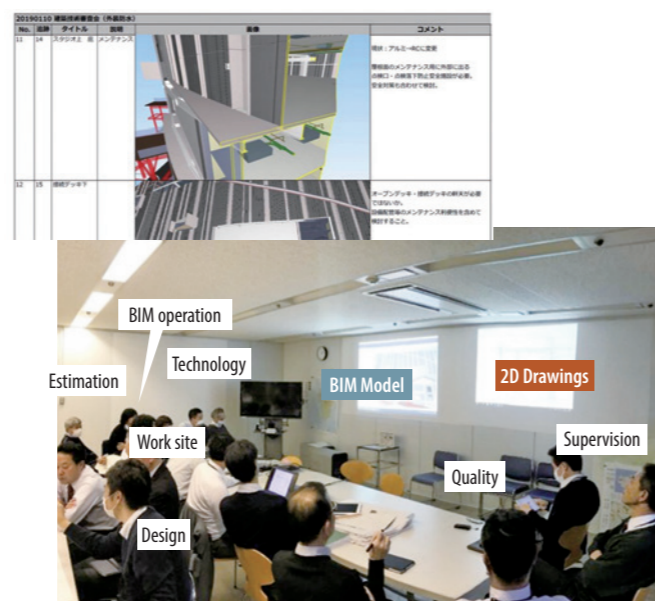


KPI: Implementation rate of human resources education

Result: **100** (Target: 100)

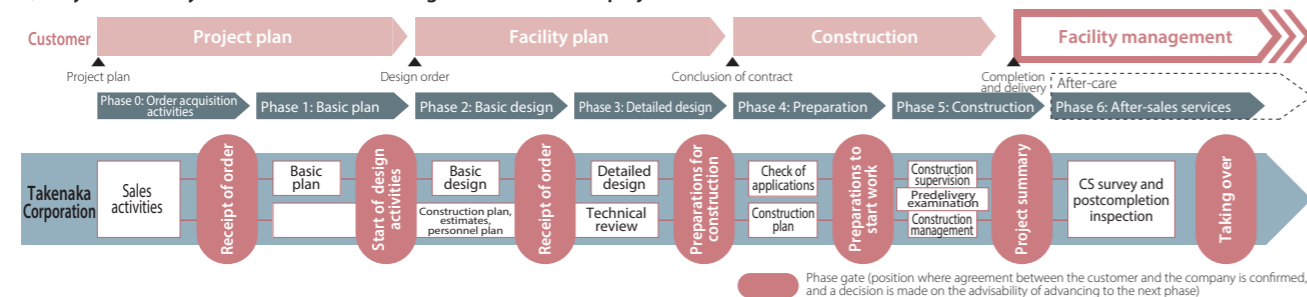
"Building in quality" from the design stage based on construction conditions

Making the best use of the merits of design-build integration, our construction department and major subcontractors work to build in quality from the design stage in order to assure quality, and this business flow has been standardized (ISO9001 acquisition) as our quality assurance system. In this way, we have been building in quality, including construction know-how, by adding the construction department, which participates in determining a site manager from the basic design and manages the working drawings from the detailed design, and by reflecting construction procedures and working information from partner companies in the design drawings. In addition, we have started to use BIM on all projects, and through this we have begun quality checks on equipment connections with building frames, rebar fittings, drainage routes, etc. with similar models for project-related parties from the design stage through construction.



Example of a situation where quality is checked through an exterior review committee and model

Quality assurance system for architectural design and construction projects



Quality integration education

To pass on skills for integrating quality into production, we provide training programs for different skills and levels in our practical technology training center (Omoi). In 2018, life-size training models were supplemented with a hybrid structure, which was made of precast concrete components, steel frames and base isolation mechanisms, and a wooden structure using "Moen-Wood" and CLT.* The training programs now include the latest construction methods that participants can learn through actual experience. A CLT dormitory has also been newly built on the premises to provide the opportunity to stay in a wooden building made from forest resources during the training.

* CLT: Cross-Laminated Timber. Wooden materials in which layers of timber are glued at right angles to adjacent layers.



Hybrid mock-up training situation

Measure 4 Prevent public disasters and give consideration to local environments.



KPI: Number of serious public disasters

Result: **0** (Target: 0)

Public disasters have a profound impact on third parties and local communities. Particularly at work sites with a lot of surrounding traffic, parking concrete mixers on the street can cause traffic jams and accidents. As a measure to ease traffic congestion in Minato Ward, which is expected prior to the events in Tokyo, our Tokyo Main Office set up temporary waiting areas called "TAK-station" for incoming vehicles in cooperation with "2020 TDM (Transport Demand Management) Promotion Projects." In this way, we are avoiding street parking near work sites in this ward as well as averting traffic accidents.



Delivery vehicle coming out of a TAK-station

Measure 5 Reduce and recycle construction by-products.



KPI: Rate of mixed waste emissions in construction of new buildings (per volume)

Result: **13.9%** (Target: 15% or lower)

We are continuously striving to reduce the final disposal volume of construction waste by thorough sorting at work sites and 3R activities*. Since 2017, one specific measure has been to greatly reduce generation of mixed waste with particularly thorough education on separation. As a result, our construction waste recycling rate (by volume) in FY2019 was 92.0 percent.

* 3R activities: Waste reduction activities through "reduce, reuse, and recycle."

Promoting recycling of waste plastic and other materials

With the goal of strengthening our recycling of materials at a work site for construction of Toppan Printing's Fukaya Factory, we checked the composition of the industrial waste that was being generated, and then reexamined subdividing sorted items and expediting construction. In particular, we subdivided waste plastics into PVC pipes, hard plastics, vinyl wrapping, etc., and we pioneered new recycling routes. In addition, we worked to create and apply easy-to-understand classification rules, innovative

industrial waste yards and reuse checklists for usage before and after renovations. As a result, we achieved a material recycling rate of 86 percent (target of 80 percent or more) and a total recycling rate of 99 percent (target of 99 percent or more). These activities received the Minister of Land, Infrastructure and Transport's 3Rs (Reduce, Reuse, and Recycle) Promotion Merit Award in 2019.



