

Diakinisis Finds RFID Helps It Expedite Shipments

The Greek third-party logistics provider is using EPC Gen 2 RFID tags and interrogators to track 1,300 pallets per day for a global food and beverage company.

By Beth Bacheldor

Feb. 8, 2008—Greek third-party logistics provider Diakinisis is employing EPC Gen 2 RFID tags and interrogators to track about 1,300 pallets daily at a distribution center it operates in Athens. The company uses Alien Technology EPC Gen 2 Squiggle and M tags and ALR-8800 interrogators. Athens-based RFID systems integrator Business Effectiveness provided consulting and installation services for the deployment.

Diakinisis currently uses the RFID technology for only a single client: a global food and beverage company that has asked not to be identified. The project got underway about a year ago, and installation was completed in November 2007.

"Diakinisis has several of the largest consumer goods companies as customers," says Vlasios Tsezos, engineering manager at Business Effectiveness. "Its strategic thinking was that they wanted to have a point of difference with regards to competitors, and it was decided that RFID was the way to achieve that." Moreover, Tsezos says, the RFID system allows Diakinisis to save labor and time because its workers no longer must manually scan bar codes used to identify the pallets. The technology can also provide customers with greater and more accurate visibility of their goods being shipped.

When a pallet enters the DC—which Tsezos estimates is about 1.2 million square feet—its bar-code label, previously applied by the food and beverage company, is scanned and associated with an Alien Squiggle tag, which is then affixed to the pallet. From there, a forklift rigged with an RFID interrogator and computer picks up the pallet. The forklift's reader captures the tag's ID, and the computer screen then tells the driver where to move the pallet.

"When the pallet is read, the computer communicates with a WMS [warehouse management system], which specifies where the pallet needs to go," Tsezos explains. "This makes it much faster for them to actually store the products, because with bar codes, the drivers usually had to get off to scan the bar code, and sometimes they would even have a problem with reading it. So there is a substantial increase in the speed of operations."

The driver then takes the pallet to the appropriate storage rack, as instructed. To document that the pallet is being delivered to the correct spot, each location is identified either by an Alien M tag glued to the concrete floor, or by an Alien Squiggle tag applied to the rack, depending on which worked best at that particular location. The forklift reader captures the floor or rack tag data, and the computer confirms the location and communicates back to the WMS that the pallet has been delivered to the appropriate site.

If an employee tries to place a pallet at the wrong location, the computer screen freezes, preventing the driver from proceeding with the next task. In addition to guiding incoming pallets to various racks, the

forklift-mounted computers also receive instructions to retrieve pallets from specific locations and verify, via the interrogator, that the correct pallets are being picked up.

"You are eliminating a lot of errors on product placement on the racks," Tsezos says. "Due to that, is it much faster to locate products. If you put products on the right rack in the first place, it is much easier to retrieve the products."

Additionally, Diakinisis has affixed Alien EPC Gen 2 RFID tags to trucks that pick up pallets at the loading docks and deliver them either to other DCs or directly to stores. At each loading dock, an RFID portal reads the tags of every pallet loaded onto that truck, recording the RFID tag numbers. That information is automatically cross-referenced with data in the WMS, and in the event of a discrepancy, a light stack displays an alert and a siren is sounded.

"The portals help with traceability. You know exactly that the truck went to a specific customer carrying specific pallets," Tsezos says. "So obviously, you minimize human errors and associated costs—you have to repair the errors or, in some cases, because these are food products that have expiration dates, pay for the loss of products if you ship the wrong products to customers. And obviously, there's better customer service, because the customers receive what they want, and they can see what and when goods were shipped."

RELATED_ARTICLES The project wasn't without some custom engineering, Tsezos notes. Business Effectiveness tested several commercially available forklift readers, but wasn't satisfied with their performance. "We had to work on designing custom forklift readers. There was a lot of engineering involved," Tsezos says. "Also, we had to install RFID tags on the floor while considering the fact that the floor has a substantial amount of metal in it because it is industrial flooring."

Still, Tsezos says, RFID's benefits are taking the implementation to the next level. Diakinisis, in fact—with the help of Business Effectiveness—is now working on reengineering some of its business processes because of the efficiencies it gained from the technology. "For example," Tsezos states, "instead of having in-between steps, such as placing pallets in a spot and then having them picked up by another forklift that'll take them to the rack, employees are taking the pallets directly to the racks as they come in. This avoids double handling."

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