



Create a more human library

RFID 101

Four Reasons for a Library to Invest in RFID Technology... and Three Reasons to Wait.

Radio Frequency Identification (RFID) technology is an investment for libraries. To decide if the rewards justify making this investment, library management must look at the benefits, the near-term costs, and the arguments for waiting or using another technology.

In recent years, many large and small library systems have installed RFID systems. Usually, they identify four reasons for making what can be a significant investment:

Customer satisfaction. Books and other materials move out of the library faster with RFID. Using a self-service system and RFID, customers can check out multiple items at once. This means they spend less time waiting in line at the self-service station or the circulation desk. When RFID technology is combined with automated materials handling systems, it can also speed the process for getting CD, DVDs, videotapes and books—including frequently checked-out best-sellers—back on the shelves where customers can use them. And those items are more likely to be shelved accurately, which increases customer convenience and reduces frustration.

For many customers, the greatest benefit comes from more interaction with the library staff. When librarians spend less time on routine physical tasks, they can pay more attention to the needs of customers.

Case Study – Farmington (N.M.) Public Library: In preparation for the opening of a new building, this library began to introduce RFID in 2002. “People tell us we have the best customer service in the city. Because of RFID, we aren’t tied behind the desk, doing mundane things. We can help the patrons and they get what they need,” said Karen McPheeters, Director.

Case study – As circulation increased at the Maricopa (Ariz.) County Library District, management recognized the need for “something that would free our people up to provide the service our customers expect,” explained Vicki Terbovich, Chief Technology Officer. The solution was an RFID system that includes automated materials handling equipment. Today, books move back to the shelves about four times faster than they did with manual

check-in and sorting. And that speed translates into customer satisfaction: “It means less time waiting for popular materials.”

Case study – Kent District Library (KDL): Located in Kent County, Michigan, KDL is the largest library in the state, circulating nearly 4.5 million items in 2005. “Customers are ecstatic over the speed and convenience of self-service. They know staff are immediately available to assist them if needed and have more time to spend with those customers who may have special or more complex needs,” stated Dale Atkins, Information Technology Director.

Staff productivity and satisfaction. With RFID, librarians can do more in less time. Some of the most time-consuming tasks—check-ins, checkouts, searching for holds or lost items, and shelf management—are fully or partially automated. That opens up opportunities for improving current services and for enhancing the mission of the library. In some libraries, the installation of an RFID system has allowed librarians to provide language training, to create new programming for children and seniors, and to address other evolving community needs.

For some libraries, this boost in productivity isn’t an opportunity for enhancement; it’s a chance to return to the level of service customers enjoyed before circulation increased. For other libraries, RFID is a proactive step, an investment today that will ensure adequate service if staffing levels don’t keep pace with constant increases in circulation.

Case study – The new Darien (Conn.) Library will be twice as large and circulation is expected to increase by at least 25 percent. “But staffing for circulation and material handling will actually decrease by 30 percent, thanks to the automated materials handling and RFID system,” said Alan Kirk Gray, Assistant Director for Operations.

Case study – Since the Chandler (Ariz.) Public Library installed its RFID system, customers have enjoyed shorter lines. “But the biggest benefit for staff is the DLA,” said

Dan Lee, Assistant Library Manager, referring to the 3M Digital Library Assistant. “We all love it.” Weeding and reshelving are faster and more thorough. “There are other capabilities of the system...that we haven’t fully exploited. But what we’ve done so far has certainly—and significantly—improved our efficiency.”

Staff health. We don’t have good information on repetitive stress injuries among librarians, but many professionals believe that some circulation activities increase the occurrence of such injuries. These activities include handling volumes, desensitizing and resensitizing materials, and opening DVD and video cases to check contents. RFID systems do not eliminate these activities, but they clearly reduce item handling by librarians. For this reason, some libraries have turned to RFID systems as a strategy for reducing the manual materials handling that can lead to repetitive stress problems.

Fiscal responsibility. For many library boards, the strongest argument for investing in RFID is that the systems usually pay for themselves in two or three years. At a time of increasing circulation, an RFID system can help keep staff costs constant and predictable. And costs due to lost or misplaced items can be reduced. (In fact, many libraries find thousands of dollars worth of “lost” items when they first implement an RFID shelf management program.) After the investment has been recouped, RFID systems should generate benefits for ten years or longer.

