

## RFID: Supply Chain vs. Merchandising Visibility

By Steve Banker

More than six years ago, WalMart announced a new EPC RFID mandate. RFID was going to revolutionize the supply chain, leading to better visibility for suppliers and reduce out-of-stocks for retailers. That was the vision. However, when [I interviewed twenty-four of the top 100 suppliers](#) that

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were mandated to participate, I heard a different story. Costs would be shifted from WalMart to suppliers; supplier processes would become less efficient; and any benefits suppliers might achieve were, at best, several years out.

Consequently, amidst a storm of hype and inflated projections, no analyst group voiced more skepticism about mandate-driven RFID than ARC. And

one of our customers, who had asked us to conduct this study because they were considering a significant investment in RFID, saved themselves tens of millions of dollars.

Soon after my analysis was complete, and I concluded that the EPC RFID market was not going to become a major factor in supply chain management in the near to medium term, I stopped paying close attention to the market and its players. Then last week a press release crossed my desk from [Checkpoint Systems](#) announcing the “[World’s First Source-to-Store Merchandise Visibility Solution](#)” that includes RFID software and tags. I wondered what the difference was between supply chain visibility and merchandising visibility, so I gave them a call and asked for a briefing.

It turns out that [Checkpoint Systems acquired OAT Systems](#) last June (OAT was one of the RFID start-ups that received a fair bit of publicity during the hype phase). Further, the story Checkpoint told me surrounding RFID for “merchandising visibility” in the fashion apparel supply chain makes a lot more sense than using RFID to track low-margin commodity products.

To understand why this new RFID solution makes more sense, it helps to have some background on Checkpoint Systems. They are one of the leading providers of Enterprise Article Surveillance (EAS) solutions-i.e., those



little theft-prevention tags that are placed on garments, as well as the tag readers and the accessories to remove or deactivate the tags.



**Checkpoint Systems Reusable Tags and Sensor Gate  
(Source: Checkpoint Systems)**

In many cases, the retail apparel supply chain starts in China where the clothes are manufactured. The manufacturers are often required to put EAS tags and price tags on the clothes at their factories. Checkpoint Systems has an on-demand source management solution that allows retailers to specify what products they want tagged and at which factories. Checkpoint then sends the tags to the manufacturer, provides the EDI and computer-based proof of delivery, and facilitates electronic payments.

This is where RFID comes in. Many apparel products are higher margin products, so it's easier to justify the added cost of RFID in this supply chain.

Also, tagging is already occurring at the factories. By providing a tag that combines EAS, RFID, and perhaps even price, you are not creating additional work. Once the product arrives at the stores, the RFID process typically includes putting readers at the back of stores to track the receipt of goods. Another reader can be located between the backroom and the front of the store to track the flow of inventory to and from the selling area. Handheld RFID readers can also be used to conduct a weekly cycle count, which according to Checkpoint, can be performed ten times faster than doing it manually. Finally, POS systems track retail sales.

One of the things I learned when I conducted the EPC RFID study is how horribly inaccurate store-level inventory systems are. For many retailers, inventory accuracy at the store level is 65 percent or worse. Without good store level inventory accuracy, retailers will always have replenishment problems. For example, inventory systems typically do not account for stolen goods. The inventory system may show that a particular style and size garment is in stock, but just not selling. Consequently, it is not reordered.

This is where the combination of RFID and EAS makes sense to me. In combination with the weekly cycle count (which would not be practical without RFID handhelds), the net result is higher inventory accuracy at the store level. Retailers are now able to distinguish between true out-of-stock situations and cases where inventory exists at the store, but it's just not on the shelves.

Checkpoint admitted that RFID accuracy is still not 100 percent, although it is far better than it used to be. For example, if a store employee comes out of the backroom with an armful of garments, the RFID reader might not just read those garments, but also the garments in the selling area. This is the RFID read point that causes the most problems. In contrast, Checkpoint says that the shelf-level cycle count is almost 100 percent accurate. However, even at this backroom/front room cross over point, they can still achieve somewhere between 95 and 99 percent accuracy, which in combination with weekly cycle counts, is still far better than what could be achieved before.

Further, the price of RFID tags has come down substantially. Five years ago, the all-in volume buying price was over \$1 per tag. Now, in volume buys, the price for adding RFID to the EAS tag is less than \$0.25.

So what is the difference between “merchandising visibility” and “supply chain visibility”? Checkpoint argued that since their RFID solution extends all the way to the point of sale, it was a merchandising solution. I think the only difference is that Checkpoint's primary customers are the folks responsible for retail store operations, who have long purchased their EAS solutions, instead of the supply chain group.

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