### sustainable japan

### Shiseido explores scent's power to deepen human ties

#### Osaka Expo

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Osaka's Expo 2025, themed "Designing Future Society for Our Lives," brings together over 150 countries and regions, along with companies and international organizations. While many participants are showcasing cutting-edge technologies and futuristic innovations, Shiseido has taken a refreshingly human approach: inviting visitors to explore the power of beauty, dialogue and empathy.

The company is sponsoring and providing support for "Dialogue Theater – Sign of Life," one of the signature pavilions at the expo. The pavilion is produced by acclaimed film director Naomi Kawase.

The signature pavilions comprise eight distinctive spaces located at the heart of the expo site, each curated by a different producer. These pavilions offer immersive experiences — blending physical and virtual elements — to encourage visitors to reflect on the meaning of life and reconsider its possibilities.

Kawase's pavilion is envisioned as a space for dialogue where visitors are invited to engage with evolving, open-ended questions. Addressing global divides — whether rooted in gender, inequality, ethnicity or values — the pavilion serves as a kind of laboratory for exploring how conversation can become a tool for understanding and connection.

Shiseido's participation in this dedicated thematic pavilion aligns naturally with its pursuit of beauty spanning more than 150 years — not merely as a way to enhance appearance, but as a force that connects people and invites them to face one another. The company has long focused on fostering human relationships through beauty, aiming to realize a sustainable society in which people can truly feel happiness through the power of beauty. This philosophy resonated deeply with Kawase's vision.

Architecture also plays a quiet but power-

ful role in the experience. The three pavilion buildings — the foyer, the Dialogue Theater Building and the Meeting House in the Forest — were created by relocating and repurposing two abandoned school buildings from Nara and Kyoto prefectures. The buildings, once filled with the voices of children, have been thoughtfully reconstructed to serve as spaces for reflection and emotional preparation.

Plants nurtured in the original schoolyards were also carefully transplanted, carrying with them the layered memories of Nara and Kyoto. Among them, a symbolic 100-year-old ginkgo tree from Fukuchiyama — once scheduled for removal — now stands tall at the heart of the pavilion. Having watched over generations of children, this tree continues its quiet presence as a guardian of all life, anchoring the space in both memory and renewal.

This atmosphere set the stage for Shiseido's 10-day experiential program "Shiseido Week," held within the Dialogue Theater from July 11 to 20. One of its highlights was a participatory experiment conducted in the Dialogue Theater Building that explored how fragrance can foster empathy. During the first four days of "Shiseido Week," randomly selected visitor was invited to engage in a screen-mediated dialogue with someone they were meeting for the first time, guided by daily-changing beauty-related themes. As they conversed, proprietary Shiseido technologies measured levels of emotional resonance. When mutual empathy was detected, a gentle scent was released into the space.

The initiative set out to explore whether scent can positively influence human connections in an era marked by loneliness and social fragmentation. By merging empirical research with sensory experience, Shiseido aims to prove whether scent can serve as a catalyst for improving social bonds.

This participatory installation formed part of Shiseido's long-standing sensory science research related to cosmetics, which spans over four decades. It builds on the company's



The Dialogue Theater Building was created using materials from wooden buildings of former schools in Nara and Kyoto Prefectures. SHISEIDO

expertise in decoding how human senses, particularly smell, affect memory, mood and interpersonal interactions. Within the theater, audiences did not simply observe — they became active participants in a living experiment, with their presence subtly shaping the atmosphere through unspoken chemistry.

According to Shuntaro Okazaki, Ph.D., a senior researcher at Shiseido Mirai Technology Institute, this dialogue-based experiment asked participants to complete a specialized psychological questionnaire designed for quantitative analysis, reflecting the project's emphasis on fundamental research. Among the measures used was a validated scale for assessing rapport — mutual trust and emotional connection

— to analyze whether genuine rapport was formed between pairs of participants during their interactions.