Case study – The past five years have validated the projected return on the Maricopa (Ariz.) County Library District’s investment in RFID. As the community expands, the use of RFID can expand to accommodate it—and staffing costs are held in line. Vicki Terbovich, Chief Technology Officer, singled out the automated check-in and sortation systems: “They’ve given us a great return on our investment.”

Reasons to Wait

Most librarians acknowledge the benefits of RFID, but some still haven’t made the decision to go forward with an installation. Here’s why:

Privacy concerns: For some librarians and some citizens, privacy issues are pre-eminent. They want assurances that the government (or a technically astute neighbor) won’t be tracking their library materials (or them) using RFID chips. We agree that privacy is very important and we do not claim to know the intentions of the government or your neighbor. We are, however, confident of the technical capabilities of RFID and we believe these limits should alleviate much of the concern over what can and cannot be known using this technology.

The high-frequency tags used in library items cannot normally be read at a distance of more than 36 inches from a reader antenna. In rare instances, they might be picked up at four feet. To get to five or six feet, you would need a reader the size of a garden shed, which is highly impractical for covert surveillance. Beyond six feet, the physics of RFID make it virtually impossible to find out what’s in your briefcase or backpack.

Case study – According to Sally Fry, Branch Administrator for the Orange County (Fla.) Library System, one benefit of her library’s RFID system is the increased confidentiality of self-checkout. Several items can be placed on the pad and the checkout is instantaneous. “It’s done and there’s no one around you,” Fry said. No staff member handles the item and observes the subject matter.

Expense: Some library boards like the idea of installing an RFID system, but they want to wait for another year (or two) before making the investment, hoping that prices will come down. This would be a persuasive argument if RFID systems didn’t generate significant savings in library operating expenses. Because it pays off in just a few years, an investment in RFID can be justified at any time that a library can acquire the funding.

Another expense-related reason to wait is “book hunger.” For many librarians, the desire for more books and other media is nearly over-powering, and with reason. Some of their collections have been depleted through loss or theft. Other collections were started with modest resources; an infusion of new books, CDs and periodicals would make the library more useful to customers and increase its legitimacy as a community resource. To these librarians, RFID might appear to be a competing use of funds. It is not. In fact, an investment in RFID quickly generates savings (which can

be applied to books and other media), reveals the location of misplaced items that were thought to be lost or stolen, and—by improving customer satisfaction—adds to the community’s perception that the library is a valuable and efficient resource for citizens.

Case Study – Customers love the convenience of the RFID system installed at the Douglas County (Colo.) Libraries. The library board is also delighted, although for different reasons. The increased productivity has meant better service at less cost. As a result, the library’s CFO expects the system to pay for itself in just two years.

Other data:

Try the 3M Loss Reduction Calculator. To find out about the 3M SelfCheck System Return on Investment Calculator, contact your local sales consultant.

Disruption: Occasionally, a librarian will acknowledge that an RFID system is a good or even an inevitable improvement, with obvious benefits for staff and customers—but the conversion process would be just too disruptive right now. “We’re planning to add a new row of computers.” “The children’s section is scheduled to move to the front of the library just after the first of the year.”

In reality, conversion to RFID can be swift and painless. With the more efficient systems, most customers won’t even know the conversion is taking place because only one volume or item is removed from the shelf at a time. In these systems, a cart is positioned in the aisle between shelves and the staff person works item by item, converting from barcodes to RFID. The process is surprisingly fast; with a little practice, staff or contract workers can convert up to 500 items an hour. Meanwhile, customers can still access the shelves and they experience virtually no inconvenience.

Case study – At the Farmington (NM.) Public Library, the conversion from barcode to RFID went very smoothly. “We had three stations operating in the stacks during normal library hours,” said Karen McPheeters, Director. “The machines were very handy. In two weeks, we converted 140,000 items with no disruption for our patrons. In fact, it was a good opportunity to start teaching people about what we were doing and why.”

Case Study – Changing 750,000 items to RFID in just five months might sound daunting, but customers at the Douglas County (Colo.) Libraries found the transition seamless, according to Bob Pasicznyuk, Associate Director of Virtual Services. “Some customers were skeptical at first, but we’ve had no complaints about the conversion or the system. None. In fact, customers have written to us saying that it was easier than they dreamed it could be.”

Case Study – “Tagging was easy,” said an employee at the University of Nevada, Las Vegas’ Lied Library. “It became a game to see who could put on the most tags in an hour.” With that upbeat attitude, the staff was able to convert 580,000 bar codes to RFID tags in less than seven months.



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