

The Three Ways RFID Can Impact Business Processes

Is it Just a Better Bar Code, or Can You Invent a New Process that Maximizes Use of the Technology? An Analytic Framework

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As RFID has entered the automatic identification mainstream, many companies are looking at how to use the technology in a variety of supply chain operations.

To help think through the application of RFID technology, it may be helpful to think of the potential use of RFID in the context of the predominant supply chain auto ID technology, bar codes. From that perspective, any potential use of RFID may be thought of as occupying one of three categories relative to the current or alternative selection of bar coding for the process/application.

1. Basic Bar Code Replacement: In these scenarios, RFID will operate really just like an “electronic bar code.” Individual bar code scans are simply replaced with an RFID read. There are many examples where this type of application makes perfect sense and can deliver significant benefits. Example applications include pallet identification (e.g., in receiving or shipping), reading cartons on a conveyor system, pallet putaway, reading work-in-process totes, etc.

The advantage of RFID over bar codes in these scenarios usually relate to improved efficiency from eliminating hand scans by operators, or eliminating problems with bar code read rates, as is often found in high speed carton sortation systems.

The “basic bar code replacement” applications are the easiest to implement because the fundamental business process is the same, and the underlying business software application can often remain exactly, not caring (or knowing) whether the source of the identifier was a bar code or RFID tag.

But categorizing potential RFID-based applications as falling into which scenario can help companies understand the likely impact on potential return (lowest to highest) and system software work (also lowest to highest).

2. Enhanced Business Process: In these cases, the basic business process remains the same, but the unique advantages of RFID begin to be more leveraged. For example, RFID might be used to simultaneously read all of the cartons on a pallet as it passes through a portal, or read all of the serial numbers virtually at once as a pallet of goods leaves a production cell.

In these scenarios, the fundamental process remains the same, but is enhanced to drive even greater productivity. A pallet of bar coded goods cannot be read all at once, and if bar codes on some cartons are not accessible, could not even be read manually after the pallet is built.

These types of scenarios usually do require some changes to the underlying software, which is unlikely to be developed to handle these types of simultaneous inputs, and to react to errors or misreads.

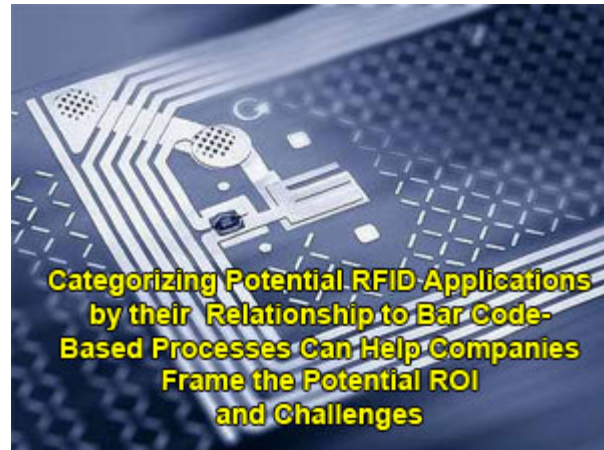
3. Designing of Truly New Business Processes: In these applications, which are mostly still being envisioned, the underlying business process is fundamentally altered. One good example might be a RFID network in a distribu-

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tion center that continually monitors all inventory in near real-time.

In that scenario, traditional beliefs and processes around traditional physical inventories and cycle counting are completely turned on their heads. That means significant work in designing "as is" and "to be" processes, getting substantially more input and buy-in from multiple parties than the first two scenarios, likely significant changes to underlying software or even adoption of new applications, substantial piloting and testing, etc.

Today, most RFID deployments fall under scenario 1. A few could be categorized as being in scenario 2. Most scenario 3 applications are still on the drawing boards.



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