



A Zebra Technologies White Paper

Inventory Is The Store

How mobility maximizes return on inventory investment



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Understanding this truth is one catalyst that has the power to make average retailers great. Successful retailing boils down to profitable inventory turn, and the best way to improve profitability and turn is to forget everything you thought you knew about the mundane exercise/discipline/system known as “inventory management” and freshen up your approach. Revisiting the basics of ordering, pricing, promotions, auditing, markdowns, and replenishment and applying mobile, analytically-driven solution software to their execution is the key to gaining inventory control. And as retail professionals charged with the management of inventory know well, mistakes can be made at every turn—mistakes that could cost you the season’s profit on a SKU.

Merchandise Analytics Drive Application Efficiency

Maintaining accurate inventory is at the heart of retailing. An accurate, real-time view of inventory is key to meeting planned sales goals, preserving margins, and meeting the expectations of your customers— all imperatives for running a healthy retail business. Perpetual inventory solutions are one means to that end.

Perpetual inventory solutions handle all the elements of an accurate in-store inventory, including receiving, transfers, return to vendor, physical inventory, cycle count, scan data collection, and inventory adjustments. Modern inventory management solutions such as this enable real-time inventory updates to a perpetual count of the total onhand quantity of each SKU. They also allow management of “committed quantity,” or that quantity of store- level SKUs that has been preordered or requested by customers; demand forecasting and cycle counts, which reconcile quantity discrepancies automatically; and receiving diverts, whereby merchandise can be diverted to the sales floor immediately during the receiving process. Other benefits of perpetual inventory management systems include:

- the optimization of customer service that comes with knowing, not guessing, that merchandise is in stock to support customer demand
- the minimization of lost sales by reducing out of stocks
- the reduction of labor for inventory management and adjustment applications
- the optimization of stock performance and profitable turns
- the reduction of reconciliation time for cycle counts and physical inventory.

In their analysis of the top supply chains in retail, AMR analysts Mike Griswold and Debra Hofman agree that maintaining high on-shelf availability is the key point to inventory turns. “Perpetual inventory and CGO (computer-generated ordering) provide a solid foundation for realtime inventory visibility and automated generation of product orders,” says Griswold. “Perpetual inventory and CGO foster improvements in product availability by ensuring orders are created and sequenced to align with customer demand.”

Once product is on the shelves, inventory management hinges on the execution of product lifecycle management and price optimization. Modern price management applications help retailers manage product, pricing, and promotions by applying controls driven by analytics. Price management functions that support item verification, weights and measures compliance, price changes, and reticketing are best executed in the aisles via wireless mobile computing.

Mobile Solutions For Efficient Inventory Management

Key to improving inventory management is meeting your inventory where it lives on the shelves. This is achieved through mobile computing enabled by inventory management software, wireless networks, mobile hardware, and sound processes. As retail technology expert Dan Hopping points out in the sidebar on the following page, the cost of computing and wireless networking have fallen to the point that retailers of all sizes are capable of deploying mobile inventory management solutions.

Vendors of mobile computing solutions such as Motorola and Zebra are focused on delivering inventory management solutions like those offered by SofTechnics to the retail industry on the convenient form factor of a handheld computer. Scanning; ticketing, shelf labeling, and item labeling (which are three of a retailer's few constant and controllable customer interfaces); price auditing; markdowns; and promotion execution are but some of the inventory management applications retailers can run more efficiently using mobile technology driven by modern software solutions. Aisle level shelf labeling, for instance, has consistently reduced store relabeling time 40% among retailers deploying the technology. Driven by merchandising software, mobility enables the labeling and relabeling process, whether it involves tickets, shelves, or items, to be as simple as a scan of the SKU's UPC with a scanner-enabled handheld. This is followed by the automatic printout of the correct label or ticket on a portable printer, and application of that label or ticket to the item or shelf. The reduced cost and time spent on inventory management that's enabled by mobile scanning, labeling, and ticketing saves margins and has a ripple effect by enabling more frequent and creative pricing and promotion initiatives. Erv Jones, VP of marketing at inventory management software provider SofTechnics, says that software driven via wireless networks to mobile handhelds is but one element of the system. "Process is even more important than the tools used to execute it," he says. "Developing a process that leads to real-time inventory management and inventory accuracy, is the starting point," he says.

