



Shimizu Corporate Social Responsibility Report

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SHIMIZU CORPORATION

# Message from the President

Major recovery efforts are currently under way in the aftermath of the Great East Japan Earthquake, and we understand that those affected by the disaster are all working very hard under extremely difficult conditions. We would like to express our sympathy for those affected and, as a company responsible for the development of Japan's infrastructure, we will continue devoting all our resources to supporting them. Our Earthquake Restoration and Support Office (ERSO) will play a central role in these efforts. We expect to encounter numerous difficulties as we work to achieve a rebirth of the affected areas. Nevertheless, we are confident that these areas will regain their vitality, as individuals pool their strengths to overcome a succession of difficulties.

Ultimately, we have a responsibility to use the knowledge we have gained from this earthquake experience for the betterment of society. In addition to strengthening our business continuity plan (BCP) and operating within the framework of a sustainable society, we wish to reinforce the importance of corporate social responsibility (CSR) in relation to our management goals and work to improve our efforts in this area.

In June 2010, we formulated our new long-term vision, Smart Vision 2010. This vision clearly demonstrates to those inside and outside Shimizu our ideals as a company whose core is the construction business. The vision seeks to characterize Shimizu's efforts, progress, and advances as a response to long-term societal needs, as opposed to simply maintaining stability during a time of dramatic change both in Japan and around the world.

Fully acknowledging the importance of our interactions with society as the foundation of this vision, we have established our medium-term targets based on the following three pillars of CSR:

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

## The Smart Vision 2010 Long-Term Vision

The Shimizu ideal is expressed in the following words: "A company that continues to grow alongside society; a leader in creating environments where people can live with peace of mind." To achieve sustained growth over the coming decade while maintaining construction as our core business activity, we will establish and develop businesses to serve as a base for future revenue in three key areas: stock management businesses; global businesses; and sustainability businesses. We will also work to strengthen corporate management of the entire group by drawing upon synergies that were generated by our corporate-wide focus on the environment. We will also create management structures to realize this vision and promote enhanced CSR, technological capabilities, human resource management, organizations, and systems to establish such management systems.

## Fairness and Transparency in Business

As part of our efforts to contribute to a sustainable society, we will base our business activities on a strong sense of corporate ethics. In new business domains as well as existing ones, our goals will be to enhance our risk management rules and systems in accordance with social requirements, prevent problems before they occur, and reduce risks. This approach will promote sounder management systems. In addition to existing initiatives that ensure the propriety of all business transactions, full compliance with antitrust laws, and zero tolerance for socially detrimental activities, we will pursue other group-wide initiatives (including anti-corruption measures) based on a global perspective.

## The Creation of Value That Surpasses Expectations

Based on a firm conviction that the construction industry's mission is to meet the diverse needs of customers and society and to provide value that surpasses expectations, we seek to improve our production process based on the Life Cycle Valuation (LCV) concept. We are also moving forward with environmental efforts in which all employees across all our business domains take part, including our company-wide Ecological Mission to help fight global warming, the Shimizu Carbon Management plan, which serves as a roadmap for reducing carbon-dioxide emissions, and the Shimizu Biodiversity Action Plan in the area of biodiversity.

## Coexistence with Society

Traditionally, we have established close ties to local communities through our construction activities. Valuing communication, we continue to pursue business continuity planning (BCP) and other activities that contribute to society, activities in which the head office, branch offices, sales offices, and numerous construction sites all play vital roles. As part of efforts to maintain workplaces in which our human resources can learn to do outstanding, highly motivated work, we will continue to implement accident prevention measures and companywide safety initiatives to eliminate all workplace accidents.

In doing so, we seek to ensure that all employees fulfill their roles and can point with pride to our corporate slogan: "Today's Work, Tomorrow's Heritage."

This report covers the results of Shimizu's CSR-related activities in fiscal 2010, as well as our activity policies for the 2011 fiscal year. We have chosen the theme "Connecting" to express how we interact with society and people's lives through our building and construction projects. These activities reflect the ideal of pursuing and implementing a wider range of possibilities in these times of necessary change.

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

\*Life Cycle Valuation (LCV): Activities intended to visualize the qualities of a construction project expected by customers and society throughout a project's life cycle and to provide technologies and services that maximize these qualities



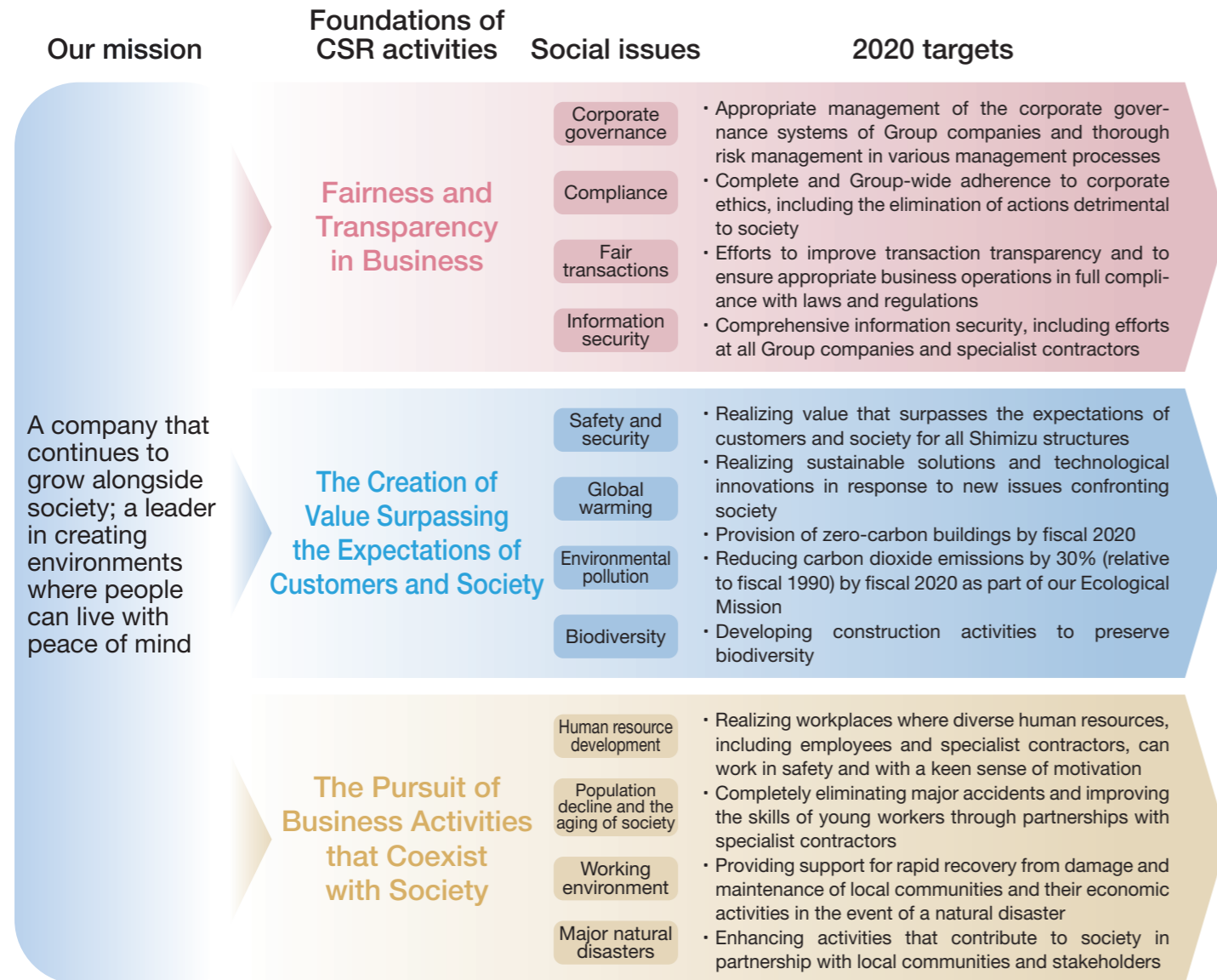
President, Shimizu Corporation

# Toward an Abundant and Sustainable Society

## Editorial Policy

This report describes the CSR initiatives undertaken by Shimizu Corporation. We hope it will serve as a useful tool for disclosing information to stakeholders. As in past editions, the report is divided into two parts: Topics and Activities. The Topics section features articles on the theme of "Connecting." The Activities section provides a list of efforts, along with an assessment of results, to provide an overview of Shimizu's CSR initiatives for the 2010 and 2011 fiscal years. Details are provided in the subsequent sections on individual initiatives.

In addition, our activities in response to the Great East Japan Earthquake are reported in the following pages (pages 5 and 6).



## Basic Scope of Reporting

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

Organizations covered:

Head office and domestic branch offices of Shimizu Corporation (overseas organizations are included under Business Areas and Financial Condition)

\* A report on overseas efforts and efforts at group member companies is available on the Shimizu website

(<http://www.shimz.co.jp/csr/environment/intro/overseas.html>).

Period covered: Fiscal 2010 (April 2010 through March 2011)

Date of publication of next edition: June 2012

## Corporate Information

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

### ■ CSR Report

Social activities: Our stance and actual performance

Environmental activities: Our stance and actual performance

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

### ■ Financial Summary of Each Fiscal Year, Financial Statement, Annual Report

Economic activities: Our business strategies and financial condition

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

## Theme: "Connecting"

The year 2011 marks the fourth year of our monozukuri (manufacturing technology) enhancement activities. In relation to various projects from recent years, this section describes how people and communities can connect through creative activities, thereby producing new value and an expanding range of possibilities.



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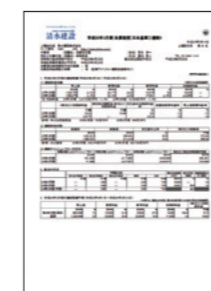
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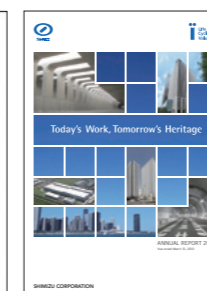
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A report on environmental accounting is provided on the Shimizu website ([http://www.shimz.co.jp/csr/environment/report/pdf/data\\_2011.pdf](http://www.shimz.co.jp/csr/environment/report/pdf/data_2011.pdf)).



Financial Summary of Each Fiscal Year



Annual Report



CSR Report

# Responding to the Great East Japan Earthquake

At roughly 2:46 pm local time on March 11, 2011, a massive earthquake struck with an epicenter off the Pacific coast of the Tohoku region of northeastern Japan, resulting in unprecedented damage to eastern Japan. Shimizu immediately deployed a wide range of earthquake response activities, based on Guideline for Earthquake Disaster Countermeasures specified in its business continuity plan (BCP).

## Activities to Date Since the Earthquake

### Initial response based on Guideline for Earthquake Disaster Countermeasures

Immediately after the earthquake, under the leadership of President Miyamoto, Shimizu Corp. established an Earthquake Disaster Headquarters (EDH) at its Tokyo head office and Emergency Task Forces (ETFs) at branch offices, business sections, and the Institute of Technology. Shimizu confirmed the safety of all employees and their families and began to assess damage to company-related facilities and its construction sites. We also began a survey of the damage sustained at client facilities.

A teleconference meeting was held two hours after the earthquake to plan Shimizu's response to the disaster and to coordinate the EDH and ETFs nationwide. By the morning of March 12th, the safety of all employees had been confirmed. Early on the morning of March 13th, the first group of ten relief personnel from the head office reached the Tohoku Branch. At this point, emergency recovery efforts and surveys of client structures that began immediately after the earthquake went into full effect.

### Head office support staff gather at one location

From early in the morning on March 12th, more than 300 persons from the EDH and the architecture, civil engineering, and administration ETFs, gathered on a single floor. Full-time head-office support personnel provided intensive support to branch ETFs for 20 days, through March 31st.

By gathering all participants in one location, ranging from management to architecture, engineering, design, procurement, marketing, and administrative staff, we were able to share all related information continuously and provide comprehensive support. Support efforts ranged from damage surveys, emergency measures, and technical studies to purchases of materials, supplies, and equipment. These efforts demonstrated the effectiveness of semiannual disaster drills and BCP drills performed with similar structures and personnel.



The Earthquake Disaster Headquarters established in the third-floor dining hall at the head office



Sandbags delivered to Otsuchi, Iwate Prefecture, and nonprofit personnel

### Supporting client BCPs and affected areas through rapid response

One of the most important missions of the construction industry in the event of an earthquake is to provide support for client BCPs by safeguarding against secondary damage and assisting rapid recovery. Since this earthquake affected a broad area ranging from the Tohoku region to the Tokyo area, a system was adopted whereby client service task forces in the architecture and civil engineering ETFs centrally managed requests that clients submitted to the head office and branch offices nationwide, thus allowing branch ETFs to devote their efforts to damage evaluations and emergency measures.

Through early May, we had performed some 5,500 primary evaluative investigations, and our structure and equipment engineers had performed roughly 1,400 secondary evaluative investigations. Centralized management of client information and response activities based on the united efforts of the head office and branch offices helped ensure rapid, efficient support for client BCPs.

At the same time, as one facet of our social contribution activities in the affected areas, we provided evacuation centers, medical organizations, and other facilities offering relief supplies, including food, potable water, and commodities, as requested by local governments and other organizations. Through late March, in addition to supplying approximately 16,000 packaged meals, we had also installed roughly 170 portable toilet facilities at evacuation centers and other sites. We also provided roughly 150 power generators.

In May, we provided 10,000 sandbags to nonprofits active in the town of Otsuchi, Iwate Prefecture, for use in removing sludge and debris.

Along with the transition toward full-fledged large-scale recovery construction, effective April 1st, we established an Earthquake Restoration & Support Office (ERSO) to provide companywide assistance for restoration work. Since then, in coordination with branch offices nationwide, ERSO has provided fast and responsive human and material support for recovery work.

To fulfill the mission of the construction industry, namely, to create and protect critical infrastructures that underlie society and support human life, the entire Shimizu organization will continue to contribute to the recovery effort in affected areas.

## Readiness for a Major Disaster

### Working with all our employees, partner companies, and society at large in order to prepare for disasters before they strike

#### The BCP perspective

After confirming the safety of employees and their families, Shimizu's business continuity plan (BCP) emphasizes various efforts, including the rapid protection of work sites and company-owned facilities, the application of our technologies as a general contractor to support restoration and recovery in affected areas, and support for the rapid resumption of client business activities. For this reason, we routinely develop and test response measures such as safety confirmation systems, bases for recovery activities, and emergency supply. We also undertake joint drills with partner companies, including simulated information-sharing on workforces, materials, and supplies. In addition, support activities for clients' BCPs helped enable a rapid response to the recent earthquake. These BCP activities proved the effectiveness of our practical initial response drills, which had involved rapidly dispatching the personnel actually needed to survey damage and implement emergency response, while checking on client communication networks and methods.

#### Working with outside parties

Shimizu pursues research and development on disaster response in cooperation with various third parties, including universities, research institutes, and industry associations. We participated in the Reconstruction Engineering Technology Committee of the Special Committee on the 2011 Great East Japan Earthquake established by the Japan Society of Civil Engineers immediately after the earthquake. This committee addresses recovery activities and regional reconstruction. The aid provided to the affected areas will begin with the provision of technologies to address the pressing needs for the disposal and reuse of debris, as well as soil and groundwater remediation, all based on conditions in the affected areas.

The experience of the recent earthquake reminds us how important it is to prepare for a disaster before it strikes. The basis of such readiness is an everyday relationship of trust, built on an understanding of our clients' businesses, as well as examining BCP-related efforts side by side with our clients and proposing technological solutions. To fulfill the mission of protecting and sustaining not only our clients but also society in general, we must establish a structure that enables an immediate response to various needs following an earthquake. This requires the regular training and drilling of our employees as well as the employees of partner companies, as these are the

#### Providing technologies

During the recent earthquake, our seismic-isolation structures remained in continuous use, suppressing shaking to about one-third the levels experienced by ordinary buildings. Other buildings with earthquake-resistant designs escaped life-threatening structural damage such as collapse. However, in some cases, damage to nonstructural components, such as ceilings, partitions, and fixtures, affected client production or sales activities. The massive tsunami generated by the earthquake led to significant loss of life. Shimizu has analyzed the characteristics of this earthquake and released a report on our website. We will strive to achieve a safe, sustainable society by providing various advanced technologies, including new seismic-response control systems and control technologies with low energy requirements. We will also strive to better understand the risks posed by massive earthquakes and tsunamis by conducting simulations.



Simulating the effects of furniture overturned in an earthquake



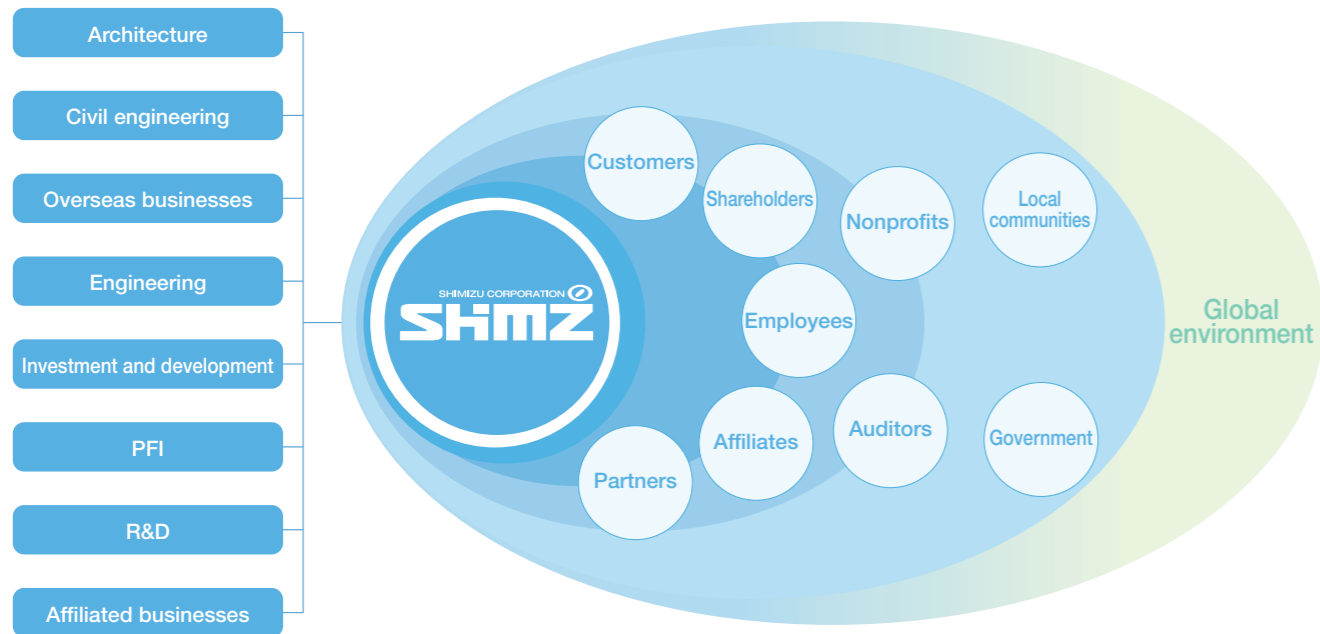
Seismic-isolation equipment at the Shimizu Institute of Technology

individuals actually responsible for carrying out such activities. It also requires the development of appropriate work environments.

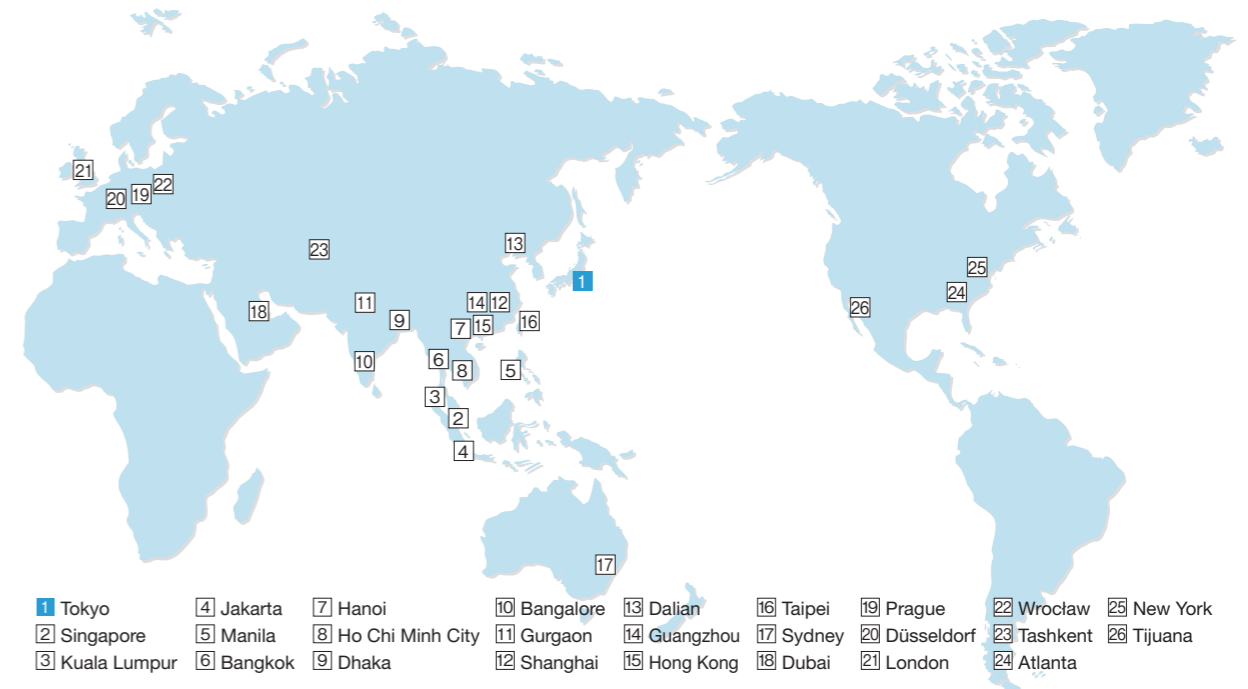
Shimizu will continue to prepare diligently for disasters on a daily basis, together with all our employees, partner companies, and clients. In this way, we will help to ensure safety and rapid business recovery at client facilities and reward the trust placed in us by individual communities and society as a whole.

