



2014

Shimizu Corporate Social Responsibility Report

Message from the President

Targeting sustained corporate growth and contributing to society through safe, reliable urban development

The business environment confronting Shimizu

The prospects for the Japanese economy have brightened due to the effects of monetary and economic policies implemented since last year, as well as the decision to hold the Olympic and Paralympic Games in Tokyo in 2020. Nationwide disaster prevention and mitigation efforts targeting large-scale natural disasters such as earthquakes have also begun, as seen in plans for the construction of Olympic venues and infrastructure in the greater Tokyo area and the passage of the Basic Act for National Resilience at the end of last year. Beyond the restoration work being conducted in the aftermath of the Great East Japan Earthquake, the construction industry is pursuing its broader mission of contributing to safe, reliable urban development.

Although construction demand is growing, some pressing issues have emerged, including labor shortages and an aging construction workforce nationwide. Securing the necessary labor supply will require a combination of efforts, including rehiring retired workers, employing more women, and developing innovative construction technologies based on information and communication technologies (ICT) and labor-saving construction methods.

Promoting the long-term Smart Vision 2010

Based on Smart Vision 2010, our long-term corporate vision formulated in 2010, we are working to expand our business areas to create a path toward sustained growth while maintaining the construction business as our core business.

In our core construction business, we employ advanced technological capabilities and services to provide customers with finely tuned yet comprehensive solutions.

Our global business extends beyond orders placed by Japanese firms overseas. Our technological and management capabilities and reputation for reliability increasingly attract orders from local firms and create opportunities to participate in large-scale infrastructure projects. We are also making progress toward our target of increasing global business to about 20% of our total business volume by 2020.

In the area of building stock management, we are generating steady growth in the building management business, which works to ensure facilities operate at maximum efficiency. We pursue this business based on our action policy of extracting full value from existing buildings and structures.

In promoting our sustainability business, we are actively carrying out ecoBCP^{*1} activities that combine ecological measures with business continuity planning (BCP)^{*2} to address the needs of corporate customers for both BCP and energy conservation. Broadening the scope of these activities from individual buildings to groups of buildings and entire areas, we

are moving forward with projects to build smart communities in various regions. We are also focusing on renewable energy efforts, including verification work related to solar power projects and floating wind farm projects.

Despite dramatic change in the domestic and international business environments, our long-term goal of contributing to a sustainable society remains unchanged. By continually tackling the challenges posed by new businesses while maintaining the principles and values that have guided us since our foundation, Shimizu seeks to spearhead the concept of sustainable growth.

Three pillars of CSR management

Based on our long-term vision, we are making headway on the following themes, each identified as one of the three pillars of CSR management.

1. Fairness and transparency in business

Last year, we became the first general contractor in Japan to sign and participate in the UN Global Compact.^{*3} In the four areas addressed by the Compact—human rights, labor, the environment, and anti-corruption—we are working to safeguard against various problems and mitigate risks by strengthening our risk management rules and systems, all based on the needs of individual countries and local communities. In addition, the Shimizu Group continues to pursue group-wide efforts to ensure fair trade, uphold Japan's Antimonopoly Law, and address problems linked to antisocial behavior.

2. The creation of value that surpasses the expectations of customers and society

Since massive earthquakes could strike Japan at any time, preparedness for earthquakes and the ensuing tsunamis and ground liquefaction remains an urgent issue for both local governments and enterprises. Just as urgent is the need to address abnormal weather patterns, which have grown more common in recent years. We are developing and rolling out a series of technologies to ensure safety and peace of mind across society, including technologies that forecast the scope of disaster and damage at specific building sites; prevent or mitigate disasters; and determine the extent of building damage immediately after a disaster. We continue to enhance our technologies and services to protect the lives and property of our clients and end users and to ensure business continuity. We engage in continuous drills to ensure that each employee has a clear understanding of how to act effectively in the event of an emergency.

As always, we seek to ensure high quality at every stage of our everyday activities, ranging from business development through design, construction, and operations, thereby delivering value that surpasses the expectations of our customers.

Recognizing global warming as yet another serious and pressing issue, we will continue promoting our Ecological Mission.^{*4} This mission includes companywide targets for reducing carbon dioxide emissions and efforts to promote state-of-the-art energy conservation technologies in various building types, including the new Shimizu head office building completed in 2012.

3. The pursuit of business activities that coexist with society

By hosting site tours at our construction sites across Japan and participating in community events, we have worked to establish close ties to local communities. We seek to maintain and improve our working environment by creating attractive workplaces that help motivate diverse groups of employees and other workers; by encouraging workplace communication; and by creating workplaces that promote mutual growth. We also undertake sustained companywide safety initiatives, focusing on accident prevention to strengthen workplace safety.

Through all these efforts, we hope to ensure that every employee can fulfill his or her role as a member of society and that we remain true to our corporate motto: Today's Work, Tomorrow's Heritage. This report covers the results of Shimizu's CSR-related activities in fiscal 2013 and activity policies for 2014. Based on the theme "Strength and Flexibility," the special feature in this year's report describes our efforts to contribute to community development through earthquake restoration work and to develop a resilient society capable of standing strong in the face of disaster.

Thank you for taking the time to read this report. As always, we welcome your feedback and candid comments.

Yoichi Miyamoto
President, Shimizu Corporation



^{*1} ecoBCP: Eco measures undertaken in ordinary times that also account for the need for business continuity in times of emergency

^{*2} BCP (business continuity plan): Activities undertaken in ordinary times to minimize damage to business assets and allow the continuation or prompt recovery of core business activities in the event of an emergency, including natural disasters

^{*3} UN Global Compact: A voluntary endeavor initiated by the United Nations in 2000 to build societies predicated on sustainable growth

^{*4} Ecological Mission: See pages 40 and 41.

"Smart Vision" and "ecoBCP" are registered trademarks of Shimizu Corporation in Japan.

Toward an Abundant and Sustainable Society

Editorial Policy

- This report is intended to serve as an important tool for clearly disclosing to stakeholders information on the CSR initiatives undertaken by Shimizu Corporation.
- The following report is divided into two parts, a special feature section describing initiatives receiving particular focus and an activities section reporting on steps taken toward CSR efforts and their assessment. Based on the theme “Strength and Flexibility,” the special feature in this year’s report examines efforts to help build a resilient society amid rising disaster risks, including those posed by earthquakes and abnormal weather. The activities section identifies projects Shimizu must undertake to address various societal issues, based on the core topics specified in ISO 26000 (Guidance on Social Responsibility) and the principles of the UN Global Compact. These activities are grouped based on the three pillars of our CSR initiatives.
- The contents of this report, as well as detailed information and performance data omitted from this version of the report due to space constraints, are available at the Shimizu website:
<http://www.shimz.co.jp/csr/environment/report/report2014.html>

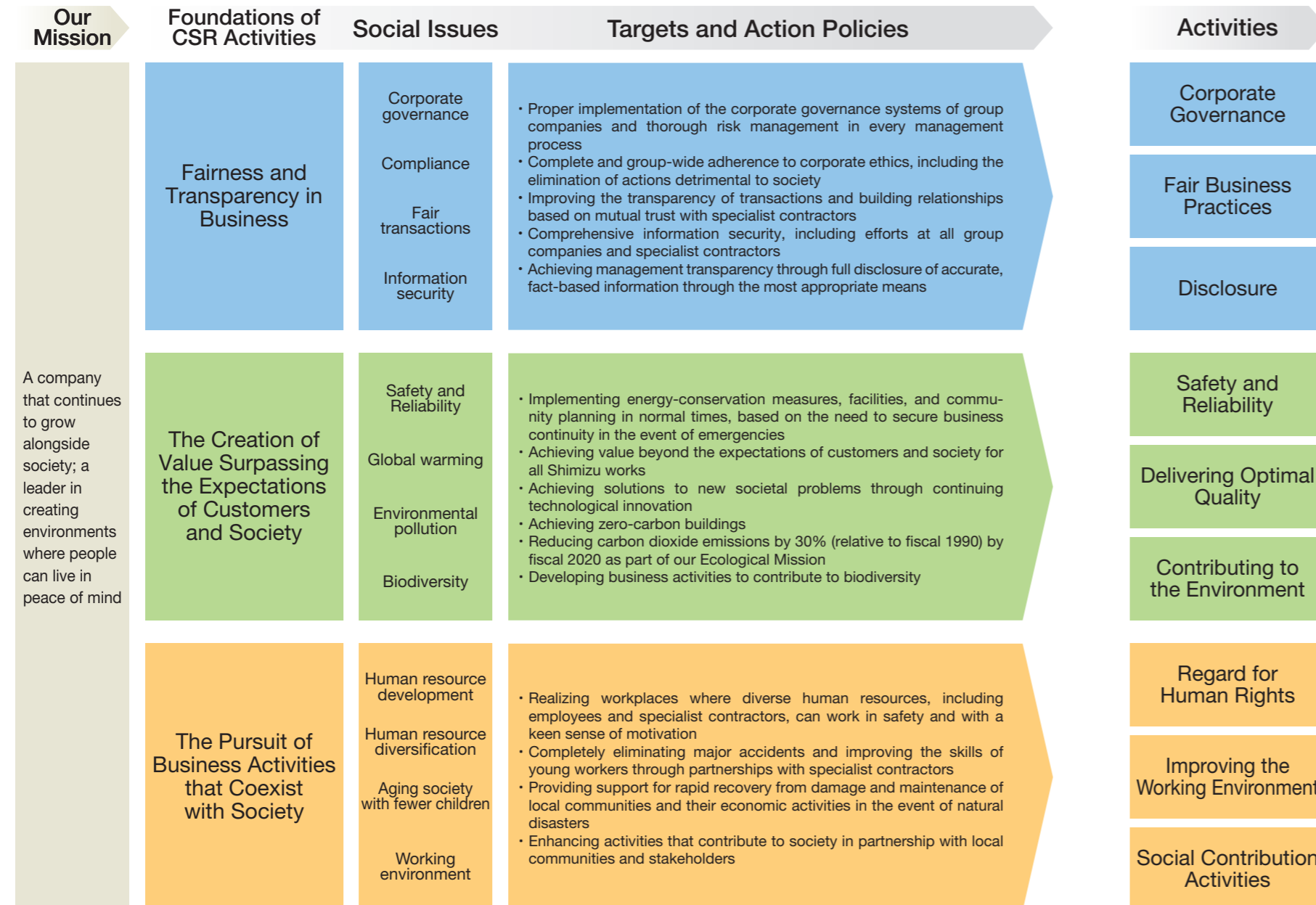


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Basic Scope of This Report

Outlined below is the basic scope of the contents of this Report.

■ Organizations covered: Head office and both overseas and domestic branch offices of Shimizu Corporation and member companies of the Shimizu Group

■ (Note that the performance figures and key performance indicators [KPIs] given in Activities cover only the activities of the head office and domestic branch offices of Shimizu Corporation.)

■ Period covered: Chiefly fiscal 2013 (April 2013 through March 2014), although some activities before and after this period are included.

■ Publication of next edition: June 2015

Corporate Information

Information on our company is published in various reports and on our website (<http://www.shimz.co.jp/>).

■ **CSR Report**
 Social activities: Our stance and actual performance
 Environmental activities: Our stance and actual performance
 (CSR activities:

<http://www.shimz.co.jp/english/csr/basis.html>)

■ **Financial Summary of Each Fiscal Year**, Financial Statement, Annual Report
 Economic activities: Our business strategies and financial condition

(Investor Relations information: <http://www.shimz.co.jp/english/ir/message.html>)

Key Performance Indicators (KPIs)

Key performance indicators (KPIs) were established in 2013 based on a careful review of CSR activities from two perspectives: as indicators of increased value for a diverse range of stakeholders and as major indicators of progress in Shimizu’s growth. See page 18 for more information on these KPIs.

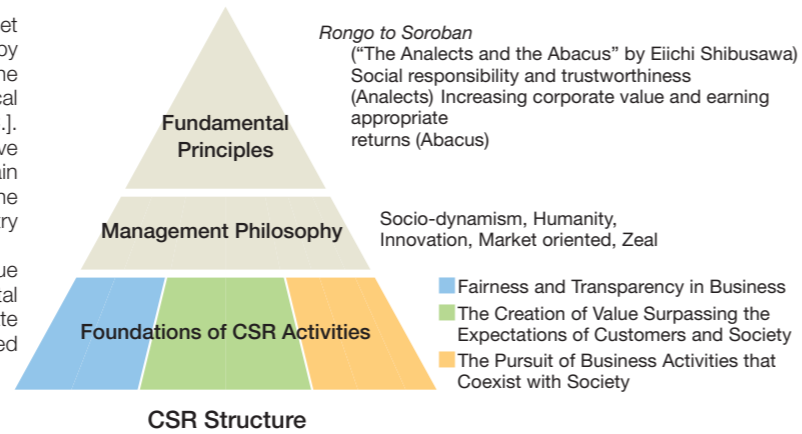
An environmental accounting is given as part of the report data on the Shimizu website (<http://www.shimz.co.jp/csr/environment/report/report2014.html>).

Basic CSR Concepts

Shimizu's management principles are based on the precepts set forth in *Rongo to Soroban* ("The Analects and the Abacus") by Eiichi Shibusawa, who proposed a balance between the economic activity symbolized by the abacus and the ethical humanism of the *Analects* of Confucius [552 - 479 B.C.]. Carrying on in this spirit amid the changing conditions that have buffeted the company and the construction industry, we remain dedicated to a brand of CSR management that draws on the special strengths and characteristics of the construction industry in addressing society's needs.

To advance CSR as part of our business activities, to pursue continuing reforms over the long term in response to societal change, and to play an active role as a responsible corporate citizen in solving the issues confronting society, we have based our CSR management on the following three pillars:

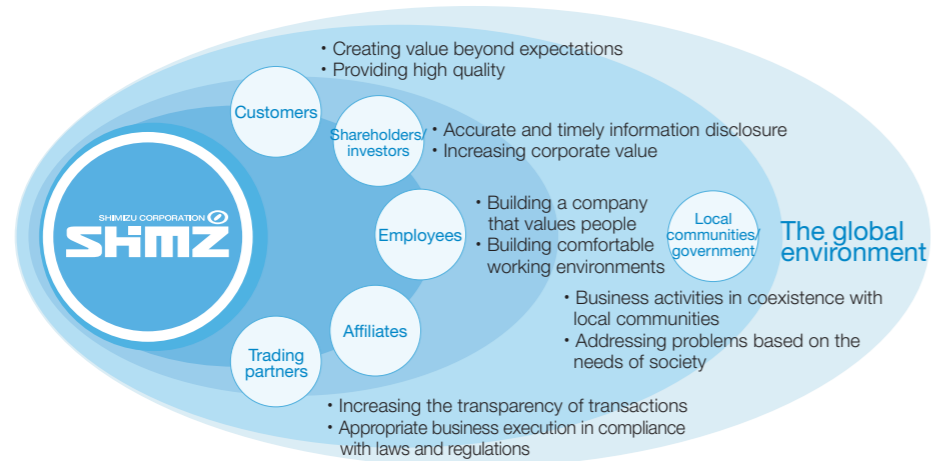
- Fairness and transparency in business
- The creation of value surpassing the expectations of customers and society
- The pursuit of business activities that coexist with society



See the Shimizu website (<http://www.shimz.co.jp/csr/>) for more information.

Shimizu's Relationship to Its Stakeholders

Shimizu advances CSR initiatives through its business activities to bolster the value delivered to a diverse range of stakeholders.



CSR Standards and Framework

Based on the seven core topics specified in ISO 26000 (Guidance on Social Responsibility), Shimizu has selected the initiatives it intends to address in relation to various societal issues. We also have signed and begun taking part in the UN Global Compact* in March 2013 and are currently advancing efforts in accordance with the ten principles of the Global Compact in four areas. Pages 18 and 19 provide an overview of the relationship between Shimizu's initiatives and ISO 26000 and the UN Global Compact.

ISO 26000 Core Topics	Global Compact: Ten Principles in Four Areas			
	Human Rights	Labor	Environment	Anti-Corruption
Corporate Governance Human Rights Labor Practices The Environment Fair Operating Practices Consumer Issues Community Involvement and Development	Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and	Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;	Principle 7: Businesses should support a precautionary approach to environmental challenges;	Principle 10: Businesses should work against corruption in all forms, including extortion and bribery.
	Principle 2: make sure that they are not complicit in human rights abuses.	Principle 4: the elimination of all forms of forced and compulsory labor;	Principle 8: undertake initiatives to promote greater environmental responsibility; and	
		Principle 5: the effective abolition of child labor; and	Principle 9: encourage the development and diffusion of environmentally friendly technologies.	
	Principle 6: the elimination of discrimination in respect of employment and occupation.			

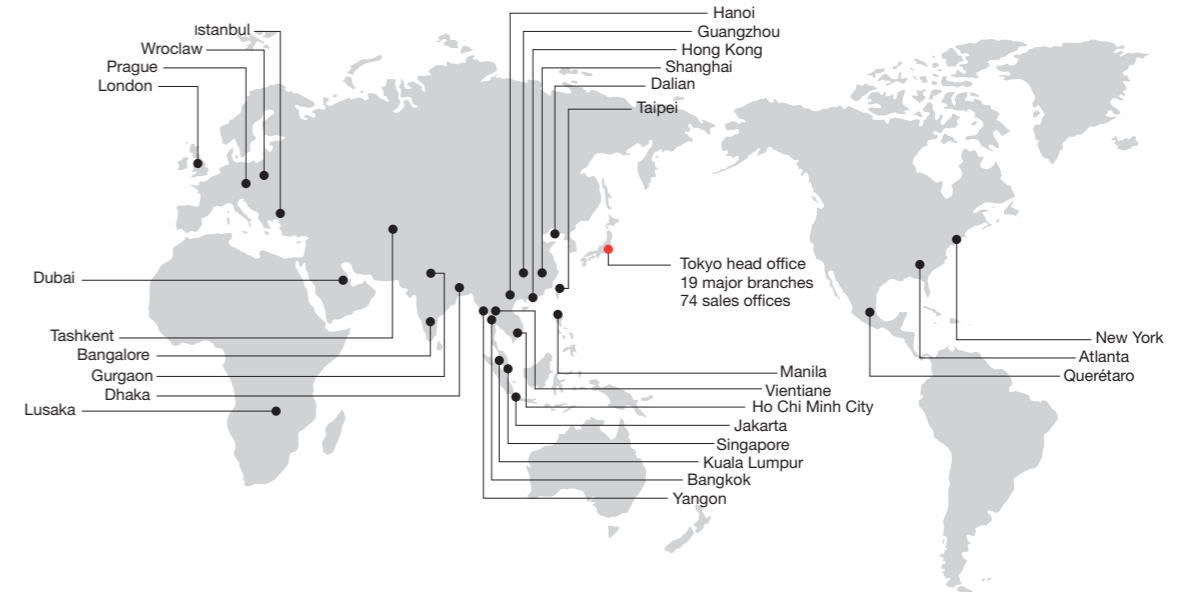


* See the following website for more information on the UN Global Compact: <http://www.unglobalcompact.org/>

Business Areas and Financial Condition

Shimizu is active around the world, drawing on a network spanning 28 countries and territories, including Japan, Asia, Europe, and North America.

International network (as of April 1, 2014)



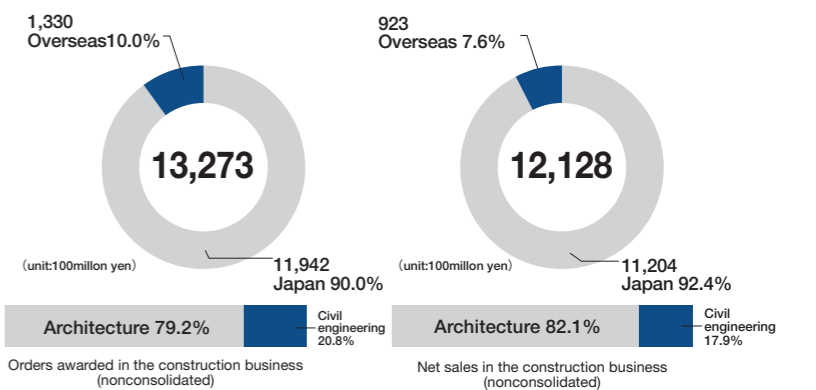
Corporate profile

Established : 1804
 Capital : 74.3 billion yen (as of March 31, 2014)
 No. of employees : 10,975 (as of April 1, 2014)
 Main areas of business : Construction, civil engineering, and other contracted projects, including machine installation; research, planning, geological surveys, land surveys, design, and administration of construction projects; sales, purchases, leasing, brokering, management, and appraisal of real estate properties; building, selling, leasing, and managing residential buildings and other properties; development and sales of vacant land

President : Yoichi Miyamoto
 Annual sale(nonconsolidated) : 1,253 billion yen (fiscal 2013)

See the Shimizu website (<http://www.shimz.co.jp/english/about/group.html>) for a list of major Group companies.

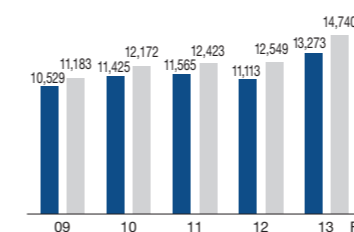
Domestic and overseas percentages of orders awarded and net sales in the construction business (fiscal 2013)



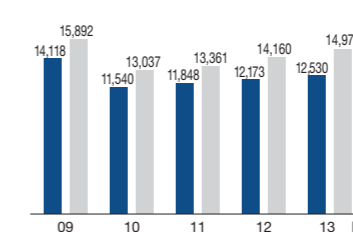
Financial condition

■ Nonconsolidated ■ Consolidated (Unit: 100 million yen) Note: The figures shown have been rounded down to the nearest 100 million yen.

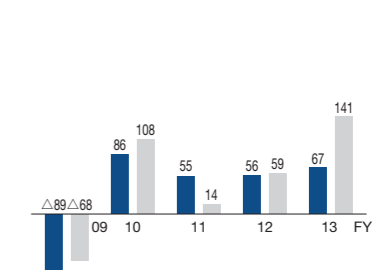
Orders awarded in construction business



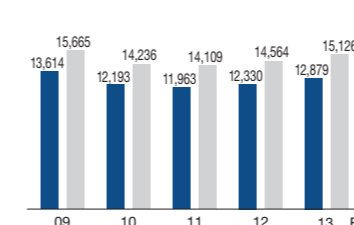
Net sales



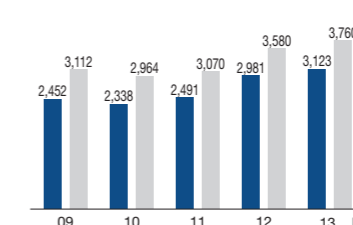
Net income



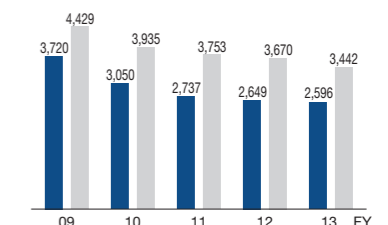
Total assets



Net assets



Interest-bearing debt



Special Feature : Strength and Flexibility

Since the Great East Japan Earthquake in 2011, research on earthquake risk to the Japanese archipelago has rapidly accelerated. This work has resulted in an improved understanding of the mechanisms that cause earthquakes as well as ways to forecast earthquake damage. Another pressing need is the need for effective earthquake response. In this regard, the construction industry is ideally positioned to contribute to society by creating safe, reliable facilities, thereby safeguarding lives and property and helping to maintain a sustainable society. The scope of these needs is also expanding to include overseas markets. Based on the theme “Strength and Flexibility,” this special feature introduces three projects intended to contribute to a resilient society.

01 Building a strong future for the community

: the Rikuzentakata earthquake restoration project



Today, more than three years and three months after the Great East Japan Earthquake, a wide range of restoration projects is underway in communities located in affected areas. One such community is the city of Rikuzentakata in Iwate Prefecture, where construction is proceeding rapidly to establish the infrastructure for a new city.

The first goal of the city's restoration work is to enable the return of residents still living in temporary housing or taking refuge outside the city and to ensure these residents will have a safe, secure hometown to which to return.

To fulfill this mission, Shimizu is seeking to understand as clearly as possible the specific issues faced by the local government and our client, through close contact and information exchange. We will proceed with the project by mobilizing bold ideas and advanced technologies at all stages, from research and design through construction. We are also taking part in local events and making sustained efforts to revitalize the community.

Based on the three fundamental principles, our Rikuzentakata earthquake restoration project seeks to achieve rapid recovery and sustainable growth for the community. These efforts involve pursuing a new kind of urban development that will help Rikuzentakata rebound from the earthquake and develop as a strong community.

Fundamental principles

- ① Creating a beautiful, world-class community
- ② Creating a community that safeguards lives, helps people thrive, and promotes community ties
- ③ Creating a vibrant community

Project overview (as of May 2014)

- (1) Location: Rikuzentakata City, Iwate Prefecture, Japan
- (2) Client: Urban Renaissance Agency
- (3) Construction period: December 11, 2012 to March 31, 2017
- (4) Volume of construction work:
 - Takata district (surface area subject to leveling work: 77.8 ha)
Excavation: 3.45 million m³; embankments: 1.98 million m³
 - Imaizumi district (surface area subject to leveling work: 22.0 ha)
Excavation: 6.44 million m³; conveyor belt installation and removal: 2970 m; temporary bridge installation and removal: 220 m; crushing equipment: 8 units

Photo: Equipment used for the Rikuzentakata earthquake restoration project
(The hill in the foreground is being excavated to create new residential land. The excavated earth will then be run through crushing equipment and transported on a massive conveyor belt to the opposite side of the river, where it will be used to raise the level of the land and create the site for the new community.)

