

The Obstacles to RFID Adoption

Time and secrecy about success stories are among the greatest hurdles that must be overcome in the adoption of radio frequency identification.

By Mark Roberti

July 2, 2007—People often ask me what I consider to be the biggest obstacles to adoption of radio frequency identification, specifically regarding technologies based on the Electronic Product Code (EPC). Most people would say it's the lack of a clear business case and the cost of the technology. The answer I give: "Time and secrecy."

Cost is not really an issue. No matter what a technology costs, companies will adopt it if it delivers significant benefits. The lack of a clear business case is also something of a red herring, as many large companies know there are significant benefits to be had from adopting EPC technologies in their supply chain—such as reducing out-of-stocks, increasing sales of promotional items, improving track and trace, and recalling capabilities.

Time is probably the biggest hurdle. It took some of the earliest EPC adopters three or four years to get to the point where they could achieve such benefits. They had to conduct rigorous testing to make sure the technology worked for their specific applications, and in their particular environments. They launched field trials, worked with software companies to develop or fine-tune applications, built network infrastructures to support larger rollouts and refined their business processes.

It won't take quite that long for fast followers, because the hardware and software now exist, the benefits have been proven and roadmaps are available. Consumer products goods manufacturers, for example, can read our recent cover story on how [Kimberly-Clark](#) is tracking promotional displays to learn how it can use EPC to boost its own sales of promotional items in stores (see [Kimberly-Clark Gets an Early Win](#)). And retailers can read our case study on [Wal-Mart](#) to see how it's using EPC to reduce out-of-stocks (see [Wal-Mart Tackles Out-of-Stocks](#)).

Still, even with all these advantages, fast followers will need to test tags on their products, as well as the ability to read tags consistently in their particular environments. They'll need to set up network infrastructures to handle the RFID tag data, while installing software that can leverage the data and integrate these applications with their RFID systems. Finally, they'll need to change their business processes to take advantage of the data. All of these steps take time.

The second issue, secrecy, is inhibiting adoption because many companies are sitting on the sidelines, refusing to adopt EPC technologies either until they're forced by a customer to do so, or the benefits become clear to them. A few early adopters have championed EPC and been vocal in sharing their stories, including Kimberly-Clark, [Metro Group](#), [Procter & Gamble](#) and Wal-Mart. Many other firms, however, have great stories to tell but aren't telling them. I hear about these implementations off the record, either from end users or frustrated technology partners that would love to get their customers to open up.

This is not unique to EPC, of course—with all new technologies, companies are reluctant to share early successes and give competitors insight into what they're doing. That's understandable, but I believe such firms need to weigh the benefits of secrecy with those derived from openness. The advantages to keeping successful projects secret can include getting a cost advantage over a competitor, or increasing sales of promotional items in stores. But these are short-term benefits, as competitors will certainly figure out how to use EPC successfully, and it's unlikely such benefits would be so huge they'd translate into a real competitive advantage in the first place. Companies compete mainly on brand loyalty, price, product quality and so forth.

The disadvantage of maintaining secrecy is that it slows technology adoption, limiting the potential benefits a company can achieve. Early adopters sharing their success stories believe they, and the industry, will gain from their experiences. Bar codes saved an estimated \$17 billion annually in the grocery industry, for instance, because everyone could use them to capture data more accurately and effectively. Moreover, widespread adoption is needed to generate the volumes of tags and readers required to bring prices down, which benefits everyone.

RELATED_ARTICLES Let's say a manufacturer and a retailer working together could increase sales by using EPC technology to reduce out-of-stocks, or to ensure that promotional displays are on the floor when advertising hits. If these companies are not willing to discuss such benefits, both lose out. Why? Because fewer manufacturers are willing to tag goods for the retailer—or, if forced to do so, they proceed as slowly as possible—and fewer retailers adopt the technology, preventing manufacturers from getting the same benefits working with other retail chains.

I once asked a senior Wal-Mart executive about this very issue, and his response was that the company was willing to share its learnings to promote adoption, knowing it would keep innovating faster than its competitors. The long-term benefits of promoting success stories clearly outweigh any short-term advantages that might come with keeping them under wraps.

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