Discussing separation items for new materials

Setting up separate recycling boxes



Improving material recycling rate by detailed categorization after waste composition analysis

Initiatives at group companies Tokyo Asahi Build Corporation

Passing on the allure of craftsmanship to the next generation with hands-on classes

Tokyo Asahi Build, a specialist in framework construction, is focusing on cultivating next-generation human resources. As a part of these efforts, every year since 2014 the company has been holding visiting classes at technical high schools where its experts give students hands-on experience with rebar and framework demonstrations. Through this program, the company is fostering a zeal for craftsmanship in the youth who will be responsible for our future. While stimulating interest in the construction industry in an entertaining manner, the importance and joy of "pride in craftsmanship" is being conveyed to these students.



Delivering a class at a technical high school

Response to the global environment and biodiversity

Under our Environmental Message, "Connecting people with nature" and our Environmental Concept aiming for a carbon-neutral society, both of which are based on our Environmental Policy, we have been promoting environmental contribution activities in accordance with an environmental management system that conforms to ISO14001.

Measure 9: Reduce CO₂ emissions from the entire supply chain.

More on construction by-products is listed on page 38. Please refer to page 17 for future activities.

Measure 8 Promote environmentally conscious designs and energy conservation.



KPI: Number of ZEB projects

Result: **8** (Target: 5 or more)

We are working to expand projects for zero-energy buildings (ZEBs) that employ energy-saving designs and renewable energy.

● **New head office building of TS TECH Co., Ltd.**

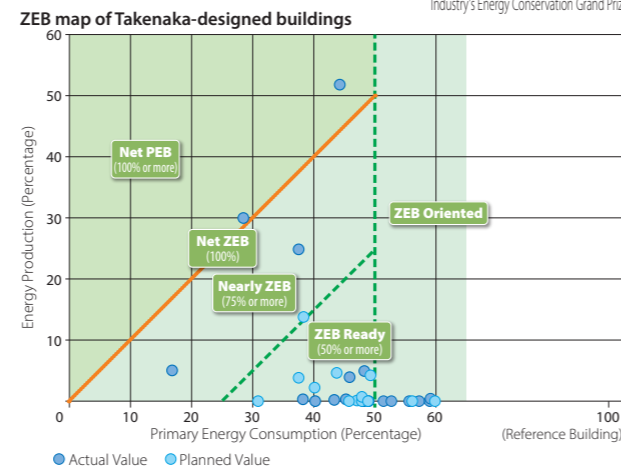
This building was completed in March 2018 as an affordable ZEB by utilizing a number of generic technologies, and it was certified as Nearly ZEB by BELS. After one year of operation, the building achieved an 86.9 percent reduction in primary energy consumption, which was even higher than the design value. This performance then received the Minister of Economy, Trade and Industry's 2019 Energy Conservation Grand Prize Award in the Energy Conservation Best Practices Category.

● **New Fukae Chikuyu Dormitory**

At our Fukae Chikyu Dormitory for unmarried employees, where rebuilding was completed in September 2019, lifestyles and energy savings were planned as pillars for shared living. Then, in what was a first for an apartment building designed by our company, it acquired "ZEH-M Ready" certification. In addition to this, we are expanding ZEB projects with various types of buildings such as schools, logistics facilities and exhibition halls.



New head office building of TS TECH Co., Ltd. Awarded the Minister of Economy, Trade and Industry's Energy Conservation Grand Prize



Measure 10 Promote initiatives for biodiversity.



KPI: —
Result: Promoted the "Takenaka Biodiversity Facilitation Program."

We have formulated a Takenaka Biodiversity Facilitation Program as an initiative to materialize the Biodiversity Action Guidelines that were established 2012. As a part of this program, we put a Seiwadai forest building activity into practice on the site of the Takenaka Training Center, which was near the Kurokawa District in Kawanishi City of Hyogo Prefecture. This area has been

said to be Japan's finest *satoyama*, which is a mountainside hamlet where woodlands, agriculture and people coexist in a traditional picturesque landscape. We have been continuously implementing Activity 2, "Hands-on forest building workshop," by collaborating with experts, local citizen groups and companies, and inviting participation from employees nationwide. Through this workshop held in Japan's best known *satoyama*, we are focusing on fostering next-generation leaders who can broadly resolve social issues along with producing attractive and creative work with a work-life balance. Moving forward, we aim to be an "integrated engineering firm for urban creation," and promote "forest building" that can contribute to society.



Hands-on forest building workshop



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.

Measure 11 Pass on architectural culture and technology, and contribute to local communities.



KPI: Number of community contribution programs

Result: **311** (Target: 200 or more)

● **Support for community educational activities**

At our Nagoya Branch's work site for Shimada Municipal Hospital in Shizuoka Prefecture, we requested students from the art club of a local industrial high school to create some wall art, which was displayed along the site enclosure. In combination with tourist spots and festivals, the colorful designs delighted many visitors. Eight second-year junior high school students from Osaka Municipal Shintatsumi Junior High School visited our Osaka Main Office to hear about our SDG initiatives. By explaining about creations that flourish through our environmental measures and development, we were able to deepen the students' understanding and interest in architecture and urban creation.



Wall painting by high school students Junior high school students hearing about our SDGs

● **Interaction with and contribution to local communities**

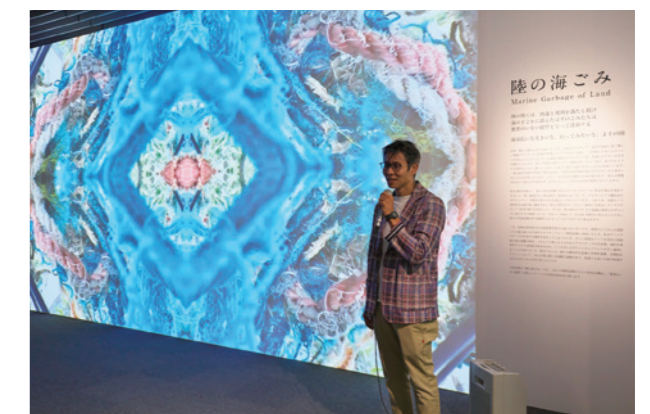
At the end of last year, the eighth Earthquake Reconstruction Event, "Children's Town Ishinomaki" was held in Ishinomaki City, Miyagi Prefecture. Many children were able to enjoy things like making a model a room, where they would want to live, at our architecture experience booth, and painting a wall mural of a large whale with their palms. In addition, we organized a Workshop to Design a Future Park for Children in Ishinomaki's Kadonowaki-cho. This workshop received the Minister of Economy, Trade and Industry Prize under the Kids Design Award 2019. In Osaka, we participated in the sixth Open House Osaka 2019, which is Japan's largest architectural event. Our Osaka Main Office opened exhibitions to promote interest in architecture, and it held a variety of events, which included a chopstick-making workshop guided by our carpenters as well as a session to experience the latest technologies such as VR.