# Business Areas and Financial Condition

## Shimizu's businesses and stakeholders



## International network (as of April 1, 2011)



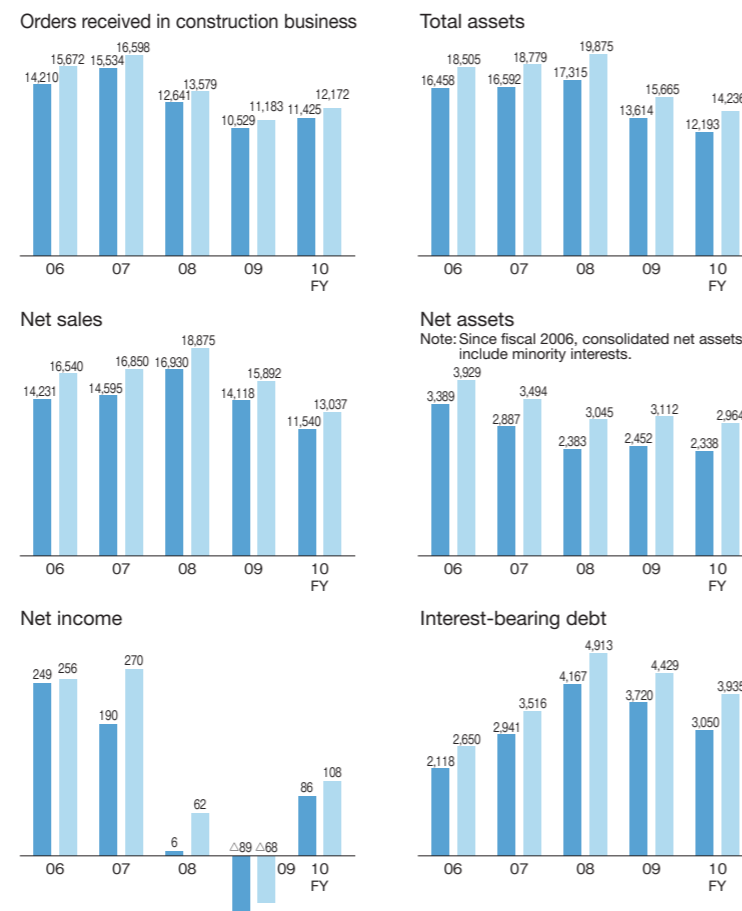
## Corporate profile

Established: 1804  
 Capital: 74.3 billion yen (as of March 31, 2011)  
 No. of employees: 11,215 (as of April 1, 2011)  
 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 appraisals of real estate properties; building, selling, leasing, and managing residential buildings and other properties; development and sales of vacant land

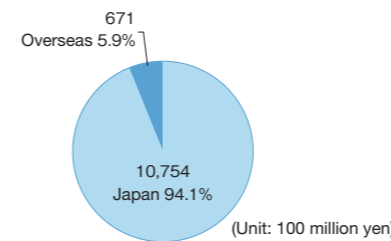
President: Yoichi Miyamoto  
 Annual sales (nonconsolidated): 1,154 billion yen (fiscal 2010)

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

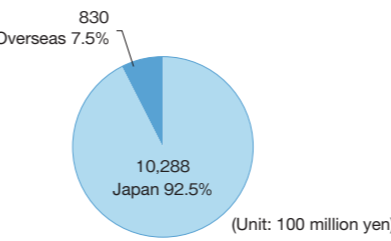
## Financial condition (Unit: 100 million yen)



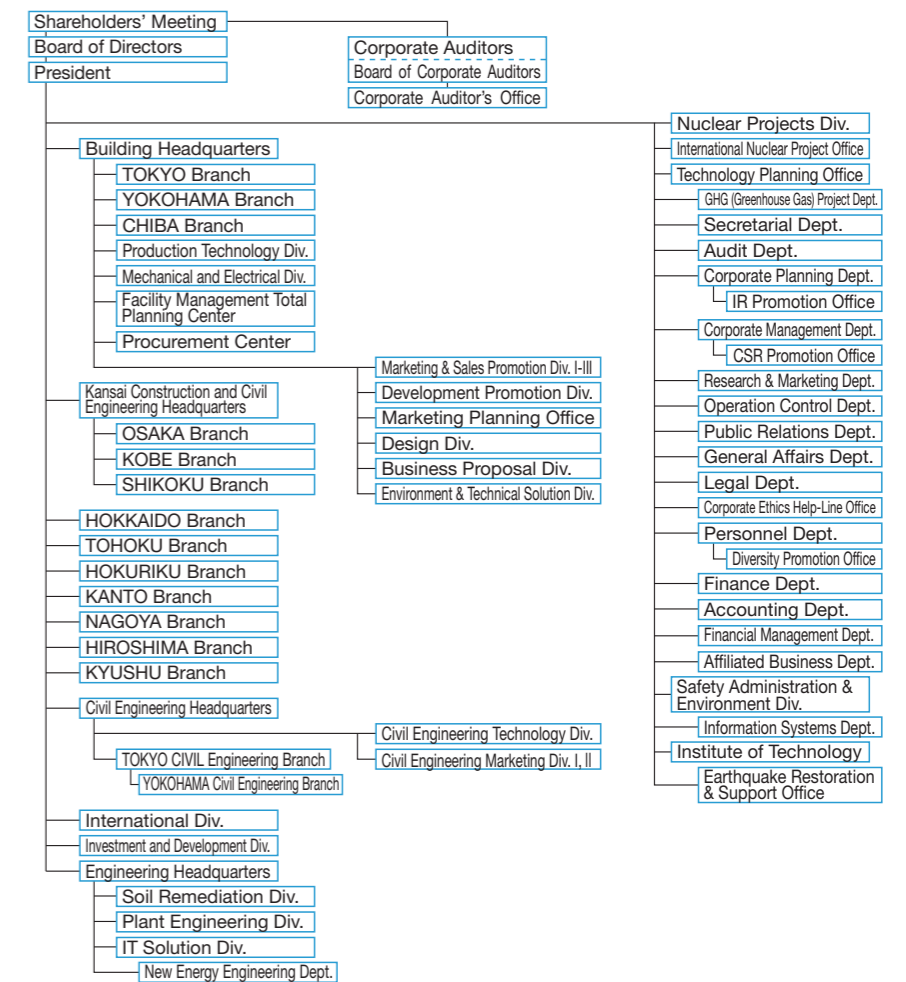
## Domestic and overseas percentages of orders awarded and net sales in the construction business (fiscal 2010)



## Orders awarded in the construction business (nonconsolidated)



## Organization (as of April 1, 2011)





A corridor and open meeting spaces overlooking the Minato Mirai bay area



Open stairways

### Open offices with access to upper and lower levels

In addition to workspaces almost completely free of partitions, each floor is connected to the ones above and below via stairways that provide open access to nearby floors. This design approach makes it even easier for researchers to work together.

### Refreshing spaces incorporating views of Minato Mirai

The 300-meter corridors provide enjoyable views that vary by floor, direction, and time of day, helping to relax tired minds and provide a change of scenery. Meeting spaces are provided everywhere to allow people to examine things alone or to hold simple meetings.

Corridor



The building as seen from Bay Quarter Yokohama, at the East Exit of JR Yokohama Station

## Connecting People, Connecting to Energy

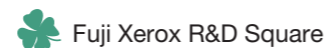
Creating open spaces brings people together to create new interactions. Building bridges initiates the exchange of people and things.

A comfortable living room brings the family together and generates harmony. An office with an open atmosphere makes it easier for people to move from point to point and makes work go more smoothly.

Creating a positive environment helps connect people and generates the power needed to set things in motion.

Through its building activities, Shimizu connects communities and people and paves the way to future possibilities.

### Connecting to generate new ideas



#### Connecting people

Fuji Xerox recently opened a new research and development facility in the Minato Mirai 21 district of Yokohama by consolidating in a single location multiple R&D facilities distributed throughout the greater Tokyo area. The goal of this Fuji Xerox R&D Square, designed as a base for collaborative work between engineers and customers, is to identify management issues and find solutions based on close communication with customers. The theme of this building is Co-creation. Based on the Fuji Xerox concept that the use of partners expands possibilities, the building had to provide spaces that allowed people to connect to other people, including spaces that connected engineers to customers and the public, thereby

generating new ideas. The building's oval shape was intended to facilitate these objectives.

The floors from the building's 5th through 19th floors comprise spacious offices totaling roughly 6,000 square meters per floor, making each floor one of the largest in the greater Tokyo area. The most prominent characteristic is a corridor with a 300-meter circumference that runs along the perimeter of each floor. This bright, open perimeter affords panoramic views of the Minato Mirai bay area and serves as a place where researchers, often given to shutting themselves in their offices, can recharge and find new inspiration. The space also encourages communication among researchers to generate new ideas.

To help people make new connections, the

building features caf counters and a three-dimensional layout, including open stairways that connect the upper and lower floors. These design choices are intended to create spaces that encourage new interactions and foster intellectual stimulation and creativity.



A partition-free workspace

### Large spaces that combine comfort with energy conservation

Environmental considerations are central to the building's design. Not only do the corridors provide magnificent vistas, they also incorporate superior energy-conservation performance. One example is an air-conditioning system that self-adjusts in accordance with the movement of the sun across the sky. Directional heat-exhaust systems are installed on the ceilings above window blinds whose movements are directed by sunlight sensors. This controls heat exhaust in accordance with an annual schedule to reduce solar radiation and heat effects.

Since the large offices do not face the windows directly, the interior environment is unaffected by sunlight. Due to the lack of partitions and the building's around-the-clock operating hours, its lighting and air-conditioning systems employ motion sensors so that light levels are adjusted based on the presence or absence of research staff. In addition to optimal lighting types for usage areas with lighting controls that incorporate automatic shutoff, dimming, and adjustment based on available sunlight, the building's lighting is of a lower hue than in standard offices (though still ensuring the necessary brightness for work that is primarily computer based). These efforts have reduced the building's total carbon-dioxide emissions by 35% compared to a typical office building that would have been built in 1990.

In addition, the rooftop on the lower section features a green space known as Midori no Oka (Green Hill). This space is open to the public and helps counter the heat-island effect.

#### Stakeholder Comments

Creating new value for customers and partners



**Yoshihiro Maruyama**  
Group Manager, Facilities Group  
General Affairs Division  
Fuji Xerox Co., Ltd.

The year 2012 marked the 50th anniversary of the start of our business operations in Japan. We opened this R&D facility in the brand-new (for us) locale of Yokohama to serve as a platform for our next 20 to 30 years of growth as a manufacturer active in developing technologies and human resources for the coming era. We expect this facility to demonstrate its total technological capabilities in order to overcome barriers between organizations, create products having lasting value, and address issues that are directly facing our customers. We also expect the building to play a key role in developing technologies that contribute to society by facilitating open innovation in partnership with customers, universities, research institutes, and other organizations. The facility was completed last April. I believe we have taken a new and significant step forward over the roughly one year since. The building has served as a venue for various new activities, including technical exhibitions and joint research with customers and partners.

#### From the Architect

Proposing an R&D facility designed entirely from the customer's perspective



**Yoshihiro Yamada**  
General Manager, Project Design Dept. II  
Design Div., Planning Design and Consulting Division  
Building Headquarters

In response to Fuji Xerox's enthusiastic wish to build an R&D facility designed entirely from the customer's perspective and that peers ahead into the next half-century, we proposed a facility based on the concept of Co-creation with Customers combined with detailed environmental considerations. Enjoying the wide-open, 360-degree panoramic views of its seaside location in the Minato Mirai district, we designed 300-meter-long corridors along the periphery and spaces inside the facility to stimulate creativity, encourage personal gatherings, and inspire the development and sharing of new ideas with colleagues. We also attempted to create a facility environment that coexisted with nature, seeking to reduce carbon-dioxide emissions by 35% relative to the performance of a 1990s-era office building. We look forward to seeing all the ways in which this facility will generate new value and turn office spaces into comfortable living zones.



A new viaduct with 15-millimeter windbreak walls on both sides so that trains can pass, even at wind speeds of 30 meters/second. Acrylic sheets preserve passenger views from passing trains.

## Connecting the Hopes of the Community to the Future Amarube Viaduct

### Replacing a state-of-the-art bridge from the Meiji Era with advanced technology from a century later

The Amarube Viaduct is located along the Sea of Japan coast, between the Yoroi and Amarube stations on JR's San'in Main line. Work was completed last year to replace the viaduct, which had stood as a familiar presence for many years. Built in 1912 during the Meiji Era, the old viaduct was a steel trestle bridge\*1 310 meters long and 41 meters high, the longest of its type in Japan and considered as an asset representing the heritage of modern civil-engineering technologies. The vivid color and beautiful profile of the viaduct have also earned the affection of many tourists and local residents. In 1986, this viaduct was the site of an accident in which a train was toppled by a sudden gust of wind from the sea. The incident led to strengthened restrictions that prohibited trains from passing when wind speeds reached 20 meters/second or higher. This restriction significantly increased train cancellations and delays. Ensuring trains could run on time became a major issue. The age of the old viaduct, which had withstood years of severe wind and snow blowing off the Sea of Japan, also began making it difficult to perform maintenance. In 1991, local governments, including the Tottori and Hyogo prefectures, established an Amarube Viaduct council to address the issue. In July 2002, the decision was made to replace the viaduct with a concrete

structure. Following studies by teams including university professors, JR West, the Railway Technical Research Institute, and local stakeholders, the decision was made in March 2005 to build the new viaduct as a pre-stressed-concrete box-girder extradosed bridge.\*2 Construction began in 2007, with the goal of making the new bridge one beloved by the community for a long time to come.

### Transporting and rotating 3,800-ton\*3 girders through the air to minimize viaduct closures

The new viaduct was constructed parallel to the old one on its southern side, with a distance of just seven meters separating the two. The greatest issue facing the project was how to ensure construction safety in the face of strong winter winds. The measures taken to ensure both construction and train safety included installing three-dimensional wind speed and direction gauges and connecting these online to the Shimizu Institute of Technology in Tokyo, where wind data was analyzed and on-site winds were constantly simulated. Another safety measure involved the use of mesh windproofing sheets, based on the understanding that winds pushed up by the viaduct under construction could pose hazards.

An important key to connecting the east end of the viaduct to the existing rail tunnel was minimizing the time

during which trains would be unable to pass. For this purpose, the girders used at the point where the viaduct connects to the tunnel were built in a temporary position, then transported to their designated positions, rotated, and finally connected only after removing the east end of the old viaduct. After moving these 90-meter-long, 3,800-ton, S-shaped girders laterally toward the sea at an elevation of 40 meters, they were rotated counterclockwise around a near-central axis. This feat was unprecedented in the history of Japanese civil engineering. The Institute of Technology performed some 70 patterns of tests involving moving and rotating the girders, using a one-tenth-scale model. The girders were also subject to test pulling to ensure the structure employed was completely safe. This testing continued right up to the connection stage of the project. While train operations were suspended for 26 days starting July 17th to allow the switchover to the new tracks, thanks to this advance testing the movement and rotation of each girder was completed in the space of about one hour, with no issues whatsoever. On August 12th, trains began using the new viaduct.

\*1 A bridge employing a structure in which bridge girders rest on piers that are combined in a fan-like structure  
\*2 A bridge employing a structure in which the main bridge girders are supported by diagonal braces extending from short main pylons  
\*3 A weight of 3,800 tons is equivalent to that of about five and one-half 700-series Shinkansen bullet trains (assuming each train has 16 cars).



The old viaduct before replacement. The slender, linear design of the new viaduct evokes the look of the old structure.

### The local community celebrates the opening of the new viaduct

A local community organization called Asu no Amarube wo Tsukuru Kai (Association to Build the Amarube of the Future) sponsored the illumination of the new viaduct from 7:00 pm to 10:00 pm on its first two days of operation, August 12 to 13, 2010. Organized by the local community to celebrate the opening of the new viaduct amongst themselves without any special public advertisement, the event was well-received. The striking white light that silhouetted the viaduct against the night sky remains an indelible impression from the two-day celebration. A movement is afoot to hold other events each August 12th to commemorate the opening of the new viaduct.

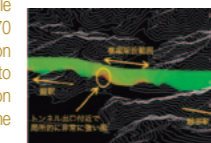
#### Illumination



### Completing a difficult construction project in close cooperation with the Shimizu Institute of Technology

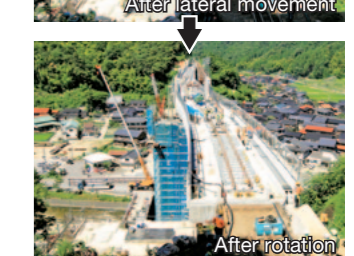
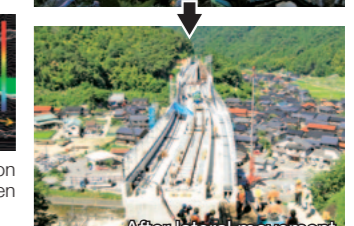
Wind issues at the site were addressed by installing three-dimensional wind speed and direction gauges and linking them online from Amarube to the Institute of Technology in Tokyo. This has allowed analysis of measurement data and simulations of the work under any given wind conditions. Other efforts to ensure a thorough system for safe and reliable construction included some 70 patterns of tests of the construction intended to connect the viaduct to the adjacent railway tunnel, based on a one-tenth-scale model at the Institute of Technology.

#### The latest civil-engineering technologies



Wind analysis on a computer screen

Connecting S-shaped girders to the tunnel



### A viaduct designed based on interactions with the local community

This construction project would not have been possible without engaging in dialogue with the local community. Members of the local league of neighborhood associations, the project contractor, and personnel from local government offices met once every month or two in meetings on safety and environmental measures to confirm progress on the project. Participants expressed support for the project, with some asking for an approach to construction that ensured the safety of the community once the decision had been made to replace the viaduct. The heads of the neighborhood associations quickly passed on information to residents in their neighborhoods, allowing the project to proceed without complaints regarding various adjustments made in advance.

Even those who had said they would miss the old viaduct after it was removed welcomed the new viaduct once it had been completed. I'm glad to have a safe and secure viaduct, said one observer. I hope the new viaduct will become a symbol of Amarube, said another. On August 12th and 13th, when the new viaduct was opened for use, local residents organized a welcoming event in which the viaduct was illuminated with spotlights. Future plans call for retaining the three western piers of the old viaduct for use as sightseeing points and building a railway museum and a park nearby. Such efforts will help make the new viaduct a symbol of Amarube for the next generation and also revitalize the community.

#### Stakeholder Comments

We also want the new viaduct to be something we can take pride in, representing the best of Japan.



**Mitsuo Yamamoto**  
Chairperson

Amarube League of Neighborhood Associations  
Asu no Amarube wo Tsukuru Kai

Before the construction of the new viaduct, we worried about the arrival of so many construction workers in the area. But they all did their best to fit into the community, and they were warm and open in providing detailed construction information in meetings on safety and environmental measures. All this reassured us as we watched the construction proceed. We had other worries as well. We didn't have a clear image of the planned concrete bridge, and we wondered if the local community would like it and whether it would add to the community. Looking at the completed project, we believe it is a wonderful viaduct. It blends in with the scenery. Like the old viaduct, we want the new viaduct to represent the best of Japan. We want it to be something in which Amarube can take pride. We hope that it will watch over our community for the next century or two.

#### From a Construction Team Member

We tried to make this a project that would become part of our civil-engineering heritage 100 years in the future.



**Toshiyuki Nakahara**

Foreperson, JV JR Amarube Viaduct Replacing Project  
Civil Engineering Dept., Kobe Branch  
Kansai Construction and Civil Engineering Headquarters

The mighty Amarube Viaduct was completed in the Meiji Era and served for some 100 years. With reverence in our hearts for the civil engineers who preceded us in creating this piece of our civil-engineering heritage, we approached this replacement project under a slogan that inspired us to try to make it part of our civil engineering heritage 100 years into the future. Our approach to construction was based on a partnership and continuing dialogue with the local community. To ensure safety and a rapid switchover to the new viaduct, we kept in close touch at all times with the head office's Institute of Technology and Civil Engineering Technology Division. We hope that this new viaduct, just like the old one, will become a beloved part of the local community, standing in harmony with the scenery of Amarube even a century after its completion.



The waiting room features a play area for children arriving with their mothers.

## Building a Homelike Environment to Channel Birthing Power St. Luke's Birth Care Clinic

St. Luke's Maternity Clinic is a medical facility opened by St. Luke's International Hospital that specializes in natural childbirth. Its founding concept is to tap into an expectant mother's natural birthing powers to ensure nearly completely natural childbirths, except in cases that absolutely require medical intervention. In cooperation with obstetricians and pediatricians, midwives provide support from expectancy through childbirth to childcare. The design and building of this clinic emphasized the need to create a home-like childbirth environment in which women could give birth surrounded by their families, one that eased anxieties and worries.

### A structure designed to make a midwife's work easier

A unique characteristic of this facility is that it is made up of four levels of floors for expectant mothers and new mothers, in a structure of two pairs of floors stacked one on top of another, resembling a stack of two ordinary two-story homes. The architecture also features an open terrace for each pair of floors so that someone on the fourth floor can see the third floor, and someone on the sixth

floor can see the fifth floor. This structure is intended to harmonize with the clinic's midwifing system.

This clinic employs a team primary system in which a team of four to five midwives provides continual support for an expectant mother, from outpatient visits during pregnancy, through childbirth, to caring for the mother and child after birth. Involving midwives in the childbirth process from the expectancy stage onward builds trust in expectant and nursing mothers and their families and allows the mother to navigate the childbirth process free of anxiety. To ease the mother's anxieties, the examination room for each team is equipped with a sofa instead of an examination table.

### Individual rooms that feel like home, in order to deepen connections among family members

Another element intended to make the clinic feel like home is the wooden latticework at the lounges, placed inside the windows of the building's glass facade. These function as blinds, which give the interior a comfortable atmosphere by allowing sunlight to pass

through the gaps. Interior light escaping through the latticework is visible from the street at night, providing a warm welcome to patients arriving to give birth after nightfall. Each expectant or new mother has her own private room, with half the rooms fitted in Japanese-style with tatami mats and half in Western style with beds. Patients can choose



The exterior of the clinic. The two pairs of floors—the third and fourth floors and the fifth and sixth floors—are designed to resemble two two-story homes stacked on top of each other.

