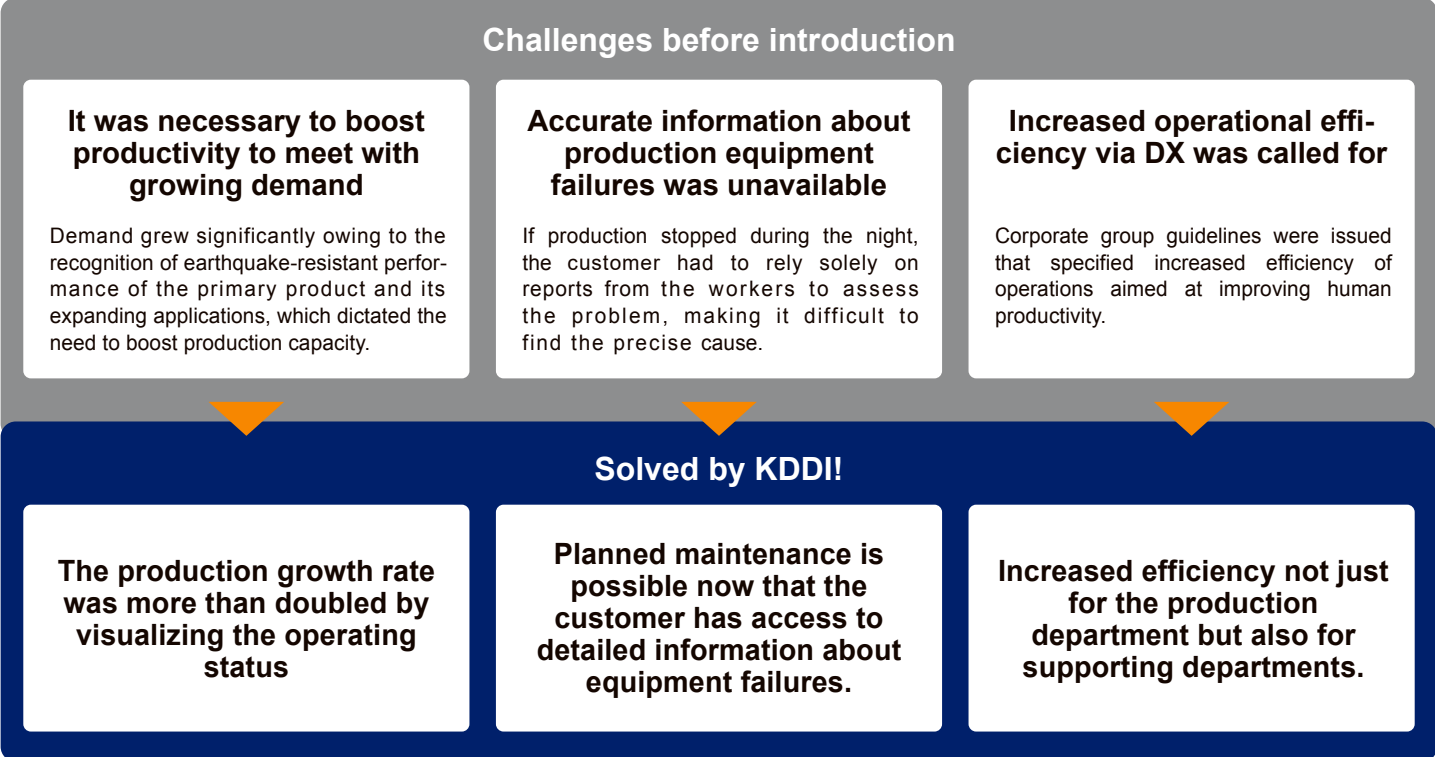


SEKISUI (WUXI) PLASTICS TECHNOLOGY CO., LTD.



Productivity gain achieved through visualizing operating status. Work reform accelerated by moving towards a smart factory through digital transformation (DX).

SEKISUI (WUXI) PLASTICS TECHNOLOGY CO., LTD. is a wholly-owned subsidiary of SEKISUI CHEMICAL CO., LTD. located in Wuxi City of Jiangsu Province in China that manufactures polyethylene electrofusion (PEEF) joints used for gas and water supply pipes. All products are exported to Japan where they play a critical role in the laying of gas and water supply pipes. In recent years, polyethylene (PE) has become widely recognized for its earthquake-resistant properties, causing demand to surge. Demand also increased for product variations, creating a need to boost productivity. To accomplish this, the customer built a system that visualizes the operating status of the production equipment and achieved a digital transformation. In addition to receiving significant productivity improvements, the customer was able to take a big step toward creating a smart factory.



- Additionally**
- The solution enabled the customer to grasp the progress of production in real time, making it possible to fine tune production plans according to the situation.
 - Through additional proposals by KDDI, the customer also introduced other tools, such as an online conferencing system and smart glasses as it moves forward with a broad range of improvements in operational efficiency.