Painting with hands "Flying Whale" Children enjoying Five-Sense Response (VR technology)

● **Support for charitable foundations**

Through support of public interest foundations, Takenaka has been expanding its 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).



"Marine Garbage of Land" at the Gallery A4

● **Opening Chochikukyo (an Important Cultural Property) to the public**

Built over 90 years ago in Oyamazaki-cho, Kyoto Prefecture as the private residence of Koji Fujii, who had been an architect at our company, Chochikukyo is a wooden house that represents Japanese modernism of the 1920s. Our efforts to promote architectural culture by opening the house to the public through a collaboration with local residents were recognized with the Grand Mécénat Award in 2019.



Guided tour of Chochikukyo by local residents

Development of industrial and social infrastructure through technical innovation

We will challenge state-of-the-art technology development to innovate construction production by fusing the latest technology with environments, safety and security, and the spirit of craftsmanship, which are being called for by our society.

Measure12: Develop and deploy technology focused on strengthening cities and buildings.
* See our website for further details.

Measure 13 Popularize wooden structures and buildings, and promote the utilization of Japanese timber.



KPI: Number of wooden structures and building projects

Result: 11 (Target: 9 or more)

We are actively increasing the number of buildings partly or entirely made from wood—and employing Japanese wood products in such buildings—by developing related technologies, such as our exclusive fire-resistant laminated timber, Moen-Wood, and utilizing our skills with cross-laminated timber (CLT). We are actively disseminating our Forest Grand Cycle concept, which promotes sustainable timber utilization. Using more timber in construction helps maintain and care for the forest, as well as invigorating the forestry industry and local communities.

● **PARK WOOD TAKAMORI**

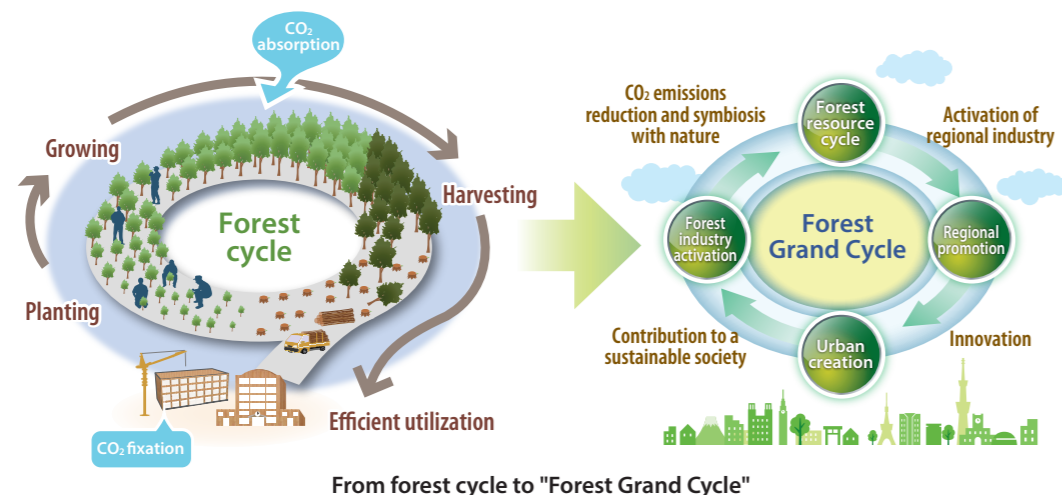
This is Japan's first 10-story apartment building with a hybrid wooden structure* comprising two-hour fire-resistant Moen-Wood, CLT shear walls, and CLT slabpanel. A total of 120 cubic meters of timber was used in the building, and it won the Director General of Forestry Agency Prize in the 2019 Timber Utilization Model Building Contest, and the Grand Prize (Minister of Agriculture, Forestry and Fisheries Prize) under the Japan Wood Design Award 2019.

* Hybrid wooden structure: A building structure that uses a combination of wood and steel, and reinforced concrete as the main frame.

For this project, we had a number of meetings with a forestry company and agreed to purchase timber directly from the company so that it could make an appropriate profit. We also participated in the company's new tree planting on the forested land. In addition, we are also carrying out activities that broadly convey the attractiveness of wood by holding seminars and various events.



Tree planting activities on deforested land



● **Main wooden structures and buildings completed in 2019**



Measure 14 Improve labor productivity through innovation of entire processes.



KPI: Labor Productivity Index (over 2015 level)

Result: 12.31% improvement (Target: 6.0% improvement)

In response to a rapidly decreasing number of skilled construction workers, we have been integrating highly productive building methods through joint efforts between our construction department and partner companies from the design stage. Nevertheless, some conventional construction methods remain with labor intensive areas, and even if roboticized, there will still be some areas where work needs to be done by a skilled worker. Accordingly, we have developed labor-saving technologies for such areas, and we are striving to further minimize on-site work.

● **Productivity improvement for column connection areas with steel frame beams and precast concrete methods**

Construction methods using columns made of low-cost reinforced concrete and steel frames with high workability beams rationally combine these two elements, but constructing joints between columns and beams takes time. We therefore developed the T-ReCS Method (patent pending) or informally the T-Rex Method, which eliminates the necessity of rebar and formwork by surrounding joint sections with metal plates. We also significantly improved construction efficiency by making some parts of the frame as modular units.