### An environment free of birthing tables to ensure a relaxed childbirth

Located on each of the third through sixth floors, each maternity theater is equipped with braces, wall bars, and other such equipment for childbirth rather than birthing tables. This is intended to allow mothers to give birth in whatever position they find most comfortable.

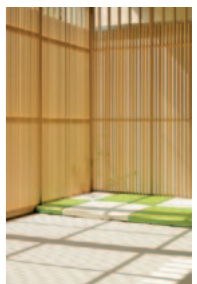
#### Maternity theater



#### Living space

### A lounge where families can gather with their newborns

The lounges on the south side of the building feature wooden latticework inside the large windows. These not only serve as blinds and keep people from bumping into the glass, they help create a comfortable space in which families can spend time. Sunlight passing through the gaps in the latticework helps to create a relaxing atmosphere.



the type of room they prefer. The maternity theaters are fitted with equipment such as braces and wall bars for childbirth rather than birthing tables, thus allowing the expectant mother to give birth in the position she finds most comfortable. In the next rooms are baths to warm and ease the labor pains of expectant mothers, as well as restrooms roomy enough to allow nurses to accompany patients. The clinic uses dimming lights and light-blocking curtains to help patients focus on childbirth. Patient rooms offer enough space to allow family members to visit for lengthy periods.

The lounge on each floor also features a tatami space where families can gather with their newborns.

Despite concerns that few patients would choose the Japanese-style tatami rooms in this day and age when most hospital rooms are furnished in Western style, once the clinic opened, reservations for Japanese-style rooms filled up quickly. The rooms have been well-received by users. Among their comments are the following: I'm delighted I had the freedom to use the space in the way I wanted; It gave my older children space to run around; My legs didn't swell up; It was a comfortable space for visitors, no matter how many came to see me. Some older children appear to have remained with their mothers at night until just before birth. In this way, the clinic not only provides for a mother's birthing needs, but also connects family members and deepens family bonds.

### Stakeholder Comments

Our goal is to provide an environment for natural childbirth with the assistance of midwives



**Tsuguya Fukui**  
President  
St. Luke's International Hospital

More than 10 years ago, our Chairman Shigeaki Hinohara and I began considering how to change the situation drastically when the numbers of both obstetrician-gynecologists and childbirths were decreasing. The St. Luke's philosophy is to do everything possible for the sake of the patient. Our goal was to make this a clinic that would omit unnecessary medical care and provide the support that expectant mothers needed to give birth naturally. The tatami rooms were the idea of a midwife. We wondered if there'd be any demand for them, but we chose to adopt them based on enthusiastic responses from some expectant mothers contacted in advance. Thanks to Shimizu's careful handling of our detailed requests, I think we've been able to create a remarkable clinic. In particular, the waiting rooms feature wooden trim that matches the beige interior that so ideally suits St. Luke's. We're satisfied that this is a warm space where people can spend their time in comfort.

### Stakeholder Comments

We want this to be a place where new mothers can gather after giving birth, much like a family home



**Yoko Fukasawa**  
Team Leader/Midwife  
St. Luke's Maternity Clinic

Our vision for this clinic was a home for childbirth. We wanted it to be a place where mothers could give birth naturally in a home-like environment, a place they could return to any time after leaving the clinic, just like a family home. Another unique characteristic of the clinic is the way midwives work in teams to provide consistent support, from expectancy through childbirth to after. We build strong and trusting relations with both mothers and their families. Current activities for mothers who have already given birth include yoga and baby massage classes. We want to expand these events gradually to include childcare group activities and study sessions, in this way helping mothers bond with other mothers.



People gathering to view the completed treehouse

# Connecting Across Boundaries

*Monozukuri* (manufacturing technology) to help people grow.

To communicate the enjoyment and importance of *monozukuri* as well as the technologies that support it, Shimizu pursues various efforts that extend beyond organizational boundaries. These include seminars and workshops for the youth to whom the torch will pass in the coming generation.

## Experiencing Building Face to Face with the Natural Environment The Hokkaido University treehouse

On November 5, 2010, a treehouse made of fallen leaves, built through an industry-academia partnership project between Hokkaido University (HU) and Shimizu,\* made its appearance on the university campus. The goal of this project was to reexamine how we should build things by connecting students to the company and by using familiar natural materials to build a treehouse by the same methods used when building an actual structure. Another goal was to have participants face nature with their own hands from the perspective of a construction project that, by its nature, would have some kind of impact on the environment. Some 40 students and young engineers took part in the project.

**Pursuing the true essence of a house that coexists harmoniously with nature**

This project began in September 2010. Proceeding under the research theme of the true essence of a house that coexists harmoniously with nature, the project had the following specific goals: (i) a design based on an understanding of and closeness to nature, (ii) a design befitting HU; and (iii) a design that anyone could use to build a structure on their own. The plan was given specific form by building on ideas introduced in the course of repeated discussions at HU and Shimizu, respectively, then discussing these ideas in teleconferences involving both HU and Shimizu. In October, following numerous teleconferences, a proposal based on the concept of fallen leaves, symbolizing fall at HU, was selected. The idea for the treehouse was elaborated into design diagrams to prepare for construction. In this way, the task of finishing

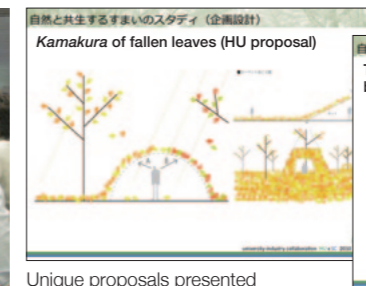
the construction plans moved forward. The HU team assumed responsibility for planning the exterior, which was to be built with fallen leaves; Shimizu assumed responsibility for structural design and construction planning. To avoid an excessive impact on the tree, no bolts were used in the structure. The wooden frame and other components were stabilized by suspending them from tree branches using wires. Covered with fallen leaves collected on campus, the treehouse's exterior expressed the central design image. Construction proceeded over a three-day period starting November 3rd. Work ended on November 5th without any issues. Shaped like an inverted cone and measuring 4.5 meters in diameter and three meters high, the treehouse was completed in a Japanese zelkova tree that stands in front of the HU Faculty of Engineering.



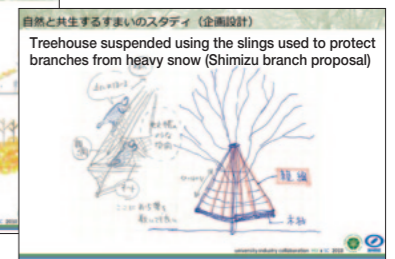
Planning meetings

Lively exchange of opinions through a teleconference link between Tokyo and Hokkaido

Meetings between the HU team and Shimizu's Stream DEW team occurred via teleconferences. Participants exchanged unique proposals that transcended boundaries between students and professionals, including the idea of a treehouse suspended using slings used to protect branches from heavy snow and a kamakura (traditional snow hut) made of fallen leaves instead of packed snow.



Unique proposals presented



Blocks of fallen leaves

Using blocks of fallen leaves to speed up construction

The treehouse of fallen leaves was inspired by the renowned ginkgo trees that line the walkways of the HU campus. Students proposed forming blocks by covering a frame with bird netting and entwining fallen leaves in the netting. The project involved the formation of 90 blocks using 270 kilograms of fallen leaves.



On November 6th, it was opened to the public, drawing considerable interest from local media. It was disassembled on the following day, November 7th. The project served as a valuable workshop, giving students the opportunity to experience the importance of technology and the enjoyment of building things.

\*An industry-academia partnership project involving the Architectural Planning Laboratory in the Division of Architectural and Structural Design of the Hokkaido University Graduate School of Engineering (Prof. Suguru Mori), Shimizu's Hokkaido Branch, and Stream DEW. Stream DEW is an action committee made up of younger employees from design sections active across a wide range of activities, both inside and outside Shimizu Corp., on the theme of construction.



A workshop open to the general public was held on November 6th.

### Stakeholder Comments

A reaction from nature and society



Suguru Mori

Professor  
Architectural Planning Laboratory  
Division of Architectural and Structural Design  
Graduate School of Engineering, Hokkaido University

Inevitably, construction has some impact on the natural world. We focused on this treehouse not as a poetic object, but as an opportunity for us, as specialists, to deepen our awareness of our responsibilities to nature. We were able to open the completed treehouse to the public for a single day. Even in this brief time, some 1,000 people came to see it. Today, as the complexity of construction makes the societal repercussions generated by our work increasingly remote, it's crucial to experience these repercussions through direct communication. In the future, we'd like to take on more such joint efforts in order to help communicate the essential joys of construction to the general public.

### From Participating Students

An experience not available as part of ordinary student life

Student comments included the following remarks:  
The most romantic part of this project was being able to see the smiling and startled faces of the people circling the completed treehouse. (Hisato Hasebe)  
If the treehouse had been allowed to stand for a bit longer, more people could have seen it, and also the treehouse itself would have become covered more deeply with fallen leaves. (Hiromi Urano)  
Seeing a structure built with our own hands take shape before our eyes was an inspiration to learn about architecture. (Sawako Makanae)  
In developing the proposals, I got a true sense for the key significance of a structure and construction methods that determine the final form of the architecture. For me, this was the most valuable experience, because it's something we're not really aware of in a university classroom. (Shingo Hojo)  
The opportunity to get a feel for the creative and technological capabilities of a company was invaluable and highly stimulating. Getting a taste for the process of seeing a planned project take form was fun, something we could not experience when working only with diagrams and models. (Ayumu Nakamura)  
Other comments pointed to interest in repeating a similar project and regret that the opportunity to climb the treehouse was limited to project participants.



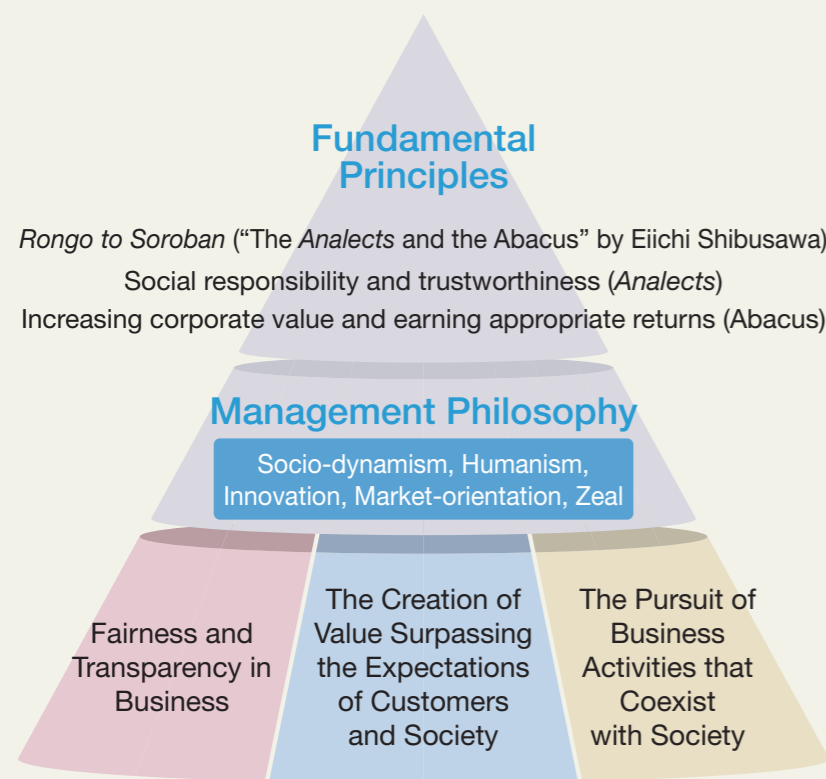
# CSR Efforts and Assessments

Of the 17 CSR efforts undertaken in fiscal 2010, all either met or surpassed their stated goals. In fiscal 2011, efforts will continue to strengthen CSR efforts.

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

## CSR Structure

Based on the fundamental principles of *Rongo to Soroban*, Shimizu has developed a CSR structure that will play a key role in a sustainable society. For more information on our CSR structure, see the Shimizu website (<http://www.shimz.co.jp/english/csr/>).



Theme	Effort	Main activities in fiscal 2010	Self-assessment	Activities in fiscal 2011	Page
Fairness and Transparency in Business	Corporate Governance and Improvements to the Business Environment	<ul style="list-style-type: none"> <li>Corporate governance: Managing our corporate governance structure and internal controls for financial reporting by applying suitable checking functions</li> <li>Risk management: Following up on key risk management items established in fiscal 2009 and strengthening related activities, as well as continuing to implement training and countermeasures based on our business continuity plan (BCP)</li> </ul>		<ul style="list-style-type: none"> <li>Corporate governance: Maintaining corporate governance levels achieved in fiscal 2010 and continuing to strengthen related activities</li> <li>Risk management: Following up on key risk management items established in fiscal 2010 and strengthening related activities, in addition to strengthening training and countermeasures based on our business continuity plan (BCP)</li> </ul>	P.19
	Compliance and Corporate Ethics	<ul style="list-style-type: none"> <li>Continuing implementation of measures to prevent improprieties within the company, including violation of laws or regulations</li> <li>Implementing even more refined monitoring of compliance with laws, regulations, and internal rules</li> </ul>		<ul style="list-style-type: none"> <li>Promoting measures to ensure thorough compliance at all facilities, including those of Group companies</li> <li>Protecting and respecting intellectual property rights</li> <li>Promoting efforts such as compliance training and basic training on construction byproducts through our e-learning system</li> </ul>	P.20
	Fair and Transparent Transactions	<ul style="list-style-type: none"> <li>Implementing efforts to ensure thorough understanding of CSR procurement, specifically the Basic Procurement Policy and Requests to Business Partners</li> <li>Ensuring thorough compliance with construction industry laws and regulations and elimination of any interaction with organized crime elements</li> <li>Conducting monitoring on whether procurement-related systems based on internal controls are applied appropriately</li> <li>Revising and expanding systems so that appropriate construction systems are implemented</li> </ul>		<ul style="list-style-type: none"> <li>In addition to Shimizu's own CSR procurement efforts, providing further support for CSR procurement related to suppliers (i.e., suppliers of materials or products), particularly for CSR procurement by specialist contractors</li> <li>Promoting further use of appropriate construction systems</li> </ul>	P.21
	Disclosure of Corporate Information and Information Security	<ul style="list-style-type: none"> <li>Holding tours of company facilities for shareholders, briefings on settlement of accounts, site tours for securities analysts, and briefings for overseas investors; initiating communication via Twitter in addition to the website</li> <li>Ensuring thorough adherence to rules on removing information-technology devices off company premises, strengthening e-mail security, and providing training on internal security and internal auditing thereof</li> <li>Deploying security measures overseas and providing support for strengthened security measures at affiliates</li> </ul>		<ul style="list-style-type: none"> <li>Strengthening IR activities; continuing to strengthen information disclosure to stakeholders</li> <li>Continual deployment of security measures overseas</li> <li>Providing support for implementation of security measures at affiliates</li> <li>Providing support for security improvements at specialist contractors</li> </ul>	P.22
The Creation of Value Surpassing the Expectations of Customers and Society	Identification of Needs	<ul style="list-style-type: none"> <li>Solutions and support to raise the value of customers' real-estate holdings</li> <li>Advancing proposals for advanced new environmental technologies as a leading firm in the area of environmental conservation</li> <li>Advancing business proposals in anticipation of prospected regulations and systems</li> <li>Advancing proposal activities to grow the building stock management business in accordance with social trends</li> </ul>		<ul style="list-style-type: none"> <li>Business solutions with high returns on investment and low environmental impact that are tailored to current social and economic trends, as well as support for these solutions</li> <li>Strengthening renewal solutions and building management solution activities aimed at growing the building stock management business</li> <li>Strengthening solutions and support suited to customers' overseas businesses</li> </ul>	P.24
	Providing High Quality	<ul style="list-style-type: none"> <li>Advancing the visualization of customer needs</li> <li>Strengthening systems for accumulating and organizing relevant information and putting this information to effective use in preventing the recurrence of similar problems</li> <li>Conducting customer satisfaction surveys on a trial basis</li> <li>Promoting and strengthening building management business to increase the satisfaction of facility users</li> </ul>		<ul style="list-style-type: none"> <li>Continuing the visualization of customer needs</li> <li>Executing measures to ensure quality and prevent serious technical accidents, ascertaining and evaluating their impact, and revising them as needed</li> <li>Expanding building management contracts for existing buildings built by Shimizu</li> </ul>	P.25
	Economics and Efficiency	<ul style="list-style-type: none"> <li>Advancing designs that minimize life-cycle cost</li> <li>Advancing production system reform activities</li> <li>Enhancing customer service activities</li> </ul>		<ul style="list-style-type: none"> <li>Advancing designs that minimize life-cycle cost</li> <li>Advancing production system reform activities more powerfully under the Monozukuri Promotion Committee (chaired by the President)</li> <li>In addition to new construction, expanding customer service activities for existing buildings</li> </ul>	P.27
	Preventing Global Warming	<ul style="list-style-type: none"> <li>Promoting six measures to help prevent global warming (namely, designing energy-saving buildings, resource conservation and green activities at construction sites, energy-saving renovation and eco-services, new-energy facility installation, energy-saving in offices, and carbon credit acquisition and use) in order to achieve the target of reducing by fiscal 2020 the carbon-dioxide emissions from all structures built by Shimizu (both past and present, including the Building Construction and Civil Engineering divisions) in Japan by 30% relative to fiscal 1990 levels (the Ecological Mission)</li> </ul>		<ul style="list-style-type: none"> <li>Promoting six measures to prevent global warming: designing energy-saving buildings, resource conservation and green activities at construction sites, energy-saving renovation and eco-services, new-energy facility installation, energy-saving in offices, and carbon credit acquisition and use</li> </ul>	P.29
	Biodiversity Efforts	<ul style="list-style-type: none"> <li>Exhibiting and participating in the 10th Meeting of the Conference of the Parties to the Convention on Biological Diversity (COP 10)</li> <li>Beginning activities in accordance with the Shimizu Action Plan on Biodiversity</li> </ul>		<ul style="list-style-type: none"> <li>Continuing activities in accordance with the Shimizu Action Plan on Biodiversity</li> <li>Further promoting R&amp;D on technologies for the preservation and creation of biodiversity in urban communities, as well as the use of such technologies</li> </ul>	P.31
	Reducing and Recycling Construction Byproducts	<ul style="list-style-type: none"> <li>Promoting 4R Activities (Refuse, Reduce, Reuse, Recycle)</li> <li>Developing a Construction Byproducts Management System in each section</li> <li>Promoting the use of e-manifest forms</li> </ul>		<ul style="list-style-type: none"> <li>Continuing promotion of 4R Activities and studying low-waste construction model projects</li> <li>Examination of the use of Construction Byproducts Management System by all construction sites</li> <li>Studies toward making fuller use of e-manifest forms</li> </ul>	P.32
	Measures Involving Hazardous Materials	<ul style="list-style-type: none"> <li>Developing the Shimizu Jet Mist (S-Jet) method to remove asbestos</li> <li>Measuring indoor air concentrations of five substances upon completion of design and construction projects</li> <li>Promoting on-site disposal, including in situ purification and site cleanup</li> <li>Deploying remediation of soil contaminated with dioxins</li> </ul>		<ul style="list-style-type: none"> <li>Continuing appropriate processing of dispersible asbestos</li> <li>In addition to the five substances whose concentrations in indoor air are measured upon completion of construction, taking sample measurements of TVOC concentrations</li> <li>Promoting on-site disposal, including in situ purification and site cleanup</li> <li>Establishment of a plant for remediation of naturally distributed soil contamination and deployment of its use for projects</li> </ul>	P.33
	Environmental Communication	<ul style="list-style-type: none"> <li>Promoting total eco-activities</li> <li>Beginning energy-conservation support service activities</li> </ul>		<ul style="list-style-type: none"> <li>Beginning customer surveys to evaluate total eco-activities more objectively</li> <li>Continuing energy-conservation support service activities</li> </ul>	P.34
The Pursuit of Business Activities that Coexist with Society	Toward the Realization of a Company that Values People	<ul style="list-style-type: none"> <li>Continuing measures in areas such as awareness of human rights, diversity, and work-life balance, and enhancing measures to support a balance between work and family life, in response to an amendment of the Child Care and Family Care Leave Law.</li> <li>Revising methods for informing employees of systems and measures such as those related to childbirth, childcare, and family care, summarizing them in organized, easily understandable brochures or other materials, and posting these onto the intranet and publicizing them within the organization</li> </ul>		<ul style="list-style-type: none"> <li>Continuing actions in the areas of education and awareness of human rights and work-life balance</li> <li>Enhancing measures to promote diversity (e.g., formulating a fundamental policy on the promotion of diversity, studying and implementing measures to promote the role of women in the workplace, and developing a diversity-promotion website)</li> </ul>	P.35
	Working to Realize a Comfortable Working Environment	<ul style="list-style-type: none"> <li>Continuing and advancing measures to strengthen coordination with specialist contractors (with procurement sections playing a central role) and communicating the future of the construction industry in a way that is appealing to younger workers</li> </ul>		<ul style="list-style-type: none"> <li>Advancing the creation of even better working environments in procurement sections and continuing with activities in cooperation with specialist contractors to make construction work more appealing to young people</li> </ul>	P.38
	Health and Safety Efforts	<ul style="list-style-type: none"> <li>Performance: Accident frequency 0.64 (target: 0.70)</li> <li>Implementing activities to prevent accidents and achieve target values, focusing on three things: implementation of redundant safety measures in areas associated with a risk of falls; implementation of measures to prevent accidents involving construction vehicles, cranes, etc.; and thorough adherence to rules on the use of elevated and mobile work platforms</li> </ul>		<ul style="list-style-type: none"> <li>Target: Accident frequency 0.65</li> <li>Steady implementation of activities to prevent accidents, according to priority measures formulated based on the results of accident analysis</li> <li>Establishing base indices to assess the implementation status of priority measures; periodic follow-ups and improvement in these areas</li> </ul>	P.39
	Interacting with Society	<ul style="list-style-type: none"> <li>Considering that Shimizu's construction business prioritizes coexistence with communities in Japan and internationally, the Tokyo head office, branches, and offices implement activities at each level, mainly based on interaction with the communities at the project sites</li> </ul>		<ul style="list-style-type: none"> <li>Head office: Implementing wide-ranging activities to achieve harmony with society, in addition to supporting activities at branches and project sites. Clearly defining concepts related to communication with society and improving related systems.</li> <li>Branches, offices, and project sites: Enhancing activities through a proactive approach to community</li> </ul>	P.41
	Engaging in Social Contribution Activities	<ul style="list-style-type: none"> <li>Implementing social contribution activities and creating an atmosphere that encourages participation in such activities within the community, with a focus on the areas of environmental conservation, education of the young, and support for social contribution activities among employees and executives</li> </ul>		<ul style="list-style-type: none"> <li>Enhancing continued social contribution activities that address local community issues in order to create livable communities</li> </ul>	P.42

The section in charge of each effort performed self-assessments. Environmental efforts are promoted through the establishment of medium-term targets every three years and the formulation of an environmental activity plan each year. Fiscal 2010 targets and performance and fiscal 2011 environmental activity plans are covered on the Shimizu website ([http://www.shimz.co.jp/csr/environment/report/pdf/data\\_2011.pdf](http://www.shimz.co.jp/csr/environment/report/pdf/data_2011.pdf)).



