Westgate Logistics Focuses on RFID

To meet the needs of Colgate-Palmolive, Target and other customers, the Australian company seeks to be at the forefront of the testing and implementation of the technology.

By Beth Bacheldor

July 17, 2007—Following a successful RFID pilot with multiple business partners using RFID to track shipments of wooden pallets in Australia, Westgate Logistics, a unit of the Salta Westgate Group in Port Melbourne, Victoria, says it is planning further RFID tests involving the tracking of customers' products across the supply chain.

Founded in 1971 as Westgate Storage as a provider of logistics and supply-chain services, the company currently maintains 16 warehouses throughout Australia. It has more than 1,000 employees working in pick-and-pack operations, and operates more than 400 vehicles delivering products directly to stores and distribution centers. Among its many customers are consumer products company Colgate-Palmolive, retailer Target Australia and supermarket giant Woolworths' HomeShop home delivery service—all companies with an interest in RFID, according to George Lerias, national manager of Westgate's logistics solutions group.

"Our customers believe the implementation of an RFID solution is a natural progression in lower costs and improving data flow in the supply chain," Lerias says. "In turn, our customer base necessitates that Westgate Logistics is at the forefront of the testing and implementation of this technology."

Known as the National EPC Network Demonstrator Project Extension, the pilot was managed by GS1 Australia, a branch of international standards-setting organization GS1, in cooperation with RMIT University in Melbourne. According to Lerias, the trial provided Westgate Logistics with "the perfect opportunity to further understand and test [RFID] with experienced partners with the technical know-how and resources to undergo such a pilot" (see Australian Companies Say Pallet-Tracking Project Proves RFID's Mettle).

Participants consisted of CHEP, ACCO Australia, Capilano Honey, Franklins Australia, Procter & Gamble, Linfox and MasterFoods, as well as service providers Telstra and Retriever Communications.

Westgate Logistics provided a warehouse site for the pilot in Yennora, New South Wales. Stacks of empty wooden pallets, fitted with EPC Class 1 Gen 2 RFID tags, were received at the warehouse, documented via four RFID antennas and an interrogator at the dispatch door, and sent on to CHEP's facility in Erskine Park, New South Wales. The RFID reads were captured and communicated via Westgate Logistics' Cisco local area network to a secure Internet site, on which pilot participants could view the data.

Early on, Westgate Logistics realized it would need outside technical assistance to set up the RFID reader and antennas. It also learned that a vigorous quality-assurance process must be established for a successful RFID implementation to weed out dysfunctional or damaged tags and failed reads.

In addition, the logistics provider had to test multiple read distances before finding the most favorable range. "The fixed readers have an optimum distance of between 600 millimeters [23.6 inches] and 800 millimeters

[31.5 inches]," Lerias says. "Any closer and the top and bottom pallets could be missed."

Westgate Logistics further determined that pallets must be kept at a specific distance from the floor—otherwise, the reads might fail. "There was a requirement for the pallets to be kept around 20 centimeters [7.9 inches] off the ground," Lerias explains, "as we found out that if the pallets were any lower, the radio frequency waves would reflect off the floor and prevent the pallets lower in the stack from being read."

What's more, the tiny amount of water content in the wood required that adhesive foam strips be used to affix the RFID tags, to provide a separation between the chip and the wood. Water can sometimes interfere with RF waves.

RELATED_ARTICLES Westgate Logistics' was one of the first sites to participate in the pilot, which ran for approximately two months. During the first series of tests, read rates were between 92 and 95 percent successful, though a second round of testing showed an improved success rate at 98 percent. "As this was still not good enough," Lerias recalls, "the processes were then again reviewed and changed, and after many tests and hours of collaboration, the required outcome of a 100 percent read was achieved."

Armed with experience from the pilot, Lerias says, Westgate Logistics now wants to expand its RFID project from tracking just the physical assets, or pallets, to tracking customers' products. "In order to build a business case," he notes, "we will complete further testing to support further investment in the technology." Although Lerias declines to release specifics at this juncture, he states that Westgate Logistics has identified customers to further test RFID in the supply chain. Additionally, he adds, the company has identified key areas where it thinks RFID will improve information flow and business processes, while also eliminating waste and providing further value to customers.