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Achieving Six Sigma Retailing

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Retailers would like to perform at the same level as manufacturers that have embraced Six Sigma strategies, but it can't happen without RFID.

By Mark Roberti

June 1, 2009—The *Wall Street Journal* recently published an article entitled Clarity Is Missing Link in Supply Chain. The story focused on the supply chain for semiconductor chips used in DVD players, computers, iPods and a host of other electronic products. The article noted that when the financial crisis led to a sudden and dramatic collapse in consumer spending, companies were able to react quickly, though they did not have good data to act upon.

The supply chain for many consumer electronics products ends at Best Buy. When the crisis hit, according to the article, the retailer had no idea by how much to cut weekly orders. As such, it made best guesses, as did suppliers down the line. The big problem was that the retailer and its suppliers were not in synch. Suppliers reduced their orders more than necessary, and were thus unable to deliver the products Best Buy required. As a result, the company believes it lost sales.

The article highlighted the lack of visibility that led to an inability of suppliers and Best Buy to match supply to demand. Retailers are not tracking in-store inventory accurately, so they do a poor job of reacting to changes in consumer demand. What's more, they are unable to provide suppliers with the data needed to meet that demand. The crisis exposed the problem, but it exists all the time, not just when there's a sudden decline in consumer spending. There are always spikes in demand, such as when a new gadget turns out to be hotter than expected, or when a product disappoints and there is oversupply.

It's no wonder the big industry buzz is about Six Sigma retailing. Six Sigma is a manufacturing philosophy—started by Motorola—that seeks to improve the quality of manufactured goods by identifying and removing the causes of defects and variations in manufacturing and business processes. The goal of Six Sigma efforts is to reduce the number of defects to no more than 3.4 per 1,000,000 units produced, tasks performed, orders filled, customers served and so forth.

Retailers can never achieve this level of efficiency with current technologies, because they are unable to measure their own inefficiencies, or those of their partners. They can not easily measure, for instance, the number of times customers enter a store and fail to locate, on shelves, the products they want to buy. As such, these companies can't address operational issues, either within the store or within the supply chain. In other words, how can you work with your suppliers to solve a problem when you can't even measure the extent of that problem?

The strength of radio frequency identification is that it enables retailers to collect the information they

need, with little or no additional labor costs. The technology makes it possible to take inventory once daily or weekly, so inventory inaccuracies can be corrected. And it also allows retailers to perform root-cause analysis more effectively.

Let's say a retailer orders 100 units of a new digital camera for the month of July. It sells 50 units in the first two weeks of that month, then 30 units and then none. It might appear that demand has fallen off, and that the units do not need to be replenished in August—or that they need to be replenished, but in a smaller quantity.

But what if the demand were for 50 units per week—yet only 95 units had been shipped to the store, 10 were pilfered by employees and another five were stolen by customers? That would mean only 80 units were available for sale, and had quickly sold out. The retailer should thus be ordering 50 units per week and communicating that demand to its suppliers, but incorrectly believes the demand is a lot lower.

By capturing data regarding the movement of goods at every point in the supply chain, RFID can provide information that indicates only 95 were shipped. And by taking daily inventory counts, the retailer knows that units are being stolen, and can therefore inform suppliers to replenish more quickly, thereby ensuring that fewer sales are lost. Moreover, companies can analyze data to see where problems occur in the supply chain and in the store, so that corrective actions can be taken.

At a macro level, better perpetual inventory allows the retailer to gather and analyze more accurate data from across the entire chain, and to order replenishments more efficiently. Sharing this information with suppliers enables those suppliers to react more quickly to changes in demand, without having to maintain large safety stocks on hand in case of a spike.

Would radio frequency identification have prevented the problems described in the *Wall Street Journal* article? If all items had been tracked with RFID and the data had been analyzed properly, the retailer would have had a clearer picture of demand, based on more accurate in-store inventory counts. And armed with that information, the company would have then been able to provide more accurate data to its partners, thus enabling them to replenish more effectively.

Supply chain partners are more reactive than ever before, but companies do not always react to accurate data, and there is no way to achieve Six Sigma performance without basing performance on accurate information.

Mark Roberti is the founder and editor of RFID Journal. *If you would like to comment on this article, click on the link below. To read more of Mark's opinions, visit the RFID Journal Blog or click here.*