An Avery Dennison White Paper

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Finding Value In Item Level RFID

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Finding Value in Item Level RFID

Retail Business Challenges and the Benefits of RFID

Retailers face a myriad of challenges. Three of the most important to bottom line results are: Out of Stocks/Excess Stock, Inventory Shrinkage and Customer Perception/Customer Service.

According to IDTechEx, the annual cost to retailers globally is:

- Out of Stocks - $120 billion
- Excess Stock - $40 billion
- Inventory Shrinkage - $60 billion

In addition, all retailers need to pay attention to Customer Perception and Customer Service.

Early RFID pilots have shown that RFID can have a dramatic impact on all of these issues. ROI is available at the item level as a real value proposition to many retailers today.

Out of Stock/Excess Stock

According to a study by AMR Research, products are out of stock 7-20% of the time. And the Grocery Manufacturers Association reports that approximately 75% of the time, the “out of stock” item is actually sitting in the back room inventory and just can’t be located.

RFID at the item level provides accurate, real-time visibility to on-hand quantities – no matter where the product is located in the store. As a result, buyers have the ability to replenish what they need when they need it. Stockouts and overstocking situations are avoided.

Early implementers of RFID pilots at item level are reporting hard benefits. Examples of those benefits include the following:
- increased inventory accuracy by as much as 20%
- reduced out of stocks by up to 50%
- increased sales from 5-8%

Other inventory-related issues being addressed by item RFID include new product introduction and promotions. Failure rates of new products and promotions from 60-85% are not uncommon, often due to inaccurate record keeping as to where the items and promotions are located and a failure to keep accurate track of sales of each item.

The bottom line is that RFID at the item level provides unequalled current information about inventory, and can greatly improve inventory-related business issues in the retail environment.

Inventory Shrinkage

Shrinkage has been estimated to cost retailers 2% of sales per year. Studies have indicated approximately 47% of shrinkage is due to employee theft with the rest being attributed to shoplifting, vendor fraud and administrative error.

Item level tracking and tracing allows for identification of loss points, deterrence of theft and reduction of shrink based on administrative error. We've seen that retailers can expect a 20- 50% reduction in shrinkage when using an item level RFID solution.

Improved Customer Service

Customer service is a critical differentiator for most retailers. It is estimated by the Grocery Manufacturer's Association that if a customer encounters out-of-stocks 2-3 times, the customer stops shopping at the retailer. In addition, time spent by the employee counting inventory, receiving, etc. is time spent away from the customer.

Improved efficiencies and accuracy lead to product on the shelf and employees on the floor helping customers rather than doing administrative tasks like cycle counting and receiving.

After implementing item level RFID, retailers found a 90% decrease in receiving time and a 90% reduction in cycle counting time, as well as reductions in out-of-stocks by 50%.

Benefits Summary

In short, item level RFID can afford Retailers benefits across their business:

1. **Increased Sales** – The inventory accuracy provided by RFID reduces out of stocks, and increases tracking and tracing of new product introductions and promotions, leading to increased sales of 5-8%.
2. **Reduced Inventory Costs –** RFID reduces unintentional excess inventory associated with over ordering due to poor accuracy.
3. **Reduced Shrink –** Item level tracking and tracing allows for identification of loss points, deterrence and reduction of administrative error based shrink.
4. **Reduced Labor** – While most labor efficiency gains translate into improved customer service, if the store is large enough, efficiencies will reduce actual labor costs.

Breaking Down the Barriers to a Successful RFID Implementation

Cost and technical barriers exist, but can be overcome.

Cost Barrier

The most talked about “barrier” in implementing RFID is that of disappointing ROI’s and that the cost of implementation can be higher than any benefits culled from RFID.

However, early implementers such as Marks & Spencer, Best Buy and Tesco, have found this to be otherwise. By taking a “launch and learn” approach – whereby the pilot starts slow, with a few selected items and with each step evaluated at pre-set intervals – these companies have carefully controlled costs, but realized a strong ROI for their item level tests.

Technical Barriers

Reader density issues, slow introduction of an industry standard and lack of a widely recognized end-to-end solution have also caused some companies to hesitate to use RFID to improve processes.