Moving rapidly to build a safe, secure community

Ensuring speed and transparency in construction

To enable residents living in temporary housing or still evacuated outside the city to return to Rikuzentakata at the earliest possible date, this project employs a new system intended to rebuild the community as quickly as possible.

We are working to increase the pace of this project through the Construction Management System,*1 a new system for placing construction orders that significantly reduces the time to project completion, as well as a fast-track method*2 that maximizes the benefits of integrated design and construction work.

In addition, this project employs a subcontractor selection-method that prioritizes the use of local firms while maintaining a fair selection process. This gives local subcontractors opportunities to secure orders and contributes to local economic development.

Carrying out a large-scale project quickly and reliably

To rapidly transport the large amounts of soil needed to form the new community site, eight units of crushing equipment and a massive conveyor belt (1.8 m in width) have been installed over a distance of approximately three kilometers. This makes it possible to transport 5,500 t of earth per hour (the equivalent carried by 550 dump trucks), allowing completion of construction in approximately one-fourth the time required using dump trucks.

The project also adopts computer-aided construction methods based on IT technologies. Three-dimensional design data obtained via GPS and aerial photographs captured by drones support project management efforts to ensure high-quality construction work.

Protecting the community environment

In building this new community, this project also incorporates measures to preserve the surrounding environment.

The conveyor belt described above makes it possible to significantly reduce the use of dump trucks, helping to ensure safe road conditions for nearby residents while reducing air pollution and CO₂ emissions from exhaust fumes. (The conveyor belt reduces dump truck emissions by about 4,000 t-CO₂.)

The water in the Kesengawa River that flows through the center of the city is very clear, and the river is famous for its seasonal sweetfish fishing and salmon runs. The construction work requires transportation of earth across the river on a conveyor belt. Based on concerns related to safeguarding the river ecosystem, we consulted with the local fisheries cooperative and other parties before adopting a suspension bridge structure that minimizes interference with the salmon run.

Residents of the city have grown fond of this suspension bridge, which was given the name “Kibo-no-kakehashi” (“Bridge of Hope”) based on proposals submitted by local children.

*1 Construction Management System: A system of integrated management overseen by a Construction Manager (CMR) from the stages of research, surveys, and design through construction

*2 Fast-track method: A method whereby construction begins on portions of the project as soon as the design work for these portions is complete, rather than waiting for completion of the design for the entire project



The massive conveyor belt used to transport earth



The Kibonokakehashi suspension bridge across the Kesengawa River



The ceremony marking the start of earth transportation on March 24

Urban development undertaken side by side with the community

Partnership with local government and citizens' groups

Before construction work began, we met with the Rikuzentakata Chamber of Commerce and Industry and other parties to examine the feasibility of locally sourcing construction materials, fuel, commodities, and other supplies. By purchasing nearly all supplies in Rikuzentakata, we contributed significantly to the local economy. We are also pursuing other initiatives intended to contribute to the community. Examples include forming a community contribution promotion team as part of this Shimizu restoration project joint venture. In cooperation with the Rikuzentakata Chamber of Commerce and Industry as well as all our project partners, the team participates in various community development activities

Smile Tohoku Project

The Shimizu joint venture working on this project initiated the Smile Tohoku Project in cooperation with three newspaper publishers in the Tohoku region. The idea is to spread smiles within Tohoku and to communicate these feelings to the rest of Japan. With the participation of Mayor Toba from the city of Rikuzentakata, the senior class of Yokota Nursery School, local residents, and more than 50 joint-venture employees and workers, the project involved digging flowerbeds, planting sunflowers and other flowers in a 20-acre field, thereby creating a 24-meter-wide smiling face formed of flowers. Plans call for this project to continue, with all participants looking forward to seeing the smiling face in full bloom.



Residents taking part in the Smile Tohoku Project

Tour de Sanriku

The Tour de Sanriku promotes community development and tourism over a broad area while supporting recovery in the Sanriku region through the healthy and eco-friendly sport of cycling. Some 50 individuals from the Shimizu joint venture, including those from partner companies, took part in this highly successful event. This event won the Sports and Community Development Prize (Japan Chamber of Commerce and Industry prize) at the second annual sports promotion awards.



Tour de Sanriku

Looking forward to rapid community restoration, with an emphasis on quality of life

Quality of life is the most important aspect of this earthquake restoration project. We are incorporating expert views and the latest technologies to restore Rikuzentakata as a safe, secure community, despite the surrounding sea and mountains and the resulting constraints on usable land area.

The plans give considerable weight to rebuilding the city and creating a park devoted to prayers for recovery. Plans call for a park on the site of Takata-matsubara, known for its lovely pine trees and sea views. The park will serve as a disaster memorial and a place to mourn the victims of the earthquake.

Construction is underway today, with Shimizu Corporation playing a central role. I was startled by the idea of using a massive conveyor belt to transport earth. Like other city residents, I have the highest expectations for this innovative method, which will contribute to the rapid restoration of our community. As its name implies, the “Kibo-no-kakehashi” suspension bridge across the Kesengawa River will serve as a symbol of Rikuzentakata’s recovery, alongside the Miracle Pine, a single surviving pine tree.

As future community development initiatives take concrete form, we also intend to make the entire city barrier-free and incorporate other innovative measures to better serve its aging population.

Mayor, Rikuzentakata **Futoshi Toba**

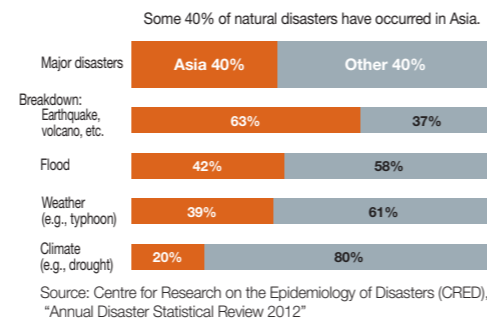


02 Readiness for disasters starts with identifying risks

Shimizu Global Hazard Evaluation System

Recently the Asian region has been hit by major disasters nearly every year. Some 40% of natural disasters worldwide from 2002 to 2012 occurred in Asia. For the people living in the area, dealing with natural threats are critical for their daily lives.

As a company with its overseas business activities centered in Asia, Shimizu hopes to deliver safe and threat-resilient facilities to all clients and end users. As part of this endeavor, we developed the Shimizu Global Hazard Evaluation System, which can help improve the selection of construction sites and the design of each facility's disaster-prevention performance.



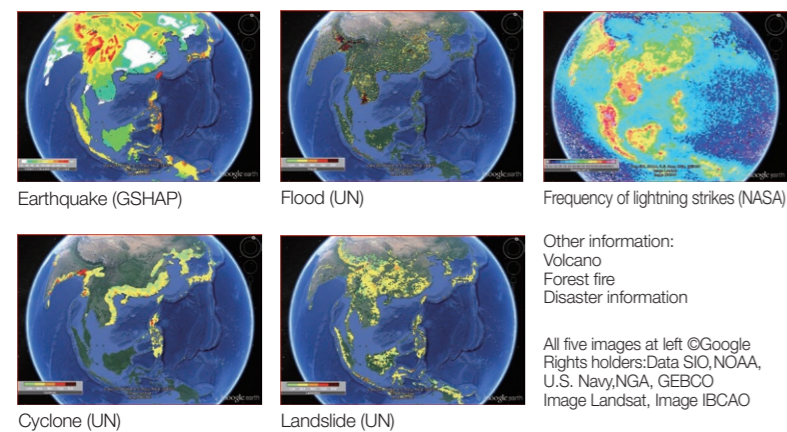
Instant grasp of pinpointed potential risks

When studying a site location or structural specifications, developers must know the potential risks of earthquakes, floods, lightning strikes, and other disasters and natural threats.

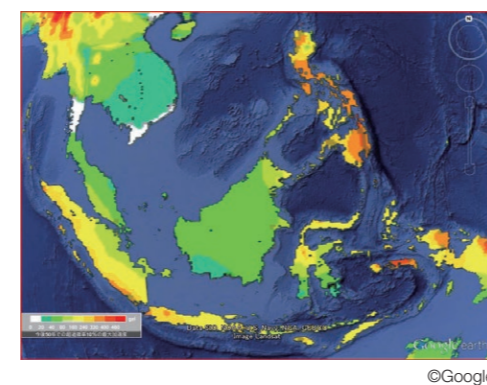
Institutions around the world provide hazard data that serves as an invaluable resource in disaster risk mitigation. However, it may take much time and effort to gather this data, which is published by each institution and updated individually.

To improve this situation, Shimizu has developed the Shimizu Global Hazard Evaluation System. Using Google Earth as a common platform, the system integrates 16 types of public databases from 11 institutions, including the UN and NASA. Shimizu Global Hazard Evaluation System makes it possible to access all the necessary data at once by selecting any location around the world.

Integrating a broad range of data on natural disasters



Pinpoint display



Planning safe facilities alongside our clients

This system demonstrates its greatest advantage at the stage of site selection. We can advise our clients on whether earthquake countermeasures are required and on the specific measures required at a particular site based on a visual comparison of information on disaster risks at multiple proposed sites.

In the design stage, the system also makes it easier to optimize specifications (e.g., setting floor level based on historical flood records) through direct discussion with the client.

Even for projects which Shimizu undertakes only construction work, the system can be used for simple risk analysis to determine whether the given specifications are adequate for the site.

In its work on projects in Asia and around the world, Shimizu takes to heart its responsibility to build and deliver the best facilities at each site and for the clients and community residents.



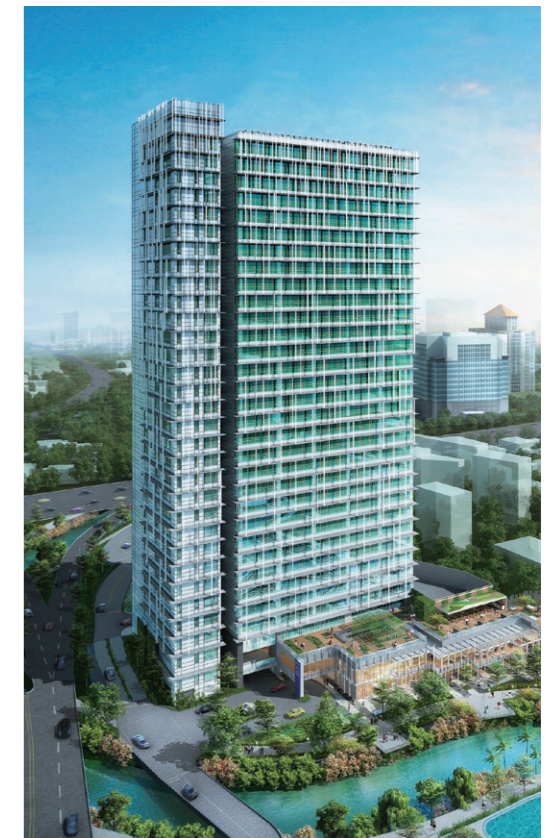
Major events at which the system has been exhibited:
Smart Community 2013 Indonesia (December 2013)
Myanmar-Japan Disaster Management Collaboration Dialogue Workshop (February 2014)
International Smart Grid Expo (February 2014)
Asian Conference on Disaster Reduction (March 2014)

Case Study Simatupang Mixed-use Project (Indonesia)

Launched in July 2013, this project is the development of a large-scale facility combining offices, retail shops, and other uses in Simatupang, South Jakarta. The client is PT Grage Trimitra Usaha, a major Indonesian real estate company. "We want to build the top-class Green Building, in harmony with Indonesia's climate and culture," says President Franky Tjahyadikarta, discussing his lofty expectations for the project. He also has the highest expectations for Shimizu's disaster-prevention technologies, developed in Japan as an earthquake-prone country.



Putting together the project plans with President Franky (center)



Exterior view

The process of considering disaster-prevention features for this building involved location analysis using the Shimizu Global Hazard Evaluation System. Results showed the site is prone to concentrated rain and lightning but found earthquake risk is relatively low. Based on these findings, we incorporated the measures listed below into project plans after discussions with the client.

Analysis results and measures (excerpt)

① Flood, concentrated rain

Analysis Results

- Limited risk of flood, high risk of concentrated rain (max. precipitation 240 mm/hour)

Measures

- Planning to achieve adequate rainwater drainage even at the max. projected rainfall
- Planning to relocate electrical systems susceptible to water damage above flood levels
- Installing flood barriers to counter flooding in the basement

② Lightning strike

Analysis Results

- A high risk of lightning strikes in Jakarta (annual lightning strikes: 40-50 incidents/km²)

Measures

- Deploying lightning protection systems based on the SNI/IEC-standard mesh method
- Anchoring of metal part of external wall mullions to protect against side flashes
- Installing surge protective devices to enhance electrical system stability

③ Earthquake

Analysis Results

- Relatively low risk of major earthquake (Peak Ground Acceleration with 10% probability of exceedance in 50 years: 240-320 gal)

Measures

- Schematic design ensures adequate seismic safety
- Other measures are not required

Such pinpoint site analysis and optimized solutions will help realize a high cost-performance building providing all necessary safety features: neither too much nor too little. The risk analysis process itself will be a part of great added-value of the building.

03 Protecting urban communities and supply chains

The Great East Japan Earthquake and its ensuing tsunami destroyed numerous buildings and took many lives. These events also resulted in serious disruptions to supply chains across the manufacturing and logistics industries, particularly for functional parts and materials, and brought long-lasting effects on the Japanese economy. In anticipation of future earthquakes in the Nankai Trough or directly beneath the greater Tokyo area, the construction industry has been responding to the clear and urgent need to improve the seismic resistance of buildings, thereby safeguarding lives and property and contributing business continuity. Since the Great Kanto Earthquake of 1923, Shimizu has been conducting great efforts to prevent earthquake damage as a leader in the construction industry. Technologies and expertise accumulated over many years are currently being incorporated into a wide range of safety and reliability initiatives. (See pages 27–29.) Here focusing on protection of urban communities and supply chains, we introduce “Dynamic Screw”, seismic response control technology, with initiative intended to improve the seismic resistance of existing buildings.

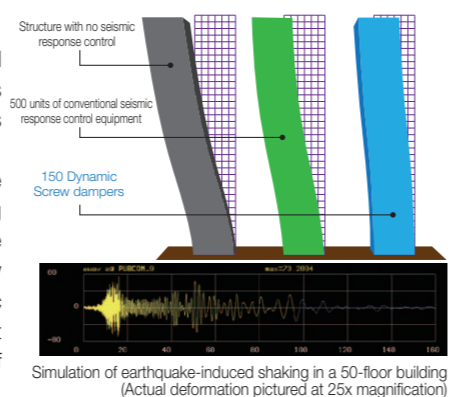
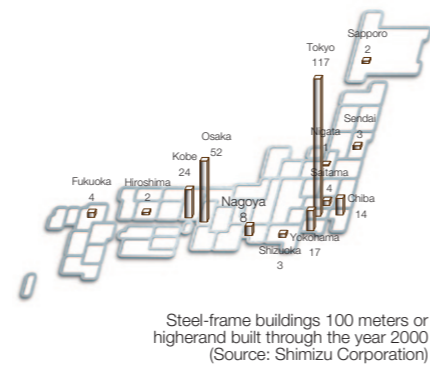
Protecting urban communities and buildings

Current status and issues confronting Japanese cities

Many buildings higher than 100 meters were built in Japan from the late 1980s through the early 1990s, a period when scant attention was given to the potential consequences of long-period seismic tremors. This wave of construction centered on the greater Tokyo, Osaka, and Nagoya areas, Japan’s three largest metropolises areas, and about 250 of such buildings are still in existence according to a Shimizu study. At the time of the Great East Japan Earthquake, high-rise buildings located far away from the epicenter experienced considerable shaking. In buildings lacking countermeasures against long-period seismic tremors, the shaking was even worse due to resonance effects with seismic tremors. While the buildings themselves suffered little damage, the damage to interior finishing materials, fixtures, furniture, and other property was considerable. These observations point the need for countermeasures against long-period seismic tremors, particularly buildings predate the year 2000.

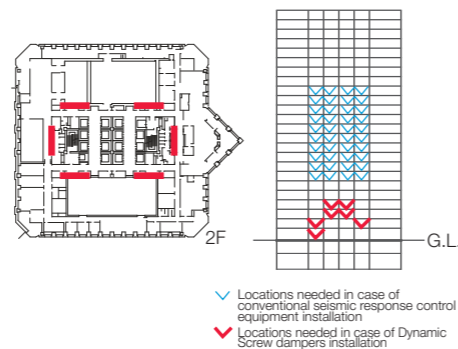
Improvement of seismic performance with “Dynamic Screw”

The high-performance “Dynamic Screw” dampers which control seismic response developed by Shimizu harness the inertial force of a rotating spindle to absorb seismic energy. With this technology, rotating spindles weighing approximately 0.6 t can be as effective as spindles 4,000 times heavier and weighing 2,500 t. The greatest advantage of Dynamic Screw technology as a seismic response control measure in high-rise buildings is the small number of units needed. While requirements vary depending on building itself and ground conditions, simulations of earthquake waves that reproduce the effects of a long-period seismic tremor on a 50-story building show those 150 Dynamic Screw dampers can deliver performance equal to or better than 500 units of traditional seismic response control equipment. Comparisons before and after of the installation show that Dynamic Screw technology dampens shaking by about two-thirds and cuts the duration of sustained large-tremor shaking by about one-half.



Case Study Seavans South

Dynamic Screw dampers were installed in this 24-stories high office building, completed in 1991, to counter long-period seismic tremors. The technology calls for one-third to one-half the number of units required by traditional seismic response control equipment. This makes it possible to limit installation to areas around stairwells and other common areas, minimizing inconveniences for the tenants. No tenants were displaced, even temporarily, during the installation. The modest number of units installed also approximately halves the time needed for installation and reduces other related work, including the restoration of finishing materials, resulting in construction cost savings of 20% to 30%.

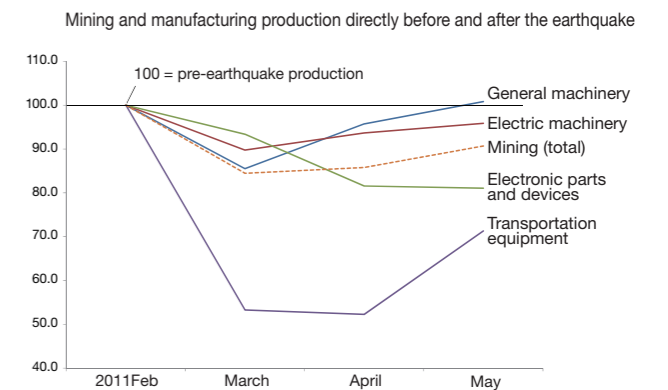


Example of Dynamic Screw damper installation

Protecting production lines

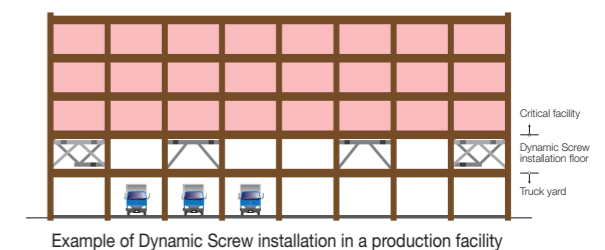
Continuity of production and operations in the event of disaster

The Great East Japan Earthquake resulted in massive damage to manufacturing industries, centering on the Tohoku region. Parts shortages due to supply chain disruptions brought broad-ranging effects on the overall Japanese economy. In some industries, the impact was global. The influence by the earthquake were especially broad-ranging, and the time required for recovery prolonged, in relation to the production of functional parts and materials such as electronic devices. A wide range of manufacturers relied on these parts and materials and in some cases used special-order products for which there are no substitutes. Production lines provide key products for the supply chain, as well as products that directly affect human life (such as food and medicine). The need to protect such lines in the event of disaster is obvious.



Making facilities more resilient enough for keeping production and operation even in the state of emergency

The greatest advantage of the Dynamic Screw dampers lies in how flexibly they can be deployed. The dampers can be installed in a wide range of locations either vertically or horizontally. Installing the dampers concentrated on floors with little impact on day-to-day operations avoids interfere to the critical facilities like clean rooms hard to be renovated located on upper floors and also to the truck yards frequently in operation located on ground floor. This flexibility of installation makes it possible to improve the seismic performance of the entire building with minimal interference and downtime.



Case Study Hisamitsu Pharmaceutical Co., Inc., Utsunomiya Factory

Hisamitsu decided to improve the seismic resistance of this factory's buildings, which sustained serious damage in the Great East Japan Earthquake. Dampers were installed only on the first floor, avoiding the upper floors located clean rooms and other facilities having direct hit on their on business continuity were located. This project improved the seismic performance of the entire building with no disturbance of usual mode of productions.

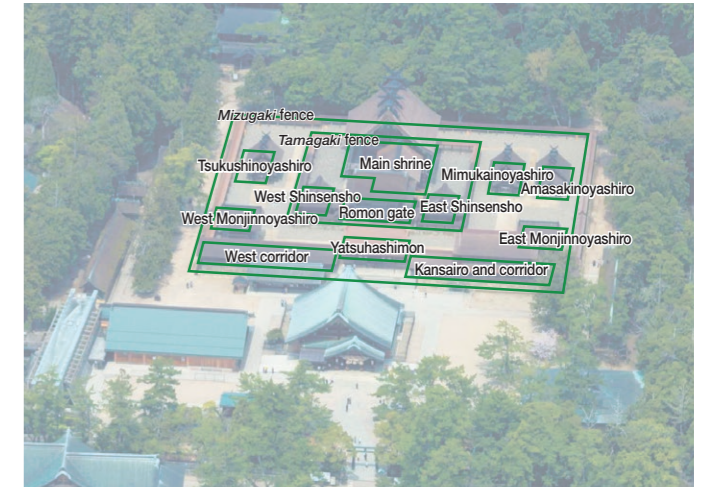


Preservation and restoration work on Izumo-taisha shrine, a Japanese national treasure New life for the next 60 years

An ancient shrine whose establishment is already described in *Kojiki* (the Records of Ancient Matters), Japan's oldest historical document, Izumo-taisha began as Amanohisumiyama shrine and was built to enshrine the god Ookuninushi-no-ookami when he restored Japan to the sun goddess Amaterasu-oomikami. After the enshrined deity was moved to a temporary shrine in 2008, preservation and restoration work proceeded on the main shrine and 13 other structures. The work was completed in May 2013, at which time the deity was returned as part of the first shrine transfer ceremony held in 60 years. Designated as national treasures or important cultural properties, some of the structures that make up the shrine were built in 1667 and others in 1744. The work involved re-shingling the roofs with Japanese cypress bark while leaving the structures themselves intact. Parts and materials that withstood the rigors of time were preserved, while sections damaged by years of wind and rain were reinforced and restored. Some locations received extensive improvements, including steel-frame reinforcements, to make sure they could withstand the rigors of the next 60 years. Restoration work continues on the shrine, including auxiliary and subordinate shrines inside and outside the grounds. All restoration work will be completed by 2015. By that time, the ongoing work will confer a renewed beauty on the entire site, focusing on the main shrine but including surrounding facilities, auxiliary and subordinate shrines, and torii archways. Shimizu's goal for this project is to ensure the next generation can appreciate the heritage of this shrine for another 60 years.



A The completed main shrine



C Sites of restoration work



B Installing the restored log called *katsuogi* on the main shrine roof

Photos:
A: Masaharu Nakatsuka, Naru Photo
B: Ken'ichi Komeiji
C: Kazunari Satoh, Satoh Photo

■ Using parts and materials that withstand the rigors of time
A key aspect of repairing and restoring areas damaged or decayed over the years involves dismantling structures and measuring and studying the damage that has become visible. The extent of the work required becomes clear only after the entire structure has been dismantled and studied. The total number of parts and materials repaired in all 14 structures for which restoration was complete reached into the tens of thousands. The status of these structures as treasured cultural properties made it imperative to use parts and materials capable of withstanding the rigors of time. Restoring cultural properties requires more time and effort than new construction and generally requires a company with a deep understanding of repair materials and experience repairing cultural properties.

■ The fate of people and materials connected by a deity
The main shrine's roof, known as *hakakushi*, showed clear damage to its decorative ridge beams. This meant the entire roof needed to be dismantled before re-shingling. The material used was pine. However, except in the Tohoku region, the pine weevil has devastated most domestic pine trees with large trunks. The Great East Japan Earthquake struck on March 11, 2011, three days after the lumber supplier in the city of Ofunato, Iwate Prefecture, sent notification that the lumber would be delivered the following week. Although communications were cut off for the following two weeks or so, both the supplier's plant and the logs escaped tsunami damage, and the logs were delivered on March 31st without further incident. While the supplier's efforts played a clear and essential role, one might be excused for seeing the hand of fate in these events: because Okuninushi is the known as the deity of bringing people together, everyone and everything involved in the restoration of Izumo-taisha—including the individuals harvesting the lumber, workers at the plant, and those of us at Shimizu—were brought together by the work materials. Our work to complete all restoration by 2015 continues, inspired in part by the idea that we are restoring the home of an ancient deity.



B Restoration of a structure known as "Kansairo"

■ Handing on the site to future caretakers
A ridge-end ornament, *oniita* (also known as *onigawara*), is installed on each end of the roof ridge. These ornaments were restored by making molds from the cloud-shaped engravings found on existing ornaments. Following two years of trial and error, we revived the Edo Period *channuri* painting method,* which had fallen out of use for 130 years. Repair work done once every 60 years is of necessity undertaken by completely different generations. Virtually no records remain from the repair work performed in the 20th century. While repair work on cultural properties must leave no visible trace, one of our main project goals as we dismantle and study these structures is to create and maintain records for future generations.