# Compliance and Corporate Ethics

Main Activities  
in Fiscal 2010

Fiscal 2010  
Assessment  
and Responses

Activities in  
Fiscal 2011

- Continuing implementation of measures to prevent improprieties within the company, including violation of laws or regulations
- Implementing even more refined monitoring of compliance with laws, regulations, and internal rules

○ In accordance with our plans for fiscal 2010, we made steady progress in areas such as monitoring, internal audits, and training of all employees through our e-learning system administered by the Legal Department.

- Promoting measures to ensure thorough compliance\* at all facilities, including those of Group companies
- Protecting and respecting intellectual property rights
- Promoting efforts such as compliance training and basic training on construction byproducts through our e-learning system

\* Compliance: Corporate activities that meet the needs of society, based on full compliance with all laws and regulations

## Thorough Implementation of Compliance

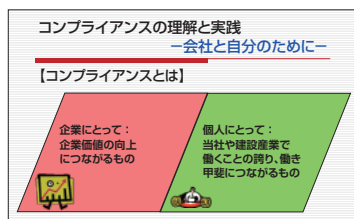
### ● Systems for ensuring thorough compliance

To ensure a thorough understanding of corporate ethics, the entire organization is made aware of the Code of Corporate Ethics and Conduct, a code of fundamental standards for the behavior of executives and employees. Additionally, the Committee on Corporate Ethics meets twice a year to develop and deploy compliance-related measures throughout Shimizu and examine specific measures for countering or preventing the recurrence of company misconduct. The Committee then works to implement these measures throughout the company.

In addition, Shimizu has established a Corporate Ethics Help-Line Office to ensure that executives and employees do not violate laws, regulations, or company rules in the performance of their duties. The Compliance Hotlines have also been established both inside and outside the company and made available to ensure timely and appropriate handling of matters such as consultations and the provision of information on corporate ethics.

### ● Compliance training

Shimizu undertakes various types of compliance training, including an online e-learning compliance training course for all employees, training of new hires, and training that targets specific job responsibilities. In fiscal 2010, the e-learning course addressed topics including compliance with Construction Industry Law, fair bidding practice, and transparent relations with politicians and government (prevention of corruption and other improprieties). The course had a 100% attendance rate.



A screen from the online e-learning compliance training course

### ● Fair bidding practices

We employ a Code of Conduct for Officers and Employees Relating to Tenders for Construction Projects to ensure that all sales activities steer clear of legal or regulatory improprieties or the appearance thereof. In addition to the three principles applying to all employees, this code of conduct establishes specific measures and other rules on topics such as how to respond to outside incitements to engage in illegal activities. In fiscal 2010, the Legal Department also provided training and audits for all business sections to help monitor each section's compliance status.

## Compliance with Environmental Laws and Regulations

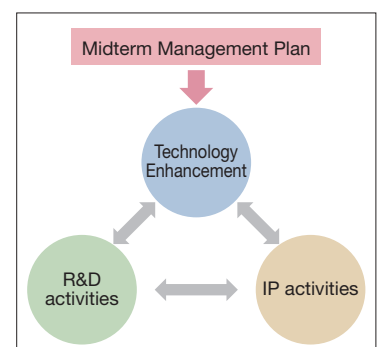
In fiscal 2010, we received a warning instruction from a public health center with jurisdiction over a power plant construction project (performed by a joint venture) pursuant to the Act on Waste Disposal and Public Cleansing. The warning was issued for negligence of checking the description on the control manifest for industrial waste which was entrusted to a waste-disposal firm. Based on guidance from the public health center, we quickly submitted a report on measures to prevent the recurrence of this violation and took steps to ensure a thorough understanding of preventive measures within the company. Going forward, to ensure a thorough understanding of the appropriate management of construction byproducts, employees involved in construction will receive training in the basics of such byproducts through an e-learning system.

## Protecting and Respecting Intellectual Property Rights and Putting Them to Strategic Use

To enhance our technological capabilities as set forth under our Midterm Management Plan, we are pursuing various strategic intellectual property (IP) activities, including the development of a patent portfolio suited to our business model, with a focus on technological development themes.

To advance these efforts companywide, we have established an IP Strategy Committee that checks progress in this area and discusses related policies and goals. We have also revised our internal rules in accordance with changing social requirements. We believe that our employees' motivation to innovate is directly linked to our corporate competitiveness. By providing training on intellectual property issues, we are also working to ensure awareness of the need to respect the intellectual property rights of other firms.

Shimizu also provides group member companies with related services, including guidance on intellectual property compliance, the patent process, and applying the results of technological development.





# Disclosure of Corporate Information and Information Security

Main Activities  
in Fiscal 2010

Fiscal 2010  
Assessment  
and Responses

Activities in  
Fiscal 2011

- Holding tours of company facilities for shareholders, briefings on settlement of accounts and site tours for securities analysts, and briefings for overseas investors; initiating communication via Twitter, in addition to website
  - Ensuring thorough adherence to rules on removing information-technology devices off company premises; strengthening e-mail security, and providing training on internal security and internal auditing thereof
  - Deploying security measures overseas and providing support for strengthened security measures at affiliates
- We made steady progress in accordance with plans for fiscal 2010 on disclosing corporate information. These efforts will continue into fiscal 2011.
  - Measures to strengthen security were undertaken largely according to plan.
- Strengthening IR activities; continuing to strengthen information disclosure to stakeholders
  - Continual deployment of security measures overseas
  - Providing support for implementation of security measures at affiliates
  - Providing support for security improvements at specialist contractors

## Disclosure of Corporate Activities

From the vantage point of fair disclosure, we promptly disclose all appropriate information on key matters concerning the company (including management and financial information) to all stakeholders, including clients, shareholders, and investors. This disclosure is implemented via tours of company facilities for shareholders, briefings on settlements of accounts, site tours for securities analysts, briefings on management topics, other timely disclosure efforts, and our public website, among other means and venues. We also hold periodic briefings for overseas investors.

Through our website, we strive to communicate a broad spectrum of information on our business activities in a timely manner. The website is updated some 250 times a year. In response to the rapid growth of Internet communication tools such as social media, including blogs and Twitter, we began communicating information via Twitter in fiscal 2010.

Shimizu's website: <http://www.shimz.co.jp/>

On Twitter (Shimizu Now): [http://twitter.com/Shimizu\\_now](http://twitter.com/Shimizu_now)

## Disclosure of Information on Construction Works, Structures, etc.

Based on the notion that our construction sites and the Institute of Technology serve as a nexus between our corporate activities and society at large, we hold tours and neighborhood briefings for stakeholders and local residents. We also proactively disclose information in areas such as technology, quality, safety, and environmental impact—all part of our effort to win the public's trust.

## Protecting Information

### ● Protecting personal information

As part of their business activities, companies in the construction industry manage personal information that includes information on customers, business partners, and employees. In 2005, Shimizu established a Privacy Policy to ensure the protection of all such personal information.

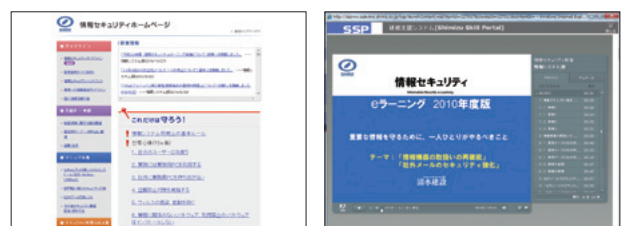
### ● Information security activities

In recent years, the leakage of confidential information in the course of company activities has become a topic of serious concern. In the construction industry in particular, projects involve numerous participants, including customers, architectural firms, and specialist contractors. The specific makeup of this group varies from project to project, making it crucial to protect information on the designs of buildings under construction. In fiscal 2008, Shimizu thoroughly revised its Electronic Information Security Control Guide (established in fiscal 2002) to create its Information Security Guidelines. This document addresses the handling of all information, including information in paper form.

Under our information security management system, we are seeking to raise awareness among employees of Shimizu and group member companies as well as specialist contractors through improvements in various areas, including training content. In addition to enhancing the security of our IT environment, we are also working to prevent information leaks through audits of information security by independent internal parties.

Some specific measures include the following:

- Distributing brochures to all system users and implementing corresponding e-learning activities (100% achieved)
- Strengthening email-related measures to prevent leaks
- Creating an environment for safe information sharing and exchange with outside parties
- Installing tools to counter information leaks on personal computers used overseas
- Enhancing countermeasures against leaks at affiliate companies (strengthening rules on removing IT devices from company premises)
- Supporting specialist contractors in efforts to improve security (distributing security-training content, conducting interviews)

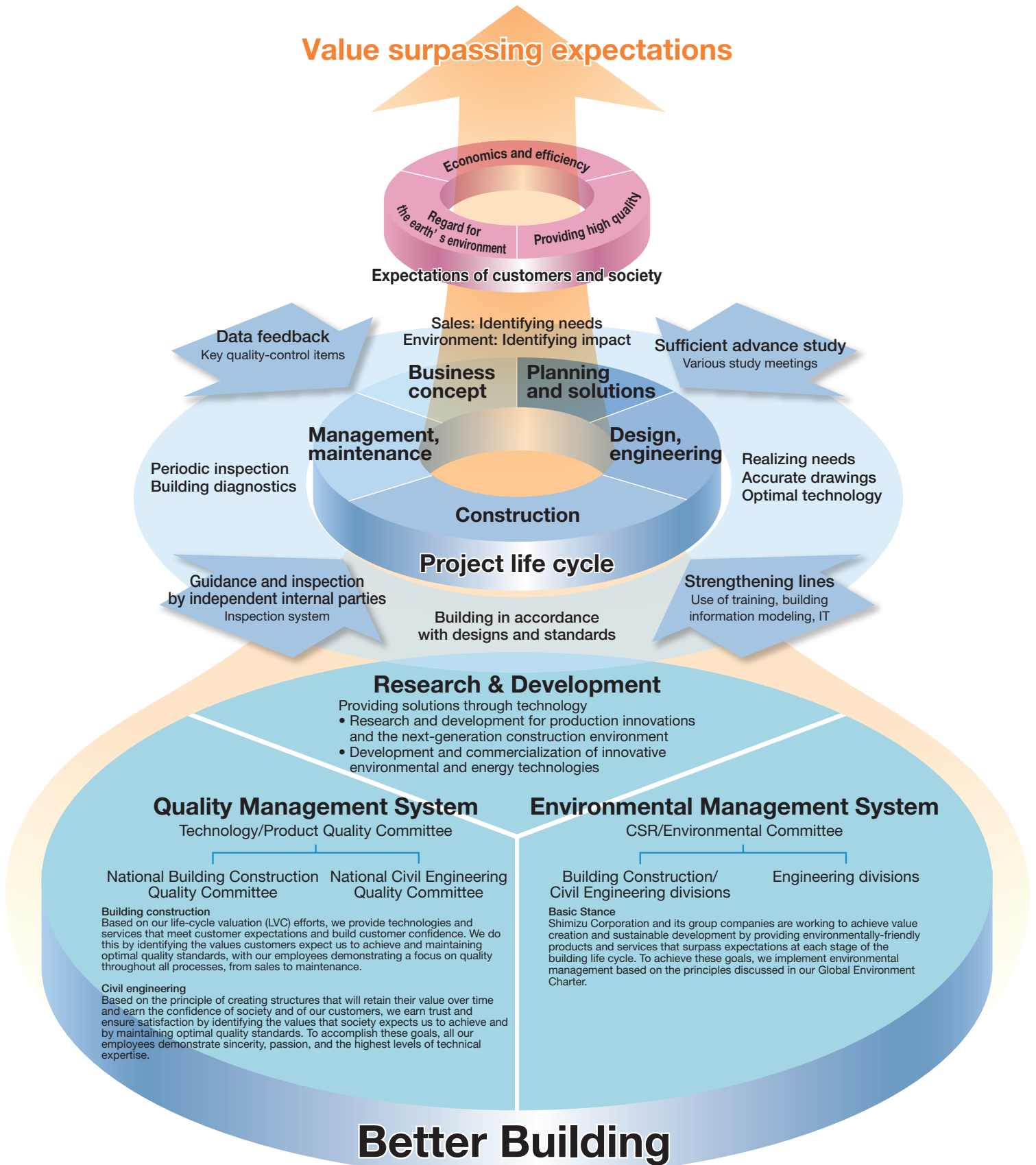


The information security website and FY 2010 e-learning content

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

The Life-Cycle Valuation (LCV) approach used by Shimizu since 2005 seeks to maximize the value provided in response to customer expectations and society. To accomplish this, we use the “Better Building” principle to quantify and visualize value in all processes of the project life cycle. Our Better Building infrastructure integrates groupwide quality and environmental management systems as well as technological development and is subject to continuing improvements through a plan-do-check-act (PDCA) cycle.

## Value surpassing expectations



# Identification of Needs

Main Activities  
in Fiscal 2010

Fiscal 2010  
Assessment  
and Responses

Activities in  
Fiscal 2011

- Solutions and support to raise the value of customer real-estate holdings
- Advancing proposals for advanced environmental technologies as a leading firm in the area of environmental conservation
- Advancing business proposals in anticipation of prospected regulations and systems
- Advancing proposal activities to grow the building stock management\* business in accordance with social trends

\* Building stock management: Management and maintenance of buildings throughout their lifespan

- Through cooperation between related sections, we implemented measures in accordance with plans for fiscal 2010, and generated good results as well.

- Business solutions with high returns on investment and low environmental impact that are tailored to current social and economic trends, as well as support for these solutions
- Strengthening renewal solutions aiming at the building stock management business, as well as building management\* solution activities
- Strengthening solutions and support suited to customers' overseas businesses

\* Building management: Maintenance and management services to keep completed buildings in their best possible condition through building management, maintenance, repair, and other means

## Planning, Solutions, and Support Activities

Based on its long-term performance record, Shimizu offers business solutions and support activities that can be implemented with confidence. Our goal is to identify needs that customers themselves may not have noticed, based on a various expert perspectives.

Our specialized internal sections provide a wide range of support starting from the business planning stage, including plans and proposals concerning business potential, the return on investment, and real estate.

Our goal is to realize a sustainable society that balances environmental conservation and economic development. Through these activities, we strive at all times to increase environmental cost effectiveness from two perspectives: reducing environmental impact and creating and restoring the environment.

### ● Solutions and support for increasing the value of real estate

In April 2010, we established the CRE\* Solution Department to provide support for increasing the value of customers' real estate. This office proposes a wide range of solutions, including the publication of "Shimizu Strategic CRE Support," a brochure describing the nature of the support we provide in a clear, easy-to-understand format. Our solutions are based on Shimizu's wealth of expertise with real-estate transactions, construction technologies and other areas such as soil remediation and energy conservation.

\* CRE: Corporate real estate used by companies as a part of their business operations



### ● Proposing advanced environmental technologies

The Smart Solutions Lab allows people to experience first-hand the environmentally sensitive offices featured in the new head office building opened in May 2010 at the Institute of Technology. This laboratory introduces the latest environmental technologies, capable of cutting carbon-dioxide emissions by 50% compared to a typical building employing existing technologies, but



A tour of the Smart Solutions Lab

without compromising comfort or functionality. The building welcomed some 4,400 visitors by the end of March 2011, including customers, government officials, and partner companies, reflecting the keen interest in advanced environmental technologies.

### ● Business solutions that anticipate regulations and systems

We provide broad-ranging solutions for pressing issues customers face, anticipating, for example, the strengthening of regulations to prevent global warming, such as the amended Law Concerning the Rational Use of Energy and other revisions to Tokyo environmental regulations. A typical example is the Shimizu Carbon Management Partnership for brainstorming side-by-side with our customers on ways to reduce carbon-dioxide emissions from the buildings they own. This initiative provides support to customers at every stage of their business activities, from research and analysis, including energy conservation diagnostics, through the formulation of medium-term carbon-dioxide emissions reduction plans, planning and design, and operations.



A Shimizu Carbon Management Partnership brochure

### ● Solutions and support that are tailored to social and customer trends

Shimizu is working to strengthen the way it builds trust with customers by making proposals that are appropriate to their situation. These solutions are based on understanding our customers' business environments and draw upon cross-functional teams established in specific fields. For example, we suggest a wide range of energy-saving technologies via our website and in our brochures for operators of data centers, which consume large amounts of energy.

### ● Solutions and support for renovation and building management services

To help customers maintain the value of their assets, we draw on energy-management technologies and advanced environmental technologies to propose ways to conserve energy and reduce carbon-dioxide emissions throughout the life cycle of a property. Enlisting group member companies and working side-by-side with our customers, we offer comprehensive services for each building asset, from design and construction through to management. Our unified operations for supporting customers' assets include everyday maintenance and management of buildings and facilities, medium-term repairs and renovations, and tenant management.

## Providing High Quality

Main Activities  
in Fiscal 2010

Fiscal 2010  
Assessment  
and Responses

Activities in  
Fiscal 2011

- Advancing visualization of customer needs
- Strengthening systems for accumulating and organizing relevant information and putting this information to effective use in preventing recurrence of similar problems
- Conducting customer satisfaction surveys on a trial basis
- Promoting and strengthening building management business to increase the satisfaction of facility users

○ In fiscal 2010, we implemented measures and achieved results in accordance with our plans. We will continue these efforts, continuously seeking to achieve even stronger results in the future.

- Continuing visualization of customer needs
- Executing measures to assure quality and prevent serious technical accidents, ascertaining and evaluating results, and revising them as needed
- Expanding building management contracts for existing buildings built by Shimizu

### Quality Efforts

Shimizu believes quality assurance includes not just building structures that are free of quality defects or failures, but also identifying the needs of the building users and owners, thus realizing structures that surpass customer expectations. Shimizu seeks to ascertain customer needs precisely and uses the latest technologies to visualize these needs before construction begins. Based on our quality management system, we perform rigorous advance studies at the design and construction planning stages. Shimizu strives to ensure quality by proceeding with construction based on technical standards, construction management systems, and standardized construction management systems. We also carry out internal inspections and audits from an independent perspective. At the stage of building operations, we promote and strengthen building management business so that customers can continue using their buildings for as long as possible. In fiscal 2010, we performed customer satisfaction surveys on a trial basis. We plan to develop these systems and conduct regular surveys in order to incorporate customer feedback.

### Proposals Surpassing Customer Expectations: The Role of Shimizu Design

After precisely identifying customer needs starting from the business development stage, we draw up proposals based on our extensive data and experience. We even respond to latent customer needs by suggesting solutions capable of yielding long-term returns on the customer's investment. Examples include the construction of buildings with long usable life spans and life-cycle cost controls. At the design stage, we seek to increase the value of a structure by incorporating customer needs and social requirements and applying a wide range of innovative solutions, such as those that help realize energy conservation and advanced modes of work.

### Using the Building Information Modeling Method to Improve Design Quality

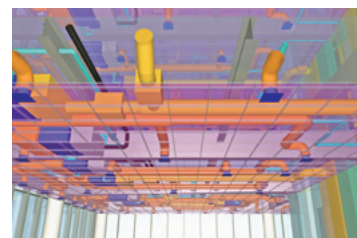
Building information modeling (BIM) is a methodology that integrates a computer-generated three-dimensional building model with data from the design, construction, maintenance, and management stages.

- Building consensus at an early stage through the visualization of customer needs

Since it makes it possible to visualize a clear image of the completed building in three dimensions, the BIM can help customers achieve a deeper understanding of their buildings, compared to traditional descriptions based on materials such as floor plans and perspective drawings. As such, it can help reach consensus at an earlier stage. In addition, BIM can also be used for performance testing to help achieve further quality improvements by visualizing problems before they emerge.

- Ensuring consistency of designs by linking to information immediately

Integrating design and construction efforts from the initial stage of a project and including data in the BIM makes it possible to prepare plans that ensure consistency among design, structure, and facilities through the uniform management of building data and technologies. Since sharing information makes it possible to resolve problems before they arise, the workers on-site can devote themselves to construction with minimal revisions, helping to ensure quality and efficiency.



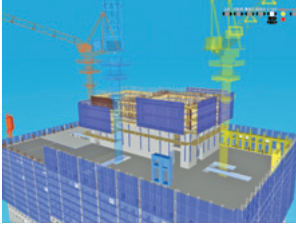
### Rigorous Advanced Study

- At the design stage: design review (DR)

For projects involving both design and construction, engineers other than the designers responsible for the projects check design documents from an independent perspective at the planning, basic and working design, and supervisory stages, thereby ensuring that the documents meet the requisite quality standards.

● **At the construction planning stage: pre-construction quality-control meetings**

Sales, design, construction, and technical staff jointly hold pre-construction quality-control meetings to study and check key quality-control matters and control points, as well as measures to respond to design issues, all based on customer needs. In addition, the BIM is used to study and check construction methods and details in order to assist in the study of processes and quality assurance.



BIM used to study construction plans



A pre-construction quality-control meeting

**Building Reliable Quality into Construction Processes**

● **Designated project-management system**

Large-scale or particularly challenging projects that require company-wide support from technical staff are designated as “special” or “specific” construction projects (construction) or “highly important” or “important” projects (civil engineering). Support for these projects is provided mainly by technical staff to prevent serious technical incidents and ensure project quality.

