2015

Shimizu Corporate Social Responsibility Report

SHIMIZU CORPORATION

Message from the President

Targeting sustained corporate growth and contributing to society through the development of safe, reliable national infrastructure

The business environment confronting Shimizu

The Japanese economy has maintained its course of gentle recovery, and business conditions in the construction industry have brightened thanks to increasing construction investment in the private sector. Activity also remains brisk in the area of public works projects.

The most pressing issues related to the construction of safe, reliable national infrastructure are as follows: urgent restoration work in response to the Great East Japan Earthquake; recurring weather damage and natural disasters; and problems associated with an aging infrastructure.

Last year saw the passage of three acts intended to secure the workforce that will carry our industry into the future, including the amended Housing Quality Assurance Act, which establishes a legal framework for the sound development of the construction business. We must respond to these developments with a singular focus, making sustained progress in the improvement of work conditions and employee training programs, as well as productivity improvements to prepare for future declines in the working population.

Formulating and promoting Midterm Management Plan 2014

Last year, we revised our Midterm Management Plan based on the long-term Smart Vision 2010, formulating Midterm Management Plan 2014 to respond effectively to booming construction demand while preparing for long-term trends in the construction market.

In our core construction business, we will push forward with our technological capabilities, solutions, and building construction systems in order to meet construction demand and secure high quality and reliability, the very foundations of our business. We will also strive to maximize customer satisfaction by focusing on high-quality solutions attuned to the needs of both society and our customers in areas such as the environment, energy saving, and disaster prevention and mitigation.

In our global business, one of three key businesses, we are enhancing our training of global human resources. This includes continuing refinements of the international rotation system introduced in fiscal 2011. We will continue working towards our goal of increasing global business to about 20% of total business volume by 2020.

We are moving forward with various globalization initiatives and expanding into new business domains in the area of building stock management, including our investment, development, and BSP*1 businesses and our sustainability business, which encompasses renewable energy, nuclear power, coexistence with nature, and ecoBCP.*2

To further strengthen our business foundations, we are striving to increase corporate value through CSR management and the advancement of workplace diversity. These efforts include the expansion of opportunities for women and non-Japanese employees and the strengthening of HR management.

Overall, we strive to achieve enterprise growth and contribute to a sustainable society by seeking out new business challenges while remaining true to our social responsibilities and management principles, the precepts set forth in *Rongo to Soroban* (“The Analects and the Abacus”).

Pillars of CSR management

We are making headway on the following themes, each identified as one of three pillars of CSR management.

1. Fairness and transparency in business

In 2013, 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 prevent problems and mitigate risks by strengthening 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.

Alongside efforts to boost compensation for skilled workers and improve working environments for the workforce of the future, we are striving to improve our industry’s multilayered subcontracting system and encourage subcontractors to participate in social insurance programs.

We are also striving to communicate impartial and accurate information, including corporate information and management information, to all our stakeholders, including shareholders, investors, and customers.

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

Amid frequent natural disasters, including earthquakes, typhoons, mudslides, and volcanic eruptions, we see growing awareness of and demand for business continuity planning (BCP) designed to prevent and mitigate disasters. We are working to develop technologies based on the new Advanced Earthquake Disaster Prevention Laboratory established at the Institute of Technology to develop even more advanced BCP initiatives that will make it possible to withstand unforeseen

disasters. We are also promoting activities such as large-scale safety drills for local communities and our customers in order to prevent and mitigate the effects of disaster.

As always, we seek to ensure the highest 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 to promote our Ecological Mission.*4 This mission includes companywide targets for reducing carbon dioxide emissions and efforts to promote state-of-the-art energy conservation and energy-creation technologies (including renewable energy) 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 tours of our construction sites across Japan and participating in community events and volunteer activities, we have worked to enhance communications and establish close ties to local communities. We are always striving to improve work conditions and create attractive workplaces that can motivate diverse groups of employees and other workers. We also encourage good communications in the workplace and the promotion of mutual growth among employees. We are also undertaking sustained companywide safety initiatives on construction sites to strengthen workplace safety, with a special focus on accident prevention.

Through all these efforts, we hope to ensure that every employee can fulfill his or her role and full potential 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 2014 and activity policies for 2015. Based on the theme of “Building Together,” the special feature in this year’s report describes our efforts to contribute to an attractive and sustainable society in partnership with diverse stakeholders.

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

Yoichi Miyamoto
President, Shimizu Corporation

Yoichi Miyamoto

*1 BSP (Building Service Provider): A business that provides comprehensive services related to facility management and operations after the completion of construction
*2 ecoBCP: Eco measures undertaken in ordinary times that also account for the need for business continuity in times of emergency
*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 38 and 39.

Toward an Abundant and Sustainable Society

Editorial Policy

■This report is intended to serve as an important tool for clearly disclosing to stakeholders*1 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 of “Creating Together,” the special feature in this year’s report introduces examples of how Shimizu is providing increased value to society, alongside customers and other stakeholders, by addressing issues ranging from quality control to energy and disaster resilience. 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/report2015.html

Our Mission	Foundations of CSR Activities	Social Issues	Targets and Action Policies	Activities
A company that continues to grow alongside society; a leader in creating environments where people can live in peace of mind	Fairness and Transparency in Business	Corporate governance Compliance Fair transactions Information security	・Proper implementation of the corporate governance systems of group companies and thorough risk management in every management process ・Complete and group-wide adherence to corporate ethics, including the elimination of actions detrimental to society ・Improving the transparency of transactions and building relationships based on mutual trust with business partners ・Comprehensive information security, including efforts at all group companies and business partners ・Achieving management transparency through full disclosure of accurate, fact-based information through the most appropriate means	Corporate Governance Fair Business Practices Disclosure
	The Creation of Value Surpassing the Expectations of Customers and Society	Safety and Reliability Global warming Environmental pollution Biodiversity	・Implementing energy-conservation measures, facilities, and community planning in normal times, based on the need to secure business continuity in the event of emergencies ・Achieving value beyond the expectations of customers and society for all Shimizu works ・Achieving solutions to new societal problems through continuing technological innovation ・Achieving zero-carbon buildings ・Reducing carbon dioxide emissions by 30% (relative to fiscal 1990) by fiscal 2020 as part of our Ecological Mission ・Developing business activities to contribute to biodiversity	Safety and Reliability Delivering Optimal Quality Contributing to the Environment
	The Pursuit of Business Activities that Coexist with Society	Human resource development Human resource diversification Aging society with fewer children Working environment	・Realizing workplaces where diverse human resources, including employees and business partners, can work in safety and with a keen sense of motivation ・Completely eliminating major accidents and improving the skills of young workers through partnerships with business partners ・Providing support for rapid recovery from damage and maintenance of local communities and their economic activities in the event of natural disasters ・Enhancing activities that contribute to society in partnership with local communities and stakeholders	Regard for Human Rights Improving the Working Environment Social Contribution Activities

Table of Contents

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 given in Activities cover only the activities of the head office and domestic branch offices of Shimizu Corporation.)

■Period covered: Chiefly fiscal 2014 (April 2014 through March 2015), although some activities before and after this period are included.

■Publication of next edition: June 2016

■This is a free translation into English of our CSR report issued in Japanese and is provided solely for the convenience of English-speaking readers.

Corporate Information

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

■CSR Report
Social and environmental activities: Our stance and actual performance
・CSR activities
(http://www.shimz.co.jp/english/csr/basis.html)
・Environmental accounting

■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*2)

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 16 for more information on these KPIs

*1 Stakeholders: Parties with a direct or indirect interest in our business. (See p. 6 for details.)

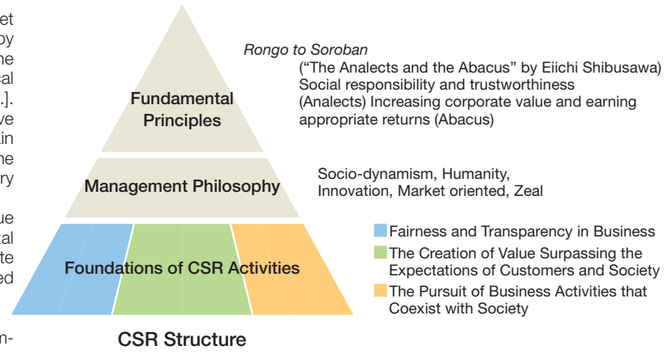
*2 KPI: Abbreviation for Key Performance Indicator.

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

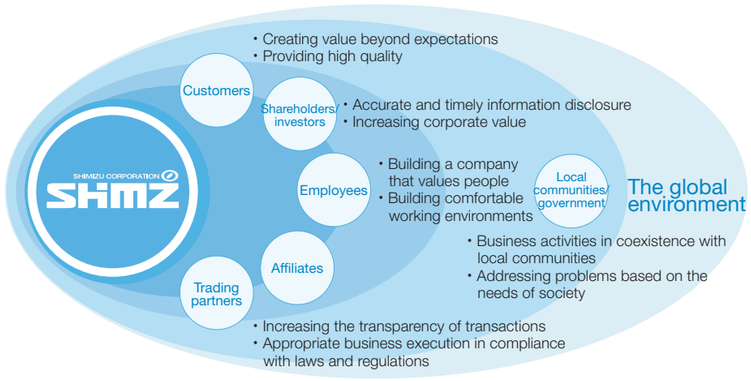
See the Shimizu website (http://www.shimz.co.jp/csr/) for more information.



CSR Structure

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 16 and 17 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	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.
Human Rights			Principle 4:	the elimination of all forms of forced and compulsory labor;	Principle 8:	undertake initiatives to promote greater environmental responsibility; and		
Labor Practices	Principle 2:	make sure that they are not complicit in human rights abuses.	Principle 5:	the effective abolition of child labor; and				
The Environment			Principle 6:	the elimination of discrimination in respect of employment and occupation.	Principle 9:	encourage the development and diffusion of environmentally friendly technologies.		
Fair Operating Practices								
Consumer Issues								
Community Involvement and Development								

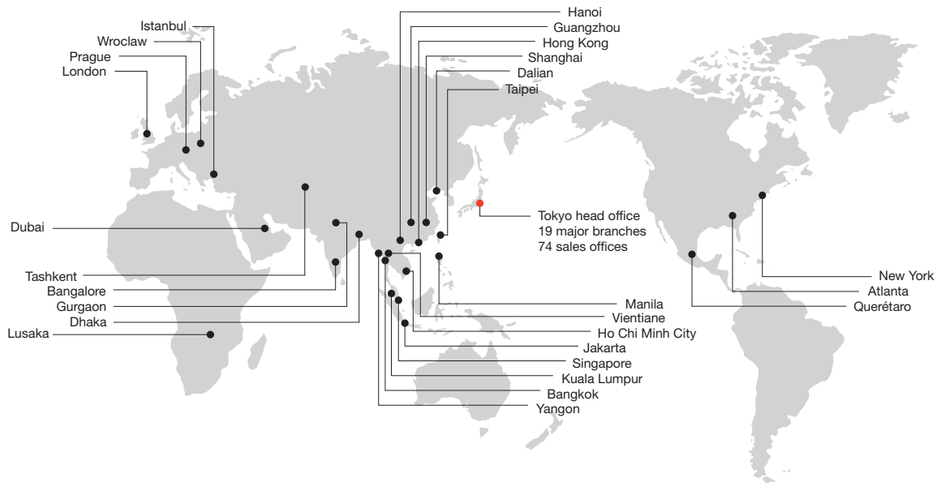
THE GLOBAL COMPACT
Network Japan
WE SUPPORT

* 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, 2015)



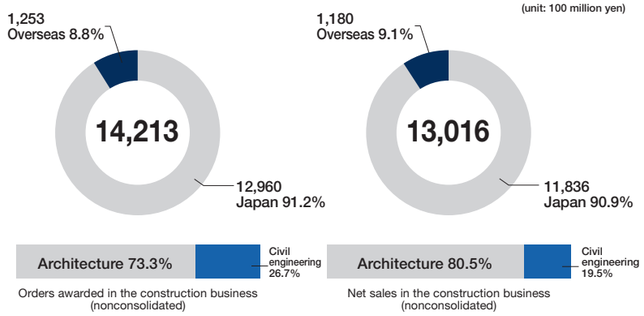
Corporate profile

Established	:	1804
Capital	:	74.3 billion yen (as of March 31, 2015)
No. of employees	:	10,819 (as of April 1, 2015)
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)	:	1,340.7 billion yen (fiscal 2014)

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 2014)

(unit: 100 million yen)



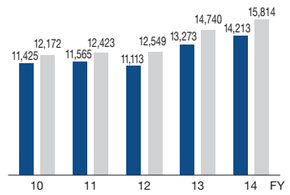
Orders awarded in the construction business (nonconsolidated)

Net sales in the construction business (nonconsolidated)

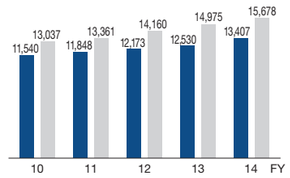
Financial condition

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

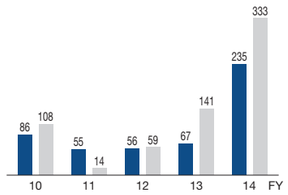
Orders awarded in construction business



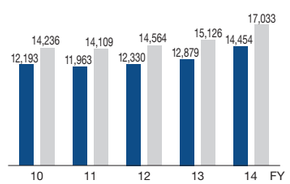
Net sales



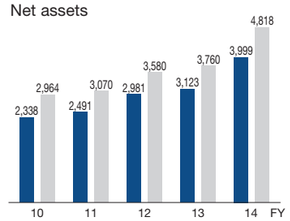
Net income



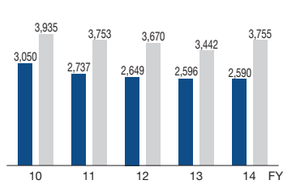
Total assets



Net assets



Interest-bearing debt



Special Feature : Creating Together

Shimizu's management principles are based on the precepts set forth in *Rongo to Soroban* ("The Analects and the Abacus") advocated throughout his life by Eiichi Shibusawa, who in 1887 was appointed a senior advisor to Shimizu. Shibusawa proposed a balance between the economic activity symbolized by the abacus and the ethical humanism of the *Analects* of Confucius (552 – 479 B.C.). These words also describe the spirit of the three types of satisfaction sought by traditional Omi merchants: a satisfied seller, a satisfied buyer, and a satisfied world.

In each project, individual Shimizu employees strive to earn appropriate returns and realize value that surpasses the expectations of the customer, meanwhile increasing value within the world and society at large.

By examining three projects, this special feature provides examples of value realized by Shimizu alongside customers, government, local communities, and business partners.

Oase Shibaura MJ Building
(Building A)

Oase Shibaura Residences
(Building B)

Oase Nexus Shibaura
(Building C)

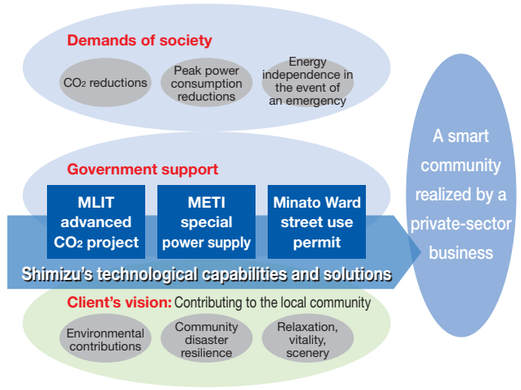
Client: Marujin Holdings Co., Ltd.
Design/construction: Shimizu
Uses: offices (Building A), housing (Building B), offices (Building C)
Total floor area:
Building A 13,060 m², Building B 6,155 m², Building C 2,183 m²
Floors:
Building A 7 above-ground floors, Building B 14 above-ground floors, Building C 6 above-ground floors
Structure:
Building A: steel-frame seismic isolation structure,
Building B: reinforced concrete seismic isolation structure,
Building C: steel-frame, seismic vibration-damping structure

01 Achieving the client's vision in partnership with government
Oase Shibaura

The first smart community built within an existing district in anticipation of future policy trends

Along with the need to reduce carbon dioxide emissions to help prevent global warming, society since the Great East Japan Earthquake has demanded that buildings reduce their peak power consumption during ordinary times while securing energy independence in the event of an emergency. In addition, government increasingly expects the development of safe, attractive urban communities as a result of national resiliency planning and international competition among urban centers.
This project, which was carried out in the same area as that in which the project owner's company was founded, is the first smart community to be built within an existing district. It realizes the client's vision—namely, to contribute to the local community through district-level projects—in cooperation with energy companies and cross-functional activities at Shimizu, as well as deregulatory measures taken by the Ministry of Land, Infrastructure, Transport and Tourism, the Ministry of Economy, Trade and Industry, and Tokyo's Minato Ward.
Oase Shibaura is a new model for urban development that combines community exchange and disaster resilience with smart energy use across its three sites.

■In partnership with government

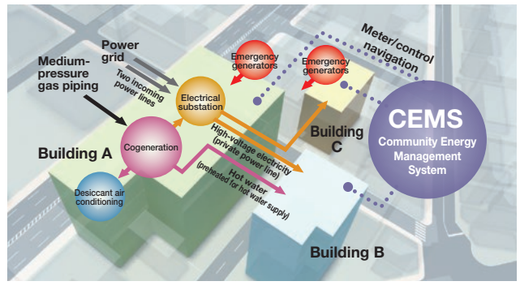


Obtaining project authorization and legal permits from three government agencies simultaneously

Thanks to support from the client, this project received simultaneous permits from multiple government agencies—the Ministry of Land, Infrastructure, Transport and Tourism, the Kanto Bureau of Economy, Trade and Industry, and Minato Ward—based on recognition of its social value. Although it is a private business, Shimizu was thus authorized to implement the smart use of electricity and heat in multiple blocks across public roads.

- **Named a leading project that introduce cutting edge CO_2 reduction technology of housing and buildings by the MLIT**
  Thanks to smart management of energy across multiple sites and efforts to improve energy independence in the event of an emergency, this project was named an exemplary project for carbon emissions reductions in the housing and building sector by the Ministry of Land, Infrastructure and Transport and awarded subsidies from the national government equal to about one-half of the project's costs related to smart energy use.
- **Permit for special energy supply under the Electricity Business Act from the Kanto Bureau of Economy, Trade and Industry**
  Typically, electricity is drawn via one connection at each site. However, in keeping with policies intended to promote use of independent distributed power supply (cogeneration) and other goals, the project received a special energy supply permit, enabling electricity received at a single point to be distributed to three sites. This makes it possible to flexibly generate and purchase electricity across all three sites.
- **Street occupancy permit obtained from Minato Ward**
  In recognition of this project's contributions to community disaster resilience and other factors, it was issued a street occupancy permit by Minato Ward. This has made it possible to install private power lines and heat piping under public streets, something essential to the project's shared use of electricity and heat across all three sites.

■A leading model for urban development



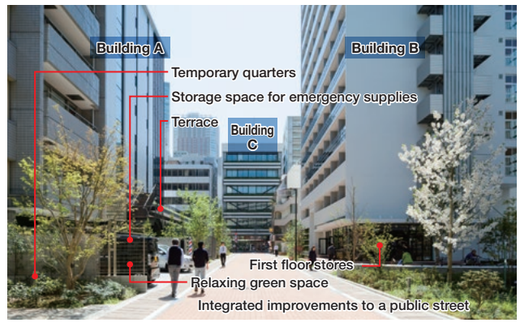
Shared energy use and CEMS energy controls

Creating three kinds of value: leveling power use, achieving low carbon emissions, and improving disaster resilience

The three building sites are connected by private power lines and heat piping, enabling shared energy use across all three buildings and realizing coordinated peak power controls and low carbon emissions not possible for a single building.
Additionally, all three buildings can share cogenerated electricity to power elevators and lighting in the event of an emergency, rendering the buildings more disaster resilient.

- **Leveling power use through a shared energy supply strategy incorporating purchasing, generation, and conservation**
  Peak power consumption: reduced by 25%
- **Reducing carbon dioxide emissions through advanced use of heat for dehumidification, heating, and hot water supply**
  CO_2 emissions: reduced by 30%
- **Improving disaster resilience through shared use of private power generation across all three sites in the event of an emergency**
  Emergency power supply: 50% of normal power supply secured
  (adding the capacity of emergency generators)

■In partnership with the client's vision



An open space that contributes to community exchange and disaster resilience

Contributing to community exchange during ordinary times and disaster resilience in the event of an emergency

This development project is located in the area where Marujin Holdings Co., Ltd., the client, was founded. The project is intended to give concrete form to its strong concerns for the community—not merely by increasing corporate value, but by advancing community development through attractive urban cityscapes and local community bonding.

- **Building a space for exchange in ordinary times based on a public street between the three sites**
  - Creating a bustling streetscape with stores on the first floors of all three sites
  - Providing abundant green spaces for relaxation
  - Integrated paving of the street and sites
- **Contributing to disaster resilience in the event of an emergency**
  - Terraces function as evacuation spaces in the event of tsunami or floods.
  - Provides temporary quarters for those unable to return home and storage space for Minato Ward emergency supplies.
  - Provides open spaces for use in emergency activities, including cooking and serving food.