A Installing a restored ridge-end ornament



A Channuri painting

*Channuri:
A traditional Japanese paint. Its main ingredient is perilla oil, mixed with pine resin, coal, and lead. Copper sheets were painted with green *channuri* mixed with verdigris. Ridge-end ornaments were painted with black *channuri* mixed with India ink.

ACTIVITIES

CSR Efforts and Assessments

Seeking to promote CSR management as part of our everyday business efforts, to pursue a sustained program of reforms in response to changing social conditions, and to play an active role in solving social issues as a responsible corporate citizen, Shimizu bases its CSR activities on the following three principles:

- Fairness and transparency in business
- Creating value that surpasses the expectations of customers and society
- Pursuing business activities that coexist with society

Shimizu established six key performance indicators (KPIs) in its CSR activities based on two main perspectives: their contributions to corporate value for a broad range of stakeholders and their impact on Shimizu's growth.

A self-evaluation of each effort based on targets and performance (including KPIs) showed that 12 of our 13 CSR efforts in fiscal 2013 either surpassed targets or were largely in line with plans.

In the one area where results fell short of targeted goals—Health and Safety Efforts—we will enhance incident-reduction efforts by making comprehensive improvements to existing conditions. Overall, we plan to enhance CSR management by prioritizing efforts based on their urgency with respect to social needs and expectations.

The opening pages of each section (pages 20, 26, and 44) present the KPIs and other quantifiable assessment indicators.

The section in charge of each effort performed self-assessments.

Environmental efforts are promoted through the establishment of Midterm Performance Targets every three years and the formulation of an environmental activity plan each year.

Theme	Effort	Main activities, targets, and performance in fiscal 2013	Self-assessments	Targets and efforts for fiscal 2014 and beyond							Page				
				Organizational governance	Human rights	Labor practices	Environment	Fair operating practices	Consumer issues	Community involvement and development		Global Compact			
Fairness and Transparency in Business	Corporate Governance	• Instituting suitable checks on our corporate governance structure and establishing internal controls for financial reports		• Maintaining levels achieved in fiscal 2013 and strengthening related activities	●								P21		
	Improvements in the Business Environment	• Continuing to address new security risks (targeted attacks) • Strengthening security management and overall management structures for information devices overseas • Following up on key risk management items from fiscal 2013 and strengthening related activities • Implementing disaster-prevention activities in partnership with local communities		• Continuing to address new security risks (targeted attacks, social media) • Conducting comprehensive information security measures, including security measures for specialist contractors • Following up on key risk management items from fiscal 2013 and strengthening related activities • Continuing to deploy disaster-prevention activities in partnership with local communities; conducting regular community drills; establishing organizations that can respond appropriately to disasters	●			●	●				P21 P22		
	Compliance and Corporate Ethics	• Holding compliance training for all employees of Group member companies • Implementing basic training on construction byproducts for all employees working in the field • Providing intellectual property training for new employees and new managers		• Promoting measures to ensure thorough Group compliance • Providing environmental risk prevention training for employees and managers • Raising employee awareness of intellectual property issues through training and information dissemination	●	●	●	●			●	●	●	P23	
	Disclosing Corporate Information/Fair and Transparent Transactions	• Continuing to promote CSR procurement, including joint efforts with specialist contractors • Proactively communicating important information to shareholders, securities analysts, and overseas investors; communicating information via Twitter and our websites		• Providing ongoing support for CSR procurement with partner companies • Making active use of mass media and the Internet to ensure timely communication of company information to a broad segment of society	●	●	●	●			●	●	●	P24 P25	
The Creation of Value Surpassing Surpasses the Expectations of Customers and Society	Safety and Reliability Efforts	• Using new and already developed technologies to build safe, secure cities and buildings while strengthening earthquake resistance; incorporating the lessons learned from the Great East Japan Earthquake (applying Shimizu's comprehensive disaster prevention diagnostics system to some 150 buildings) • Restoration efforts following the Great East Japan Earthquake (Awards and recognition granted for efforts to promote reductions, reuse, and recycling; the Minister of Land, Infrastructure and Transport prize)		• Proposing the construction of safe and reliable buildings and structures to protect customer lives and ensure business continuity in the event of a Nankai Trough earthquake or an earthquake striking directly beneath the greater Tokyo area; making wide-ranging contributions to society through the development of innovative technologies • Continuing to pursue restoration efforts in the wake of the Great East Japan Earthquake								●		P27 P31	
	Delivering Optimal Quality	Architectural construction: Ensuring the construction of high-quality projects and deliverables; ensuring process quality by working closely with customers and deploying BIM and 3D printers; ensuring the quality of after-sales service through customer satisfaction surveys once buildings enter use Civil engineering: Concerted efforts to promote quality-assurance activities, including the implementation of ten quality-assurance measures; implementing e-learning programs on questions and answers concerning defects for all civil-engineering employees		Architectural construction: Continuing to promote quality-improvement activities that take advantage of our ability as a general contractor and design and construction firm to provide one-stop solutions across the entire building life cycle, from project planning through design, construction, maintenance, and management Civil engineering: Promoting quality-assurance activities to eliminate defects attributable to technology use; developing new technologies that will contribute to the development of tomorrow's social infrastructure								●		P32 P37	
	Contributing to the Environment ecoBCP Initiatives	• Promoting smart-community projects within city blocks • Earning ISO 22301 and ISO 50001 certification for a city block centered on the head office building • Applying smart energy management to support earthquake-damaged seafoodmarine product processing facilities		• Pursuing facility and community development from the perspectives of ecoBCP and ecoLCP by combining ecological activities during normal times with business continuity plan during emergencies (e.g., by securing energy sources (ecoBCP) or life continuity plan (LCP)).										●	P38 P39
	Preventing Global Warming Ecological Mission	• Efforts undertaken as part of the Ecological Mission reduced CO ₂ emissions by 18%, exceeding our fiscal 2013 target of 16% relative to fiscal 1990 levels. The overall goal of the Ecological Mission is to reduce, by fiscal 2020, CO ₂ emissions from all buildings constructed in Japan (including past construction projects) by 30% relative to fiscal 1990 levels.		• Continuing to move forward with the Ecological Mission to achieve the goal of reducing, by fiscal 2020, CO ₂ emissions by 30% relative to fiscal 1990 levels • Continuing to examine new indicators, targets, and measures based on high-level government plans and other initiatives related to Japan's energy strategy										●	P40 P41
	Biodiversity Initiatives	• Set as an environmental activity goal a minimum of 14 biodiversity-related proposals; implemented 18 such projects • Implemented appropriate activities to protect ecosystems at sites requiring special consideration • Continued to promote research and development in genetic analysis, ecosystem network analysis, and related areas		• Setting goals for the number of biodiversity-related proposals and pursuing related projects • Study of medium- to long-term targets launched with an eye toward the years 2030 and 2050										●	P42
	Addressing Construction Byproducts and Fighting Pollution	• Continuing to promote 4R Activities and initiating new measures to reduce construction byproducts • Continued to promote the Shin Kan-tasu (improved Kan-tasu) construction byproducts management system • Launch of efforts to achieve 100% use of e-manifest forms		• Continuing to promote 4R Activities and deploying new measures to reduce construction byproducts • Continuing to promote the Shin Kan-tasu ("improved Kan-tasu") construction byproducts management system (including efforts to achieve 100% use of e-manifest forms)										●	P43
	The Pursuit of Business Activities that Coexist with Society	Realizing a Company that Values People	• Verifying and studying measures to promote awareness of human rights and other activities from a global perspective; posting English translations of our Basic Human Rights Policy, Diversity Policy, and other company guidelines on our website • Establishing and verifying measures to promote diversity (e.g., promoting the presence of women in the workplace and hiring and promoting non-Japanese employees) through various initiatives, including roundtable discussions for women and training for women construction workers		• Studying measures to promote awareness of human rights and other activities from a global perspective • Establishing and verifying measures to promote diversity (e.g., promoting the presence of women in the workplace and hiring and promoting non-Japanese employees)	●	●							●	P45 P47
Health and Safety Efforts		• Eliminating falling accidents (highest priority target) • Eliminating accidents caused by cranes or heavy equipment or by the collapse of heavy structure components • Achieving significant improvements in short-fall prevention • Preventing accidents among older workers		• Eliminating falling accidents (priority measure) • Eliminating accidents caused by cranes or heavy equipment or by the collapse of heavy structure components • Preventing accidents during irregular tasks • Preventing accidents among older workers									●	P48 P49	
Interacting with Society / Engaging in Social Contribution Activities		• Deployment of activities matched to the character of each community by branches, sales offices, construction sites, Group companies, and other facilities: 20 Medama Projects • Number of participants in site tours across Japan: 14,403		• Enhancing community outreach activities to achieve the near-term goal of 20,000 annual participants in site tours across Japan										●	P50

* Accident frequency rate: The number of deaths and injuries per million cumulative man-hours (Figures for all industries and for the construction industry represent accidents resulting in one or more days of lost work; figures for Shimizu represent accidents resulting in four or more days of lost work.)

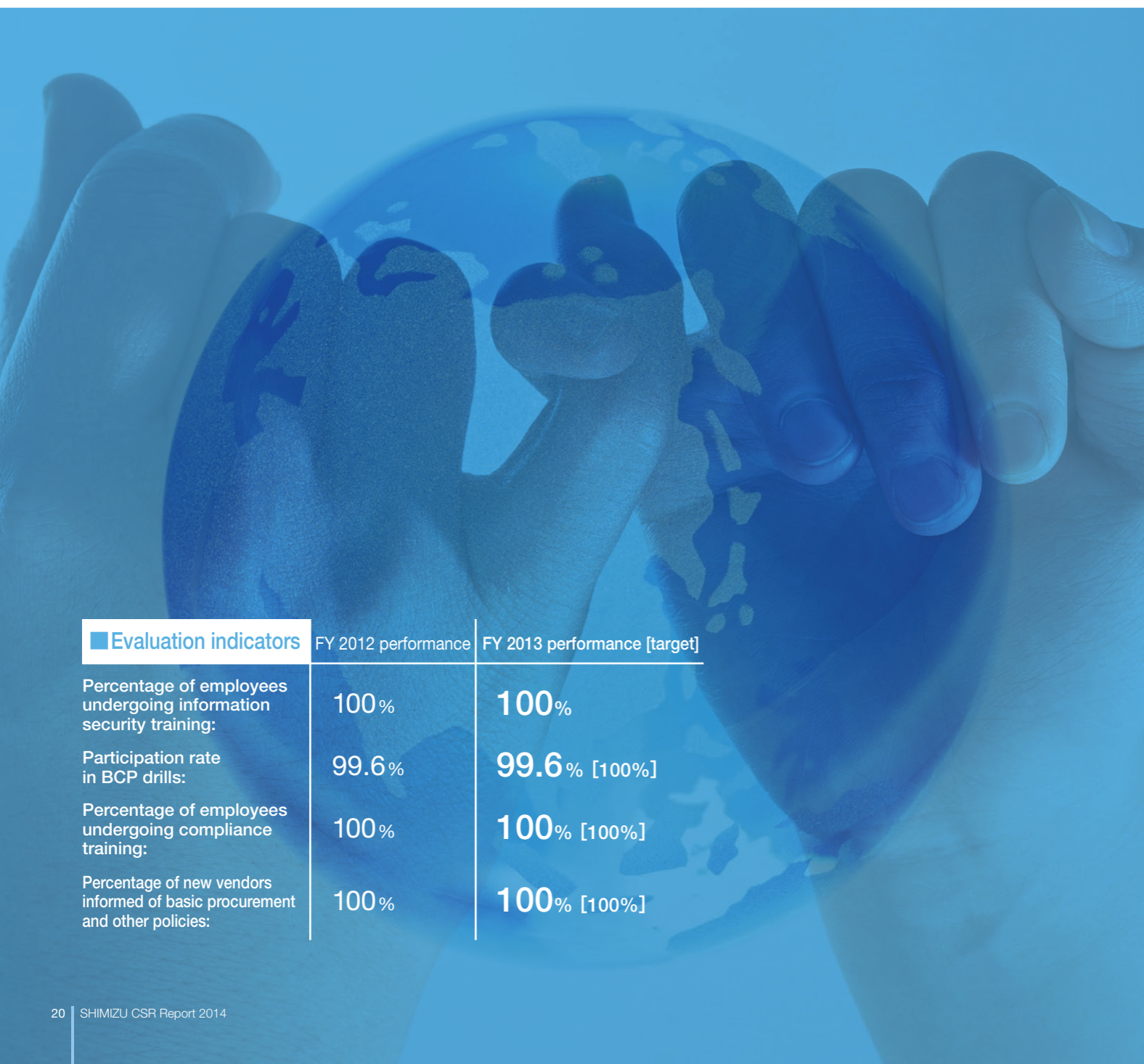
ACTIVITIES

Fairness and Transparency in Business

Shimizu's management is based on the fundamental principles of Rongo to Soroban ("The Analects and the Abacus").

Shimizu practices compliance management based on corporate ethics of the highest standards, with all officers and employees proceeding with their daily duties based on a clear understanding of this fundamental principle.

Shimizu strives to earn ever greater trust from society and to act as an organization striving to achieve sustainable societies based on sound action and judgment across a broad range of areas, including corporate governance and risk management, compliance and corporate ethics, transaction transparency, and appropriate disclosure of corporate information.



Evaluation indicators	FY 2012 performance	FY 2013 performance [target]
Percentage of employees undergoing information security training:	100%	100%
Participation rate in BCP drills:	99.6%	99.6% [100%]
Percentage of employees undergoing compliance training:	100%	100% [100%]
Percentage of new vendors informed of basic procurement and other policies:	100%	100% [100%]

Corporate Governance

Corporate governance
Governance systems and internal controls based on propriety and sound judgment at all times

■ Appropriate deployment of corporate governance systems
To achieve rapid, efficient management, Shimizu has reduced the number of its directors (currently eight out of a total of 12 seats) and now uses an executive officer system as part of efforts to create a clear functional demarcation between strategic management and business execution. Shimizu has established a system whereby its Board of Directors and corporate auditors monitor and audit the performance of individual duties. Shimizu's five corporate auditors include three external auditors, all independent reviewers as defined under the rules of the Tokyo Stock Exchange. They audit the directors' overall compliance from a fair, impartial perspective.

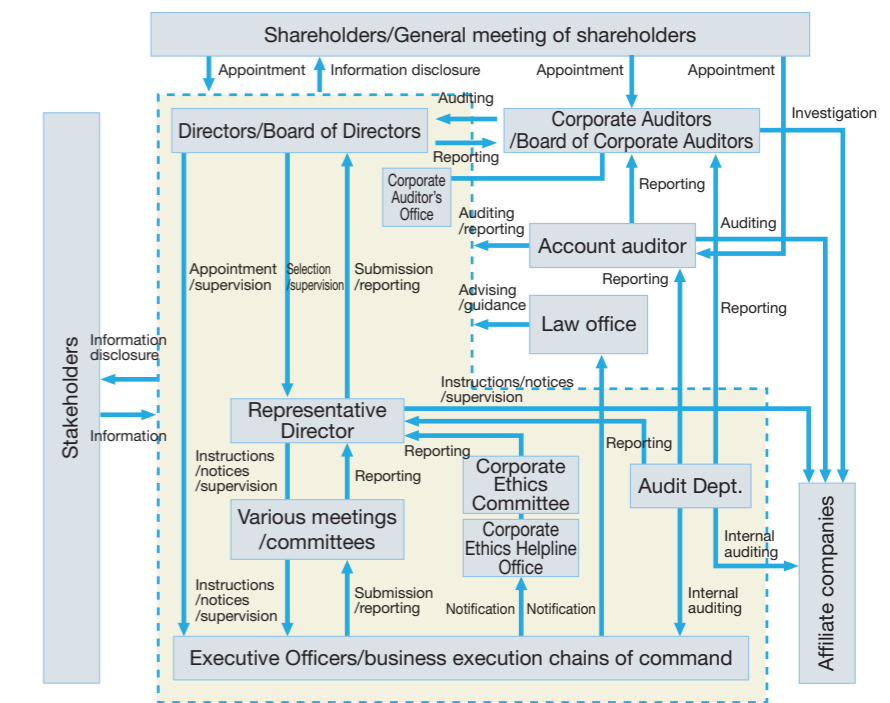
The Audit Department undertakes comprehensive internal audits of the business execution sections, reporting to the company's representative directors, corporate auditors, and accounting auditor on the results of audits based on audit plans approved by the Board of Directors.

In the area of internal controls, a Basic Policy on Developing an Internal Control System has been established to develop a system that ensures the propriety of business operations. This policy is reviewed by the Board of Directors when deemed necessary.

■ Specific measures taken

To stimulate further discussion among the Board of Directors and enhance the Board's management supervisory functions, a director recruited from outside the company was appointed in June 2013.

Corporate Governance System



Improvements in the Business Environment

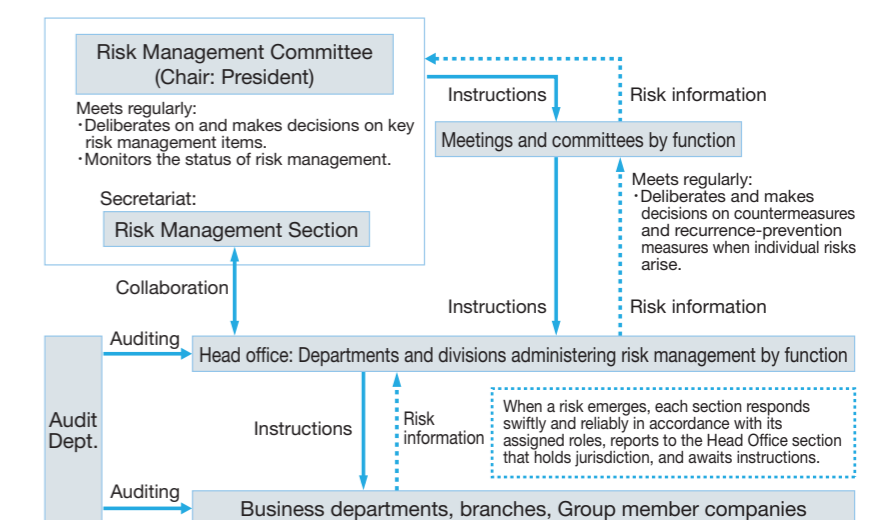
We are currently establishing management systems capable of addressing a wide range of risks, including those related to finance, information security, violations of laws and regulations, and disasters.

Risk management organization
Promoting risk management through the PDCA cycle

■ Risk Management Committee

Each fiscal year, the Risk Management Committee (chaired by the President) makes decisions on key risk management items for the entire company, taking steps to ensure that these decisions are incorporated into the plans of each section. Alongside these efforts, the Committee also undertakes risk management based on the Plan-Do-Check-Act (PDCA) cycle. This cycle is applied to monitor the status of risk management by function at all central and operating divisions as well as at Group member companies; corrections and improvements are proposed as appropriate; and new risks are addressed.

Risk Management Organization (according to Risk Management Rules)



Protecting personal information Appropriate management of personal information under the Privacy Policy

Recognizing the importance of protecting personal information obtained in the course of our business activities, including information on clients, business partners, and employees, Shimizu established a Privacy Policy in 2005 to manage all such personal

information, based on appropriate security management measures. We have also established a contact point for personal information on the Shimizu website to address inquiries related to the handling of personal information.

Information security activities Enhancing information security measures, including those for specialist contractors

Information security efforts

Since information used during processes ranging from planning to design, construction, and operations is often highly confidential for the client, information management is a crucial responsibility of every construction company. In fiscal 2008, Shimizu overhauled its Electronic Information Security Control Guide established in fiscal 2002 and drew up a new set of Information Security Guidelines. This document addresses the handling of all types of information, including information in paper form. By applying this information security management system, we seek to enhance security and prevent information leaks within the IT environment and to develop training programs that ensure a deep, widespread understanding of security measures. Efforts in fiscal 2013 focused on strengthening measures to counter targeted cyber-attacks. We are also deploying measures to raise information security awareness among employees and to strengthen information security measures, including those for specialist contractors.

Specific measures taken

- Strengthening information security**
 - Countering targeted cyber-attacks
 - Revising the Information Security Guidelines (e.g., enhancing information security BCP measures)
 - Audits by external agencies of information security vulnerabilities
- Publicizing information security**
 - Implementing information security training for all employees
 - Distributing pocket-sized Information Security Handbooks
 - Distributing information security posters
 - Conducting information security audits, centered on construction sites
 - Conducting simulation exercises in preparation for targeted email attacks
 - Supporting specialist contractors in efforts to improve security (e.g., distributing educational materials and holding training sessions)

Business continuity planning (BCP) efforts Disaster-prevention activities undertaken in partnership with the community (providing support for those unable to return home in the event of a disaster)

To fulfill its social responsibilities as a construction company, Shimizu continually improves its disaster-response systems in order to maintain readiness for large-scale earthquakes. Tokyo's Chuo Ward, where the Shimizu head office building is located, has a daytime population of approximately 600,000 people. In the event of a major earthquake, forecasts indicate roughly 300,000 people in the ward would be unable to return home. In such cases, as requested by Chuo Ward, the head office building would serve as a regional disaster center and provide space and temporary accommodations for shoppers, travelers, and others unable to return to their homes. The specifics of providing such spaces and practical management issues continue to be examined.

The Chuo Ward emergency shelter council is formed by the Chuo Ward, Shimizu, and other companies dedicated to supporting individuals stranded in the area and unable to return home in the event of an emergency. The council is currently developing manuals for temporary shelter facilities. On September 1, 2013, Shimizu's head office building served as the site of Chuo Ward's first drills involving the sheltering of those unable to return home due to an emergency.

The head office building's ability to function as a regional disaster center is characteristic of Shimizu's community spirit. In cooperation with Chuo Ward and with other companies, we plan to help develop a disaster-prevention system for the area based on a system of mutual aid.



Reception on the first floor of the head office building



Reception in Shimizu Hall on the second floor of the head office building

Training through e-learning
Implementation rate
100%



Distribution of information security posters

Compliance and Corporate Ethics

Shimizu's fundamental principles are based on the precepts set forth in *Rongo to Soroban* ("The Analects and the Abacus") by Eiichi Shibusawa, who proposed a balance between the ethical humanism of the *Analects* of Confucius [552 – 479 B.C.] and the economic activity symbolized by the abacus. According to this concept, a company can contribute to society by earning appropriate returns through ethical business activities. Shimizu is working to ensure that the daily actions of all our officers and employees are consistent with these principles and compliant with all laws and regulations as well as our corporate ethics.

Thorough Compliance Strengthening Compliance Groupwide

Code of Corporate Ethics and Conduct and internal systems

Shimizu has established a Code of Corporate Ethics and Conduct to ensure thorough understanding of corporate ethics companywide.

As an internal system to achieve this goal, the Committee on Corporate Ethics, chaired by the Vice President, undertakes various activities, including implementing and monitoring efforts to achieve a thorough understanding of corporate ethics and compliance issues.

Shimizu addresses major compliance risks through various measures, including the Antimonopoly Law Compliance Program, the Rules on the Prevention of Insider Trading, and the Security Export Control Rules.

Compliance training

In fiscal 2013, the rate of participation in the e-learning course for all Shimizu employees once again reached 100%. Shimizu provides compliance training for all employees of our 22 Group member companies. Some 3,000 individuals underwent this training in fiscal 2013.

Including the International Division, business sections undertake compliance training specific to the actual conditions facing each section. To raise awareness of insider trading regulations and to prevent all such trading, an e-learning program on insider trading regulations was provided in fiscal 2013 for officers, regular employees, and temporary employees. Roughly 11,800 individuals took part in the program.

Compliance with environmental laws and regulations Comprehensive measures to ensure appropriate management of construction byproducts by all site employees

Efforts to ensure compliance with environmental laws and regulations

All sites display banners featuring reminders about the appropriate handling of construction byproducts. To ensure a thorough understanding of appropriate management of waste, harmful materials, and water quality, an e-learning program on basic training for construction byproducts was implemented in fiscal 2013 for all site employees.

Examples of problems and preventive measures

In fiscal 2013, Shimizu once again incurred zero administrative penalties involving violations of environmental laws or regulations. Nevertheless, five minor problems did arise during the year, including oil leaks due to errors in operating machinery and delays in addressing materials that exceeded standard values (due to natural causes) in embankment work.

We have implemented measures to prevent the recurrence of such issues, including training sessions and the internal distribution of relevant information. Shimizu also developed and deployed the Shin Kan-tasu integrated construction byproducts management system, which ensures the comprehensive and appropriate management of construction byproducts through the companywide sharing of a database concerning license status and plant operations of industrial waste treatment companies.

We also undertake audits that focus on byproducts (targeting topics such as waste, harmful materials, and water-quality management) to ensure appropriate handling at construction sites. In fiscal 2013, these audits took place at 72 sites.

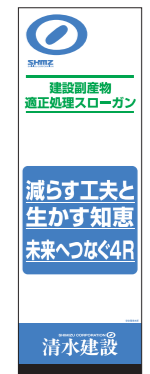
A residential management training course was also held for mid-level employees involved in construction (including employees at Group member companies).

