

# The importance of localized inventory management and planning

By Dr. Linda Whitaker, Chief Scientist, Quantum Retail

The current state of the global economy means that individuals and organizations are trying to find ways to reduce costs and increase profits. For retailers, things are not only difficult but highly unpredictable. Some retailers have reasoned that the best thing they can do is cut expenditures on new technological systems and processes in order to save money. Others have decided to increase these expenditures, but are being more selective about what they spend their money on. In times like these, demonstrable return on investment is essential before choosing to invest in any new product or system. Yet, the right expenditure on the right technology can yield dividends.

---

## The biggest investment you make

One area that many retailers can improve upon is inventory management. Inventory is the biggest investment a retailer can make, yet retailers are unaware of how to use their inventory processes to achieve a competitive edge. Traditionally, they will carry out assortment planning, allocation and replenishment activities based on a process known as clustering. Each individual store in a retail chain is grouped together with other stores that the retailer believes are similar, for reasons ranging from geographic proximity, to square footage to average income of shoppers. Market demographics are often used to try to understand the potential customer base in a cluster based on geography and other common traits. These clusters of stores are then treated the same in terms of type and quantities of inventory stocked. This is based on average performance of items across the cluster.



Certainly, there are some benefits in utilizing market demographics for clustering. They can be very useful in long range planning, and in understanding how a retailer's core offering can be tailored to meet local requirements. This type of demographic data can also be extremely useful when a retailer is planning to open a new store. Since data on behavior in the new store will not be available for some time – at least for initial allocation – using data from similar stores in that area only makes sense for helping the store get up and running.

Additionally, many retailers today use market basket analysis, which assumes that if a customer buys one type of product they are likely to buy another as well. For example, if someone purchases a remote control car, they are likely to buy batteries as well. Or if a customer buys a swimsuit, he or she will likely also want to purchase sunscreen. This type of analysis is useful in understanding product affinities and the ability to flex demand across multiple products, and understanding the cross-sell and up-sell opportunities in the assortment to drive store specific ranging.

## Room for improvement

Despite usage of these types of techniques, which do help improve a retailer's performance, at the end of the day just because stores are similar does not mean they will always perform in the same way. Every store is unique and each item in each individual store is going to behave differently. Traditional inventory management approaches do not drill down to an individual SKU-store level. These are supported by systems that are designed to react to observed changes in demand on an aggregate level, rather than accurately anticipating what that demand is going to be.

This lack of accurate forecasting and SKU-store level detail creates a number of inefficiencies in the way retailers use their inventory. Yet it's crucial because inventory affects everything from out of stocks to markdowns, and at the end of the day has the biggest effect of any activity on the bottom line. What is needed is a way to gather insight into product performance at an individual store level which can then be used to determine which products to stock, how many of them to order, and in which stores to place them to ensure better product availability without holding excess inventory and eventually forcing markdowns.

## Technology offers new solutions

The first step is to define the objectives that a retailer wants to achieve. Many retailers have difficulty identifying their priorities: unsure whether they're looking for a high level of product availability, an increase in market share, or whether they just want to maximize profits. While there are those who have defined their objectives, they are unable to make decisions that will help them to move toward achieving them. Often it is simply that they are unaware their inventory can be managed to not only achieve those objectives but also that the technology is available to make it happen.

Q, a comprehensive allocation and replenishment solution from Quantum Retail, works in real time to analyze the performance and behavior of every single item in every single store location. It assigns each item a role, whether it is a loss leader, traffic driver, or core staple. While one large US retailer employs over 200 people to manually review the replenishment parameters of only 10% of its items each day on a cluster basis, Q analyzes 100% of items on a store-by-store basis every day.

Importantly, Q is fully and easily scalable regardless of the number of stores, ranges, and items a retailer may have. It reacts to both supply and demand side signals, but also acts proactively by providing accurate demand forecasts based on those same signals, in addition to a variety of other parameters that influence retail demand. Demand signal evaluation should look at all available information about a product and its performance at the store level. Supply side considers what inventory is available and what inventory is expected in the near future. Uniquely, Q is able to consider both demand and supply signals simultaneously and continuously to determine how best to utilize available inventory.

The result is that Q typically tells a retailer to change their distribution activities to hold back more inventory initially, then replenish based on individual store performance. This is effective in part because Q views allocation and replenishment as the same activity rather than two separate processes. The system then considers all of the data available along with the allocation and replenishment options it can choose from, and decides what activities to proceed with based on the objectives the retailer is trying to achieve. One of the biggest benefits of using a system like Q is that it is goal seeking, so it always keeps the retailer's objectives in mind and makes decisions that will further said objectives. Q is also quick and easy to implement compared to the vast majority of solutions on the market today. This is thanks to its small hardware footprint and ability

to coexist with most existing supply chain and inventory management systems. Every implementation of Q around the world has paid for itself within 6 months.

## Benefits of new processes

The value of using an approach like this is immense. Benefits seen by all retailers who have used Q to date include higher full-price sales, fewer out of stocks, less inventory that must be marked down, lower overall inventory, lower carbon footprint thanks to more efficient distribution activities and fewer shipments, higher market share, and increased profitability. Q also provides great detail in terms of visibility into product performance giving retailers greater insight into key performance indicators (KPIs) and enables users to run simulations to predict what effect any changes to the system's configuration will have on performance.

An example is European fast fashion retailer, New Look, which saw an increase of 2.8% in like-for-like sales in the 14 weeks to January 3, 2009 following implementation of Q. New Look was one of only three major retailers in the United Kingdom to see increased like-for-likes over that period. New Look attributes part of that increase to improvements in its inventory visibility down to the SKU-store level, thanks to Q. Additionally, New Look's overseas divisions saw a 30% uptake in sales, due in large part to increased localization in planning its size offering down to the store level.

The ability to understand the unique behavior of items in different locations and react to that difference is something that retailers have sought for years. Thanks to technology, it is now possible to act as though you have someone managing the allocation and replenishment activities for each item at each store individually. The benefits of doing this, including increasing both customer service and profitability, are undoubtedly of enormous value to retailers. In these difficult economic times, anything that can provide a quick, measurable return on investment is worth investigating.

---

## Quantum Retail Technology, Inc.

**The market is asking new questions... you need new answers.**

Q answers the new questions facing grocers and retailers today with solutions that enable them to profitably buy, move and sell merchandise, solving the most complex and costly problems they face - **quickly and permanently.**

**Q is the answer for:** Assortment and Range Planning - Forecasting and Order Planning - Replenishment and Allocation

Every Quantum Retail customer has achieved 100% return on investment in less than 6 months. For more information visit <http://www.quantumretail.com>. Follow Quantum Retail on Twitter at <http://twitter.com/quantumretail>.