02 Across campus and in partnership with the community
Chubu University's Smart Eco-Campus®

A smart campus as a base for disaster resilience and activities for the community

Launched in 2012 as a joint feasibility study with Chubu University, this project is intended to give concrete form to the University's campus development vision of using the campus as a center for research and the demonstration of smart energy use. Drawing on the active participation of the entire university, including students, faculty and staff, and facility managers, the deployment of smart technologies has expanded from five buildings in a single college to over three colleges.
Since 2014, in addition to accelerating deployment of smart technologies campus-wide, the University has expanded its partnership with the community to cut carbon dioxide emissions and contribute to disaster resilience. These efforts have earned recommendations from the local government and certification from the national government. The University is now preparing to enter the stage where it can function as both an educational facility and a center supporting safe, eco-friendly communities.

*Smart Eco-Campus is a registered trademark of Shimizu Corporation.

Building a college grid
- Adopting smart technologies in college buildings
- Realizing a college smart grid

Toward a smart campus
- Shared energy use among college grids
- Building a whole campus grid

Contributing to the community
- Contributing as a community disaster facility
- Launch of cooperative efforts with national and local governments

Partnership with local government
- Deploying low-carbon technologies
- Promoting vitalization and exchange with local government

2012 Start of joint feasibility study (Chubu University, Shimizu) → 2014 Start of community partnership project (Ministry of the Environment, city of Kasugai, Chubu University) → Building a safe, eco-friendly community

College of Life and Health Sciences

Kasugai Campus

The Kasugai Campus and surrounding area

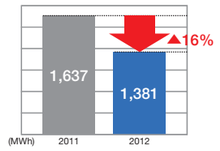
Kozoji New Town
©Google

■Applying smart technologies to five college buildings, including existing buildings

Smart grid feasibility study with Chubu University
As the university's campus grew, the electrical infrastructure began to approach its limits. This project began as one of Japan's first joint feasibility studies on a smart grid that enables optimal control of power generation and conservation, thereby making more effective use of electricity.

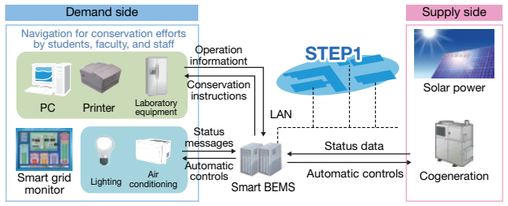
Promoting energy conservation activities with faculty, staff, and students
This project proposed energy conservation activities that extended to the use of laboratory equipment. It introduced an energy conservation navigation system to calculate target values from the Smart BEMS energy forecasting system and to encourage required conservation activities.

Demonstrating the results of the smart grid
As a result of campus-wide activities by facility managers, facility users, faculty, staff, and students, the project cut total electricity use in 2012 by 16% and peak power consumption by 24%.



Reductions in college electricity use


Students looking at a smart grid monitor



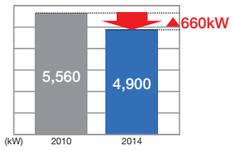
Overview of the college smart grid

■Developing a shared campus-wide infrastructure and a smart campus

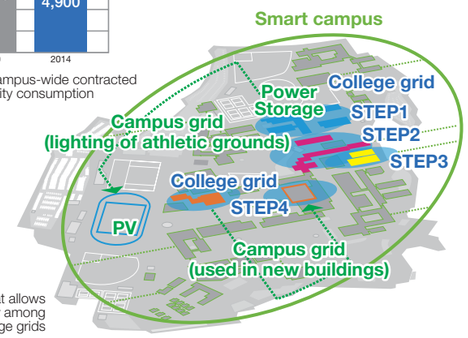
Developing information infrastructure and visualization of energy use
The project developed information infrastructure, including campus-wide energy measurement and conservation navigation. This makes campus activities pursued by faculty, staff, and students more transparent.

Working with suppliers
A common communication network was developed to connect and control the various power generation, power storage, air conditioning, and lighting equipment on campus, allowing each device to communicate with the Smart BEMS system.

Building a campus grid
As efforts gradually expanded from individual colleges, the campus-wide savings on contracted electricity vs. fiscal 2010 reached 660 kW in fiscal 2014.
Plans call for the entire campus to become a smart campus by 2016. The goal is to build a campus grid that allows shared use of electricity across all colleges (cutting CO_2 emissions by 25%).



Decrease in campus-wide contracted electricity consumption

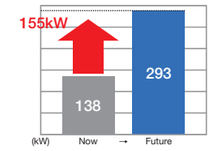


The campus grid that allows sharing of electricity among college grids

■Environmental and disaster resilience efforts recognized by the national government

Serving as a community disaster facility
The project's steadily expanding generator facilities can be used not only during normal times but as an independent source of electricity they can be used when electricity and gas are cut off in the event of a disaster. As such, they help increase the safety of faculty, staff, and students in the event of an emergency.
The campus, designated a local evacuation center as well as a wide-area evacuation center by the city of Kasugai, helps the surrounding community become more disaster resilient thanks to its high degree of energy independence.

Recognized by national and local government
The Ministry of the Environment of Japan has certified this project as a Green Plan Partnership Project in recognition of its advanced technologies and strong partnership with the city of Kasugai. As part of this recognition, a symposium was held, with the support of the Ministry and the city of Kasugai, to publicize the project's achievements and future plans to city residents and society at large.



Expanding power generation capacity and increasing independence


Students, faculty, and staff also took part in the symposium

Joint industry-academy-government symposium held

■Technological and interpersonal exchange with local government, as an educational institution

In partnership with local government
In addition to Chubu University's activities to reduce CO_2 emissions, which will help meet the target (17% reductions in CO_2 emissions) of the local government's environmental action plan, a liaison council has been established to deploy low-carbon technologies at local government facilities.

In partnership with city residents
The campus holds eco tours so that local residents can learn about effective energy use via smart campus technologies. Chubu University also contributes to building vital communities through partnerships with companies in Kasugai and Kozoji New Town, which has a dense population of senior citizens.

Chubu University	Partnership	City of Kasugai
Adoption of renewable energy	Building a low-carbon community	Promoting renewable energy
Installation of energy conservation facilities		Promoting activities by residents and businesses
Smart Eco Campus		Improving the community environment
Promoting resource recycling	Promoting recycling	Building a recycling-based society
Participation in COP10	Coexistence with nature	Preserving the natural environment
Designated evacuation center, wide-area evacuation center	Community disaster resilience	Developing a community with disaster readiness
Developing local (information) bases for community activities	Aging population	Support to safeguard senior citizens

Promoting partnerships in low carbon, disaster resilience, and other areas

03 With specialists from around the world
268 Orchard Road (Singapore)

Building a massive, complex column-less space with world-wide partners

Singapore is constantly reinventing itself, serving as an attractive location that continually creates new value. Alongside its advanced social systems, the urban environment plays a key role in attracting workers, businesses, logistics activities, funding, and information from around the world.
Constructed on Singapore's most important main street, this building realized the client's strong desire to introduce innovative impact into that constantly evolving cityscape. Sparkling like a jewel case at night, the retail facility posed some of the most difficult design and construction challenges ever encountered. The building, with its signature feature of three massive glass boxes, employs a daring, unconventional structure composed entirely of lightweight stainless steel sashes and wires. As a result, the building is completely free of collums and beams. This world-class project emerged and achieved this impressive shape from an unlikely collaboration: the innovative ideas of a glass façade designer from France, the supply and technological capabilities of sash makers in Italy and China, and Shimizu's design and construction technologies and general solutions capabilities. All of these are integrated for this world-class quality for this project.

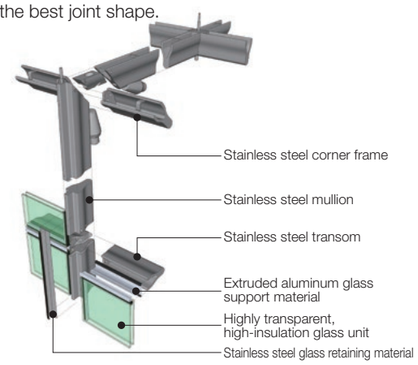
Client: RE Properties Pte. Ltd.
Architectural design: Raymond Woo & Associates Architects
Façade concept/schematic design: Hugh Dutton Associés
Façade design development supervision: Shimizu
Construction: Shimizu
Use: Retail facility
Structure: Steel frame, reinforced concrete, stainless steel
Floors: B1-12F; building height: 72 m
Building coverage area: 2,490 m²; total floor area: 16,971 m²

Specialist engineers participated
Structural design: Chong & Lee Consultants
Mechanical & Electrical design: Bescon Consulting Engineers/ PTA Consultants
Lighting design: Lighting Planners Associates
Façade sub-contractor: YUANDA Australia
Fire consultant: ARUP Fire Singapore

Design phase
The glass box frame uses high-strength solid stainless steel, a material rarely used in building structures. More than 100 options of connection details between each member were studied from the view point of design performance, rationality of the structure, and constructability. Thus we had finalized the best joint shape.

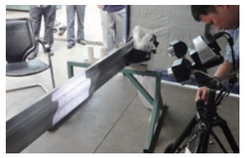

Concept study model

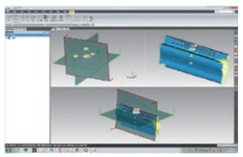

Studying joint details using actual materials



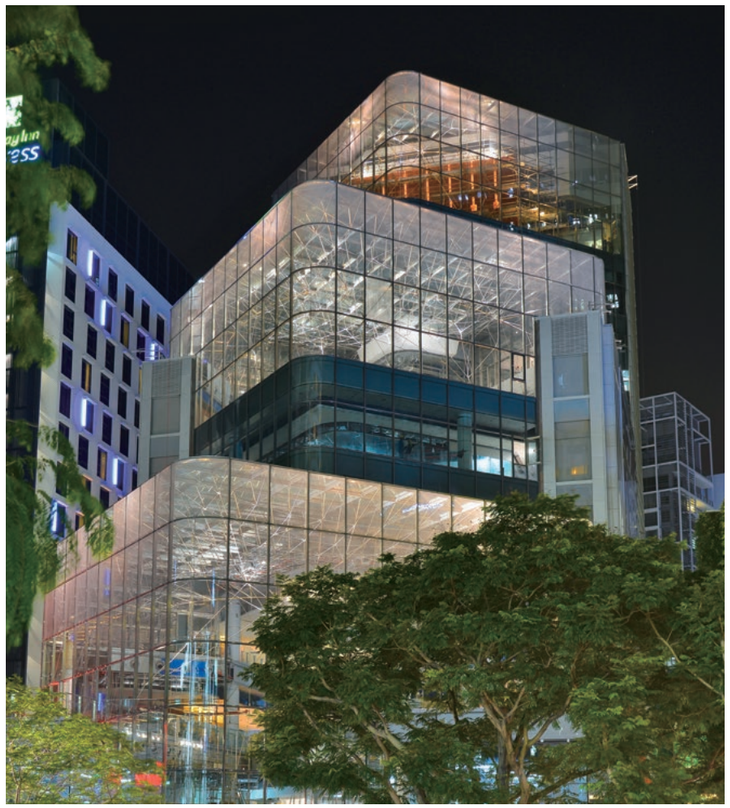
Details of the glass box frame

Construction phase
Because of the unique shape, all stainless steel components were a little distorted during production and different shaped. Therefore, in order to precisely assemble them, all components were scanned by 3D scanners, digital-assembled and mockuped by computer to coordinate the different joint shapes needed for each point of intersection on the frame.


Scanning with a 3D scanner


Computerized digital mockup


Prepared joints



TOPICS

Construction on the Shōsōin treasure house, a national treasure

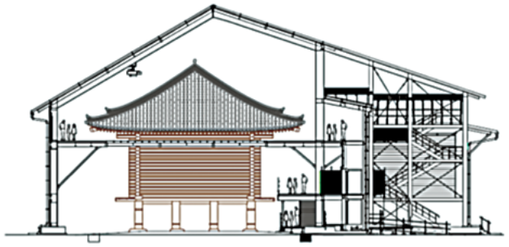
A treasure house reborn

Preserving a national treasure for the next century

During the Nara and Heian periods, many major temples built treasure houses in which to store their valuables. Over the years, most of the treasure houses gradually disappeared. Today, only one, located at Tōdai-ji in Nara, retains its original form. Used in the past to store the treasures of the emperor of Japan and Tōdai-ji Temple, it was built around 756 A.D. The graceful and magnificent all-cypress structure has adorned Nara for more than 1,200 years. It was named a National Treasure of Japan in 1997 and added to the register of World Heritage Sites in the following year as one of the Historic Monuments of Ancient Nara.
Since its construction, the treasure house has undergone numerous repairs to keep it. This specific construction project was implemented to address concerns about rainwater leaks. The structure had sustained gradual damage since the last major repairs were conducted 100 years earlier, in 1913, when the entire building was disassembled and rebuilt. Our previous experience maintaining Tōdai-ji facilities was served, including construction work on the East Repository (1953), where treasures are stored and preserved, and large-scale repairs conducted during the Showa era to the Great Buddha Hall (1980). In addition, it was also a valuable opportunity to gain expertise that would prove invaluable to this project through its repairs of other historical structures and the use of the latest structural analysis technologies. The project was completed in October 2014.
Subsequent repairs to Shōsōin should take place in about 100 years. Through its work on this project, Shimizu hopes to hand down the spirit of monozukuri to future craftspeople and citizens.

Building a protective temporary roof

The first step in the construction process was to build a massive steel-framed temporary roof, weighing approximately 360 tons, to protect Shōsōin from wind and rain and to serve as scaffolding for construction work. The narrow site ruled out use of the sliding method (whereby a steel frame is assembled on the side of the building and slid horizontally into place), which is typically used for erecting temporary roofs. Instead, a crane was used to assemble the steel frame from above Shōsōin. This was handled with great care, from the building of the temporary roof through the disassembly process, to ensure that not a single bolt was dropped onto the building.



A cross-section of the temporary roof: 48 m wide, 35 m deep, 19 m high

■Earthquake resistant

Shōsōin was built using the *azekura* storehouse method, with walls made of interlocking triangular timber. The most remarkable feature is how the building, weighing approximately 500 tons, rests loosely atop 40 short independently standing supports, each measuring 60 cm in diameter. This structure would be inconceivable in contemporary engineering. To assess this structure's seismic performance, we performed a detailed analysis focusing on the rocking ability of the short supports. Although the structure lacked the earthquake-resistant materials, such as earthen walls, generally seen in traditional wooden construction, the results indicated surprisingly good earthquake resistance.
To further improve the structure's seismic performance, we repaired and improved the steel-reinforced roof truss (behind the ceiling) that were added in the 1913 construction and reinforced the beams and pillars inside the structure with new cypress materials. In addition, we restored the edges of the eaves—which were sagging some 10 cm to 15 cm—to their original shape, restoring the structure's original beauty.

■Rain resistant

One of the highlights of this construction project was the replacement of all of the roof tiles. In principle, repairs to cultural properties are based on the reuse of original construction materials and strong efforts to retain the original appearance. Expert appraisals indicated that the roof had about 730 flat tiles and 100 semicircular tiles retained from the Tenpyō period when Shōsōin was first built. After examining the tiles, we made the decision to reuse 8,400 existing tiles and, wherever possible, to employ traditional tile-making methods for the rest of the roof. Where absolutely necessary, higher-quality modern methods were used for parts of the roof in need of greater weather resistance.
Since the reused tiles, the new tiles made using traditional methods, and the new tiles made using modern methods all differed in weight, two different tiling methods were used: either placing earth beneath the tile or attaching the tile directly to the underlying base. These methods were applied carefully in order to maintain the overall weight and balance of the structure.

Shōsōin is supported by 40 short supports.

Repairing and improving the truss

Reinforcing beams and pillars
(lighter-colored material is reinforcement)

Tile construction

Building tiles to last a millennium

Kiyokazu Yamamoto, Chairman, Yamamotokawarakougyou Corporation

We removed all 35,400 tiles from the roof, had each appraised by experts to determine when it was made, and carefully identified those tiles that could be reused through visual inspections and physical tapping. The three key factors to making high-quality tiles are the kiln, the earth, and craftsmanship. Prior to these repairs, about 70% of the tiles on the west face of the roof were reproduction tiles made for the 1913 repairs. These tiles were made from the highest quality sieved earth to faithfully reproduce the original Tenpyō period tiles. For us, as tile craftspeople, these tiles are jewels; unfortunately, they failed to harden sufficiently in the kiln, resulting in durability problems. For this reason, we replaced most of them with tiles made using modern methods. This experience reminded us anew how critical the kiln is to tile-making. For the south and east faces of the roof, which are exposed to significant sunlight but feature good environmental conditions for tiles, we employed reused tiles and new tiles made by traditional methods, which involve much hand-crafting and about 10 times the work compared to modern methods. Since the tiles made in each period differ in their dimensions, curvature, and surface finish, we had to carefully arrange each of the tiles in order to complete a sturdy, attractive roof. (English translation from Japanese)

Like the homecoming of a cherished family member

Yasuo Mitsuhashi
Director, Engineering Division, Kyoto Office, Imperial Household Agency

The repairs had been discussed with experts in each field and the construction work was being handled by Shimizu, so I wasn't concerned at all about technical issues. I was pleased by how impressed the attendees were when they saw Shōsōin up close during the five site tours held during construction.
Shōsōin is for me like a family member who's returned reinvigorated and in splendid shape after a checkup and some minor treatment at the hospital, with the doctor giving Shōsōin a clean bill of health for another 100 years. I would like to thank everybody involved in this project. (English translation from Japanese)

Passing on the ideas and techniques of our predecessors to future generations

Masato Fujisawa
Construction Manager, Temple Construction/Residential Division, Tokyo Branch

Through the sense of contact with lumber and tiles from more than 1,200 years ago, this project gave me a true sense of just how hard our predecessors worked to leave this building to us. I learned how difficult and how important it is to pass this spirit on to our descendants. The DNA of the craftspeople who made and laid these tiles 1,200 years ago remains alive in today's craftspeople. I, too, want to pass along the techniques I learned to subsequent generations. These techniques should now become part of Shimizu's heritage. I'm delighted to have contributed to the successful repair and preservation of this structure.

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 2014 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 18, 24, and 42) 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.

