



## Industry Week's **RFID Strategy**

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A S S O C I A T E S



### **RFID's Potential**

*Technology can help reduce labor, increase capacity,  
but challenges exist*

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Thanks for tuning in to the inaugural issue of **IndustryWeek's** RFID Strategy newsletter\*. I hope that you'll find the content we have assembled to be timely, relevant, informative and hopefully a little entertaining.

You have felt the presence of RFID (radio frequency identification) for years, whether you realize it or not. RFID allows us to speed our way through tollbooths and security checkpoints, and it is now considered a time-tested technology. In manufacturing and distribution, however, RFID is a relatively new and still evolving technology. When deployed correctly, it can reduce clerical and manufacturing labor, and speed raw materials, packaging components and finished goods through your plant more quickly and accurately, allowing you to reduce inventory and increase capacity.

But RFID will not replace bar coding any time soon. If you consider the time it took for global adoption of bar coding and the use of the UPC (Universal Product Code), you can understand that RFID will require several decades to be ubiquitous.

The questions on the minds of manufacturing leaders today are -- or should be: What does RFID mean to me? When should I think about implementing RFID? What is the first step required to implement RFID?

RFID can mean many things in the manufacturing space, and each type of production facility can require different applications of the technology. Most companies today see RFID as a huge cost burden, based upon current research that suggests the average manufacturer will spend several million dollars implementing RFID in the context of complying with large retail customer requirements. It is important to consider all facets of a potential investment. As a manufacturing leader, you should start to learn how your specific operation could benefit from RFID to reduce costs and errors and increase throughput -- and where it may not be appropriate. This column will help you gain that understanding.

A few of the areas to examine closely when considering investing in RFID include:

- Location of raw materials
- Work-in-process material movement
- Automatic work-order completion
- Transfer to finished-goods inventory
- Real-time order status for customer service
- Tool and company asset tracking for maintenance staff.

Among the largest challenges that you face with RFID is that it isn't a packaged application as you might associate with a manufacturing execution or warehouse management system. RFID is a variety of technologies that must be integrated and tested together to develop a specific solution.

In the manufacturing supply-chain arena, for instance, you can apply RFID to improve operations in a variety of ways. If your suppliers are able to use pallet-, case-, or drum-level RFID tags, then inbound raw materials and components can be associated ahead of time with an ASN (Advanced Ship Notice) so that when the product physically arrives you can automatically receive it as it passes by a reader at your receiving dock doors. If you require product quarantine or inspection, the RFID middleware can be configured to recognize which purchase order line items need inspection and initiate the correct steps to divert the product -- thus eliminating human error from keying in the receipt or allowing product to be transferred into inventory without being inspected. A mobile RFID reader will allow you to conduct on-going inventory cycle counts in your warehouse or on the manufacturing floor. Having accurate status on the location and the amount of raw materials available will allow you to control inventory levels and more accurately manage the master production schedule (MPS).

In addition, fixed "portal" readers stationed throughout the manufacturing floor can eliminate the typical "traveler" that many manufacturers use to record progress against the routing steps a product might require. This eliminates manual updates and the clerical requirements to update manufacturing job order status and at the same time provides management near real-time visibility to compliance with the MPS. A portal reader located at the exit from manufacturing (to your finished-goods warehouse or straight to the shipping dock) can provide several benefits. Upon scanning the tags for each finished-goods item, case, or pallet, you can prompt the operator to confirm quantity being transferred, waste or damage of any raw materials or components, and/or identify anything being transferred back to raw materials inventory. The RFID middleware can then pass this information to your production management software.

### **A Look Ahead**

I hope this first column provided some insight into RFID technology. My next column will present technical detail about the components that comprise RFID technology.

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**\*Chris York's RFID column appears twice monthly in IndustryWeek's RFID Strategy newsletter and on IndustryWeek.com. Click [here](#) to register for the newsletter.**