

Euro Pool System Tags Reusable Crates

Euro Pool System is running an RFID pilot involving EPC Class 1 Gen 2 RFID tags molded into the bottoms of foldable plastic crates, enabling it to track the containers more quickly and efficiently.

By Beth Bacheldor

July 23, 2007—[Euro Pool System](#), a provider of reusable containers used primarily for fruit, vegetables and other products, is implementing passive UHF RFID tags and readers to help improve its overall logistics and inventory processes.

Euro Pool System is headquartered in Belgium, with facilities in France, Germany, Italy, Spain, the Czech Republic and Slovakia. The company began looking to RFID as early as 2003, says Henry Lok, Euro Pool System's manager of engineering and development, hoping to employ the technology to improve and streamline its overall logistics.

Specifically, the company was drawn to RFID because the technology would not require line-of-sight scanning, unlike the linear and two-dimensional bar codes it also uses. Euro Pool System transports hundreds of orders for containers every day to and from various countries in Europe, and owns more than 88 million containers, which it uses to carry at least 414 million separate shipments per year.

Euro Pool System contracted Hewlett-Packard's Business and IT Services arm, [HP Services](#), which just recently opened a new RFID Solutions Center in Milan, Italy, in collaboration with [Intel](#), [Microsoft](#) and the School of Management and the Department of Electronics and Information at [Polytechnic of Milan](#). There, HP consultants tested tags, readers and middleware to develop an RFID system that would work at Euro Pool System's distribution depots.

Now, Euro Pool System is running an RFID pilot at its newest depot, in Zellik, Belgium, leveraging EPC Class 1 Gen 2 RFID tags molded into the bottoms of foldable plastic crates. Installation of the Zellik pilot started in January 2006. With the crates being moved on pallets that hold up to 304 crates at a time. RFID-enabled portals read the RFID tags of palletized crates (empty or filled), documenting when they arrive and leave the Zellik depot, as well as the total number of crates on hand at the depot at any given time. The Zellik pilot follows Euro Pool System's initial work with RFID, which started in 2004 and involved the testing of EPC Gen 1 technology. The company began working with HP in early 2005.

The RFID technology, Lok says, lets Euro Pool System track the crates much more quickly and efficiently than it could with bar codes. "RFID will increase our process speed," he explains. "At this moment, you need to stop for one second [at the portal] to read a full pallet of crates with 2-D bar codes. With the RFID tags, you can go through a portal at 6 kilometers (3.72 miles) per hour. That's much faster."

Together with HP and [Bekuplast](#), a German injection-molding company, Euro Pool System designed an RFID-tagged, foldable crate measuring 60 centimeters (23.6 inches) long by 40 centimeters (15.7 inches) wide. The crate is available in several heights, ranging from 10 centimeters (3.9 inches) to 24 centimeters (9.4 inches). Embedded in the crate's lower side, Lok says, the tag is designed to withstand high-pressure cleansing

with soap and water as hot as 70 degrees Celsius (158 degrees Fahrenheit).

HP and Euro Pool System began designing and testing the RFID system in early 2006, attaining a 60 percent success rate during the first year of operation. "A lot of the readers we tested were not really working, so we had to do reprogramming, and software filters were added. Other times the tags weren't functional, so we changed tag technologies," Lok recalls, noting that the read rate is now 100 percent. "We've checked readers, modified antennas—everything you could imagine, we've done."

Lok adds, "We believe that by having these RFID tags, we'll be able to better track the crates that are returned. Being very accurate on 304 crates can be challenging, because you might receive a pallet with 300 without noticing it. So we will be better equipped to accurately give back deposits to customers." The use of RFID, he says, will provide Euro Pool System a much more accurate count of the crates it has on hand. With that information, the company will be able to reduce the amount of stock it carries, without worrying that it might not have enough if a customer needs more crates.

Euro Pool System is currently testing the RFID technology only at its Zellik facility, but hopes to enlist participation from the retailers renting its crates. The company plans to begin this next phase in the first quarter of 2008, during which retailers would use RFID interrogators to read the tags of arriving and departing crates, as well as track those crates in their stores.

Euro Pool System expects its customers to be able to take advantage of the RFID data collected from the system. "Our retail customers will know better, via RFID, where the crates are when they get to their shops," Lok says. "They'll know better how many of the crates are still filled [with produce], and when they are emptied. They'll also know how long a certain crate has been in the shop, and how fresh the produce is. All these benefits will result in cutting waste."

Euro Pool System intends to continue working with HP at the Milan RFID Solutions Center through the fourth quarter of 2007. "We will mainly demonstrate the abilities of the technology to potential partners and [further test] the reliability of tags and equipment," Lok says. "HP has a lot of experience with RFID already. We've been able to learn all the good and bad things about RFID from HP. With RFID, there is a certain learning curve, and having HP in on the project reduced that learning curve."

RELATED_ARTICLES HP's Milan RFID Solutions Center joins a growing list of other HP-operated labs and centers focused on RFID, says Frank Lanza, HP's worldwide RFID director. These include facilities in Bristol, England; Palo Alto, Calif. (see [HP Kicks Off U.S. RFID Demo Center](#)); Toronto, Canada; and Sao Paulo, Brazil. An additional center is located in Tokyo, and HP eventually plans to open another in the Australian/New Zealand region.

HP also operates so-called "noisy labs," including sites in Memphis, Tenn., and Beijing. These labs are set up to mirror real-world manufacturing and other environments so the company can test RFID technology solutions. HP's lab in Sao Paulo, for instance, is a noisy lab used by the company to develop, test and implement RFID in its own products (see [HP Takes RFID End to End](#)).

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