Self-assessments: Targets surpassed / Targets generally achieved / Targets not met

Theme	Effort	Main activities, targets, and performance in fiscal 2014	Self-assessments	Targets and efforts for fiscal 2015 and beyond	ISO26000: Organizational governance	ISO26000: Human rights	ISO26000: Labor practices	ISO26000: Environment	ISO26000: Fair operating practices	ISO26000: Consumer issues	ISO26000: Community involvement and development	Global Compact: Human rights	Global Compact: Labor	Global Compact: Environment	Global Compact: Anti-corruption	Page
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 2014 and strengthening related activities	●				●						●	P19
	Improvements in the Business Environment	・Continuing to address new security risks (targeted attacks, social media) ・Conducting implementing comprehensive information security measures, including security measures for specialist contractors ・Following up on key risk management items from fiscal 2014 and strengthening related activities ・Implementing practical large-scale drills in partnership with group member companies, business partners, and customers; implementing disaster-prevention activities in partnership with local communities ・Developing and using a disaster information-sharing system to promote more systematic responses		・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 2015 and strengthening related activities ・Deploying disaster prevention activities in partnership with local communities; implementing and stepping up the pace of periodic practical large-scale drills	●				●	●						P19 – P20
	Corporate Ethics and Compliance	・Holding compliance training for all employees of Group member companies ・Establishing rules to prevent bribes and corrupt practices in Japan and overseas ・Implementing environmental risk management training at meetings of construction managers and supervisors at all branches ・Implementing basic training on construction byproducts for all employees working in the field ・Providing Intellectual property(IP) training in four head office sections and seven branches, as well as IP training for new employees and newly appointed 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		●	●	●	●			●	●	●	●	P21
	Disclosing Corporate Information/Fair and Transparent Transactions	・Continuing to promote CSR procurement, including joint efforts with specialist contractors ・Promoting improvements in the multilayered subcontracting structure and participating in social insurance and other programs with partner companies ・Proactively communicating important information to shareholders, securities analysts, and overseas investors ・Enhancing the communication of information via the website and Twitter, both at home and abroad		・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		●	●	●	●			●	●	●	●	P22 – P23
The Creation of Value Surpassing Surpasses the Expectations of Customers and Society	Safety and Reliability Efforts	・Learning from past earthquakes to develop technologies for improved BCP (Use of a large-scale shaking table and a large-stroke shaking table began with the completion of the Advanced Earthquake Disaster Prevention Laboratory. Related technologies include a system for predicting damage to high-rise buildings and the Shimizu Safety & Security Floor, etc.) ・Supporting recovery and restoration work following the Great East Japan Earthquake (e.g., completing radiation decontamination in Hirono followed by the return of the area's first residents)		・Contributing to improved BCP programs for customers and to greater safety and security for society through proposals and application of the latest technologies, as well as an earthquake simulation program that capitalizes on the latest facilities ・Implementing full-scale radiation decontamination in Okuma and Tomioka to support the return of residents in areas to the north of Hirono; implementing the radiation decontamination of farmland in Minamisoma					●						P25 – P29
	Delivering Optimal Quality	Architectural construction: ・Comprehensive implementation of quality policy deployment tables for priority quality management topics in construction, as requested by customers, and management follow-up processes based on these tables, thereby strengthening efforts to focus on quality and identify the value expected by customers ・Holding in-house seminars during Quality Month, both to review Shimizu's history and to assess its competitive advantages in technology and quality Civil engineering: ・Energetically promoting activities to prevent the recurrence of quality and safety problems in process-specific management ・Preparing *Kataritsugu* ("Handing it down") pamphlets for each process and distributing them to related technicians ・Implementing e-learning on the topic of defects that actually occurred		Architectural construction: ・Energetically promoting activities to accurately identify customer preferences and apply them to priority construction management topics ・Implementing improvement activities based on customer satisfaction surveys ・Preventing defects by developing design and construction methods that account for workability, including ease of construction Civil engineering: ・Making sustained efforts to prevent the recurrence of defects; striving to eliminate serious defects caused by technological factors; and deploying new technologies such as CIM and robotics to develop high-quality social infrastructure					●						P30 – P35
	Contributing to the Environment New business initiatives	・Promoting energy businesses, including area and on-site energy supply services and cloud-based energy management services ・Expanding business domains to encompass agriculture, forestry, and fisheries (e.g., strawberry cultivation)—fields in which the effects of global warming are expected to be pronounced—based on sustained efforts to promote businesses that help prevent global warming overseas ・Promoting various proposals and business efforts to address the aging public infrastructure		・Continued participation in the power generation business with a focus on renewable energy; expanding the smart city business based on the power generation and energy service businesses ・Continuing to promote businesses to help prevent global warming as well as businesses in the areas of agriculture, forestry, and fisheries overseas ・Promoting efforts to target infrastructure projects in Japan, which are currently characterized by a growing shift from public management to public/private partnerships					●				●		P36 – P37
	Mitigation Global Warming Ecological Mission	・Efforts undertaken as part of the Ecological Mission reduced CO_2 emissions by 22%, exceeding our fiscal 2014 target of 17% 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.		・Carrying forward the Ecological Mission, with its goal of reducing CO_2 emissions by 30% relative to fiscal 1990 levels ・Considering revisions to the Ecology Mission to reflect Japan's post-2020 target figures (currently under study in preparation for COP21), future energy mix plans, related electricity base units, and other changing circumstances					●				●		P38 – P39
	Biodiversity Initiatives	・Set as an environmental activity goal a minimum of 14 biodiversity-related proposals; implemented 17 such projects ・Promoting the preservation of ecosystems through construction activities, R&D, and social contribution activities in accordance with the Shimizu Action Plan on Biodiversity (The planting of 4,550 mangrove trees by Thai Shimizu)		・Proposing at least 14 biodiversity-related projects; pursuing related projects ・Continuing to promote activities in accordance with the Shimizu Action Plan on Biodiversity (The planting of a cumulative total of 10,000 mangrove trees by Thai Shimizu in FY2016) ・Continuing study of medium- to long-term targets launched with an eye towards the years 2030 and 2050					●				●		P40
	Addressing Construction Byproducts and Fighting Pollution	・Continuing to promote 4R Activities; deploying new measures to reduce construction byproducts ・Continuing to promote and improve the Shin Kan-tasu (improved Kan-tasu) construction byproducts management system ・Making efforts to achieve 100% use of e-manifest forms (81%)		・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 ・Making efforts to achieve 100% use of e-manifest forms					●				●		P41
The Pursuit of Business Activities that Coexist with Society	Realizing a Company that Values People	・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)		・Implementing 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, hiring and promoting non-Japanese employees, hiring those with disabilities)		●	●					●	●			P43 – P45
	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 ・Preventing accidents during irregular tasks ・Preventing accidents among older workers		・Eliminating falling accidents, accidents caused by cranes or heavy equipment, and accidents caused by the collapse or toppling of heavy structural components ・Preventing accidents caused by a failure to examine work procedures when changing assignments			●						●			P46 – P47
	Interacting with Society /Engaging in Social Contribution Activities	・Initiating sponsorship of the nonprofit STAND to help develop and promote athletics for those with disabilities ・Deployment of activities matched to the character of each community by branches, sales offices, construction sites, Group companies, and other facilities: 23 Medama Projects (Sustained afforestation activities at our Osaka and Nagoya branches over seven years) ・Number of participants in site tours across Japan: 15,823		・Cooperating with the nonprofit STAND and continuing Medama Projects ・Enhancing community outreach activities to achieve the near-term goal of 20,000 annual participants in site tours across Japan					●	●			●		P48 – P50

The Creation of Value Surpassing Surpasses the Expectations of Customers and Society

KPI	FY2014 performance [target]
Number of peer-reviewed papers submitted	: 106 [90]
Countermeasures against global warming Reductions in CO_2 emissions vs. FY1990	: 22% [17%]
Final disposal rate of construction by products	: 3.4% [4.1% or less]
Base unit of total construction byproducts:	: 15.1 kg/m^2 [15.8 kg/m^2 or less]

The Pursuit of Business Activities that Coexist with Society

KPI	FY2014 performance [target]
Number of women in management positions	: 33 [double the number from April 1, 2014 (19 individuals) by FY2019]
Accident frequency rate	: 0.70 [0.60]

* 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, corporate ethics and compliance, transaction transparency, and appropriate disclosure of corporate information.

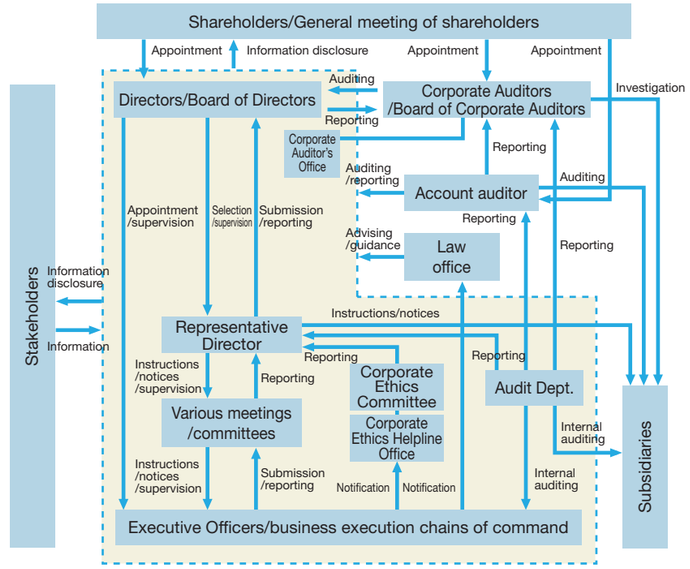
Evaluation indicators	FY 2012 performance	FY 2013 performance	FY 2014 performance [target]
Percentage of employees undergoing information security training:	100%	100%	100% [/100%]
Participation rate in BCP drills:	99.6%	99.6%	100% [/100%]
Percentage of employees undergoing compliance training:	100%	100%	100% [/100%]
Percentage of new vendors informed of basic procurement and other policies:	100%	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 number of its directors to seven (including one outside director) out of a total of 12 seats. It also deploys an executive officer system as part of efforts to create a clear functional demarcation between strategic decision-making and management supervision on the one hand and business execution on the other. 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.
To stimulate further discussion within the Board of Directors and to enhance the Board's management supervisory functions, plans call for appointing a new female director recruited from outside the company in 2015. This will bring the number of outside directors to two.

Corporate Governance System



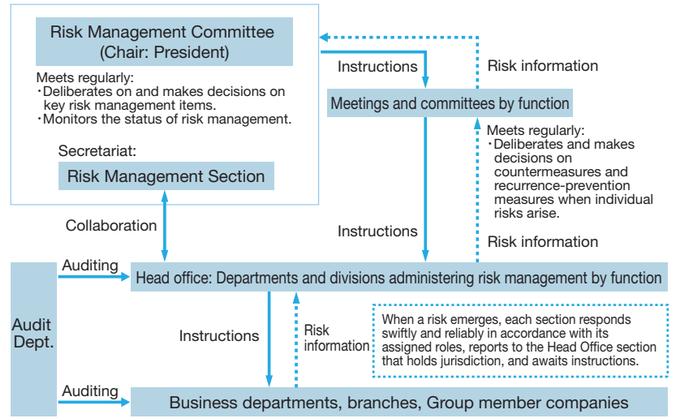
Improvements in the Business Environment

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)



Training through e-learning
Implementation rate
100%

Distribution of information security posters

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

■Information security efforts

Various types of information used during processes ranging from planning and design to construction and operations are considered highly confidential by clients. Each stage of a project involves numerous related parties, including designers and specialist contractors. Accordingly, information management has become a key responsibility of every construction company.

In fiscal 2008, Shimizu overhauled its Electronic Information Security Control Guide, first established in fiscal 2002, and drew up a new set of Information Security Guidelines. By implementing this information security management system, we hope to enhance security in the IT environment. We have also developed employee training programs to strengthen information security and prevent information leaks. Efforts launched in fiscal 2013 include stronger measures to counter targeted email attacks. We will continue implementing measures to promote information security awareness among employees, meanwhile strengthening information security measures over a wider sphere, including specialist contractors.

■Specific measures taken

Strengthening information security

- Revising Information Security Guidelines
- Countering cyberattacks
- Implementing information security audits (e.g., audits of sites and administrative sections)
- Assessments of security vulnerabilities by third-party agencies
- Unified computerized management of nondisclosure agreements

Information security training and awareness promotion

- Implementing information security training (e-learning in which all employees take part)
- Conducting simulation exercises in preparation for targeted email attacks
- Distributing Information Security Handbooks and posters
- Activities to improve information security at specialist contractors (e.g., holding briefings on information security, providing individualized guidance)

Business continuity planning (BCP) efforts
Implementing practical disaster drills and promoting disaster prevention activities together with the community

To fulfill its social responsibilities as a construction company in the event of disasters, Shimizu continually seeks to improve its disaster response systems. In addition to physical improvements such as enhanced building and facility seismic resistance for structures that serve as bases for disaster response, enhanced information and telecommunications systems connecting facilities to other facilities, and expanded stores of emergency supplies, we strive to strengthen related operations through periodic drills in anticipation of large-scale disasters.

On September 1, 2014, we undertook large-scale drills in cooperation with group member companies, business partners, customers, and other related parties. Our goal is to improve disaster readiness through drills focusing on the reliable implementation of initial responses (e.g., safety checks and setting up of disaster headquarters) as well as recovery activity drills conducted while maintaining contact with actual customers.

In the event of a major earthquake, forecasts indicate that roughly 300,000 people would be unable to return home in Tokyo's Chuo Ward, where the Shimizu head office building is located. Under such conditions, as requested by Chuo Ward, the head office building would serve as a regional disaster center and provide space and temporary accommodations for those unable to return home. Shimizu is currently working on a system to handle these functions in the event of an emergency. By making full use of the capacity of the head office building to serve as a regional disaster center, Shimizu hopes to make an important contribution to the local community. In cooperation with Chuo Ward and other companies, we plan to develop a disaster prevention system for the area based on mutual aid.

Shimizu has also developed the BCP-Web System to share information in the event of a disaster. This system will allow organized response by rapidly collecting accurate information in the event of a major disaster. This system will also accelerate recovery through the companywide sharing of information on damage and customer needs, thereby contributing to customer business continuity efforts.

A drill on hosting those unable to return home

An earthquake drill (Earthquake Disaster Headquarters on the fourth floor of the head office building)

Corporate Ethics and Compliance

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 our corporate ethics as well as compliant with all laws and regulations.

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. In fiscal 2014, we added text that clearly prohibits offering or accepting bribes to the Code of Corporate Ethics and Conduct and established rules on preventing bribery to strengthen related measures in Japan and overseas.

■Compliance training

In fiscal 2014, the rate of participation in the e-learning course for all Shimizu employees once again reached 100%. Shimizu provides compliance training as needed and in accordance with the circumstances of each business section, including the International Division.

Shimizu provides compliance training for all employees of our 22 Group member companies. Some 3,000 individuals underwent this training in fiscal 2014.

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

As a construction company, Shimizu gathers personal information over the course of its business activities, including information on clients, business partners, and employees. Recognizing the importance of protecting personal information in a society characterized by advanced information and communications technologies, Shimizu established in 2005 a Privacy Policy to manage all such personal information and is currently implementing 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.

Compliance with environmental laws and regulations
Implementing environmental risk management training at meetings of construction managers and supervisors at all branches

■Examples of problems and preventive measures

In fiscal 2014, Shimizu incurred zero administrative penalties involving violations of environmental laws or regulations.

■Environmental compliance initiatives

- Audits that focus on byproducts (targeting topics such as waste, hazardous materials, and water quality management)
- Environmental risk management training at meetings of construction managers and supervisors at all branches to ensure appropriate management of issues such as waste, hazardous materials, and water quality
- Residential management training course for mid-level employees involved in construction
- Basic training through e-learning on byproducts for all site employees

Environmental risk management training at the Hiroshima Branch: All construction managers and supervisors took part, including the branch general manager.

Balancing efforts to respect and promote intellectual property rights
Training for employees to promote awareness of intellectual property issues

■Basic concepts of intellectual property rights

Shimizu actively acquires and makes use of intellectual property rights, with an emphasis on its prioritized technological fields, as a crucial way to enhance its competitive strengths. Shimizu promotes proprietary technologies by licensing the use of this intellectual property to others. Shimizu also makes the utmost effort to handle the intellectual property rights of others with all due respect and to avoid any infringement of such rights.

■Training on intellectual property issues

To ensure a thorough understanding of and compliance with the above concepts, each Shimizu section provides its own training on intellectual property issues. Held at four head office sections and seven branches, fiscal 2014 training emphasized measures to avoid the infringement of intellectual property rights. All new employees receive basic training on intellectual property rights, and an e-learning training program is provided for newly appointed managers. In addition, we have increased our number of consultations regarding risk avoidance related to intellectual property in recent years.

Disclosing Corporate Information

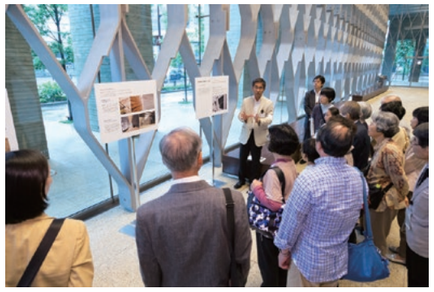
In addition to promoting community understanding of construction sites through site tours and briefings, we strive to disclose corporate information in a timely and accurate manner.

[Our main Internet sites]
Shimizu's website:
http://www.shimz.co.jp/

On Twitter (Shimizu Now):
https://twitter.com/Shimizu_now

Disclosure of corporate information and management information
Proactive communication of information through diverse channels

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 annual management discussions for members of the media. We also hold periodic briefings for overseas investors (three times annually).
In fiscal 2014, we organized and hosted a tour of company facilities for shareholders at the head office building, which was completed in 2012. Focusing on head office building services as a state-of-the-art model of ecoBCP combining energy conservation with business continuity planning (BCP), the tour showcased various building features, including air conditioning and lighting systems in the office areas and the seismic isolation system in the basement.



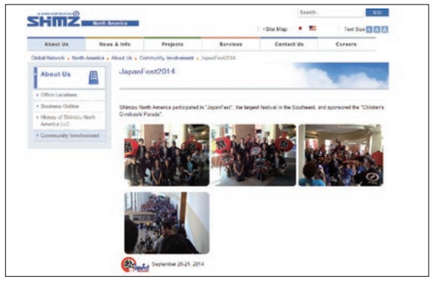
Shareholder tour of the head office building

Using the internet to communicate information to local communities
Communicating information on overseas facilities

The Shimizu Group operates overseas facilities in 28 countries around the world. Each facility is developing its own website to help residents of its country or region better understand Shimizu's business activities. In both local languages and English, these websites communicate information not just on construction performance and employment opportunities, but also on construction sites, events, and social activities. The goal for each facility is to win the trust and acceptance of the local community.

Website for Shimizu Corporation China

Website for Shimizu Corporation Philippines



The page from Shimizu North America's website is about our participation in JapanFest 2014.

Disclosing information on greenhouse gas emissions
Singled out by CDP as leader in climate change performance for the third consecutive year

At the 2014 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 for the third year in a row. 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.
Of 500 candidates, only two companies—Shimizu and one other—were awarded an overall performance grade of A for the third consecutive year. The grade indicates that the company assesses, verifies, and manages greenhouse gas emissions in keeping with CPLI standards. This recognition further attests to the high regard in which our environmental management initiatives are held and the transparency of our environmental information disclosures.

Assessment item	Emissions reductions	Disclosure
Governance, strategy	88	96
Risk/opportunity management	100	92
Control of emissions	85	98
Verification, stakeholders	100	100
Overall evaluation	A	96

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 companywide efforts in cooperation with specialist contractors.

Promoting CSR procurement
Alongside our business partners

■CSR procurement initiatives
In the procurement sphere, we work to ensure sustained transactions based on a supply chain that understands the Basic Procurement Policy and Requests to Business Partners—measures that were established to ensure fairness and transparency in business activities. Once again, in fiscal 2014, we obtained agreements from all 1,277 new business partners to abide by the provisions set forth in these documents.

Basic Procurement Policy website
http://www.shimz.co.jp/csr/supply/policy.html

Working with specialist contractors
Alongside our specialist contractors

■Efforts to build relationships of trust with specialist contractors
This year, Shimizu once again implemented measures with its specialist contractors to strengthen the Shimizu supply chain, as required by Midterm Management Plan 2014. This year marked the 23rd annual training program for next-generation managers. As part of this program, we join with specialist contractors and confirm their commitment to taking concrete steps to meet agreed-upon goals.
The relationship between Shimizu and the Kanekikai, an association of specialist contractors, is much like that between a car and its wheels. We have implemented various measures to make these wheels more robust. Through this joint training program, we exchange opinions on efforts to promote participation in social insurance and other programs and to improve the multilayered subcontracting structure, thereby improving the working environment for technicians.
Other ongoing measures include a system of awards for outstanding forepersons who make significant contributions in the areas of quality, safety, or the environment. The forepersons singled out are awarded commemorative helmets featuring the word *takumi* (craftsperson), indicating their status as esteemed Shimizu craftspeople. This year, *takumi* honors were conferred on 23 individuals, bringing to 176 the total number of past and current winners 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 in 2014

Hirotoshi Manazuru (steel frame construction), Shinwa Kogyo Co., Ltd.
Aichi University of the Arts Faculty of Music Building construction project, Nagoya Branch

The project for which I won this award was a really difficult one involving a tight construction schedule and significant variations in site elevation. While those of us who work in structural construction move on to the next site before seeing the building completed, the building, once completed, declares itself as evidence of our work. When I think about a building I worked on and how it stands on the site now, I feel the joy of *monozukuri*.
I love my job. I've never thought of quitting. I move forward based on a plan, making adjustments here and there in response to advice from others. If this approach makes things go faster or better than planned, it feels very rewarding.
I'm currently working on the construction site of the Dainagoya Building. Besides myself, this site has two takumi award winners, a framework carpenter and scaffolding worker. We do our work with a focus on quality, safety, and interpersonal communications. Here, too, I take pride in my involvement in this project, always doing 120% of what's required and making various adjustments to ensure that we secure the materials and the staff needed to complete the project within the constraints of the construction schedule.
(English translation from Japanese)

Hirotoshi Manazuru (R.) with Toshiyuki Takenouchi (L.) of Namimatsu Kogyo Co., Ltd., winner of a takumi award for framework construction (in fiscal 2013).

The Creation of Value Surpassing the Expectations of Customers and Society

The following two concerns are shared by all companies today:
① The need to ensure readiness for earthquakes, abnormal weather, and other natural disasters (e.g., efforts to ensure safety and reliability)
② The 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 must also confront the following issue:
③ The 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 society at large.

Efforts to improve safety and reliability

Delivering optimal quality

Contributing to the Earth's environment

KPI	FY2012 performance	FY2013 performance	FY2014 performance [target]	Reasons for KPI selection and future topics
Number of peer-reviewed papers submitted	109	116	106 [/90]	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%	18%	22% [/17%]	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/m²	3.2% 15.1 kg/m²	3.4% [/4.1% or less] 15.1 kg/m² [/15.8kg/m² 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	FY2014 performance [target]
Number of structures subject to comprehensive disaster prevention diagnostics (Cumulative)	110	147	151
Number of BCS Awards won	3	2	3
Number of Japan Society of Civil Engineers Awards won	9	5	5
Number of BELCA Awards won	2	1	2
Global warming countermeasures Reductions in CO_2 emissions vs. FY1990	3.43 million t	3.56 million t	3.89 million t [/3.70 million t]

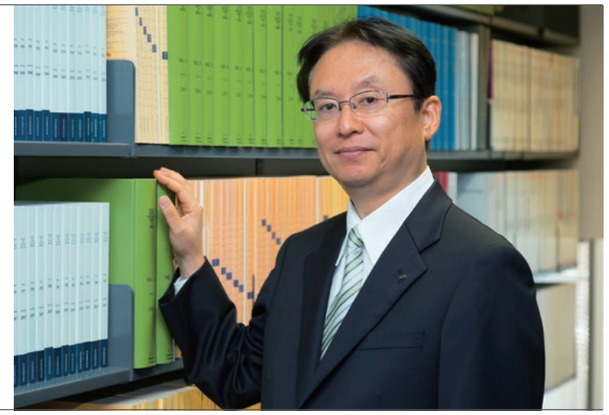
Efforts to Improve Safety and Reliability

Protecting livelihoods and business, even in the face of unforeseen events

At the Institute of Technology's new Advanced Earthquake Engineering Laboratory, efforts are underway to develop resiliency technologies that strike a healthy balance between physical qualities, intangibles, and skills. Based on the lessons of the Great Hanshin Earthquake and the Great East Japan Earthquake, the goal is to optimize business continuity planning (BCP) in order to withstand even large-scale disasters. Shimizu also supports restoration efforts in areas affected by the Great East Japan Earthquake, including decontamination of radioactive substances scattered by the nuclear accident.

