

# Common Mistakes, Uncommon Best Practices

Here are three common mistakes companies make when implementing RFID and three uncommon best practices.

Apr. 11, 2005—Radio frequency identification is the sexy topic these days, but there is nothing particularly glamorous about its origins. The technology traces its roots back to the friendly aircraft identification systems developed during World War II for, and for years RFID has been commercially used in railroading, automobiles, and animal and personnel tracking. Since the late '90s, universities and governments worldwide have fervently researched RFID and its close kin, smart dust.

Fortunately for operations and logistics executives, this research is deeply targeting the supply chain. In fact, the opportunity for RFID to improve the supply chain has barely begun its early gestation period. In a study by Allied Business Intelligence, RFID transponders used for supply chain management in 2002 represented a paltry 1 percent of sales volume. Yet by 2007, supply chain usage is expected to represent a whopping 46 percent of the RFID market.

Many operations executives are scratching their heads, wondering why. After all, will tracking the entire life cycle of a single can of tuna really lower operating costs and increase sales?

Even at this preliminary stage, the promises of RFID are staggering. Inventory reduction through transparent real-time item visibility. Reduced man-hours through automated item tracking. Increased warehouse accuracy. Fewer shipment errors. The elimination of out-of-stocks and an increase in sales through shelf-level visibility. Shrinkage reduction. Better regulatory compliance. Control over items with temperature sensitivity. Even ensuring the safety and security of citizens around the world.

Just a little pressure for this four-letter acronym.

## Three Common Mistakes

With all these promises, it is not easy to separate truth from hype. Technical reality changes constantly, and within hype might be found a mote of reality. Still, it behooves an organization to avoid the three most common pitfalls of RFID implementations today: overestimating the RFID's benefits; adopting a "slap and ship" implementation of RFID; and expecting RFID to be a magic bullet.

**Overestimating the benefits.** We must walk the fine line between believing the benefits of the technology touted by vendors, and knowing how it will solve real-world business issues. Vendors with heavily invested RFID resources obviously promote the existing, future and even dreamed-up advantages of RFID, but they seldom shed light on obvious and much lower-costing alternatives.

**Adopting a "slap and ship" approach.** Conversely, disillusioned suppliers who feel pushed into RFID from their customers (like Wal-Mart or Target) are tempted to employ a "slap and ship" approach because they simply cannot find a return on investment. Here we have the tail wagging the dog. It is true, there is *no* ROI in slap and ship. But despite what you have heard to the contrary, companies of all sizes are finding significant ROI with RFID. More creative thinking must be used to find the business benefit. But have no doubt that a

business benefit does exist...it simply takes the right methodology to find it.

**Expecting the magic bullet.** Do not let RFID's sexy persona mislead you into thinking that RFID is the cure-all in the practical reality of business operations. There are other complementary and competing technologies that should be considered when looking at your overall supply chain process. Other technologies that capture data, such as advanced GPS or simple bar coding, also have their place. In addition, RFID is changing dramatically and will continue to do so. Academic think tanks are now considering hybrid solutions that combine radio frequency with optical technology in certain instances.

Another way RFID will change is in its architecture. Today the common model for RFID employs a tag that communicates with a reader, but there is no tag-to-tag communication. Having tags that talk to each other creates some interesting possibilities. When all is said and done, there is only one certainty: RFID will change.

### **Three Uncommon Best Practices**

The key to finding the optimal use for RFID is to begin at the beginning and first consider your company's strategic objectives. As simple as that sounds, it is astounding how uncommon a practice is common sense. RFID must be applied in a balanced way that takes into consideration a company's strategic objectives, without being carried away by the hype of RFID. Here are three key considerations that will determine success.

**Consider your key business indicators.** Any company uses performance indicators to measure success, and project return on investment is one of these indicators. And yet, beware of the tendency to think in a linear or limited framework, one that does not look at the overall business, the industry at large, existing technology options and futures. Sometimes politics within an organization cause technologies to be pigeonholed. In this case, enlisting outside expertise can quickly assess where and how RFID can be a strategic enabler that will directly profit the bottom line.

RFID offers significant potential benefits, but you must consider the entire picture of your organization in order to see the greatest benefit. There is an enormous opportunity here. I repeat, *enormous*. Additionally, do not mistake the best solution to be the one with the highest price tag. Expensive solutions are not the answer, nor is analysis paralysis. Creative, outside-the-box thinking will match the opportunity of RFID with your company's strategic and tactical needs.

**Consider as-is and to-be business processes.** RFID is not an IT issue. It is a company-wide opportunity. Gaining the greatest benefit from RFID projects requires the clear expectation that software (middleware) and hardware (tags and readers) represent a fraction of what is needed to gain the highest benefit to the company. Business processes will and should shift. Automation will and should occur. People's responsibilities and knowledge must change. New methods of analysis will be employed. Indeed, new data may even shift the way that companies measure success. Capitalizing on an RFID investment requires championing a new vision, enabling a shift in thinking, and providing simple changes to the way things are done today.

**Ask, What if?** Do not cheat yourself by refusing to ask one more question. This is a question that merits asking not by one individual person, but by a group of your best thinkers and visionaries. Schedule a Friday boardroom lunch and write on the whiteboard one simple question that should generate a good hour's worth of thought-provoking ideas. The question is: "If we could track anything in any way we wanted, and use that data in any way we wanted, what would that look like?"

In other words, what do you want RFID to do for you? This question does two critical things. First, it takes your company's mindset outside of the box of "I am a victim of my customers and vendors and have no choice in the matter." It puts control back in your hands and creates a positive and proactive mindset that

allows your company to reap seriously big benefits from technology.

Second, it generates demand to the manufacturers of RFID hardware and software. There are dozens of large RFID manufacturers and hundreds of smaller ones, all of which have vast resources to put your creative ideas into action. If you come up with a good enough idea, you could consolidate the needs of multiple suppliers. Let these manufacturers work for you.

This very question has already made changes to RFID. For example, it recently caused manufacturers to create RFID tags with built-in time and temperature tracking for food and medical applications.

Optimally implementing RFID is challenging and requires both creative vision and careful execution. But nothing worthwhile is *not* challenging, in life and in business. And, when properly approached, that small little RFID tag on your can of tuna just might be a catalyst that takes your company into a state of shareholder bliss.

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