FY2025 Shimizu Corporation Sustainability Management Briefing

October 27, 2025

FY2025 Sustainability Management Briefing

Agenda	Speaker	
Opening Remarks	Senior Managing Officer and Representative Director, In charge of Sustainability	Yoshiki Higashi
Presentation I Development of Environmentally Friendly Concrete for Realizing Decarbonized Society SUSMICS®-C / DAC Coat®	Managing Officer Director of the Technology Research Institute	Shuji Kakegawa
Presentation 2 Shimizu Solutions for Building Resilient Societies	Managing Officer Chief of Design Division, Construction Headquarters	Hiroyuki Fujimoto
Presentation 3 Initiatives for Sustainable Supply Chains	Managing Officer Construction Headquarters Procurement Department	Tomoaki Harada
Presentation 4 Cultivating Diverse Talent to take on Challenge and Co- Create	Executive Officers NOVARE Vice Executive Conductor Human Resources Strategy Department Head	Kazumi Sato
Q&A		

Presentation I

Development of Environmentally Friendly Concrete for Realizing Decarbonized Society SUSMICS®-C / DAC Coat®

Shuji Kakegawa,

Managing Officer, Director of the Technology Research Institute

Sustainability Management Policy



The Group's Environmental Vision "SHIMZ Beyond Zero 2050"

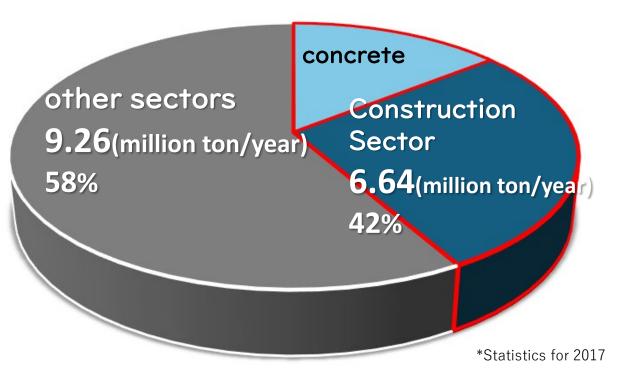
We are committing ourselves to must achieve net zero emissions, a final waste zero, and zero negative impact on the environment in 2050

Mid-Term Business Plan <2024-2026>
Decarbonization-related KPIs (2026 Targets)

Reduction rate of CO2 emissions in the Construction Business (compared with FY2023)

≥ I 2%

The Situation Surrounding Concrete Japan's Total Material Input

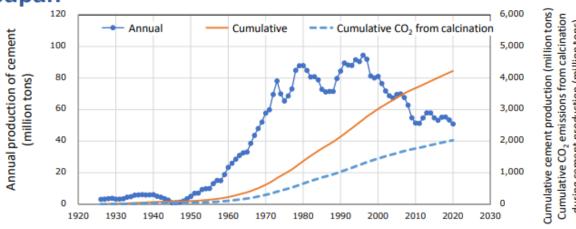


The construction sector accounts for 42%

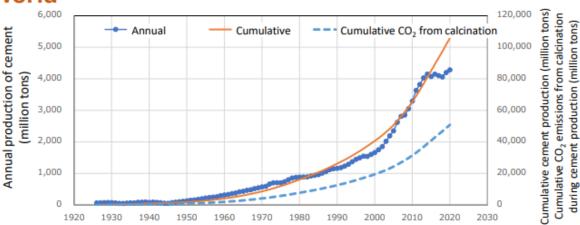
 \rightarrow Of which concrete accounts for 34%

From Moonshot Project materials (https://moonshot-c4s.jp/en/)

Cement Production Volume and CO² Emissions Japan







World: Over 50 billion tons

Japan: Over 2 billion tons

of CO2 are emitted

Classification of Environmentally-Friendly Concrete

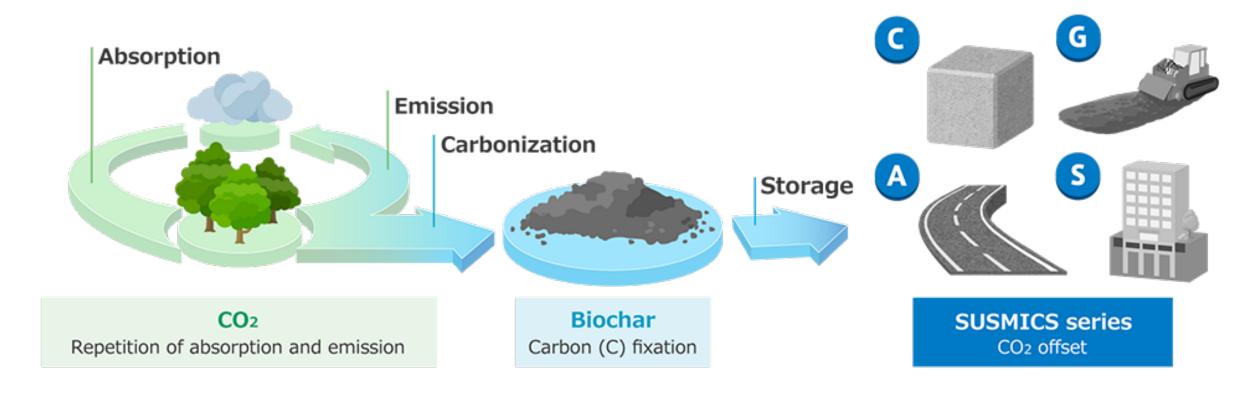






Concrete (as a material) makes a significant contribution to decarbonization.