Meanwhile, in the adjacent Meeting House in the Forest, another interactive installation called "Beauty Dialogue Letter & Post" invited visitors to write letters sharing moments they experienced at the expo. Each letter included the scent of Shiseido's signature serum, Ultimune, posted to loved ones around the world. In a time dominated by instant messages, this tactile, aromatic gesture felt surprisingly intimate.

"To my surprise, many visitors were fully immersed in writing their letters," said Wataru Takekoshi, manager of Shiseido Global Brand Unit. "I honestly wondered if handwritten letters were outdated, but seeing those quiet, focused moments changed my mind"

The act of writing — contemplating someone important, choosing words with care, and sending a message imbued with scent — became a profound form of nonverbal dialogue. According to Takekoshi, "The concept originated from a campaign Shiseido Canada ran in the 2010s, which encouraged people to share messages of appreciation and beauty through handwritten notes. The emotional response it generated inspired this revival in Osaka."

Thinking of someone and putting those feelings into words — this simple act quietly awakens our emotions in today's digital society. Through the invisible mediums of scent and handwritten letters, the connections between people gently come into focus — at once nostalgic, and yet surprisingly fresh.

In another installation inside the Meeting House in the Forest, visitors could explore empathy through scent. Seated face-to-face across a table equipped with sensory research technology, pairs of participants engaged in open conversation while making eye contact. As they spoke, Shiseido's system analyzed their facial expressions for emotional cues, calculated the degree of empathy and gently released a fragrance into the space when a moment of mutual empathy was detected.

As a dialogue unfolded, the system detected emotional cues from facial expressions and calculated the degree of mutual empathy. When a moment of strong empathy was identified, a subtle fragrance was released into the space. After the session, participants could view a summary showing how many times the fragrance was triggered and the peak level of empathy that was achieved.

This installation was designed to offer a similar experience to those who did not participate directly in the demonstration experiment held in the Dialogue Theater Building. "We often believe we understand each

other, but that belief can be misleading," said

older adults less comfortable with technology." In a future increasingly mediated by AI and algorithms, the ability to measure and nurture authentic human connections may become a critical social asset.

Shiseido's approach offers a quiet counterpoint to the dominant narratives of progress. Rather than competing to showcase the fastest, smartest or most efficient

Beauty Dialogue Letter & Post" let people share

moving moments from the expo. SHISEIDO

Okazaki. "By bringing those emotions into

awareness and making them visible, we

relationships."

may be able to improve the quality of our

The implications of such work extend

beyond the Osaka expo. According to Okazaki, "These technologies and ideas could

offer new ways to address generational

and digital divides, particularly between younger, screen-native generations and

innovations, the company reminds us that the future also depends on qualities that can't be quantified: empathy, reflection and sensory awareness.

Through scent, letters and dialogue, the pavilion gently reminds us that progress is not only about innovation, but also about preserving our capacity to feel, connect,

and understand. Looking ahead, it will be

worth watching how the research insights gained through the Osaka expo help shape the society of



## Yokogawa Electric's control systems cut emissions

Mission: Sustainability

OSAMU INOUE

Yokogawa Electric Corp. has introduced control systems for large plants and factories in a broad range of industries, including petroleum refining and chemicals, steel, textiles, pharmaceuticals, food, water, power generation and gas.

Yokogawa Electric is also a manufacturer, producing measuring instruments and control systems. It has pledged to reduce its Scope 1 and 2 (direct and indirect) greenhouse gas emissions to zero by 2030. For Scope 3 (supply chain) emissions, which in fiscal 2023 totaled 640,000 tons, or over 90% of the company's total emissions of greenhouse gases, it has set a target of reducing them 30% by fiscal 2030, compared to the level in 2019, and 100% by 2050.

But these figures alone may be relatively insignificant because its control systems have contributed significantly to reducing emissions and improving the efficiency of renewable power generation for companies around the world. The reductions from these contributions reach into the hundreds of millions of tars.