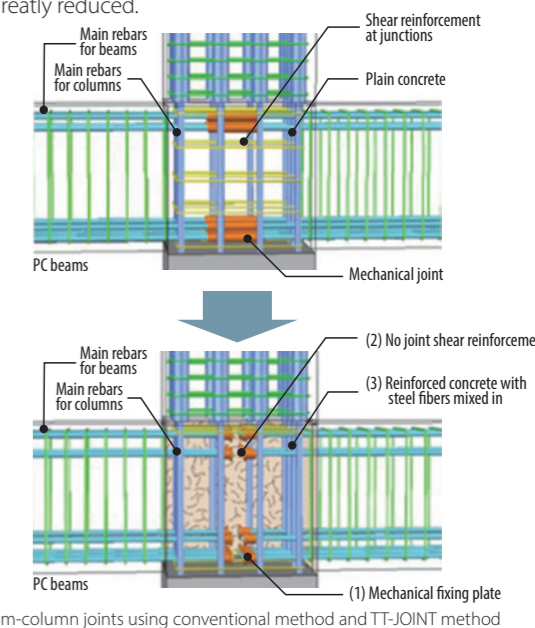


Beam-column connection in the T-ReCS Method



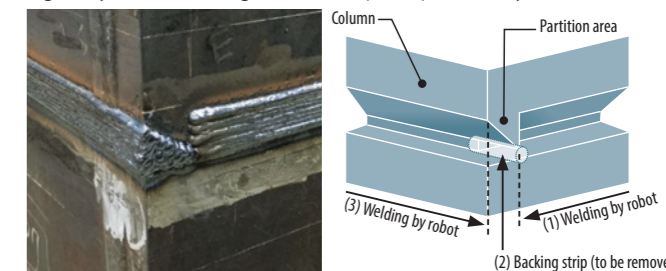
Field preassembly of modular units, including beam-column joints

Even in cases where PC beams are precast at a factory, it takes a lot of work to join them to column junctions. Thus, we developed the TT-Joint Method (patented) for these areas. In this method: (1) Rebar joints are replaced with fixing plates; (2) Column reinforcement bars are eliminated; and (3) High-strength concrete with steel fibers mixed in is placed. As a result, work processes required to join PC beams and columns have been greatly reduced.



● **Reducing the burden of steel column welding with robots**

When utilizing robots to weld square steel columns, we can only use the robots to weld the flat surfaces and a skilled worker is needed to weld the column corners. This is because it is difficult to control multiple robots in a coordinated manner at corners while maintaining high quality welding. In response, we added a border piece at the column corner so that the robots could work independently of this border piece without hindering each other. Through this kind of ingenuity, we are working to further improve productivity.



New method for column-corner welding with robots

Initiatives at group companies Takenaka Civil Engineering & Construction Co., Ltd.

Initiatives to improve productivity at construction projects

Takenaka Civil Engineering & Construction is striving to adopt Full Utilization of ICT, as suggested by the Ministry of Land, Infrastructure, Transport and Tourism. In a highway construction project in Tokushima Prefecture undertaken by the company, a combination of land survey data captured by drones and 3D design data was used to identify any potential faults and check the structural layout. The company also used GNSS tools and machine guidance backhoes during the actual construction, as well as drones and a laser scanner in surface management for inspection of the completed shape. These technologies brought about a reduction in labor and improvements in work efficiency in the project. Meanwhile, we continue to aim for an attractive construction business with productivity improvements and so on through the promotion of i-Construction.



Machine guidance backhoe

Sustainable Growth

We are working to create safe and comfortable workplace environments, where employees are motivated and have foresight, and diverse personalities and individuality are respected. To this end, we share an understanding of issues and collaborate on resolving them through close communication with employees and partner companies.

Realization of healthy and rewarding workplace environments

In order to foster a corporate culture where employees can work in a state of fulfillment, both mentally and physically, we aim to realize a workplace environment where each employee can enhance and make the most of his or her skills.

- Measures
- 15: Improve work-life balance through drastic productivity improvement.
 - 17: Ensure safe, hygienic workplace environments at our work sites.
 - 18: Facilitate health management that fosters healthy minds and bodies.

* See our website for further details.

Measure 16 Provide education and support aimed at improving employee growth and management skills.



KPI: —
Results: Reviewed training programs and configurations, and implemented management training.

Our new employees spend a year in a new company dormitory while experiencing OJT in different departments to learn our traditional spirit, as well as to acquire a professional mindset and necessary knowledge. In 2019, the Fukae Chikuyu Dormitory was rebuilt, and the training program was reorganized with the aim of creating an educational dormitory for training human resources of the future, bringing improvements both in terms of the facility and the program. We also implement a job classification education program to build awareness of job functions and management capabilities, so that we can develop human resources in tune with the social environment as well as with our management strategy.



Main Cluster, a communication space in the Fukae Chikuyu Dormitory that was rebuilt in 2019

Promotion of diversity

With the watchwords of “dialog” and “take responsibility,” we aim to create a working environment in which individuals can exert their abilities to the fullest extent according to their personalities in a diverse manner.

Measure 19 Facilitate active involvement of female and senior employees.



KPI: Rate of women in managerial positions

Result: 4.1% (Target: 4.1% or more)

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 the 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 expanded our childcare support programs in 2019. In doing so, we introduced a concierge service to support women with childcare, partnerships with nursery schools for companies and revision of our childcare leave program to encourage early return to work from childcare leave. For senior employees, we revised our reemployment system in 2018 to enhance work opportunities for senior workers 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.



Members of the Komachi construction work team ATG54

Fair Corporate Activities

Based on our Corporate Philosophy, we practice “Total Quality Management” in order to obtain customer satisfaction and earn the trust of society. Together with raising our value to society as a corporation, we will fulfill our social responsibilities.

Achievement of targets through partnerships
Measure 25: Understand social issues through dialog and check policy plans and measures.

* See our website for further details.

Measure 20 Maintain and reinforce internal controls.



KPI: —
Results: Disseminated and instilled our Corporate Code of Conduct.

Based on the basic policy for internal control, we have developed a corporate organizational framework and implemented awareness building and training, promoted CSR activities and compliance, introduced disaster prevention activities to respond appropriately when risks are high, and promoted crisis management to be conducted under ordinary circumstances. Each of our group companies formulates its own Corporate Code of Conduct that complies with our own to ensure optimal maintenance of the management organization. In response to demands from the international community in recent years, we revised our Corporate Code of Conduct in July 2018. The Code has been distributed among employees and is now well established through e-learning.