Commitment

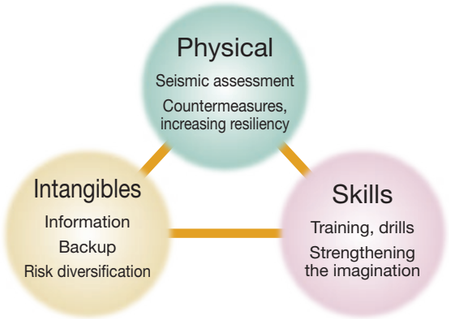
Striving to improve BCP still further



Yutaka Ishikawa
Managing Officer/General Manager,
Technology Planning Office
Director, Institute of Technology

It's been 20 years since the Great Hanshin Earthquake of 1995. Based on its experience with the earthquake and the need to prepare for future ones, Japan has made significant progress in seismically retrofitting buildings and promoting seismic isolation and vibration control technologies, as well as deploying various disaster information systems, including emergency earthquake warnings.
The Great East Japan Earthquake of four years ago focused attention on the threat of massive tsunamis, which can cause severe damage, as well as ground liquefaction and damage to non-structural materials, such as ceilings, caused by seismic vibrations over wide areas. That disaster also revealed the threat posed by long-period seismic motions, the kind that can cause high-rise buildings to shake violently for a long time.
In a global economy, unforeseen disasters may interrupt business continuity, leading to a loss in market share. Beyond that, as court decisions on lawsuits for damages brought by tsunami victims show, even unforeseen events are starting to pose a significant liability risk.
To develop an even better BCP capable of withstanding unforeseen events, we have to start by understanding the characteristics of earthquake tremors in a specific location. The next step is to investigate the seismic performance of the various parts of a facility (e.g., its columns, beams, ceilings, and walls) to determine how they behave against strong shaking. Wherever necessary, we make modifications to improve seismic performance. We also prepare disaster information and monitoring systems to quickly identify the damage sustained after a disaster. The more unexpected the disaster, the more it matters how individuals respond. That means we need to improve disaster response skills before the disaster happens.
The system for predicting damage to high-rise buildings developed by Shimizu last year consists of risk-assessment software. This software broadens the scope of the previous earthquake damage prediction system (which covered medium- and low-rise buildings) to include high-rise buildings. The Shimizu Safety & Security Floor, which was developed for use in hospital operating rooms, is a typical example of applying physical seismic isolation technologies to risk preparedness. The system maintains hospital functions by isolating important areas such as operating rooms from seismic vibrations, even if the building as a whole is not seismically isolated.
This April, the Advanced Earthquake Engineering Laboratory began operating inside the Institute of Technology. The Lab's mission is to protect livelihoods and business activity in the face of unforeseen events. In addition to two shaking tables used to test various earthquake-resistance measures, it also features a program to improve earthquake response skills, based on simulations of earthquake shaking. This makes it possible to reproduce different types of shaking, even long-period seismic motions.
Seismic activity in Japan has picked up since the start of the 21st century. Drawing on its state-of-the-art facilities, Shimizu is committed to continually improving client BCP systems and the safety and security of broader society.

The Advanced Earthquake Engineering Laboratory



Safety and reliability technologies

Introduced below are some of the results of everyday R&D activities and proposals whose purpose it is to help build a more disaster-resilient society. In fiscal 2014, in addition to new technological developments, Shimizu completed a research center that ranks among the world's leading facilities of its type. By incorporating these newly developed technologies into existing high-quality buildings in retrofit projects, Shimizu is working to preserve our shared heritage for future generations.

Seismic technologies
Supporting improvements in skills in addition to physical and intangible measures

Operations start at the Advanced Earthquake Engineering Laboratory

The Advanced Earthquake Engineering Laboratory is an R&D center for predicting earthquake disasters. It combines experimentation, measurement, and analysis and serves as a place where we can introduce customers to our earthquake-resistance technologies and where people can learn more about preventing disasters through the earthquake simulation program. At the core of the facility are two shaking tables.

The "E-Beetle" large-scale shaking table moves in all three dimensions, measures seven meters in width and depth, features a maximum load of 70 tonnes, maximum horizontal vibration of ±80 cm, and maximum acceleration of 2.7 G with a load of 35 tonnes. It offers performance superior to any other large-scale shaking table in the industry. Perhaps its most outstanding characteristic is its ability to reproduce the shaking of various historical earthquakes from around the world. This makes it possible to reproduce with remarkable realism the processes in a building's collapse and the complex behavior of elements like ceilings, which is hard to track via analytic studies.

The "E-Spider" large-stroke shaking also moves in three dimensions. It measures four meters in width and depth and features a maximum load of 3 tonnes, maximum horizontal vibration of ±150 cm, and a maximum acceleration of 1.0 G (with a load of three tonnes). It's the only shaking table in the world capable of realistically reproducing in three dimensions the shaking of a high-rise building under long-period seismic motions. In fact, it can reproduce the shaking of a wide range of earthquakes—not just long-period seismic motions, but short-period seismic motions. We expect it to achieve good results in the analysis of structural damage and the effects of shaking on equipment and machinery, fixtures, and even people.

The "E-Beetle" large-scale shaking table

"E-Spider" is also used in the earthquake simulation program that lets people experience the effects of an earthquake's shaking and the results of earthquake resistance measures. The participants in the earthquake simulation program enter a special-purpose cabin set up on the shaking table. Computer graphics of a living room are projected onto the walls inside the cabin, making it possible to reproduce in real-time the movements of furniture and other items in response to the forces imparted by the shaking table.

Shimizu intends to use these two shaking tables to contribute to a safer, more secure, and more earthquake-resistant society.

* The name "E-Beetle" was inspired by the strength of a beetle: The name E-Spider reflects the shape and movements of a spider; "E" stands for earthquake, examination, enhancement, and excellence.

Winner of an Architectural Institute of Japan Prize (Research Theses Division)

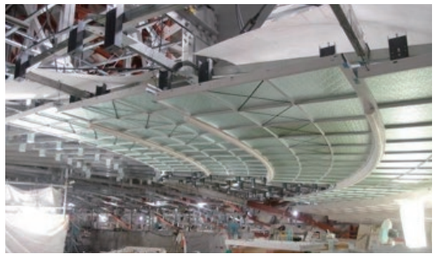
Mika Kaneko, General Manager, Center for Safety and Reliability Engineering

I proposed a way to make simple, high-precision quantitative assessments of the danger of furniture sliding and toppling over in the event an earthquake. This helps assess the safety of interior spaces. We can use this method to quickly estimate earthquake damage to furniture inside buildings based on simple parameters. This method is already incorporated in various documents, including the guidelines of the Architectural Institute of Japan and studies by the Japanese government. It's considered a benchmark guide for interior damage assessments and countermeasures.

Protecting historical structures: Retrofitting of the "Yasuda Auditorium" of the University of Tokyo

The University of Tokyo's Yasuda Auditorium was built about 90 years ago by Shimizu-Gumi, the forerunner of today's Shimizu Corporation. These large-scale repairs included seismic retrofitting of the auditorium's structure and incorporate technologies developed by Shimizu to improve safety and protect human life in the event of a major earthquake. Changes to achieve better seismic performance include a switch from suspended ceilings to "directly fixed ceiling system" with GRC (Glass fiber Rein-forced Gypsum), the lightweight ceilings. Evaluated highly by both the client and third-party observers, this project has drawn attention as a model for the successful retrofitting of ceilings, which have seismic features that are typically difficult to improve.


Yasuda Auditorium after repairs


Seismic performance secured by connecting the ceiling directly to the auditorium's structure

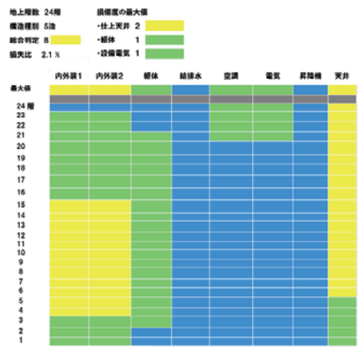

Inside the auditorium after repairs

Diversification of earthquake risks: Intangibles

Rapidly measuring earthquake damage: System for predicting damage to high-rise buildings

Shimizu has developed and put to practical use a system for predicting damage to high-rise buildings. This system quickly and precisely predicts earthquake damage to existing high-rise buildings.

This system can predict earthquake damage to a building in as little as 10 minutes, based on publically available information on a building and information on the seismic motions expected at the building location in the event of an earthquake—for example, an earthquake with an epicenter directly beneath Tokyo or a massive Nankai Trough earthquake. In addition, based on the results of this prediction of earthquake damage, we can use the high-rise version of Shimizu's comprehensive disaster prevention diagnostics in on-site studies and diagnostics to identify any disaster prevention issues with the building. We can then recommend possible improvements and appropriate countermeasures.



Example of damage assessment for a 24-story steel-frame office building

Key

Overall assessment: S, A, B, C

Extent of damage: 0 None, 1 Light, 2 Medium, 3 Severe

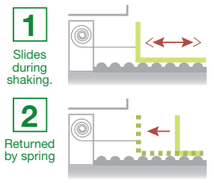
Note: The overall assessment is based on results of "Maximum Damage to Individual Parts" and "Overall Loss Rate." (Loss rate = repair costs vs. new construction costs)

Making earthquake-resistant buildings: Physical

Protecting operating rooms: The Shimizu Seismic Isolation Floor

Shimizu and Nippon Steel & Sumitomo Metal Corporation have jointly developed the Shimizu Seismic Isolation Floor for hospital operating rooms. This simple design places a flat steel plate (upper plate) over an embossed steel plate (lower plate), and the floor system measures less than 5 mm thick. In the event of an earthquake, the upper plate slides, demonstrating a high performance of seismic isolation, keeping the operating table and medical instruments from falling over or sliding. A restoring spring connecting the upper plate to the building floor returns the upper plate to its original position. This makes it possible to continue providing medical care right after an earthquake. Shimizu provides this system as a solution for safe, secure operating rooms.

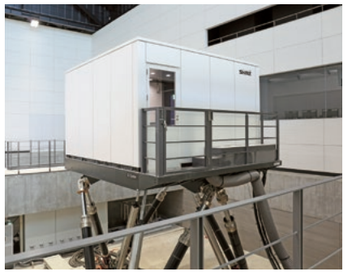
Simple principles



Promoting awareness of earthquake disaster prevention: Skills improvement

Experiencing earthquake vibrations and earthquake-resistance technologies: The "E-Spider" large-stroke shaking table

This large-stroke shaking table reproduces violent ground motion, large displacements at the top of high-rise buildings, and other shaking phenomena in the event of a major earthquake. Beyond this, a cabin (floor size: about 4 × 4 meters) can be set up on the table to allow people to enter and experience a simulated earthquake, including video synchronized to the shaking. As R&D equipment, the table is useful in confirming the seismic safety of building equipment and machinery and in designing spaces where people can safely stay during an earthquake. It will also be used to provide earthquake simulation experiences that can help customers learn about the actual shaking generated by an earthquake, understand the effectiveness of the countermeasures taken, and improve their ability to respond to an earthquake.


The "E-Spider" large-stroke shaking table fitted with a cabin


Inside the cabin


Sample video image displayed in sync with the shaking

Support for earthquake restoration and contributions to affected communities

Today, more than four years and three months after the Great East Japan Earthquake, Shimizu is involved in a wide range of activities intended to help affected areas recover as quickly as possible. Provided below is an introduction to efforts to clean up radioactive substances from the accident at the Fukushima Daiichi Nuclear Power Plant.

Futatsunuma Park after reopening in Hirono (photo taken April 29, 2015). Shimizu's tasks included removing the grass and top layer of the soil.

Earthquake restoration efforts

Full-scale decontamination project in Hirono, Fukushima Prefecture

■After a complete evacuation, returning the town of Hirono to life

Immediately after the accident at the Fukushima Daiichi Nuclear Power Plant, the entire population of the town of Hirono, located in the area 20 km to 27 km south of the plant, was forced to evacuate. After Hirono's designation as an emergency evacuation preparation zone was lifted at the end of September 2011, JR resumed train operations on the Joban Line to Hirono Station. The Japanese government carried out advance decontamination work around the town hall and cultural and educational facilities. In February 2012, the town contracted Shimizu to handle the Hirono Town full-scale decontamination project, Japan's first full-scale radiation decontamination project. A series of studies of individual buildings and prior monitoring (radiation measurements) conducted by district began immediately. Once the process was completed for an entire district, a briefing would be held for the residents.

A typical comment from a resident: "I hope you remove all of the radiation so we can live there with our grandchildren once again." To fulfill the hopes of the residents, decontamination began in March 2012 in the residential district of Koyodai.

In response to the strong desire of the town's mayor to reopen schools in late August of that year, as many as 1,300 personnel were sent to Hirono—many more than the population of the town that had returned by that time—to complete decontamination of town roads used to access schools and most homes by the Bon holidays in late summer. Full-scale decontamination work on National Highway Route 6 in the town, which also serves as a school route, was completed as part of the first decontamination project under the direct supervision of the Ministry of Land, Infrastructure, Transport and Tourism. In August, approximately one and a half years after the entire town had been evacuated, its middle and elementary schools, kindergartens, and preschools were reopened.

Full-scale decontamination of the woods near the homes began soon after. With the cooperation of the Hirono agricultural trust association, some 256 ha of agricultural land was decontaminated by spring 2013, and rice planting resumed.

Restaurants, bars, and convenience stores also reopened. The Park Golf Course returned to normal operations after the replacement of all its greens and fairways. Two years after the accident, Hirono was a place where the residents could live normal lives again.

In June 2013, the scope of decontamination work broadened to include vacant land, wooded areas along roads, cemeteries, and agricultural roads. By March 2015, decontamination was complete in all of the town's livelihood zones (zones in which people engage in everyday activities, such as homes, workplaces, and roads, as well as surrounding zones up to a distance of approximately 20 meters).

Decontaminating a home (in the Tomioka decontamination project currently underway)

■Community contribution activities

This town was completely deserted after the accident at the Fukushima Daiichi Nuclear Power Plant. As people began returning, a litter problem emerged. In response, our employees and workers mobilized to clean up areas around the town hall and the station at regular intervals. They also contributed to the Hirono Summer Festival by operating booths and donating fireworks.

Meeting with the residents while operating a booth at the Summer Festival

The Park Golf Course reopened after the replacement of all of its greens and fairways.

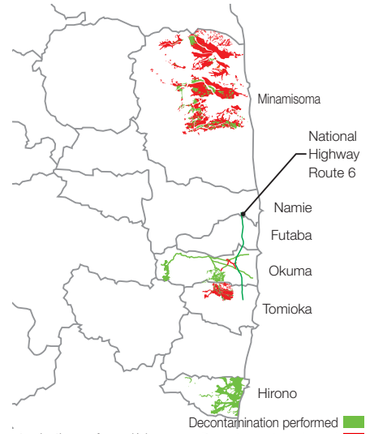
■Decontamination performance to date and future efforts

Decontamination is complete in Hirono for 1,850 homes, 121 km of roads, 227 ha of woods in the livelihood zones, 298 ha of agricultural land, and 47 other facilities, and residents are now streaming back to town.

Located on the Pacific coast, the town features a temperate climate and marks the northern limit for Unshu tangerines. Throughout the Tohoku region, it is said that spring arrives here first. The town is also home to Futaba Future School, which was featured in a television commercial in April 2014 due to the use of "Future" in its name. To extend the spring northward, Shimizu is working diligently on full-scale decontamination projects in Okuma and Tomioka, as well as decontamination of farmland in Minamisoma.

Life returns to JR Hirono Station. Behind the station is the site of the Hirono Higashiguchi Building (tentative name), a project whose design and construction work is being handled by Shimizu.

Results of decontamination in Hirono



Decontamination results to date in all affected areas (as of March 31, 2015)

- Homes **7,701**
- Roads **325km**
- Woods in the livelihood zone **521ha**
- Farmland **1,253ha**

The following comments are from the Niizumas, who returned home soon after Hirono's designation as an emergency evacuation preparation zone was lifted. The Niizumas also helped with the decontamination of local farmland.

We hope Hirono will grow into a lively town with a larger permanent population.

The Niizumas

We think the decontamination work was really effective. The readings at monitoring spots have clearly decreased, and both residential areas and farmland, areas that seemed hopeless right after the disaster, are returning to their previous state. Residents understand the difficulty of the decontamination work. It seems like more and more people are trying to do what they can themselves. The town seems to have become something of a model for the Futaba district, with the thorough decontamination performed while most of the population was evacuated. We believe the permanent population needs to grow. We want the town to serve as a center for developing new industry, or even as a base for people involved in decommissioning the nuclear reactors or performing decontamination work. We think a larger permanent population for the town would make it a livelier place and encourage more residents to return.

(English translation from Japanese)

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 utilize 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. Below, the managers responsible for architectural construction and civil engineering technologies introduce Shimizu's quality assurance efforts from their stand point.

Efforts in architectural construction

Commitment

Working as our customers' best partner and exceeding their expectations

Masahiro Indo
Executive Officer/General Manager,
Production Technology Division

Today, society is undergoing rapid and dramatic change. While the growth of construction investment in preparation for the 2020 Tokyo Olympic and Paralympic Games puts the wind at our back, at the same time, we need to overcome various issues, including the aging of skilled workers and the decline in their absolute numbers. Requirements for buildings and structures are changing and diversifying. These include contributing to customers' businesses, addressing environmental issues, and ensuring readiness for natural disasters like earthquakes, heavy snowfall, and torrential downpours.

No two of our buildings are alike. Customer needs and conditions all vary. We have to tailor each building to each situation, considering the optimal solution on a case by case basis. Simply doing our jobs in the way described in the manuals will deliver only minimal results. If we want customers to continue selecting us as an ideal partner, we need to ensure that quality expectations are met not only by following the manuals, but by thinking about what more we can do. We have to deliver quality that is based on the customer's rather than the builder's.

In addition to giving form to the ideas and dreams of customers and diligently responding to their needs, we must do the following:

Work carefully, all the way from the business development stage to maintenance

Pay attention at all times to how facilities are used as well as level of satisfaction during the design, construction and post-construction phases

Boldly take on challenges and always seek to be useful to society and our customers as a matter of personal principle

This is the corporate culture that Shimizu has handed down for 210 years. I believe it's a strength difficult to emulate.

We will take the steps needed to ensure that each of our one-of-a-kind projects is an excellent example that surpasses customer expectations.

In dramatically changing societies, where customer needs grow ever more diverse and advanced, new needs arise where none were before. We'll continue to tackle the challenge of improving our technologies by anticipating the directions in which customer needs will progress. We'll meet these needs and deliver value that surpasses expectations. I think Shimizu's *monozukuri* concept is based on this vision of working with our customers at all times.

In-house inspections and auditing by technical staff

Using mockups to teach younger employees basic techniques and improve their inspection capabilities (practical rebar inspection training)

Thinking about Shimizu's essential strengths in technology and quality by looking back over the company's history (an in-house seminar held during Quality Month)

In order to meet the needs of our customers and deliver value that exceeds expectations, we approach quality from three perspectives: quality of output, quality of processes, and quality of after-completion services. In this section, we will introduce various business improvement initiatives intended to achieve a style of *monozukuri* that is grounded in customer satisfaction. We will also look at some projects that make the most of the Design-Build strategy, including proposals to meet customer needs, the establishment of a fundamental agreement on the project during the planning stage, and services provided after completion.

Monozukuri grounded in customer satisfaction

In the past, when the construction business first adopted ISO9001, the systems developed sought mainly to secure acceptable levels of quality based on a quality assurance concept that duly accounted for customer satisfaction, technical standards, and the absence of defects and flaws. Efforts to improve quality further—to the point where it surpassed customer needs and expectations—relied instead on our longstanding company culture and the individual skills and efforts of site general managers.

Since an excessive focus on technical standards led to problems such as quality defects and poor detailing, the system evolved into one that minimized risks while realizing customer needs and achieving customer satisfaction.

■Deploying quality policies based on customer needs

Work on each project advances based mainly on quality policy deployment tables.

First, the site general manager obtains information from the sales and design staff (or from design documents) about the customer's goals for the project. Sales staff identify customer needs by interacting with them on a regular basis, while design staff communicate to site general managers the information obtained in the design stage and notes specific to each project. (For projects designed by an outside architectural firm, the site general manager obtains this information at design briefings and regular design meetings.) At the same time, the site general manager carefully examines the design documents and identifies issues that require special attention.

