



RFID: Do Just What You Must

RFID! Radio frequency identification is coming, with enormous promise, and more companies will see their key customers requiring it.

But why pioneer this path? RFID suppliers haven't yet found a way to deliver high reliability at an acceptable price, and probably won't for at least a year or two. If some businesses press forward with voluntary RFID implementation — well, trails must be blazed.

For an analogy, recall America's great westward migration. The nineteenth-century manufacturers and distributors who stepped into the flow grew rich. But don't confuse them with trailblazers — the ones who went first, and mainly died broke. Blazing trail is tough work.

On the Horizon

RFID will smooth the flow of raw materials and finished goods through a world marked by sharper competition, just-in-time demand and intensifying security measures.

It will finally offer real-time supply-chain visibility for manufacturers, distributors and retailers, as products transmit their own life stories from assembly lines in China and cash register lines in Kokomo — and beyond, say privacy watchdogs.

News reports and advertisers have announced the end of the bar code, but the death watch is premature. In fact, look for more RFID–bar code combination labels.

Here's a summary of the technology's advantages and drawbacks.

RFID Advantages

No sightline required. Warehouseers can “see” a hot pallet in an inbound truck and dig it out for cross-docking, or be reassured that an ocean load is making progress.

Data trove. High-capacity RFID tags are available at a price, though Internet logistics software provides sufficient data storage and access for most companies’ needs.

Read-write. Read-only tags are most common. More expensive read-write tags offer supreme flexibility and up-to-date functionality — complete, partial or updated data can be written over the old at any point in the manufacturing process or distribution chain.

Durable. RFID tags can be sealed in plastic to withstand heat, cold, chemicals, abrasion and other hostile elements.

Fast. More and more users are reading and processing RFID data in real time.

RFID Drawbacks

Cost is the biggest obstacle to item-level RFID. Bar code tags can be had for a penny a piece, but RFID tags cost over 20 cents and won’t drop to a dime any time soon. Even for high-cost products or high-level tracking, the benefits of RFID may not outweigh the cost for some time.

Reading difficulties. Liquids and metals can block or distort RFID signals. Packing and placement strategies can overcome some problems, but not all.

No sightline possible. Yes, it’s a disadvantage too — an RFID “interrogator” reads every tag in range, which can introduce chaos in warehouse routines built around one-at-a-time directional scanning.

Failure is an option. RFID is an emerging technology. Hardware failures, calibration problems and feed-rate issues all keep costs high.

Subject to change. Standards are being developed, but many proprietary systems still refuse to speak to each other. Nor have privacy concerns been resolved.

Big Box Stores Drive RFID

The mass retailers are leading the drive for RFID adoption and development. Bugs and costs will be driven out, the systems will work their way down and RFID will be harnessed to materials management, production planning, reporting and other internal processes.

But as with most new technology, it's often best to let others blaze a trail for you.

To learn more about the RFID outlook, please contact our firm.