However, with the advent of the GEN 2 standard, tags and readers are more standardized. Readers are more capable of handling tags that are densely grouped.

Companies like VUE Technology, VeriSign and Avery Dennison are partnering together so that end-to-end solutions are realized.

Best Practices for Successful RFID Pilots

Once the decision is made to create an RFID pilot test program, it’s important to know the steps to take to make sure it’s a success.

The first step in evaluating the potential value of item RFID to your business is to plan for a small pilot program. Start small and learn as you go. Select a group of items (generally high value items, with only a few of each type in the store) and develop your pilot plan focused on those items.

Successful pilots for item level have used the following methodology:
- RFID Needs Assessment
- Project Plan Development
- RFID Pilot Test Planning
- Test Pilot Implementation
- Assessment and Next Steps

RFID Needs Assessment

The first step is to form a multifunctional RFID team including representatives from various areas of the company including: Operations, Information Technology, Purchasing and Distribution.

Next, review the “pain points” that you expect RFID may help solve such as out of stock, shrink, excess inventory and markdowns. With these “pain points” in mind, identify your objectives and milestones.

Important: At this point, you should obtain senior management buy-in or sponsorship. Since an implementation eventually can represent a significant amount of capital and procedural changes, it’s imperative that senior management supports the efforts of the pilot team.

Lastly, obtain preliminary technology education for the team. Get them acquainted with the terminology, tools and tasks that will be involved with the pilot.

Project Plan Development

After you have assessed your RFID needs and obtained management buy-in, you’ll need to define an implementation plan.

Begin by surveying for reputable RFID technology providers. It is important to work with a partner that has experience in executing successful pilot programs. They should provide process flow analysis, ROI calculation and optimal RFID technology and tagging solutions. The right partner can guide you through the entire process.

Next, generate a target ROI using best benefit assumptions for financial and process improvements. Your RFID technology provider can assist you.

The last element in your Project Plan Development will be to identify SKU’s or product lines to be RFID tagged that represent “pain point” items.

RFID Pilot Test Planning

Once your plan is developed and your technology partner is selected, you can begin planning your RFID pilot.

If possible, select 2-4 test sites along with 2-4 control locations. Test duration should be 90 days at a minimum.

Establish key performance measures in support of your business case assumptions.

Determine the RFID technology test set including tags, reader positions, data collection points, item tagging locations and replenishment methods.

Overlay a stand-alone software system to run the RFID test pilot plus links to update the inventory position. (This can generally be done with relatively little cost.)

When your pilot plan is in place, obtain approval for financials for test requirement items such as tags, readers, labor, hardware and software.

Pilot Test Implementation

When all your careful planning is completed and funding is in place, you are ready to begin your RFID Pilot Test.

Important: Engage privacy groups in your area and identify test technology clearly to your customers.

Communicate clearly what your intentions are with your pilot and address any concerns they may have. (Marks & Spencer uses in-store signage and on-tag notations to communicate, for example.)

After this has been accomplished, you are ready to conduct initial metric data and measurement points for your “pain point” items.

Mark all test items and initiate test rollout within 48 hours of marking.

Review test metrics and location feedback every two weeks and adjust your plan, as necessary.

Assessment and Next Steps

At the conclusion of the pilot, assess your findings and decide on next steps by reviewing the benefits and issues uncovered at each of the milestone dates. With this information, you can update business ROI parameters with actual results from the test.

Important: Conduct Senior Management review with the RFID team and site managers on results.

Determine the viability of continuing the test, expanding site locations or deferring use of RFID technology.

Pilot Implementation Summary

RFID is an enterprise system change technology. It requires full management discipline involvement, not just Information Technology or Operations.
Expect changes and challenges to setting up the test sites from the original plan. You will achieve optimal results if you remain flexible and open-minded during the test. (“Launch and Learn” is a good phrase to remember.)

Look for real improvement results from changing the business model for sites based on improved inventory visibility.

Upper management support for trials and results are key to any successful implementation.

Thanks to Avery Dennison partners **VeriSign and VUE Technology** for jointly developing the webinar on which much of the information in this white paper is based.

For more extensive details on Avery Dennison’s study regarding Finding Value in Item Level RFID, please contact:

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