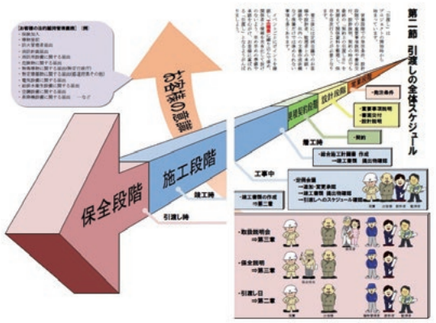
The standards and quality control figures are specified to clarify the policies at each of the building's constituent sections and locations. Sales, design, construction general managers, technical support staff, and site representatives discuss these issues in quality study meetings before construction starts, after which policies are reviewed and confirmed. The project is then built on site in accordance with these policies. Branch management and construction general managers visit the site together to inspect the work and provide guidance. Technical support staff carry out internal inspections and audits to follow up on these initiatives and their outcomes.

■Business improvements based on feedback from customer satisfaction (CS) surveys

Following the completion of the building and again two years thereafter, the branch's CS interview team meets directly with the project manager, who was positioned closely to the dicision making of the project, in order to assess the customer's level of satisfaction or dissatisfaction. Buildings are built to order one at a time, and the scope of our contract significantly varies by project. Because consistent surveys were considered difficult to conduct, site general managers in the past would grade customer satisfaction based on subjective impressions of the customer's reaction. This method proved ineffective.

The CS interview team consists of staff working in sales, design, site management, facilities, and building life care sections who were not involved in the project in question. This system makes clear any problems that the customer may not have communicated to project staff. In addition to resolving customer issues, the feedback received has in many cases led to improvements in business operations.

For example, studies identified a tendency toward polarized opinion with regard to building descriptions and documents (including building manuals) handed over upon the completion of construction. In response, individual cases were examined and necessary revisions identified. A guidebook was prepared on project delivery that is now used when handing over buildings to customers in ways suited to customer needs.



The guidebook was edited to reflect customer feedback from CS surveys.

Komatsu's Awazu Plant, a next-generation assembly plant that looks 50 years into the future

■Moving forward with a client's project to cut electricity consumption in half

As one of the world's leading manufacturers of construction machinery, Komatsu offers an outstanding product lineup that is unrivaled by competitors (DANTOTSU). Located in the city of Komatsu, Ishikawa Prefecture, where the company was founded, the Awazu Plant is the core facility in Komatsu's network of numerous production sites around the world. Since 2012, Komatsu has implemented a wide range of efforts as part of a project intended to cut electricity consumption in half. These efforts include the elimination of electricity waste, the reform of production systems, and the use of alternative energy sources. The following introduces a next-generation assembly plant built with the goal of reducing electricity purchases by 90%, an innovative solution that will help reduce power consumption.

■Proposing a Smart Floor Factory

The main concept underlying this project is a next-generation assembly plant that looks 50 years into the future, balancing productivity improvements with DANTOTSU (unrivaled) energy conservation measures. To achieve this goal, Shimizu proposed an unprecedented Smart Floor Factory in which the plant's entire floor consists of unique pit structure along with removable floor panels.

■Ensuring the quality and precision of construction

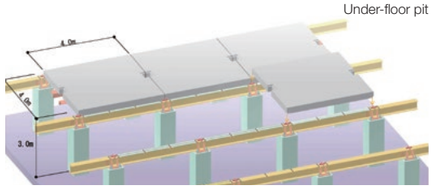
The Smart Floor consists of prestressed concrete floor panels (measuring four meters square and 30 cm thick) that are placed atop steel girders. The floor panels require high degrees of strength and precision so that machinery built at the plant (which weigh as much as 36 tons) can be driven over them without causing damage. Following a study stage that brought together knowledge from throughout the company—including not just design and construction personnel but also the Production Technology Division and the Institute of Technology—trial construction was repeated and full-sized prototypes tested. After this, all processes, from production through installation of the roughly 700 floor panels, were completed in just eight months.

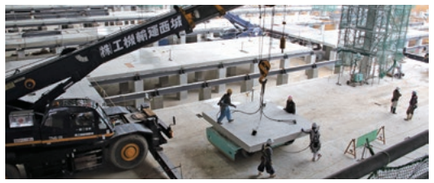
Production line area

■DANTOTSU productivity (doubling productivity per floor area)

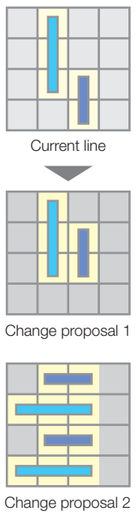
This next-generation plant must be able to adapt flexibly to continuous developments and improvements on the production line. With its massive interior scale (spanning up to 32 meters) and highly adjustable floor panels, the plant is a flexible production*1 space that can accommodate a wide range of line expansions and changes over a short period of time. Utilities such as electricity and compressed air are installed inside the pit for ready access. In addition, by installing air conditioning inside the pit and making all cranes hung from roof structure, this plant's design has greatly reduced the use of floor equipment that could impede production lines on the floor*2. By realizing an ideal production-line structure, this plant has increased production capacity by 50% despite cutting floor area by 30% compared to a traditional plant, thereby doubling productivity per floor area.

Under-floor pit

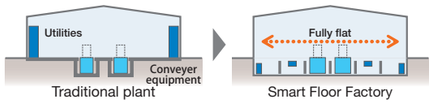




*1 Flexible production lines



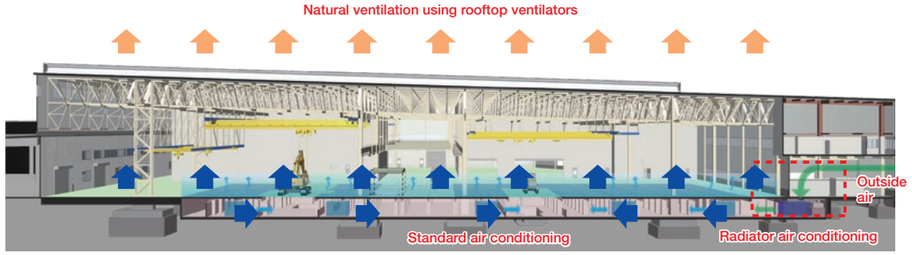
*2 Fully flat production space



■Achieving a balance between DANTOTSU energy conservation (30% reduction) and a comfortable environment

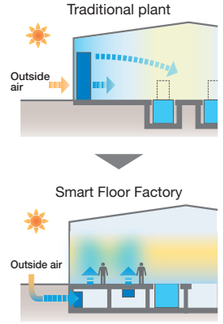
This plant makes the most of its location by harnessing the abundance of renewable energy available. The city of Komatsu is blessed with abundant reserves of groundwater. Since this groundwater remains at roughly 15° C year-round, the plant is able to use it as a cooling heat source for exterior air intake and air conditioning needs. Natural resources are protected by returning the water underground after use. The plant also uses a natural lighting system that combines lighting from roof windows with an LED lighting system that incorporates sun sensors.

The Smart Floor Factory works very well with natural energy and highly efficient air conditioning systems. Natural ventilation and a duct-free air conditioning system use the under-floor pits*3, and a stratified air conditioning system blows air through openings in the floor panels to efficiently cool only those zones in high-ceiling spaces where staff are present. As such, the Smart Floor Factory achieves an optimal balance between energy savings (30% vs. traditional plants) and a comfortable working environment.



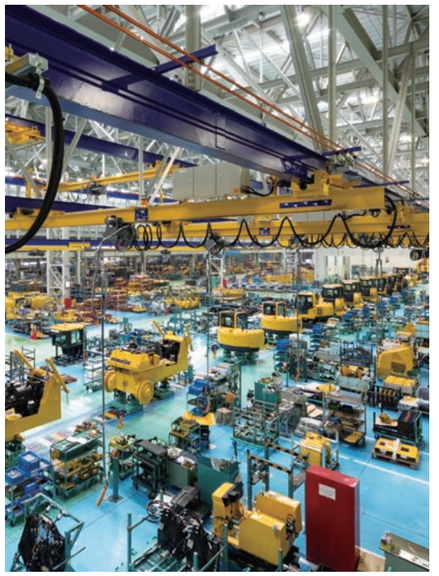
Radiator air conditioning utilizes groundwater to adjust the temperature of outside air drawn into the plant

*3 Pit aid-conditioning/ventilation system



■Achieving the project's goal (a 90% reduction in purchased power) through cooperation with the client

In addition to Shimizu, several Komatsu's partner companies took part in this project, all working towards the same goal. These efforts covered a wide range of issues, including the improvement of production line efficiency, the deployment of ceiling cranes with electric regenerative functions, the installation of solar panels and cells, and the installation of wood biomass power generation equipment in partnership with Ishikawa Prefecture's KAGA Forest Association. These joint efforts reduced purchased power by 90% compared to traditional plants.



■Follow-up efforts and further improvements

Improvements continue to be made beyond all the new technologies intended to maximize energy conservation. Shimizu has held regular follow-up meetings with the customer since the completion of construction. In addition to maintaining a close dialogue with the customer, these meetings seek to identify points in need of improvement and to propose possible solutions.

Looking forward to achieving DANTOTSU environmental performance and productivity

Toshiyuki Kishinaka, Komatsu Awazu Plant

We chose Shimizu to handle the design and construction of this plant because of our high regard for its dual floor structure (with the pit beneath the entire floor) in the March 2013 design competition. This proposal promised large-scale productivity improvements and flexibility for future production line changes. The stratified air conditioning system using floor vents, which takes advantage of groundwater and geothermal resources, promised us considerable savings in electricity consumption. We're grateful for how this project was completed on time, based on the combined knowledge and experience of both companies, despite the short and busy construction period. We found Shimizu's highly streamlined schedule control quite impressive. Now the production lines have begun operating, and the true value of the new plant will emerge. We look forward to both improving productivity and cutting power consumption as planned.

(English translation from Japanese)

Activities in civil engineering

Commitment

Striving to develop a high-quality social infrastructure

Takashi Kawata
Executive Officer/General Manager,
Civil Engineering Technology Division,
Civil Engineering Headquarters

Civil engineering structures include roads, railways, and other parts of the transportation network; lifeline services such as water, electricity, and gas; and facilities that protect our communities from flooding, tsunamis, and other natural disasters. This infrastructure supports safety and comfort in our everyday lives. Drawing on a wealth of experience and state-of-the-art technologies, Shimizu's civil engineering sections deliver a diverse range of high-quality social infrastructure facilities. Since these facilities vary widely with respect to structural and site conditions, the Civil Engineering Headquarters includes design professionals and engineers who are expert in basic technologies related to ground foundations and concrete as well as construction technologies for a broad range of structures, including tunnels, bridges, and dams. At the design stage, highly experienced designers and engineers familiar with construction processes take part in Design & Reviews (DRs). At the construction stage, as part of efforts to control individual processes, they take part in pre-construction reviews and special meetings before starting key construction processes. Further efforts to ensure quality and safety include regular site patrols with site personnel. I also attend DRs, pre-construction reviews, and other meetings and participate in site patrols along with the engineers responsible. In fiscal 2014, as part of efforts to eliminate quality defects and safety issues, I participated in patrols at more than 100 sites across Japan.

Another important responsibility is the training of outstanding civil engineers. We set our targets based on the number of years a civil engineer has been with the Company and strive to provide the required knowledge, skills, and management abilities through on-the-job training (OJT). In March 2014, to prevent recurring quality defects and safety issues, we revised the *Kataritsugu* ("Handing It Down") pamphlets and distributed them to all civil engineers to provide an overview of significant incidents and quality defects from the past. We also prepare *Kataritsugu* versions for individual types of structures, like tunnels and dams, to strengthen quality and safety management by construction type. We repeatedly communicate this content to engineers involved in study sessions held at the head office and at branches and through site patrols. In addition, we deploy a defect Q&A program, a self-learning program that examines defects that have actually occurred, thus strengthening quality knowledge and skills at the individual level.

We're also pushing ahead with efforts involving new technologies, such as construction information modeling (CIM) and robotics. Three-dimensional structural models made using CIM allow us to avoid design errors and visualize construction-related issues by checking for rebar clash, for example. These are powerful tools for building high-quality structures, but we're also moving forward with the use of robotics to reduce workloads and improve quality and safety. We've also developed disaster inspection robots and invert strut installation robots that are already in use at construction sites.

By deploying new technologies, assiduously tackling process management tasks by construction type, and effectively communicating information on quality and safety, we are striving, alongside the construction site, to build high-quality social infrastructure that meets the needs of our clients in Japan and around the world.

Using 3D modeling to check for clash between rebars and PC steel materials (Komaki Viaduct)

Invert strut installation robot

Donggi-Senoro LNG project (Indonesia)

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 is a report on quality efforts in civil engineering as implemented in the Otagawa Ohashi Bridge project, an example of securing both product and process quality under the constraints imposed by a tight construction schedule.

Ensuring structural and construction processes quality of a bridge construction despite an extremely tight schedule

■The Otagawa Ohashi Bridge project (Winner of the Tanaka Award in the 2014 Japan Society of Civil Engineers Awards)

Construction is currently proceeding on the Hiroshima South Road (total length : 23.3km) that will link the coastal areas of Hiroshima City from east to west. As part of this project, a 4.2km section including the Otagawa Ohashi Bridge (total length : 412m) opened to public on March 23, 2014, alleviating traffic congestion at nearby roads.

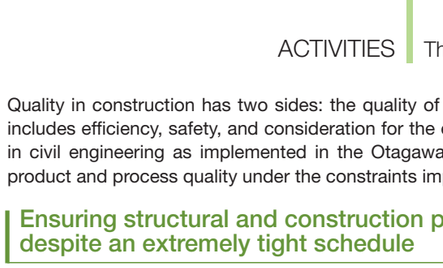
The Otagawa Ohashi Brige is based on a design that took the top prize in an international design competition, the second such prize-winning bridge designed in Japan. Combining concrete bridge girders with slender steel arches that complement the view of Miyajima, the structure posed great technical difficulties in terms of both design and construction. Since the stress and sectional force on individual parts of the bridge would change in complex ways during construction, the bridge required a construction approach that allowed for continual safety assessments based on 3D analysis with an accurate representation of the construction sequence (bridge's shape & structure).

In addition, the bridge had to be completed within 30 months—around half the period normally required for such projects—under numerous constraints, including seasonal variations in river levels, rising and falling tides, and overhead restrictions attributable to the proximity of the Hiroshima-Nishi Airport. It wouldn't have been possible to meet the deadline by using temporary bridges and temporary storage locations for transporting and storing building materials in the river. As a result, all construction above water was performed using barges and other equipment.

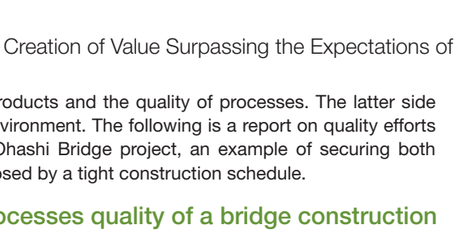
The arches could not been built using crane barges due to the shallow river depths. Instead, they were built in a single process using regular barges and large jacks. Only two dates : May 3 and 17 2013, which met the requirements for ensuring the safety and avoiding interference with the machinery, were fully utilized to build the arches and bridge girders. Both dates fell during the stage of balanced cantilever erection*, and both required modest tide variations and adequate water depth. The head and branch office engineering staff held several meetings with their business partners to resolve a work schedule that was accurate to the minute and to specify matters such as the feasibility of construction methods, standards for the suspension of operations, and responses to any problem that might arises. On the date of the arch construction, the steel arch, which weight 475t, was successfully and precisely installed on time, with staff reinforcement coming from the head and branch office.

By overcoming series of technical challenges in a tight schedule, this project produced another high quality infrastructure to the nation's social capital.

* Balanced cantilever erection: A construction method used for concrete bridges. A form traveler is used to build the bridge girder one step at a time, starting from the pier, in blocks roughly three meters length. The method does not require the use of ground support and is ideal for construction of bridges over rivers or busy roads.



Using a 3D frame analysis model to evaluate the safety during construction



The completed Otagawa Ohashi Bridge

condition of second arch construction (May 17 in 2013)

(1) Balanced cantilever erection (until block 9)

(2) Second arch towing (morning of May 17)

(3) Second arch construction (afternoon of May 17)

(4) Balanced cantilever erection (block 9 and later)

(5) The completed Otagawa Ohashi Brige

Contributing to the Environment

To contribute to “socio-dynamism,” a key aspect of the company’s Management Philosophy, our long-term vision positions environmental awareness at the core of all its business activities. Our business activities are based on the energetic pursuit of sustainability.

New businesses

Shimizu is expanding its sustainability business by using its strengths as an innovator to address a wide range of challenges linked to the development of a sustainable society. In the energy field, initiatives include the development of the ecoBCP business and clean energy sources, and, in the environmental field, businesses to counter global warming, and agricultural, forestry, and fisheries businesses based on coexistence with the natural environment, while in the infrastructure field, we operate various asset management businesses. In this way, we seek to contribute to the realization of a prosperous and sustainable society that is highly competitive on an international level.

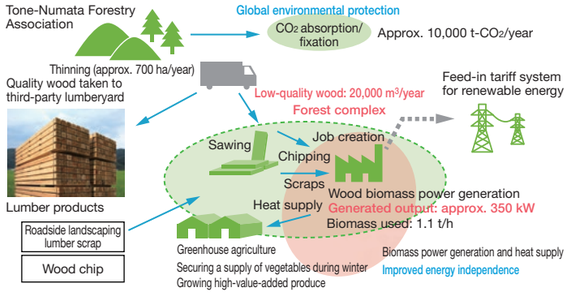
Commitment

Striving for harmony and balance between built structures and the natural environment through an optimal mix of energy supply and demand

Shigeru Namioka
Senior Managing Officer,
New Business Promotion Division

The ecoBCP concept we’re promoting has expanded steadily from the level of individual buildings to groups of facilities and areas. While moving forward with technological innovations and IT integration in individual projects, we are also thinking about how to create greater social value through the cumulative effects of ecoBCP projects over a broader area.
The impending reforms to the energy system, including electricity, gas, and thermal energy, provide an opportunity for rapid progress in ecoBCP. I think we can create a deeper kind of ecoBCP by merging two approaches: expanding ecoBCP efforts from a focus on single buildings to groups of buildings, districts, and areas, and improving energy production, distribution, and consumption. Beyond this, we can maximize the value added for existing building stock and introduce a time axis to provide a vision of an ideal future society.
In this context, existing efforts to acquire and retain CO_2 CERs (Certified Emission Reductions) will eventually need to be repositioned. By broadening efforts to adopt renewable energy and proposing the best energy mix in terms of both supply and demand (but focusing more on the supply side), we hope to develop businesses that will realize ecoBCP in its optimal form.
Regarding coexistence with nature, our activities have mainly focused on measures to counter global warming overseas. These activities are part and parcel of efforts related to power generation and agriculture. By countering global warming, we continue to contribute to those countries in which we are active while exploring the feasibility of our new environmental businesses.
Needless to say, our core construction business has close ties to the natural environment. We need to generate an even greater sense of harmony and balance between nature and the buildings, structures, and cities we build, based on a general concept of sustainable environments and ecosystems. In Japan, we’ve only just started with projects that involve energy integration, such as horticultural facilities and projects that harness forestry resources. I hope we can use new perspectives to expand the possibilities for construction businesses coexisting with nature.
Another emerging social issue, aging infrastructure, highlights the question of just what constitutes superior infrastructure stock. We must provide our vision concerning the future of the infrastructure we have helped to develop, along with the ideal forms of the communities and systems charged with the management and operation of these facilities.
As the shift from public management to public-private partnership expands, we’re identifying new approaches to business. Learning from examples overseas, which are somewhat more advanced than in Japan, we hope to move ahead with efforts in the Japanese infrastructure business.

Now underway: A smart community project whose goal is to achieve an optimal mix of energy supply and demand (Kyobashi, Chuo Ward, Tokyo)



Now underway: Green Value Program targets harmony and balance between buildings and the natural environment (Kawaba, Gunma Prefecture)

Energy businesses

To build a business foundation, Shimizu is taking advantage of various energy reforms, including the liberalization of the electricity, gas, and heat markets, through investment and participation in projects from both the demand and supply sides.
On the demand side, we’re starting by building low-carbon facilities and districts that incorporate enhanced eco BCP functions offering high degrees of business continuity. We are making progress on businesses providing local area and on-site energy supply services, as well as energy management services using cloud technologies for which we have been certified as an energy management business by the Ministry of Economy, Trade and Industry of Japan. In the future, in cooperation with our power generation businesses, we are considering entering the fields of energy purchasing and retail sales. Oase Shibaura, a project in Tokyo’s Minato Ward for which we handled the design and construction, has achieved strengthened ecoBCP functions and realized energy sharing across multiple sites through coordination among multiple facilities.*1
On the supply side, we’re moving forward with investment and planning in the power generation business, focusing on renewable energy in a way that draws on our management and technological capabilities. In addition to the Engineering Headquarters’ solar power projects at Ako (12 MW) and Kitakami (3.7 MW), we’re also taking part in a 400 kW geothermal power project in Oita Prefecture.

A geothermal power project (Oita Prefecture)

*1 See the special feature at the start of this Report (pp. 8–9).