● **Publishing and utilizing the Monozukuri handbooks**

The publications Keys to “Monozukuri” : “The Art of Craftmanship” (for construction) and “Monozukuri” Handbook for Civil Engineering have been published as tools for confirming and visualizing quality-control points that must not be overlooked at work sites. They aid in compiling work instructions by personnel responsible for projects in order to ensure quality. These are also used as training tools.



Monozukuri handbooks

**Guidance and Inspection by In-House Independent Auditors**

Projects are subject to frame-completion inspection to confirm that the frames built satisfy relevant standards and delivery inspections to confirm that requisite quality levels have been secured. Both tasks are performed by technical staff from an independent perspective. To build structures in which customers can be confident, we believe the process of integrating quality into construction (the quality process) must be monitored and improved at all times. Full-time technical auditors visit and audit construction sites across Japan to perform inspections from various perspectives and provide advice on improving quality companywide.

**Strengthening the Building Management Business**

We are increasingly promoting our building management business (“BM” hereinafter, meaning the comprehensive management and operation of a building on behalf of building owners, including building facilities maintenance, cleaning, and security), thus allowing customers to use their buildings over long periods of time safely and comfortably. We have transferred all BM businesses to group member company Shimizu Building Life Care to consolidate the BM business under a nationwide structure. With the goal of doubling the value of BM orders received in five years, Shimizu and Shimizu Building Life Care are working as a team on business-development activities in the nation.

**Improving Quality Awareness (monozukuri awareness)**

● **Technical and human resource development activities**

Under a banner bearing the words “technical and human-resource-development activities,” Shimizu is pursuing various activities to pass along the skills it has accumulated to date and foster a sense of readiness and responsibility for achieving first-rate engineering. We are also striving to promote awareness of high-quality manufacturing technologies by designating November 1st as “Monozukuri Day” and November as “Quality Month”; participating in quality patrols with specialist contractors; and holding meetings for the presentation of case studies on everyday improvement activities (group communication activities).

**Comments from a member of civil engineering staff**

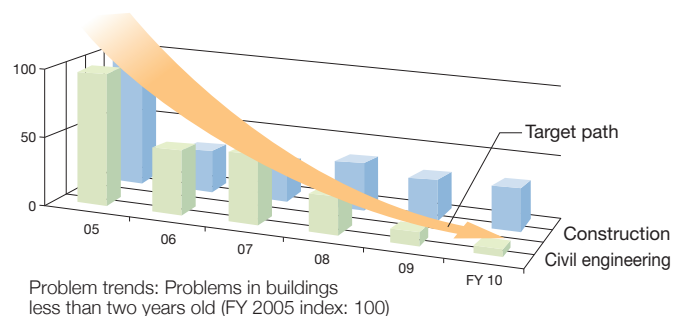
When I visualize the building we’re working on at my work site and see it serving as part of the social infrastructure, visited by lots of people, it deepens my commitment to quality control. I strive every day to improve quality control, with the goal of helping to raise a structure that can be used in safety and with peace of mind for a long time to come.



(Shiho Saimen, Kanjo-2 bridge construction site, Civil Engineering Dept. III)

**Targets and Performance**

Measures to ensure quality and prevent serious technical accidents have led to a steady decline in problems with completed structures. Shimizu thoroughly investigates any problems that emerge to determine which factors are responsible, then uses the conclusions to prevent the recurrence of such problems and to review its relevant quality systems. Our goal for fiscal 2020 is a problem rate of less than 7% of the fiscal 2005 rate for buildings completed over the preceding two years.



# Economics and Efficiency

Main Activities  
in Fiscal 2010

Fiscal 2010  
Assessment  
and Responses

Activities in  
Fiscal 2011

- Advancing designs that minimize life-cycle cost
- Advancing production system reform\* activities
- Enhancing customer service activities

\* Activities intended to strengthen business competitiveness and structures through business innovations across all production-related sections, including design, production planning, estimates, and procurement. These activities are the basis of our monozukuri activities, for which practical measures reflecting environmental changes have been advanced since 2000.

○ In fiscal 2010, we implemented measures and achieved results in accordance with our plans. We will continue these efforts, seeking to achieve even stronger results in the future.

- Advancing designs that minimize life-cycle cost
- Advancing production system reform activities more powerfully under the Monozukuri Promotion Committee (chaired by the President)
- In addition to new construction, expanding customer service activities for existing buildings

## Initiatives to Improve Economic Performance and Efficiency

Shimizu believes improving economic performance and efficiency means not just improving the economic performance and efficiency of buildings themselves, but undertaking construction itself more efficiently. In the design process, we strive to give concrete form to customer needs and minimize costs over the life of the building. In construction, we strive to reform production systems and develop and promote the use of technologies that contribute to related activities. In the building operation stage, we enhance customer service activities and help reduce operating costs.

## Improving the Economic Performance and Efficiency of Buildings

### ● Design proposals to minimize life-cycle costs

We strive for optimal planning at the design stage to ensure lower long-term life-cycle costs, including costs in areas like BCPs, the environment, and energy conservation, thereby increasing value for our customers.

- Main temple at Nishi-Arai Daishi Sojiji Temple (preservation/repair): Improving earthquake resistance to allow use as an evacuation center after major earthquakes

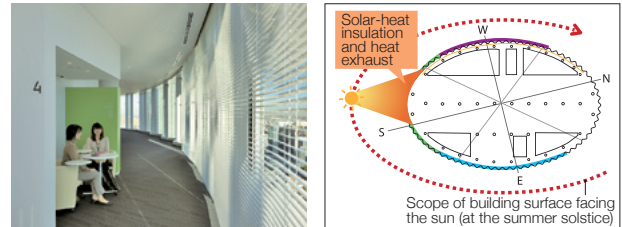
The Nishi-Arai Daishi Sojiji Temple is the oldest temple of the Buzan sect of Shingon Buddhism in the Kanto region, first built one thousand years ago. Important issues raised by this repair project included strengthening the earthquake resistance of the main temple building, rebuilt in 1971; preserving the exterior and interior appearances of the temple cherished by the local community; and improving functionality by securing access routes when the temple is crowded. To allow continued use of the building as a community evacuation center immediately after a major earthquake, project plans called for the first mid-story seismic isolation retrofitting project in Japan for the large reinforced-concrete main temple building. This was intended to keep roof tiles from falling and the main statue of worship inside the temple and other fixtures from toppling. We also prepared a long-term maintenance plan for the coming 60 years that accounts for the life cycle of the temple, which currently stands as a pillar of the community.



\* Winner of the 20th BELCA prize for best renovation project

- Fuji Xerox R&D Square: Using directional heat-exhaust systems (see “Topics,” pp. 9-10)

Since this building has an oval shape, some part of its surface is exposed to sunlight at any given time during daylight hours, with the exposed area changing throughout the day. The structure incorporates directional heat-exhaust systems to disperse this heat load. Based on the direction of the sunlight, these systems allow hot air accumulating between the exterior glass and the window blinds to escape through ventilation slits embedded in the building’s façade. This ensures a comfortable, cost-effective temperature environment without impeding views from the building.



A directional heat-exhaust system: Exhaust volume in each direction is controlled according to an annual schedule, reducing the load on heating and air-conditioning systems through the efficient exhaust of heated air from ventilation slits on the ceiling, which are positioned based on the direction of incident sunlight.

### Comments from a member of the design staff

We adopted this design because it makes it possible to use a perimeter corridor with a 360-degree view.

It’s the building’s oval shape that makes this precise control possible.

(Yoichi Kawamoto, Group Leader, Project Design Dept. 2, Design Div.)



## Initiatives for Achieving High-Efficiency Construction with Short Delivery Schedules

### ● Deploying a Guide for Index of Operation Efficiency

One reform in our production systems focuses on productivity rates (indicators of operational efficiency and effectiveness) and planning. This started four years ago, with efforts intended to return to the drawing board and increase productivity rates by improving planning companywide. As a practical tool, we began preparing a

guide for younger staff members in charge of related issues. Two years ago, we published the “Guide for Index of Operation Efficiency” This tool provides hints on how each individual can think and act on his or her own to eliminate waste, improve planning, and increase productivity. It involves visualizing construction plans and progress, using productivity rates as a yardstick.

In January 2011 we prepared and began using the “Easy to Understand Guide to Planning,” which identifies the rigorous *monozukuri* standards, an invaluable inheritance that has been handed down since Shimizu’s founding. These standards serve as pillars of the company’s business today and must never be forgotten.



An excerpt from the Easy to Understand Guide to Planning

**Comments from a member of the construction staff**

Construction involving rapid turnaround requirements doesn’t just mean building something fast. Building a structure requires essential steps that can never be omitted. I’m always considering what’s essential and what isn’t. This helps ensure high quality, lets us do our work safely, and lets us build something I can be proud to show my daughter, all the while meeting the constraints of the time and budget allotted.

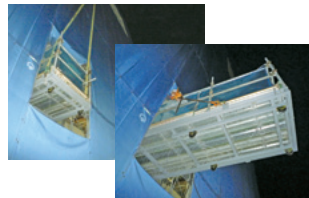


(Masaki Fuchimoto, Production Planning and Technology Dept., Production Technology Div.)

**Technological developments**

- Increasing productivity at small and medium-sized sites

We pursue various technological development activities to increase productivity at smaller work sites.



A sliding gantry for transporting materials to narrow urban sites

- Reverse construction (demolition technologies)

This process divides a building to be demolished into blocks, starting from the top of the building and working down, using the dismantling method best suited to each block of the building. The tower cranes, which are ordinarily used to construct new buildings, lower the dismantled blocks to the ground, after which they’re taken apart and sorted by material at a dedicated processing site. This new method was developed to allow safe, reliable, ecofriendly demolition of high-rise buildings. It was used to demolish the old office building as part of the construction project for the new head office building.



Separating a building into blocks (two photos at left) and lowering a block to the ground using a crane (photo at right)

**Civil engineering case study (high-speed shield tunneling method)**

In Tokyo, progress is being made in developing a network of water pipes to support the daily needs of residents and the functions of the capital city well into the future. Since the water pipes are laid in locations deep underground in the congested underground spaces of central Tokyo, the efforts depend on the use of shield-tunneling technology. Shimizu meets time constraints by using the F-NAVI method, which dramatically increases underground tunneling speed and reduces the time needed for tunneling by 33%.



Installing a new water pipe from the area of Konan 5-chome in Tokyo s Minato Ward to Yashio 1-chome in Shinagawa Ward

**Meeting to give a presentation on small-group activities and improvement examples (construction)**

A meeting will be held in November as part of our Quality Month activities for giving and listening to presentations on various examples of small-group activities. This event is intended to promote improvement efforts across different small groups in areas such as quality improvements, reducing construction times, and environmental considerations.

**Enhancing Customer Service Activities**

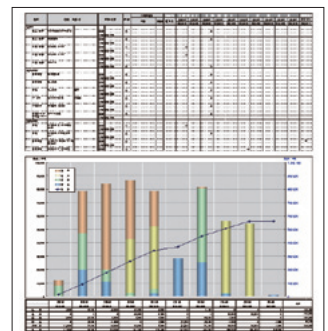
**Promoting comprehensive building diagnostics and renovation proposals**

We have established standards for customer service activities to strengthen activities for providing such services, including simplified building diagnostics, preparation of medium- to long-term maintenance plans, services to support energy conservation, and energy-conservation diagnostics. These efforts help customers minimize building life-cycle costs and life-cycle carbon-dioxide emissions and meet customer needs following building construction. They also help us maintain close ties as a building and facility management partner over the long term. We focus in particular on comprehensive building diagnostics, mainly for buildings constructed by Shimizu. Combining efforts like energy-conservation diagnostics with building-wear analysis, generally performed 12 years after completion, comprehensive building diagnostics provides customers with comprehensive proposals that increase asset value through renovations.



Building diagnostics findings sheet (left): The building is inspected visually. The findings are summarized on a findings sheet.

Wear-analysis evaluation sheet (right): Building wear over time is evaluated using a radar chart covering subjects of analysis, including construction, electrical, air conditioning, and sanitary facilities.



Maintenance plans, life-cycle costs: Maintenance plans are prepared on a year-by-year basis

## Reports by Activity Theme

# Preventing Global Warming Ecological Mission

Main Activities in Fiscal 2009

Fiscal 2009 Assessment and Responses

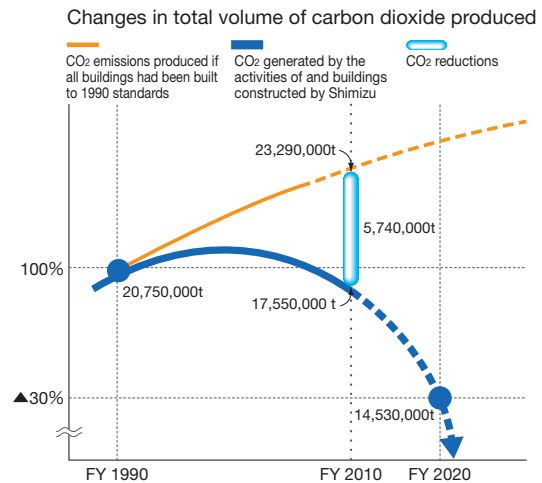
Activities in Fiscal 2010

- Promoting six measures to prevent global warming (namely, designing energy-saving buildings, resource conservation and green activities at construction sites, energy-saving renovation and eco-services, new-energy facility installation, energy-saving in offices, and carbon credit acquisition and use) in order to achieve the target of reducing by fiscal 2020 the carbon-dioxide emissions from all structures built by Shimizu (both past and present, including the Building Construction and Civil Engineering divisions) in Japan by 30% relative to fiscal 1990 levels (the Ecological Mission)
- We handily surpassed our fiscal 2010 targets, and current measures should help us achieve our 2020 target. We plan to maintain these activities in fiscal 2011.
- Promoting six measures to prevent global warming: designing energy-saving buildings, resource conservation and green activities at construction sites, energy-saving renovation and eco-services, new-energy facility installation, energy-saving in offices, and carbon credit acquisition and use

In accordance with policies and standards for collecting and reporting environmental performance data, the data given in this report is based on internal rules and documents that specify various standards, such as the CO<sub>2</sub> Emissions Reduction Survey Entry Guide. The data complies with all applicable environmental laws and regulations.

### Ecological Mission Program Fiscal 2010 Achievements

Due in part to reductions in the amount of construction materials used, fiscal 2010 saw a 16% decrease in CO<sub>2</sub> emissions from the fiscal 1990 figure of 20,750,000 tons. We thus met the target of 9% reductions relative to fiscal 1990 levels. Total CO<sub>2</sub> emissions in fiscal 2010 amounted to 17,550,000 tons. A comparison of buildings constructed through 2010 to those constructed to 1990 standards indicates a reduction of 5,740,000 tons.



#### Breakdown of fiscal 2010 CO<sub>2</sub> reductions

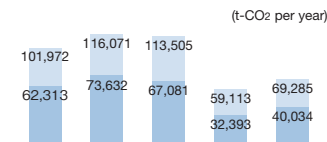
Measures	CO <sub>2</sub> reductions	Details
Design of energy-saving buildings	1,885,000t	Improvements in the efficiency of facilities and insulating properties of new buildings; greenification
Resource conservation and green activities at construction sites	3,374,000t	Reducing carbon dioxide generated during the construction stage; using optimal construction methods; reducing construction materials used
Energy-saving renovations and eco-services	63,000t	Reducing carbon-dioxide production through renovations; reducing carbon dioxide produced by building management on a long-term basis by Shimizu
New-energy facility installation	386,000t	Installing wind, solar, and biomass power generation and other facilities
Energy-saving in offices	4,000t	Promoting energy conservation at the head office and all branches of Shimizu Corporation
Acquiring and using carbon credits	23,000t	Development of CDM and JI projects

Discussed below are the following fiscal 2010 measures: designing energy-saving buildings; resource conservation and green activities at construction sites; energy-saving renovations and eco-services; and the acquisition and use of carbon credits. The Shimizu website provides information on efforts related to all six measures designed to achieve the goals of the Ecological Mission. ([http://www.shimizu.co.jp/csr/environment/report/pdf/data\\_2011.pdf](http://www.shimizu.co.jp/csr/environment/report/pdf/data_2011.pdf))

### Design of Energy-Saving Buildings

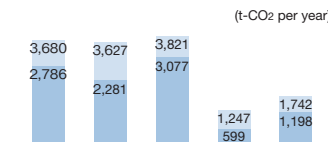
We are currently striving to design energy-saving buildings that meet the PAL, CEC, Q, and μ standards\* defined in the Law Concerning the Rational Use of Energy. We are also promoting greenification and the adoption of building and equipment technologies based on natural and untapped energy sources.

#### Commercial buildings: Changes in estimated CO<sub>2</sub> emissions per year



Note: CO<sub>2</sub> emissions depend on the number of buildings constructed and the purpose of the buildings.

#### Residential complexes: Changes in estimated CO<sub>2</sub> emissions per year



Note: CO<sub>2</sub> emissions depend on the numbers and locations of buildings constructed. The comparison above is relative to standard values under 1999 law, which stipulates more rigorous next-generation standards.

Legend:   
■ Estimated CO<sub>2</sub> emissions if buildings had been built to 1990 standards   
■ Estimated CO<sub>2</sub> emissions using energy-saving designs

\*Note: The lower the figure below, the lower the energy consumption. PAL value stands for "perimeter annual load," an index of a building's exterior insulation performance. The CEC value is an index of system efficiency for air conditioning, lighting, and hot-water facilities. The Q value is an index of required residential property winter-heating loads. The μ value is an index of required residential property summer cooling loads.

● Reducing projected CO<sub>2</sub> emissions through natural and untapped energy sources

We have aggressively promoted the adoption of various technologies for using natural and untapped energy sources, such as controlling lighting to use daylight, solar power generation, natural ventilation, rainwater usage, cool tubes,\* and a floor-supply displacement air conditioning system (Floor Flow). As a result, we reduced projected CO<sub>2</sub> emissions by 1,871 t-CO<sub>2</sub> per year.

\* A cool-tube method to reduce air conditioning loads by drawing external air into a building through underground, where temperatures tend to be stable.

● Increasing estimated CO<sub>2</sub> absorption through greenification

To decrease both the heat island effect and global warming, greenification efforts are promoted. Estimated total CO<sub>2</sub> absorption corresponding to trees planted as part of fiscal 2010 designs is 1,056 t-CO<sub>2</sub> per year.

**Resource Saving and Green Activities at Construction Sites**

● Resource saving at construction sites

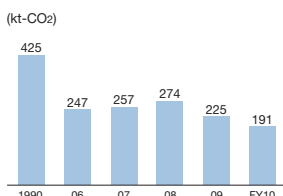
In the area of design, we have made progress on reducing CO<sub>2</sub> emissions through efforts incorporating the use of recycled materials. In the field of building design, we have reduced CO<sub>2</sub> emissions from structural materials by 6.8% (35,613 t-CO<sub>2</sub>) relative to fiscal 1990 levels by using electrosteel materials, electrosteel rebars, and Type B blast-furnace cement. In addition, construction methods with low environmental impact, such as concrete-filled steel tube (CFT) pillars, have reduced the volumes of materials used and lowered CO<sub>2</sub> emissions from structural materials by 10,267 t-CO<sub>2</sub>. In civil engineering design, CO<sub>2</sub> emissions from structural materials were reduced by 30.9% (9,845 t-CO<sub>2</sub>) from fiscal 1990 through the use of electrosteel rebars, Type B blast-furnace cement, and recycled asphalt concrete.

● Green activities at construction sites

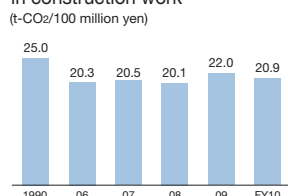
As in the preceding year, we strove in fiscal 2010 to reach our goal of at least 95% of construction sites adopting six or more CO<sub>2</sub>-reduction policies. To reduce CO<sub>2</sub> emissions, all construction sites were required to turn off all lights during lunch breaks; halt engine idling of construction vehicles; appropriately maintain construction machinery; promote the use of high-efficiency temporary electrical equipment; and implement various other energy-saving measures. In addition, the sites were required to adopt at least one other feasible action from the following six: replacing heaters with air-conditioning units; appropriately maintaining construction vehicles; reducing the volume and mileage of waste soil and sand transported from construction sites; eliminating excessive use of heating and cooling; using fuel-efficient construction equipment; and using vehicles meeting 2015 fuel-consumption standards. These measures reduced fiscal 2010 per-unit CO<sub>2</sub> emissions by 16.3% compared to fiscal 1990 levels. They also reduced volumes of CO<sub>2</sub> emissions in fiscal 2010 by 55.1% compared to fiscal 1990.

We have also adopted construction methods that help reduce CO<sub>2</sub> emissions, including the nonscaffold construction method, thus reducing CO<sub>2</sub> emissions by 11,257 tons in fiscal 2010.

Gross CO<sub>2</sub> emissions



CO<sub>2</sub> emissions per 100 million yen in construction work



Note: The figures above are estimates based on sampling.

**Energy-Saving Renovations and Eco-Services**

Recent developments, including the amendment of the Law Concerning the Rational Use of Energy, Tokyo's enactment of a requirement to reduce aggregate carbon-dioxide emissions, and the enactment of a carbon-trading scheme, ultimately mean that existing buildings must reduce their carbon-dioxide emissions.

This requirement has increased the importance of energy-saving renovations. Shimizu is actively moving to advise customers on activities designed to achieve energy-saving renovations, based on a combination of energy-conservation diagnostics and building-wear analysis. These proposals include measures to improve operating methods, based on which we present plans tailored to the state of building



Excerpts from case studies on energy-saving renovation. In fiscal 2010, each of our development sections set the targets for carbon-dioxide emissions reductions to be achieved through renovations. Since then, we have reduced emissions by 5,272 t-CO<sub>2</sub>/year companywide.

**Carbon Credit Acquisition and Utilization**

As part of its activities under the Ecological Mission program, Shimizu has been developing clean development mechanism (CDM) projects to reduce greenhouse-gas emissions overseas. These measures help prevent global warming and contribute to sustainable development in developing countries, meanwhile allowing Shimizu to acquire and use carbon credits generated by these projects.

