CUSTOMER CASE STUDY

OPTEX
Sensing Innovation

> “The FUJITSU Cloud Service IoT Platform provides us with an environment that is convincing from the perspectives of both efficiency and cost.”

Mr Akihiko Nakamura
General Manager, R&D Strategy Dept.
OPTEX Co., Ltd.

OPTEX built a common infrastructure that processes various types of sensor data efficiently, in real-time, using the FUJITSU Cloud Service IoT Platform.

At a glance

Country: Japan
Industry: Measuring & Equipment
Founded: 1979
Website: www.optex.net

Challenge

OPTEX is building on the Internet of Sensing Solution (IoS) concept to develop its business utilizing sensor data via the internet. The aim is to establish a highly sustainable business model from which to expand its business.

Solution

Using the FUJITSU Cloud Service IoT Platform, OPTEX built a common infrastructure that processes various types of sensor data efficiently, in real-time. Then, as the first step in its data exploitation business, it developed a simple water quality measurement system. This is a groundbreaking system that uses the cloud service to obtain analysis results in real-time.

Benefit

- Achieved goal of a database visualized in the cloud service in a short time and at low cost
- The first step towards a new business model, ‘WATER it’, was built
- Developing the ‘WATER it’ application in-house speeded up the trial-and-error process, shortening the work and reducing costs
- Highly reliable cloud service platform reduces uncertainty when it comes to future challenges, making ambitious initiatives possible

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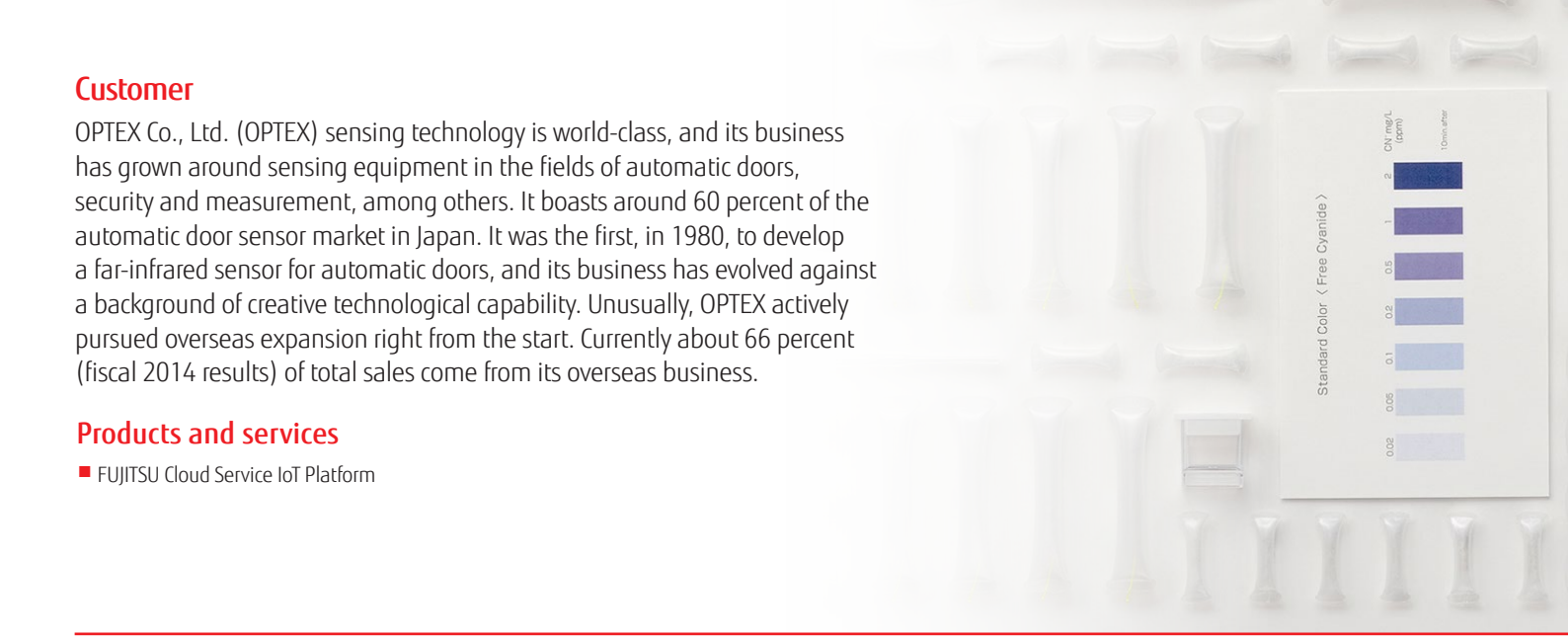
Customer

OPTEX Co., Ltd. (OPTEX) sensing technology is world-class, and its business has grown around sensing equipment in the fields of automatic doors, security and measurement, among others. It boasts around 60 percent of the automatic door sensor market in Japan. It was the first, in 1980, to develop a far-infrared sensor for automatic doors, and its business has evolved against a background of creative technological capability. Unusually, OPTEX actively pursued overseas expansion right from the start. Currently about 66 percent (fiscal 2014 results) of total sales come from its overseas business.