In terms of process, the flexibility enabled by mobility is important as well. Because pricing and promotion changes can now happen so quickly, retailers can combine applications like price auditing, markdowns, clearance, and relabeling. For example, as an item is scanned for price auditing against the central store system, the system beeps if a new price applies to the item. Simultaneously, a new label or ticket is printed for application. Mobility speeds the time it takes to implement price changes by up to 50%.

"Store execution practices can also ensure that orders are automatically placed without associate intervention, with training regarding the ordering practices for new associates shortened," says AMR's Griswold. He also says supply chain leaders recognize the link between this kind of execution and merchandise planning. "Consumercentric merchandising integrates demand, assortment, allocation, space management, pricing, and promotional planning processes, allowing retailers to align product and promotional decisions with store-specific consumer demand signals," he says. "Organizationally, retailers must move merchandising and marketing functions from traditional, vendor-driven events to more collaborative and consumer-driven strategies."

Ancillary Benefits Of Mobility

In addition to back office functions, mobile computing has significant customer-facing implications as well. Line busting, the practice of preparing customers for checkout as they wait in line, is achieved using mobile scanners/computers and has been shown to increase specialty same-store sales by 1%. Mobile computing empowers consumers as well, as demonstrated by scanner-wielding bridal and registry customers in savvy retail environments. This also eliminates the need for time-consuming associate interaction with registry customers. Indeed, mobile computing's key retail ROI is planted firmly in inventory management. But the multifunctional nature of today's mobile computing solutions make them an integral and multifaceted tool that bolsters ROI. Griswold's analysis of the AMR Research/NRF CIO Council's fourth annual retail IT budget

benchmarking study is that inventory optimization, life cycle pricing, and fresh item management will generally need more attention and retail wallet share in 2008.

Mobility And The Future Of Inventory Management

Dan Hopping has made a life's work of figuring out what you, the retail technologist, should do next. Hopping, president of retail technology consultancy Next Retail Group, says mobility should be part of your every in-store technology initiative, and that a mobile inventory management solution is no exception. "Ten years ago, mobile technologies were limited to \$100 million and larger retailers. Today, it's folly for even a \$5 million retailer not to apply mobile solutions to inventory management," says Hopping. "The cost of computing and the cost of wireless have dropped to the point that there's a business case for virtually every retailer."

But the future is where Hopping's passion really lies. "I'm working on store of the future projects with 27 different retailers right now, and more investment in mobile (802.11) technology is a common thread among all of them." Elements of inventory management such as receiving and direct store delivery, says Hopping, are the prime movers of mobile technology in the retail sector. But, he says, running multiple applications on mobile devices is the key to maximizing return on the asset. Line busting is just such an application. In specialty stores, line busting (scanning a customer's merchandise while they wait in line to speed the POS transaction) has been shown to increase sales by 1% in comp-store studies. That percentage could conceivably be expected to double or more among big-box retailers.

Extended Supply Chain And The Art Of Inventory

Looking five years ahead, Hopping says what we currently consider the endpoint of the supply chain will change. "Technology has brought us to the point where, increasingly, the POS is no longer the end of the retailer's supply chain," he says. "Five years from now, it will be common that the supply chain will extend to the consumer's pantry." Hopping envisions automated replenishment happening not on store shelves but on pantry shelves due to pervasive Internet and cell phone connectivity.

Hopping also anticipates more scientific inventory management applications in the near future thanks to better forecasting algorithms, and though he is a self-described futurist and technologist, he doesn't discount the art of merchandising. "The merchandise and inventory managers will never be totally replaced by computers," he declares. "There will always be the "why" question behind every trend that data mining detects. Many of those why questions can only be answered by the human mind." In practice, Hopping points to a scenario where a data mining process identified spikes in the sale of bananas and apples when they were juxtaposed on a store shelf. Human analysis uncovered that the timing of the spikes coincided with autumn back-to-school shopping. That buyer was careful not to overstock outside of that selling season. In the apparel segment, Hopping points to pop culture's huge sales influence as an argument for the human factor. "If a young starlet attracts attention in a new style, whichever retailer gets it to market first will sell out of it. Computer science can't predict that."

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Daniel Hopping is a global technology futurist, author, consultant, and speaker. With over three decades of hands-on experience, Dan's area of expertise is forecasting the impact that technology will have on the retail industry and tomorrow's consumer.

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