While continuing operations of the facility for a landfill methane gas capture project in Yerevan, Armenia, we completed construction of a facility for our second CDM project, a landfill methane gas capture project in Tashkent, Uzbekistan. The construction work included well boring, surface soil coverage and gas collection plant installation to collect methane gas from an approximately 18-hectare site. The facility began operation in February 2011. The emission reductions of these two projects in fiscal 2010 totaled 23,065 tons. Emissions reductions of the Armenia project in fiscal 2009 has been approved by the United Nations' CDM executive board and carbon credits of 12,022 tons were issued in April 2011. As a new approach to the global warming issue, we are conducting a feasibility study on CO<sub>2</sub> emission reduction from peatland in Indonesia, which is entrusted by the Global Environment Centre Foundation. The project aims to reduce CO<sub>2</sub> emissions due to the decomposition of dry peat caused by drainage through manmade water canals. By restoring groundwater level in the peatland, which has been used for irrigation, rice production can be increased along with CO<sub>2</sub> emission reductions. Through the above-mentioned activities, we will continue our efforts to reduce greenhouse gases.



Methane gas collection facility in Uzbekistan

## Biodiversity Efforts

Main Activities  
in Fiscal 2010

Fiscal 2010  
Assessment  
and Responses

Activities in  
Fiscal 2011

- Exhibiting and participating in the 10th Meeting of the Conference of the Parties to the Convention on Biological Diversity (COP 10)
- Beginning activities in accordance with the Shimizu Action Plan on Biodiversity

- In fiscal 2010, we achieved levels targeted for these efforts. In fiscal 2011, we will review the relationship between COP 10 decisions and Shimizu's initiatives and continue with these activities.

- Continuing activities in accordance with the Shimizu Action Plan on Biodiversity
- Further promoting R&D on technologies for the preservation and creation of biodiversity in urban communities, as well as the use of such technologies

### Exhibiting and Participating in COP 10

- A joint booth sponsored by Chubu University, Shimizu, and Aichi Prefecture

This booth presented the results of survey and analysis of hot spots with respect to biological diversity, regional biodiversity, and genetic diversity. It welcomed approximately 5,000 visitors and was reported on by various media outlets. In addition, in a forum organized by the Chubu Economic Federation, Shimizu gave a presentation on the results of this research, together with Prof. Motoyasu Minami of Chubu University.



- Animal-Pathway Research Society

In cooperation with the Kiyosato Educational Experiment Project (KEEP), Shimizu presented a video introducing the activities of the association, exhibited various models, and held an international symposium. A panel discussion featured a lively exchange of opinions on efforts to protect small arboreal animals.

- Japan Business Initiative for Conservation and Sustainable Use of Biodiversity (JBIB)

Shimizu has participated in JBIB, an organization of companies with a high level of interest in biodiversity ever since the organization's inception. At COP 10, Shimizu took part in various activities, including exhibitions on advanced research results, a symposium on leading efforts by firms in Japan and Southeast Asia, and public seminars.

### Activities in Accordance with the Action Plan

- Initiatives at the planning, proposal, and design stages

Based on an awareness of the need to take biodiversity into consideration in activities including design competitions, technical proposals, and general evaluations, Shimizu proposes solutions that help avoid, reduce, or offset environmental impact, in addition to making efforts to identify the potential impact of a proposed construction project. In fiscal 2010, 40 such proposals were presented as part of Shimizu's construction operations and six as part of its civil engineering operations.

- Initiatives at the construction stage and in procurement activities

In building the Gima Dam on Kumejima Island in Okinawa Prefecture, we applied various measures, including building sediment basins and spraying a mixture of grass seed and soil on slopes to prevent the runoff of red soil into the water. We also relocated rare native species, including the Kumejima firefly native to the region of the dam.



Sloping surfaces covered with grass seed and soil at the Gima Dam site

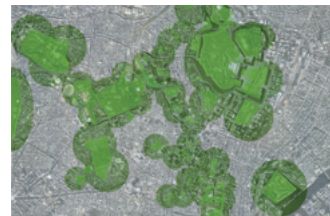
As part of efforts to conserve lumber resources through procurement activities, we use lumber certified by the Forest Stewardship Council (FSC) as part of the concrete forms on the new head office project (currently under construction). As part of a research project under contract to the Chubu Bureau of Economy, Trade and Industry, we have also tested the use of domestic lumber (Japanese cedar from the Tama area) in temporary enclosures at construction sites.

- Biodiversity preservation education

A seminar on the preservation of biodiversity, consisting of a keynote lecture by Associate Professor Ryo Kohsaka of Nagoya City University and an introduction to Shimizu's initiatives was held by Shimizu. This was supplemented by the provision of an e-learning program on the preservation of biodiversity for employees and managers alike.

- R&D Initiatives

We continue to push ahead with R&D efforts on technologies for preserving and creating biodiversity in urban communities. We have also developed and put into practical use the UE-Net Lite system for visualizing the biodiversity of flying creatures near construction sites.



Evaluations using UE-Net Lite: Green areas indicate the home ranges of the Japanese Tit.

In addition, to identify the role played by biodiversity preservation in improving the living environment, we performed a questionnaire survey on ecosystem-related services generated by rooftop garden efforts and performed various related physiological and psychological testing. Through these efforts we have confirmed the psychological effects of rooftop gardens, including reduced psychological stress.

# Reducing and Recycling Construction Byproducts

Main Activities in Fiscal 2010

Fiscal 2010 Assessment and Responses

Activities in Fiscal 2011

- Promoting 4R\*<sup>1</sup> Activities
- Developing a Construction Byproducts Management System in each section
- Promoting the use of e-manifest\*\*<sup>2</sup> forms

\*1 4R: Refuse, Reduce, Reuse, Recycle

\*\*2 E-manifest: A system for controlling industrial waste from generation through final disposal via telecommunications networks; used to confirm matters such as proper disposal of waste.

- 4R Activities were promoted at all sites.
- We developed a Construction Byproducts Management System in each section. This system was recognized by an external award.\*
- Promoting the use of e-manifests advanced steadily.

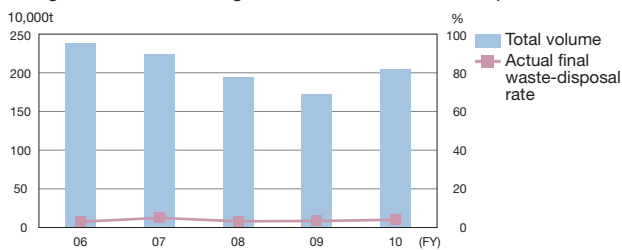
\* The Industrial Science and Technology Policy and Environment Bureau Director-General's Award in the Resource Recycling Technology and Systems Awards

- Continuing promotion of 4R Activities and studying low-waste construction model projects
- Examination of the use of Construction Byproducts Management System by all construction sites
- Studies toward fuller use of e-manifest forms

## Total Volumes Generated and Final Waste-Disposal Rates

Total construction byproducts generated rose by 18% from the previous year to approximately 2,040,000 tons. The final waste-disposal rate (not including sludge and harmful substances) was 3.6%.

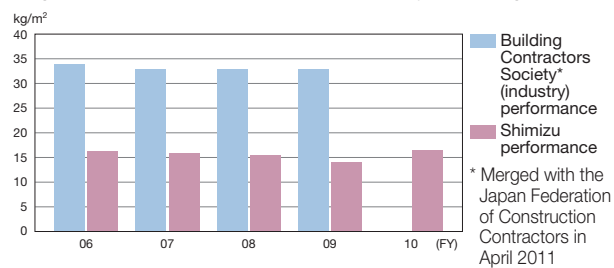
Changes in total volumes generated and final waste-disposal rates



## Base Unit of Total Construction Byproducts Generated

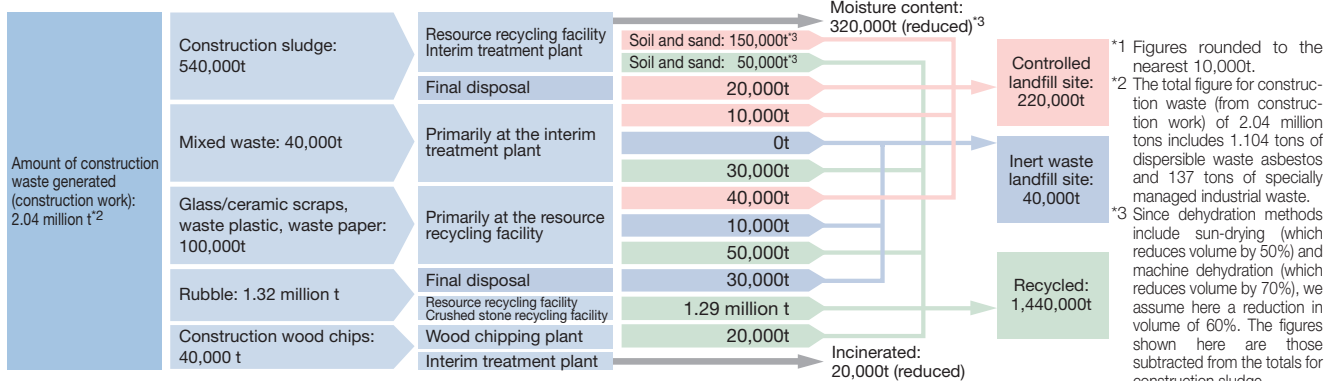
The base unit of total construction byproducts generated from new construction projects (not including sludge or other harmful substances) was 15.2 kg/m<sup>2</sup>.

Changes in the base unit of total construction byproducts generated



\* Merged with the Japan Federation of Construction Contractors in April 2011

## Flow of Construction Waste Treatment for FY 2010\*<sup>1</sup>



## Developing a Construction Byproducts Management System

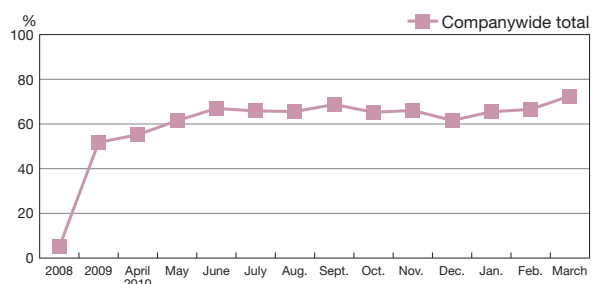
This system automatically forecasts the volume of construction byproducts generated from construction based on a building construction database (covering data such as materials and equipment used) and the construction period. The system identifies models for reducing and recycling such byproducts. Adopting this system results in reductions of roughly 10% to 20% in the base units of total construction byproducts generated. So far, the system has been used for 120 projects in total.



A meeting on reducing construction byproducts based on forecasts of volumes generated

## Changes in Rate of Use of E-Manifests

E-manifests were used in approximately 65% of cases in fiscal 2010.



## Measures Involving Hazardous Materials

Main Activities  
in Fiscal 2010

Fiscal 2010  
Assessment  
and Responses

Activities in  
Fiscal 2011

- Developing the Shimizu Jet Mist (S-Jet) method to remove asbestos
- Measuring indoor air concentrations of five substances upon completion of design and construction projects
- Promoting on-site disposal, including in situ purification and site cleanup
- Deploying remediation of soil contaminated with dioxins

- All dispersible asbestos (1,093 t) was disposed of appropriately.
- All measurements of indoor air concentrations were within Ministry of Health, Labour and Welfare guideline values.
- Shimizu met targets for the fiscal year through efforts including promoting the use of insolubilization and the bio-bubble cleaning method in projects, as well as technological developments for a soil washing plant targeting naturally distributed soil contamination. These efforts will continue into fiscal 2011.

- Continuing appropriate processing of dispersible asbestos
- In addition to the five substances whose concentrations in indoor air are measured upon completion of construction, taking sampling measurements of TVOC\* concentrations
- Promoting on-site disposal, including in situ purification and site cleanup
- Establishment of a plant for remediation of naturally distributed soil contamination and deployment of its use for projects

\* TVOC: Total volatile organic compounds. Volatile organic compounds (VOCs) include toluene and xylene, among others.

### Countermeasures Against Asbestos

We have developed the Shimizu Jet Mist (S-Jet) method, a powerful method for removing asbestos in renovation construction.

Conventional asbestos removal methods involving ultra-high-pressure water are poorly suited to renovation construction for various reasons, including concerns about water leaking to lower floors and the need to process excess water. The most significant characteristic of the new method is that it cuts water use to one-tenth to one-third that used by conventional methods without generating excess water. At the same time, it maintains an asbestos-removal efficiency that is at least equal to conventional methods. The dimensions of the new equipment allow for transportation on elevators, making it even more suitable for renovation work.

In the future, we will seek to further increase the productivity and safety of asbestos removal work by developing advanced technologies for automated asbestos removal and the use of robotics.



### Countermeasures Against Indoor Chemicals

In fiscal 1997, when the issue of sick-building syndrome first emerged in Japan, we initiated a project to develop technologies that maintain healthy residential environmental air quality. We established the Shimizu Healthy Building System, consisting of elements including forecasting chemical concentrations from the design and planning stage, on-site measurements, various types of testing and analysis, evaluations of building materials and components, and ventilation systems that control levels of air flow using temperature sensors, thus making it possible to provide comfortable living spaces.

In design and construction projects of a certain size, we also measure indoor concentrations of chemical substances on our own,\* delivering the buildings only after confirming their safety with regard to sick-building syndrome.

\* Measurements are taken for five substances thought to have health consequences: formaldehyde, toluene, xylene, ethyl benzene, and styrene.

### Soil Remediation Initiatives

#### ● Deployment of in situ remediation

The enforcement of the amended Soil Contamination Countermeasures Law has increased interest in in situ (on-site) soil remediation methods. The bio-bubble cleaning method\* we first proposed after its development in 2009 has been determined for implementation, and we have confirmed its performance in advanced treatability test. This method also promises to be faster and more cost effective than traditional methods.

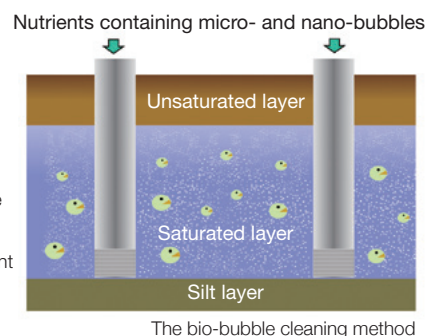
\* A method of cleaning soil and groundwater contamination by injecting nutrients containing micro- and nano-bubbles to activate microorganisms in the soil.

#### ● Development of soil washing methods for naturally distributed pollutants

Thus far we have used on-site soil washing for heavy metals and oil pollution. In 2010, we developed a soil washing plant for naturally distributed pollutants in the soil, making it possible to clean up sites at a lower cost. Large volumes of naturally distributed pollutants are present in soil across wide expanses of land in the seaside of major urban areas, thus impeding the effective use of the land. This method is intended to promote more effective use of such land.

#### ● Deployment of dioxin soil remediation

Shimizu's soil remediation business has been licensed under the Soil Contamination Countermeasures Law, allowing it to clean contaminated soil containing mixtures of heavy metals and dioxins. These cost-effective remediation services help to offset the environmental impact of such substances.



Micro-bubbles activate aerobes in the soil, jump-starting the long-term establishment of a uniform aerobic environment.

The bio-bubble cleaning method

# Environmental Communication

Main Activities in Fiscal 2010

Fiscal 2010 Assessment and Responses

Activities in Fiscal 2011

- Promoting total eco-activities\*1
- Beginning energy-conservation support service\*2 activities

\*1 Total eco-activities: Activities intended to provide customers with buildings and services accounting for environmental considerations and related reports as part of the design and construction of major projects. These activities apply to projects of a certain size designed and constructed by Shimizu.  
 \*2 Energy conservation support services: Services involving the collection of data on building-energy use in the first, second, fourth, eighth, and twelfth years after completion and analysis of the state of energy consumption. The purpose is to enable simplified energy conservation assessments for office buildings, hotel facilities, hospitals, and educational facilities of a certain scale.

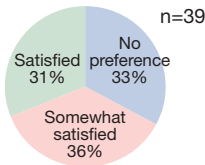
- Total eco-activities have largely achieved their targets (with at least 65% of customers consenting to provision of data). Activities in fiscal 2011 have the same goal.
- Energy-conservation support services were implemented according to plan.

- Beginning customer surveys to evaluate total eco-activities more objectively
- Continuing energy-conservation support service activities

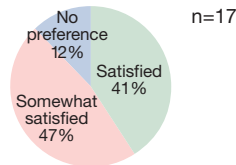
## ● Total eco-activities

Total eco-activities began in fiscal 2003. Through the end of fiscal 2010, they had been deployed in 518 buildings. Customer response in fiscal 2010 to reports provided upon completion and during the building-usage stage was generally positive.

Customer satisfaction with completion reports



Customer satisfaction with usage-stage reports



n: Number of reports in fiscal 2010

## ● Energy-conservation support service activities

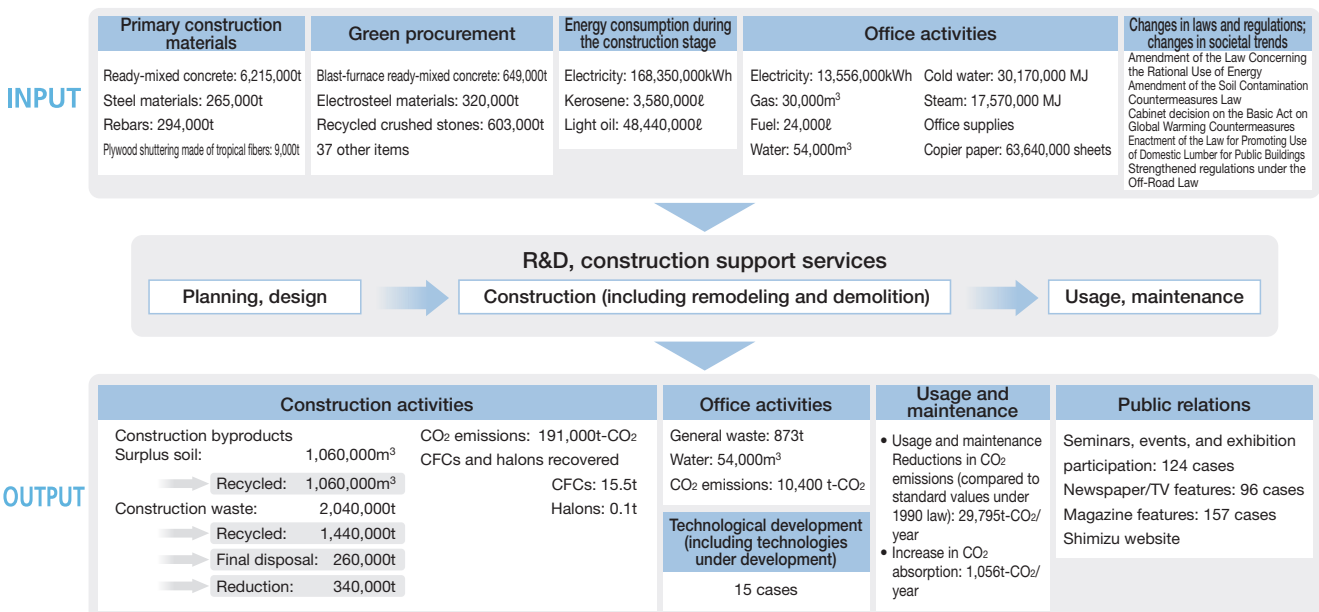
We promote energy-conservation support services as one facet of our customer service activities. Through these activities, we help customers reduce their environmental load by keeping them informed of the current energy consumption in their buildings as compared to benchmark buildings used for the same purposes.



Excerpts from analysis reports

# Fiscal 2010 Material Flows

Inputs include changes in laws, regulations, and societal trends that affect outputs. Outputs include reductions in CO<sub>2</sub> emissions at the building-usage stage resulting from energy-saving designs, technologies reducing environmental impact, and full disclosure of information to the public.



Note: The scope of the data summarized above encompasses the Shimizu Corporation head office, the Institute of Technology, and other domestic divisions and construction sites.

# Toward the Realization of a Company that Values People

Main Activities  
in Fiscal 2010

Fiscal 2010  
Assessment  
and Responses

Activities in  
Fiscal 2011

- Continuing measures in areas such as awareness of human rights, diversity, and work-life balance, and enhancing measures to support a balance between work and family life, in response to amendment of the Child Care and Family Care Leave Law
- Revising methods of informing employees of systems and measures such as those related to childbirth, childcare, and family care, summarizing them in organized, easily understandable brochures or other materials, and posting these onto the intranet and publicizing them within the organization
- Human rights initiatives and employment of individuals with disabilities went according to plan. The number of days off taken by employees failed to reach the planned target.
- In addition to establishing a new system of family care leave and extending some child medical-care leaves in accordance with the amendment of the Child Care and Family Care Leave Law, efforts such as extending childcare leave, expanding the scope of eligibility for the shortened working hours system, and extending family care leave were implemented according to plan.
- Continuing actions in the areas of education and awareness of human rights and work-life balance
- Enhancing measures to promote diversity (e.g., formulating a fundamental policy on promotion of diversity, studying and implementing measures to promote the role of women in the workplace, and developing a diversity-promotion website)

## Creating Comfortable Workplace Environments

### ● Human rights efforts

Our Code of Corporate Ethics and Conduct calls for respect for employee diversity, personal character, and individual differences, and prohibits discrimination and sexual harassment. We have also established a basic human rights policy as well. In this and other ways, we continue to pursue activities that raise awareness of human rights.

We have established a Committee to Enhance Awareness of Human Rights (chaired by the Vice President). We have also established a system comprised of individuals at the managerial level (general managers and managers) to ensure increased awareness of human rights within each division. The Committee seeks to disseminate, via the intranet and at company workplaces, various regulations and policies intended to prevent harassment. The Committee has also established a hotline for questions related to human rights.

We seek to raise awareness through other activities as well, including flyers and posters posted in conjunction with Human Rights Week at the head office, branch offices, construction sites, and other facilities. These notices increase awareness of sexual harassment and power harassment issues. Other efforts include a Human Rights Awareness Training program targeting specific job responsibilities and an awards program to solicit slogans for human rights awareness.

<Human Rights Awareness Training (involved a total of 3,995 trainees in fiscal 2010)>  
Executive training (conducted annually)

Division Deputy General Manager/General Manager training (conducted annually)

General employee training (conducted every other year)

<Best Slogans for Human Rights Awareness, Fiscal 2010 (number of entries: 1,181)>

Employee Section: "Words are important; The reset button doesn't work on what has already been said."

