



RFID for the Customer Experience

The Next Wave for the Retailer and Consumer

EXECUTIVE SUMMARY

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About ChainLink Research

ChainLink Research, Inc. is a Supply Chain research organization dedicated to helping executives improve business performance and competitiveness through an understanding of real-world implications, obstacles and results for supply-chain practices, processes, and technologies. The ChainLink Inter-Enterprise Model is the basis for our research; a unique, real-world framework that describes the multi-dimensional aspect of links between supply chain partners.

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Executive Summary

Your life—it's full of challenges, day-to-day issues as well as wonderful events and adventures that create the memories we all treasure. So why am I mentioning this in a report targeted on RFID and the consumer? It is quite simple: RFID can, if implemented correctly, have a significant impact on retail performance. This report takes a look at what is being done by some early adopters.

Radio frequency identification (RFID) is not a new thing—it's been around for over 30 years. Most of the recent focus in the press and within enterprises has been about using RFID in the supply chain area to address visibility issues and shrinkage. But we knew that for RFID to be really successful in the retail area (beyond the supply chain), it would have to be embraced by consumers, and that RFID implementations would have to address their needs. We also knew that the merchandising and store operations of retailers, members of the entertainment industry (golf, theme parks, museums, etc.) could deploy this technology to improve the consumer experience.

In addition, we knew that to make this research effort a success, we would need to have dialog (interviews) with a wide variety of resources—from retailers to RFID providers. So we launched an in-depth survey to “drag the nets” and determine what was going on across a variety of retail industries: manufactures, distributors and retailers.



Here are our findings:

- The “leaders” have implemented, or have a pilot in place, to use RFID to enhance the customer experience (22%).
- Another segment of enterprises has plans for 2007 (23%).
- A much greater percentage of enterprises are “waiting to see” how the hardware matures and what the cost and risk of implementation is (44%).
- A set of emerging implementation best practices—such as ways to lower the implementation cost and align the organization with the goal of maximizing the consumer experience—are being learned through these pilots and early-adopter implementations.
- The technology allows for some very exciting new business processes to be put into play that benefit both the customer and the retailer.

This report covers the type of RFID projects already being used to enhance the customer experience. It also covers some do's and don'ts from the early adopters, as well as some emerging best practices, including RFID hardware, human resource infrastructure, and the establishment of an effective, ongoing dialog with customers.

This report is a must read for members of the retail, hospitality, and entertainment industries, or any venue providing a consumer experience (e.g. museums, sports arenas, libraries, government offices). It is particularly valuable if you are:

- Responsible for the RFID strategy for an enterprise
- Responsible for the customer experience in an enterprise
- Solutions Provider, providing RFID software or hardware that can be utilized to enhance the customer experience
- Responsible for increasing loyalty and sales.

One thing is clear: Retailers have an urgent need to find ways to get shoppers into their stores to get them to spend. This includes having better merchandise, better in-store inventory, and better locations (all covered in other ChainLink reports). RFID will be just one of the approaches deployed to impact performance. But without a dramatic change in the overall experience, shoppers will go elsewhere.



