

“In cooperation with Fujitsu, we are continuously improving the system which will be used by a wide range of farmers.”

Yasuaki Fukunaga  
President  
Aeon Agri Create Co., Ltd.

## Transforming farming by exploiting ICT.

### At a glance

Country: Japan  
Industry: Agriculture  
Founded: 2009  
Employees: 280  
Website: [www.aeon.jp/agricreate](http://www.aeon.jp/agricreate)

### Challenge

Japan's agricultural sector is hampered by social change - arable land is being abandoned because of a lack of people willing to take over farms. Meanwhile Japan's farmers are growing older.

### Solution

Aeon's farms use Fujitsu Akisai cloud computing service as the basis for daily farm operation and monitoring. Workers use tablets, smartphones or other mobile devices to gather data on farming operations, checking pesticide or fertilizer use while also keeping track of operational costs.

### Benefit

- Workers can record if crops have suffered from blight or insects, adding to the knowledge base
- GPS function enables the gathered data to be linked with the specific farm and the area within the farm
- Helping to re-energize Japan's agricultural sector as more people are encouraged to take up farming and more efficient farm management methods are developed

## Customer

Established in July 2009, Aeon Agri Create is a farming subsidiary of the Aeon Group, which includes one of Japan's leading supermarket chains. The philosophy of Aeon Agri Create is 'to develop farming and add value to customers' through efficient farming methods and the development of new value chains for agricultural production. The workforce of Aeon Agri Create was initially made up of people whose professional background was in other types of work within the Aeon Group. It was effectively a farming organization created from scratch.

## Products and services

■ Fujitsu Akisai cloud computing service

## Challenge

Japan's agricultural sector is hampered by social change - arable land is being abandoned because of a lack of people willing to take over farms. Meanwhile Japan's farmers are growing older.

Aeon Agri Create applies ICT to develop and share farming expertise so that people without much farming experience can deliver good results. This 'ICT farming' enterprise has been created in partnership with Fujitsu.

## Solution

Aeon's farms use Fujitsu Akisai cloud computing service as the basis for daily farm operation and monitoring. Workers use tablets, smartphones or other mobile devices to gather data on farming operations, checking pesticide or fertilizer use while also keeping track of operational costs. The GPS function in the smart devices enables the gathered data to be linked with the specific farm and the area within the farm. Workers can also record if crops have suffered from blight or insects, which further adds to the knowledge base.

Aeon has voluntarily adopted the GLOBAL G.A.P. standards for certification of good agricultural practice that were developed in Europe. Stringent quality assurance checks and procedures based on these standards are built into the IT systems used by Aeon.

The data gathered on farming operations is shared and applied to farm management. At its head office, Aeon integrates the farming plans, crop yield forecasts, field observations, harvest data and other farm-related information into its accounting database. In this way, Aeon head office ensures that the information from all of Aeon's farms is reflected in each set of quarterly financial results. Aeon is now starting to apply the farming and accounting data to analysis of its farming operations.

Aeon is currently trialing an analytical system developed in-house that allows managers to look in detail at projected crop yields and revenue for each land plot on every farm. This system provides more accurate estimates of farm output for business management purposes. For instance, analysis of the data gathered from planting Japanese mustard spinach has suggested that crop yields per hectare could be improved by up to 33 percent by using sunlight and heat to eradicate weeds while selecting the best harvesting timing. Aeon has applied these objective data-driven results to produce more crop in the next season and set a production target based on this. Aeon aims to use integrated data analysis as the basis for more advanced farming operations, and thereby establish a successful 'ICT farming' enterprise.

At present, Aeon Agri Create directly manages 15 farms covering over 200 hectares in locations across Japan. The total land under cultivation is expected to expand to over 300 hectares by March 2015. Fujitsu cloud computing services are supporting this nationwide farming operation.

## Benefit

The application of ICT to farming by Aeon Agri Create to deliver reliable supplies of fresh vegetables to Aeon Group stores has helped develop Aeon's brand within the agricultural sector. Repeated trial-and-error development of systems has enabled Aeon Agri Create to achieve its current success in a short period of four years.

Two significant recent developments stand out. The first is the applied use of farm-generated data to support strategic crop planting. This potentially paves the way to optimize farm production by incorporating Point of Sale data and consumer demand based on in-store sales operation.

The second initiative is the expanded application of ICT farming practice to subcontracted growers. By supplying ICT-based expertise, Aeon Agri Create aims to forge win-win relationships with other farmers and help them become more competitive. The goal is to foster long-term commercial partnerships while also generating more data that Aeon can use to secure a more stable supply of produce for Aeon Group stores. The plan calls for extending the application of ICT farming to the current 3,000 subcontracted farmers, step by step.

Other agricultural and large-scale farming enterprises are also seeking the ICT farming expertise that Aeon Agri Create has accumulated. Based on the experience gained through the partnership with Aeon Agri Create, Fujitsu has developed the Akisai cloud computing platform using sensors and smart devices for applications across the agricultural sector, including livestock farming.

As of January 2014, the Akisai user base comprises 160 companies, including Aeon Agri Create. Aeon is taking a proactive stance toward sharing the advanced expertise it has forged in farming to support more widespread adoption of ICT-based farming methods. This is helping to re-energize Japan's agricultural sector as more people are encouraged to take up farming and more efficient farm management methods are developed. The creative partnership between Aeon Agri Create and Fujitsu promises to deliver even more impressive results.

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