Creating, protecting, and using intellectual property rights and respecting the intellectual property rights of other firms Training for new employees and newly appointed managers to raise awareness of intellectual property issues

Creating and using intellectual property rights and related risk management

In addition to strategic patent applications and acquisition in priority areas, we continued with our efforts launched in fiscal 2012 to promote the effective use of patents held and to increase the contributions made by intellectual property (IP) rights to our business operations. Risks related to intellectual property have grown in recent years. In response, we have sought to achieve thorough risk management based on a

respect for patents owned by other companies as well as the need to protect our own. In fiscal 2013, we offered basic training on intellectual property issues for new employees. We also provide training based on e-learning for newly appointed managers, mainly covering the use of intellectual property and related risks. Finally, we are pursuing measures that target Group member companies, including activities related to licensing, the application of development results, and the provision of guidance on IP risks.



A banner featuring reminders about the appropriate handling of construction byproducts

Disclosing Corporate Information

In addition to promoting community understanding of construction sites through site tours and briefings, we strive to disclose corporate information in a timely and accurate manner.

Disclosing Corporate Information Proactive communication of information through diverse channels

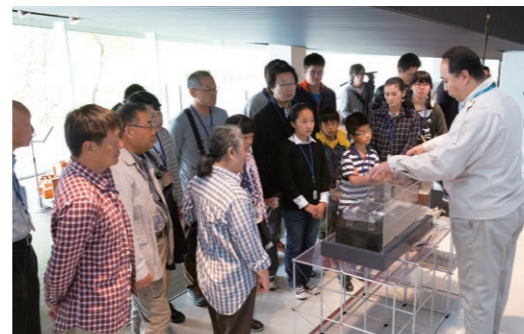
Disclosing corporate information and management information

In the interests of full and fair disclosure, we strive to disclose accurate, impartial corporate and management information to all stakeholders, including shareholders, investors, and clients. We take a proactive approach to disclosing important company information. These measures include annual tours of our facilities for shareholders; briefings on settlements of accounts, site tours, and briefings on management topics for securities analysts (provided five times per year); and site tours and management discussions for members of the media.

We also hold periodic briefings for overseas investors (twice annually).

Disclosure via the Internet

Via our websites, Twitter feeds, and other internet services, we strive to communicate a broad range of information on our business activities to the public in a timely manner. In fiscal 2013, we updated our website roughly 310 times.



The Shimizu Open Academy workshop for individual shareholders

Disclosing information on construction projects Disclosing construction information through websites and other means

At the construction sites where our business activities take shape, we disclose to customers, users, and community members information on the technologies we use, as well as on quality, safety, environmental impact, and other issues. We do this in various ways, including tours, briefings, and other events. All these efforts reflect our dedication to gaining and maintaining the public trust.

In recent years, growing numbers of construction sites have set up their own websites to provide information on construction projects.



The website for the city of Akita's new city hall project

Disclosing information on greenhouse gas emissions Singled out by the CDP as a leader in climate change performance

At the 2013 Japan meeting of the Carbon Disclosure Project (CDP), Shimizu's activities to reduce greenhouse gas emissions and mitigate the risk of climate change earned us recognition and a place on the Climate Performance Leadership Index (CPLI) as a leader in climate change strategy and emissions reductions. The CDP—an international nonprofit organization that discloses to institutional investors and provides to the public key information on corporate environmental information performance—surveyed 500 companies in Japan. Only 12 companies were awarded an overall performance grade of A, indicating that the company assesses, verifies, and manages its greenhouse gas emissions in keeping with CPLI standards. This recognition is further evidence of the high regard in which our environmental management initiatives are held, not to mention the transparency of our environmental information disclosures.

Assessment item	Emissions reductions	Disclosure
Governance	B	93
Strategy	B	
Risks	—	78
Opportunities	—	81
Control of emissions	—	100
Reporting of emissions	—	92
Emissions performance	A ⁻	—
Verification, stakeholders	A ⁻	100
Overall evaluation	A	91

Fair and Transparent Transactions

Our goal is to continue to improve the transparency of our transactions and to pursue our business activities in full compliance with all laws and regulations through the companywide efforts in cooperation with specialist contractors.

Promoting CSR procurement Alongside our business partners

CSR procurement initiatives

In the procurement sphere, we work to build fair trade relations and sound partnerships with our business partners, based on the Basic Procurement Policy and Requests to Business Partners established to meet the demands of our customers and of society. Once again in fiscal 2013, we obtained the agreement of all 1,372 new business partners to adhere to the provisions set forth in these documents.

As part of activities in support of CSR procurement, we visit the sites of business partners with whom we have ongoing transactional relationships. As in past years, in our fiscal 2013 visits to 85 companies to confirm their status and provide relevant feedback to further strengthen CSR procurement efforts, we used checklists covering topics such as legal compliance, environmental issues, and information security.

Basic Procurement Policy
Shimizu Corporation is dedicated to building good partner relationships with its business partners based on mutual respect for the needs and position of each party and in accordance with the Basic Procurement Policy established below.

- 1. Fair, impartial, and honest transactions**
Shimizu will strive to engage with its business partners in good faith and to provide fair and impartial competitive opportunities.
- 2. Compliance with laws, regulations, social norms and expectations, and internal rules**
Shimizu pledges to pursue sound and fair procurement activities in compliance with laws, regulations, social norms and expectations, and its internal rules.
- 3. Awareness of and consideration for the environment**
In accordance with its environmental policies, Shimizu pledges to pursue procurement activities in full awareness of and consideration for the environment.
- 4. Securing quality**
Shimizu pledges to maintain and improve quality alongside its business partners.
- 5. Building good partnerships with business partners**
Shimizu pledges to build good partnerships with its business partners and to work side by side to improve the technological capabilities both of Shimizu and its partners, based on relationships of mutual trust.

Working with specialist contractors Alongside our specialist contractors

Efforts to build relationships of trust with specialist contractors

The relationship between Shimizu and its specialist contractors is much like that between a car and its wheels. We have implemented a variety of measures to strengthen these wheels and build strong partnerships based on common ideals of coexistence and co-prosperity. This year marked the 22nd annual training program for next-generation managers, a program sponsored by Shimizu, in which 29 representatives from specialist contractors participated. The declining number of construction workers in recent years, especially among the younger generation, has emerged as a topic of concern within the construction industry. Addressing issues related to securing and training a workforce for the construction industry, this training program also sought to encourage specialist contractors to provide social insurance programs for their employees.

Other ongoing measures include a system of awards for outstanding forepersons, the nationwide deployment of a system for providing additional allowances for forepersons, and efforts to promote participation in the Retirement Pension Fund Association for Construction Workers (Kentaikyo). The awards for outstanding forepersons recognize outstanding forepersons who make significant contributions in the areas of quality, safety, and the environment. The forepersons singled out are awarded commemorative helmets featuring the word *takumi* ("craftsperson"). This year, *takumi* honors were conferred on 23 individuals currently working at sites across Japan.



The annual training program for next-generation managers

From a *takumi* recipient On winning the award for outstanding forepersons

Kenji Kambara (structural carpenter), Maruso-Sato-Gumi
New Chitose Airport Domestic Terminal Expansion Project, Hokkaido Branch

I think the site I was working on when I won this award was the toughest I've experienced. We had to do all our work subject to numerous airport regulations. So much so that I was pleasantly surprised to win this award. When I arrive at a site for the first time, I always try to keep in mind my role as a professional structural carpenter. As a foreperson, I place the highest priority on communicating well and establishing an environment that makes it as easy as possible for people to do their jobs. I do my best to provide clear, understandable plans and instructions so workers always know what to do.

I never compromise with respect to the on-site responsibilities entrusted to me in the areas of safety, quality, processes, or cost. I also make the utmost efforts to ensure the safety of my colleagues. To date, all the sites where I've worked as a foreperson have remained completely free of accidents and injuries. I enjoy building things because they're something we can leave behind for posterity. Thinking about how each completed building will serve as someone else's starting point fills me with pride. I'm pretty young for a foreperson. My goal is to make the most of my youth to inspire the world with a new and exemplary approach to building craftsmanship, one characteristic of Hokkaido, while continuing to express my gratitude to those around me.



ACTIVITIES

The Creation of Value Surpassing the Expectations of Customers and Society

The following two concerns are shared by all companies today:

- ①The need to ensure readiness for earthquakes, abnormal weather, and other natural disasters (e.g., efforts to ensure safety and reliability)
- ②The need to contribute to the Earth's environment by responding to climate change and the resource depletion resulting from explosive population growth
- In addition, as an entity within the construction industry, Shimizu must respond to the diversifying performance and quality requirements for the facilities and infrastructure it designs and expand its capabilities to meet a broader range of requirements. As such, we also confront the following issue:
- ③The need to deliver structures and services to secure reliable quality (delivering optimal quality)

By creating value that surpasses the expectations of customers and society in these three areas, Shimizu strives to satisfy the needs of clients while contributing to all of society.

Efforts to improve safety and reliability

Delivering optimal quality

Contributing to the Earth's environment

KPI	FY2012 performance	FY2013 performance [target]	Reasons for KPI selection and future topics
Number of peer-reviewed papers submitted	109	116 [94]	While peer-reviewed papers may be widely cited and or make direct contributions to scientific progress, they can also make major contributions to practical work when reflected in ISO and various other standards. Shimizu strives to communicate information by publishing in leading journals on a regular basis. This represents one more approach to contributing to our global society.
Countermeasures against global warming Reductions in CO ₂ emissions vs. FY1990	16% ^{*1}	18% [16%]	We consider this an important area not just for contributing to the earth's environment—in one sense the stakeholder with the most broad-ranging needs—but also as part of growth strategies tailored to society's needs. One task that remains is to boost motivation for helpful activities by communicating information on our initiatives in clear and comprehensible ways both inside and outside the company.
Final disposal rate of construction byproducts Base unit of total construction byproducts	3.2% 15.2 kg/m ²	3.2% [4.3% or less] 15.1 kg/m ² [16.0 kg/m ² or less]	We strive to reduce and recycle construction byproducts based on the 4R activities: refuse, reduce, reuse, recycle. We have chosen these as indicators that can be managed quantitatively. Maintaining industry-leading performance in these areas even in the face of growing volumes of construction work, primarily in the greater Tokyo area, will pose significant challenges
Other evaluation indicators	FY2012 performance	FY2013 performance [target]	
Number of structures subject to comprehensive disaster prevention diagnostics (Cumulative)	110	147	
Number of BCS Awards won	3	2	
Number of Japan Society of Civil Engineers Awards won	7	14 ^{*2}	
Number of BELCA Awards won	2	1	
Global warming countermeasures Reductions in CO ₂ emissions vs. FY1990	343 million t ^{*1}	356 million t [338 million t]	

*1 Methods for totaling data were partially revised this year. Performance figures for past years have been revised accordingly.

*2 Performance figures for two years are shown to ensure consistency between the time of announcement and the time of publication.

Efforts to Improve Safety and Reliability Safeguarding lives and communities against earthquakes and tsunami

Based on lessons learned from the Great East Japan Earthquake, we're working to develop technologies to prevent and mitigate disasters and to build safe, reliable cities and buildings. Our comprehensive disaster-prevention diagnostics system, which is based on prior assessments of building sites and on-site facility inspections, is accumulating an impressive track record. Using this system, we propose proactive measures and solutions to prevent disasters, including improvements in seismic resistance and measures to prevent ground liquefaction and tsunami. Other efforts underway include disposing of disaster-related waste and cleaning up radioactive materials scattered from the damaged nuclear power plant in areas affected by the Great East Japan Earthquake.

Aiming to build safe, reliable buildings and facilities

Yukinobu Kurose
General Manager,
Environment & Technical Solution Division,
Building Headquarters



The Cabinet Office and the Central Disaster Prevention Council have issued new estimated distributions of seismic intensity and damage estimates for a major earthquake in the Nankai Trough and an earthquake with an epicenter directly beneath the greater Tokyo area, both considered potential future threats. Each scenario anticipates serious damage. Following the Great East Japan Earthquake, Shimizu analyzed the damage resulting from that event and quickly began developing technologies to protect against tsunami, ground liquefaction, severe collapse of ceiling, and other earthquake-related events that caused significant damage. In these ways, we hope to deliver improved safety and reliability to our customers.

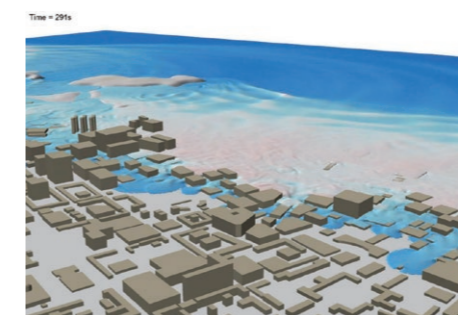
In the area of countermeasures against tsunami, we have developed a simulation system for assessing with high precision the propagation of a tsunami and the load it would place on buildings, as well as ways of making new and existing buildings more tsunami-resistant. We are deploying these technologies as part of the solutions we propose to customers in coastal areas. We have also developed low-cost methods for countering ground liquefaction impacts on smaller structures and are currently applying these techniques to new and existing facilities.

To counter severe collapse of ceiling, we investigated the corresponding mechanisms through vibration platform experiments and mathematical analysis. Subsequently, we developed and put to practical use Shimizu's new earthquake-resistant ceilings and the grid-support method, both of which offer high levels of safety in the event of an earthquake, as well as the SD clipless method, which delivers outstanding safety and economic performance and overturns the conventional concept of earthquake-resistant ceilings.

In addition to earthquakes, abnormal weather events ranging from tornadoes and torrential downpours to blizzards have grown more frequent in recent years, causing considerable damage across Japan. In response to such natural disasters, we are assessing hazards at the sites of customer facilities, using facility diagnostics (Shimizu's comprehensive disaster prevention diagnostics system) to identify issues related to potential damage from natural disasters, and proposing appropriate modifications and reinforcements. We have already provided these diagnostics services for about 150 buildings.

We have also launched systems to support customer restoration efforts following a disaster. Our seismic safety monitoring system, which determines the extent of the damage sustained by a building immediately after an outbreak of an earthquake, makes it possible to quickly assess building safety following an earthquake, which in turn helps customers resume business operations as quickly as possible. In addition, our teams of experts are capable of assessing the extent of damage to a building after a disaster strikes, determining the feasibility of continued building use, and proposing solutions for both emergency and permanent restoration work based on the findings.

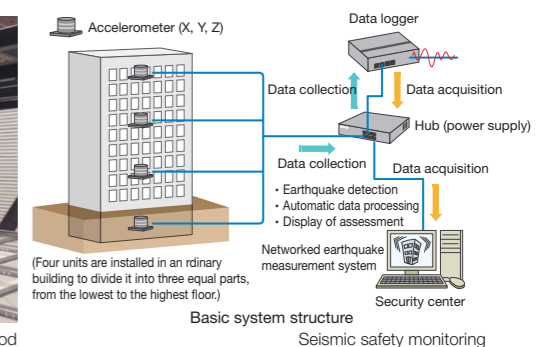
In these ways, we provide a broad range of reliable solutions, including hazard analysis, the proposal of disaster-prevention measures, and support for restoration work following a disaster. We strongly believe that these efforts will improve the safety and reliability of buildings and other facilities and help ensure the physical safety and business continuity of our customers. We hope to contribute to society at large by developing even more innovative technologies to address the future threat of a major earthquake in the Nankai Trough, an earthquake with an epicenter directly beneath the greater Tokyo area, and other potential disasters.



Three-dimensional tsunami simulation



SD clip-less method



Safety and reliability technologies

Our everyday life is surrounded by the risk of various disasters, including earthquakes, tsunamis, fires, typhoons, tornadoes, flooding, and landslide damage. We Shimizu develop and apply various technologies to safeguard human life and buildings against such risks.

Both in a normal period and after an outbreak of an earthquake, we provide broad-ranging support to protect the physical safety of our clients and to help ensure the continuity of their business and swift resumption of business activities, from forecasting building damage via site hazard assessment through various disaster prevention and mitigation measures based on the results. We also support customer restoration efforts in the event of major disasters by assessing and identifying the extent of damage based on a detailed damage investigation.

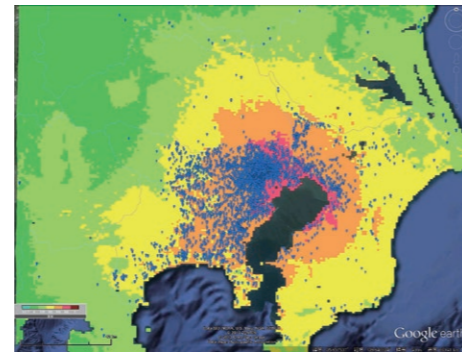
Based on high-precision simulation analysis of other disaster risks, including risks posed by fire, flooding, strong wind, and landslide damage, we provide accurate damage forecasts and propose appropriate countermeasures.

Seismic technologies Ensuring physical safety and supporting business continuity and resumption

Identifying conditions at sites and buildings Hazard assessment and damage forecasting technologies

Pinpoint assessment of customer building sites ~Hazard assessment technologies

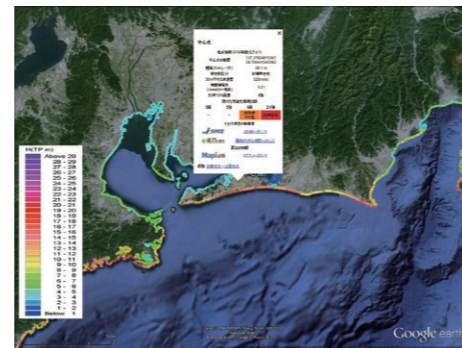
These technologies make it possible to estimate with pinpoint accuracy the damage suffered in locations of client buildings in the event of an earthquake. They assess hazards using data from the Japanese government on seismic intensity, liquefaction risk, and tsunami inundation levels resulting from an earthquake centered directly beneath the greater Tokyo area or a massive Nankai Trough earthquake. Drawing on a database of customer buildings compiled by Shimizu, we propose appropriate disaster prevention and mitigation measures.



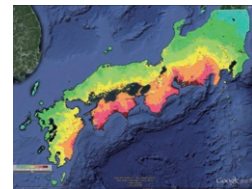
©Google Estimated distribution of seismic intensity for an earthquake with an epicenter directly beneath the greater Tokyo area and buildings constructed by Shimizu (blue plotted points)

Identifying issues related to damage sustained by individual client buildings ~Shimizu's comprehensive disaster-prevention diagnostics system

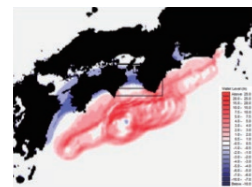
This diagnostics system uses site analysis and site surveys to identify issues related to disaster prevention at customer facilities. The 110 check items based on knowledge gained from the Great East Japan Earthquake deliver more multifaceted and comprehensive diagnostics. It has already been applied to approximately 150 buildings and facilities. This is an optimal system for use as the first step toward disaster prevention- measures for a building or facility.



©Google Prior site assessment (tsunami depth in coastal areas)



©Google Distribution of seismic intensity for a massive Nankai Trough mega earthquake



Simulation of tsunami propagation

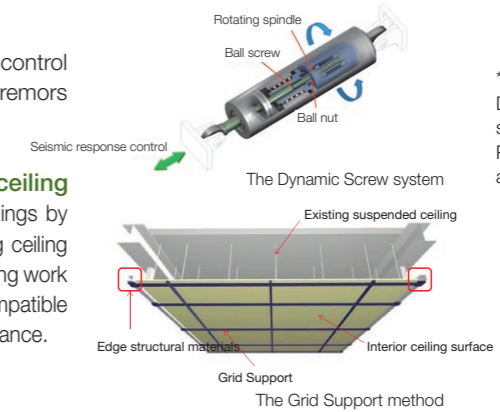
Comprehensive disaster-prevention diagnostics system

110 items checked
Used in **147** buildings and facilities

Taking appropriate countermeasures Preemptive technologies

Protecting people and facilities from ceiling cave-ins

Shimizu's high-performance Dynamic Screw* seismic response control system demonstrates its effectiveness against long-period seismic tremors induced by a massive earthquake.



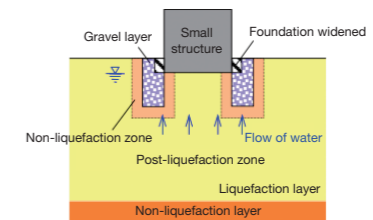
*For more information on the Dynamic Screw technology, see "Special Feature: Protecting urban communities and supply chains" (page 14).

Protecting people and facilities from severe collapse of ceiling

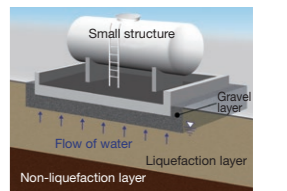
Shimizu has developed a grid support method to reinforce existing ceilings by supporting ceiling materials through a steel grid attached to the existing ceiling framework by means of structural materials. This approach allows retrofitting work to be performed while the space remains in use. The technology is compatible with large ceilings and optimal for use when retrofitting facilities of importance.

Protecting structures from ground liquefaction

Shimizu has developed and implemented a low-cost construction method for minimizing damage from ground liquefaction, a result of seismic activity that can significantly affect a company's business continuity. By installing a layer of highly water-permeable small stones on the bottom surface of the foundation, it mutes groundwater pressure spikes in the event of an earthquake and minimize damage from differential settlement and other factors. This technology is ideal for small structures.



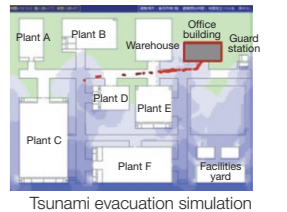
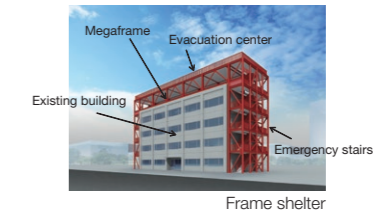
Example of countermeasures against ground liquefaction for an existing structure



Example of countermeasures against ground liquefaction for a new structure

Protecting people and buildings from tsunami ~Integrated anti-tsunami system

This system employs simulation analysis to assess tsunami propagation, their inland extent, and the force to which they can subject buildings, thus determining whether an existing building can withstand the force of the tsunami (tsunami diagnostics). If necessary, the building can then be reinforced and transformed into a tsunami shelter incorporating a tsunami evacuation center (frame shelter). The system also provides support for choosing optimal evacuation routes through evacuation simulation analysis.



Ascertaining post-disaster status technologies for reacting to a disaster; restoration

Immediately ascertaining the extent of damage ~Seismic safety monitoring

This system immediately identifies the extent of earthquake damage sustained by the building and clarifies whether to evacuate, even if no experts are present. The system also makes it easy to effectively prioritize relief activities and building inspections, helping to safeguard physical safety, preventing secondary damage, and allowing businesses to get back on their feet as fast as possible.



Example of a seismic monitoring system screen

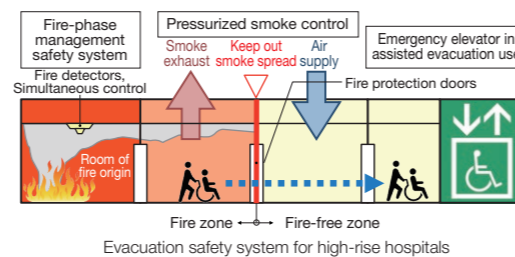
Inspection by a team of experts ~Restoration support

After a major earthquake, a team of architectural specialists inspects the extent of damage sustained by the building and determines whether the building can remain in use. Where risk of secondary damage exists, the team makes arrangements for emergency countermeasures. Detailed analysis of damaged buildings (including surveys of damage level categories) by our experts helps to move ahead with design and construction work toward permanent restoration.

Technologies for safeguarding against damage from fire, wind, and landslide disasters Supporting readiness for a wide range of disaster risks

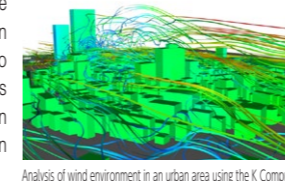
Evacuation due to fire

Shimizu has developed an evacuation safety system for high-rise hospitals that enables safe and reliable evacuations for disabled patients due to fire. This system can detect quickly when fire occurs by the Fire-phase information management system, and simultaneously close fire protection doors and activate pressurized fire control system. The system has developed by joint research of Juntendo University, Waseda University and Shimizu Corporation. And it was applied in new high-rise Juntendo Hospital in Tokyo, which is allowed for the first time in Japan to use emergency elevators for disabled patients' vertical evacuation.



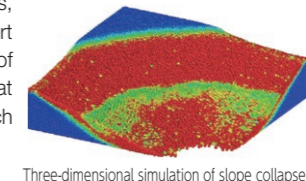
Damage from strong winds

Shimizu is developing the analysis methods for a very large-scale numerical flow simulation to run on the K Computer (a highest caliber of supercomputers in the world). These analytical methods will lead to the most effective methods that protect structures and their claddings from typhoons, tornadoes, and other strong winds. The figure below shows a detailed simulation run on the K Computer that analyzes the effects of strong wind in an urban area. Analysis results are used to visualize wind flows, assess effective wind pressures on structures, and aid with the design of wind-resistant structures.



Landslide damage

Shimizu has developed a 3D simulation method for modeling earth structures such as embankments and residential sites, making it possible to provide detailed forecasts of aspects such as slope collapse patterns and the distance the ground travels. In addition to predicting mudflows and other destructive ground movements, these simulations support detailed assessments of construction methods that can help prevent such damage.