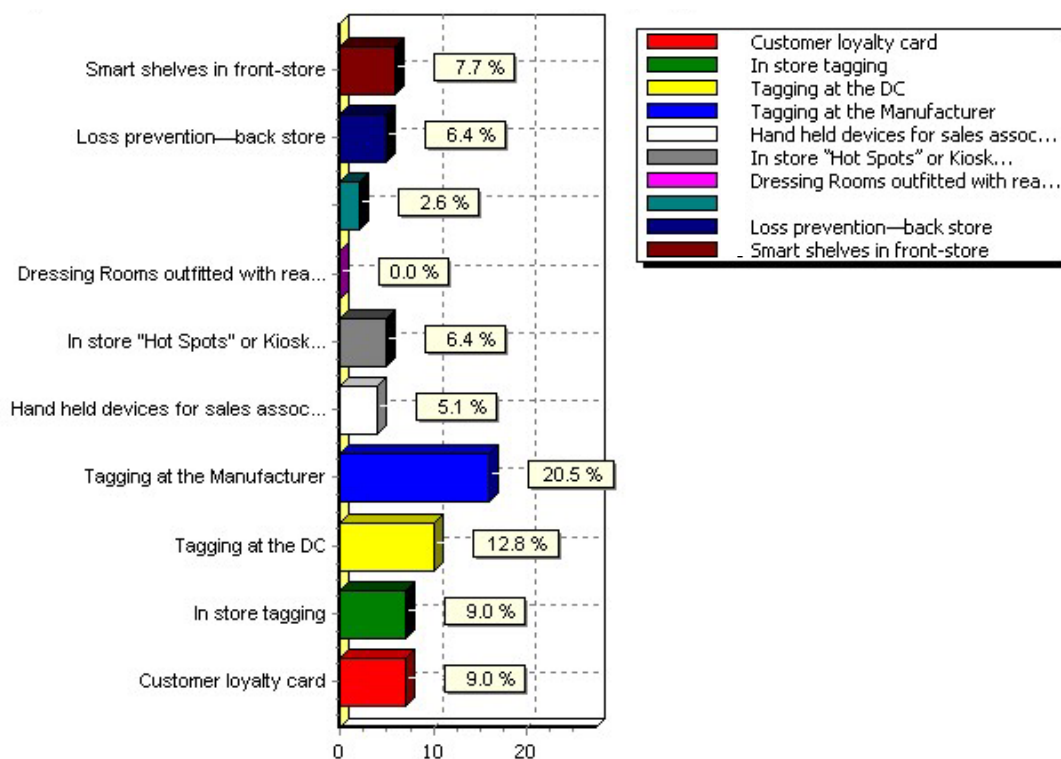


Figure 4—What elements of RFID technology did your project(s) or pilot(s) contain?

USES OF RFID TO ENHANCE CUSTOMER EXPERIENCE

We gave a list of elements that we believe are areas in which RFID implementation can have a positive impact on the consumer experience, and asked for information about which of the elements was being used.

The most popular of the elements was tagging by the manufacturer.¹ This is logical, as it is the necessary element to “start the retail chain”, so to speak. Tagging is either done at the DC or by the 3PL (third-party logistics provider). The next most popular (and the next link in the chain) was the tagging of product at the DC. This can address availability of product. So, whether web-shopping, special orders shipped from the DC, or merchandise at the store, the consumer and the retailer know that the product is available.

Other elements in areas that have the most impact on a customer experience are the smart shelves in the front of the store, in-store “hot spots” or kiosks, personal sales assistants, and hand held devices for sales associates to locate merchandise. There are more customer-friendly devices like concierge service, self-checkout or interactive loyalty technologies. But it became clear that there is a roadmap approach here, not explicitly stated, that once a foundation is in place, follow-on implementations become easier and cheaper. We’ll talk more on that, later. (See figure 5, next page.)

1. See report: *RFID for Manufacturers—How Manufacturers are Improving Processes by Using RFID*
<http://www.chainlinkresearch.com/research/detail.cfm?guid=7D2ADC10-E4AD-472B-72CF-CFBE9719A387>