Carbon Storage by Biochar



- By carbonizing biomass, CO_2 absorbed from the atmosphere during the course of tree growth is fixed as long-term stable carbon in biochar.
- By incorporating biochar into concrete, CO_2 absorbed by trees is fixed within the concrete.

Features of SUSMICS-C

Highly Versatile

No special equipment required; production possible at ready-mix plants nationwide Workability and quality (strength, durability, etc.) **equivalent to general concrete**

Enables Efficient CDR (carbon dioxide removal)

 CO_2 fixation capacity per kg is over 8 times that of calcium carbonate Biochar (CO_2 /C): 3.6 kg- CO_2 /kg Calcium Carbonate (CO_2 /Ca CO_3): 0.44 kg- CO_2 /kg

Can Be Used In Combination with Low-Carbon Cement

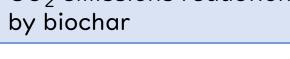
Can be combined with low-carbon cements such as Type B and Type C blast furnace cement enables **carbon neutrality and carbon-negative** outcomes



SUSMICS-C: Field Applications and Third-Party Verification

Field Applications
• •

	Civil Engineering	Building Construction
Emissions Reduction Rate	99%	111%
Construction Volume	$34.5 \mathrm{m}^3$	5 I Om ³
CO ₂ emissions reduction	Approx. 4.7 t-CO ₂	Approx. 62.8 t-CO ₂



Third-Party Verification

Carbon negative verification by Socotec Certification Japan Co., Ltd.





https://www.nies.go.jp/whatsnew/2025/ua88o2000009njje-att/ua88o2000009nk3e.pdf

Expansion of the SUSMICS Series





Expanding applications of biochar in various construction and civil engineering materials





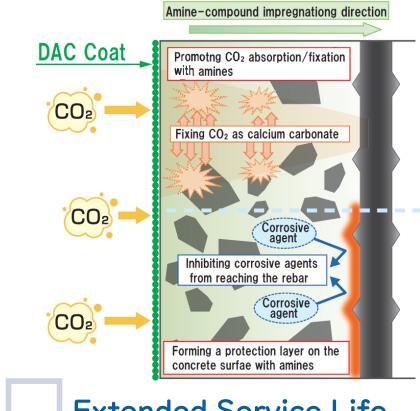
DAC Coat Mechanism: The Development of the World's First Technology

(Developed in Collaboration with Hokkaido University)





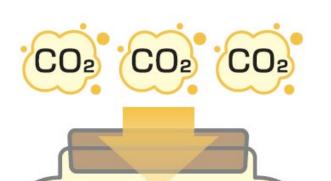
Amine compounds with high CO₂ absorption capacity are impregnated into concrete The concrete structure absorbs & fixes atmospheric CO₂



Extended Service Life

Anti-corrosion effect of amines improve the rebar's corrosion resistance Enhancing the durability of RC structures

The Effects and Benefits



Artificial Japanese cedar forests 10,000m²

*The CO₂ fixation amount in artifical

Japanese cedar forests is according to the Forestry Agency

CO₂ fixation amount: approx. 9 tons/year



10 piers applied with DAC Coat

(equivalent to 3,000m³ concrete)

*Calculated by assuming 30kg/m³ of concrete structure's CO₂ fixation amount *Assuming maintenance (re-application of DAC Coat) every 10 years

CO₂ fixation amount: approx. 9 tons/year



1.5 times or more increase (indoor test results)

Inhibiting the Rebar's
Corrosion Rate
Corrosion rate

Approx. 1/50th

Improving the Rebar's Corrosion Resistance

Corrosion resistance

Approx. 1.5 times

DAC Coat Effect Verification

Assessment of CO₂ Absorption Effectiveness in the Field

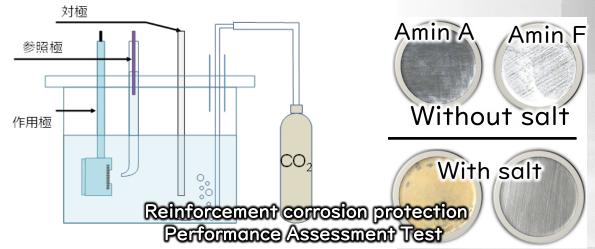
Evaluating 30 types of amine compounds in the field Approximately 2.5 to 4 times greater CO_2 fixation promotion effect confirmed compared to untreated surfaces

Assessment of Reinforcing Steel Corrosion Protection Performance

Simulating the carbonation environment (pH)inside concrete by bubbling CO₂ gas into Ca(OH)₂ solution **Corrosion protection effects** confirmed for many amines **in carbonation environments**

Amines exhibiting high corrosion resistance against salts have also been identified





Presentation 2

Shimizu Solutions for Building Resilient Societies

Managing Executive Officer Head of Design Division Hiroyuki Fujimoto

Architecture Engineering Construction TECH DRIVEN

Creating a single building
Connecting the technologies gathered there
Connecting them to manufacturing and new
business domains
and make it the driving force behind
Shimizu's growth



BLUE FRONT SHIBAURA

Design: Maki and Associates; Shimz DESIGN;
Ove Arup & Partners Japan Ltd.; Nikken Sekkei Ltd.

