

Achieving total business visibility will require a suite of technologies, but RFID will do the lion's share of the work.

By Mark Roberti

Nov. 9, 2009—My last few [Editor's Notes](#) and [blogs](#) have been fairly shrill, a sign of my growing frustration with analysts and journalists who misinform readers about radio frequency identification, and with vendors who sell RFID but don't want to discuss the very technology they're selling. So now I would like to take a deep breath and explain why I believe so passionately that RFID is becoming a critical technology for most companies.

When I first learned of RFID, back in 2000, researchers at the MIT Auto-ID Center (now the [Auto-ID Labs at MIT](#)), backed by [Procter & Gamble](#), [Gillette](#) (then not part of P&G), [Wal-Mart](#) and others, had developed something called the Electronic Product Code (EPC). This RFID technology was designed to provide a way for companies to better manage their supply chains, with accurate near-real-time data. This made complete sense to me.



But as I followed the development of RFID, it became clear the technology was much more than just a way to track cases and pallets in the supply chain. It could be used to monitor assets, inventory, tools, vehicles and all the other things that companies struggle to manage. And it could be utilized to achieve total business visibility, which could be shared with customers and supply chain partners to facilitate business. I came to see this technology not as something companies deploy simply to solve one business problem—such as the underutilization of assets—but as an extension of the corporate IT infrastructure to better manage many aspects of their business.

RFID enables companies to see, track and manage all the parts of their business they can't manage effectively today. Mobile assets don't report on their utilization rates the way salespeople file production reports, or the way fixed machines now report on their output. Inventory doesn't tell a warehouse manager when there is too much of one item and not enough of another. And tools don't shout out when they are left in the wrong location or stolen.

Do companies need to manage these things? I argued in last week's column that they do, even if they don't yet realize it (see [Do You Really Need to Justify Your RFID Investment?](#)). The supply chain VP of a major consumer packaged-goods company told me that at any given time, his company has \$1 billion in inventory for which it can not account. The inventory is not lost or stolen; it's simply *not visible*. That amounts to excess inventory the company could eliminate with better inventory visibility, while still meeting demand. And that would free up a billion dollars—a *billion dollars!*—in working capital, as well as eliminate perhaps \$250 million in annual carrying costs.

RFID has its limitations, of course. In some cases, RFID needs to be integrated with related technologies—such as bar codes, GPS, infrared and ultrasound—in order for companies to achieve total business visibility. But these technologies assume a supporting role to RFID, because on their own, they can not come close to tracking the wide array of things a passive and active infrastructure can cover. 2D bar codes require too much human labor. GPS doesn't work indoors, and can not be used on smaller items. Infrared is unable to penetrate most packaging materials, so you can't read tags on things within a box, or piled one on top of another. And ultrasound is too expensive to be used on billions of items.

But by meshing these technologies and using automated software reporting tools, companies will be able to manage their assets, inventory, tools, vehicles and so forth, as effectively as they manage the production equipment on their manufacturing lines. They'll also be able to protect the food and drug supply chains, reduce counterfeiting, improve recycling, enhance the customer shopping experience and make people's lives better.

That's why I'm more passionate about RFID today than I was when I launched *RFID Journal* in 2002. I'm not frustrated that companies have been slow to adopt RFID. I understand it's a developing technology, and that businesses are cautious with their investment dollars. What's more, I realize it will take years for companies to build out an effective total business visibility platform. But the good thing is, if businesses have the right vision, they can start small, achieve a return on investment, and build on the infrastructure with each phase paying for the next.

RFID is going to be an essential part of the corporate infrastructure required to run an effective 21st-century business. This is the vision journalists, analysts and RFID vendors should be communicating to businesses globally.

Mark Roberti is the founder and editor of RFID Journal. If you would like to comment on this article, click on the link below. To read more of Mark's opinions, visit the [RFID Journal Blog](#) or click [here](#).