RFID and the innovation economy

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There's a lot of talk these days about the I word: Innovation.

I'm not sure if sliced bread was invented in America, but I do know that innovations as varied as the cotton gin, the Model A and the Microsoft operating system have driven economic growth over the years. Many are looking for innovation, both large and small, to help us out of our current crisis.

So, I'm on the lookout for innovative products. I came across one from Tego, Inc., a Massachusetts-based RFID company, last month while researching a story about maintenance and repair in the aerospace and defense industry.

Tego makes a fully-compliant EPC-style passive RFID tag. In and of itself, that's not unique. EPC-compliant passive tags were developed for tagging cartons and pallets in supply chain operations.

What makes the Tego tag innovative is the amount of memory they can put on a tag – up to 32 kilobytes, with plans to offer more storage in coming product upgrades.

Instead of merely storing basic product information on the tag, which is what's done today, Tego's tags have enough memory for a user to write extensive information about the product, part or asset it's attached to. A manufacturer could even include an operating or repair manual on the tag. What's more, the information can be read by any standard EPC-compliant reader. The end result is that the tag becomes a traveling database of critical information that can be easily accessed without connecting to a backend database on a computer.

"If a part has a life of 30 days, this is not relevant technology," says Timothy Butler, Tego's CEO. "But if it has a long history, it's important that the information stay with the part."

Butler and his team are targeting the aerospace industry for now because parts may stay in use for decades. What's more, every repair or modification to that part may result in a new part number or a new configuration of that part. Each of those repairs has to be recorded to meet regulatory requirements and may be relevant to the next repair. "Instead of walking over to a computer somewhere to look up information or to update information about a part, a technician working on an aircraft would scan it, get the information he needs, and then update the record when he's completed his repair," says Butler. "We've found that 95% of the return on investment for the part comes from mechanics interacting with parts and assets that are within 3 or 4 feet of where they're working."

In the ideal world, Butler imagines an aircraft, like a Boeing jet, with millions of storage devices that can travel with that aircraft.

If you think about it, these types of issues aren't limited to the aerospace industry. Food and beverage and the pharmaceutical industries have strict record keeping requirements. Automobiles stay in use for a decade or two: Wouldn't it be great if your mechanic could scan an RFID tag and see what repairs have been made over time? Or, wouldn't you like to know everything that's happened to a used car before you buy it?

Is the Tego tag the greatest thing since sliced bread? Probably not, and it probably won't be the engine of growth that single-handedly turns around the economy. But it's innovation like this that allows us all to be a little more efficient in our jobs and our supply chains. Taken together, I believe it's small but measurable steps, enabled by innovation, that will move us forward again.