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

Measure 21 Promote CSR and compliance.



KPI: Number of serious noncompliance cases

Result: 0 (Target: 0)

● **Developing CSR and compliance systems, and promoting continual awareness activities**

We have created various councils and dedicated departments shown on page 46, forming a system to improve CSR and compliance. Promotion officers have been assigned to each group company, and a liaison office for counseling and whistleblowing was also set up to provide a service in this area for our partner companies. To develop training and awareness, various groupwide training programs have been conducted. There is also a range of programs, including monthly CSR and Compliance News releases, self-monitoring quizzes for employees and CSR seminars for executive officers during Awareness Month.



CSR and Compliance News

● **Ongoing activities on compliance with the Construction Business Act**

We are making ongoing efforts to be sure that our employees are aware of relevant laws and ordinances to ensure that our corporate activities are conducted properly and legally. In association with the Fair Construction Transactions Promotion Month designated by the Japanese government, we have confirmed full legal compliance at all of our partner companies.



Seminar on SDGs for executive officers responsible for CSR

● **Activities to achieve fair procurement and continuous measures against antisocial forces**

To fulfill our social responsibility, we have formulated a procurement policy and action guidelines, based on which we are working with our business partners to implement procurement that responds to the needs of society and our customers. We ask our business partners to take specific action based on this policy and guidelines.



Explaining procurement policy and action guidelines at a general meeting of Chikuwakai (an alliance of business partners)

Measure 22 Promote initiatives for respecting human rights.



KPI: —
Results: Implemented measures and reviews based on human rights due diligence.

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 taking concrete action on respect for human rights and promoting it in our business activities.

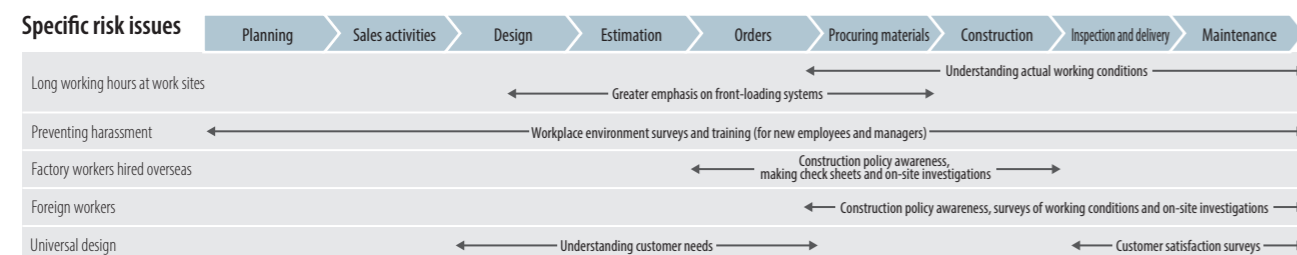
In 2019, measures were developed and implemented to deal with some risks that had been identified and evaluated with measures taken the previous year. In October, we made visits to group companies that were also our partners, to investigate the actual working conditions of foreign technical interns, which has been an important issue for us. We held dialogs with the technical interns and representatives of the organizations in Japan that take them in. In December, Mr. Hidemi Tomita of Lloyd's Register Japan provided comments and suggestions on the state of our initiatives, including dialogs with important stakeholders and analysis from different perspectives. We will reflect this feedback in future activities and continue these initiatives.



Dialog on foreign technical interns



Reviewing human rights activities



Measure 23 Reinforce information security.



KPI: Number of data breach incidents

Result: 0 (Target: 0)

We have introduced information security activities to protect the valuable data assets of our customers. In the face of the growing threat of cyberattacks in recent years, we are putting in place further protection against external attacks and data leakage through unauthorized access. We are also making great efforts to use e-learning and awareness activities to train all our employees across the entire group, including our overseas operations, to handle targeted e-mail attacks.

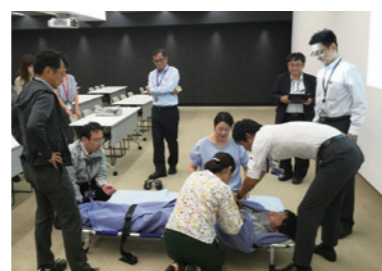


Measure 24 Prepare and strengthen disaster response systems.



KPI: —
Result: Implemented joint earthquake disaster drills and reviewed coordination systems.

We have established a business continuity plan (BCP) for preparedness in the event of a large-scale earthquake, which is anticipated in the near future. We have also have set up disaster management headquarters to check the safety of employees and their families and to check for and repair damage to work sites, company facilities and buildings that we have constructed for our customers. In 2019, disaster simulation drills were conducted at eight work sites as training for our initial response. Additionally, training for joint disaster measures was organized to verify the effectiveness of the companywide mutual cooperation system. Some 12,000 employees, including those from 17 group companies, participated in these drills. Moving forward, we will continue to improve our BCP and link this to specific actions in the event of any emergencies.



Emergency rescue drills

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 activities aimed at improving the quality of our overall corporate activities to satisfy the demands of our customers, earn the trust of society at large, 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 Division

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 office companywide to promote education and awareness. The CSR Promotion Department is carrying out activities for the global environment including initiatives that resolve social issues.