A solar power project
(Ako Solar Power Company)

Environmental businesses

To counter global warming, as we expand the domains of our existing environmental businesses to include agriculture, forestry, and fisheries (areas in which we expect the effects of global warming to be profound), we will strive to create new projects based on the principle of coexistence with nature.
In the field of bioenergy, we’re contributing to the sustainable development of communities in the Indonesian state of North Sumatra by generating biomass electricity using palm kernel shell from palm oil plants.
In another effort to counter global warming, we’re developing a project based on the Joint Crediting Mechanism (JCM)/Bilateral Offset Credit Mechanism (BOCM) promoted by the Japanese government. This project will reduce the carbon dioxide emitted from peat farmland in Indonesia through proper management of water levels in the farmland.*2
In the city of Tomakomai, Hokkaido, one of our projects in the fields of agriculture, forestry, and fisheries involves large-scale cultivation of strawberries in a two-hectare, naturally illuminated greenhouse. In the village of Kawaba, Gunma Prefecture, we’re developing a business model to achieve sustainable development for rural villages and revive the forestry industry by putting local forestry resources to use as part of a joint project with the Tokyo University of Agriculture. (See illustration on p. 36.)

Large-scale horticultural facility
(greenhouse cultivation of strawberries by Tomatoh Farm Co., Ltd.)

Biomass power generation using palm kernel shell (Indonesia)

*2
Aridification of the peat soil due to its development as agricultural land has led to a breakdown of the peat and the outbreak of fires, which together emit about 1 billion tons of CO_2 per year, rivaling Japan’s total emissions. Reducing these emissions has become the subject of great national concern in Indonesia. This project will reduce CO_2 emissions by rehumidifying the peat and controlling the breakdown caused by microorganisms. This can be accomplished by building sluices and channels to manage the water level, which has the added benefit of increasing harvests by making it possible to grow double crops of rice.

Infrastructure businesses

Japan’s public infrastructure, established during a postwar period of rapid economic growth, is now reaching an age of 30 to 50 years. Infrastructure maintenance, management, and renewal in the coming years will entail rising costs. Amid tight government budgets, this is a major issue confronting national and local governments. Future infrastructure renewal work must be undertaken in a systematic and effective manner while anticipating changes in community needs and accounting for the issues currently faced by local communities, including the aging population, low birth rates, and the decreasing population of workers in their productive years. Shimizu’s efforts in this area include not just physical measures such as technologies for monitoring, diagnosing, and repairing aging roads, bridges, and tunnels, but the development of infrastructure renewal plans and infrastructure asset management solutions. Based on industry-academy-government partnerships, we provide these services to the local governments and municipalities that manage hospitals, schools, and other public facilities. We are also pushing ahead with efforts to win concessions for airport facilities, roads, and other projects undertaken in accordance with amendments to the PFI Act (projects managed by the public sector based on a system of operating rights for public facilities and other infrastructure).

Mitigation of global warming —Ecological Mission

As part of its efforts to mitigate global warming and promote our Ecological Mission, Shimizu is striving to achieve 30% reductions in CO_2 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 CO_2 emissions at the construction stage. To contribute to CO_2 reductions across a wide range of areas, we are backing the introduction of solar power and other new energy sources and implementing the Clean Development Mechanism (CDM) projects overseas to acquire Certificated Emission Reduction (CERs) and other initiatives.
In fiscal 2015, we are considering revising our Ecological Mission in light of Japan's post-2020 target figures now being considered in advance of the 21st session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP21) to be held in November in Paris. We must also factor in future energy mix plans and corresponding electricity consumption rates.

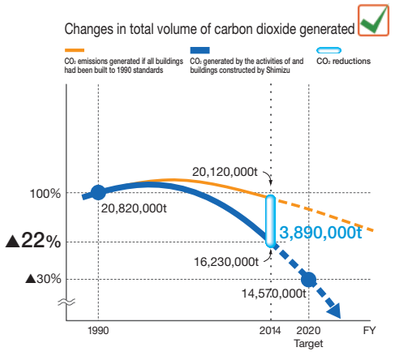
■FY2014 Ecological Mission performance

CO_2 emissions in FY2014 totaled 16.23 million tons, down 22% from the FY1990 total of 20.82 million tons, meeting our target for the year. In addition, we met our target of achieving reductions of 3.89 million tons through a six-part plan that includes the design of energy-saving buildings.

CO_2 emissions from all buildings

Reduced 22% vs.FY1990 ☑

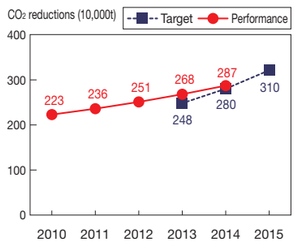
Changes in total volume of carbon dioxide generated ☑

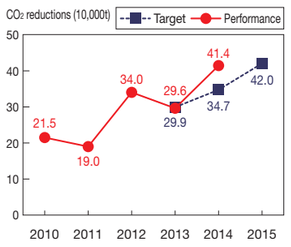


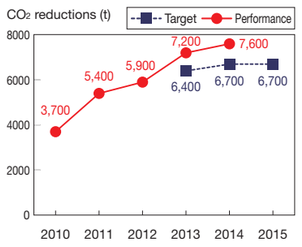
CO_2 reductions resulting from six measures:

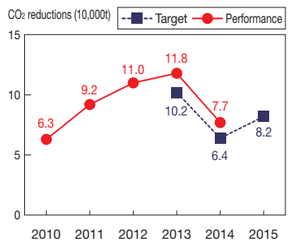
3,890,000tons ☑

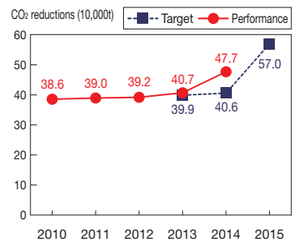
	Design of energy-saving buildings	Resource conservation and green activities at construction sites		Energy savings in office spaces	Energy-saving renovations and building management	Promoting the introduction of new energy sources	Obtaining and utilizing Certified Emission Reductions (CERs)	Total
		Construction	Materials production					
(1) FY1990 emissions	14,150,000t	630,000t	6,020,000t	18,000t	–	–	–	20,820,000t
(2) FY2014 base emissions	17,020,000t	400,000t	2,680,000t	18,000t	–	–	–	20,120,000t
(3) FY2014 emissions	14,190,000t	230,000t	2,440,000t	10,000t	–	–	–	16,230,000t
(4) Additional reductions	40,000t	–	–	–	77,000t	480,000t	46,000t	
Ecological Mission reductions	(2)–(3)+(4) 2,870,000t	(2)–(3) 410,000t		(2)–(3) 8,000t	77,000t	480,000t	46,000t	3,890,000t
Initiatives	**Improving the environmental performance of buildings/ Promoting natural and untapped energy sources** ●Shimizu promotes energy conservation construction at the design stage by setting energy efficiency targets for insulation performance, primary energy consumption, and CASBEE rank and considering 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/ green procurement/Promoting green construction** ●We cut CO_2 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. ●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		**Efforts to reduce CO_2 emissions at all company 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 ●From FY2014, in addition to the head office and branch office buildings in Japan, these figures include sales offices and all other company buildings.	**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 CO_2 emissions in various ways (e.g., by optimizing operations and proposing energy conservation improvements at facilities under building management contracts).	**Building renewable energy facilities** ●Proposing, designing, and constructing various renewable energy facilities, including wind farms, mega-solar facilities, and biomass power generation facilities ●Operations began at various facilities, including a wind farm in Ehime Prefecture and a mega-solar project in Hokkaido. ●Operations began in FY2014 at a mega-solar power plant operated by Shimizu in the city of Ako, Hyogo Prefecture. Plans call for a facility in the city of Kitakami, Iwate Prefecture, to begin operating in FY2015.	**CDM*2 projects/Promoting the new mechanism** ●Methane gas capture projects currently underway are a landfill methane gas capture project in Yerevan, Armenia, and a landfill methane gas capture project in Tashkent, Uzbekistan. ●We are currently undertaking feasibility studies supported by the Japanese government for two projects under the Joint Crediting Mechanism (JCM).	

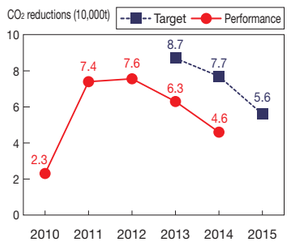












Note: To total performance for FY2013, performance figures were revised retroactive to past fiscal years, and targets for FY2012 and earlier are omitted in graphs of performance trends and targets.
Note: Policies and standards for gathering and reporting information on environmental performance are based on documents establishing internal rules and standards (e.g., the CO_2 Emissions Reduction Survey Entry Guide), in compliance with applicable environmental laws and regulations.
Note: Methods for calculating energy-saving renovations and building management have changed from FY2014.

*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.
☑:CO_2 emissions and reductions marked by this symbol are independently verified by Ernst & Young Sustainability Co., Ltd.

■Use of emissions allowances obtained through CDM projects as offsets

By utilizing CERs obtained through the CDM projects undertaken by Shimizu to date, 2,914 t-CO_2 were used to achieve carbon-neutral status for CO_2 emissions from the head office building. We obtained a carbon-neutral certificate from the Ministry of the Environment under its FY2014 carbon-neutral certificate model program.
We also utilized a total of 56,500 t-CO_2 (☑) CERs to offset FY2014 CO_2 emissions from our about 2,200 site offices (covering offices for large-scale projects such as dams and high-rise buildings, as well as for small and medium-sized construction projects) and our all 95 office buildings in Japan, including the head office, branches, and sales offices.

CARBON NEUTRAL www.jcs.go.jp

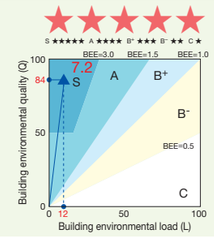
CN015-01

Shimizu Corporation
Head Office Building

Certificate valid:
March 1, 2015 –
February 29, 2016

■SEICHO-NO-IE "Office in the Forest" awarded CASBEE S ranking; achieves positive-energy building (PEB) status

This building was completed in May 2013 and first occupied approximately a year and a half ago, in October 2013. Despite a harsh winter and record snowfalls, its supply of energy exceeded demand by a far greater margin than predicted during the design process, thanks to the substantial benefits of using natural lighting from roof windows and elsewhere, as well as keen awareness of energy conservation among its users. Since the electricity generated exceeds the amount consumed, the building has surpassed zero-emission building status to achieve positive-energy building (PEB) status. In addition, it achieved a record high score of 7.2 in its CASBEE S ranking, based on assessments made during the operational stage following construction.
In FY2014, it received the Carbon-Neutral Grand Prize and the Environmental and Equipment Design Award.



Initiatives toward biodiversity

Under the Shimizu Action Plan on Biodiversity, Shimizu is making steady progress on various biodiversity issues, from efforts at individual building construction sites and entire regional ecosystems to internal and external educational activities, as well as social engagement activities. The following introduces such activities at the overseas subsidiary Thai Shimizu.

Environmental Conservation

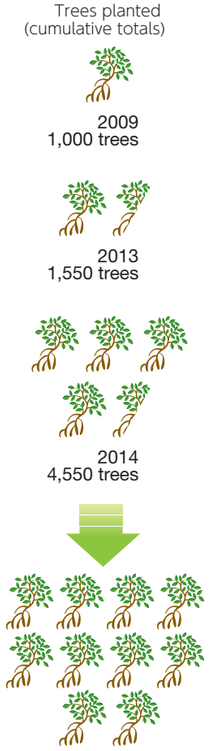
Thai Shimizu's Mangrove Reforestation

Thai Shimizu aims to conduct eco-friendly business activities, and carries out a wide range of initiatives to contribute to the environment. One of these involves planting mangrove trees in order to revive mangrove forests that have been lost as a consequence of development. Although this activity began in 2009 as a joint activity with our client, Thai Shimizu has independently continued it, planting a grand total of 4,550 mangrove trees by 2014.

Through these tree-planting activities, employees and their families have learned about the important role played by mangrove forests in protecting marine resources such as shrimp, crabs, shellfish, and fish, as well as the land creatures and birds that prey on them. They have also gained a strong sense of the role of the coastline and the importance of protecting it, as they have seen with their own eyes how the coastline receded after the loss of mangrove forests. Furthermore, they have come to appreciate the role mangrove forests play in preventing global warming by absorbing carbon dioxide. Every year, more and more employees and their family members volunteer to take part in this activity.

Thai Shimizu will continue these tree-planting activities in the future, as it hopes to further its growth as a company that contributes to the global environment and to its community. The tree planting also serves as an opportunity for deeping exchanges among employees, their family members, and the local community.

The goal is to plant a cumulative total of 10,000 trees through the end of fiscal 2016. By doing so, enough mangroves will have been planted to offset the entire amount of CO_2 that its employees emit just by breathing.




Employee family members also enjoy taking part.

External Educational Initiatives

Thai Shimizu's External Educational Activities


Thai Shimizu's Environmental Activities Team

Since 2007, Thai Shimizu has also visited elementary schools twice a year to talk to students about the importance of sustained environmental protection, including topics ranging from biodiversity to 4R activities (Refuse, Reduce, Reuse, and Recycle).

In hands-on courses with Thai Shimizu's mascot of environment "Kankyo-kun", students draw pictures on environmental themes and participate in other activities that present an enjoyable learning experience. The schools in which these activities were held praise them as excellent opportunities for students to learn about the environment. Thai Shimizu plans to continue with these educational opportunities, based on its belief that environmental protection is critical both for humanity today and future generations.


Company mascot of environment "Kankyo-kun" (right) at an environmental picture contest

Construction byproducts, preventing pollution

Shimizu strives to reduce and recycle construction byproducts at each of its sites across Japan 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

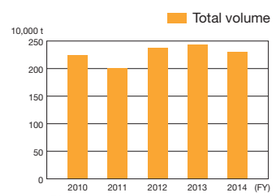
Making effective use of construction sludge, timber, and root materials

After advance consultations with environmental authorities and the client, the Yamamoto construction site on the Joban Expressway (Yamamoto, Watari-gun, Miyagi Prefecture) improved sludge generated from construction through intermediate treatment to use as embanking materials for the roadbed under the expressway. In addition, lumber felled in the process of construction at the foot of the mountains was recycled in the intermediate treatment facility on site for use as litter, fertilizer, and fuel chips. These efforts have been recognized by the FY2014 3R Promotion Award and other prizes for their significant contributions to minimizing final waste volumes generated in areas affected by the Great East Japan Earthquake and to combating the depletion of building materials.

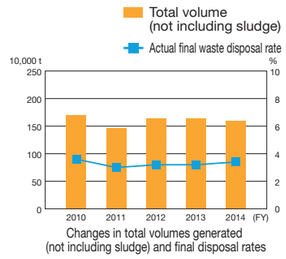
■Total construction byproducts generated, final disposal rate, base unit of total construction byproducts

Figures for total construction byproducts generated fell by 6% from the previous year to approximately 2,300,000 tons. The total volume generated, not including sludge, was 1,590,000 tons. The final disposal rate was 3.4%.

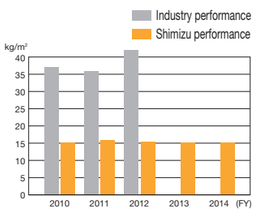
The base unit of total construction byproducts generated from new construction projects was 15.1 kg/m2. Based on the Shin Kan-tasu*1 integrated construction byproducts management system and sustained efforts to reduce and recycle byproducts from before the start of construction, we continue to maintain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



Changes in total volumes generated



Changes in total volumes generated
(not including sludge) and final disposal rates



Changes in the base unit of total construction byproducts

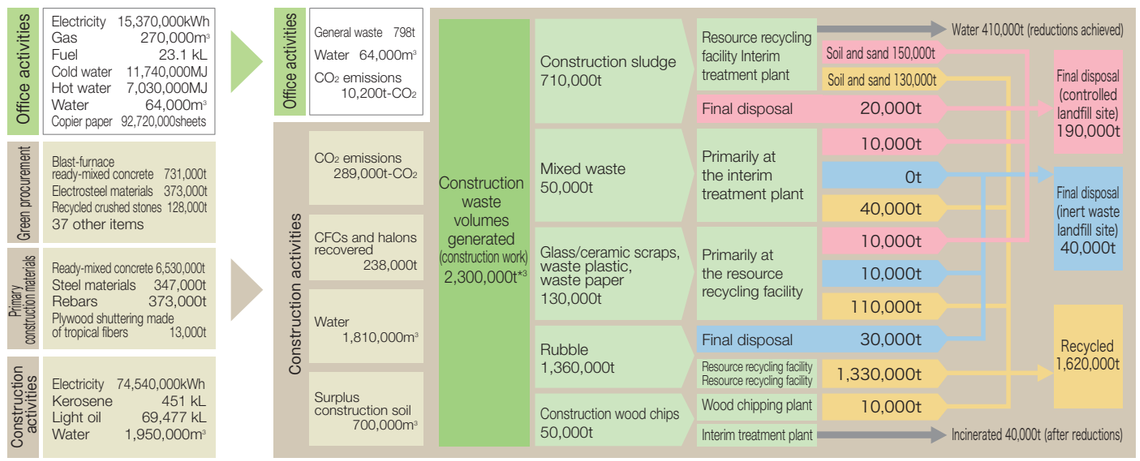
*1 Shin Kan-tasu (improved Kan-tasu)
An integrated construction byproducts management system launched in FY2013.
The name conveys our focus on contributing to environmental conservation.

Final disposal rate
3.4%
(Target:4.1% or less)

Base unit of total construction byproducts
15.1 kg/m²
(Target:15.8 kg/m² or less)

Fiscal 2014 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 unit shown.
*3 The figure of 2,330,000 t for total construction waste generated (construction work) includes 818 t of asbestos dust and 90 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	FY2014 performance [target]	Reasons for KPI selection and future topics
Number of women in management positions:	17	19	33 [double the figure as of April 1, 2014 (19) by FY2019]	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	0.70 [/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	FY2014 performance [target]
Percentage of employees with disabilities:	2.05%	2.05%	2.11% [annual average 2.05% or higher]
Number of male employees taking childcare leave:	1	0	2 [one or more]
Percentage of female employees taking childcare leave:	94.7%	97.3%	100.0% [80% or higher]
Sections implementing *Medama* Project social contribution activities:	15 sections	15 sections	19 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

■Helping women thrive in the workplace

The Midterm Management Plan 2014 establishes the following policy: "Making active efforts to promote female managers and engineers and helping women achieve further success in the workplace: Doubling the number of female managers and engineers within five years."

In November 2014, as part of efforts to help women thrive in the workplace,* Shimizu organized the Women's Career Forum 2014 based on the theme of building a bright future by identifying your own career path. About 300 women employees from across Japan and around the world took part in this forum, which featured a speech by Executive Vice President Hiroko Kawamoto of ANA, a panel discussion by women employees, and a reception afterwards. In October 2014, numerous employees of all ages, both male and female, attended a diversity management seminar led by soccer coach Norio Sasaki.

The seminar by coach Norio Sasaki

* As of March 2015, the total number of women working at Shimizu was 1,440, or 13.7% of the total workforce.

Women's Career Forum 2014

■Hiring and promoting people with disabilities

Shimizu participates as a founding member in the Accessibility Consortium of Enterprises (ACE), whose mission is to establish, together with society, new models for employing those with disabilities and contributing to the growth of enterprise. As one of the ACE's 27 corporate members (as of January 2015), each a leader in its industry, we participate in various activities, including corporate partnership activities in which companies learn about best practices, explore case studies, and share their expertise; activities in partnership with universities and colleges and other institutions that help students with disabilities start developing skills at an early age, thereby cultivating human resources capable of contributing to enterprise growth; and role-model activities that introduce disabled employees already active in enterprise and recognize them as role models, thus helping those with disabilities to envision their own growth and helping companies understand how to work with disabled employees.

In June 2014, a seminar titled "Hiring Case Studies: Hiring the Human Resources Targeted by ACE" was held for HR personnel at member companies. In December 2014, a seminar titled "Career Seminar: Working in the Enterprise" was held for students with disabilities and featured a lecture by Tetsuya Takeuchi, who serves as a director for NHK despite being wheelchair bound. A follow-up discussion was then held with employees of ACE's member companies.

The second ACE Forum held in November featured lectures by mayor Soichi Kataoka of the city of Soja, Okayama Prefecture, and administrative vice-minister Atsuko Muraki of the Ministry of Health, Labour and Welfare; an introduction to case studies of people with disabilities who play active roles in member companies; and an annual activities report. The event concluded with an announcement of the 2014 ACE Awards.

I participated in "Career Seminar: Working in the Enterprise" as a employee with disabilities

Tomoka Nakayama, Civil Engineering Production Planning Dept. I, Tokyo Civil Engineering Branch, Civil Engineering Headquarters

The seminar format involved grouping us into teams by disability type, then mingling with students and fielding their questions. Many of the student expressed anxiety about finding work. I hope that as a worker with disabilities, my answers helped ease their fears and take a positive attitude.

I also found it really encouraging to hear the opinions of senior employees at other companies.