Floor Space: 267,424.57 m Phases I & II 550,596.26 m 3below ground, 43 above ground, 2-story penthouse Height: 228.88 m

An integrated development project featuring offices, hotels, commercial facilities, and residences that will transform the Tokyo Bay Area landscape

[New Technologies Developed and Implemented(Design)]
•BILMUS

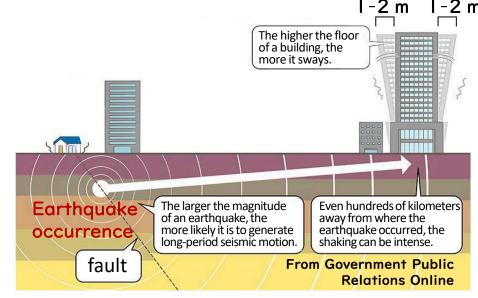
- ·Wind Lock Mechanism
- ·Fail-Safe Mechanism (e-Cushion)
- ·Advanced AMD Control Law
- ·High-Strength Steel 780 CFT Truss
- Thin-walled Large-section CFT Columns
- ·Refrigerant reheat type dehumidifying air conditioner
- ·Environmental Sensor Integration Blind Control System
- ·Pressurized smoke control system, etc.

Essential Countermeasures for Long-Period Seismic Motion in Skyscrapers

- •Even hundreds of kilometers from the epicenter, long-period ground motion causes skyscrapers to sway slowly and significantly for extended periods.
- ·Amplitudes reached one to two meters on upper floors, so controlling this movement is a key challenge.

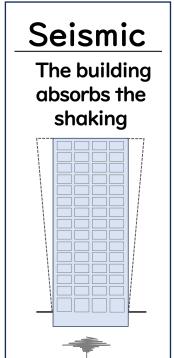


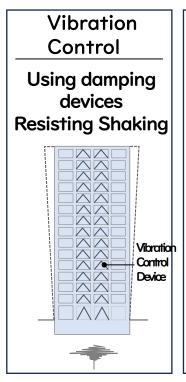
During the Great East Japan Earthquake, skyscrapers swayed significantly and slowly

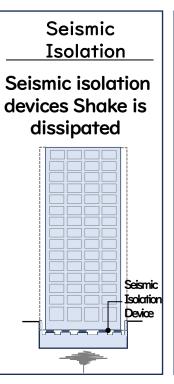


Characteristics of long-period seismic motion

Advances in Seismic Isolation and Vibration Control Technologies for Skyscrapers





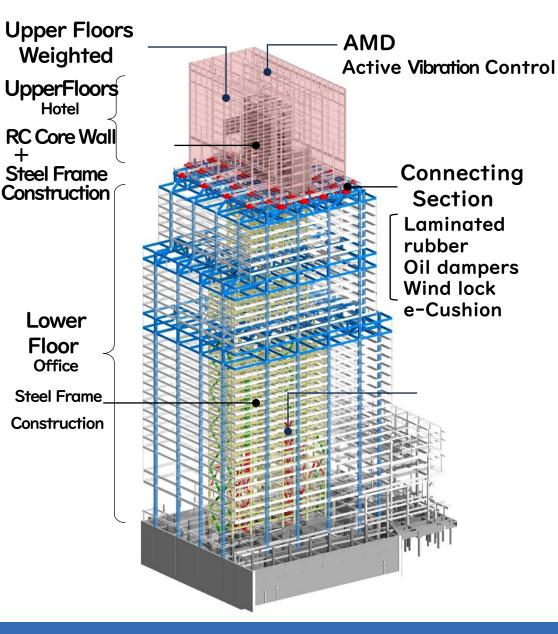






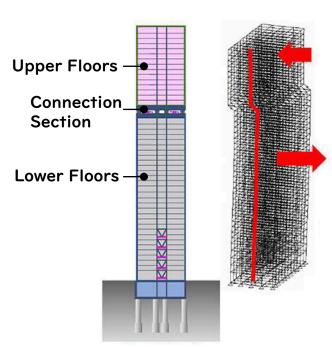
- · The development of tuned mass damping technology, which uses weights atop buildings to counteract sway, has been remarkable. (30-year history)
- · Although increasing the weight enhances its damping effect, it also increases the load on the building. → Achieving this balance is the challenge.

BILMUS®



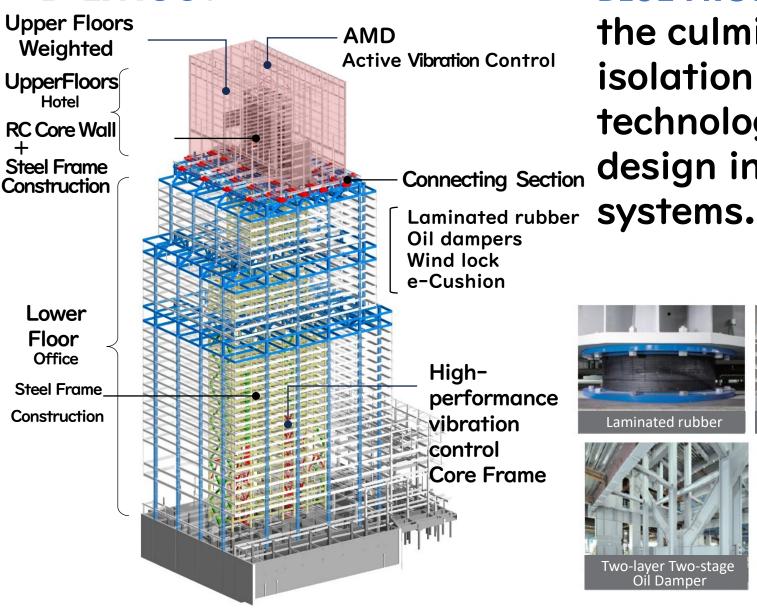
Technology that replaces part of the building with counterweights

- The 34,200-ton weight of the upper floors is used as a counterweight, canceling out the sway of the upper and lower floors.
- This technology reduces upper-floor sway by 50% and decreases the amount of steel used for lower floors by 30%.



