

R&D Satellite Starts Operations

Toward the Further Open Innovation

To foster innovation, it is essential to not only utilize the company's existing technologies and expertise, but also to integrate solutions from outsiders such as customers.

We introduce our technologies and assess customer needs by visiting their locations and offering tours of our Technical R&D Center in Aikawamachi, Kanagawa Prefecture. However, given that customers are often situated a considerable distance from our facilities, the time required for travel had limited the opportunities for conducting tours. On the other hand, online meetings are not enough to showcase our technologies which can be experienced through conventional facilities.

As a facility to solve these issues, we opened a satellite of our Technical R&D Center named "TAIKISHA INNOVATION GATE Shinjuku" at the Head Office in April 2023. By establishing a "gate" through which people can experience our technology in the easily accessible Shinjuku area of Tokyo, we aim to broaden the scope of our communication and pave the way for the integration of internal and external solutions as well as the discovery of innovations for the future.

Introducing the concept and areas of the satellite

The concept of TAIKISHA INNOVATION GATE Shinjuku is to generate customer interest and engagement in the technology we possess by utilizing video content and mixed reality (MR) technology. Another objective is to create opportunities for open innovation at our Technical R&D Center.



- Greeting Space**
A space for welcoming customers
- Brand Theater**
We have installed a large monitor to showcase the Company's journey through video content.

- Innovation Gallery**
We showcase our technology using a touch panel monitor. Guests can experience our technology in MR using wearable computers and tablets.
- Creation Hub**
The area serves as a conference room connected up to the Technical R&D Center, offering the introduction of the interior of the Center in real-time using a 360-degree camera. You can also view video content showcasing our technologies, captured using the 360-degree camera.



Future outlook

Reconstruction of the research building within the Technical R&D Center commenced in February this year. It is being transformed into a research facility capable of proactively anticipating and addressing the needs of customers and society, through open innovation with external parties. Starting with TAIKISHA INNOVATION GATE Shinjuku, we will strengthen the ties between the Technical R&D Center and our domestic and

international locations. We will accelerate open innovation through collaborative creation with external parties, including customers. Although TAIKISHA INNOVATION GATE Shinjuku currently serves as a satellite for the Green Technology System Division, we are planning to make it function as a satellite for the Paint Finishing System Division as well in the future.

Utilization Result of Taikisha Innovation Gate Shinjuku

Since its opening in April 2023, the venue has been visited by customers from various industries across the country, including manufacturers, design firms, banks, general contractors, and trading companies. As of July 2023, 15 companies have visited the facility.

Open innovation through collaboration with customers and business partners has also been gaining momentum, as illustrated by the examples below.

Feedback from customers

- "The use of digital technology made the advanced initiatives easy to understand."
- "I found taking Taikisha's technologies from a higher perspective at the Innovation Gallery to be extremely useful in terms of integration with various facilities."
- "I think that if the touch panels can effectively demonstrate how the technology can resolve societal issues, they could really resonate with visitors."

Comments from a customer



Hiromoto Watanabe
President
SHINWA CORPORATION

Thank you for inviting me to the TAIKISHA INNOVATION GATE Shinjuku, a facility that gathers together Taikisha's cutting-edge technologies.

The interior of the INNOVATION GATE offers a different dimension-like space unlike that of any typical office building. In the Brand Theater, I was able to learn about the journey Taikisha has taken to get here. In the Innovation Gallery, where air current was represented in 3D using VR technology, I felt the potential of the technology of the future.

The Creation Hub, the main facility, is connected to the Technical R&D Center via cameras. The wall is filled with projections of the facility's staff, creating a space that made me feel the people are actually there with us.

On this occasion, I was able to see the new technologies that Taikisha is embarking on in real-time from Shinjuku, and I am once again deeply impressed. I would be delighted if, going forward, we can collectively invigorate the industry with new technologies through our partnership with Taikisha. We look forward to working with Taikisha.

Examples of open innovation initiatives being implemented

CO₂ concentration capture

At plant factories, the CO₂ concentration is set higher than that of the outside air to promote photosynthesis in the plants. We are currently supplying CO₂ from cylinders, but we are working on developing a device that can concentrate and supply CO₂ from the outside air as a replacement for the cylinders.

Utilization of robots and IT

To improve the productivity of our operation and make it unmanned, we are carrying out a test run of measuring using robots and automating the filing of paperwork through IT. This fiscal year, we have begun trialing these initiatives at actual construction sites. We have also developed filter system leakage and integrity testing equipment for the purpose of enhancing our current operations, which we plan to trial and evaluate at construction sites going forward.

Sterilization equipment

To create an environment where people can spend their time comfortably and healthily, not only are temperature, humidity, and air current important, but so is the control of cleanliness. To provide a clean and safe environment, we are working on developing sterilization equipment that can be installed on the exterior of air conditioning units. Performance verification has already been completed, and we are proceeding with preparations for market launch.

Technologies currently in development

By focusing on understanding potential customer needs and collaborating on development and verification with customers and academic institutions, we are developing technologies that lead to the creation of new value.

green TEC

- CO₂ separation and utilization technology
- Use of natural energy
- Exhaust treatment with reduced environmental impact

smart AGRI/HEALTH

- Sterilization equipment
- Silencing technology
- Visualization of air current as an infection prevention measure
- Direct expansion type radiation air conditioning system

smart FACTORY

- Robot control
- Room pressure control
- Test environment
- Technical verification lab
- Variable air volume control type low-dew-point room
- Air nozzle which follows the person and supplies air (product name: FOLLOAS)
- Precision temperature control



Reducing environmental impact and CO₂ emissions



Use of natural energy