Supporting restoration in areas affected by the Great East Japan Earthquake

Shimizu is currently participating in projects whose goal is the rehabilitation and reconstruction of earthquake-affected areas at the earliest possible date. These efforts include the decontamination of radioactive materials released during the nuclear power plant accident following the earthquake, the disposal of disaster waste (rubble) created by tsunami damage, the development of the Sanriku coastal road (a key route for restoration purposes), the relocation of affected communities to higher ground, and community redevelopment.

Decontamination projects and technologies Earthquake restoration support

Decontamination work to date
• Residence
5,905 homes

• Roads
295 km

• Woodland areas
in residential zones
417 ha

• Agricultural land
494 ha

*1 High-efficiency decontamination system
System designed to increase the efficiency of decontamination work by adjusting work rates based on radiation measurements and post-decontamination assessments

*2 Power Grind Screen (system for segregating combustible materials)
Improved version of general-purpose segregation systems designed to segregate soil attached to plant roots

Technologies to improve safety and reliability at decontamination and intermediate storage facilities

Following verification of decontamination technologies and preliminary decontamination work, Shimizu participated in three full-scale decontamination projects. Decontamination work involved the direct handling of residential property. Intermediate storage facilities were used to store 27 million m³ of environmentally hazardous materials. This work was performed with unremitting consideration for the safety and peace of mind of local residents. Shimizu continues to develop technologies to bolster safety and peace of mind at decontamination and intermediate storage facilities. These new technologies must be verified and implemented as quickly as possible to achieve the timely recovery and restoration of affected areas. In partnership with specialized manufacturers, we are developing highly reliable technologies readily adaptable to meet specific requirements in the field.



Aerial photo of the Ministry of the Environment's full-scale decontamination project in Okuma



Work on the Ministry of the Environment's full-scale decontamination project in Okuma



A pressure-hose truck equipped with the high-efficiency decontamination system^{*1}



Power Grind Screen^{*2}

Miyagi Prefecture's disaster waste disposal project (Minamisanriku disposal ward) Project awarded the Minister of Land, Infrastructure and Transport Prize for promoting waste reduction, reuse, and recycling

This project was awarded the Minister of Land, Infrastructure and Transport Prize, the leading award in the field of construction. The award recognizes our successful treatment of disaster-related waste from affected areas within the prefecture, as well as improvements in disaster debris recycling rates.

The Great East Japan Earthquake generated 659,000 tons of disaster-related waste in the town of Minamisanriku. This project involved the successful design, construction/implementation, management, and operation of various intermediate disposal tasks, including waste segregation, breakdown, and incineration, as well as recycling and final disposal. Some of the project achievements are listed below:

- ① Precise segregation of waste through multistage segregation, thereby reducing final disposal volumes
- ② Incineration to reduce waste volumes and use of incineration-generated heat
- ③ Use of electricity from a biomass power generation system to power on-site treatment facilities
- ④ Use of a granulation system to improve recycling rates
- ⑤ Generation of materials for use in restoration work (embankment materials) through soil cleanup
- ⑥ Implementation of a system to treat and recycle contaminated water and safeguard river and marine environments
- ⑦ Achievement of a 99.7% rate for waste treated within the prefecture and a 97.8% recycling rate (including thermal recycling) through the use of high-efficiency fuel-saving equipment and natural energy sources

Percentage treated within the prefecture
99.7 %

Recycling rate
97.8 %



From left: Tohoku Branch General Manager Ota, Award Committee Chair Kimura, 3R Suishinkyogikai Chair Hosoda

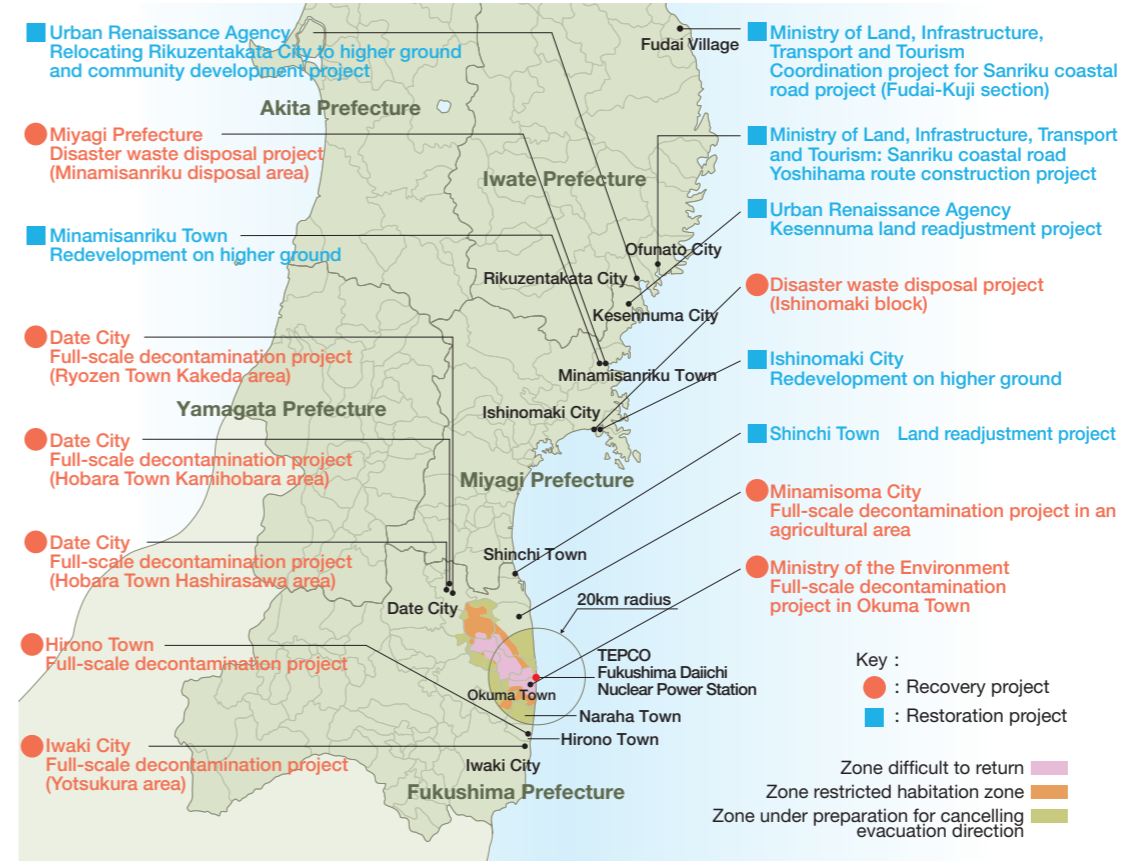
Projects involving road improvements, land readjustment, and relocation to higher ground Achieving rapid recovery

Restoration development and infrastructure improvement projects

Beyond debris decontamination and treatment and other disaster-restoration work, Shimizu is taking part in various full-scale recovery projects. These include improvements to the transportation infrastructure, including work on the Fudai-Kuji section of the Sanriku coastal road project; work on the Yoshihama route tunnel and bridge; and land readjustment work to create the foundations for community redevelopment in the city of Kesennuma and the town of Shinchi. We are also pursuing several development projects in Rikuzentakata, Kesennuma, and Ishinomaki that involve relocation to higher ground.



Ministry of Land, Infrastructure, Transport and Tourism Sanriku coastal road: Yoshihama route construction project



*For more information on the relocation of Rikuzentakata City to higher ground and the related community development project, see "Special Feature: Strength and Flexibility" (pages 8 to 11).

Fukushima Daiichi Nuclear Power Plant Integrating companywide capabilities to overcome challenging construction conditions

Starting with the removal of disaster-related waste from nearby plant buildings immediately after the accident, we proceeded with work related to the accident at the Fukushima Daiichi Nuclear Power Plant in cooperation with other construction companies, electrical manufacturers, and subcontractors. Ongoing efforts include the construction of a cover for the Unit 1 Reactor building and the construction of facilities to treat contaminated water.

We drew on the full range of capabilities available across the company to overcome these challenging construction conditions. We also developed and implemented automated and labor-saving construction methods to minimize radiation exposure risks.



Constructing a cover for the Unit 1 Reactor building



Building a sludge storage facility



Building construction related to polynuclear species removal system

Delivering Optimal Quality

The facilities and infrastructure we deliver to our customers pose a nearly infinite combination of requirements with respect to site conditions, functions, and performance. Each structure is built to meet a unique set of specifications. In our inspections, diagnostics, maintenance, and other service businesses, no two projects are alike. We draw on our full range of capabilities to accurately identify the specific conditions and requirements for each project and to grasp each customer's needs. To meet these needs, we draw on our unique technological capabilities. This is the basis for Shimizu's concept of optimal quality. In the text that follows, personnel drawn from Shimizu's sales, construction, after-sales service, and other sections describe from their own perspectives the various quality-assurance initiatives for which they are responsible. This year's report features introductions to quality concepts and strategies from responsible individuals within the Design Division and the Civil Engineering Technology Division, together with accounts of efforts to deliver optimal results in architectural construction (pages 34–35) and civil engineering (pages 36–37).

Establishment of trust with customer is essential to improve quality .

Shigeki Kuriyama
Executive Officer/General Manager,
Design Division,
Building Headquarters



Quality of architecture can be defined by fulfillment of client's requirement and satisfaction over its life cycle.

Naturally, quality is judged by the actual product. Our fundamental task is to fulfill the customer's needs; however, delivering a building beyond their expectation with great quality would have positive effect on brand establishment.

In addition, technology, permit process, and application procedure are becoming more complex in recent years. The quality of design process including scheduling for building completion, cost management, responding to change orders, and management of human resource is also an important factor in completing a project.

Designing itself is the process of forming a clear consensus with the customer.

By listening to customer needs, capability of proposing solutions backed up with effective technologies, scheduling, and cost planning are the advantages of Design-Build.

Under the circumstance of rising material, equipment, and labor costs and ongoing shortage of workers, rapid decision-making is essential. When finishing the design development stage, we work on forming a fundamental agreement with the customer on basic specifications and structural system to execute early purchasing and arrangement.

Improving productivity through the standardization, modularization, and industrialization is also an important factor. Building information models (BIM) and 3D printers are useful tools for sharing and consolidating information.

We are planning to expand its usage to help early decision-making and to improve its productivity.

Furthermore, service of after completion may be the most important aspect of the quality for the customer. We believe service after completion based on customer's satisfaction (CS) surveys, and their feedback improve our building quality further and better than focusing just on designing and building itself.

In order to accomplish our task, not only building a good relationship with customer, but also extensive communication with the person in charge is necessary to find true solutions.

Over the life cycle of the building from business planning, designing, construction to maintenance, we are aiming to improve quality and to establish our brand by employing our one-stop solution driven from Design-Build strategy.

Making steady efforts to ensure quality

Hiroyasu Nakagawa
Deputy Director,
Civil Engineering Technology Division,
Civil Engineering Headquarters



The first preconstruction review meeting was held on October 9, 2012 at the Rokubancho site under the supervision of the Nagoya Branch. There were 24 engineers, including site staff, staff with experience with similar construction work across Japan, and staff from the Civil Engineering Technology Division. The discussion was profound and ranged over various topics, including potential planning problems and remaining safety issues as we prepared to launch the bridge girders. This was the key phase of a difficult project which is to construct an expressway bridge directly above another arch bridge used for the Tokaido Shinkansen line which runs over the National Highway 1. Shimizu won the tender and, in February 2012, the project was designated as the most important construction work based on our construction type designation system (one of the civil engineering section's ten quality assurance measures). We have held three preconstruction meetings to review and verify the plans by the time when we obtained customer's approval. Finally, on January 9, 2013, the erection of the bridge girders was commenced.

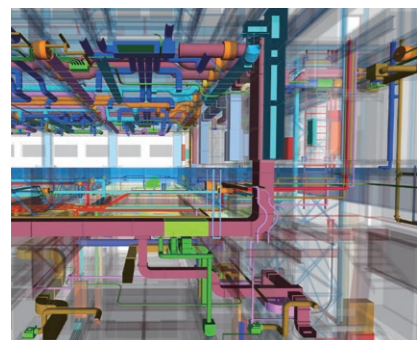
On that day, 27 of Shimizu staff across Japan gathered up to the site to provide on-site support in giving directions at the site, supervising, and carrying out measurements. I patrolled the site myself and checked various points. Though it was a cold winter night, around 1,000 people were observing the work. A big wave of applause occurred when the girder reached, precisely, to the intended point on the bridge pier on the other side.

The civil engineering section is promoting quality-assurance activities with the

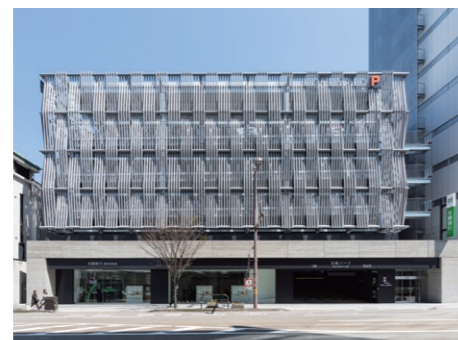
ten quality-assurance measures listed below, that were established based on the way of thinking that our social mission includes quality assurance and safe construction. The Rokubancho site is an excellent example of projects in which challenging construction tasks were completed without an accident or an incident, thanks to the careful planning of these measures.

There are many kinds of works in civil engineering. Concreting is one of the most important work on which Shimizu is making effort, especially. In civil engineering projects, most concrete structures are exposed. This means we need to provide well-finished surface, as well as achieving all applicable strength requirements. A certain slogan has guided many of our projects over the years: "A piece of concrete will tell the quality of whole civil engineering project." We've set a specific quality target of reducing occurrence rate of concrete defects (e.g., a crack of 0.5 mm or wider) to less than one per 20,000 cubic meters. To achieve this goal, we hold review meetings before work begins, assign experts to patrol sites, and hold training sessions at each branch. We also use Defects Q&A, an e-learning program, to review the past case studies. We are continually striving to improve overall quality levels by taking steps to ensure each staff members to understand the importance of quality assurance and be well-informed on defect prevention methods.

Providing thorough instruction with the ten quality-assurance measures and repeatedly reminding staff, Shimizu will develop each staff and the organization and will build up a solid reputation for quality and technology.



Visualization of mechanical information by BIM



Exterior wall of parking structure for Hokkoku Shimbu's Hokkoku Park Building completed after design studies using 3D printer



Gardenier Kinuta West, eco-friendly, disaster-resistant condominium project by Shimizu design and build

Ten Quality-Assurance Measures

- ①Enhancing review meetings before the start of construction and for important construction processes
- ②Preparing quality plans
- ③Creating a new post of quality managers
- ④Enhancing technology audits
- ⑤Revising and strengthening the system for designated construction types
- ⑥Pursuing technological development
- ⑦Training engineers to ensure high familiarity with design and construction
- ⑧Conducting in-house training on concrete technology
- ⑨Encouraging staff to obtain certifications related to concrete technology
- ⑩Holding quality conferences



The Rokubancho construction study meeting



A site patrol during concrete work

Tackling architecture

To satisfy our customers for their needs, we seek to improve quality from three perspectives: quality of output, quality of processes, and quality of after completion services.

We would like to introduce our Design-Build projects where Design-Build strategy is applied from forming fundamental agreement to services after completion.

New Karimoku Head Office, a highly optimal building by coaction with customer

*1 Product example



Karimoku 60 K chair

Space designing fit for product development of wood furniture

Karimoku Furniture Inc. manufactures and merchandises high-quality furniture*1 that integrates natural wood and the latest human engineering. Heading the lessons of the Great East Japan Earthquake, the company has planned to construct its new head office with high earthquake resistance and comfort for people.

Through dialogue with Karimoku Furniture, utilization of natural wood became the scheme for interior design space. Natural wood fits their working space for product development of wooden furniture.



Karimoku employees with Shimizu staff in front of the new head office



Office equipped with original furniture produced by the client



Meeting hall incorporating elements of the outdoors (at top: wooden louvers)

Approach toward "monodukuri" (creation) based on the joint efforts of furniture and construction experts

The joint efforts between the client and Shimizu for this new head office began when Karimoku expressed their wishes to build the flooring, wooden windows + doors, finishing of staircase, and other wood items themselves, because they have been studying office space summarizing the skills and knowledge Karimoku holds.

Karimoku produced numerous highly finished prototypes of different materials, colors, and varnishes with precision. After many conversations, highly qualified detail specifications of building materials were developed.

On the other hand, wooden louvers produced by Shimizu were finalized by making full scale mock-up with advice from the client regarding wood property and its look. As a result, we were able to visually confirm and agree on the items which cannot be seen in a small model or 3D perspective.

Even though, applying construction material produced by the client required delicate care, optimal building quality was achieved by design-build process inspired by searching new degree of the construction material and furniture prototype*2.

*2 Prototype furniture produced by the client



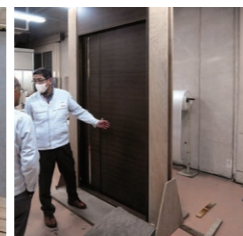
Office desk



Office meeting table



Prototype of flooring



Prototype of wooden door



Prototype of step



Prototype of wooden louver

Working together to build a comfortable new head office

Hideki Kato, President, Karimoku Furniture Inc.

As Karimoku, a company who manufactures and merchandises wooden furniture, this project was realized with our desire to construct the entire office space with our wood products. Working along with Shimizu, the experience has broaden our knowledge throughout the Design-Build process.

We are very pleased with our new head office because the office is surrounded by wood suited for manufacture who handles wood.

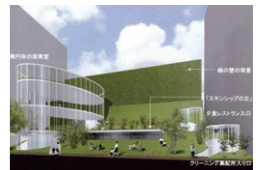


Karimoku and Shimizu staff

Chuo Municipal Kyobashi Kodomo-en, children's center rooted with the local community

Shimizu initiative to solve waiting children for kindergarten and day care center

Chuo Municipal Kyobashi Kodomo-en has been built as public facility with private operation. For the purpose of solving the waiting children problem due to the rising population in Chuo Municipal, the building serves as certified Kodomo-en, where seamless service in kindergarten and daycare center is offered, and as parenthood support center. The project has started as part of public contribution for Shimizu headquarter office construction appointed for special revival ward of Tokyo.



Green hill in the middle of the city (to in-house competition)

Daycare center surrounded by greenery Integrating knowledge and understanding at every step of construction

For its program, a design competition was held within our firm concentrating all of our knowledge. The selected program proposes that the space cultivates rich sensitivity by encouraging children to spend joyful

time. In design stage, the concept was developed further and completed by creating a bright and open center with greenery in a form of a floating box.

Building a child-friendly facility Elaborate quality by design-build integration

Chuo Municipal and Shimizu Design-Build team held hearings to existing daycare center throughout design and construction stage to elaborate the program from operational perspective and children's point of view. The opinions for the operations, kitchen usage, children's behavior and safety measures were extracted from the hearings to help design children's spot, key and switch locations, and also preferences and effects of color choices.

Since children sweats during nap and playing time,

they are very sensitive to air conditioning changes; therefore, we developed a donut shaped diffuser integrated with lighting.

The diffuser uses film on its face and reduces air speed to 1/3 of a typical diffuser. The effect of the diffuser was confirmed by airflow simulation and a mock-up (full scale model). By this development, a comfortable space was achieved.

Toward further quality improvements Linking to quality for after-completion services

Even after the school is opened, diligent observation has been undertaken. For example, although brightness and openness are the characteristics of the space, we found out that more storage and display

space are required based on their operation. We are planning to reflect such observation and opinions from the operation for similar future projects.



Diffuser with child-friendly membrane vents



Mockup of a membrane vent



Children running around the playroom and schoolyard



Lunchtime scenery



An alcove makes a great place to play.



Colorful, touchable sign

Children are encouraged to touch the sign at the entrance, which is made from felt dyed with natural materials.

This children's center has attracted considerable attention from residents in the Municipal.

Kazuaki Hoshino (L) and **Hidenori Takeuchi** (R), Child-Rearing Support Sec. Social Welfare and Public Health Dept. Chuo City Government

This is the first children's center opened by the Municipal in a business district and the first to be licensed to provide extended childcare until 10:00 p.m. The center's public opening attracted more visitors than previous facilities, indicating high interest among residents in the Municipal. We felt confident entrusting Shimizu with the construction of this facility, in part due to their close attention to every detail. This facility embodies ideas from many different parties. We hope it will long serve as a place where children can grow in a delightful environment.



Activities in civil engineering

Quality in construction has two sides: the quality of products and the quality of processes. The latter side includes efficiency, safety, and consideration for the environment. The following section reports on quality of both sides, using the construction of the Rokubancho Overpass as an example of the latter and disaster-restoration work on the Sakanoue Tunnel as an example of the former. It also introduces technological development activities designed to contribute to the high-quality infrastructure of tomorrow

Efforts to secure the quality of construction process while erecting a bridge above a high-speed rail line and a national highway

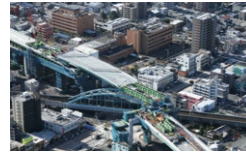
***1 Launching method**
A method of erecting a steel bridge. Bridge girders are assembled on a completed portion of the bridge or temporary piers. Extension equipment (called a "launching girder") is attached to it. Then, the new girders are launched to the extension direction with self-propelled carriages. This method makes it possible to erect a bridge without interrupting traffic below.



① Before launching



② After first launch (the tip of the launching girder has reached its destination)



③ After six launches (launching girders little by little)



④ After 11 launches (Completion of launching)



⑤ Rotating the bridge girders and connecting them to girders on each side

The total distance of launching:
100m



Opening ceremony for Tokai Route of Expressway No. 4

■ Rokubancho Overpass project

Route 4 Tokai line, the final segment of the Nagoya Expressway, was fully opened to traffic on November 23, 2013. The completion of project is expected to smoothen traffic flow in Nagoya by connecting a missing link and improve disaster resistance.

The span of Rokubancho Overpass is approximately 100 meters at the crossing point where it over-passes the Tokaido Shinkansen high-speed rail line and National Highway 1. This project's major challenge is the erection of an elevated expressway bridge in the space above an elevated high-speed rail line, which itself was built over the intersection between National Highway 1 and the city's Egawa Route.

The project adopted the launching method*1 to minimize impact on existing traffic. Work was restricted to a few hours late at night when the high-speed rail line pauses its service. At the same time, the launching process itself needed to be completed within the specified construction period. The most pressing issues related to the quality of the construction process were to meet this schedule and to ensure the safety of the roads and rail lines below.

Under such conditions, the construction plan was refined and made more detailed as the first step. Three precon-



A preconstruction review meeting

struction review meetings were held, in addition to comprehensive studies by each site engineers. Experienced engineers on similar construction projects were brought together to the site to make sure the on-site plans more reliable. A dry run was carried out to help every staff to confirm their each assignment, the operation procedures of each piece of equipment, the instruction and reporting systems and the time schedule under the same conditions with the actual day. In addition to these careful preparations, we confirmed more safe, more swift, and more high-precise launching operations by adopting a comprehensive launching management system which enables simultaneously measuring of the total distance of bridge girders transported and the load on carriages.

Launching the bridge girders 35 meters above ground and congested core infrastructure was a ceaseless source of tense atmosphere. Nevertheless, thanks to all the personnel who worked side by side to improve the quality of the construction process, we succeeded in completing the project without a problem.



The completed Rokubancho Overpass



Launching bridge girder

Efforts to secure improved quality and durability through infrastructure renovations

■ Disaster restoration work on the Sakanoue Tunnel

In July 2012, the Sakanoue Tunnel*2 on JR Kyushu's Hoho Main Line suffered serious damage during torrential rainfall in northern Kyushu. Rain washed rails, ties, and ballast out of the tunnel. Part of the tunnel collapsed. Shimizu was selected to undertake the tunnel restoration work.

As for the collapsed portion of the tunnel (approximately 50 meters in total), collapsed earth and materials of the old tunnel were removed, and a new tunnel has been constructed. Precast Modularch*3 members were used to build a high-quality tunnel while meeting the need for rapid restoration. To ensure the precise installation of the heavy Modularch members, the weak base earth at the



Immediately after the disaster

site was removed to expose the strong bedrock base, which was further strengthened by concrete poured on top to create a solid foundation. Following the installation of the Modularch members, the outer surfaces of the joints between the blocks were waterproofed to ensure the structure would be highly durable over the long term. In the tunnel portions that had not collapsed, to ensure a stable, long-lived tunnel, our Aqua Grout Method*4 was applied to fill in cavities that had developed behind the tunnel walls.

We are confident that the repaired tunnel will not only withstand similar torrential rains in the future, but also will provide long years of reliable service.



The tunnel restored with Modularch members

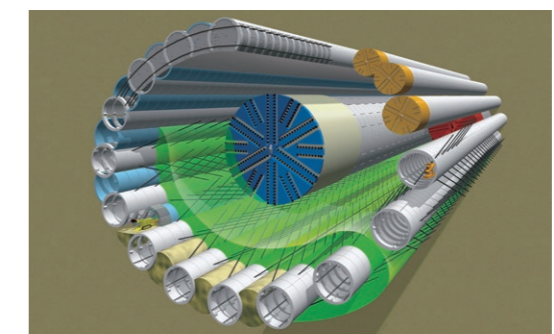
We are grateful for Shimizu's advanced technologies and strong sense of responsibility.

Teruo Oka, Manager, Construction Department, Construction Division, Kyushu Railway Company (formerly Manager, Hoho Main Line Restoration Project)

This project involved the restoration of a tunnel after an unprecedented disaster which led to its partial collapse. All work for this project was completed in time, despite challenging working conditions, such as temperatures of -16°C . In no small part, this was due to Shimizu's skill in quickly gathering engineers and specialized machinery from across Japan. We're grateful for the technological capabilities and strong sense of responsibility demonstrated by all those involved in this project.

