FUJITSU

BEISIA CO., LTD

IoT Temperature Monitoring That Reduces Store Workload

Facing growing labor shortages and increasing operational demands related to HACCP compliance, BEISIA needed a more efficient way to manage temperature control across its stores. By adopting Fujitsu's Advanced Operation & Management solution, the company automated temperature monitoring, reduced manual workload, and improved real-time visibility—helping ensure food safety while enabling staff to focus more on customer service.

HACCP (Hazard Analysis and Critical Control Point) is an internationally recognized food safety management system designed to identify and control potential risks in food handling and storage.

Challenges

BEISIA faced major operational pressures, including rising manual workloads for HACCP temperature checks, delays in identifying equipment issues that risked product loss, and limited real-time visibility into refrigeration and freezer conditions across stores.

Solutions

Using Fujitsu's Advanced Operation & Management solution, temperature management was automated and visualized, enabling IoT-based detection of equipment anomalies with instant alerts and establishing a real-time monitoring platform across stores.

Outcomes

- Reduced store workload directly contributing to significant labor cost savings
- Improved food safety and product quality through faster detection and response to temperature anomalies
- Company-wide governance strengthened by enabling faster management decisions.

"They took the time to deeply understand our on-site operations and challenges, and worked with us to propose effective solutions. Fujitsu is a partner we can collaborate with to build systems designed for long-term use."

Daishi Yoneyama, Manager, Digital Promotion Headquarters, BEISIA CO., LTD

Workload Pressures from Labor Shortages and Food Safety Compliance

With labor shortages intensifying and food safety compliance requirements adding operational strain, BEISIA's store teams were facing mounting pressure. The urgent challenge was to operate safely and efficiently with fewer staff—while still delivering better products at better prices.

Tatsuya Ueda, Director, Store Operations Division, explains: "Our priority is to offer better products at better prices for our customers, and improving productivity on the shop floor is essential to achieving that. Food safety is also one of our top priorities and complying with HACCP-based requirements is a critical part of that commitment." To meet these requirements, BEISIA must conduct strict, routine temperature monitoring across refrigeration and freezer units and maintain detailed records for each unit—significantly increasing the workload at store level.

Temperature checks were conducted twice a day—at 11 a.m. and 3 p.m.—with store staff manually recording readings on paper sheets. Teams from produce, seafood, meat, delicatessen, and daily foods inspected roughly 120 refrigeration and freezer units per store. "Each round of checks took more than 30 minutes, and if a unit entered automatic defrost mode and the display became unavailable, staff had to repeat the inspection later. It was a highly time-consuming, labor-intensive task," says Yumi Okazeri, Manager, Store Quality Control Department.

In addition to the workload, the manual process made consistent accuracy difficult to maintain. "Because temperature checks relied entirely on human input, reviews were sometimes delayed during peak hours or when stores were short-staffed, which also pushed routine tasks into overtime," adds Ueda. "This led us to pursue an automated temperature-monitoring system to reduce staff workload and minimize the risk of human error."

Solution Selection and PoC Validation

To address these challenges, BEISIA evaluated automation options based on accuracy, reliability, ease of operation, scalability, and cost effectiveness. Among the solutions reviewed, Fujitsu's Advanced Operation & Management stood out. By visualizing data from a wide range of IoT sensors in real time, the solution supports faster decision-making and contributes to cost reduction and environmental considerations—capabilities that matched BEISIA's need for managing a large number of refrigeration and freezer units.

Figure 1： IoT sensor installed inside a freezer to monitor temperature conditions

"We had evaluated similar systems in the past, but many were too costly to support our goal of improving productivity so that we can continue offering affordable products," says Daishi Yoneyama, Manager, Digital Promotion Headquarters. "By contrast, Advanced Operation & Management provided cost-effective multi-store deployment, strong maintainability through its mesh network, and the reliability needed for stable operations. Although several vendors had comparable experience, we chose Fujitsu because we trusted they would work closely with us to resolve issues and support large-scale rollout."

BEISIA conducted a proof of concept (PoC) at its Takasaki-Kuragano store to verify whether the solution would perform as expected in a live retail environment and to identify any operational issues before full deployment.

Validated Performance Through PoC and Path to Full Adoption

The PoC involved teams from the Digital Promotion Division, Store Infrastructure Department, Quality and Freshness Control Department, and Operations Division. Fujitsu supported the project end-to-end—from system setup and in-store configuration to coordinating customer engineers. The PoC covered all temperature-controlled assets, including sales-floor display units, backroom walk-in storage, and refrigerated and frozen cases used for food preparation and storage.

Looking back on Fujitsu's role, Yoneyama says, "Fujitsu worked closely with our store managers and quality teams to capture operational requirements and translate them into system design. They coordinated installation and addressed unforeseen issues, keeping the project and all stakeholders aligned."

The PoC demonstrated the strengths of Advanced Operation & Management—including the high accuracy and stability of FCL sensors, the reliable connectivity of the Wirepas Mesh network, and strong capabilities in data collection and visualization. "Compared with other products we tested—many of which were expensive and required cumbersome parent-child device setups—Fujitsu's solution proved significantly simpler and much easier to maintain," Yoneyama adds.