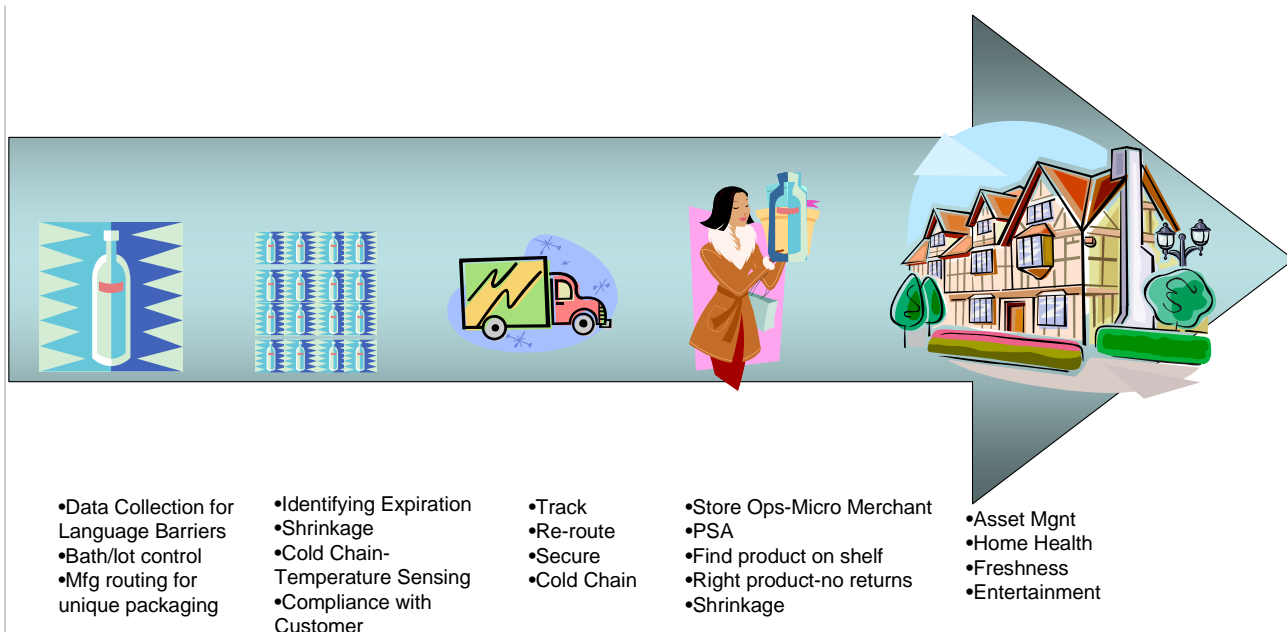


Figure 5—RFID is a Multi-Enterprise Solution

SAMPLE PAGE FROM FULL REPORT

It is always important to determine whether or not implementation partners are used in projects that have a lot of technology and business process changes. In addition, since these technologies are new, there can be a dearth of good help. The RFID implementation partners who responded to our survey had an equal split between those that used implementation partners (50%) and those that did not use implementation partners (50%). There was, however, a slightly higher success rate in those initiatives that involved an implementation partner.

The second question we asked was whether those businesses that used an implementation partner were satisfied with their performance. It seems that a sizable number of respondents were pleased with their implementation partner's performance (44.1%). Only 14.7% were unhappy with their partner's performance.





Case Study – The Tech Museum of Innovation

TheTech

I had the opportunity to speak with Greg Brown at the Tech Museum in San Jose, CA about the RFID initiative he has been spearheading for the last couple of years. My thinking, prior to the discussion with him, was that RFID implementations were a science, but after our discussion I began to realize that just possibly, the successful ones might really be more of an art!

RFID for the Customer Experience

Here is a description of the Tech Museum's innovative uses of RFID to enhance the customer experience:

Recent advances in RFID networking and data storage make it possible for museums to offer visitors powerful new learning opportunities. At the Tech Museum, they have applied this technology to their TechTags—a tool for visitors to personalize their experiences before, during, and after their museum visit.

The Tech Museum provides visitors with a small TechTag that they can either carry or wear on their wrist. Each tag is imprinted with a URL (my.thetech.org) and a unique ID number. When a visitor holds up the TechTag to a selected RFID reader, the reader detects the ID number and stores the information to the visitor's account on The Tech Museum's network. With one application, visitors can explore exhibits in new ways and create a personalized website with their own digital content.



A personalized website can include digital photographs, personalized screen names, and other self-produced content. For visitors whose primary language is Spanish, they can indicate their language preference when they first log on with their TechTag. Thereafter, when they hold up their tag to any reader, the accompanying exhibit will greet them in Spanish and provide the Spanish language version of the multimedia interactive. They can also send digital content, in Spanish, to their website.

After visitors leave the museum, whether at home, school, or on a return visit, they can access their personal online account and view their website. They can also retrieve information about museum events, or use their account as a link to the museum's main website.

The Art of the Possible

Because RFID for consumer experience is still in its infancy, we felt it was important to explore potential applications, to get a fuller picture of what's possible. The approach we've taken is creating a solution "roadmap" which leverages the various solutions from the user, back office, warehouse, and in-store.



Figure 10—Technologies and What They Can Do

These types of solutions were all mentioned in interviews, but pilots vary in terms of the numbers of firms taking their first steps.

The next section of emerging best practices will come in handy as you begin your own journey to improve your customer's experience.



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