#### **Billion-ton CO2 cuts**

In 2017, Yokogawa Electric announced its Three Goals setting out its vision for society in 2050, summarized as "Achieve net-zero emissions; stopping climate change," "Ensure well-being; quality life for all" and "Make the transition to a circular economy; circulation of resources and efficiency," and expressed its resolve to transform itself toward them.

At the same time, it set medium-term targets for 2030 in which it aimed to achieve a "CO2 emissions control amount through customers" of 1 billion tons over a period from fiscal 2018 to 2030 — a total comparable to the amount that Japan as a whole emits in



The Ishikari Bay New Port Offshore Wind Farm GREEN POWER INVESTMENT CO. LTD.

one year.

How is it possible to set such ambitious targets? The answer lies in its core "distributed control systems" (DCS) for plants and factories. In 1975, it introduced the Centum DCS, and since then has installed more than 30,000 units in plants and factories in more than 100 countries.

#### Wind power in Japan

Its "collaborative information" (CI) servers have also begun to play an active role in renewable energy.

Australia's largest commercial green hydrogen project currently underway, called Yuri, uses a control system centered on a Yokogawa Electric CI server. The system aggregates a large amount of data collected from the related facilities. Centralized management then supports swift operational decision-making.

In Japan, a control system centered on a CI server is playing a key role at the Ishikari Bay New Port Offshore Wind Farm, one of the largest facilities of its kind, which started commercial operation in 2024.

Yokogawa Electric provides remote operation and monitoring of the entire facility, including both offshore and onshore parts, as well as maintenance service for them. In addition, tests have begun on a system to detect signs of damage on submarine cables by using fiber-optic temperature sensors.

#### Autonomous control AI

In March 2023, Eneos Materials Corp., a subsidiary of the Japanese oil major Eneos Holdings Inc., announced that it had succeeded in achieving the stable operation of a chemical plant using an autonomous control AI and had become the first company anywhere to officially adopt AI for plant control.

For this project, Eneos Materials introduced an autonomous control AI system that incorporates an AI algorithm based on reinforcement learning that was jointly developed by Yokogawa Electric and the Nara Institute of Science and Technology. The technology reduced both steam consumption and carbon dioxide emissions by about 40%.

Yokogawa Electric's DCS and CI servers have already been installed in many plants of key heavy and large-scale industries, including oil and steel. Senior Vice President Akira Fukuda said the autonomous control AI can



Akira Fukuda, Yokogawa Electric senior vice president (left), and Chika Furukawa, general manager of the Sustainability Promotion

Department OSAMU INOUE

be applied to these production sites.

#### An indispensable role

Yokogawa Electric's control systems, which have evolved with AI, appear set to further accelerate efficiency improvements in conventional industries, including the heavy industries of oil and steel, and contribute to energy conservation and decarbonization. This is symbolized by the target of a billionton reduction in greenhouse gas emissions mentioned earlier. Furthermore, the billionton target was set in 2017, preceding recent leaps in AI technology. Yokogawa Electric's AI, used in combination with DCS and CI servers, appears set to contribute significantly to reducing the carbon footprint of existing plants and achieving more efficient generation of renewable energy.

Yokogawa Electric is playing a remarkable role in everything from the decarbonization of key industries to managing green energy. The scope of its activities is expanding to include everything from a "confocal scanner" unit that enables the observation of living cell activity, used in drug discovery and medical practice, to the support of the reuse of lithium-ion batteries from electric vehicles

Yokogawa Electric continues to urge many companies in many countries to do important things for humanity and the Earth. As a company indispensable to industrial activities for sustainability, its contributions to society are only increasing.

Scan the QR code to read the full version of Yokogawa Electric's article. This story was published on June 28 in the Sustainable Japan Magazine.



# Women's network pioneer Sasaki reflects on progress, challenges

#### ESG/SDGs

MIKA OSAKI CONTRIBUTING WRITER

One brave person creating a space for those without a voice to finally be heard is how real change starts.