 The upper floors function as counterweights, canceling out each other's shaking during earthquakes.

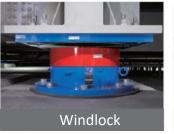
BILMUS®



BLUE FRONT SHIBAURA represents the culmination of Shimizu's seismic isolation and vibration control technologies, featuring an optimized design integrating various technical









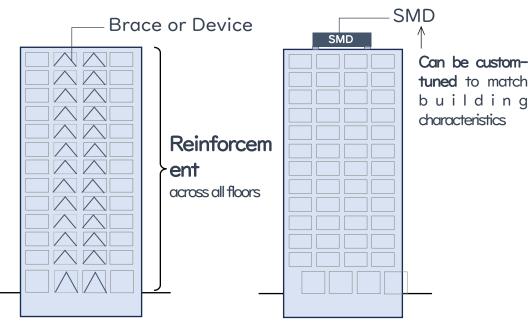




We will Scale Up our Building Lifecycle Business

Seismic retrofitting and vibration control

SMD Retrofit



- Seismic retrofitting of buildings constructed before the new seismic standards is an urgent task.
- Seismic retrofitting cannot be carried out due to tenant turnover during construction.

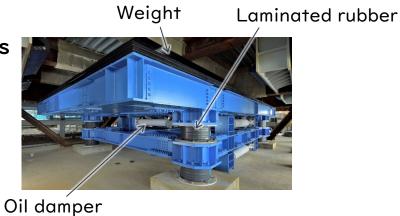
Shimizu Swing Mass Damper

- SMD reduces building sway by installing counterweights on the roof to suppress sway.
- SMD, which can be performed without residents having to move out, supports seismic renovations.

Construction cost **High** Construction cost **Low**Construction Period **Long** Construction Period **Short**Relocation **Required** Relocation **Not required**

Tenant turnover
Tenant vacancies

SMD Installation Examples



New "Resilience Management" Service

Normal: Consulting



- Assessment of redundancy (safety-related redundancy)
- Vulnerability assessment (susceptibility to damage)

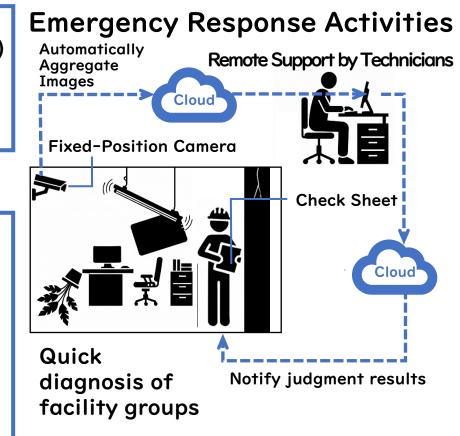
Preparation of damage scenario maps and checklists

After Disaster: Emergency Response and Recovery Support



- Recording observed seismic waves and acquiring damage images
- Remote support for emergency hazard assessments provided by technicians in unaffected areas

Enhance the effectiveness of disaster response actions after damage to facilitate early recovery



 Providing "business resilience management" to support appropriate investment plans for business continuity

Flood Countermeasures at Disaster Base Hospitals

Earthquakes: Occur suddenly Flooding: Can take preventive action before disaster strikes using weather and river water level information → Timeline is effective

Disaster base hospitals are tasked with responding to emergency requests even when affected by disasters

Medical Continuity Plan

Supporting Medical Continuity Plans (MCP) during disasters

- Timeline development and disaster drill support
- Providing a digital platform (MCP Support System) to aid decision-making

Example of a disaster base hospital timeline defining actions chronologically



Approximately 40% of disaster base hospitals nationwide Approximately 40% of disaster base hospitals nationwide are located in flood zones Hospitals within projected flood zones Hospitals outside flood-prone areas

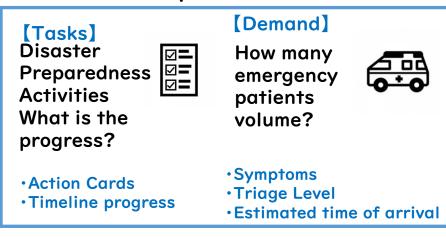
**Omitted for Okinawa Prefecture as no disaster base hospitals ex within projected flood zones

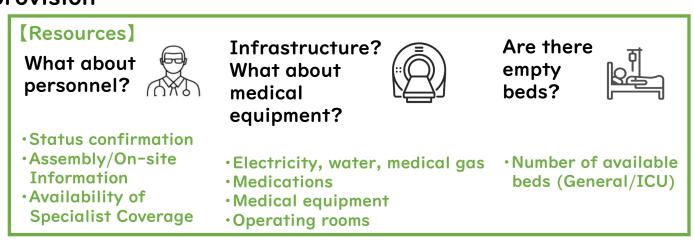
Digital Sharing Platform for Information in Hospitals: MCP Support System

Medical Continuity Plan

The Disaster Response Headquarters must make swift decisions on how to respond with limited resources such as personnel, infrastructure, and beds.