Introducing a case study on job activities through the 2014 ACE Awards (excerpt from venue narration)

Ming-Chung Liou, Institute of Technology

Originally from Taiwan, Ming-Chung Liou studies structural analysis at Shimizu Corporation. Constantly challenging himself to do all he can and more, he's overcome disabilities involving movement and posture to earn a Ph.D. from the Tokyo Institute of Technology. In his work involving the analysis of distortion and bending, he visits building sites and takes responsibility for verifying structural safety. He often demonstrates his advanced technical skills both in Japan and overseas—for example, by giving a special lecture at a university in Taiwan. Remaining positive and willing to work with others are part of his approach, as is a sense of gratitude to all those who have supported him in the past.

■Human rights efforts

In addition to incorporating a policy of respect for human rights into our Code of Corporate Ethics and Conduct, we energetically promote awareness of human rights under our Basic Human Rights Policy. In fiscal 2014, we returned to the roots of human rights activities launched in 1983 by deploying promotion policies and plans determined by the Committee to Enhance Awareness of Human Rights (chaired by Shimizu's vice president) to promote even greater awareness of various human rights issues, with a special emphasis on discriminatory actions and policies. Sections and affiliates established committees to promote awareness of human rights, formulate awareness-raising policies and plans, and develop promotion structures. A system for reporting on human rights issues was also established. Lastly, we held a new overnight Human Rights Leader Training Program to improve staff skills in promoting awareness of human rights at each section and affiliate and to enhance the Human Rights Awareness Training program targeting specific job responsibilities.

We're also seeking to promote awareness of human rights through other broad-ranging efforts. Measures include dedicated consultation centers, workplace rules, intranet reminders, and e-learning programs for employees that clearly set forth our policies on preventing harassment in the workplace. Other efforts include posters on preventing sexual harassment and abuse of power displayed at our head office, branch offices, construction sites, and other facilities and an awards program that solicits slogans for human rights awareness from employees, their families, and affiliate companies. Winners are announced during Human Rights Week in December.

The Human Rights Leader Training Program

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

■Promoting a sound work-life balance

Our policies meet and exceed legal requirements in areas such as childcare and family care leave periods. Other measures include paid childcare leave, encouraging employees to take time off for childbirth by a spouse, supporting the return to the workplace of employees who have taken childcare leave, establishing a system for rehiring employees who left the company for reasons related to childbirth or childcare, providing interest-free loans to pay for fertility treatments, and offering a unique system of subsidized discounts for childcare services. Through these and other measures, we're making progress in creating an environment in which employees expecting or raising children can work with true peace of mind.

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.

Our efforts to formulate and achieve the goals of a private business action plan in compliance with the Act on the Advancement of Measures to Support Raising Next-Generation Children have been certified by the Ministry of Health, Labour and Welfare.*

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

■FY2014 performance — Note: Figures in parentheses indicate FY2013 performance

Childbirth, childcare	Childcare leave (through the age of two)	62 persons (55 persons)
	Percentage of female employees taking childcare leave	100.0% (97.3%)
	Reduced work hours for childcare (through third grade)	52 persons (39 persons)
	Exemption from overtime /holiday work	6 persons (5 persons)
	Spousal childbirth leave	75 persons (85 persons)
	Child medical care leave	28 persons (1 person)
Family care	Family care leave	0 person (1 person)
	Reduced work hours for family care	0 person (0 person)
	Family care leave	2 persons (1 person)
Other	Refreshment leave (14 consecutive days every 10 years)	581 persons (632 persons)
	Volunteer leave (10 days/year)	21 persons (10 persons)
	Percentage of annual leave taken	32.9% (29.5%)

"Childcare leave let me spend time and share valuable experiences with my family."

Toru Morinishi, Kanto Branch

I took about two months of childcare leave when our third child was born. I wanted to help my wife because the birth happened at the same time our eldest son started going to elementary school and our second son began going to kindergarten. Before taking the leave, I worried about various things, wondering when the best time would be to apply for leave. I didn't want to inconvenience my colleagues. It turned out there was no need to worry. My supervisor was incredibly supportive of my request. So was the sales office. Thanks to them, I had no troubles and smoothly took this leave of absence.

The leave gave me the chance to see the actual birth of our third child. I'll never forget how I sobbed with my wife at this birth. While my wife was in the hospital, in addition to general housework, I took the children to school, prepared their lunches, and met with their teachers. I enjoyed a close relationship with my children, experiences I'll always treasure.

Shimizu's human resource development
Giving diverse human resources the opportunity to flourish

■Dialogue in the Dark

This year, the Monozukuri Juku Program for new managers held annually for employees newly appointed to managerial positions adopted a "Dialogue in the Dark" program. During fiscal 2014, a total of 180 employees took part in this training program, which was held six times, starting in May.

This program is intended to make trainees experience the difficulties that arise when trying to communicate information unaided by vision. It requires trainees to complete various tasks with other trainees in an environment that's completely dark, led by visually impaired attendants.

Here are some of the remarks from employees who completed the training: "I learned the importance of speaking up"; "I realized the need to listen closely to others' thoughts"; "It made me think about the meaning of diversity."

Our hope is that trainees will draw on the awareness gained from this experience to better manage their workplaces and train subordinates.

Entering the pitch-dark training room with white canes

A photo taken with a supersensitive camera inside the dark training room (© The Asahi Shimbun Company)

■Global HR development

Launched in fiscal 2011, the international rotation system entered its fourth year in 2014. Under this program, a total of 49 new employees have been assigned overseas to date. As for the employees assigned overseas as new employees in the first fiscal year of this program, two civil engineering employees returned to Japan in fiscal 2013 after completing their first rotations, as did six architectural construction employees and one facilities employee in 2014. In exchange, civil engineering employees in their third year and architectural construction and facilities construction employees in their fourth year were sent on overseas assignments.

Employees returning to Japan from overseas are given opportunities to learn about practices in Japan. For example, employees in the architectural construction field learn construction management methods for one month through classroom work and hands-on training on site before being assigned to domestic job sites. Shimizu plans to continue this rotation system to ensure sustained progress in developing an environment ready for global business growth.

New employees assigned overseas (unit: employees)

	FY2011	FY2012	FY2013	FY2014
Architectural construction	6	6	6	6
Civil engineering	2	2	2	3
Facilities construction	1	1	1	1
Administrative	3	3	3	3
Total	12	12	12	13

Securing human resources
Improving business continuity by securing the next generation of human resources

The construction workforce—skilled workers in particular—is aging rapidly due to a marked decrease in the number of young people entering the field. Achieving a successful transition from generation to generation by attracting younger workers, including women, is a pressing issue for the industry.

In cooperation with its Kanekikai partner companies, Shimizu has launched efforts to improve the working environment and to help women thrive in the industry, including efforts to encourage broader social insurance participation for skilled workers. Composed of women employees from Shimizu and specialist contractors, the Nadeshiko Construction Team is moving to improve the working environment from a woman's perspective.

Other activities intended to contribute to human resource development include efforts launched to secure human resources from overseas. We are developing a structure to accept construction workers from overseas in accordance with the Ministry of Land, Infrastructure, Transport and Tourism guidelines. As part of our efforts to build human resources, we will continue the Shimizu Open Academy* program held at leading overseas universities, providing students with an introduction to our technologies and achievements.

We are also promoting productivity improvements by developing technologies that reduce the labor required for construction work. In the future, even in the face of declining populations and in alignment with the efforts of the construction industry as a whole, we will continue to assume the construction industry's responsibility for maintaining and renewing our social infrastructure in a sustainable manner.

* Shimizu Open Academy
A course open to the public and held for young people and others in Japan and around the world, the Shimizu Open Academy features lectures by experts who describe matters in a clear and easy-to-understand way, thus deepening public interest in construction. It has been held at various universities, including the National University of Singapore, the Indian Institute of Technology Delhi, and the Ho Chi Minh City University of Technology.

Health and Safety Efforts

In the area of health and safety, Shimizu is carrying out activities to prevent accidents by consistently implementing the COHSMS (Construction Occupational Health and Safety Management System). In fiscal 2015, we plan to reduce accidents still further based on a policy of formulating work plans and procedures based on risk assessments and following up on results through the Sangen-Shugi principle (the "three actuals": the actual site, the actual situation, and the actuality).

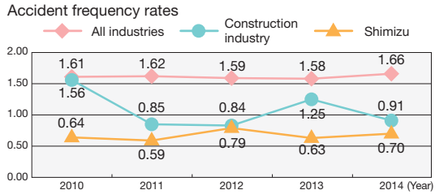
Fiscal 2014 results
Injuries caused by falls of less than two meters and slips and trips increase

*1 Accident frequency rate: 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 worsened from the previous year, rising from 0.63 in 2013 to 0.70 in 2014, falling short of the target rate of 0.60.

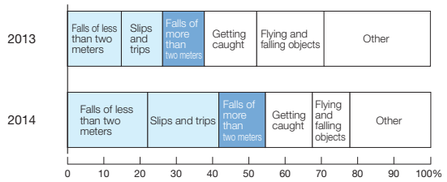
Accident frequency rates



■Accident analysis

A look at accidents by type shows that falls of less than two meters, slips and trips, and falls of more than two meters accounted for the largest share of accidents, followed by getting caught in machinery or equipment and flying and falling objects. In particular, falls of less than two meters and slips and trips occurred at high rates, accounting for about 40% of all accidents. A look at the causes of these accidents points to factors such as inadequate planning of temporary facilities, inadequate patrols and inspections during work, and inadequate consideration of procedures when changed.

Accidents by type



■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. Participating in a morning meeting at the Kyobashi 2-chome west district redevelopment site in Tokyo, which he visited in July, Mr. Miyamoto told workers, "The boldness to say 'Stop!,' continuous effort, and an adherence to procedures are all key to ensuring safety. I want each of you to monitor the workplace carefully. You should establish an environment in which you look around carefully and feel free to warn others when needed, thereby making your safety efforts as effective as possible."

Mr. Miyamoto on safety patrol

Specific measures in fiscal 2015
Formulating safe work plans, temporary facility plans, and job procedures; warning one another when needed
Stopping work and checking procedures when changed

*2 "Rock-Paper" activities
To help prevent accidents involving heavy equipment, workers follow a simple rule. They raise an open hand (like the "paper" gesture in the game rock-scissors-paper) when entering a zone where heavy equipment is operating, thereby warning the operator to stop. On seeing this, the operator raises a fist in the "rock" gesture to acknowledge the other worker entering the zone. No one can enter the zone until he or she sees the "rock" gesture.

*3 "3-3-3" activities
Accident-prevention activities involving lifting loads by a crane. Workers must confirm safety as follows:
- Stop the crane temporarily when loads are 30 cm above the ground.
- For three seconds, check to see if the wire is securely attached to the crane.
- Signal to resume lifting after confirming no one is within three meters of the load.

■Eliminating accidents involving falls from heights and accidents involving heavy equipment, cranes, or collapsing or falling heavy structures

Our goal is to eliminate accidents involving falls from heights and accidents involving heavy equipment, cranes, or collapsing or falling heavy structures. To do this, we will formulate safe work plans, temporary facility plans, and job procedures. We will carefully inspect the implementation of these plans during patrols and make a practice of warning each other.
To address accidents involving falls from heights in particular, we will move forward with planning and implementation of redundant accident-prevention measures, along with the "Always wear your safety belt" activities and a system for penalizing those who fail to use safety belts. To address accidents involving heavy equipment, cranes, or collapsing or falling heavy structures, we will implement checks on the structural safety of temporary structures and heavy structures, as well as the "Rock-Paper"*2 and "3-3-3"*3 activities.

■Preventing accidents due to causes such as a failure to consider work procedures when changed

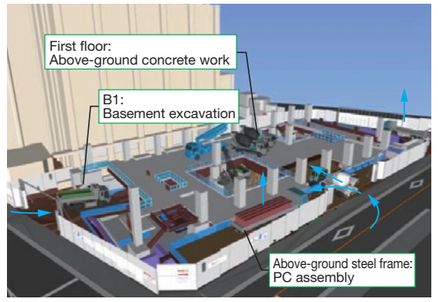
We will ensure thorough adherence to the policy of stopping work temporarily when changing work procedures and resuming work only after confirming the changed procedures jointly with the relevant business partners. In this way we strive to eliminate risks of misunderstanding and thus prevent accidents.

A Juntendo University project: Reducing work at high elevations and finding ways to avoid performing construction work on two levels
Working conditions and facilities that make working safely easier for everyone

This project involves renovating an existing hospital facility into a high-rise structure. Work on the project needed to overcome several hurdles. First, the on-site emergency room had to continue operating 24 hours/day. Next, the site featured differences in elevation of up to four meters and was too small to accommodate a dedicated construction yard. Finally, the project timeline was brief, and all work had to be performed during daylight, at the request of neighborhood residents. Despite all these constraints, we were able to create a construction yard and preparatory yard to ensure a safe working environment. Below, we give three examples of our efforts.

■Preceding multi-floor construction slab method*1

Due to time constraints, the standard preceding construction slab method*2 posed the risk that work would need to be performed above ground and below ground at the same time—a clear safety hazard. We responded by taking a multi-floor approach. We decided to use the on-site differences in elevation to split the movement of construction vehicles into two flows and built initial construction slabs both at the ground floor and the first basement floor. We set up a safe working environment by assembling the steel frame and PC materials for the highest floor in a small yard space around the building, pouring concrete on the first floor, delivering and raising materials from the first floor, and excavating the basement areas from the first basement floor. By clearly differentiating work areas in this way, it was possible to avoid performing work on two levels at the same time.

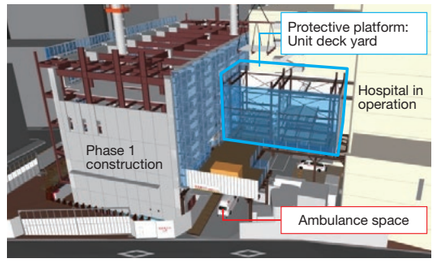


*1 Preceding multi-floor construction slab method: A method of building construction slabs on more than one floor as an initial step

*2 Preceding construction slab method: A method of building a construction slab on the ground level as an initial step so that it can be used as a yard for construction work; often used to build high-rise structures on small sites.

■Unit deck*3 yard

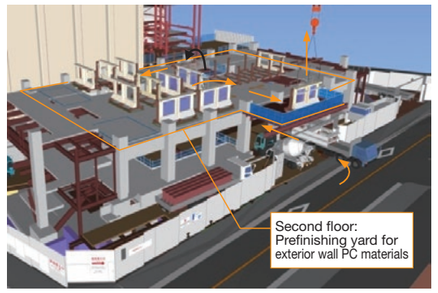
At first, it looked like the lack of space for a preassembly and stock yard would make it hard to set up a unit deck on site. We managed to build an assembly yard in the ambulance space on the adjoining hospital grounds. The structure used for an assembly base incorporated an upper protective platform and a ceiling crane. We completed the next preassembly steps atop the unit deck assembled first. This allowed workers to reach things easily at heights not exceeding 1.5 meters, resulting in a safe work environment.



*3 Unit deck: Structural materials for the floor (steel beams and a deck) preassembled in an on-site yard

■Finishing yard for exterior wall PC materials*4

To complete exterior wall finishing work safety and efficiency, we set up another working base on the second floor, namely, the prefinishing yard for exterior wall PC materials. We used cranes to lift delivered exterior wall PC materials from the first floor to the second floor. This made it possible to finish the exterior walls safely and atop this stable floor, thus eliminating the need for elevated work. The low floor height also allowed us to use air lifters to move materials laterally. We also achieved a safe work environment on higher floors by preassembling scaffolding and other safety equipment in the yard.



*4 Exterior wall PC materials: Reinforced concrete materials for exterior walls produced in advance at a factory

Comments from a worker on site

Kazuo Suzuki, Project Director

This project involved the construction of a high-rise building on a small site. We set up a construction yard and a preparatory yard based on a multi-floor approach. Clearly differentiating individual work areas helped create a safe working environment by eliminating the need to work on multiple levels at the same time. It also helped reduce hazardous work at elevation. By using a unit deck to quickly set up a base floor for construction work and by installing safety equipment in advance in the prefinishing yard for exterior wall PC materials, we managed to create a safe working environment for everyone. I'd like to apply this multi-floor approach in the future to construction yards and preparatory yards. I think it's remarkably effective for safety management on small construction sites.

Interacting with Society/Engaging in 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.

Supporting athletic activities for people with disabilities
"Sports for Everyone" athletic event for people with disabilities

■Working with STAND, a nonprofit

As part of efforts to help those with disabilities take part in athletics, Shimizu sponsors the Challengers.TV website organized by the nonprofit organization STAND (Shibuya-ku, Tokyo; Director: Kazuko Ito). Shimizu supports the concept of this nonprofit, which promotes athletic participation among the disabled. We also support STAND's athletic events for the disabled, which take place three times a year across Japan, with Shimizu employees, executives, and family members participating as volunteers at these events.

■The first event was held in Kanazawa.

Tailored to local residents of elementary school age and older, these events are intended to provide opportunities for those with disabilities to demonstrate various capabilities, including athletic prowess and communication skills. The program is intended to allow anyone to enjoy athletic activities based on the "Sports for Everyone" web-based teaching materials developed by STAND.

The first event was held on September 14th at Ishikawa Sports Center (Kanazawa, Ishikawa Prefecture). A total of 128 people with and without disabilities participated, most of them elementary school children.

■Gaining new awareness through goalball

A message from Ms. Ito of STAND at the start of the event established the basic premise: anyone can participate and enjoy sports together, regardless of disability. Cross-country skier Yoshihiro Nitta, a gold medalist in the Vancouver Winter Paralympics, talked about the "The Power of Dreams," emphasizing the importance of never giving up. He let participants touch his gold medal. Many expressed surprise at its size and weight.

After the speeches, medalist Akiko Adachi and Naoki Eguro, coach of Japan's gold medal national women's goalball team in the London Summer Paralympics, led a game of goalball, a Paralympics competitive event. Participants were split into two teams: one for children and the other for adults. With all players wearing blindfolds to level the playing field, participants practiced listening to and catching a ball equipped with a bell that was rolled to them by Eguro and Adachi. The practice session was followed by a match in which teams sought to score points by rolling the ball into their opponent's goal. Loud cheers erupted as those with and without disabilities competed. "The experience gave a vivid sense of how hard everyday tasks might be if you can't see," said one participant.

Children play goalball with Ms. Adachi.

Adult players compete for victory.

Note: Video of the event can be seen on the Challengers. TV website.
URL:
http://www.challengers.tv/topics/2014/09/3382.html

■Volunteers had a great time, too.

A total of 38 employees and family members from Shimizu's Hokuriku Branch took part as competitors and as volunteers running the event. They appeared invigorated afterwards. "It was fun to greet people with a smile," said one. Said Director Ito, "Based on all the smiles on the faces of participants and volunteers, the event appears to have been a major success."

A commemorative photo together with comments by participating children

Participating from the basic program planning stage through architectural design and construction
Elem experience-based economic educational facilities

■Working with Junior Achievement Japan

Founded in the United States in 1919, Junior Achievement is the world's largest economics education organization. It draws some 9.7 million young people each year to events at facilities in 123 countries around the world. Shimizu encourages its activities as a supporting member of Junior Achievement Japan.

In 2012, the Qatar Friendship Fund—operated by Qatar to support recovery of the earthquake-affected area in Tohoku—adopted the Student City*1 and Finance Park*2 programs proposed jointly by Junior Achievement Japan and the cities of Sendai and Iwaki. Participating in the design and construction of Elem special-purpose facilities in both cities, Shimizu has been involved in the program, starting from the basic design stage to the completion of construction.

Student City

Finance Park

■Design efforts

Plans called for the Elem facilities to occupy the remodeled eighth floor of an existing high-rise building in front of JR Sendai Station and a newly constructed three-story building in Iwaki. For the Iwaki project, the Design Department of the Tohoku Branch held a competition to generate ideas for the facility based on the theme "A Window to the Future." Judges included members of Junior Achievement Japan and the Iwaki City Board of Education. Shimizu conducted detailed studies including the use of models with detailed furniture layouts to represent the facility. The goal was to achieve layouts that children and students would find appealing and easy to use. Other activities included ongoing discussions and tours of existing facilities in Tokyo and Kyoto.

The exterior design features random openings fitted with blinds of different colors in order to symbolize windows to the future. Even the ceiling lighting is arranged randomly. The floor design is based on a map of the city of Iwaki. The colors of the furniture were selected deliberately. These and other aspects of the design were intended to inspire children.

Conducting a design review

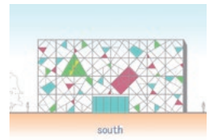
The floor design patterned after a map of the city of Iwaki

Random openings symbolizing windows to the future

The Student City and Finance Park features booths set up mainly by local businesses. Given the nature of the program, most participating businesses come from the B2C community (e.g., retail and services). While Shimizu did not take part in the actual program, the looks on the faces of the children near the end of the day-long program suggested this exposure to the "Window to the Future" concept had made a lasting impression.

*1 Student City:
Student City is a program for fifth graders that provides hands-on experience with various systems used in society. Themes included the organization of the city, relationships between individuals and society, economic activity, and the relationship between work and a rewarding life. As such, the program offers children an opportunity to learn about the give and take of daily economic exchange through role playing in an environment designed to resemble an actual city.

*2 Finance Park:
Finance Park is program for eighth graders that provides hands-on experience with themes related to life and budgeting in a facility intended to reproduce an everyday environment. Students engage with tasks involving planning and budgeting based on income, taxes, health insurance, pensions, investments, and international travel.