Thirty years ago, Kaori Sasaki observed that there were no dedicated networks or organizations for women in business anywhere in Japan. In 1996, she founded the pathbreaking International Conference for Women in Business. Japan currently ranks at 118 out of 148 countries on the Global Gender Index Report, a sobering contrast to its reputation for innovation and modernity, and the lowest ranking among the Group of Seven nations.

oroup of seven nations.

The challenges faced by Sasaki and other ambitious women trying to establish careers amid the corporate climate of 1996 were even more intense, with little effort made to hide open gender discrimination. On the precipice of the 30th anniversary of Sasaki's first conference, she shared her insights and observations as she reflected on the past three decades.

on the past three decades.

When Sasaki first hosted the conference, she had no choice but to hold it on a Sunday, since women weren't permitted to take time off work to attend business-related events. The average woman's tenure in the workforce was six years, since it was not uncommon for large companies had explicit regulations mandating women to "retire" once they got married.

Still, there were always smart, talented women who took their careers very seri-



Attendees celebrate 30 years of a conference that has empowered countless women. ICWB

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ously. A percentage of the female workforce opted to persevere regardless of these discriminatory policies.

As there were no resources to connect these women or help them navigate male-centered work environments, Sasaki took it upon herself to create a network herself. She wanted the pockets of talented women spread across the workforce to feel less isolated and have a place to exchange information and skills. "It wasn't meant to come from a social activist approach; it was meant simply to connect with each other, learn more about business skills, improve and contribute," she said.

For its first 10 years, the International Conference for Women in Business was focused solely on women coming together to learn new skills, network and share their experiences. It is a 10-hour intensive seminar meant for serious businesswomen, and is not for the faint of heart. Women paid the fees themselves and attended solely in order to improve themselves and connect with other like-minded women. It was always on a Sunday, and it remained ignored by mainstream business society.

In 2014, things shifted drastically when Prime Minister Shinzo Abe became aware of the conference and personally attended, saying that women should "shine" in the workforce. Suddenly, companies started to cover the conference fee and send both male and female managers to the conference. While this helps to create wider awareness of the importance of diversity, it also brings the danger of shifting the conference from an earnest environment of self-starting women to include people who are there only out of obligation. People have even begun requesting the conference be moved to a weekday for convenience, forgetting its origins.

Despite these too-fast changes to the conference and too-slow changes to the realities women face in the workforce, Sasaki remains optimistic on the value of the events and the future of women in business

The theme for this year's conference was "Diversity is the Answer." Sasaki had 20 seminars and 70 keynote speakers. She treats the events like a movie production: She writes the script, does the casting and is the director. Throughout the progression of each conference, she wants to mirror



Kaori Sasaki, founder and CEO of Ewoman Inc., founder and executive producer of the International Conference for Women in Business ICWB

the story of a day in the life of a woman in business. This framing instinctively creates a sense of empathy as one goes through the day. Sasaki hopes to plant seeds of genuine progressiveness in the minds of attendees, and for both male and female leaders in business and politics to become advocates for real change rather than cheering for platitudes.

After 30 years of making a difference in the lives of women seeking to make serious contributions in their careers, it is clear that Sasaki's impact has not only been significant, but that founding the International Conference for Women in Business was far ahead of its time within the Japanese corporate world. Although progress remains slow, there is no denying that her strength of character, empathy and perseverance have set a precedent for the next generations to carry on the ethos of her work.

"We run, but other countries run faster," she said, and urged both men and women to think deeply about their role in either reinforcing the status quo or contributing to a brighter future where women can thrive in the workforce without first having to overcome invisible obstacles and "prove" themselves.

There has never been a shortage of intelligent and talented women, only a shortage of real opportunities and resources for them. As the world continues to shift unpredictably, society can't afford to ignore half of the population's potential to contribute positively.

One thing is true: Kaori Sasaki will never stop advocating for diversity in the workplace.