Based on the positive PoC results, BEISIA signed a formal agreement with Fujitsu and began rolling out the solution across all stores.

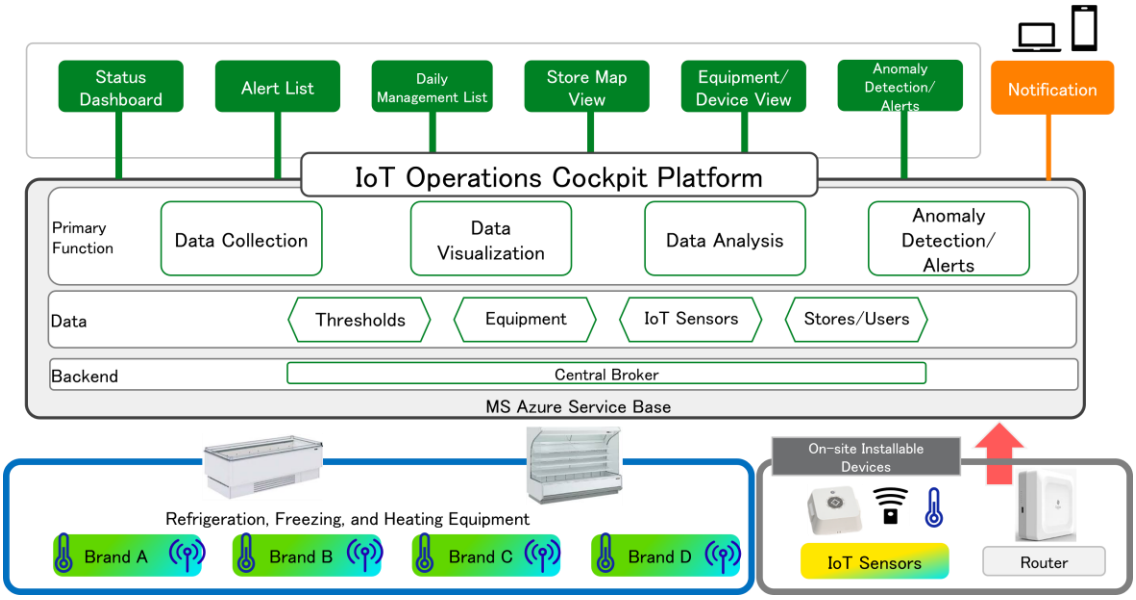

Figure 2: Overview of Advanced Operation & Management—real-time IoT monitoring and AI-driven optimization

Industry:

Retail

Location:

Japan

Website:

beisia.co.jp

About the customer

BEISIA is a shopping center chain committed to providing "better products at better prices." Guided by its philosophy of "For the Customers," the company fulfills its social responsibility by offering essential goods that support the daily lives of a broad base of consumers.

US$300K

Estimated annual labor savings across all stores

Cost Savings, Better Service, and Stronger Quality Control

The benefits of Advanced Operation & Management are already evident.

Based on the results of the proof of concept, BEISIA estimates that automating temperature checks will reduce approximately 30 hours of work per store each month—equivalent to about US$300,000 in annual labor time savings across all stores. "This represents a very significant implementation benefit," says Yoneyama. Ueda adds, "In the past, time constraints often prevented store staff from fully focusing on core tasks and customer service. By automating routine work, we expect to reallocate the time gained directly to customers and reduce the opportunity losses that previously occurred."

As a result, the solution is expected to improve customer satisfaction, expand sales opportunities, and enhance employee engagement.

Regarding incident response, Shinichi Osada, Manager, IT & Operations Systems Improvement, explains: "Previously, temperature abnormalities were often noticed only when staff manually reviewed paper check sheets, which meant issues weren't detected early and sometimes led to product loss. With the new system, anomalies are automatically detected, and alerts are sent to employees, enabling faster response and helping reduce waste."

"The system also provides early fault detection by identifying gradual temperature shifts that may indicate equipment failure, while highlighting opportunities to reduce energy use when units run colder than necessary," adds Okazeri.

Osada also notes the value of systemization: "For a multi-store retailer like ours, having centralized, real-time visibility into temperature conditions across all locations is extremely valuable. Compared with the previous paper-based process, the ability to manage everything through one system is a major advantage. Headquarters can see store conditions immediately, strengthening quality control and enabling faster management decisions."

Extending Deployment Beyond Stores

As BEISIA moves toward completing deployment across all 138 stores, the company is already planning future enhancements.

"Our first goal is to finish deployment across all locations, but once that is achieved, we plan to explore additional capabilities such as predictive maintenance and improved energy efficiency," says Yoneyama. "While this phase currently covers stores, we also see strong potential to extend the solution to our prepared-foods factory and distribution centers, where similar temperature-management needs exist." Ueda adds: "BEISIA will continue advancing its digital transformation, which we see as an industry-wide movement in retail. Through this temperature-monitoring initiative, we have strengthened our relationship with Fujitsu and look forward to further collaboration."

The partnership between BEISIA and Fujitsu is establishing a solid foundation for food safety and positioning BEISIA as a leader in retail digital transformation.

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