Information required for medical care provision





MCP Support System Dashboard Screen (Partial)



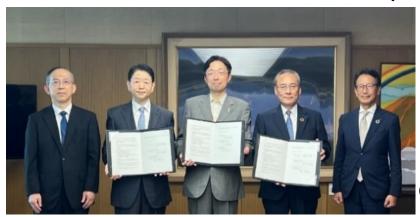
Activities for Communities to Consider Medical Continuity during Disasters

Promoting collaboration among medical institutions, local governments, fire departments, and others to enhance regional resilience

- Discussing swift and optimal decision-making by sharing real-time information among institutions
- Comprehensive Partnership Agreement on Disaster Medicine Signed with Kumamoto Prefecture and Kumamoto University Hospital



Hitoyoshi-Kuma Region Disaster Medical Collaboration Scene from the Discussion Meetina



2025 August 26 Signing Ceremony

 Participation in the Disaster Prevention Consortium "CORE" hosted by Tokio Marine & Nichido

Subcommittee Theme

"Establishing a Regional Medical Continuity System During Floods Using Timelines"

[Participating Companies]
Shimizu Corporation (Lead Company)
Tokio Marine & Nichido

NTT DATA Weathernews River Information Center Nissui Construction





Architecture Engineering Construction TECH DRIVEN

Technology hones us and expands the possibilities of construction

As a solution partner for BCP

Contributing to the transformation toward a highly profitable business structure in the construction industry

For detailed information on the technologies introduced today, please see here



BILMUS



MCP

Presentation 3

Initiatives for Sustainable Supply Chains

Tomoaki Harada,

Managing Officer,

Construction Headquarters Procurement Department

Agenda

- Overview of Initiatives for Securing and Developing Workforce for Subcontractors
- 2. Collaboration with Subcontractors: Partnership with "Kaneki-kai"
- 3. Construction Skilled Worker Training Facility "SHIMIZU TAKUMI TRAINING CENTER"
- 4. Initiatives for Success of Global Human Resources: Support for Accepting Technical Intern Trainees

1. Overview of Initiatives for Securing and Developing Workforce for Subcontractors [Objective]

- · In recent years, the construction industry has been facing a chronic shortage of skilled workers due to the aging workforce and lack of young workers.
- · Furthermore, with the trend towards larger construction projects in Japan and the impact of changes in economic conditions, there are significant fluctuations in labor demand depending on the region and time, making it difficult to secure a stable supply chain.
- · To address these issues, we are working to secure and develop the workforce for our subcontractors with the aim of maintaining and strengthening the supply chain.

[Collaboration with "Kaneki-kai"]

· We are advancing these initiatives in collaboration with "Kankikai," an organization composed of Shimizu's subcontractors.

- [Measures for Securing and Developing Personnel]

 · Utilization of the "SHIMIZU TAKUMI TRAINING CENTER," construction skills training facility
- Employment Support
- > Holding hands-on trade experience classes and site tours in collaboration with high schools
- > Participation of Shimizu Corporation's subcontractors in joint company information sessions for term-based Self-Defense Forces personnel
- > Holding construction seminars and site tours in collaboration with Hello Work
- > Operation of Shimizu's subcontractors' recruitment sites in collaboration with job advertising companies
- > Support for accepting technical intern trainees from Uzbekistan

2. Collaboration with our Subcontractors: Partnership with "Kaneki-kai"

[What is Kaneki-kai?]

- •A network of specialized construction companies working on Shimizu's projects comprising approximately 1,300 partner companies with outstanding skills and technology
- ·A core presence within our company's supply chain



[Purpose of Kaneki-kai]

·To promote welfare, improve construction technology, ensure quality, promote construction safety, and facilitate smooth operations, thereby contributing to friendship among members and the development of Shimizu's business and promoting co-existence and co-prosperity

Kaneki-kai and Shimizu have a strong partnership of mutual trust that has been likened to the "Pair of wheels for a car"

[Background]

- •In response to concerns over a shortage of skilled construction workers at construction sites, Shimizu established a training facility for construction technicians to build a supply chain to train and secure skilled workers for its partner companies.
- ·Jointly operated with Kaneki-kai companies, operations commenced in July 2020. Usage statistics for fiscal year 2024 reached 2,484 individuals, with cumulative usage since opening reaching approximately 10,000 individuals.







[Key Initiatives]

- Workforce Development
- > Conducting various training programs and workshops
- Workforce Recruitment
- > Promoting recruitment of young workers through facility tours and training/workshop

[Initiatives]

- ·Propose new training and workshops as needed in response to requests from partner companies, continuously improving and enriching training content
- Begin offering on-site training sessions at branch locations nationwide in response to requests from branches

■Training and Workshops

- ·New Employee Training
- ·Specialized Education Workshops
- ·First-Year Follow-Up Training
- ·Second-Year Follow-Up Training
- ·Field Management Training
- ·Supervisor Re-education (for renewal procedures)
- ·Communication Skills Improvement Training
- ·Multi-Skilled Worker Training
- ·CAD/BIM Training
- ·Uzbekistan Technical Intern Trainees Reception Training & Special Education Workshops
- ·Foreman Training for Foreign Workers
- Off-site delivery of the above training programs and courses

■ Site Visits and Collaboration with Other Organizations

- ·SHIMIZU TAKUMI TRAINING
 CENTER Tour
 Facility Tour
 Observation of Training and
 Workshop Sessions
- ·Industrial High School Trade Experience Class
- · Japan Structural Concrete Pouring Certification

■Internal Use

- Various training programs
- Productivity improvement support

Assist Tools
Robot Development
and Experimentation

XItems in red text

New initiatives introduced since the 2022

[New Employee Training]











[Various Practice Sessions & Workshops]







[Multi-Skilled Worker Training]







[Development and Verification of Assist Tools and Machinery]





4. Initiatives to Support Global Construction Workers: Technical Intern Trainee Acceptance Support

[Initiatives]

·In anticipation of Japan's declining population, Shimizu is working to support subcontractors in accepting technical interns as part of its efforts to promote the active participation of foreign workers in the construction industry going forward.