Products and services

- FUJITSU Cloud Service IoT Platform

Challenge

Although OPTEX's sensing technology is world-class, "We can't expect sustainable growth if we stick to a conventional business model," according to R&D Strategy General Manager, Mr Akihiko Nakamura.

"Let's look at security as an example. In Europe, which accounts for a large chunk of our sales, they have a high awareness of security, and a very high degree of demand when it comes to security services. So, if we can provide a service that encompasses not just the sensor hardware, but also the software, and accurately identify what the customer wants and respond quickly to those needs, we can expect our business to grow. We need to transform our concepts and our business methods."

Based on this kind of thinking, starting in 2015, OPTEX came out with a new concept aimed at expanding its business: Internet of Sensing Solution (IoS). The IoS concept is unique to OPTEX, and it works by filtering the company's enormous amount of sensor data, extracting smart data, and using the cloud to link that data to high value-added services.

Solution

A flexible cloud service platform that can handle many different kinds of sensors is required in order to move forward with sensor data IoT utilization. Not only must it be secure; maintenance and operation should be easy; and it must be capable of supporting a rapidly changing business environment.

"The reason we chose the FUJITSU Cloud Service IoT Platform from among several possibilities was because it allowed us to dramatically reduce the initial investment, development man-hours, and also running costs. We could also sense Fujitsu's eagerness to incorporate new things. Of course our technical demands were met, but the good quality control system and the fact that they always responded flexibly were very reassuring," says Mr Nakamura.

In the Proof of Business using the IoT Platform, the person in charge of developing the water quality measurement sensor developed, in a short time, a water quality control application. By linking the IoT Platform and the rapid application development and execution platform, applications can be developed easily, even without programming experience. "One of the big outcomes of the Proof of Business was that someone who's not an expert programmer could develop an application. Until now we almost always outsourced development, so it was a big breakthrough to be able to develop in-house using the Fujitsu Platform," said Mr Nakamura.

'WATER it' was the first system in OPTEX's IoS business to operate using the developed application. It is a simple water quality measurement system. 'WATER it' collects data from portable water quality measurement sensors to the IoT Platform and allows time-series analysis on smartphones and other devices.

Until now, the recorded data had to be manually analyzed, which was time-consuming, and it was also difficult to gather a broad range of samples at one time. By using the cloud service, 'WATER it' makes it possible to analyze in real-time, and follow-up is also easy because the data is stored in the cloud. Basically, it is a powerful tool that facilitates visualization of a water quality environment database.

Benefit

With 'WATER it' anyone can easily manage the measurement data using a portable measuring instrument, regardless of time and location. By simplifying the process, water quality measurement can be done proactively, allowing more measurements to be taken and increasing the frequency of data analysis. Based on the accumulated data, more precise analysis results can be obtained and trends readily seen. This allows the creation of a concrete action plan aimed at improving water quality. Mr Nakamura states, "By creating one good cycle like this, we've been able to develop our business sustainably, and we also feel we're contributing to society. It's important to set up this kind of business model."

The high performance measuring instruments used for 'WATER it' are supported by OPTEX's advanced technology and obtain very precise measurement results. From that starting point, Fujitsu and other experts assembled their individual capabilities to build the system. Mr Nakamura continues, "You can't produce a good system if you just 'build to specifications'. And, if you really want to make a useful solution, of course you're limited if you only use your own company's capabilities. To develop your business these days, it's particularly important to keep an eye on the needs of society and your customers, find the optimal business partners, and tackle problems together. I think this business style, where each specialized area contributes its knowledge and all work together toward a completed product, will become more and more mainstream."

'WATER it' is likely to find big demand mainly in developing countries where industry is flourishing and all kinds of development are taking place. OPTEX has already started approaching developing countries and feels that the feedback is good. It is also developing a measurement system for atmospheric pollution, continuing its involvement in social issues. There is no doubt that the cloud service platform of the IoT Platform will allow OPTEX's business to become even more creative, and demonstrate its contribution to society. "The IoT Platform will surely continue to be the infrastructure with which we meet new challenges. With 'WATER it' as the start, we want to provide solutions using sensing technology in a variety of areas, and develop a service that only OPTEX can give. We have high expectations of Fujitsu as a partner who strongly supports our evolution," concludes Mr Nakamura.

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