Family Section: "A magic phrase, 'Thank you' is the password."



A Human Rights Awareness Training session



The award ceremony for slogans for human rights awareness

### ● Promoting diversity and inclusion

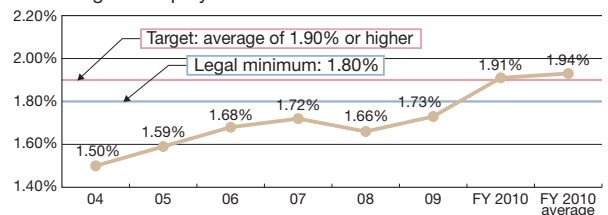
In addition to training sessions to assist female employees (in March 2011, the total number of female employees was 1,353, or 12.4% of the overall workforce), we are steadily implementing a number of programs

intended to promote diversity, including presentations on our activities to the Architectural Institute of Japan and the Japan Society of Civil Engineers. We are also examining ways to promote and train women in the workplace. We are the only company in the construction industry to participate in the Ministry of Health, Labour and Welfare's program of model enterprises to promote the hiring of individuals with mental disabilities. Through this and other initiatives that promote the employment of people with disabilities, we currently meet or exceed the legally mandated minimums and targets regarding the employment of such individuals.

Number of women in management positions					Unit: individuals
2007	2008	2009	2010	2011	
6	6	7	9	12	

New graduate hires		Unit: individuals			
		2008	2009	2010	2011
Regular employees	Women	24	35	38	35
	Men	196	198	184	162

### Percentage of employees with disabilities



### "An environment where one can work regardless of nationality"

Phan Huu Duy Quoc  
Civil Engineering Headquarters

I'm originally from Vietnam. I joined Shimizu in 2006. My main duties involve proposing technical solutions for concrete and support for quality control in the field. Recently, the number of opportunities to interact with site workers and customers has increased. Each time, people appear to be surprised to learn I'm a foreigner. As hiring of foreigners increases, I think this reaction will become less common. I strongly believe that Shimizu is gradually building up (generating) an international environment where one can work regardless of nationality. Still, from time to time, I've been so busy lately that I have no time left to play with my children. I'd like to improve my work efficiency to maintain a sound work-life balance.



● **Enhancing support for striking a balance between work and family life**  
 In response to the amendment of the Child Care and Family Care Leave Law (June 2010), we have implemented enhancements in areas such as periods subject to leave, shortened working hours, and other programs for childcare and family care. Together with these measures, we developed a new systematic summary of systems and policies related to childbirth, childcare, and family care. This information has been posted on the company intranet.

	Before	After
• Childcare leave	18 months	→ Two years old
• Childcare shortened working hours	Preschool	→ Third grade
• Family care leave	93 days	→ 365 days

In addition, we are making progress in establishing an environment in which employees taking childbirth or childcare leave can work with peace of mind—for example, by supporting the smooth return to the workplace of employees who have taken time off for birth by spouses or for childcare leave. These efforts include a system for rehiring employees who have left the company for reasons such as childbirth or childcare; interest-free loans to pay for fertility treatments; and employing a discount babysitting program, provided by Kodomo Mirai Zaidan, to make raising children easier. Following efforts to formulate and establish a general business action plan in compliance with the Act on Advancement of Measures to Support Raising Next-Generation Children, we have been certified by the Ministry of Health, Labour and Welfare to use the Kurumin certification logo as a company taking action in supporting child-rearing and related efforts.

	2009	2010
Childcare leave	38 persons (95.5%)	38 persons (94.4%)
Shortened working hours	16 persons	27 persons
Exemption from overtime/holiday work	2 persons	3 persons
Child medical care leave	2 persons	1 person
Family care leave	-	1 person

Note: Figures in parentheses represent percentages of female employees who started their childcare leave



**“Men take childcare leave, too.”**

Kosuke Yoshizaki  
 Personnel Dept.

My first son was born around the time the Child Care and Family Care Leave Law was amended in June 2010. I took two weeks of childcare leave, starting when my wife and son left the hospital. I made adjustments such as moving up some of my work and postponing other work. I spent 24 hours a day caring for my son. Bathing him and changing diapers were a real challenge, something it took me a while to get a grasp on. This gave me a real feel for the reality that childcare leave is no vacation. Neither my wife nor I are originally from the Tokyo area, so we decided we didn't need to return to our parents' home for the childbirth. Thanks to childcare leave, we surmounted our most significantly challenging times together.

● **Promoting health maintenance**

In addition to health checkups on items required by law for all employees, we strive to promote health maintenance, including efforts to combat metabolic syndrome. These efforts include examining employees aged 35–39 for lifestyle-related conditions and mandatory complete medical checkups for employees 40 years of age or older. Among other efforts, we use a system of health-management categories based on the diagnosis of industrial physicians (illness categories and categories of persons requiring health management) and interviews with industrial physicians and public health nurses for employees regularly working overtime in order to raise their awareness of health issues and provide health guidance. Other activities include follow-ups on results by employee supervisors.

We are also enhancing mental-health measures, including counseling by clinical psychotherapists and various informational presentations, partnerships with an external employee assistance program (EAP), and planning and implementing programs to help employees return to the workplace after leaves of absence.

**“Campaigns to encourage walking and quitting smoking”**

Hiroshima Branch

This program for the month of October sought to improve employee health and prevent illness by encouraging employees to get into the habit of walking, challenging them to walk 300,000 steps in one month. More than 60% of participants achieved this goal. Comments from participants indicated that the program had the unexpected result of enlivening communication, as well as improving health. Said one participant: “We had lively workplace discussions on the topic, including sharing daily achievements with each other.” The Hiroshima Branch also implemented a campaign to help employees quit smoking, under the leadership of a public health nurse. All nine participants succeeded in quitting smoking. “I was worried whether I'd be able to quit smoking during a busy stretch at work,” said one participant, “but I'm delighted to succeed in doing so, thanks to the encouragement of my workplace and my family.”



Employees walking during lunch break

● **Efforts to promote a sound work-life balance**

In addition to a refreshment leave (14 consecutive days) provided every 10 years and a relocation/break leave (generally 5 days) for site workers when moving to another site, we offer a diverse range of leave programs, including volunteer leave (10 days/year) to encourage employees to contribute to society. To allow employees to take long blocks of consecutive days off, we provide special paid leave apart from annual paid leave during summer vacation (nine consecutive days) and the New Year's holidays (six consecutive days).

The rate of annual leave taken:

- Refreshment leave: Taken by 485 employees
- Volunteer leave: Taken by 13 employees
- Annual leave: 21.5%

We also promote activities to reduce working hours, including regular discussions between labor and management, assessments of actual conditions through site patrols, and efforts to raise awareness of the need to cut back on working hours. We also strive to cut total working hours through the horizontal deployment of positive improvements across the organization and by briefly shuttering entire sites to encourage employees to take vacation time and days off.

In addition to prohibiting overtime on specified days, we hold hands-on technical seminars for employee family members on Family Day (the third Sunday in November), which is recommended by the Japanese government. Our goal is to reform employee attitudes and ultimately reduce working hours.



Participants encounter a wind tunnel in a hands-on technical seminar for employee family members



Participants in a hands-on technical seminar for employee family members

● **Fair HR evaluations**

Evaluations seek to identify results accurately and improve the capabilities of each individual. For this reason, Shimizu holds mandatory semiannual meetings between employees and their supervisors. In these meetings, personnel and supervisors discuss performance issues and goals, achievements, and other matters. In addition, through evaluator training and e-learning programs, Shimizu seeks to ensure an accurate understanding of the evaluation system and its correct use.

HR Development to Foster Individuality and Imagination

● Global HR development

There is pressing need to train human resources capable of thriving amidst the rapid globalization that is under way in Japan and around the world. For this reason, Shimizu has launched several new initiatives to strengthen employee English-language abilities and expand cultural awareness.

To strengthen the English-language abilities of our employees, we have incorporated the Test of English for International Communication (TOEIC) into group training programs for employees in their fifth and tenth years with the company, in addition to the program for new hires. This is intended to ascertain the current state of employee English-language abilities and provide an impetus for self-improvement. (In fiscal 2010, 403 employees took part.)

We also established a training program to improve communication skills for employees in their fifth year with the company. Led by two instructors from overseas, this program strives to train global communicators capable of adapting to and thriving in any environment, in addition to improving their English-language skills.



Training to improve communication skills (nearly 70% of the course is conducted in English)

● Promoting women in the workplace

The companywide training system now incorporates diversity training. Training to promote women in the workplace is currently under way, with the goal of increasing the motivation of female employees, achieving networking with senior trainers and among female employees, and expanding the awareness of supervisors regarding female employees in the workplace.

In the follow-up training program for female employees in their second year with the company, five senior female employees participate as trainers. This also serves as a networking opportunity: the trainers have a positive influence on the employees, who can consult with them freely after the training program has concluded.

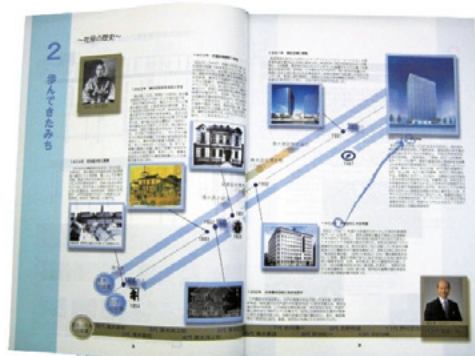
In addition, supervisors and personnel with guidance responsibilities in sections accepting new female hires receive management training on the promotion of women in the workplace. Intended to deepen recognition and understanding of subordinate development, this training program was provided in 2011 for the third year running. Particularly in communication role-playing by personality type, trainees learned skills they can apply immediately in the workplace by learning their own personality types, something they may not have given much thought to in their everyday work. The training proved highly satisfactory to the trainees who took part.



Follow-up training for female employees

● Passing on the heritage of Shimizu employees

Full-scale deployment of the Shimizu Start Guide has begun as part of activities to strengthen HR development. The guide provides simple explanations on various topics, including the values maintained by Shimizu since its founding and how a leading company conducts itself, and is used as a teaching tool in training programs, including training for new hires and the Monozukuri Juku Program for new managers. The guide is also used as a starting point for superiors and subordinates to discuss workplace issues, among others, thus helping to strengthen communication and pass along Shimizu's heritage in a variety of contexts.



Contents of the Shimizu Start Guide

Introduction: Shimizu's principles, history, and position
Readiness: Personal growth supports company growth
Department: Start with personal appearance and greetings
Ways of doing things: Thinking about the meaning of work and the determination to get things right

● Educational promotion organization and HR development programs

We are developing a carefully designed education promotion system through various efforts, including setting up education committees by section, field, and function under the organization of a companywide education committee; formulating and reviewing the education plan for each fiscal year in each committee; and running through the plan-do-check-act (PDCA) cycle.

We also strive to train human resources capable of serving as top professionals trusted by both society and customers through programs that focus on specific fields and functions. The goal here is to develop human resources (*hitozukuri*) capable of developing strong projects (*monozukuri*).

	Young employees	Mid-level employees	Managerial positions
Training in behavior, attitudes, and knowledge	New employee training	Practical training	Management training
Training related to the code of conduct	Compliance, human rights, security		
Promoting diversity	Follow-up training for female employees, training on management for promoting women in the workplace		
Specialist training by field	Sales, design, construction, facilities, civil engineering, R&D, operations administration, overseas business		
Specialist training by function	Safety, environment, information technology literacy		
Divisional training	Self-improvement support	e-Learning, assistance for earning qualifications, TOEIC	
	On-the-job training	Basic training, skills transfer, quality control, business improvements	
	Off-the-job training	Sponsored by division (including technology, safety, quality, cost, office equipment, sales)	
Overseas study and external deployment	Off-site studies in Japan and overseas; external deployment		
External activities	Academic organizations, research organizations, conferences with other industries		
HR development and deployment	Employee rotations, HR reporting, awards		

# Working to Realize a Comfortable Working Environment

Main Activities  
in Fiscal 2010

Fiscal 2010  
Assessment  
and Responses

Activities in  
Fiscal 2011

- Continuing and advancing measures to strengthen coordination with specialist contractors (with procurement sections playing a central role) and communicating the future of the construction industry in a way that is appealing to younger workers
- Joint company briefings were held with specialist contractors in order to secure specialized skilled workers, and calendars to improve the image of the construction industry were prepared and distributed jointly with specialist contractors. The results were well-received.
- Advancing the creation of even better working environments in procurement sections and continuing with activities in cooperation with specialist contractors to make construction work more appealing to young people

## Joint Efforts with Subcontractors

A Monozukuri Committee was established within the organization to promote cooperation with specialist contractors and the exchange of views among site forepersons and managers. Considerations of related matters included how to improve site productivity and how to portray the construction industry in a way that appeals to younger people.

Continual efforts repeated in fiscal 2010 included joint company briefings and the preparation of a Monozukuri calendar. In addition, together with the Monozukuri Committee, we reviewed and discussed systems for securing outstanding skilled workers and issues related to the shortage of skilled workers.

These activities focused on the following specific issues:

- Nationwide deployment of a compensation system that forepersons can use to develop outstanding construction technicians
- Study on how to allocate time for morning group meetings and individual meetings in order to secure more time for actual construction work



A Monozukuri Committee meeting



The Monozukuri calendar



A joint company briefing

## Toward the Realization of Comfortable Workplaces



Winners of the Comfortable Workplace Award

The ranks of younger skilled workers have declined dramatically in recent years.

We are actively striving to develop workplaces where young people would want to work when they grow up. In fiscal 2010, our efforts were recognized by the Comfortable Workplace Award from the Labor/Productivity Systems Committee of the Japan Federation of Construction Contractors.

# Health and Safety Efforts

Main Activities in Fiscal 2010

Fiscal 2010 Assessment and Responses

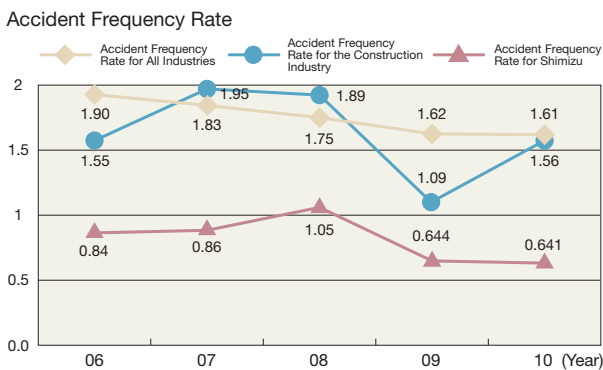
Activities in Fiscal 2011

- **Performance: Accident frequency 0.64 (target: 0.70)**
- **Implementing activities to prevent accidents and achieve target values, focusing on three things: implementation of redundant safety measures in areas associated with a risk of falls; implementation of measures to prevent accidents involving construction vehicles, cranes, etc.; and thorough adherence to rules on the use of elevated and mobile work platforms**
- **In fiscal 2010, we achieved our target for accident frequency. In fiscal 2011, we will continue to carry out steady accident-prevention activities to improve safety performance.**
- **Target: Accident frequency 0.65**
- **Steady implementation of activities to prevent accidents, according to priority measures formulated based on the results of accident analysis**
- **Establishing base indices to assess the implementation status of priority measures; periodic follow-ups and improvement in these areas**

## Fiscal 2010 Performance

### ● Health and safety goals and results

Our Accident Frequency Rate has improved since fiscal 2009, declining from 0.644 to 0.641. However this year (2010) has surpassed our target value of 0.70.

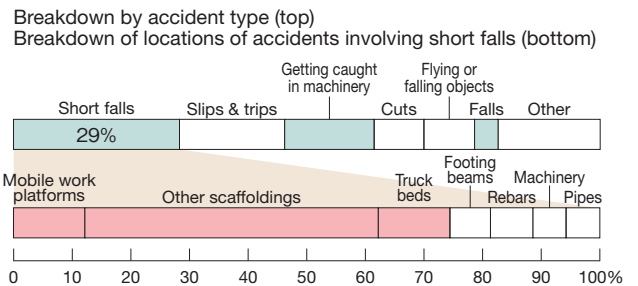


• Accident Frequency Rate: Deaths and injuries per million cumulative person-hours (represents the frequency of accidents)

### ● Accident analysis

A breakdown of accidents by type shows that while the numbers of accidents involving falls or employees getting caught in machinery decreased, the percentage of total accidents corresponding to short falls rose from 19% in the previous year to 29% in this year. A breakdown of accidents involving short falls by the locations where they occurred shows that while the number of short falls from

mobile work platforms fell from eight to two (such incidents being the target of high-priority safety efforts last year), there were numerous short falls of less than two meters in height from similar locations such as truck beds and scaffoldings.



### ● President Miyamoto takes part in a safety patrol

During National Safety Week in July, President Miyamoto took part in a safety patrol at a construction site. After joining the morning group meeting and informing employees that "Preventing accidents means following the rules and protecting each other," he took part in a site safety patrol.



During the patrol

## Fiscal 2011 Initiatives: Specific Examples

We have identified the following three measures as priority safety efforts for fiscal 2011. We plan to establish standardized criteria and indices to assess their implementation, perform periodic follow-ups, and institute continuing improvements.

**1. Redundant safety measures at sites associated with hazards of falls**  
While the number of accidents from falling has decreased from ten in 2009 to two in 2010, preventing accidents from falls is a key point of safety measures, and redundant safety measures at sites associated with hazards of falls will be continued in fiscal 2011.

**2. Preventing accidents on construction vehicles, cranes, and lifts**  
Accidents involving construction vehicles, cranes, and lifts can lead directly to serious accidents. We have established a system of safety measures to be implemented before work begins and have taken steps to ensure these measures are always implemented.

### 3. Preventing short falls in work at heights less than two meters

Companywide deployment in fiscal 2010 of measures to prevent falls from mobile work platforms have reduced the number of such accidents from eight in 2009 to two in 2010. Due to the large number of falls (16) from locations of less than two meters in height, we will expand the scope of these measures in fiscal 2011, deploying new high-priority safety efforts to prevent such accidents.

### ● Methods for evaluating priority measures

We have set graded criteria and indices (scores)\* for work in priority areas and are currently evaluating their implementation through periodic graded assessments. The goal is to establish a virtuous circle through follow-up activities and improvements that are based on the results of such evaluations.

\* Example of criteria and indices (scores): Posting redundant safety measures results in a half point. Checking posted measures during site patrols results in a full point.

## Site Health and Safety Management: Initiatives at the Yabegawa Bridge Site (Project General Manager: Norikazu Moriya)

The Yabegawa Bridge is a three-span continuous PC cable-stayed bridge spanning the Yabe River, a river located in southern Fukuoka prefecture designated as an important water system and administered by the Japanese government. The bridge is 517 meters in length. Its central span, at 261 meters in length, is the longest bridge in Japan.

With the goal of building on schedule and without accidents a beautiful bridge for future generations, we came up with the following slogan: "Project Y stands for intelligence, ingenuity, enthusiasm, and sincerity." (The "Y" in "Project Y" means Yabegawa.) We also established action guidelines that specify the following: "Handling things with a clear purpose, clear heads, and a bold manner." Lastly, we identified the following three high-priority safety measures for the site:

① Addressing best practices for protection against openings as a pre-safety measure to prevent objects from falling.

This means always checking whether something might drop or cause a fall from a temporary opening.

② Working in fundamental ways to prevent accidents caused by human behavior. This involves following established procedures in a calm and precise manner without hurrying or cutting corners.

③ Preventing accidents related to heavy machinery by first checking the vicinity of the machinery and the state of hoists to ensure the absence of any irregularities.

### ● Responding to site-specific risks ("hardware")

Specific construction conditions at the site included the risks associated with continuous work at elevated heights. The main pylons, located near private homes adjacent to the site, reach heights of up to 85 meters. This makes any loose object generated by construction potentially harmful. Additionally, the surrounding waters are a base for the cultivation of seaweed, which is vulnerable to even a drop of mortar falling from the construction site.

We gave the highest priority to securing and retaining any loose objects that could be dropped or sent flying and to deploying measures to eliminate any openings through which such items might fall. We accomplished this through the following three measures:

① Fitting all scaffoldings with handrails, nets, and baseboards

② Covering the corners of scaffoldings (where openings are likely to appear) with rubber sheets and similar materials to keep even small items from falling

③ Installing safety nets beneath the main pylons as a redundant safety measure to catch any items that fall from the main pylons

We also accounted for the environment, covering the entire surface of all work platforms with rubber sheets and installing pits to collect all site runoff, including mortar and rainwater. This runoff was then discharged after being pumped through with water-processing equipment, thereby ensuring no untreated mortar or rainwater flowed into the river under the construction site.



A main pylon under construction

### ● Activities to raise awareness of health and safety ("software")

Apart from the equipment-related measures, raising awareness for workers is key. By clarifying and reiterating basic site policies from the start and through continuous training and oversight, we established a culture in which workers came up with their own ideas, including the establishment of cleanup procedures after each task. During national safety week and national occupational health week, we solicited safety slogans and mottos from employees and other site workers, posting the outstanding entries in large characters on banners and signs on site. We also took various measures to improve on-site camaraderie and communication, including a barbeque party and group photographs during the construction process, which were then used to create a calendar distributed as a memento to workers.



The slogans on the banners were the best of the entries submitted by approximately 70 entrants during Safety Week.

These efforts resulted in a total of 333,568 accident-free working hours and a commendation from the Minister of Health, Labour and Welfare. The culture established at the site emphasized the value of personal relations and called for constant assessments of what assistance might make others work easier if a task had to be performed ourselves. In turn, this made it easier to enjoy the process of building the bridge. We will continue emphasizing the development of a successful workplace culture at other construction sites, with the goal of passing on, improving, and further refining this essential concept.

## Interacting with Society

Main Activities  
in Fiscal 2010

Fiscal 2010  
Assessment  
and Responses

Activities in  
Fiscal 2011

- Considering that Shimizu's construction business prioritizes coexistence with communities in Japan and internationally, the Tokyo head office, branches, and offices implement activities at each level, mainly based on interaction with the communities at the project sites
- We performed numerous communication activities with the communities at every level, including the Tokyo head office, branches, and project sites.
- To enhance future efforts, we developed a system to record activities for communication conducted within various communities.
- Head office: Implementing wide-ranging activities to achieve harmony with society, in addition to supporting activities at branches and project sites. Clearly defining concepts related to communication with society and improving related systems.
- Branches, offices, and project sites: Enhancing activities through a proactive approach to community

### Major Communication Activities

#### ● Holding tours and a calligraphy contest for local elementary schools

At the site of the Meguro Tunnel under construction in the town of Erimo, Horoizumi-gun, Hokkaido, as part of efforts to interact with the local community, we held site tours for some 240 local elementary school students over a four-day period timed to coincide with the opening of the tunnel in April 2010.