Introduced service

Smart Factory IoT Solution



Customer interview

Reason and background for adoption

We felt KDDI was the best partner for leading operational reforms through DX

The customer was considering ways to raise productivity through the use of IT to meet growing product demand. They aimed for a system that would allow them to understand the operating status of equipment in real time during the night, a time when operation was particularly left up to staff, and choose KDDI as their partner to achieve this. General Manager Sumio Matsuno commented on this decision by saying, "When we were looking for a partner we could trust, we participated in one of KDDI's seminars held in Suzhou, China, and after listening to their presentation about the benefits IoT and RPA can bring to manufacturing companies, we felt that they were a perfect match for our future vision. A major convincer was how KDDI enthusiastically proposed a system that met our expectations."



Sumio Matsuno
General Manager

Benefits

The monitoring effect on night-shift work realized productivity improvements that exceeded expectations

The introduction of a visualization system for the production equipment increased per day productivity by approximately 1%, giving the customer the production capacity to meet continually-increasing demand. Matsuno said, "In the past, production tended to drop during the night when the supervisor was off duty, but by visualizing the operating status of the equipment, the system produced a "monitoring effect" that has raised productivity. In the planning stages, we projected gains of about 0.3 to 0.5%, but the results we achieved exceeded our expectations."



Injection molding machines and other peripheral production equipment

Planned equipment maintenance is possible now that the customer also has access to detailed information about equipment failures

The customer gained the ability to monitor the operating status of virtually all production equipment in the factory facilitates an accurate understanding of the circumstances when equipment failures occur. Matsuno said, "Injection molding machines are our main equipment, and for each machine there are three to four pieces of peripheral equipment, but now when a line stop occurs, we can track which piece of equipment caused the problem. This allows us to quickly repair problems depending on the situation to avoid impacting production, and we also intend to use this insight to facilitate preventive maintenance in the future."



Monitors show the operating status of equipment

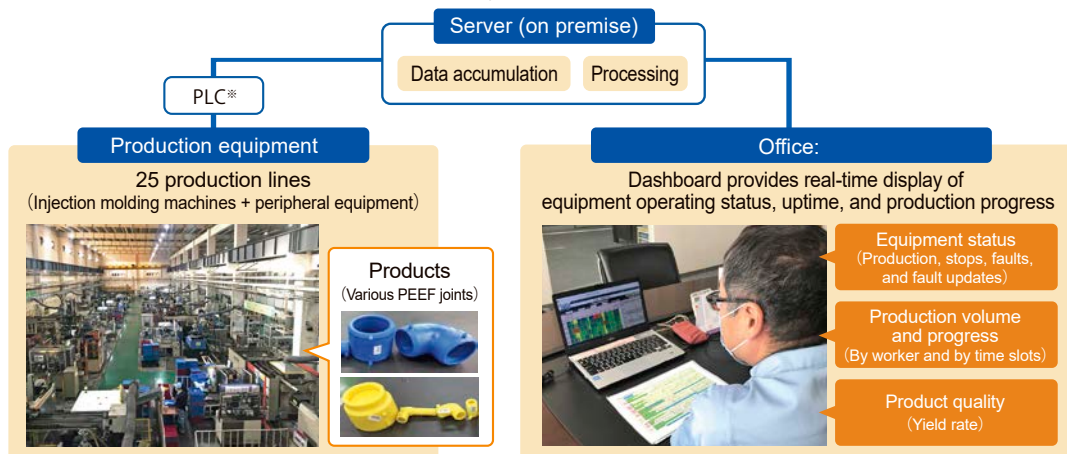
KDDI's overall strength for supporting DX contributed to the realization of the smart factory

This visualization system for the production equipment is just the customer's first step toward realizing a smart factory, and the next plan is steadily underway. Matsuno shared his outlooks as follows: "We have plans to optimize our process by linking equipment uptime data with the production planning system, to automate raw material purchasing and customs clearance procedures, and to share information with our mother plant in Japan. Additionally, the entire company has made great progress in implementing a digital transformation thanks to suggestions from KDDI for a variety of services, from going paperless to an online conferencing system and smart glasses. With the support of KDDI, we intend to continue advancing our efficiency improvement efforts even further."



Matsuno in a discussion with the team leader from KDDI

Overview of Production Equipment Visualization System at SEKISUI (WUXI) PLASTICS TECHNOLOGY CO., LTD.



※PLC: Programmable Logic Controller

Message from the Team Leader



Zhang Qifeng
Team Leader,
KDDI Shanghai Corporation
Suzhou Branch

Years of experience with IoT, proactive proposals driven by customer needs, and teamwork enabled us to provide a one-stop solution for build-ing and maintaining this system. We will continue to contribute to not only the customer's digital transformation and smart factories, but also to addressing their other challenges.

Customer profile SEKISUI (WUXI) PLASTICS TECHNOLOGY was established as a joint venture between SEKISUI CHEMICAL CO., LTD. and Mitsubishi Plastics, Inc., in 2002. The business was transferred from Mitsubishi Plastics in 2012, making it a 100% subsidiary of SEKISUI CHEMICAL. The company manufactures PEEF coupling joints with covered wires which are mainly used for gas and water supply pipes. This product, which uses electrical heat to melt the pipe and then form a solid joint, is essential for improving the earthquake resistance properties of lifelines. The company has about 25% market share in Japan.

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Capital 4 million USD
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