CUSTOMER CASE STUDY

METAWATER

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Takao Uratani
Manager of the Solutions Development
Business Strategy Division
METAWATER Co., Ltd.

Building a platform for information-based collaboration with other industries that responds more rapidly to water and sewerage utilities' needs.

At a glance

Country: Japan
Industry: Facilities
Founded: 2008
Website: metawater.co.jp

Challenge

- Build an information platform that would allow collaboration with other industries
- Build a system that can recover as quickly as possible in the event of a disaster or system failure
- Break free from need to run software developed in-house on Infrastructure as a Service (IaaS)

Solution

METAWATER chose FUJITSU Cloud Service S5 as the ICT platform for its WBC. Running the inspection and maintenance system, Smart Field Service, which combines tablet PCs and Fujitsu Augmented Reality (AR) technology, on S5 allows device operational status and water level/flow rate measurements to be captured and stored as IoT data.

Benefit

- Manages and publishes Web services Application Programming Interfaces (APIs) making it possible to collaborate with other industries
- Promotes DR measures through system configuration dividing systems East-West into production and standby systems
- Uses development methodology employing Platform as a Service (PaaS) type services reduces man-hours and development timeframes

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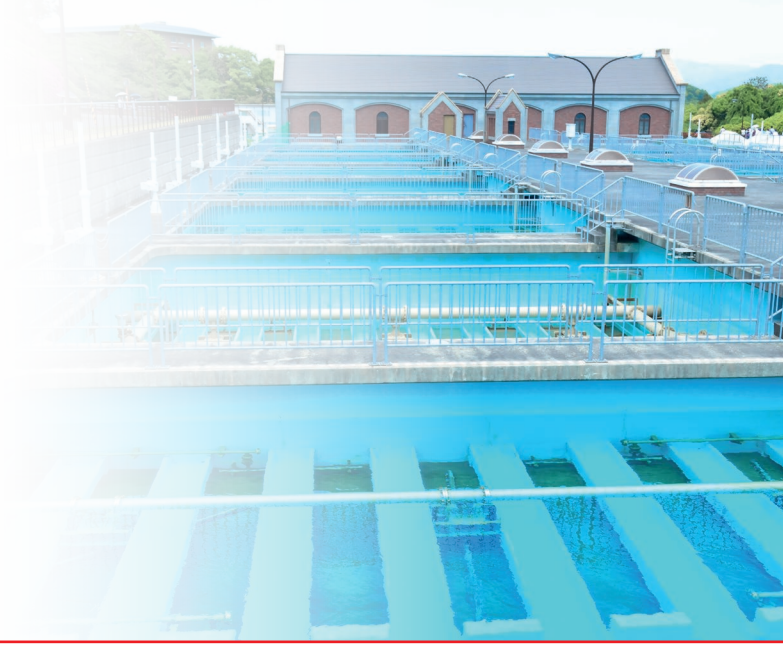
Customer

METAWATER is a company that provides water and environment related plant engineering and service solutions to water and sewerage utilities both in Japan and overseas. The company also pro-actively adopts state-of-the-art technology including ICT. One of its initiatives was the Water Business Cloud (WBC), which commenced in 2011.



Products and services

- FUJITSU Cloud Service K5

Cloud services for water and sewerage businesses and data analysis to help solve issues

Water and sewerage works operations of local government face many challenges. The volume of water demand is decreasing because of Japan's low birth rate and aging society, and water facilities built for higher volumes of demand in the past period of high Japanese economic growth continue to age. Moreover, as many skilled technicians reach retirement age, passing on the knowledge to the next generation is an issue.

Running software developed in-house on IaaS was not suitable for making the WBC a true information platform. Takashi Ueno, General Manager, WBC Center, Business Strategy Division states, "Once you capture and store IoT data, next comes the phase of analyzing that information using Business Intelligence and Artificial Intelligence and coming up with answers to customers' business challenges. We needed to be able to link data and content with ICT companies that have analysis solutions, without having to develop software."

Furthermore, disaster recovery (DR) measures were also essential to provide continuity of service in the event of a natural disaster, such as an earthquake or flooding.

Migration to FUJITSU Cloud Service K5 enables easy connection to external services via APIs

METAWATER decided to migrate to FUJITSU Cloud Service K5, a Fujitsu cloud service, which allows multidimensional usage during the secondary development of its Smart Field Service system. Using the integrated API platform 'API Management' to manage and publish a variety of Web services APIs makes it possible to use Web services and cloud services provided by ICT companies without having to develop software in-house. As a result, it becomes possible to quickly provide the functions clients need.

Being able to use external services via APIs was a good fit with METAWATER's strategy of getting companies in different industries to use the WBC. Collaboration was essential, not only with local government authorities running water and sewerage works operations, but also with those in adjacent industries.

Review of system configuration using Fujitsu Technical Support Phased Migration

The work of migrating the WBC and Smart Field Service system from S5 to K5 required ingenuity at each phase with service continuity as the highest priority.

Mr. Takao Uratani, Manager of the Solutions Development Department, WBC Center, Business Strategy Division, states, "We embarked on migration to the new core WBC from November 2016 after having performed test operation of certain business systems on K5 and confirming that they operated stably." New servers were built on the K5 side and over 100 virtual servers used for the Smart Field Service system were transferred over to K5 in stages. Server transfer work was performed with improving migration work efficiency in mind, using Open-Source Software (OSS) orchestration tools and generating scripts.

During the migration, METAWATER also proactively availed itself of Fujitsu's technical support. Mr. Uratani states, "The input from the Fujitsu SEs, who are thoroughly familiar with our system configuration, allowed us to implement the kind of reviews that you can only do at migration, such as optimizing system settings, and improving utilization by integrating a number of servers." Migration of all the virtual servers is scheduled to be completed in October 2017.

Mr. Uratani is impressed by the K5 functionality which allows resource allocation volumes to be automatically adjusted to match changes in the load on the virtual servers. He states, "Just by setting the system to increase virtual server capacity at peak times it is possible to obtain maximum capacity at minimal cost."

Furthermore, using FUJITSU Cloud Service K5 IoT Platform, the K5 data collection and utilization platform makes it possible to flexibly respond to the different protocols and data formats used by the various manufacturers of water supply and wastewater networks and their products.

Aiming to build more public-private sector collaboration in information infrastructure in future

METAWATER has started seeing many of the results it had hoped for. Quantitative results include reduced costs and shorter timeframes. Mr. Ueno explains, "Although the number of virtual servers will increase in future due to IoT support, it looks like we will be able to keep cost to a minimum." Using PaaS services will reduce the number of man-hours and the overall timeframes required for software development. Mr. Uratani comments, "The time taken from designing the system environment to installing the servers and getting them up and running also looks like only taking around half the time of on-premises systems."

Moving forward, METAWATER plans to further roll out and expand its WBC system operating on the K5 cloud as a private-capital driven, information platform for public-private sector collaboration. "Information is owned by everyone. We can't just fence it off," says Mr. Ueno. METAWATER aims to create a world in which the information obtained from analysis is provided to people in a variety of different industries for them to then monetarize to build a bright future for the water and environment business.

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