Challenge for new technologies for higher-quality infrastructure

Construction of roads and rails deep underground is currently getting realized. At the same time, enlarging plan of traffic network centered capital area and renovations of old infrastructures are receiving attention nowadays, given the Tokyo Olympics and Paralympics. The SR-JP method*5 is a new technology intended to ensure both the quality of the objects constructed and the quality of the construction processes. The method makes it possible to build large tunnels for intersections between main expressway routes and ramps, even at deep underground, without excavating from the ground surface.



A conceptual illustration of the SR-JP method

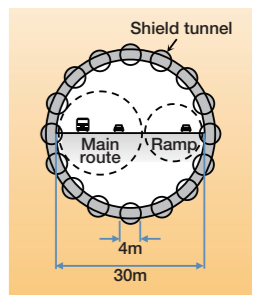


*2 Sakanoue Tunnel
A 2,283-meter tunnel between Miyaji Station and Namino Station on the Hoho Main Line; first completed in 1928

*3 Modularch
Concrete block unit used to build arch-shaped tunnels. This project used 38 blocks, each measuring 1.75 meters deep and weighing approximately 55 tons.

*4 Aqua Grout Method
Method for filling in cavities behind the walls of existing tunnels using one pack type liquid polymer cement filling material

*5 SR-JP Method
Method for building a single massive tunnel by connecting multiple small-diameter shield tunnels to form a large cylinder that serves as the outer shell of the ultimate tunnel. Current plans call for a completed tunnel diameter of roughly 30 meters, based on an outer shell composed of small tunnels of about 4 meters in diameter. This method allows for the flexible scaling of cross-sectional shapes and sizes.



Contributing to the Environment

We have identified “socio-dynamism” as a key aspect of the company’s Management Philosophy and accordingly positioned environmental awareness the core of all business activities under Smart Vision 2010, our long-term vision. We also strive to realize value that exceeds both social and customer expectations, based on the pursuit of sustainability in the building structures we deliver.

ecoBCP initiatives ~Smart Community Project~

Based on the lessons of the Great East Japan Earthquake, Shimizu is promoting facilities and urban development from the perspectives of ecoBCP and ecoLCP. Energy conservation measures and the use and sharing of renewable energy (the “eco” in ecoBCP and ecoLCP) during normal times are combined with business continuity plan (BCP) and efforts to secure energy sources and maintain the life continuity plan (LCP) in times of emergency. By doing so, we strive to build comfortable, disaster-resilient communities in which people can live with a deep connection to nature.

Peak power consumption
25% decrease

CO₂ emissions
30% decrease

BCP/LCP measures Supplying power in times of emergency

*1 The first private community Excluding industrial parks and large-scale site redevelopment projects

*2 Cutting peak consumption This refers to cutting use of power during hours when demand for electricity is greatest (e.g., on summer afternoons). This provides economic benefits and meets social needs by minimizing electricity expenditures, lowering contract prices, and making the most of our society’s limited power supply capacity.

*3 Specified supply Established under the Electricity Business Act, this system makes it possible to supply electric power through private power lines in cases involving multiple closely affiliated users.

*4 CEMS CEMS stands for Community Energy Management System, a system used to monitor the use of electricity in communities and to control related equipment.

*5 Desiccant air conditioning Desiccant air conditioning is air conditioning that uses desiccants, regenerated through heat, to control humidity efficiently, thereby delivering outstanding comfort and energy conservation.

Shibaura 2-chome Smart Community “The first private community*¹ energy system” within city blocks

This project involves the construction of a small office building, a mid-sized office building, and 150 apartment units on three adjacent sites in Shibaura 2-chome, Minato Ward, Tokyo. It features a privately operated infrastructure installed beneath public streets that conserves energy during normal times and supplies electricity in times of

■(eco) Cutting peak consumption*² by managing the use of electricity between blocks

Electric power for three buildings, each with different peak consumption hours, is received in bulk at Building A, where it is combined via cogeneration (the combined supply of heat and electricity) and supplied to the other two buildings based on a specified supply*³ configuration. Combined with energy conservation controls implemented through a CEMS*⁴ system on the demand side, this approach cuts peak power consumption by 25%.

■(eco) High-efficiency energy use based on heat sharing within blocks

Improving energy efficiency requires cogeneration technologies that make efficient use of waste heat produced during power generation. This heat is used as the heat source for the regenerating desiccant in office desiccant air conditioning*⁵ in summer, heating in winter and water heating in apartment complex at night.

■(eco) CEMS system to minimize CO₂ emissions

The CEMS system achieves efficient control of electricity and heat demand and supply in the three buildings, selecting the optimal energy supply option based on load forecasts for each building. The energy conservation navigation system and air conditioning and lighting controls help cut CO₂ emissions by 30%.

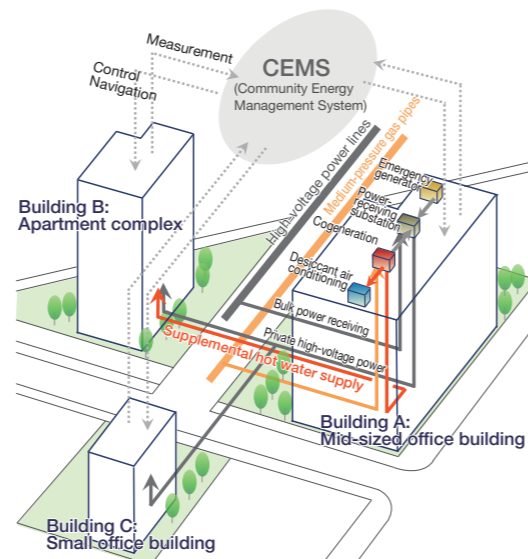
■(BCP) Energy independence during emergencies

The combined use of a cogeneration system based on earthquake-resistant medium-pressure gas and an emergency power generator delivers highly reliable power generation in times of emergency, with capacity equivalent to roughly one-half the power used by the three buildings in normal times. The system supplies power for elevators, water pumps, and other facilities and contributes to the site’s energy independence, allowing people to continue working and going about daily life even during emergencies.

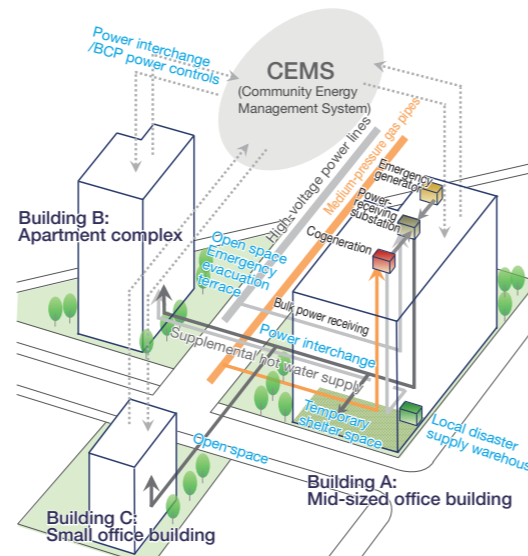
■(BCP) Contributing to city area

This complex will also contribute to community disaster resistance during emergencies through means such as the installation of an emergency supply warehouse for Minato Ward, an emergency evacuation terrace area, and a temporary shelter for displaced persons.

emergency, allowing all three sites to pool electricity and share heat. As the first real-world example of the interchange and control of electricity and thermal energy between existing city blocks, this project helps realize low-carbon community development (eco) as well as improved disaster resiliency (BCP) in an urban community.



Concept of shared use of electricity and heat in a block



Concept of BCP and community service features

Kyobashi Smart Community Resilient and sustainable urban development plan friendly to both people and the environment

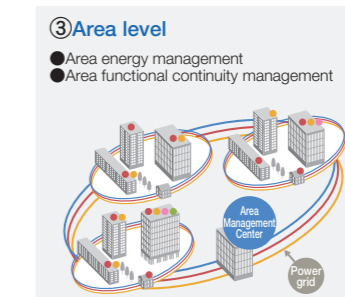
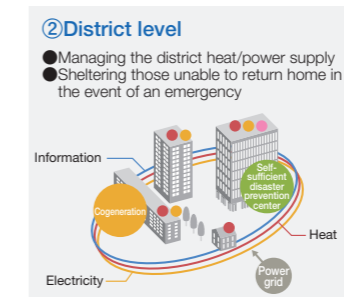
A key aspect of making a city more competitive involves revitalizing existing urban districts to create resilient and sustainable communities. Elements of such efforts include ① minimizing the carbon footprint and strengthening disaster prevention center functions at the facility level; ② managing district heat/power supply and distributing disaster-prevention functions at the district level; and ③ deploying energy and business/life continuity management at the area level. Starting with Shimizu’s head office building, smart community development is already underway in the Kyobashi area.

① Facility level: Shimizu’s head office building

This building ensures comfort and conserves energy in normal times through a broad range of energy conservation technologies, including a radiant air conditioning system and building integrated photovoltaic systems. Emergency power generation equipment, storage cells, and other systems secure energy independence in the event of an emergency.

② District level: District-wide high-efficiency energy utilization

Measures to utilize the waste heat generated by the area heating/cooling system for Shimizu’s head office air conditioning system have resulted in the highest



Kesennuma Smart Community Applying smart energy management to support earthquake-damaged seafood processing facilities

In the Akaiwaminato district of Kesennuma City, 11 marine product processing facility buildings owned by nine companies were damaged by the Great East Japan Earthquake and the resulting tsunami. Fortunately, they were able to resume operations after adopting a smart energy management system. As part of a pioneering smart community project, the Kesennuma project is sponsored by the Ministry of Economy, Trade and Industry. Based on requests by the power producer and supplier (PPS),*⁸ joint efforts across the 11 facilities will implement peak power shifting (demand response), peak power

overall energy efficiency rating (1.39) for an district heating/cooling system achieved to date in Japan.

③ Area level: Making the Kyobashi area more competitive through ecoBCP management of the entire area

With Shimizu’s head office building playing a central role, the Kyobashi Smart Community Council has been established to reduce the community’s carbon footprint, improve resiliency, and make the entire area more competitive. The council promotes energy management and business continuity management for the Kyobashi area. The council is Japan’s first to earn ISO 22301 certification*⁶ (pertaining to business continuity management systems) and ISO 50001 certification*⁷ (pertaining to environmental management systems) at the area level. Assuming responsibility for the following activities to assist area residents and others unable to return home in the event of an emergency, the council ① supplies emergency water to area residents; ② supplies heat to temporary shelter areas; and ③ provides information on emergency supplies and other needs to area residents and those unable to return home in the event of an emergency.

The council has also set the goal of the curtailment of energy consumption per floor area in facilities owned and used by its members by 30% by 2020.

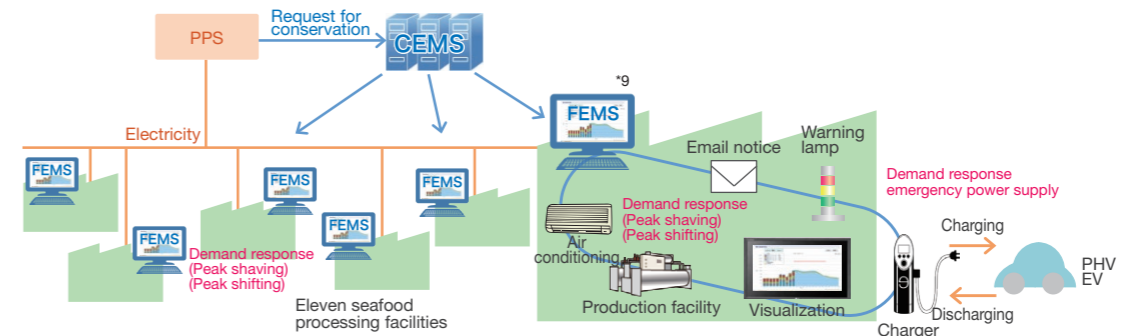
*6 ISO 22301 An international standard that specifies organizational requirements for planning, establishing, and implementing measures against disasters, failures, and other incidents, including earthquakes, fires, problems with IT systems, business partner insolvency, and pandemics

*7 ISO 50001 An international standard intended to contribute to energy management and continual improvements in energy performance at various organizations, regardless of industry or size

Coordination of energy consumption involving **11 buildings and 9 companies** active in the marine product processing industry

*8 Power producer and suppliers (PPS) A new category of power supplier that delivers electric power via power transmission networks operated by general electric utility companies such as the Tokyo Electric Power Co. and the Kansai Electric Power Co. (i.e., Japan’s ten major power companies). Operations of this type were introduced with the 1999 amendment of the Electricity Business Act.

*9 FEMS An abbreviation for Factory Energy Management System, a system used to monitor and display the use of electricity in factories and control related equipment



Facility level
CO₂ emissions
61% reductions
(Shimizu head office: April–December 2013)

District level
District heating/cooling system energy efficiency
Highest in Japan: 1.39
(Tokyo Toshi Service Company performance figures, August 2012–July 2013)

Area level
First area certification in Japan under
ISO22301 ISO50001
(Kyobashi Smart Community Council)

*6 ISO 22301 An international standard that specifies organizational requirements for planning, establishing, and implementing measures against disasters, failures, and other incidents, including earthquakes, fires, problems with IT systems, business partner insolvency, and pandemics

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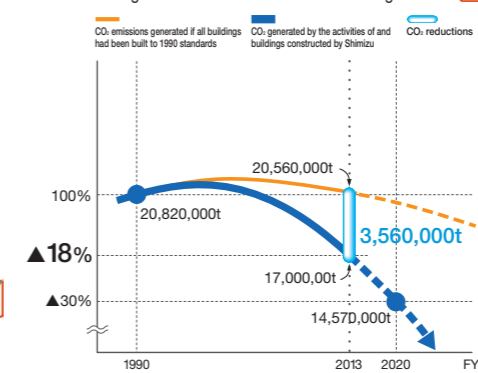
Preventing Global Warming —Ecological Mission

As part of its efforts to prevent global warming and promote our Ecological Mission, Shimizu is striving to achieve 30% reductions in CO₂ emissions, relative to fiscal 1990 levels, by fiscal 2020. We are implementing measures to counter global warming across the supply chain, including using eco-friendly building materials and energy conservation in office buildings and reducing CO₂ emissions at the construction stage. To contribute to CO₂ reductions across a wide range of areas, we are backing the introduction of solar power and other new energy sources and participating in Certified Emission Reductions (CERs) overseas through the Clean Development Mechanism (CDM) and other initiatives.

FY2013 Ecological Mission performance

CO₂ emissions in FY2013 totaled 17 million tons, down 18% from the FY1990 total of 20.82 million tons. These figures include reductions of 3.56 million tons achieved through six measures, including the design of energy-saving buildings. Both the absolute figure and the percentage reduction met our targets for the year.

Changes in total volume of carbon dioxide generated



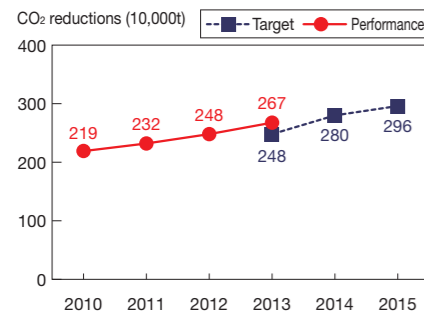
CO₂ emissions from all buildings
 Reduced **18%** vs. FY1990

CO₂ reductions resulting from six measures:
3,560,000 tons

<p>■ Design of energy-saving buildings Reductions from buildings, including those already constructed 267 t-CO₂</p>	<p>■ Resource conservation and green activities at construction sites Reductions at all active sites in FY 2013 300,000 t-CO₂</p>	<p>■ Energy-saving renovations and building management Reductions in renovation and building management businesses 120,000 t-CO₂</p>	<p>■ Energy savings in office spaces Reductions through energy conservation and power savings in the head and branch offices 0.7 t-CO₂</p>	<p>■ Promoting the introduction of new energy sources Reductions, including those at facilities built previously 41 t-CO₂</p>	<p>■ Obtaining and utilizing Certified Emission Reductions (CERs) Emission reductions achieved by operating CDM project facilities 6.3 t-CO₂</p>
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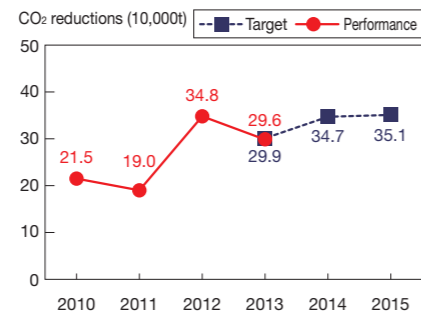
Improving the environmental performance of buildings/Promoting natural and untapped energy sources

- Shimizu promotes energy conservation construction at the design stage by setting efficiency targets for specific systems ranging from insulation performance to air conditioning, lighting, and hot water equipment and by taking into account all functions of the building in question.
- We promote the adoption of technologies based on natural and untapped energy sources. These include lighting controls based on available daylight, solar power generation, natural ventilation, and use of rainwater.



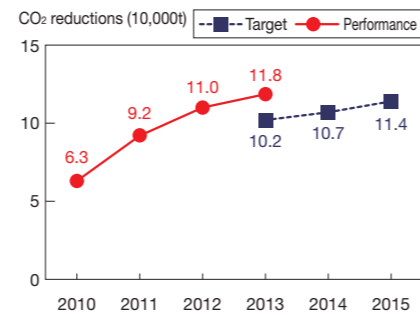
Reducing the use of materials and green procurement/Promoting green construction

- Reducing volumes of materials used through construction methods having low environmental impact
- Promoting green procurement through the use of EAF (electric arc furnace) steel, Type B blast furnace cement, and other reduced impact materials
- We cut CO₂ emissions generated during construction through various measures, including awareness efforts to minimize engine idling, fuel-efficient operation of construction equipment, use of fuel-efficient machines in general, and use of LEDs for temporary lighting.



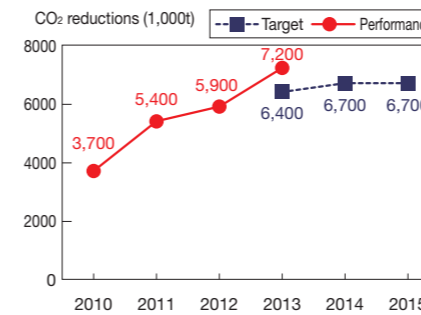
Energy-saving renovations and building management

- Promoting energy-saving renovations by assessing energy consumption at existing buildings and by renovating facilities and machinery
- Alongside affiliate companies, we're helping to cut CO₂ emissions in various ways (e.g., by optimizing operations and proposing energy conservation improvements at facilities under building management contracts).



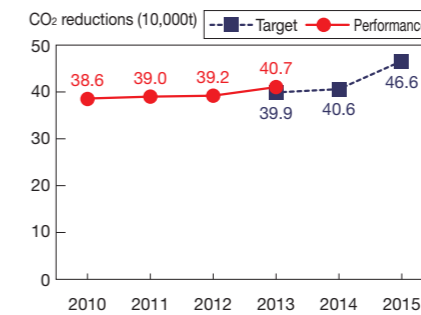
Efforts to reduce CO₂ emissions at the head office and branch offices

- Significant results achieved at the head office building (approximately 61% reductions compared to typical office buildings)
- Adoption of solar power and BEMS*1 at branch and sales offices
- Feasibility studies on adopting solar power and BEMS at the Shimizu Institute of Technology



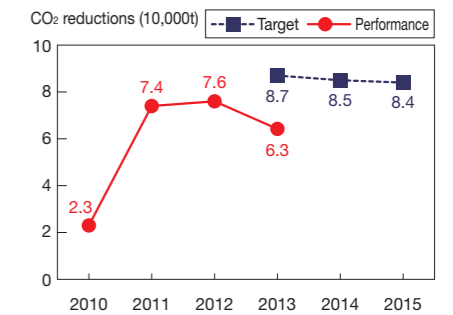
Building renewable energy facilities

- Proposing, designing, and constructing various renewable energy facilities, including wind farms, mega-solar facilities, and biomass power generation facilities
- Renewable energy facilities that began operating in FY2013 include a biomass power generation facility in Yamanashi Prefecture and a mega-solar facility in Kochi Prefecture.
- In FY2014, Shimizu itself will begin operating a mega-solar power plant currently under construction in Ako, Hyogo Prefecture.



Landfill methane gas capture CDM*2 projects/Promoting the new mechanism

- Methane gas capture projects currently underway include a landfill methane gas capture project in Yerevan, Armenia, and the second phase of a landfill methane gas capture project in Tashkent, Uzbekistan.
- We are currently carrying out feasibility studies under contract with the Japanese government for five projects under the Joint Crediting Mechanism (JCM)/Bilateral Offset Credit Mechanism (BOCM).



Note: Total reductions through FY2013 were recorded as net reductions vs. FY1990 with respect to CO₂ emissions in the production and processing of building materials. Starting this year, only reductions from activities undertaken in each fiscal year will be shown. Performance figures for the past fiscal years have been revised accordingly.
 Note: Policies and standards for gathering and reporting information on environmental performance are based on documents establishing internal rules and standards (e.g., the CO₂ Emissions Reduction Survey Entry Guide), in compliance with applicable environmental laws and regulations.

*1 BEMS: BEMS is an abbreviation for Building Energy Management System, a system used to monitor and display the use of electricity in a building and to control related equipment.
 *2 Clean Development Mechanism (CDM): Established under the Kyoto Protocol, the Clean Development Mechanism creates a way for developed countries to meet greenhouse gas reduction requirements, either by introducing new technologies or by funding efforts to reduce emissions in developing countries and applying the resulting reductions to their own national accounts.
 ✓: CO₂ emissions and reductions marked by this symbol are independently verified by Ernst & Young Sustainability Co., Ltd.

FY2013 external awards related to the environment

Seicho-No-Ie's Office in the Forest awarded the Minister of Land, Infrastructure and Transport and Tourism Prize (Grand Prize) at the Global Environment Awards.

Located in the southern foothills of the Yatsugatake mountains, Japan's first Zero-Energy Building has been completed as a prototype model of coexistence between human and nature. The building design enabled 45% cut of energy use by optimal use of the building's location on a gently sloping highlands site, taking advantage of wind, sunlight, and solar heat. In addition, 55% of the facility's total energy needs are managed by high-efficiency solar panels covering the rooftop generating one-half of the electricity consumed by the facility and by cogeneration through gasification of wood biomass making effective use of local lumber resources. This award recognizes the numerous measures taken at the facility to achieve zero energy use, as well its Forest Stewardship Council (FSC) certification (a first for Japan). Shimizu President Miyamoto accepted the prize in front of his Highness Prince Akishino at the awards ceremony.



Shimizu's head office earns commendation from the Minister of the Environment for activities designed to counter global warming.

This commendation recognizes the contributions to sustainable societies made by Shimizu's head office building, an ultra-eco-friendly office building that successfully reduced CO₂ emissions by roughly 61% from April through December 2013. Bringing together various new technologies, including a hybrid exterior, task and ambient radial air conditioning and lighting systems, and Smart BEMS technology, the building was also recognized for continual efforts to fine-tune and verify performance after the completion of construction, thereby moving closer toward the goal of zero-carbon status by 2015.



2013 Shimizu CSR Report (Vol. 19) awarded Minister of the Environment Award at the Environmental Communication Awards

The 2013 Shimizu CSR Report was awarded the Sustainability Reporting Grand Prize in the environmental reporting category. This award recognizes the perspective on value chain management expressed in Shimizu's Ecology Mission, which ranges from the selection of construction materials to building operations; renewable energy initiatives, such as mega-solar and offshore wind farm projects; and timely reporting of performance results (including information provided on the Shimizu website).



Biodiversity initiatives

Under the Shimizu Action Plan on Biodiversity, Shimizu is making steady progress in planning, design, procurement, construction, and R&D on various biodiversity issues, including efforts at individual facilities and efforts pertaining to entire regional ecosystems.

Initiatives in construction and R&D activities Conserving precious plants and animals, such as endangered and indigenous species

***1 Medaka (killifish)**
This fish occurs as distinct regional subspecies across Japan. Despite its designation as a Class II endangered species on the Ministry of the Environment's Red List and high public awareness of the need for conservation efforts, the results of genetic analysis and other studies show evidence of inadvertent crossbreeding due to the introduction of subspecies from different regions and the indiscriminate release of brood stock.



***2 Large Shijimi Blue butterfly**
Both the male and female of this species of butterfly have bright blue wings. Previously found as far north as Aomori Prefecture, the species is currently threatened or extirpated in various regions. It has now confirmed to be present only in limited areas of Niigata and Nagano prefectures and Kumamoto Prefecture.



***3 Japanese maple**
Japanese maple (*Acer palmatum*) is a tall deciduous tree of the genus *Acer*, within the family *Aceraceae* and grows south of Fukushima prefecture. Six genotypes have been identified.



***4 Hill cherry**
Hill cherry (*Prunus jamasakura*) is a tall deciduous tree of the genus *Prunus* within the family *Rosaceae* and grows west of Miyagi and Niigata prefectures. Ten genotypes have been identified.



***5 Japanese camellia**
Japanese camellia (*Camellia japonica*) is a tall evergreen tree of the genus *Camellia*, within the family *Theaceae* and grows south of Honshu. Three genotypes have been identified.



Environmental education for local nursery children at a medaka (killifish)*1 pond (Site of the new Ueda sales office construction project for Toyota Nagano Parts Distributor Co., Ltd.)