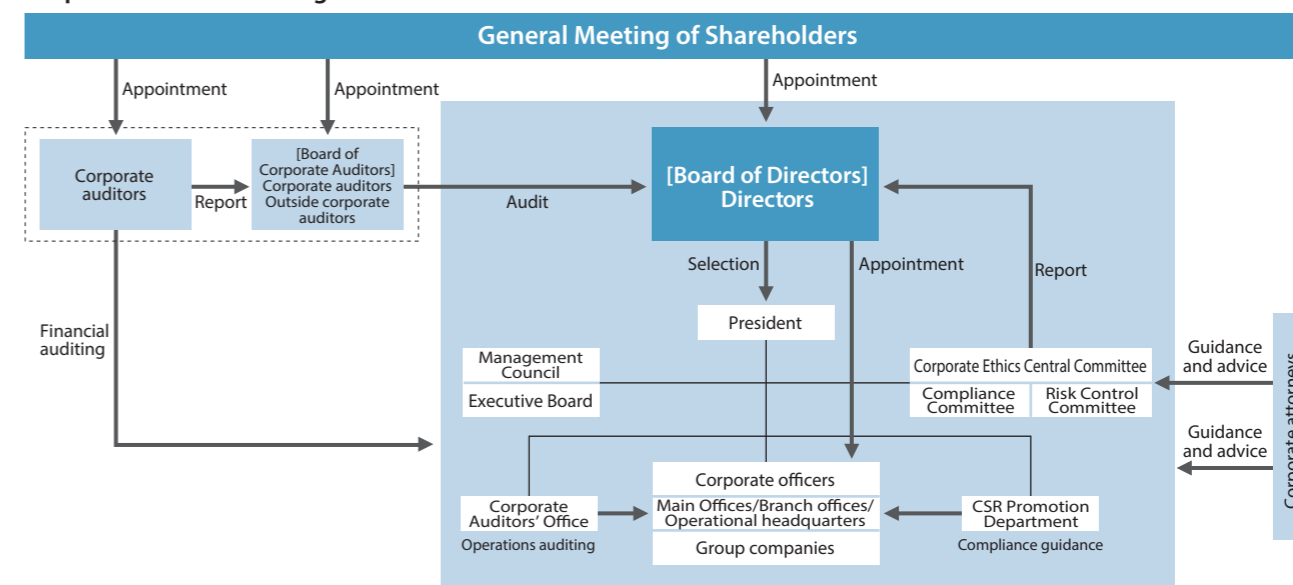
● Corporate auditors

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



Reconsidering the lodestar to aim for, we are leading our times with urban creation that only Takenaka can do. Expecting to play an active role as a trendsetter

Takashi Nawa
Adjunct Professor, International Corporate Strategy, Hitotsubashi University

Born in 1957 in Kumamoto Prefecture, Professor Nawa has a Bachelor of Arts degree in Law and Political Science from the University of Tokyo and an MBA from Harvard Business School (as a Baker Scholar). He has work experience of roughly 10 years in the industrial plants and infrastructure sectors at Mitsubishi Corporation, and approximately 20 years of consulting experience as a director at McKinsey & Company until 2010. He has been involved in a wide range of projects, including new generation growth strategy planning and companywide restructuring in numerous industries in Japan, other Asian nations, the United States, etc. He was appointed to his current post in June 2010. His books include *CSV Management Strategy and Principles of Growth Businesses: Theory of 21st Century Business Management Observed in 100 Top Global Businesses*, *Full Spectrum of Techniques in Problem-solving and Value Creation that Transcend Consulting*, *Textbooks on Corporate Reform*, etc.



Importance of expressing "Takenaka's uniqueness" with feeling

The new 2020-2022 Action Plan for a Sustainable Society is very well organized. I found it innovative to classify the major objectives (materiality) into a number of fields, with the base placed in Field G and Fields B and C positioned outside Field A, which covered the major objectives of the company and society (page 13). As I stated last year, it is necessary to take a closer look at Field B, which is identified as important for Takenaka, although it may not be as important at this time for its stakeholders. By positioning the company's commitments and the uniqueness it displays in Field B as a hub for reaching out and instilling empathy in people, Field B will become important for both the company and its stakeholders. After examining the KPIs for the major objectives in Field B with this approach, I felt that Takenaka's uniqueness should be presented with greater force. The report is well developed, but on the other hand, there are numerous elements being presented, resulting in inadequate assertion of where its strong commitments lie.

Takenaka Corporation is a company that sets itself apart from other general construction companies. Because scrutiny of the major objectives (materiality) is certain to continue beyond this year, I look forward to delivery of more pronounced and prominent assertions of a sense of excitement, uniqueness and promise of accomplishment, thus giving greater visibility to Takenaka's spirit of challenge and creativity unrestrained by conventional wisdom.

Communicate the outcome and come up with the 18th goal to add to the SDGs

The same is true for the KPIs. Simply giving the output (results) does not show change in society. What kind of society do you want Takenaka to create? What action must be taken voluntarily or how is engagement to take place? The cause-and-effect relationship may be difficult to present; I would like Takenaka to communicate the efforts as outcome (accomplishment). On the 17 SDG goals, it is certainly important to determine clearly what contribution can be made through the company's

mainstay businesses. However, there should be value that only Takenaka can offer. There may be something the company can do to make a difference, such as in Field B. By tackling the issue aggressively, Takenaka will be able to demonstrate its uniqueness and create an 18th goal that may create synergy with the other 17.