[Background]

- •Following a request for **consultation** regarding the acceptance of technical intern trainees from a Kaneki-kai member company, we decided to provide support.
- ·Since Shimizu employs personnel from Uzbekistan, we began by supporting the acceptance of trainees from Uzbekistan.
- ·Uzbekistan, as a country, was also proactive in sending personnel to Japan.

Acceptance of 1st and 2nd Cohorts

[Support Details]

- ·Skilled trainee interviews for Shimizu's subcontractors were conducted locally with support from Uzbekistani personnel employed by Shimizu.
- ·After arrival in Japan, technical intern trainees receive orientation and special training at THE SHIMIZU TAKUMI TRAINING CENTER. (cumulative total of approximately 130 trainees accepted).
- ·Shimizu mentors (Uzbek personnel) visit technical intern trainees to to provide support for their daily lives and mental well-being.

4. Initiatives to Promote Global Construction Workers: Technical Intern Training Program Support

[Uzbekistan Technical Intern Trainee Orientation Training]







[Special Training Course for Uzbekistan Technical Intern Trainees]





Presentation 4

Cultivating Diverse Talent to take on Challenge and Co-Create

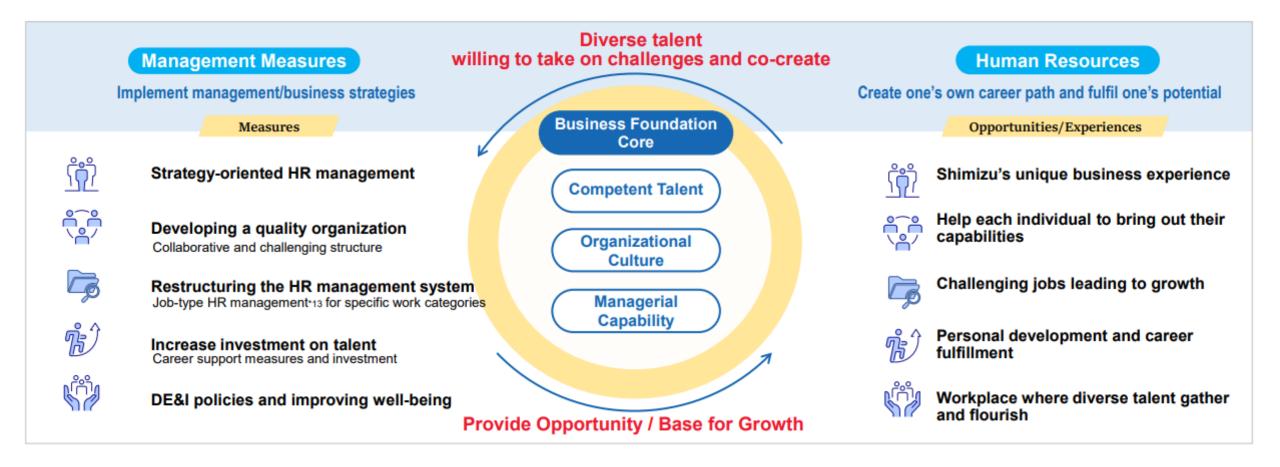
Kazumi Sato,

Executive Officer

Vice Executive Conductor, NOVARE,

Director, HR Strategy Dept., Corporate Planning Div.,

From the Mid-Term Management Plan <2024-2026>



By creating mechanisms that support growth, we cultivate diverse talent to take on challenge and co-create."



02 Nurturing Innovation

DX Talent Development

■Shimizu Digital Academy Opens

Aiming for phased digital talent development, we offer a systematic training program consisting of three steps

Digitally Literate Employees (All Employees)

Understand the significance of digital utilization to streamline the work process

Digitally Competent Employees (Over 2,000)

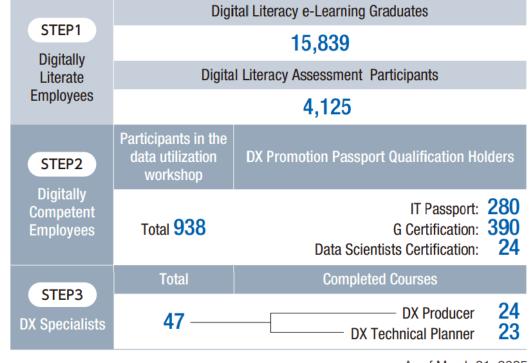
Utilize advanced IT tools to improve operations within the division

> DX Specialists (120 Trained and Assigned to All Divisions)

1) Lead business process reform throughout the Company

2) Provide new value to clients and society through existing businesses

3) Create and develop new businesses





As of March 31, 2025

A Human Resource Development Hub Pursuing "Quality" and "Safety"

■ NOVARE Academy

Quality and Safety Education



[Quality] We emphasize experiential training that lets participants see, touch, and try for themselves using full-scale mockups and the latest digital tech-nologies.