Some proposals from the idea competition

The selected "Window to the Future" proposal

Colorful blinds

Children learning the skills needed to live independently in society

Yoshihiro Nakamoto, Managing Director, PUBLIC-INTEREST INCORPORATED ASSOCIATION-Junior Achievement Japan

Both projects in Iwaki and Sendai are going well and have won high regard from children, parents, teachers, and the board of education. They've drawn growing numbers of visitors interested in observing the project first-hand from the Ministry of Education, Culture, Sports, Science and Technology, as well other local authorities and education professionals. We've also been approached by other cities about new projects. We look forward to Shimizu's continuing support, both as part of its CSR activities and through its main businesses, as we continue to expand these efforts. (English translation from Japanese)

Engaging in Social Contribution Activities
Building an adventure forest (Osaka Branch)

In November 2014, participants built an adventure forest at the Osaka Prefecture Shonen Shizen no Ie (“Youth Nature Home”) in the city of Kaizuka, Osaka Prefecture. On the day of the activities, 53 parents and children who live in local communities took part in forest thinning and tree planting activities. They also built wooden chairs and enjoyed “Treeing” (climbing trees with ropes). Participants cooked rice and sweet potatoes outdoors and spent all day in a natural setting. Shimizu employees volunteered to help with activities, provided lunch and snacks, and distributed rulers made at the Tokyo Mokkoujou Arts & Crafts Furnishings as souvenirs for the children.

Based on an agreement with Osaka Prefecture’s Senshu agriculture and forestry office and the Osaka Prefecture Shonen Shizen no Ie (“Youth Nature Home”), this activity was launched in 2008 as part of Osaka Prefecture’s Adopt-a-Forest program. Intended to deepen our ties to the woods and improve communication skills by giving children the opportunity to experience the forest, the program has been organized 11 times to date. The smiles on the faces of the children at each event suggest they are able to experience things they don’t see every day.

In 2013, the governor of Osaka Prefecture presented a letter of appreciation for the cumulative achievements of these efforts. In 2014, the activity won the Cabinet Office Minister of State’s Prize in the children and youth development support section of awards for organizations that support children, families, and young people. These awards are presented to companies that make significant contributions to activities that support children and child-rearing parents.

We plan to continue these activities to give families a chance to experience nature in an enjoyable way while learning about conservation and related issues.

Children enjoying treeing

General Manager Tanaka receives award from Minister Arimura.

Engaging in Social Contribution Activities
Matsusaka Isedera Nature Ai-Land (Nagoya Branch)

This event by the Nagoya Branch has been held 32 times since the first event in November 2008, which involved forest thinning work by employees of Shimizu and its partner businesses, especially employees from the Mie Sales Office. More than 1,500 people have taken part to date. In October 2010, a forest conservation agreement was concluded among four parties: Mie Prefecture, the city of Matsusaka, the local Isedera neighborhood association, and Shimizu. This event, with its deep ties to the local community, has also yielded other opportunities, such as nature tours by local elementary school children.

To date, the first stage of thinning has been completed for about 90% of the five-hectare forest. Carrying hatchets and saws, participants are assigned areas to work on in teams. These teams thin the trees and create walkways under the guidance of local authorities. To ensure fun for family members during these efforts, other activities include nature tours, a bamboo workshop, observation of beetle larva, and the building of “villages” made from sawdust and fallen leaves for use by Japanese rhinoceros beetles.

Since this is a long-term project, plans call for secondary thinning that will balance the amount of sunlight streaming through the canopy after the first stage of thinning has been completed.

The first stage of thinning

Children taking part in the bamboo workshop

Initiatives by an Affiliate —Shimizu BLC Co., Ltd.—

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. Outlined below are some of the initiatives pursued by Shimizu BLC Co., Ltd.

Shimizu BLC Co., Ltd.
Lines of business:
- ■Renovation
  Design, construction, diagnostics, maintenance
- ■Building management
  Integrated building management

Shimizu’s 24-hour building management center

Preventing global warming
Energy management and CO_2 reduction activities

Under the slogans “Buildings Loved Forever” and “Leave Building Safety and Reliability to Us.”, Shimizu BLC pursues timely activities with the staffs checking the status of operations at numerous sites and by fine-tune technologies based on an analysis of energy consumption. Shimizu BLC implements optimal facility management to ensure buildings perform at their best, achieving both energy conservation and comfort for its users.

Specialized head office staff at Shimizu BLC address issues that require advanced analysis technologies by analyzing data gathered by Shimizu’s 24-hour building management center, as well as data measured on site. These efforts provide powerful solutions support.

■Case study: Japanese Red Cross Ashikaga Hospital

Based on a next-generation green hospital concept, this hospital incorporates a distributed heat source system, heat pump system, using well water, radiative heating and cooling, minimal ventilation controls, and other state-of-the art technologies. These technologies, along with eco patrol activities and energy-saving fine-tuning, have achieved 45% reductions in electric power consumption compared to the typical major hospital. The building was awarded the Minister of Economy, Trade and Industry Prize (joint projects) in the 2014 Energy Conservation Awards.

Cooperative efforts involving the client and designers reduced the average primary energy consumption rate after the opening of the hospital to annual 2,240 MJ/m² of floor area,
a savings of
45%
compared to the typical major hospital.

Interacting with Society/Engaging in Social Contribution Activities
Activities of the Hashibami-kai*1 volunteer team

The Hashibami-kai volunteer team tackles various activities based on the belief that volunteer activities can contribute to the local community, benefit society, and help employees grow and achieve self-realization. Throughout the year, the team plans different volunteer activities for each season (including continuous companywide cleanup activities), with practical results achieved in each activity. Aside from the activities described here, the team takes part in food drives,*2 planting, and forest thinning.

■Fiscal 2014 volunteer activities in areas affected by disaster in Tohoku (Minamisoma, Fukushima Prefecture)

Undertaken each year in the city of Minamisoma, Fukushima Prefecture, volunteer activities in disaster-affected areas in Tohoku involve a wide range of activities. In the third session, 21 volunteers helped households move their belongings, efforts that were met with much gratitude from local residents.

Helping disaster victims move their belongings

■Shonan Beach Cleanup (Kamakura and Fujisawa, Kanagawa Prefecture)

This activity takes place every year at Yuigahama and Kugenuma beaches, with many volunteers taking part. The 2014 event at Kugenuma Beach drew 120 employees and family members.

Beach cleanup activities at Kugenuma Beach

*1 Hashibami:
Hashibami is the name for the hazel, a deciduous shrub belonging to the birch family. This name was chosen because the hazel is the birth flower for the day on which the group was formed. The hazel is said to symbolize harmony, truth, and wisdom in the language of flowers.

*2 Food drive:
Food drives collect unneeded food from homes at workplaces and schools for distribution to the needy.

A letter of thanks from the city of Minamisoma’s volunteer activities center

Past 3 years:
300total participants

Interacting with others helps us grow.

Satoru Kurazono, General Manager, Safety/Environment Dept., Shimizu BLC Co., Ltd.

In our building management efforts, we apply our expertise to help reduce CO_2 emissions through energy management optimized for each building. Our volunteer activities reflect our concern for the environment and encourage employees to foster a spirit of consideration for others. In a sense, our business is based on successfully interacting with others. As such, we look forward to continuing these environmental activities.

Stakeholder Reactions to the CSR Report 2015

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

Once again, the Shimizu CSR Report 2015 eloquently expresses Shimizu's balanced approach to realizing social value on the one hand and increasing corporate value on the other.
The special feature on the theme of "creating value together" provides excellent examples of your overall capabilities and strengths. In particular, the gradual expansion of cooperation with Chubu University and the repairs made to the Shōsōin treasure house, along with the geographical extent of your overseas projects, provide an impressive view of the value generated by your projects and the diversity of the stakeholders involved.
One also sees a number of distinctive Shimizu features in the Activities sections. The section on "Fairness and Transparency in Business," which mainly introduces matters of governance, emphasizes your awareness of contemporary issues by describing enhanced information security and anti-corruption efforts. The way you describe BCP as a part of governance seems to be an extension of this approach—namely, to make business continuity the foundation of your broad-ranging CSR activities.
I think the descriptions by those responsible for each headquarters in "The Creation of Value Surpassing the Expectations of Customers and Society" are a highlight of this year's report. Positive aspects that remind one anew of the philosophy behind "The Analects and the Abacus" include a clear message on optimal quality, not only with respect to technologies (such as those represented by the Advanced Earthquake Disaster Prevention Laboratory), but also to the development of advanced communications and technical abilities in the service of surpassing expectations while accurately identifying the needs of your increasingly diverse customer base. Also impressive are new developments in your ecoBCP technologies linked with energy system reforms and your point of view on new businesses, including the challenges of infrastructure renewal.
At the same time, there remains room for improvement in the framework of the report supporting this outstanding content. The relationship between the social issues identified and company activities is somewhat hard to understand based on the categories and presentation. This might be because the process of determining important themes and content is unclear. I think there might be room for discussion as to the appropriateness of the pioneering KPIs (key performance indicators) you have selected, together with the assessment indicators that supplement them. I would like to see you envision outcome indicators linked to the social value you strive to realize through your business activities, as well as efforts to verify their effectiveness based on their relationship to your wide-ranging stakeholders, one of Shimizu's key strengths.

(English translation from Japanese)

Ryoji Terada
Executive Officer,
PricewaterhouseCoopers Sustainability Co., Ltd.

As the concept of creating shared value (CSV) enters widespread use, the CSR reports of Japanese companies have come to play an important role in branding and investor relations. Shimizu, too, is attempting to integrate CSR themes into its business. This can be regarded highly, particularly from an investor's perspective. Each of the three themes introduced in the special feature of this year's report concerns initiatives in partnership with regulators, local government and communities, and suppliers. It is conceivable that such projects will have great potential as new CSV business models, as most CSR activities efforts undertaken through multi-sector cooperation (among diverse organizations and groups) are believed to be more effective than initiatives tackled by a single enterprise.
At the same time, from the perspective of disclosing information to diverse stakeholders, a CSR report like this one should actively present information on social issues directly related to the company's businesses, as well as potentially negative information. While companies in general tend not to be energetic in disclosing such information, isn't it possible that a faithful presentation in the CSR report of the company's situation, including negative aspects, would make a positive impression on the labor market, given the construction business faces a pressing need to secure workers in Japan as the nation's workforce shrinks?
In a CSR report from Shimizu, I believe that most readers want information on the role of a general contractor such as Shimizu in connection with the nuclear power plant accident and resilience in the face of increasing disasters around the world. While the report does provide information on radiation decontamination in areas near the nuclear power plant, it doesn't address the accident itself. I'd like to see such information disclosed from a long-term perspective, including whether or not Shimizu is involved in such activities. In addition, on the topic of resilience, a construction company faces strong expectations related to supporting the business continuity of others in the event of a disaster. While the report contains a wealth of detailed content on supporting customer BCP efforts based on Shimizu's advanced seismic technologies, in addition to information on Shimizu's own BCP efforts (including its disaster information-sharing system), I would prefer to see more information on this area than on ecoBCP efforts. I look forward to following Shimizu's future activities.

(English translation from Japanese)

From the Director Responsible for Dialogue with Stakeholders

"Creating Together," the special feature theme of this year's report, addresses a wide range of cooperative efforts. An example presented involved developing a roadmap for a smart community in an existing urban community through cooperative efforts with authorities to resolve existing legal hurdles. This example encourages expectations for future smart use of energy across multiple sites and suggests a way to expand a business scheme. The attempt to continually refine the smart campus project into a framework for contributing to local environmental management through community cooperation offers a case study and a profile for local communities of the future. The next step will be to verify the results. It is our role in societies to employ all available forms of communication and partnership to meet the increasingly diverse needs of customers at a high level, both in Japan and around the world. The challenging examples from overseas will give us clues as to how to strengthen the organization, development, and transmission of supply chain functions in Japan.
We see our dialogue with stakeholders as a supremely important contact with society. Once again this year, we believe we've succeeded in having wide-ranging dialogue to help enrich our CSR activities over the long term. Based on our principle of delivering solutions to social issues through our business activities, we have learned much about appropriate directions for future activities by shining a light on the value of activities surrounding our businesses, as well as by considering how we, as a company serving a wide range of business sectors, can approach and address issues that differ from region to region.
This year's dialogue raises the need to clarify the process how we identify our materiality and select our KPIs. In fact, this issue has been discussed for the past few years. We will deepen our discussion of the relationship between the three pillars of CSR management and our KPIs and identify new ways to approach above raised issues.
We strive to improve to deepen our dialogue with a broad range of stakeholders. We also strive to implement corporate initiatives characterized by ever-growing transparency. In these and other ways, we hope to attract an increasingly broad readership for this report.

Shigeru Namioka
Senior Managing Officer, CSR

Dialogue with Stakeholder

■Held on Wednesday, May 13, 2015, in a meeting room at Shimizu
We held a discussion forum on the following themes related to the 21st Shimizu CSR Report (2015) from the perspective of notable experts:

Mr. Takegahara from the Development Bank of Japan has taken part in this event for four consecutive years, starting with the session for Vol. 18 of the CSR Report in fiscal 2012. Mr. Terada from PricewaterhouseCoopers Sustainability Co., Ltd. took part for the first time in three years, after the session for Vol. 18 of the CSR Report in fiscal 2012.

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.

Ryoji Terada,
Executive Officer
PricewaterhouseCoopers Sustainability Co., Ltd.

Shigeru Namioka, Senior Managing Officer, CSR

External Awards

■Winning projects at the 55th BCS Awards

Ginza Kabukiza (construction)
Photo courtesy Shochiku Co., Ltd. and Kabuki Za Co., Ltd.
(Photo taken May 2013)

Shimizu Corp. Head Office
(design/construction)

Yanmar Museum (construction)

■24th BELCA Awards

Best Remodeling Section

Seifun Museum, main building
(repairs design/repairs construction)

Ekimise (repairs design/repairs construction)

■2014 Japan Society of Civil Engineers Awards

Technology Award, Group I

Pahang-Selangor Raw Water Transfer Project:
Building the South East Asia's longest (L=44.6 km) water tunnel

Environmental Award, Group II

Development and implementation of a smart recycling system for disaster waste

■List of other awards won

Award name		Work recognized by prizes or awards
2014 Japan Society of Civil Engineers Awards: Technology Award, Group II		Construction of Japan's first deep underground research facility at a depth of 500 m (Mizunami Underground Research Laboratory)
2014 Japan Society of Civil Engineers Awards: Technological Development Award		Development of Hybrid Infrared/Visible Image Inspection & Diagnostic Analysis System (HIVIDAS)
2014 Japan Society of Civil Engineers Awards: Tanaka Award (Works Section)		Otagawa Ohashi Bridge (see p. 35)
Society of Heating, Air Conditioning and Sanitary Engineers of Japan Awards: Technical Award for Building Facilities	2014	Environmental and facilities planning for the Shimizu head office: Realizing an urban high-rise office building to contribute to a sustainable society
Society of Heating, Air Conditioning and Sanitary Engineers of Japan Awards: Special Award for Remodeling	2014	Energy conservation improvements to building facilities at Makuhari Techno Garden
Society of Heating, Air Conditioning and Sanitary Engineers of Japan Awards: Promotion Award for Technological Promotion	2013	Facilities planning for Izu Velodrome
		Planning, design, and construction of Toyosu Cubic Garden
Healthcare Architecture Award 2013		Japanese Red Cross Ashikaga Hospital
		St. Luke's Birth Clinic
DBJ Green Building Platinum Certification 2013		Yokohama I-Mark Place (developed by Shimizu)
2014 Japan Concrete Institute Awards: Technical Award		High-strength concrete frame to form the exterior walls of a high-rise building: Overview of Shimizu Corp. Head Office
2014 Japan Concrete Institute Awards: Works Award		Kakamigahara Ohashi Bridge
27th Japan Construction Machinery and Construction Association Awards: Merit Award		Development and practical implementation of technology for granulation and production of crushed stone in treatment of disaster waste
Third Carbon Neutral Awards		Seicho-No-Ie's Office in the Forest: Japan's first zero-energy building
25th Institute of Electrical Installation Engineers of Japan Awards: Facilities Incentive Award		Toyosu Cubic Garden electrical facilities
25th Institute of Electrical Installation Engineers of Japan Awards: Development Incentive Award		Development and feasibility study of multi-building smart grid for Chubu University (see pp. 10–11)
12th Environmental and Equipment Design Award: Merit Award (Equipment, Fixtures, System Design)		Gradation blinds
12th Environmental and Equipment Design Award: Merit Award (Integrated Building and Facility Design)		Shimizu's Head Office
13th Environmental and Equipment Design Award: Merit Award (Environmental Design)		SEICHO-NO-IE "Office in the Forest"
13th Rooftop, Wall, and Special Landscaping Technology Competition: Ministry of the Environment Award (Rooftop Landscaping Section)		Shin-Meguro Tokyu Building rooftop garden
Energy-saving Lighting Design Awards 2014: Grand Prize, Public Facility/General Facility Section		Kyobashi Kodomoen

Independent Assurance Report

The CO_2 emissions and reductions resulting from the efforts shown under "Preventing Global Warming—Ecological Mission" on pp. 38 to 39 have undergone independent review by Ernst & Young Sustainability Co., Ltd.

Interviewing top management

Inspecting evidence for forms and data

Construction site inspection
(on-site inspection)

See the Shimizu website
(http://www.shimz.co.jp/csr/environment/report/pdf/data_2015.pdf)
for detailed information on calculation methods used for the Ecological Mission and other matters.

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Translation

The following is an English translation of an independent assurance report 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.

June 8, 2015

Independent Assurance Report

Mr. Yoichi Miyamoto
President
SHIMIZU CORPORATION

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 Key Sustainability Performance Indicators (hereafter the "Indicators") of the Company and its major subsidiaries for the year ended March 31,2015 included in the Company's Ecological Mission section of the Shimizu CSR Report (hereafter the "Report"). The scope of our work was limited to assurance over the information marked with the symbol "☑" in the Report.

1. **The Company's Responsibilities**
The Company is responsible for preparing the Indicators in accordance with the standards based on the Japanese environmental laws. The standards refer to Shimizu CSR Report 2015 Data, 2. Ecological Missions, 2.1. Estimation Standards (http://www.shimz.co.jp/csr/environment/report/pdf/data_2015.pdf). Greenhouse gas (GHG) emissions are estimated by combining emisssions of different gases by using the global warming potential values to convert the total emissions to carbon dioxide equivalents, which are uncertain because the scientific ground of the values are not established and different instruments for measuring GHG emissions have different characteristics in terms of functions and presumed parameters.

2. **Our Independence and Quality Control**
We have complied with the independence requirement defined in the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants in March 2013, which is based on the fundamental principles of integrity, objectiveness, professional competence and due care, confidentiality, and professional behavior.
In addition, as a member of Ernst & Young ShinNihon LLC, our parent company, we maintain a comprehensive quality control system, including documented policies and procedures for compliance with ethical rules, professional standards, and applicable laws and regulations in accordance with the International Standard on Quality Control 1 issued by the International Auditing and Assurance Standards Board in April 2009.

3. **Our Responsibilities**
Our responsibility is to express a limited assurance conclusion on the Indicators included in the Report based on the procedures we have performed and the evidence we have obtained.
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 in December 2003, Practical Guidelines for the Assurance of Sustainability Information, revised in December 2012 by the Japanese Association of Assurance Organizations for Sustainability Information and, in respect of GHG emissions, the International Standard on Assurance Engagements 3410, Assurance Engagements on Greenhouse Gas Statements (ISAE 3410), issued by the International Auditing and Assurance Standards Board in June 2012.
The procedures, which we have performed according to professional judgment, include inquiries, observing processes, inspecting documents, analytical procedures, agreeing with records of basic information on the Indicators, as well as the following:
- Inquiries about standards based on Japanese environmental laws and evaluating appropriateness;
- Inspecting relevant documents with regard to the design of the Company's internal controls of the Indicators and inquiring of personal responsible thereof at the headquarters and 1 site visited ;
- Performing analytical procedures on the Indicators at the headquarters and 1 site visited ;and
- Agreeing to supporting documents and re-calculating with part of the Indicators at the headquarters and 1 site visited 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 if we had performed a reasonable assurance engagement.

4. **Conclusion**
Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that caused us to believe that the Indicators included in the Report have not been measured and reported in accordance with standards based on Japanese environmental laws.

ISO certification

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/report2015add2.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

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 sophisticating the most suitable quality. All employees focus on quality in processes ranging from sales through maintenance by identifying values 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.

Editor's Afterword

Creating value that surpasses expectations is an important goal, and the approach we take in this regard matters greatly. It also matters that our ties to customers, authorities, local communities, and partners are deep and broad-ranging. In a special feature titled "Creating Together," this year's report introduces some practical initiatives in this and related areas. Following last year's repairs to Izumotaisha Shrine, we took the opportunity to renovate the Shōsōin treasure house this year. Through activities that connect Japan's historical treasures to the future, our goal is to continue passing along the spirit of *monozukuri*.
We remain committed to improving our CSR activities based on feedback we receive from readers.

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

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

SHIMIZU CORPORATION

SHIMZ

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