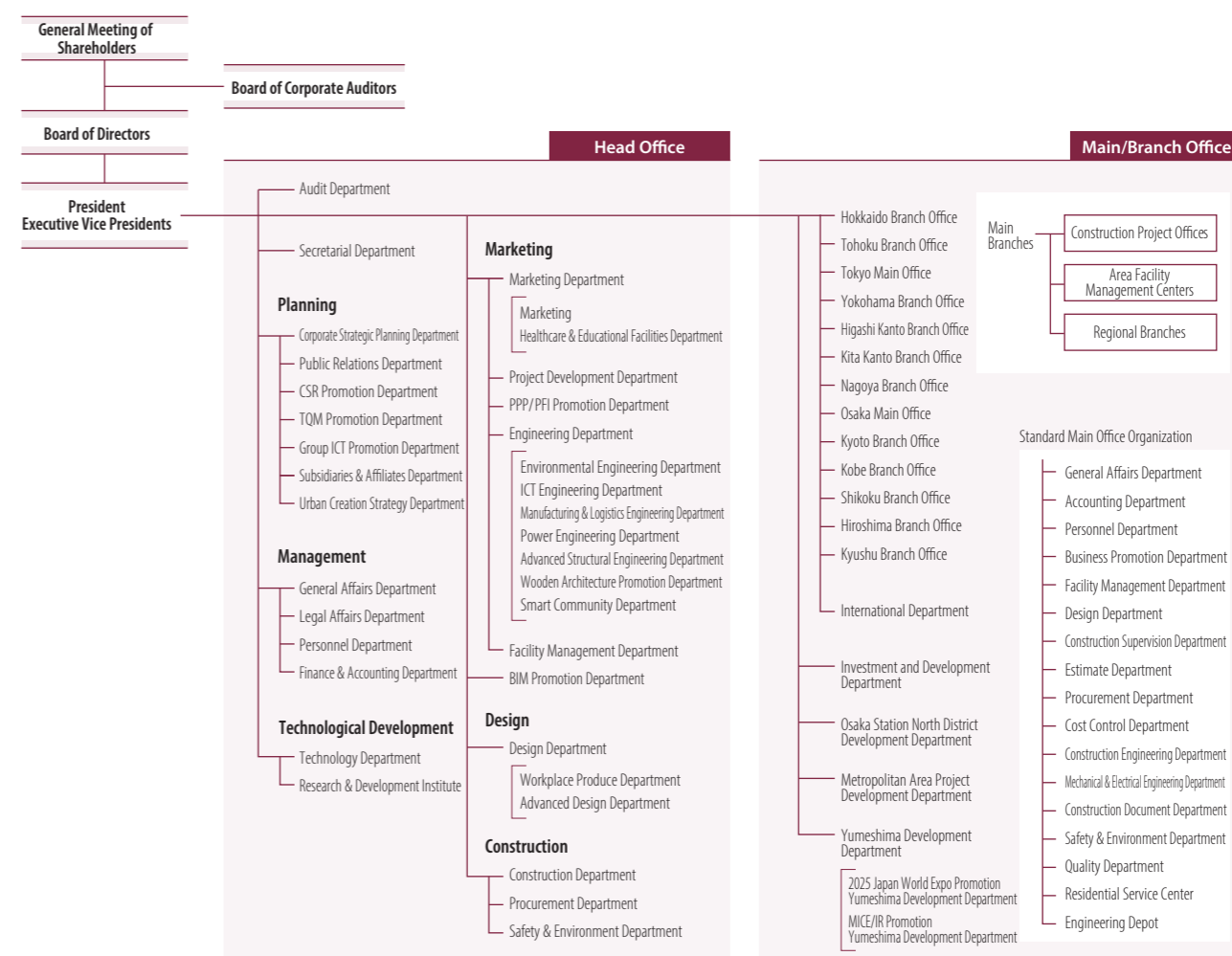
Envisioning a "society of 2050 where people and nature coalesce" with Takenaka uniqueness.

A number of companies have announced their 2050 vision on the environment. However, the business vision for a company in 2050 is not limited to the environment alone. Rather than keeping in step with how the environment unfolds, I believe that Takenaka should present a story for urban creation in 2050 that is uniquely Takenaka by expanding more on aspects besides the environment and telling readers how the company plans to achieve the coalescence of people and nature. For example, the MACHInnovation activities conducted through verification and experimentation are impressive in their powerful impact. If the perspective of urban creation in 2050 is added to this, I believe that it will gain greater breadth and an improved sense of scale that will be exciting. The DX (transformation) utilizing AI and IoT will also stimulate awareness and action on what results it will produce and how people will work and live with the change. In the case of employees, for example, the application of DX will liberate workers from routine jobs and enable them to engage in creative work that gives them "work in life and work life harmony" (fulfillment in their work). From an environmental aspect, it may be possible to engage in net positive action rather than focusing on eliminating the negative. In the future, I believe there will be an opportunity to tell the story "What does Takenaka aspire to achieve?" In this narrative, I would certainly like for Takenaka to describe "the lodestar it aspires to, MTP: (Massive Transformative Purpose)" with an expression that incorporates its own words. Then, I would like for Takenaka to increase its corporate value as a brand for intangible assets by increasing supporters who share its zeal for that storyline.

Company Name	Takenaka Corporation
Head Office	1-13, 4-chome, Hommachi, Chuo-ku, Osaka, Japan
Capital	¥50 billion (as of March 31, 2020)
Construction Licenses	Ministry of Land, Infrastructure and Transport Construction License (Special-26, Special-28) No. 2744 (General-26) No. 2744
Number of Employees	7,630 (as of January 1, 2020)
Affiliates	51 subsidiaries, 15 affiliates, and 1 related company
License Holders	Licensed first-class architects.....2,421 Licensed first-class building works execution managers.....2,307 Licensed professional engineers184 Ph.D.s.....116 (as of January 1, 2020)

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 preservation, 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. Sumitomo Mitsui Banking Corporation Mizuho Bank, Ltd. Resona Bank, Ltd. Mitsubishi UFJ Trust and Banking Corporation Sumitomo Mitsui Trust Bank, Ltd., others

Corporate Organization (as of April 1, 2020)



Income Statement and Balance Sheet (Consolidated)

(Millions of yen)

	78th term 2015	79th term 2016	80th term 2017	81th term 2018	82th term 2019
Orders received	1,295,029	1,291,682	1,391,442	1,397,818	1,419,121
Revenues	1,284,362	1,216,570	1,295,951	1,353,627	1,352,064
Operating income	59,883	91,367	107,988	85,063	80,235
Operating margin (%)	4.7	7.5	8.3	6.3	5.9
Ordinary income	68,666	93,572	115,304	93,977	89,502
Net income	44,140	61,432	75,762	63,638	68,918
Net assets	521,011	566,470	652,033	671,189	762,642
Total assets	1,342,971	1,318,055	1,450,191	1,468,850	1,519,771

Other Financial Data (Consolidated)

(Millions of yen)

	78th term 2015	79th term 2016	80th term 2017	81th term 2018	82th term 2019
Cash flow from operating activities	40,032	87,883	88,476	107,719	△45,512
Cash flow from investing activities	△20,119	△48,695	△42,847	△40,772	△15,448
Cash flow from financing activities	2,415	△147	△14,235	△32,662	△14,509
Research and development expenses (Billions of yen)	6.2	7.0	7.7	8.4	9.3
Capital investment (Billions of yen)	25.3	62.3	56.5	27.0	41.7
Return on equity (ROE) (%)	9.0	11.4	12.6	9.7	9.7