Toyota Nagano Parts Distributor Co., Ltd. has relocated its sales office to a new facility in the city of Tomi to serve the Toshin area of Nagano Prefecture. Populations of the *medaka* (killifish) are declining nationwide, and the species is currently designated as endangered. This decline is evident in Nagano Prefecture, and the state of *medaka* populations has raised concerns within the prefecture. With Shimizu's support, the Tomi sales office set up a *medaka* pond measuring about 10 meters square and stocked it with indigenous *medaka*. Before the ceremony marking the completion of construction, PD Systems Co., Ltd., a Shimizu Group member,



Mayor Hanaoka and President Utsunomiya hand medaka fish to nursery students.



The children release the medaka into the pond.

staged a picture-card storytelling performance for children of the local Kitamimaki Nursery on various topics, including the *medaka*'s life cycle. Afterwards, the 39 children and their teachers were handed *medaka* by Tomi's Mayor Hanaoka and President Utsunomiya of Toyota Nagano Parts Distributors for release into the pond. This outdoors class was widely covered in local television and newspapers.

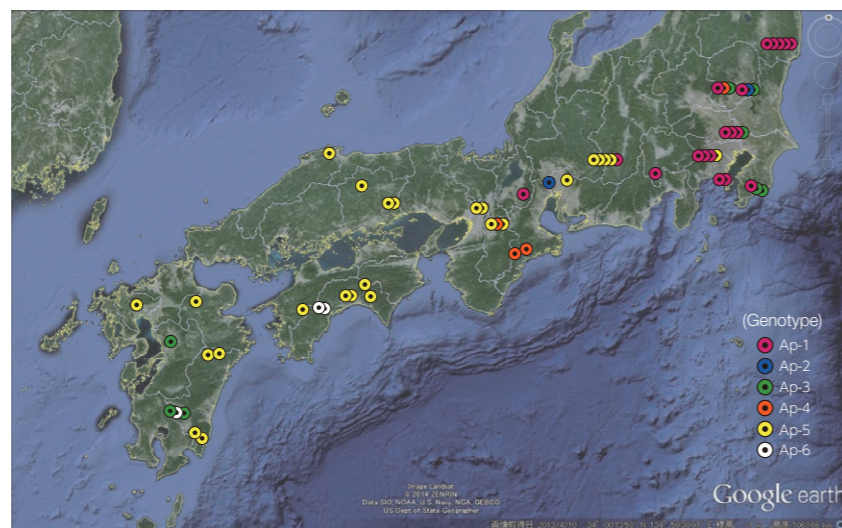
The facility's site was also landscaped based on a consideration of surrounding vegetation, which includes species such as *Sophora flavescens*, a member of the *Fabaceae* family used as food by caterpillars of the Large Shijimi Blue butterfly*2 which has itself been designated as a natural treasure by Tomi City. These are just some of the site activities whose purpose is to maintain the area's biodiversity.

Toward establishment of traceability for planted trees (Planting system for biodiversity conservation by genetic analysis)

Many tree species have genetic traits that vary by region. For this reason there are concerns that planting trees with different genes of other regions will cause genetic disturbances and consequently reduce the genetic diversity of the species.

In order to create a planting system that takes into consideration regional characteristics, the College of

Bioscience and Biotechnology of Chubu University and Shimizu Corporation co-developed a new method based on genetic analysis of three tree species commonly used for planting: Japanese maple*3, Hill cherry*4, and Japanese camellia*5. The aim of this study is to develop a tree supply system that will not cause genetic disturbances, by establishing a traceability system for planted trees based on tree origin.



Genetic distribution of Japanese maple (e.g., Ap-1 is deemed plantable in the Kanto region)

Construction byproducts, preventing pollution

Shimizu strives to reduce and recycle construction byproducts through its 4R activities: Refuse, Reduce, Reuse, and Recycle.

We also implement as a high-priority waste management issue the appropriate management of construction wastewater at all work sites.

4R activities at sites Establishing a recycling-oriented society

Reburying improved construction sludge for use as building materials

High in water content and generated from foundation work and other construction activities, earth in sludge form is known as "construction sludge." Typically, it is treated as industrial waste. While efforts to use this material as improved soil are being promoted in various construction projects ordered by the Ministry of Land, Infrastructure and Transport, Shimizu is making its own efforts to use construction sludge in private sector projects. Shimizu meets with authorities in advance and seeks to improve the sludge under an adequate control structure for use as construction materials. This improved soil can be used during embankment work.

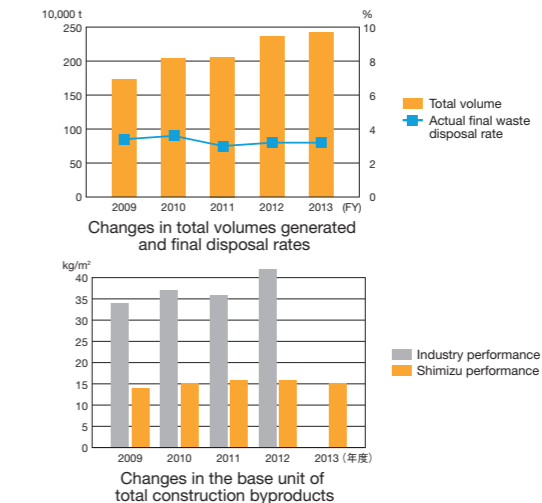


Putting improved soil back into the ground

Total construction byproducts generated, final disposal rate, base unit of total construction byproducts

Figures for total construction byproducts generated rose by 3% from the previous year to approximately 2,440,000 tons. Final disposal rate was 3.2%, the same as the previous year.

The base unit of total construction byproducts generated from new construction projects was 15.1 kg/m². Based on the Shin Kan-tasu*1 integrated construction byproducts management system and sustained efforts to reduce and recycle byproducts from before the start of construction, we continue to maintain our base unit of total construction byproducts at half the industry average or less.



***1 Shin Kan-tasu (improved Kan-tasu)**
An integrated construction byproducts management system launched in FY2013. The name conveys our focus on contributing to environmental conservation.

Final disposal rate
3.2%
(Target: 4.3% or less)

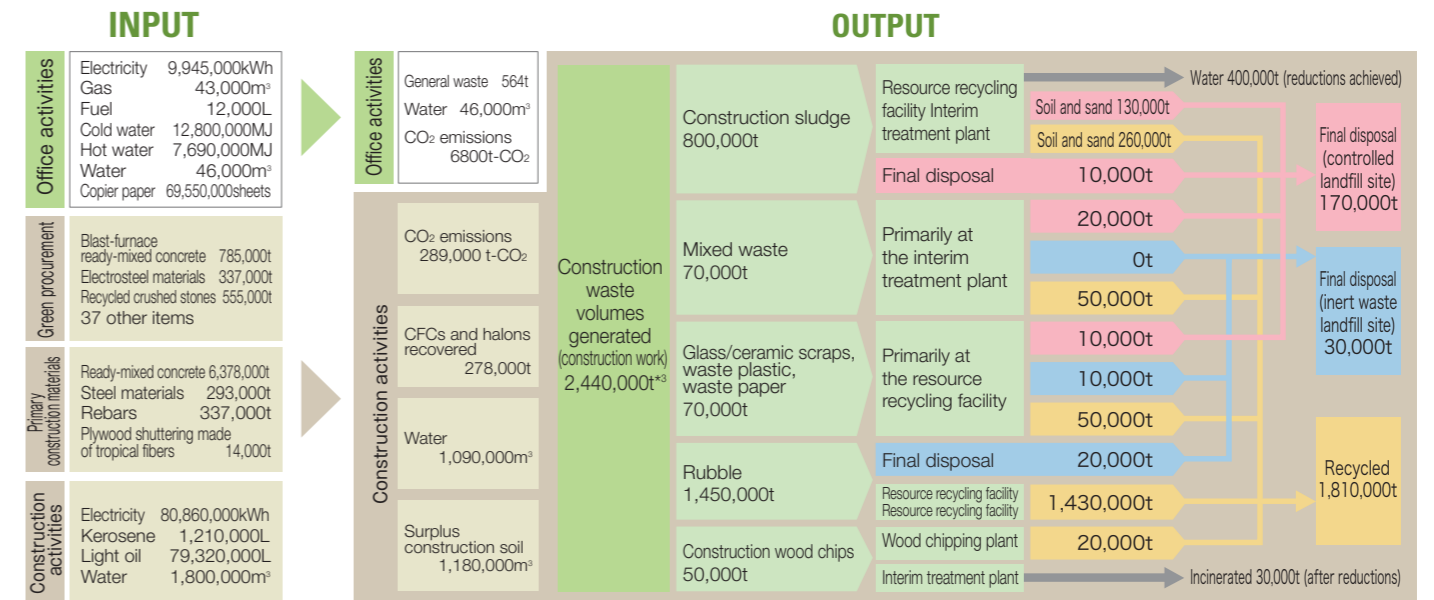
Base unit of total construction byproducts
15.1 kg/m²
(Target: 16.0 kg/m² or less)

Fiscal 2013 material flows*2

The material flows from Shimizu's production activities are illustrated below.

Materials are generally divided between office activities and construction activities. Numerical quantities through the stage of final disposal are given for each form of these materials.

Shimizu seeks to reduce environmental impact and manage the optimization of items that pose the threat of major environmental or social impact through its environmental management system (EMS) and other efforts.



*2 Figures are rounded to the nearest 10,000t.

*3 The figure of 2,440,000t for total construction waste generated (construction work) includes 680 t of asbestos dust and 16 t of industrial waste designated for special management.

ACTIVITIES

The Pursuit of Business Activities that Coexist with Society

As a responsible corporate citizen dedicated to harmonious coexistence with society, Shimizu and its stakeholders pursue a broad range of activities whose purpose is to improve social welfare, establish and strengthen community relationships, and create workplaces where employees and specialist contractors can work in secure settings inspired by a sense of purpose. Through our commitment and dedication to these activities, our everyday business activities, and other efforts, we seek to build and maintain prosperous, peaceful communities and contribute to sustained growth.



KPI	FY2012 performance	FY2013 performance [target]	Reasons for KPI selection and future topics
Number of women in management positions:	17	19 [three times the figure at the end of FY2010 (nine) by FY2016]	Selected as a representative indicator of the state of progress on diversity promotion. Various initiatives will be undertaken to create an environment in which a diverse workforce can work in comfort and demonstrate their full capabilities.
Accident frequency rate:	0.79	0.63 [0.60]	Selected as a widely accepted indicator for assessing the status of on-the-job accidents, as evidenced by its use in the Ministry of Health, Labour and Welfare's accident statistics. The construction industry has a higher accident frequency rate than other industries. As a leading company in the industry, Shimizu intends to advance various measures to further reduce the incidence of on-the-job accidents.
Other indicators	FY2012 performance	FY2013 performance [target]	
Percentage of employees with disabilities:	2.05 %	2.05 % [annual average 2.05%]	
Number of male employees taking childcare leave:	1	0 [one or more]	
Percentage of female employees taking childcare leave:	94.7 %	97.3 % [80% or higher]	
Sections implementing Medama Project social contribution activities:	15 sections	15 sections [15 sections]	

A Company that Values People

Shimizu's Management Philosophy incorporates the concept of "Humanism" along with "Socio-dynamism," "Innovation," "Market Orientation," and "Zeal." Beyond this, the first item in our Code of Corporate Ethics and Conduct calls for the development of a company that places the highest priority on people. To achieve this goal, we pursue numerous measures that reflect the ever-changing conditions of our social environment.

Creating comfortable workplace environments Various efforts to enhance the working environment

Promoting diversity and inclusiveness

The Shimizu Diversity Policy addresses a wide range of topics, including the company's concept of diversity, principles, background, and goals. Our intranet features a diversity promotion website that provides practical information and procedures for childcare leave, as well as information on ways to promote a sound work-life balance, including shortened working hours. Reports also address training, events, and other high-profile topics.



Helping women thrive in the workplace

As of March 2014, the total number of women working at Shimizu was 1,470, or 13.7% of the total workforce. In November 2013, as part of efforts to help women succeed in the workplace, we held a career advancement forum on the theme of career advancement for women. Following a message of support from President Miyamoto, this forum featured a keynote speech from Hiromi Watase, who played a central role in founding the wedding magazine Zexy; a panel discussion among women employees; and a reception. Some 300 women employees attended from across Japan and overseas. "The event was really encouraging," said one participant. "It definitely boosted my motivation," said another. The event also helped forge networks among women who work for Shimizu.



The women's career advancement forum

We've also sponsored a conference on achieving work-life balance for women construction workers to give women a forum where they can share concerns and experiences in balancing work and family. Other goals include communicating positive examples across the organization and building personal networks across the architectural construction and civil engineering sectors. Other efforts include various improvements in the work environment for women assigned to construction sites, including making helmets, work wear, and other items easier to use and adopting lighter safety harnesses.



The reception



A lighter safety harness for women construction workers

Hiring and promoting non-Japanese employees

We promote the hiring of non-Japanese employees through various activities, including seminars for international students residing in Japan. We're also expanding opportunities for non-Japanese employees to thrive in the workplace. As one example, on April 1, 2014, two non-Japanese employees were appointed to managerial positions.

FY	2010	2011	2012	2013	2014
Hires	2	-	5	2	4

Working to be a structural design professional

Neem Igetchi, Structural Design Department IV, Design Division, Building Headquarters

I'm originally from Cambodia. I joined Shimizu in 2012. The Structural Design Department designs educational, cultural, and medical facilities. I work there on tasks related to the structural design of facilities like nursery schools and high schools. In my first year with the company, I was stationed at a construction site for a licensed children's center. In this way, I gained three months' experience with various aspects of practical construction management. As a designer, experiencing the actual building process gave me a true feel for how quality structures are built by teams of professionals working together. I'm devoting my efforts to becoming a structural design professional who has something valuable to contribute.



■Providing employment and support for those with disabilities
 The percentage of employees with disabilities at Shimizu averaged 2.05% in fiscal 2013, achieving our target of exceeding the legally mandated minimum of 2.0%. We continue to promote the employment of those with disabilities in anticipation of further increases to the legally mandated rate over the medium to long term. These efforts include initiatives to broaden the range of jobs assigned to these employees.
 In recognition of our initiatives in this area, we received a thank you letter in November 2013 from the Setagaya Ward organization responsible for promoting the employment of people with disabilities. We remain dedicated to efforts to develop working environments that make it easier for people with disabilities to participate.



A thank you letter from the Setagaya Ward organization for promoting employment of people with disabilities

■Human rights efforts

In addition to incorporating a policy of respect for human rights into our Code of Corporate Ethics and Conduct, we've established a companywide organization under our Basic Human Rights Policy that includes the Committee to Enhance Awareness of Human Rights (chaired by Shimizu's vice president). We are energetically pursuing efforts to heighten awareness of human rights issues, and we support the activities of Group member companies through training sessions and briefings on instructional materials for human rights facilitators at affiliate companies. We seek to raise awareness of human rights through broad-ranging efforts. Measures include dedicated consultation centers and workplace rules and intranet reminders that clearly set forth our policies on preventing harassment in the workplace. Other efforts include a Human Rights Awareness Training program that targets specific job responsibilities and an awards program that solicits slogans for human rights awareness. Posters displayed at our head office, branch offices, construction sites, and other facilities clearly delineate our policies on sexual harassment and abuse of power.

【Best Slogan on Human Rights Awareness, Fiscal 2013 (number of entries: 1,596)】

Employee Section:
Don't force your own values on others.
Accept the values of others.



The awards ceremony for the top prizes in the awards program for slogans on human rights awareness

■Promoting a sound work-life balance

In addition to meeting and exceeding legal requirements in areas such as childcare and family care leave periods, we're making progress in establishing an environment where employees expecting or raising children can work with true peace of mind. We encourage employees to take time off for birth by spouses; we support the return to the workplace of employees who have taken childcare leave; and we've established a system for rehiring employees who have left the company for reasons related to childbirth or childcare. We provide interest-free loans to pay for fertility treatments and offer a unique system of subsidized discounts for childcare services. We offer a wide range of leave programs for employees to help them achieve a sound work-life balance, including refreshment leave and site transfer leave for site workers.
 Based on our efforts to formulate and achieve the goals of a general business action plan in compliance with the Act on the Advancement of Measures to Support Raising the Next Generation of Children, we were certified by the Ministry of Health, Labour and Welfare to use the Kurumin certification logo.*



The Kurumin certification logo

* A logo granted by the Ministry of Health, Labour and Welfare to certify that a company has taken an active role in areas such as childrearing support, thereby helping to counter Japan's low birth rates

■FY2013 performance		Note: Figures in parentheses indicate FY2012 performance
Childbirth, childcare	Childcare leave (through the age of two)	55 persons (45 persons)
	Percentage of female employees taking childcare leave	97.3%(94.7%)
	Reduced work hours for childcare (through third grade)	39 persons (32 persons)
	Exemption from overtime/holiday work	5 persons (3 persons)
	Spousal childbirth leave	85 persons (83 persons)
	Child medical care leave	1 person (2 persons)
Family care	Family care leave	1 person (5 persons)
	Reduced work hours for family care	0 persons (0 persons)
	Family care leave	1 person (3 persons)
Other	Refreshment leave (14 consecutive days every 10 years)	632 persons (671 persons)
	Volunteer leave (10 days/year)	10 persons (18 persons)
	Percentage of employees taking annual leave	29.5%(30.2%)

Human resource development
Shimizu's HR development seeks to foster individuality and creativity

■Training for all new employees

Over the four days starting April 1, 2013, we held a training program for 199 new employees on the theme of safeguarding and transferring Shimizu's core philosophy to the next generation of Shimizu workers. The etiquette training on the second day was based on the "Shimz Start Guide," which features clear explanations of Shimizu's employment standards and addresses topics for new employees, including preparation for work responsibilities and standards for on-the-job comportment.



Overall training program for new employees

【Remarks from a senior employee who served as a trainer】

This training program gave me a renewed sense of the youthful energy and enthusiasm of our new employees. I was there as a trainer, but I learned quite a lot myself.

■Hands-on training on construction tasks

As part of our field-specific specialist training provided following the general training program for new employees, we conducted hands-on training for construction tasks at the Fuji Education Training Center. In FY2013, 136 trainees

grouped into one of three fields (architectural construction, civil engineering, and office workers) were provided with a valuable opportunity to experience with their own hands and see with their own eyes various building processes that are difficult to comprehend through classroom training alone.



Hands-on training on construction tasks

【Remarks from participants】

- Through this training, I got a clear sense of the need to improve our communications and teamwork skills at construction sites. (From a male employee working in construction management)
- The hands-on experience provided by this program deepened my understanding of what I'd learned in classroom training. (From a female employee working in construction management)
- I encountered eye-opening things on a daily basis, including the great difficulty of building things, the dedication of craftspeople to get things just right, and the heightened expectations for construction companies since the Great East Japan Earthquake. (From a male employee with a humanities background)

■Study-abroad initiatives

To create a workforce with strong specialized skills and capable of thriving in a global environment, Shimizu sends employees abroad to various facilities, including companies, universities, and research institutions. Typical comments include the following: "It's a stimulating awareness-raising experience that exposed me to state-of-the-art technologies and methods"; "I intend to apply the knowledge and networks obtained through this program in my future work." We hold high expectations for employees following their return from abroad.



Employees who studied abroad during FY2013

Employees who studied abroad during FY2013
Number of employees who studied abroad during FY2013:
13 persons

Health and Safety Efforts

In the area of health and safety, Shimizu is carrying out activities to prevent accidents by consistently implementing the Construction Occupational Health and Safety Management System (COHSMS). By prioritizing the eradication of accidents involving falls from height, carrying out risk assessments, and applying the Sangen-Shugi principle (the “three actuals”: the actual site, the actual situation, and the actuality) to understand and improve upon current conditions, we seek to further reduce accidents for fiscal 2014.

Fiscal 2013 results

A rising percentage of injuries caused by flying and falling objects

*1 Accident frequency rate: The number of deaths and injuries per million cumulative man-hours (Figures for all industries and for the construction industry represent accidents resulting in one or more lost workdays; figures for Shimizu represent accidents resulting in four or more lost workdays.)

Health and safety goals and results

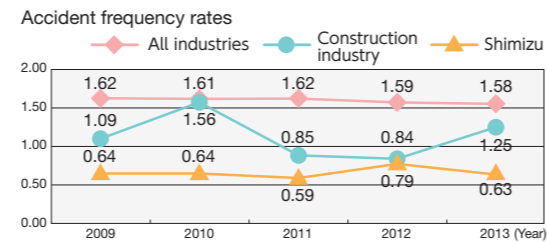
Our accident frequency rate*1 in fiscal 2013 improved from the previous year, falling from 0.79 to 0.63, but still missing our target rate of 0.60 or lower.

Accident analysis

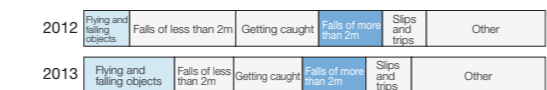
A look at accidents by type shows we have been unable to completely eliminate fall from height accidents, with several such incidents nearly resulting in serious injury. The percentage of injuries caused by flying and falling objects also increased year on year. Other incidents included eye injuries caused by failure to wear PPE (Personal Protective Equipment); accidents involving a grinder; and accidents occurring during irregular tasks. A breakdown of accidents by age of victim shows that the frequency of accidents due to slipping or minor falls tends to increase with worker age. However, the percentage of accidents involving falls from greater heights (above two meters) was especially high among younger workers.

Company President Mr. Miyamoto undertakes safety patrols

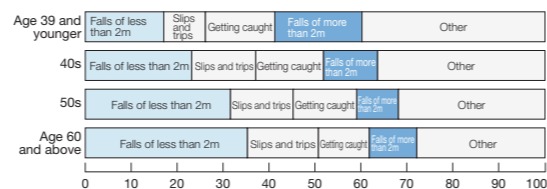
The President of Shimizu undertakes safety patrols at construction sites each year during National Safety Week and National Industrial Health Week. In July 2013, he visited the massive Gaikan-Owada construction site in the city of Ichikawa, Chiba Prefecture. “I’ve seen the steps you’re taking to ensure safety, including setting up break areas in each of the four sections of the site,” he told workers. “I encourage you to continue with these safety efforts while keeping a close eye on every aspect of the site.”



Accidents by type



Accident type by age (2004–2013)



Mr. Miyamoto on safety patrol

Specific measures in fiscal 2014

Thoroughly checking and improving circumstances through risk assessments and sangen-shugi.*2 Eliminating fall from height accidents is a top priority.

Eradicating fall from height accidents (top priority)

Based on risk assessments, we formulated work plans and procedures incorporating redundant safety measures to address specific work details and high-risk areas. We will continue to monitor the status of our accident prevention measures and make improvements based on the sangen-shugi (“three actuals”) principle.

Eradicating accidents caused by heavy equipment, cranes, or collapsing heavy structures

Accidents of this type can result in serious injury. We plan to establish plans and procedures based on risk assessments that factor in their high priority level. We will also monitor conditions and continue to make improvements based on the sangen-shugi principle.

Preventing accidents in the course of irregular tasks

We will temporarily suspend all irregular tasks and ask related parties to check their work plans and procedures for irregular tasks, which will resume only after all workers at the site have confirmed they understand the plans and procedures.

Preventing accidents among older workers

We plan to create work environments that account for the needs of older workers, who are especially prone to slipping accidents and minor falls. Examples include deploying barrier-free safety walkways, marking steps clearly, and ensuring adequate lighting levels.

Preventing accidents involving a grinder and eye injury

We plan to implement thorough measures to prevent the installation of inappropriate blades on grinders and to ensure appropriate use of protective eyewear and other safety gear.

Ensuring that subcontractors obtain social insurance

One area of concern for the construction industry is the number of companies that fail to provide their employees with social insurance. Using systems like GFS,*3 Shimizu has strengthened its monitoring systems and will continue to encourage subcontractors to provide social insurance and improve working conditions for skilled workers.

*2 Sangen-Shugi: To visit the Actual sites; to examine the Actual situation; and to understand the Actual state of things.

*3 GFS (Green File System): makes it possible to check a company's information on the website.

Efforts at the Kabuki-za construction site Building a high-visibility project safely and efficiently

Building the fifth Kabuki-za theater complex—Ginza's tallest building, rising 145.5 meters high—and its deepest, extending 29 meters below the ground—required a construction period of 29 months and roughly 400,000 workers, for a total working hours of approximately 3.2 million man hours. The project involved some 1,800 workers on peak work days.

The Great East Japan Earthquake struck during the 29-month construction period. Overcoming the subsequent two-month delay to complete the project without accidents or injuries required many adjustments and the efforts of numerous people. Two examples of such effort are introduced below: the Smart Factory Method and the External Protective Unit Method.

Smart Factory Method

The building's fifth floor was equipped with an all-weather modular-unit fabrication yard known as the “Smart Factory.” Floor units for the upper floors were assembled here in advance. By loading the floors assembled onto platforms for underfloor construction using a telfer crane installed inside the factory, we were able to safely complete the following high-risk, high-elevation construction tasks on a concrete base: attaching beams atop girders and installing deck plates,*4 inserts,*5 and studs.*6 We also safely installed fire-resistant coverings, pipes, and insulation without using aerial work platforms or related equipment.

External Protective Unit Method

This project employed protective units to help realize Shimizu's concept of building ultra high rise buildings under highly safe construction conditions. The steel erection and the installation of exterior elements are completed inside the protective units. The method allows us to erect structural steel on the highest floors, perform exterior work on the floors immediately below, and install glass windows on the lowest floors. Together, these processes enable safe completion of the work in a completely covered environment.

