

Case Study



Automated System Keeps Inventory Accurate and Updated

Challenge: A leading Grand Rapids, Michigan-based manufacturer of household cleaning machinery relied on a seven-person staff of full-time employees to manually enter hand-written inventory data. Every part placed into the warehouse and every finished product sent to the shipping dock was recorded on a transfer ticket and later entered into the company's antiquated warehouse management system. In the hustle of this fast-paced consumer goods manufacturing environment, errors were common and the employees were spending more time entering data than moving product. The system was so inefficient and inaccurate, the company was forced to use three full-time dedicated counters to ensure that inventory levels were sufficient to meet production schedules.

To make the situation worse, the company did not record the locations of parts and finished products, causing pickers to waste time searching for goods in the warehouse.

"One person, the forklift driver, stocked supplies and finished goods within the warehouse," said a manufacturing systems analyst. "If he was off for a day or on vacation, the entire system suffered because there was no physical or electronic record indicating where he put the stock."

Solution: To synchronize the warehousing operations with the rest of the manufacturing operations, the company implemented a home-grown wireless network that incorporated a supply chain management solution with a data capture system. The system relies on bar coded labels and tags, printed on Zebra® printers, to track the movement of goods into and out of the warehouse.

Application: The company's venture into enterprise-wide wireless radio frequency (RF) networking has given it a chance to integrate bar code printing and scanning into several warehousing processes. Each incoming item is labeled with a system-generated bar code that indicates where the item should be placed in the warehouse. Several Zebra printers are used on the receiving dock and at the warehouse entrance to make sure that bottlenecks do not occur. When an item is needed on the production line, pickers follow pick-list instructions through the warehouse, and use wireless data terminals to scan the bar codes on the listed items. As items are scanned, they are automatically removed from the system's inventory count.

"The Zebra printers were an easy choice," noted the systems analyst. "Not only is the reliability of Zebra products without comparison, but they perform flawlessly in wireless networks—without interference and without data loss."

Results: The company's system is always accurate and up to date. Zebra printed bar code labels have replaced manual data entry to remove the risk of human error. The company can order new supplies on-the-fly to meet specific production schedules, reducing the space needed in the warehouse. Additionally, the system keeps constant record of the location of items in the warehouse keeping the production process moving, even if the forklift driver is out for the day.

By printing its compliance shipping labels on-demand with Zebra printers, this company eliminated a finished-goods inventory backlog caused by batch-printing delays.



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