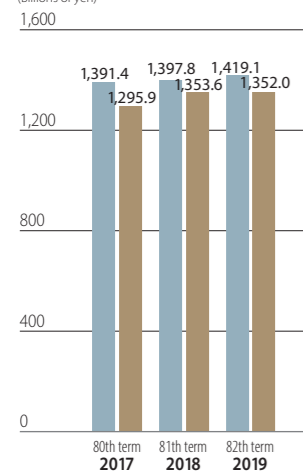
Revenues by Business (Consolidated)

(Millions of yen)

	78th term 2015	79th term 2016	80th term 2017	81th term 2018	82th term 2019
Construction business	1,188,308	1,104,999	1,193,475	1,241,868	1,241,923
Development business	46,743	59,868	49,653	59,045	54,448
Others	49,309	51,703	52,822	52,713	55,692

Orders Received/Revenues (Consolidated)

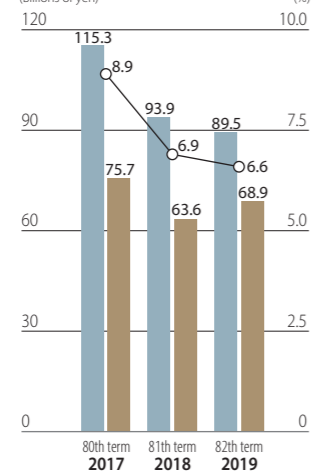
(Billions of yen)



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

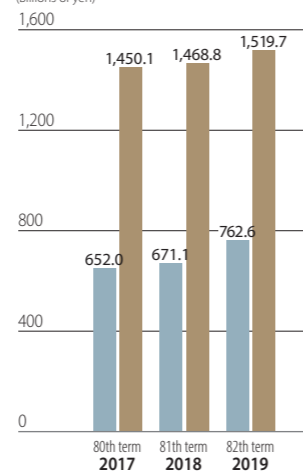
(Billions of yen)

(%)



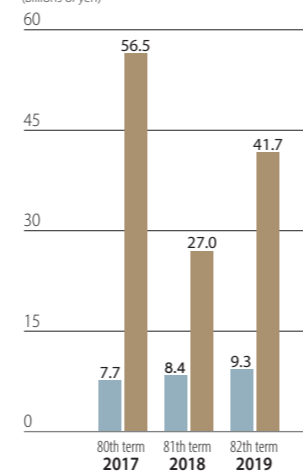
Net Assets/Total Assets (Consolidated)

(Billions of yen)



Research and Development Expenses/Capital Investment (Consolidated)

(Billions of yen)



Revenues by Region (Consolidated)

(Millions of yen)

	78th term 2015	79th term 2016	80th term 2017	81th term 2018	82th term 2019
Japan	1,090,954	1,043,880	1,128,429	1,180,889	1,198,630
Asia	134,923	117,939	91,847	87,339	74,534
Europe	27,783	26,114	46,353	52,678	48,315
North America	30,701	28,636	29,320	32,719	30,584
Others	—	—	—	—	—

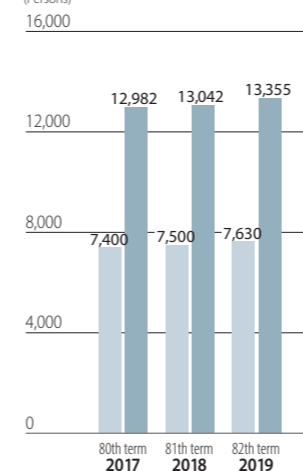
Nonfinancial Data (Nonconsolidated)

	78th term 2015	79th term 2016	80th term 2017	81th term 2018	82th term 2019
Number of employees (Consolidated)	7,195 (12,328)	7,307 (12,592)	7,400 (12,982)	7,500 (13,042)	7,630 (13,355)
Average age of employees	44.4	44.3	44.0	44.0	44.0
Average length of continuous employment (Years)	19.8	19.6	19.2	19.1	17.1
Number of women in managerial positions	78	86	100	121	126
Accident frequency rate (Accidents followed by absence of four days or more from work)*1	0.57	0.41	0.54	0.56	0.54
CO ₂ emissions intensity during construction work (t/100 million yen)*2	10.6	10.5	10.0	10.4	10.3
Recycling rate of construction waste (Wt. %)*3	93.3	95.7	94.7	91.6	92.0
Rate of number of CASBEE S- and A-rank projects (%)*4	52.0	67.1	77.3	85.7	89.2

*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.

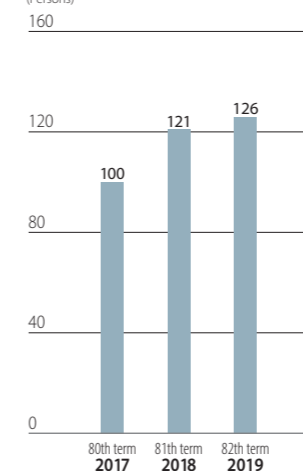
Number of Employees (Nonconsolidated and Consolidated)

(Persons)



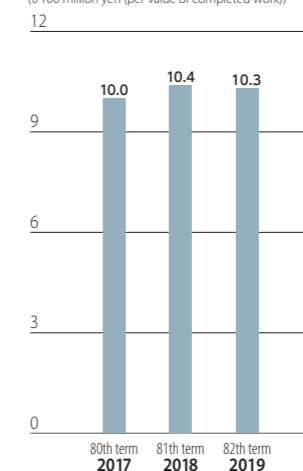
Number of Women in Managerial Positions (Nonconsolidated)

(Persons)



CO₂ Emissions Intensity During Construction Work (Nonconsolidated)

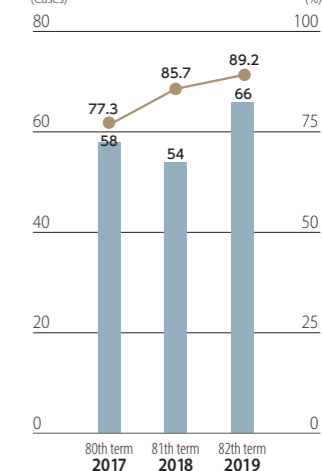
(t/100 million yen (per value of completed work))



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

(Cases)

(%)



Dreams into Reality for a Sustainable Future



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