Using this method, the finished exterior work can be revealed once the protective unit has been lifted. Viewed from off-site, the building emerges in its finished form as soon as the cover is removed. Visible even from off-site, these safety and security measures mean site workers can perform their work with greatly reduced accident risk.



Courtesy of Shochiku Co., Ltd. and Kabuki Za Co., Ltd.



Installing floor deck plates

Underfloor construction

*4 Deck plates
Steel panels corrugated to increase the floor's load-bearing capacity. These commonly used floor materials can also serve as molds for concrete floors in steel-frame structures.

*5 Inserts
Pieces of hardware with cut inner screws; installed in molds before pouring concrete

*6 Studs
Bolts and other steel bars welded to the steel frame to join the steel frame to the concrete structure



The protective unit completing its ascent

Setting a record for accident-free, injury-free work over approximately 3.2 million man hours

Yasuo Mizuta, Construction Director

At this construction site, under the slogan *nenbutsu to kanketsu* (“mantra and completeness”), we strove to implement a comprehensive, leave-no-stone-unturned approach to safety management, often repeating the mantra “Inspect! Check! Predict hazards!” Communicated through an association of subcontractor foreman (the “Kabuki-Za-Kai”) to the leaders of all business partners working on the project, this concept took root among all workers at the site, who numbered more than 1,800 people on peak days. The combination of the general contractor's creative efforts and the enthusiasm of the business partners who put them into practice helped the site set a record of approximately 3.2 million man hours without accidents or injuries.



Communicating with Society/Social-Contribution Activities

Shimizu pursues its business efforts in carefully considered coexistence with local communities across Japan and around the world. We communicate proactively with local communities to deepen mutual understanding, improve our business activities, and contribute to society.

Activities targeting community dialogue Activities that contribute to community vitality

A total of three site tours were held at the construction site for the Josui No. 2 Elementary School (tentative name), completed in January 2014 in the city of Toyota in Aichi Prefecture.

A total of 600 local children scheduled to attend the school beginning in April took part in these tours, which included activities such as a stamp rally, handicrafts, and eating cold *nagashi somen* (noodles served in a bamboo trough filled with flowing water).

This construction project drew attention from across Japan as a model for building a school in cooperation with the community. The joint efforts included the active incorporation of local views from the design stage, including workshops and other activities.



Children enjoy eating cold *nagashi somen* noodles

Activities targeting community dialogue Volunteer activities in areas affected by the Great East Japan Earthquake

Two volunteer programs took place in the town of Minamisanriku, Miyagi Prefecture, where Shimizu took part in the disposal of disaster-related waste through March 2014.

In July 2013, 36 employees from the Tohoku Branch participated in activities in Tokuramitobe Ward to support the fishing industry, a key regional industry. Planned and managed chiefly by a working group of younger employees at the Tohoku Branch, these activities involved preparatory work for oyster cultivation followed by a barbecue for those living in temporary housing.

In August 2013, a team consisting mainly of staff members from Tokyo Mokkoujou Arts & Crafts Furnishings and individuals working to dispose of disaster-related waste visited Shizugawa Elementary School in Minamisanriku to hold a woodworking workshop for children during summer vacation, an event first held last year. A total of 91 children from the town's five elementary schools were split into groups of older and younger students, with the goal of imparting woodworking experience. The older students built birdhouses and bookends, while the younger students built coasters and Eco Houses (model houses made using wood scraps and lumber derived from forest thinning activities).

Intended to revitalize affected areas, these and other volunteer activities will continue into the future. They serve as excellent opportunities for deepening participant understanding of conditions in the affected areas.



Volunteers preparing for oyster cultivation



Elementary school students hard at work building things from wood



A birdhouse made by an older student



An Eco House made by a younger student

Contributing to society overseas Delivering relief materials to areas affected by Typhoon Haiyan (International Division)

The Manila sales office and Shimizu Philippines delivered relief materials to Tacloban in the Philippines, which sustained serious damage due to Typhoon Haiyan in November 2013. In addition to food, clothing, linen, and other items donated by employees, the company donated canned foods, plastic tarps, and other materials. Other donations continue to stream in from locations around the world, including Japan, Singapore, and Malaysia.



Relief materials donated by employees

Initiatives by an Affiliate – MILX Corporation –

In addition to efforts based on Shimizu's basic CSR concepts, Shimizu Group member companies undertake their own activities in ways that reflect their respective spheres of business. The environmental initiatives of MILX Corporation are outlined below.

Preventing global warming Efforts to halve CO₂ emissions

In fiscal 2007, the MILX Corporation's CO₂ emissions peaked at 2,047 t. The company is currently pursuing the following measures to achieve its goal of halving total CO₂ emissions from fiscal 2007 levels to 1,000 t by fiscal 2020.

(A) Reducing CO₂ emissions in company buildings and offices

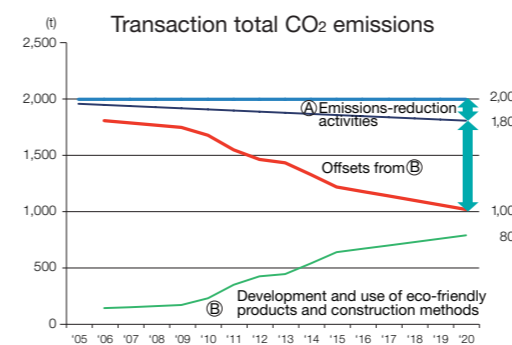
MILX Corporation is deploying the following energy-saving measures to promote energy conservation activities throughout its buildings

- 1) Cutting peak energy use by monitoring electricity demand
- 2) Switching from mercury lamps to high-efficiency ceramic metal halide lamps
- 3) Switching company vehicles to hybrid
- 4) Introducing electric forklifts

(B) Offsetting CO₂ emissions from business activities

In fiscal 2010, MILX Corporation established the "Environmental Committee" to help strengthen environmental performance throughout the company. Some of the Environmental Committee's major initiatives are outlined below.

- Leasing solar power systems for use with temporary offices*1
- Developing LED lighting fixtures for grid ceilings
- Installing fire-resistant coating materials associated with reduced CO₂ emissions
- Installing radiant ceiling panels to achieve uniform temperature distribution and draft-free air circulation
- Adopting simplified packing systems
- Launching commercial efforts in the field of renewable energy



Solar power facilities at the Hiroshima Materials Center

Renewable energy business Offsetting 140 t - CO₂ emissions annually through solar power sales

In fiscal 2013, the Hiroshima Materials Center installed solar power facilities*2 to begin taking advantage of renewable energy. Starting in fiscal 2014, the center will sell all power generated by these facilities to the Chugoku Electric Power Co., Inc., with the goal of achieving annual CO₂ emissions offsets of 140 t. As MILX Corporation strives to achieve "carbon zero" status for fiscal 2050 (i.e., 100% reductions relative to fiscal 2007 CO₂ emissions), future activities will include exploring the feasibility of installing such equipment at other materials centers, gathering related data, and focusing on technological innovation in an effort to take on important social issues.



Solar power facilities at the Hiroshima Materials Center

Reduction of **200t-CO₂**
In company buildings and offices by fiscal 2020

*1 Leasing solar power systems for use at temporary offices
A single system consists of 18 x 180-watt solar panels plus a power conditioner. (These have entered use at a total of 13 sites.)

Achieving reductions of **800t-CO₂**
Through business activities by fiscal 2020

*2 Solar power facilities at the Hiroshima Materials Center
• Installation locations: On the rooftops of two plant buildings and the office building (approx. 3,000 m²)
• Capacity: 1,092 x 245-watt solar panels
• Annual power generated: approx. 250,000 kWh (enough to supply power to approx. 80 average households)

Our initiatives and goals

We launched our environmental initiatives 10 years ago. The initial activities tended to be limited and somewhat passive. Over the years, I think they've gradually started to gain more attention throughout the company, especially since the Great East Japan Earthquake. Achieving a safe and secure work environment isn't something that just happens; it requires contributions from all of us. Working with a sense of gratitude, we intend to build on the groundwork established by our predecessors and to extend their efforts to achieve new goals.

Noriyoshi Shirose, General Manager, Safety/Environmental Division, MILX Corporation



MILX Corporation's lines of business:
Commercial leasing of temporary construction materials and equipment, construction, interior construction, iron reinforcement construction, insurance, equipment leasing, sales of information systems, security services, travel agency services, vending machines, office space brokerage services, export/import services, temporary worker placement

Stakeholder Reactions to the CSR Report 2014



Keisuke Takegahara
General Manager
Environmental Initiative
& Corporate Social
Responsibility-Support
Department Development
Bank of Japan, Inc.

This year's report features enriched content based on new frameworks introduced last year.

Opening with a special feature titled "Strength and Flexibility," this report emphasizes Shimizu's wide range of technological capabilities, which allow Shimizu to address social issues ranging from earthquake restoration to national resilience. The feature vividly depicts the unique aspects of the construction business and conveys a clear message: that the competitive strength of a company's main business is directly linked to its ability to deliver solutions that address major societal issues.

I was also impressed by how the report

described the optimal quality Shimizu delivers to customers, both in terms of the quality of the structures built and actual construction processes. While most tend to focus on the performance of our physical output, I think this feature well describes Shimizu's capabilities in the area of intangibles, including solutions that maximize client communications and client satisfaction while also accounting for ongoing changes in the external environment.

I'm delighted to see how the report uses actual projects to illustrate the ecoBCP concept in greater detail, something I requested in this space last year. The Smart Community initiatives in Shibaura 2-chome and Kyobashi (including obtaining ISO 22301 and ISO 50001 certification on an area basis) are unique efforts that help achieve Shimizu's vision for new urban communities.

While this report serves as a good tool for promoting dialogue, a number of aspects could be improved. The first concerns fuller disclosure of the process used to set key performance indicators (KPIs). For example, I

believe the report could describe how KPIs are chosen along two axes—namely, their importance to Shimizu's growth and their contributions to stakeholder value. The report could clarify which issues are most important to management and how Shimizu is attempting to address them. In addition, while this year's report discusses the importance of taking measures to prevent accidents among older employees, I would like future reports to take a more in-depth look at maintaining and strengthening site capabilities in light of the rapidly aging workforce. This particular issue has strong implications for business continuity in an aging society, as well as for strategies to maintain construction quality over the long term.

future direction, perhaps increasing the number of people who, like me, consider themselves Shimizu fans.

to see more contextual information. I look forward to seeing continuing progress in Shimizu's activities and disclosure practices,

CSR reports are essential communication tools for generating stakeholder engagement with management. When reading this report, I'd like to learn more about Shimizu's potential for the future and its contributions to the development of a resilient society. More contextual information, including the market conditions under which Shimizu operates, the risks and opportunities it faces, and its outlook for the future, would help deepen reader understanding of Shimizu's potential.

Although the report in the Message from the President clearly delineates Shimizu's view of the business environment and briefly summarizes the company's business conditions on page 7, I would prefer still more contextual information. In addition, I believe a more expansive description of the relationship between Smart Vision 2010 and the Midterm Management Plan 2010 on the one hand and the three pillars of CSR management and KPIs on the other would help clarify Shimizu's



Takashi Fukushima
President
Sustainability
Accounting Co., Ltd.

After reading a draft of CSR Report 2014, I was impressed by its account of Shimizu's steady yet sophisticated efforts. This includes the section on the three pillars of CSR management; the special feature's outstanding report on initiatives taken based on the theme of resilience and on steady use of the three-pillar framework; the introduction of KPIs that clearly indicate performance vs. targets and trends over the years; and the undaunted efforts of the Ecological Mission, whose purpose is to reduce CO₂ emissions, a challenging proposition for the construction industry as a whole.

It's not hard to see why the report was awarded the Sustainability Reporting Grand Prize last year. However, while the report is worthy of commendation, I would still prefer

From the Director Responsible for Dialogue with Stakeholders

Last year's Shimizu CSR Report Vol. 19 won the Sustainability Reporting Grand Prize (Minister of the Environment Award) at the 17th Environmental Communication Awards organized by the Ministry of the Environment of Japan and an NPO. We're grateful for the recognition conferred by this award, which reflects the judge's high regard for the progress we've made over 20 years based on dialogue with our numerous stakeholders. Over this period, we've always believed our stakeholder dialogue is the most important communication channel and we've discussed the ideal forms of our CSR activities and information disclosure.

I believe this year's dialogue covers a wide range of topics that will help enhance our CSR activities over the long term. These topics include further information on how our KPIs were adopted last year to serve as our indicators of CSR in the construction business; an account about the expectations of our diverse stakeholders, as well as the background of our environmental and social activities; and a more expansive account of our understanding of risks and risk disclosure, as well as all non-financial information.

Although we are having the more challenges like our actions reflecting the result of stakeholder dialogues and how to create our integrated report, we will continue to enhance our activities and information disclosure practices.

The special feature in this year's report, "Strength and Flexibility," highlights our activities from in three points: recovery from disaster, the preparedness against disaster in communities, and the preparedness of facilities against disaster. As an overseas activity, the report introduces our disaster assessment system launched last year in Asia region where natural disasters are common. In the past, since various disaster information are released independently by various agencies, it required significant time and effort to review potential sites for new buildings and disaster-resistant features needed. This time, we can introduce an example of our social contribution, through our development of a regional hazard assessment system that integrates 16 types of data from 11 agencies, including the UN and NASA, using Google Earth as an interface. On the other hand, two domestic examples



Hiroshi Tojo
Senior Managing Officer,
CSR

are reported; about restoration from the Great East Japan Earthquake and efforts to make existing high-rise buildings more resistant to long-period seismic tremors. We encourage readers to refer to this special feature for information on representative examples of our CSR activities and our efforts to deliver solutions to social issues through our business activities both in Japan and around the world.

Each year, we strive to improve the disclosure of information chiefly through this report, to deepen our dialogue with a broad range of stakeholders. And we strive to put into practice corporate initiatives characterized by ever-growing transparency. In this way, we hope to attract an increasingly broad readership for this report.

Dialogue with Stakeholders

■ Held on Tuesday, April 15, 2014, in a meeting room at Shimizu

We held a discussion forum on the following themes related to the 20th Shimizu CSR Report (2014) from the perspective of notable experts:

Mr. Takegahara from the Development Bank of Japan has participated in this event for three consecutive years, starting with the session for Vol. 18 of the CSR Report in fiscal 2012. Mr. Fukushima from the Sustainability Accounting Co., Ltd. participated for the first time this year.

These individuals provided invaluable advice, drawing on their respective perspectives as financial institution representative and consultant.

Attendees:

Keisuke Takegahara, General Manager
Environmental Initiative & Corporate Social Responsibility-Support
Department, Development Bank of Japan, Inc.

Takashi Fukushima, Chief Executive
Sustainability Accounting Co., Ltd.

Hiroshi Tojo, Senior Managing Officer, CSR
Hirokazu Shirata, Managing Officer, and others from Shimizu Corp.



External Awards

Winning projects at the 54th BCS Awards



Chapel, Miho Institute of Aesthetics (construction)



Marunouchi Eiraku Building, head office of Sumitomo Mitsui Trust Bank, Ltd., Bank of Tokyo-Mitsubishi UFJ, Ltd. Marunouchi 1-chome Building (construction)

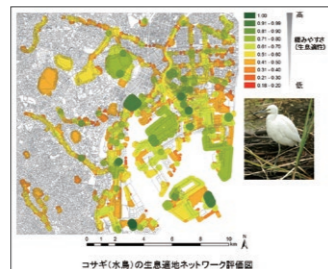
Japan Society of Civil Engineers Awards

2012 Technology Award, Group II*1



Construction of Obara Dam

Environmental Award, Group II



Development and implementation of the UE-Net² system for visualizing the ecosystem network effects of urban infrastructure greening

23rd BELCA Awards

Long-life Section



Meiji Jingu Gehaiden (construction for earthquake proofing reinforcement)

List of other awards won

Award name	Work recognized by prizes or awards	
Architectural Institute of Japan Awards: Institute Prize (Essay)	Assessment of seismic indoor damage based on estimation of furniture behavior	
Architectural Institute of Japan Awards: Recommended Work	Shimizu Corporation head office Hokkaido Institute of Technology, Gymnasium "HIT ARENA"	
Japan Society of Civil Engineers Awards: Technology Award, Group II	Fiscal 2013 Construction of storage facilities for national oil and gas reserves in Kurashiki and Namikata	
	Fiscal 2012*1	Continuous grade-separated junction near Keikyu Kamata Station on the Keikyu Railway
		Shin-Tomei Expressway (Yokohama-Nagoya route of Tokai Expressway No. 2)
		Restoration of the Port of Hachinohe northern breakwater (damaged in Great East Japan Earthquake)
		Construction of Yunishigawa Dam
Restoration work on expressways damaged in the Great East Japan Earthquake		
Preservation and restoration work on the Marunouchi-side buildings of Tokyo Station		
Japan Society of Civil Engineers Awards: Environmental Award, Group II	Fiscal 2013 Development and practical implementation of a blast-wave eater (BWE) sound-absorption box that can significantly reduce the low-frequency noise generated by blasting work during tunnel construction	
Japan Society of Civil Engineers Awards: Tanaka Award (Works Section)	Fiscal 2013 Kakamigahara Ohashi Bridge (new construction)	
	Shiodome Overpass, Yaesu Route, Shuto Expressway (renovation)	
Japan Society of Civil Engineers Awards: Technological Development Award	Fiscal 2012 Awashirasagi Ohashi Bridge	
	Fiscal 2013 Development of the paddle-sealed construction method	
Society of Heating, Air Conditioning and Sanitary Engineers of Japan Awards: Special Award for Remodeling	Kokuryu Shibakoen Building	
	Construction and performance verification for a next-generation green hospital at the Japanese Red Cross Ashikaga Hospital	
	Environmental and facilities planning at Nexus Hayama, a new training center for Daiichi Sankyo Co., Ltd.	
	Facilities planning for the Toki Works of Amada Co., Ltd.	
Society of Heating, Air Conditioning and Sanitary Engineers of Japan Awards: Technology Promotion Award	Planning, design, and construction of the Ritsugyosya Building: Realization of a "carbon halving" building	
	Planning, design, and construction of the Osaka Fukoku Seimei Building: Air-conditioning project intended to balance environmental performance and energy conservation	
	Air-conditioning project intended to balance environmental performance and energy conservation	
Global Environment Awards: Minister of Land, Infrastructure and Transport Award	Seicho-No-Ie's Office in the Forest	
Commendation from the Minister of the Environment for activities to counter global warming	Shimizu's head office building	
Environmental Communication Awards: Minister of the Environment Award	2013 Shimizu CSR Report (Vol. 19)	

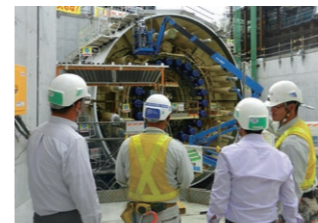
*1 For the Japan Society of Civil Engineers Awards: Technology Award, Group II (fiscal 2012), only projects in which Shimizu took part as contractor are indicated.
*2 UE-Net is a registered trademark of Shimizu Corporation that describes a system for visualizing the ecosystem network effects of greening the urban infrastructure.

Independent Assurance Report

The CO₂ emissions and reductions resulting from the efforts shown under "Preventing Global Warming—Ecological Mission" on pp. 40 to 41 have undergone independent review by Ernst & Young Sustainability Co., Ltd..



Interviewing top management



Construction site inspection (on-site inspection)



Inspecting evidence for forms and data

See the Shimizu website (http://www.shimz.co.jp/csr/environment/report/pdf/data_2014.pdf) for detailed information on calculation methods used for the Ecological Mission and other matters.

Environmental Management System (ISO 14001)

Policy and objective

Based on Shimizu Basic Environment Policy, Environmental Policies have been established for each of the following ISO 14001-certified sections: building construction and civil engineering business sections, Engineering Headquarters, and Nuclear Projects Division.

<http://www.shimz.co.jp/csr/environment/manage/index.html>

Organization

http://www.shimz.co.jp/csr/environment/activity/manage_sys.html

Results of external inspections and internal environmental auditing

<http://www.shimz.co.jp/csr/environment/report/pdf/report2014add2.pdf>

Continual improvements

New targets are set each year as a part of fiscal year targets under the Environmental Action Plan. Progress toward targets is continually monitored.

<http://www.shimz.co.jp/csr/environment/activity/plan.html>

Education


Environmental education is provided under the HR Development Policy through programs specialized for employees' job category and profession.

<http://www.shimz.co.jp/csr/human/education.html>

Editor's Afterword

Last year, efforts to address natural disasters took concrete shape. These included full-scale projects to achieve restoration from the Great East Japan Earthquake and the enactment of the Basic Law for National Resilience. This year's special feature, "Strength and Flexibility," introduces Shimizu's efforts to contribute towards resilient facilities and town development. The report features enhanced content throughout the Activities section with the topics of "disaster prevention and disaster mitigation" "safety", and "reliability". In addition, the report has added definitions for terms used and supplementary information along its outer margins to ensure accessibility for all stakeholders. We are committed to improving our CSR activities based on the feedback we receive from readers.

We welcome readers to submit comments and opinions on our website (<https://www.shimz.co.jp/toiawase/csr.html>).



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Building a better
working world

Translation

The following is an English translation of an independent assurance statement prepared in Japanese and is for information and reference purposes only. In the event of a discrepancy between the Japanese and English versions, the Japanese version will prevail.

Independent Assurance Report

To
Mr. Yoichi Miyamoto
President
SHIMIZU CORPORATION

Date: 6 June, 2014

Kenji Sawami
Representative Director
Ernst & Young Sustainability Co., Ltd. Tokyo

We, Ernst & Young Sustainability Co., Ltd. have been commissioned by SHIMIZU CORPORATION (hereafter the "Company") to provide limited assurance on the greenhouse gas emissions (hereafter the "GHG Indicators") of the Company for the year ended March 31, 2014 included in the "Preventing Global Warming—Ecological Mission" of the Company's "Shimizu CSR Report 2014" (hereafter the "Ecological Mission").

- The Company's Responsibilities**
The Company is responsible for the preparation of Ecological Mission in accordance with the Company's policies and standards¹ as criteria.
¹ Standards refer to the Company's standards which is found at web site (http://www.shimz.co.jp/csr/environment/report/pdf/data_2014.pdf), ISO14064-1 (Greenhouse gases —Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals) and Corporate Value Chain (Scope 3) Accounting and Reporting Standard (World Resources Institute and the World Business Council for Sustainable Development).
- Our Independence and Quality Control**
We have complied with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.
We apply International Standard on Quality Control 1 and accordingly maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.
- Our responsibilities**
Our responsibility is to express a limited assurance conclusion on the GHG Indicators of the Company for the year ended March 31, 2014 included in the Ecological Mission based on the procedures we have performed and the evidence we have obtained. The scope of our work was limited to assurance over the information marked with the symbol "✓" in the Report.
We conducted our limited assurance engagement in accordance with the International Standard on Assurance Engagements - Assurance Engagements Other than Audits or Reviews of Historical Financial Information (ISAE 3000), issued by the International Auditing and Assurance Standards Board, Practical Guidelines for the Assurance of Sustainability Information, revised in December 2012 by the Japanese Association of Assurance Organizations for Sustainability Information and the International Standard on Assurance Engagements 3410, Assurance Engagements on Greenhouse Gas Statements (ISAE 3410), issued by the International Auditing and Assurance Standards Board.
The summary of the procedures we performed for our assurance engagement is as follows:
 - Reading relevant documents with regard to the Company's Reporting Standards and the Company's policies and standards and inquiring of personal responsible thereof;
 - Reading relevant documents with regard to the design of the Company's internal control of the Indicators and inquiring of personal responsible thereof at the headquarters;
 - Performing analytical procedures of the GHG Indicators at the headquarters and the site visited (1 site); and
 - Agreeing to supporting documents and recalculating with part of the GHG Indicators at the headquarters on a test basis.
 The procedures performed in a limited assurance engagement are more limited in nature, timing, or extent than a reasonable assurance engagement. As a result, the level of assurance obtained in a limited assurance engagement is not as that obtained had we performed a reasonable assurance engagement.
- Conclusion**
Based on the assurance procedures performed, nothing has come to our attention that caused us to believe that the GHG Indicators of the Company for the year ended March 31, 2014 included in the Ecological Mission were not measured and reported in accordance with the Company's policies and standards in all material respects.

Quality Management System (ISO 9001)

Quality policy

Individual quality policies are established for each of the following segments: building construction, civil engineering, and engineering.

Building construction segment:

This segment is responsible for providing reliable and satisfactory technologies and services through sophisticated the most suitable quality. All employees focus on quality in processes ranging from sales through maintenance by identifying the value from customers expect.

Civil engineering segment:

Based on our management philosophy and management strategy, with all employees' best technological capabilities, good faith, and passion, this segment identifies the expected value of customers and society, achieves customers trust and satisfaction and contributes society through our continual provision of the construction works which are created by our sophistication towards the most suitable quality and meet requirements.

Engineering segment:

Coordinating customer needs and advanced specialized technologies, this segment increases customer satisfaction and wins the trust of customers by realizing valuable and outstanding environments and facilities that comply with all applicable laws and regulations. The segment delivers business potential, functionality, and permanence, all in accordance with the ISO 9001 international standard for quality management systems.

Continual improvements and external inspections

Each business segment establishes and maintains a quality management system based on the policies above, setting quality targets and reviewing the status of each activity. Each section also strives to achieve continual improvements based on external inspections, including surveillance inspections and reaccreditation, in full compliance with ISO 9001.



Shinji Anai, General Manager
Global Environmental Affairs Office,
Safety Administration & Environment Division



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