

Gyeongsangbuk-Do Improves Supply Chain Management with Advanced RFID Solution



경상북도

Gyeongsangbuk-Do
Daegu, Korea
www.gb.go.kr

Industry:
Public Sector

Employees:
2,300

Oracle Products & Services:
Oracle Application Server
Oracle Sensor Edge Server

Oracle Partner:



Fujitsu Korea
www.fujitsu.com/kr

Key Benefits:

- Improved end-to-end management of the food supply chain by implementing an advanced RFID solution to track production, distribution, and sales data in real time
- Enhanced quality control by ensuring food items can be traced back to producers
- Increased customers' trust in the safety and quality of products by enabling them to determine the origin of the item

“The RFID tracking system developed using Oracle Application Server 10g has enhanced the quality of the agricultural products supplied by the province and increased customers’ trust in the foods offered for sale.” – Team Manager, Information Technology Team, IT Division, Gyeongsangbuk-Do

Gyeongsangbuk-Do (North Gyeongsang) is a province in eastern South Korea. Formed in 1896 from the northern half of the former Gyeongsang province, it remained a province of Korea until the country’s division in 1945, when it became part of South Korea. The area is famed for its agricultural produce, including apples, barley, beans, potatoes, and rice.

The provincial government has invested large amounts of time and money to establish technology-intensive, knowledge-based farming practices and advanced systems to manage various activities. One of these is a product tracing system based on radio frequency identification (RFID) technology.

Developed using Oracle Sensor Edge Server, the solution enables the government to track the production, distribution, and sale of agricultural products. This has given senior officials greater insight into the supply chain and increased overall efficiency. Customers can also check the origin of food items by referring to the RFID tag, promoting greater trust in product quality.

End-to-End Control of the Food Chain

To compete in the global agricultural market, the Gyeongsangbuk-Do government knew it had to assure the quality of its products and maintain tight control of the supply chain, which would enable it to take immediate action should any problems arise.

In 2005, Gyeongsangbuk-do introduced a product tracing system based on RFID technology. RFID tags are attached to pallets of goods as they arrive at production centers. Staff then use handheld readers to record and receive information from these tags.

The RFID system allows government officials to collect information on food production in real time, trace the origin of all

items, and check the status of shipments at any point in the supply chain. This has made it easier for the Gyeongsangbuk-Do government to manage the production, distribution, and sale of agricultural products in local and international markets.

Improved Quality Assurance

As farmers are now aware of the traceability of their produce, they are taking greater care to ensure the quality of their crops. Customers such as agricultural wholesalers can find out where a particular item came from by referring to the RFID tag, increasing their trust in the safety and quality of the food item and maximizing the value of the products supplied by the province.

Buoyed by the success of the RFID product tracking system, the Gyeongsangbuk-Do government is now planning to extend the range of foods covered by the solution.

Why Oracle?

The Gyeongsangbuk-Do government had three criteria for its RFID solution. Firstly, the technology had to be robust enough to support a complicated distribution network. Secondly, it had to be able to collect and integrate a range of information from disparate sources into a single repository. Thirdly, the software must be flexible and easy to integrate with a range of hardware such as handheld readers.

Oracle Sensor Edge Server, a component of Oracle Application Server 10g, was chosen to build the RFID solution because it can process and integrate a vast amount of dispersed data. In addition, the middleware solution features high scalability and availability, ensuring the RFID system can scale to meet changing needs while ensuring around-the-clock reliability.

The Oracle software is also based on open standards, ensuring it is interoperable with the government's existing database and applications.

Why Fujitsu Korea?

Fujitsu Korea was engaged by Gyeongsangbuk-Do government to develop and implement the product tracking system. The company has in-depth experience in designing and deploying RFID solutions and the government felt confident it had the skills and knowledge to deliver the project on time and within budget.

Implementation Process

Development of the product tracking system started in July 2005 and was applied to nine agricultural products at 11 farmhouses in February 2006.

The Gyeongsangbuk-Do government oversees a province in eastern South Korea that is famed for its agricultural produce, including apples, barley, beans, potatoes, and rice.