

## Use Data Capture Skill In Distribution Markets

This systems integrator paired a tried-and-true supply chain process with a customized software solution to succeed in the distribution market.

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When systems integrator Enterprise Mobility saw the inventory and distribution processes in place at a petroleum product wholesaler's warehouse, the resolution to the customer's dilemma was apparent. Phil Lachmann, VP of product development for Enterprise Mobility, explains that the entire supply chain process, paper-based at the time, needed to be transferred to an automated system supported by a wireless network and handheld mobile data capture devices. "The biggest question was interfacing with the company's existing Accpac system [an accounting and operations software]," adds Lachmann. While Enterprise Mobility offered the customer a couple of solution scenarios, it was the systems integrator's willingness to work with the end user's customized Accpac system that won Enterprise Mobility the job. "Our flexibility to build the system tailor-made to their business processes and our ability to integrate with their existing inventory and accounting application were major factors in the decision," says Lachmann.

Once Enterprise Mobility won the job, it explored how paper processes were used by the customer to not only track inventory of the petroleum products, but also to organize distribution of the products via trucks and tankers. "The client delivers bulk oil and packaged oil products to auto stores and oil change outlets," explains Lachmann. To keep tabs on all of those products, the company used clipboards and paperwork. The paper trail was manually entered into the accounting system, a process that could lead to as much as two days of lag time between the arrival of products and their entry into the inventory system. "Inventory accuracy was also a problem," says Lachmann. "Since the inventory movements and counts were never up to date in the system, locating products for shipment was a cumbersome process that sometimes resulted in customer orders not being properly filled." To resolve these issues, the systems integrator installed a 3Com wireless network and developed a custom data collection application to interface with the Accpac system, which runs on Intermec CK3 handhelds with long-range scanners. The software, database, and the customer's website now reside on a Dell server installed by Enterprise Mobility as part of this project. Sybase SQL Anywhere 9 was used for the database software. "With this system, warehouse users can scan product into inventory, move it to different inventory locations, and load it onto delivery trucks, all within one system," says Lachmann.

### Legacy System Complicates Implementation

Installation started with a three-month pilot program that allowed the customer to slowly transfer its processes from paper to the wireless system. "We installed a developmental environment at our offices before we went to the customer's site and set up a test with the Accpac system to ensure compatibility," explains Lachmann. "Then, for the first few weeks, they took paperwork and punched it into the handheld to cross check accuracy with the new system." Enterprise Mobility was challenged when there was some difficulty getting data to populate within the Accpac system, which sometimes locked up due to the use of multiple handhelds feeding in data. "We modified our integration code to allow for retry loops to deal with this condition," explains Lachmann. "This allowed the handhelds to operate while the integration code waited for the table to 'unlock' to post the transaction."

Another challenge came when it was time to load the bar codes for the petroleum products. Because the old system had no record of bar codes associated with the products, the customer and Enterprise Mobility had to contact each supplier for those bar codes. Some were less forthcoming than others. "Being without the bar codes left the system in a state that wasn't very usable, so for the pilot phase, we loaded the UPC codes that we had," says Lachmann. "To collect the rest, we implemented an additional feature to allow a 'super user' to scan a bar code and, if the bar code is unknown in the system, then the super user can associate it with an internal brand code." Next for Enterprise Mobility is integrating the customer's distribution system so delivery drivers can use a handheld device and a portable printer to capture proof of delivery and track inventory.

While the final ROI can't be determined yet, Lachmann says the customer estimates an increase in inventory accuracy from 50% to more than 80% with the new system. Plus, the delivery of inventory information into the accounting system has dropped from two to three days to same day. "They take delivery, scan the code, and it shows up immediately in inventory," says Lachmann. For Enterprise Mobility, opportunity lies in selling this solution to other distributors. "There are quite a few distributors that have not implemented bar coding to improve accuracy, and both the customized Accpac integration solution and the 'super user' bar code loading solution will clearly have usage in other applications," says Lachmann.

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