In addition to these tours, we decided to incorporate calligraphy by local elementary school students on nameplates installed at tunnel entrances. We held a calligraphy contest in cooperation with the town board of education. A nameplate was built and installed using outstanding works from the contest.



The nameplate after its unveiling, together with the elementary school students who wrote winning entries

#### ● Tours and internships for local university students

Site tours for local university students are being held at the construction site of the Pahang Selangor Raw Water Tunnel in Malaysia, projected to be the world's sixth-longest tunnel when completed. These tours are intended to develop the next generation of site engineers by communicating to them the excitement and creativity involved in this profession. The workplace also accepts student interns. Approximately 200 students have taken part in a total of four site tours. Three students have studied as trainees-interns.



A commemorative photo taken during an on-site tour of the tunnel mouth by Universiti Teknologi MARA

#### ● A seminar for women on the construction industry

In December 2010, we held a seminar for female university students at the Institute of Technology to help them understand the nature of the work in the construction industry and to increase their interest in construction careers.

Responding to an announcement on the Shimizu website, around 60 students took part in the seminar. The seminar featured a site tour, followed by descriptions of the construction industry and efforts to create workplaces where women can strive and succeed in a supportive environment. This was followed by a roundtable attended by female Shimizu employees that featured a lively exchange of opinions.



A roundtable discussion with female employees generates a lively exchange of views.

#### ● Holding an Eco Products Class at Eco-Products 2010

As in 2009, Shimizu held a hands-on Eco Products Class for elementary school students as part of the Junior Green School at Eco-Products 2010, held in December 2010 at Tokyo Big Sight. Over a three-day period, based on the theme of Biotopes and Building Greenification, some 170 elementary school students learned about the importance of creating a verdant, natural environment capable of providing habitats for living creatures.



Elementary school students raising their hands enthusiastically in the Eco Products Class

# Engaging in Social Contribution Activities

Main Activities  
in Fiscal 2010

Fiscal 2010  
Assessment  
and Responses

Activities in  
Fiscal 2011

- Implementing social contribution activities and creating an atmosphere that encourages participation in such activities within the community, with a focus on the areas of environmental conservation, education of the young, and support for social contribution activities among employees and executives
- Social contribution activities have become firmly entrenched. In fiscal 2010, 120 activities were organized on the Volunteer Web community intranet site.
- Enhancing continued social contribution activities that address local community issues in order to create livable communities

## Major Social Contribution Activities

### ● Thai Shimizu's Eco and CSR activities

Since 2007, the Thai Shimizu Corporation has pursued various Eco and CSR activities. Annual activities include beach cleanup activities and visits to local elementary schools to raise student awareness of the environment. The school visits were carried out five times over the past four years, with a total of 463 students taking part. The number of participants in the beach cleanup activities increased each time they were held, and now stands at about 100, including employees, their family members, and participants from business partners.



Teaching students about the environment at an elementary school in Ayutthaya (December 14, 2010)



Beach cleanup at Pattaya Beach (August 21, 2010)

### ● Matsusaka Isedera Nature Ai-Land activities

Since November 2008, a group of volunteers who call themselves the "Ai Club" from the Mie Sales Office of the Nagoya Branch has leased five hectares of wooded land from the Isedera Residents' Association. Here, in six annual sessions, each involving some 40 to 50 people, Shimizu employees and their families, together with members of the local residents' association, volunteer to perform forest management activities, including thinning and maintaining walkways.

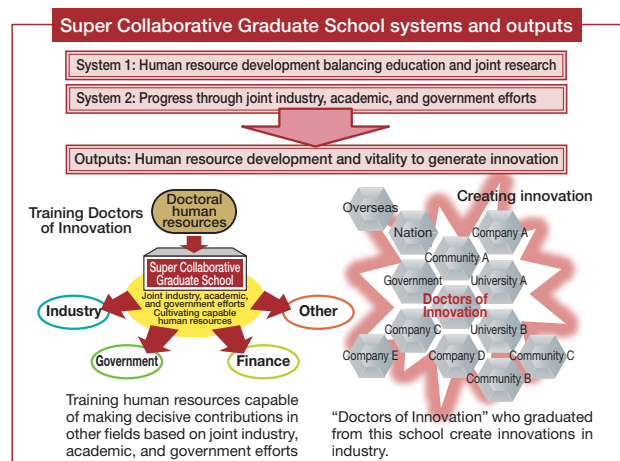
In October 2010, a forest preservation agreement concluded between Mie Prefecture, the city of Matsusaka, the Isedera Residents' Association, and Shimizu resulted in the designation of the site as a Mie Prefecture corporate forestry project.



At the signing ceremony: from left, Chairman Koizumi of the Isedera Residents' Association, Deputy General Manager Iwata of the Nagoya Branch, Vice-Governor Yasuda of Mie Prefecture, and Mayor Yamanaka of the city of Matsusaka

### ● Shimizu's vision named a "Dream Theme" of the Super Collaborative Graduate School

The Super Collaborative Graduate School, in which approximately 50 businesses and other organizations (including 14 universities from across Japan) take part, opened in April 2011, with the goal of producing "Doctors of Innovation" who will serve as capable human resources across a wide range of fields. The Super Collaborative Graduate School will identify research themes that contribute to global society and advance various research activities through industry, government, and academic collaboration. Shimizu's Green Float vision for the future has been named a Dream Theme and will serve as a core element of these activities (<http://www.shimz.co.jp/english/theme/dream/greenfloat.html>).



### ● Promoting business continuity plan (BCP) drills in partnership with customers

In the event of a disaster, Shimizu believes it must reach customers more rapidly, providing different types of support tailored to their individual BCPs for damaged facilities and communities, thus enabling them to maintain and sustain their business operations. Twice each year, we hold joint BCP drills that focus on coordinating efforts with our customers.



A BCP drill

# Stakeholder Reactions to the CSR Report 2011



**Masahiko Kawamura**  
Chief Senior Researcher, NLI Research Institute

## Management strategy and CSR

Last year, I said the Shimizu CSR framework had reached its completed form; however, this year, Shimizu upgraded the framework to include even loftier goals. As noted in the report's "Message from the President," its progress results from and reflects efforts to realize the new Smart Vision 2010, a long-term plan established in June 2010 to set goals for the year 2020.

Given the construction industry's difficult environment, this vision identifies the "smart solutions company" as the ideal form for companies to assume over the coming decade and outlines the development of Shimizu's businesses with respect to both hardware and software. Specifically, to ensure the pursuit of sustainability in both society and in the structures we build, Smart Vision 2010 identifies the building stock management business, global operations, and sustainability as the three major revenue-generating themes for the future, all while maintaining construction as a core business. It also clearly identifies CSR, technological capabilities, human resource management, and the makeup of the organization as fundamental policies for strengthening Shimizu's foundations.

This vision should be recognized as a clear expression of a CSR policy that seeks to ensure Shimizu's standing as a company founded on integrity and trusted by society. The Midterm Management Plan 2010 formulated alongside Smart Vision 2010 identifies clear measures for enhancing the plan-do-check-act (PDCA) cycle for CSR management, as well as three other key areas of environmental protection, youth education, and support for employees and management activities that contribute to society. Nevertheless, the new long-term vision and CSR structure—particularly the targets for 2020—are not entirely consistent. The two must be more tightly integrated at the fundamental management level. Above

all, ISO 26000 (an international standard on social responsibility) emphasizes corporate governance, which, as referred to below, includes decision-making processes and structures for fulfilling social responsibilities.

## Earthquake recovery and business continuity planning

Apart from its special features, this report features two pages on Shimizu's response to the Great East Japan Earthquake, providing specific and succinct accounts of the disaster-response activities implemented immediately after the Great East Japan Earthquake of March 11th, based on Shimizu's business continuity plan (BCP). The initial response based on earthquake-response guidelines and on-site support from head office staff proved effective, demonstrating the effectiveness of Shimizu's semiannual earthquake and BCP drills.

After steps have been taken to ensure the safety of company employees and their families and to assess damage to construction sites and company-owned facilities, key elements of the BCP for a construction company must include applying its own technologies to aid areas affected by the disaster and providing support to ensure rapid recovery of customer businesses (customer BCP). This leads to rapid recovery of buildings and plants that have already been delivered, strengthens customer trust, and helps restore the functioning of global supply chains. While the report explicitly notes that the recent disaster made the company more aware of the importance of everyday readiness, I would like to see even more progress made on Shimizu's BCP.

## Global warming and the Ecological Mission

The electric power shortages resulting from the nuclear power plant problems caused by the Great East Japan Earthquake and the resulting tsunami have various repercussions for global warming. Promoting energy conservation in office buildings, plants, homes, and other structures remains both a pressing issue and one that must be addressed over the medium to long term. The latest events lend new significance to Shimizu's Ecological Mission, which calls for reducing carbon-dioxide emissions by 30% relative to fiscal 1990 levels from all structures built by Shimizu, both past and present, by fiscal 2020. In addition to moving ahead with these plans, new and significant initiatives must be set, possibly including further reductions of 80% by 2050.

Based on Shimizu's CRE strategies for drawing on the unique characteristics of its industry—including strategies for using real estate to increase corporate value—Shimizu has already begun developing various solutions businesses, including building management and building stock management. In addition, Shimizu will extensively promote its carbon-half and carbon-zero buildings as a new part of its Ecological Mission. (These were thoroughly covered in the special features of last year's report. In this report, they might be emphasized in other ways, for example, by referring to them in the "Message from the President.") The future will likely see growing demand for such buildings due to increasing awareness of building environmental ratings.

## Self-assessment and ISO 26000

As I remarked previously, CSR reports should cover the plan-do-check-act cycle of CSR management, including the checking and acting elements, rather than just planning and doing. This report itself complies with this principle behind CSR reports. I would like to praise it for how it lists activities and assessments of these activities for all CSR initiatives and for the way in which it incorporates succinct, precise descriptions of the major initiatives for this fiscal year in individual domains, as well as assessments of and responses to these initiatives and initiatives for the coming year. I see special progress has been made with respect to the inclusion of quantitative data on social phenomena, something I pointed out last year. Nevertheless, I would like to see even more efforts made in this area.

The ISO 26000 standard, officially issued in November 2010, is a gauge of CSR the world over, incorporating a comprehensive range of social issues to strengthen prospects for the sustainability of world society, including the environment. While the standard is grounded in human rights, the understanding of this issue that is expressed differs somewhat from the widespread understanding of the concept in Japan. The current climate demands a thorough understanding and practice of ISO 26000 in business and in CSR procurement activities in emerging markets and developing countries. These efforts will be essential to future growth overseas.

In conclusion, I wish to propose a matrix that contrasts CSR initiatives to the contents of ISO 26000. This would make it possible to grasp any divergences between Shimizu's achievements and global CSR standards and may lead to further progress.

# From the Director Responsible for CSR

We have progressively improved the organization and information disclosure in our CSR reports—this being the 17th such report—based on issues pointed out by stakeholders and their comments. To express more clearly the ideals targeted by our CSR activities, this year's report identifies medium-term targets for 2020 and features enhanced coverage of efforts to reach these targets. I believe we have clarified still further the position of our CSR activities by identifying them once again as the deployment of business activities from a long-term perspective, based on our relationship to society and aiming at realizing the long-term Smart Vision 2010 plan.

The growing diversity of CSR has made it difficult to introduce all related activities in this report. The topics covered in this issue have been selected based on the importance of illustrating how well the related activities meet the demands and expectations arising from societal changes. The overview addresses 17 items under CSR initiative activities and assessments. In independent reviews of the report, we received comments concerning

ISO 26000. We believe Shimizu's approach to strive to resolve the various social issues caused by globalization by stressing common values with society—is closely linked to the perspectives of the ISO and other standards. Our response to the Great East Japan Earthquake of March 11th was of a scale appropriate to a major social issue. Based on the recent earthquake and the resulting damage, we must now identify to what degree such damage can be minimized and make this a key to our readiness for future earthquakes. Society must resolve this problem. We believe we must give back to society and to our communities, and we see this earthquake as a major turning point and a call not just to improve earthquake resistance through the structures we build and through redoubled safety measures including those concerning non-structural elements, but to devise altogether new measures. These new measures include community BCPs based on both "hardware" and "software" elements. What society expects from us in the way of solutions can now be divided clearly into the



**Hiroshi Tojo**  
Senior Managing  
Officer

periods before the earthquake and after the earthquake.

We're grateful for how we've been able to deepen communications from year to year with a broad range of stakeholders through the information disclosed in this report. We consider this a truly meaningful achievement. Once again this year, we intend to initiate dialogue and discussion with a wide range of stakeholders and to apply this dialogue and discussion to strengthen our activities and develop corporate initiatives marked by the utmost transparency. In this way, we hope to draw an even wider audience for this report.

## Dialogue with Stakeholders

Held Friday, November 26, 2010, in a meeting room at Shimizu

A dialogue was held on the following themes concerning the 16th Shimizu CSR Report, based on assessments and analyses by students in a seminar at the Faculty of Environmental Science, Musashino University.

1. Report on assessments and analyses of the CSR Report from a recruitment perspective
2. Questions, answers, and discussions on the following topics, based on assessments and analyses:
  - Shimizu's approaches (responsibility to society, ethics)
  - Workplace environment (employee comfort in the workplace)
  - The report itself (suitability of the content)

### Attendees:

Majors in Environmental Studies, Department of Environmental Science, Faculty of Environmental Science, Musashino University:  
Kosuke Ono           Minori Kubokawa  
Yurie Unai            Yuri Miyata  
Kazuaki Iwamoto, Global Environment Manager, Safety Administration & Environment Division, and others from Shimizu Corp.



Eco Report Way 21, covering assessments and analyses by Musashino University



Discussion with stakeholders

## Editor's Afterword

The cover of this year's report is intended to express a sense of forward movement. The people are a Shimizu employee and his son. The special features addressed in the report are organized around the following sub-themes: vitality and buildings; community and revitalization; birth and family; and cooperation, young people, and monozukuri. In turn, all these topics fall under "Connecting," which is our main theme. These topics encompass our hopes for the future. The information provided in "Activities" discusses communications with our stakeholders—a topic addressed in piecemeal fashion in the previous report—in greater detail, as a separate topic. Material accompanied by the Web icon is available on the Shimizu website. Readers interested in the topics discussed in this report are encouraged to visit our website. Our goal is to continue enhancing CSR activities and this CSR Report through repeated internal study, incorporating the views expressed by our readers.



**Kazuaki Iwamoto**  
Global Environment Manager,  
Safety Administration & Environment Division

# Significant Milestones in the Development of Shimizu's CSR

Year	Milestones
1804	Foundation of Shimizu Corporation in Kanda, Edo (present-day Tokyo)
1887	Introduction of the concept of "Rongo to Soroban" as the core of our business ethics Presentation of Instructions
1896	Establishment of Operational Regulations and General Rules
1904	Presentation of Instructions on the Handling of Business
1916	Establishment of Operational Rules and Rules for Personnel
1938	Establishment of Rules for Employees (as part of Office Regulations)
1946	Revisions in Rules for Employees
1948	Revisions in Rules for Employees
1982	Establishment of Management Principles
1991	Revisions in Management Principles Establishment of Global Environment Affairs Office Establishment of Shimizu Global Environmental Charter
1998	Establishment of Corporate Code of Conduct
1999	Introduction of the Executive Officer System
2004	Revisions in Corporate Code of Conduct
2006	Formulation of "Basic Policy on Developing an Internal Control System"

Year	Milestones
2007	Establishment of the Corporate Social Responsibility Promotion Office Establishment of the Internal Control Promotion Group Development of measures to prevent recurring violations of the Anti-Trust Law Commencement of companywide patrols to ensure thorough implementation of measures to prevent recurring violations of the Anti-Trust Law; commencement of audits by the Legal Department Establishment of an external reporting system for violations of the Anti-Trust Law Commencement of company-wide e-learning for compliance training Commencement of internet delivery of "Legal Affairs News" Formulation of a Basic Procurement Policy for subcontractors and suppliers Introduction of volunteer leave system
2008	Establishment of Risk Management Rules Establishment of the Risk Management Committee and a department responsible for risk management (Corporate Management Department) Establishment of the Shimizu Open Academy
2009	Establishment of Shimizu Biodiversity Guidelines Opening of Volunteer Web
2010	Establishment of CSR business strategies as part of our Midterm Management Plan Establishment of the Shimizu Biodiversity Action Plan

## Fiscal 2010 External Awards

Award name	Work recognized by prizes or awards
The Commendation System for Superior Energy-Conserving Machinery The Prize of Minister of Economy Trade and Industry	Development of a ductless air cleaning system separating heat treatment and cleaning functions (Task and Ambient Air Cleaning System)
Minister of the Environment Award: First contest for corporate activities on biodiversity	The Hokuto City Animal-Pathway Project
BELCA (Building and Equipment Long-life Cycle Association) Award	Kanagawa Prefectural Youth Center
Society of Heating, Air-Conditioning and Sanitary Engineers of Japan's Promotion Award: Technology Promotion Award	Shibazono Elementary School/Junior High School, City of Toyama
Engineering Commendation Award of ENAA 2011	The Survey Technic to Monitor Oil-Polluted Soil Using Sub-Surface CO <sub>2</sub>
Award for 3 R(Reduce, Reuse and Recycle)-Oriented, Sustainable Technology: Director-General's Prize, Industrial Science and Technology Policy and Environment Bureau, the Ministry of International Trade and Industry in Japan	Development and promotion of Construction Byproducts Management System
Association of Building Engineering and Equipment Environmental and Equipment Design Award Winner, Facility Equipment/Systems Design Section	Thermal Mass Storage System with Phase Change Material
Japan Society of Civil Engineers: Environmental Award	Eco-Friendly RC Segments Using Recycled PET Fiber
Japan Society of Dam Engineers: Technological Development Award	Development of "Biological Neutralization Technology" : Treatment Technology for Reusing Dewatering Sludge Cake for Reclamation Material Occuring from Dam Construction Works
Japan Construction Mechanization Association: Incentive Award	Development and commercialization of the Super FWD (SFWD) fully automated ground-analysis system
Tokyo Civil Engineering Works Execution/Managing Engineers Association: Outstanding Engineer's Award	Awarded to Hirotaka Kawasaki and Masaaki Nagasawa for the Super FWD (SFWD) ground-analysis system employing the multilayer cumulative load variation method
BCS Award	Alios Iwaki Performing Arts Center
Reduce, Reuse, Recycle Promotion Association, Chairman's Award	New construction of Tohoku Ricoh's Plant No. 7 and two other projects
Urban Infrastructure & Technology Promotion Council Presentation Merit Award	Field Observation and Numerical Modeling Approach to Improve Water Quality in Urban Small Rivers Estuary
United States Institute for Theatre Technology's Architecture Awards: Merit Award	Alios Iwaki Performing Arts Center
Sustainable Construction Awards: Judges' Incentive Award	Takubo Engineering Togane Technical Center
Institute of Electrical Installation Engineers of Japan Awards: Engineering Section Facilities Incentive Award	Kudan Government Office Building No. 3/Chiyoda Ward Offices
Society of Indoor Environment Japan, General Assembly and Research Presentations: Chairperson's Incentive Award	Development of an interior decontamination system using hydrogen peroxide
Japan Federation of Construction Contractors: Comfortable Workplace Award	Shuto Expressway Yoyogi ventilation facility
Osaka Building & Street Scene Award (Osaka Machinami Award)	Canal Terrace Horie
Kanagawa Architecture Competition: First Prize	DNP Hakone Training Center
Saitama Prefecture Environmental Home Awards (General Construction Section): Merit Award	East Building, Dokkyo University
Tokyo Construction Awards/Architecture Competition General Section, Type I: Merit Award	Nagaoka Branch, Niigata Nippo
Yamanashi Prefecture Construction Culture Incentive Award	Hakuhodo Health Insurance Society Kawaguchi Lake Recreation Facility

Note: We also received 20 other awards not listed above. For more information, see the Shimizu website ([http://www.shimz.co.jp/csr/environment/report/pdf/data\\_2011.pdf](http://www.shimz.co.jp/csr/environment/report/pdf/data_2011.pdf)).

### Shimizu listed in a leading index for socially responsible investing

There is significant interest today in evaluating and choosing investments based not just on traditional economic considerations, but on performance in the sphere of corporate social responsibility. Shimizu is listed in the Morningstar Socially Responsible Investment Index (MS-SRI)\* (dated April 8, 2011), a leading index of socially responsible firms.

\* The first stock index for socially responsible investment in Japan, composed of the 150 companies Morningstar Japan K.K. selected from among all listed companies in Japan for outstanding social performance



## Corporate Slogan

# Today's Work, Tomorrow's Heritage

In June 2008, Shimizu established and announced its new corporate slogan. At Shimizu, we believe in carrying out work as befits professionals. We want all our employees to take pride in their work as specialists would, always maintaining absolute integrity and a personal sense of responsibility. Our corporate slogan constitutes a pledge to build on our history as we create an exciting new future. We hope that all the activities and initiatives undertaken by each of our personnel, across our full range of company activities, will help fulfill this pledge. Since announcing this slogan, we have taken energetic steps to communicate it to society via the media, earning the support of large numbers of people. We are resolved to honor our commitment to all our stakeholders while advancing the concept of "Today's Work, Tomorrow's Heritage."



Shimizu's website landing page

## About the Cover

Based on this report's theme of "Connecting," our cover expresses the idea of bringing people together and inspiring them to connect their dreams and hopes with those of future generations. The models on this year's cover are a Shimizu employee and his son.

### A delightful memory

I was delighted to learn we'd been selected to appear on the cover. The picture will remain a valuable memory for my son and myself.

The photo shoot was stress-free and fun for both of us, thanks to the invigorating spring atmosphere at the park and the warmth and support of the photographic staff. I'm grateful for that.

### Takuya Kumazawa

Project Dept. I, Investment and Development Div.



Kumazawa and son Soma, both all smiles on the day of the photo shoot.