[Safety] We strengthen on-site safety awareness and leadership by combining hazard experience programs, leadership training, and VR-based disaster simulations. Cross-Departmental Training





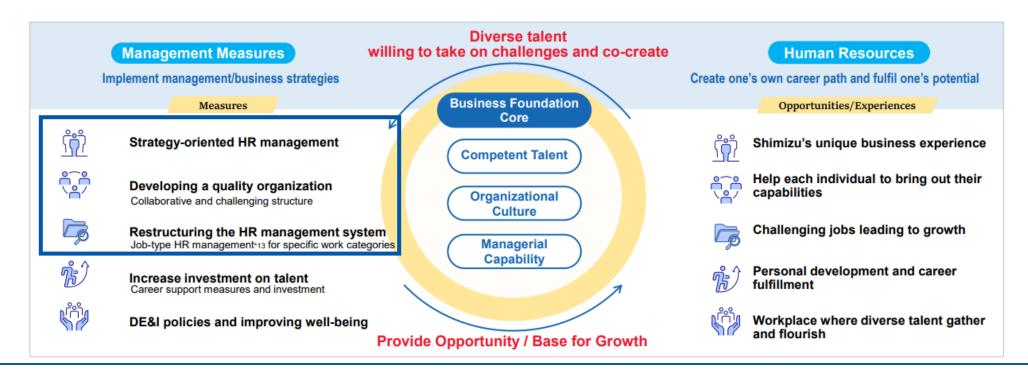
[Promotion of cross-departmental training] In the Digital Learning Zone (DLZ), we use BIM and XR technologies to conduct digital construction management and on-site simulations, promoting the transfer and sharing of on-site knowledge and expertise.

Implementing Strategy HR Management and Restructuring HR Management System

■ Developing Talent and Organizational Capabilities

To realize a talent portfolio aligned with business strategy,

- ·Reforming HR systems to promote diversity and support a comfortable workplace environment
- ·Introducing a talent management system and reorganization of the talent development framework and other initiatives to rebuild a comprehensive human resource management system.



Implementing Strategy HR Management and Restructuring the HR Management System

■ Developing a Quality Organization

·Dialogue and Surveys

Engagement item			Through FY2024	
Employee satisfaction scores	Job satisfaction	3.7		
	Health and well-being	3.6	- - Average of	
	Trust within the workplace	3.7		
Relationship metrics	Collaboration within the workplace	3.6	the six indicators 3.6	
	Co-creation across departments	3.6		
	Alignment with the vision and company policy	3.2		

Our goal is to achieve an average score of 4.0 or higher across all six indicators.

·How I-on-I Meetings Influence Job Satisfaction

		Employee satisfaction indicators			
Satisfaction with 1-on-1 meetings	Number of responses	Job satisfaction	Health and well-being	Trust within the workplace	
Very satisfied	1,217	4.43	4.49	4.54	
Satisfied	3,637	3.84	3.94	3.97	
Neutral	2,009	3.31	3.50	3.46	
Dissatisfied	366	3.01	3.23	3.03	
Very dissatisfied	132	2.54	2.85	2.21	
Not implemented	2,873	3.36	3.59	3.45	
Overall average	10,234	3.62	3.78	3.74	

- Visualizing Organizational Challenges Through Pulse Surveys and Engagement Studies
- Dialogue initiatives such as I-on-I meetings and workplace dialogue sessions
 - → Fostering trust and promoting individual/team growth



▲ Scene from a workplace dialogue session

Building a Platform for Global Expansion

■Global HR Managers Meeting

- Fourteen HR managers from various countries visited Japan to strengthen HR collaboration between headquarters and overseas locations.
- Discussed common HR challenges and conducted group work alongside headquarters HR managers



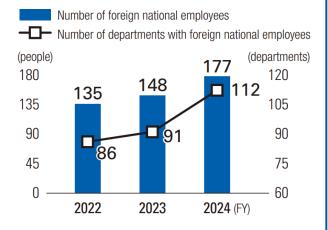
■The Contributions of Foreign Employees

 Shimizu Corporation employs 194 foreign nationals from 25 countries (as of April 2025).
 Not only is the number growing, but the number of departments employing them is steadily increasing, advancing the active participation of foreign nationals within the company.

 We provide training programs tailored to career stages, including roundtable discussions upon

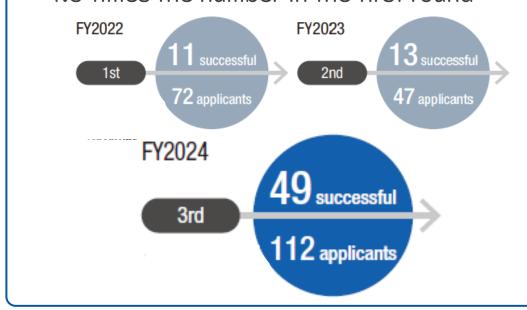
job offer acceptance, residential training sessions with direct supervisors, and follow-up training in the fourth year after joining the company.

