



Industry Week's RFID Strategy

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Limitations of Mandated Compliance

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You've all heard State of the Union reports, and now it seems we need a "State of RFID Mandates" report. Research by my colleague Tom Singer goes a long way in addressing the current limitations of mandated compliance. Below are some key points from his research.

Use Of RFID Data In Shipping And Receiving

The RFID initiatives currently in progress (Wal-Mart, Best Buy, etc.) are designed by their respective sponsors to improve visibility of product at the distribution center (DC) and store level. Suppliers are required to encode unique identifiers on case and pallet tags. These passive RFID tags are then read by automated systems at the receiving DC (now) and then at subsequent stores (future plans). However, this RFID-enabled process operates in parallel with an existing technology that provides the same function -- a unique barcode "license plate number" (LPN) coupled to an electronically transmitted advance shipping notice (ASN). In the RFID-tagged pallet, the unique EPC Global number on the tag functions mostly as a pointer to the corresponding ASN, just like the barcode system.

Defenders of the RFID compliance initiative are quick to point out two objections to this claim of equivalency:

1. The fact that RFID does not require line-of-sight scanning increases the speed and decreases the labor involved with tracking a shipment and capturing the ASN record.
2. The RFID-enabled warehouses must co-exist with non-RFID warehouses in the company's system. Therefore, the data and operations must be as similar as possible between the two. As full RFID-enabled distribution networks evolve, there will be opportunities to exploit the additional data available via RFID beyond simply referencing an ASN.

In my experience, the case for superior RFID efficiency has been made mostly in laboratory conditions and has not yet been seen in the real world of less-than-100% tag readability. RFID-tagged shipping and receiving must rely on human intervention for missed scans. This intervention is almost always a hand-scan of a barcode printed on the RFID tag as a backup, or a keyboard entry of human-readable LPNs.

The data issue -- that RFID compliance data is constrained to being "more of the same" ASN information due to the pilot-program nature of the project -- is the basis for the

ongoing proliferation of RFID software products on the market. Understandably, the industry is searching for ways to use the additional data supported by the EPC Global standard.

Comparing RFID And Barcode Scanning

It is helpful to remember the history of the barcode when looking at the current state of RFID efforts within supply chain logistics. Barcode technology has had 30 years to evolve to its current state of maturity. Barcodes offer near-100% reliability, are ubiquitous in consumer products and other industries, and are supported by all major supply chain execution software packages. They allow seamless exchange of data across systems and companies for a per-unit cost of pennies or less. Despite these advantages, there are still many distribution operations that rely on paper-based picking because they cannot justify the cost of scanners and wireless networking necessary for verification of barcode data.

RFID does not enjoy any of these advantages. It is still an emerging technology. Support for RFID data, though improving, is nowhere near universal in supply chain execution systems. As for the cost of RFID systems (for just the tag alone), Baird's monthly RFID Report brings news that Gen 2 tags are expected to be 20 cents apiece in bulk quantities. Given these facts, it is likely that the majority of RFID technology implementations will be limited to compliance initiatives for some time to come.

Business Implications

How, then, can a supplier extract value from RFID compliance projects? The key is to regard the current data model as a temporary stepping-stone to future process improvements. The coupling of an EPC code to an ASN is a necessary first step in the compliance process -- but it is not the end game. Companies can give themselves a competitive edge by considering other uses for the data on RFID tags. How to achieve this goal will be the topic for my next column.

The research cited in this column is contained in a white paper, "Looking Beyond the Technology on RFID Projects." To view this white paper visit www.tompkinsinc.com.

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