

# Container Centralen to Monitor Millions of Crates

The Dutch container company is using Oracle's EPCIS-compliant system to improve supply-chain visibility in its operations.

By Claire Swedberg

Oct. 25, 2006—Dutch container management company [Container Centralen](#) is piloting an Electronic Product Code Information Services (EPCIS) RFID data-management system to track the movement of its clients' 20 million containers throughout the Netherlands. Container Centralen manages crates carrying produce from suppliers through distribution centers to retail sites and back again.

EPCIS, currently a candidate standard (see [Interop Tests Bring EPCIS Closer to Standard](#)), serves as a communication mechanism between applications and data repositories so companies can effectively exchange and query data from within their own RFID processes, and with partners. Currently, Container Centralen has no easy way to locate crates as they move from suppliers to stores. "The business requirements for [this RFID] system were mainly around supply-chain visibility of the crates," says Charles Willemsen, Benelux area manager for Container Centralen. "Right now, containers are only counted as they move from one location to another. There is no information about which crates, exactly, are moving from one place to another. And, therefore, there is no information about cycle times of the containers, or understanding of repair cycles."

The EPCIS-compliant solution aims to rectify that problem. [Oracle](#) is providing the software that will store the time, date and location of a container's tag read, associated with unique EPC numbers for each container in a secure database on the Internet. [Capgemini](#) will then use that data to provide Container Centralen with a supply-chain visibility analysis. Container Centralen can provide all its supply-chain partners—farmers, distributors and retailers—with access to pertinent data in the EPCIS database via the Web, says Peggy Chen, principal product director of [Oracle RFID and Sensor-Based Services](#). Container Centralen and its customers can find out, for instance, the average turnover rates per crate, occasions when crates deviate from that average and how long a crate is held in any specific location.

In addition, the container-management company can restrict how much data is available to specific business groups. As a result, crate information can be shared without disclosing other supply-chain data from a retail operation.

Container Centralen is tagging its crates with UHF Gen 2 RFID tags. The EPCIS-compliant solution is built on Oracle Fusion Middleware. The system uses Oracle Sensor Data Manager—part of the Oracle Sensor Edge Server, which manages all the RFID and sensor data collected at various locations. The data manager includes the EPCIS-compliant Information Services database, which stores information about where and when a container traveled throughout the supply chain, as well as Discovery Services for searching the data.

"The focus was on understanding how the crate-cycle information can be captured from RFID readers, while at the same time using the RFID information in the chain for tracking and tracing of the goods from manufacture to store," says Willemsen.

Oracle has been incorporating RFID capabilities into its products, says Chen, and is now focusing on EPCIS. "As opposed to a standalone project, [with EPCIS] you can use the data in conjunction with business intelligence, business-activity monitoring and integration capabilities," she explains. "It's more than catching data from farm to factory to distribution to store. What's important is getting a global view of the picture [by sharing the data]."

Willemsen believes the EPCIS network will make data sharing easier. "The whole architecture is scalable to cover a large group of distributed EPCIS event repositories," he says. These repositories could be alternate sets of data for different customers or users of the containers. "This can be easily extended to include more and more Container Centralen customers."

"The first key learnings from the pilot are around the delicate balance of distributed and centralized data," says Willemsen. The system can query all the information required to do full-cycle time analysis—that is, the details regarding how long a specific crate spent in transit and in each location along the supply chain. "The question is how much of that data will be drawn into a centralized application," he says.

Willemsen hopes the pilot will provide an opportunity to learn how to use the data generated, and how much of it to make available to his partners.

The pilot, which has been underway for several months, should be completed by the end of the year, Chen predicts. As crates pass through factories, distribution centers and stores, readers send data wirelessly to the EPCIS database. Container Centralen will work with its partners on reader compatibility issues with the company's RFID tags; some may already be using RFID interrogators, while others will need to have them installed.

In the meantime, Chen says, Oracle's customers are asking numerous questions about EPCIS. "We've definitely seen a lot of interest."

Earlier this year, consumer products firm [Unilever](#) launched its own EPCIS pilot project, involving the application of Gen 2 EPC tags to cases of goods, and the use of an EPCIS-based system to share tag data with retailers (see [Unilever Expects Big Gains From Its RFID Data-Sharing Trial](#)).

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