Foreign national employees

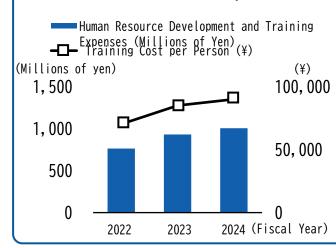


Expansion of the Job Challenge Program and Open-type Training

- ■Implementing the "Job Challenge System" to broadly recruit talent from within the company for specific projects or roles, supporting employees' proactive challenges
- The number of employees transferred using this system increased to 49, approximately 4.5 times the number in the first round



- ■Supporting employees' autonomous career development through expanded open recruitment training programs
- The external dispatch-type "Business Skills Training" introduced in FY2023 continues to expand its annual enrollment capacity
- Starting in fiscal year 2024, a new online "Video Learning Service" will be introduced to provide opportunities for acquiring knowledge and skills directly relevant to work



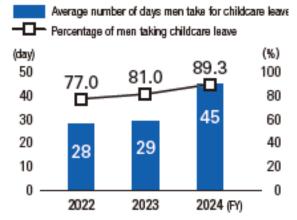
→ Expand investment in human resources and support autonomous skill development

DE&I (Diversity, Equity & Inclusion)

■Simultaneously working and raising children

 Childcare leave among male employees has seen steady progress, with both the uptake rate and the number of days taken continuing to rise.

Childcare leave



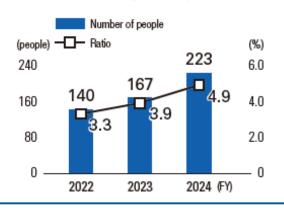


 Initiatives like the experiential workshop "Baby Understanding Seminar" for fathers encourage more active involvement in childcare

■Promoting the Advancement of Women

- The Shin Diversity Activities initiative saw top man-agement visit 14 divisions nationwide to promote the theme of The Appeal of Management Roles.
- In response to feedback from this initiative, a
 "Women's Leadership Training" program for
 management candidates was introduced. It
 incorporates external coaching and
 experiential learning to foster growth and a
 mindset of challenge.





DE&I (Diversity, Equity & Inclusion)

■Family Events

Held at headquarters, "Let's Go Again This Year!
 Family Day 2024" aims to deepen employees'
 families' understanding of their work and
 workplace environment, while also providing
 employees themselves an opportunity to
 reconnect with their families.



Business card exchange with top management (Family Day)



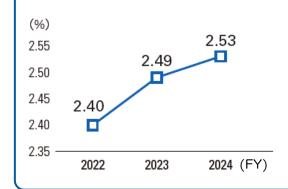
Tour of the former Shibusawa residence (NOVARE Family Tour)

• In 2024, we will also hold the "NOVARE Family Tour," featuring visits to the former Shibusawa Residence, Archives, and Hub within NOVARE.

■Advancement of Employees with Disabilities

- Held an explanatory session and dialogue meeting for employees with disabilities regarding the Mid-Term Management Plan (2024–2026)
- 57 participants from across Japan deepened their understanding of management strategy through discussions with the Corporate Planning Department and tours of cutting-edge facilities.

Percentage of employees with disabilities





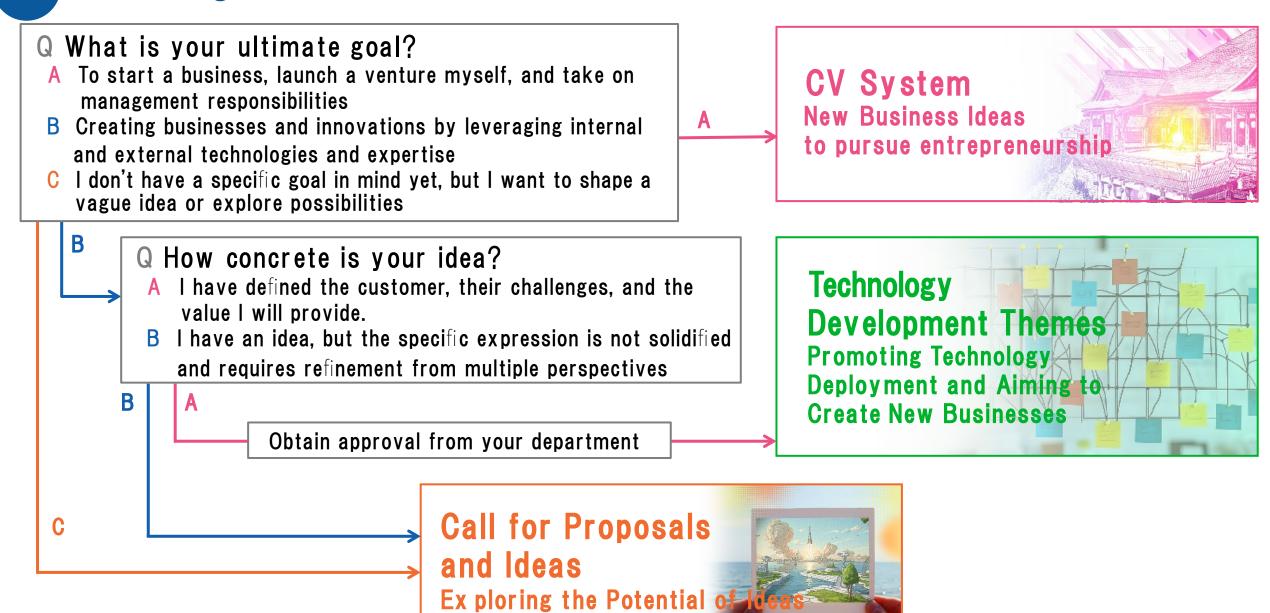
Mid-Term Business Plan <2024-2026> briefing and dialogue session



Technology Development Themes Promoting Technology Deployment and Gr **New Businesses** Technology deployment/ commercialization within the Shimizu Group Technology deployment/commercialization →NOVARE-led Project Support



Nurturing Innovation



From the Mid-Term Management Plan <2024-2026>



"By creating systems that support growth, we cultivate diverse talent who challenge themselves and collaborate creatively."