

RFID Journal Live! 2006

May 1-3, 2006
MGM Grand Conference Center
Las Vegas, Nevada



Putting RFID to Work

May 2, 2006



Deploy RFID with a ROI

Louis Sirico

RFID Industry Evangelist
AWID



Putting RFID to Work

May 2, 2006



The Quest for an ROI Starts at the Beginning...

- Up-front analysis determines:
 - What's tagged and in what volumes
 - How tagging occurs
 - Where visibility is needed (read points)
 - Affected processes
 - Impacted IT systems
 - Equipment & software
- This is the time to look for potential ROI!

Where's the Short Term ROI with RFID?

1. Reduction of direct labor costs
 - Reduce redundant, error-prone manual tasks
 - i.e. Data entry, bar-code scanning, paper-work
2. Increased through-put
 - Faster processing allows greater efficiency – do more with same amount of resources
 - Reduced order lead time
3. Improved exception handling
 - More efficient handling of special orders
 - Better tracking during Work-In-Progress

ROI with RFID – Long Term

1. Retail Perspectives:

- Reduce Out of Stocks (OOS) = Increase in Sales
- Reduced Theft & Shrinkage
- Promotions management (seasonal merchandise)

2. Serialization Benefits:

- Reduce Obsolescence (Date Sensitive Inventory)
- Reduce Counterfeiting

3. Physical Inventory:

- Reduce time spent looking for items
- Improve accuracy in internal systems
- Better forecasting

Seek and Ye Shall Find an ROI in..

1. Labor intensive processes
 - Reduce redundant, error-prone manual tasks
 - i.e. Data entry, bar-code scanning, paper-work
2. Bottlenecks in processes
 - Use non-line sight capability
 - More rapid, non-sequential scanning than bar-code
3. Areas of high shrinkage & loss
4. Tracking in rugged, harsh environments where bar-codes do not hold up

Work In Progress (WIP) management Manufacturing



Assembly Line
Above

RFID Tagged Carrier
Below



Supply Chain

Profile: \$1 billion durable goods manufacturer

Project Goal: Improve inter-facility distribution

Scenario:

- Use RFID on cases and pallets transferred between manufacturing and DC
- Project focused on special orders with mixed SKU pallets
 - Very labor intensive with barcodes and prone to error
 - Average 1,200 pallets per month / 50 – 60 pallets per work day

Process Changes

- Incorporating RFID technology affected the following processes:
 - Generate Transfer Order
 - Pick Transfer Order
 - Create Skid Manifest
 - Ship Transfer Order
 - Receive Transfer Order
 - Check in Transfer Order
- It also added two new processes:
 - RFID Tag Inventory Management
 - RFID System support



The Metrics

- Average labor cost of \$19.50 per hour (\$15+30% overhead)
- Time-in-motion study showed:
 - New processes added 5 minutes per palette.
 - **30 minutes per palette saved** in manual process time by eliminating bar code scanner and clipboard.
- Based on the average cost per minute of a warehouse worker and inventory control clerk, **this produces a labor savings of \$9.75 per palette.**

The Bottom Line

Customer achieved ROI in month 13

Details:

- Total Project cost <\$200K
 - Installation and integration services - \$92K
 - Internal Costs: training, management - \$56K
- Tag Cost - \$0.39 each (Gen2 finished labels now 15 cents each)
- Equipment depreciated using a straight-line method over 36 months with \$0 recovery value.

Other Benefits for Implementer

- Reduced labor hours to process transfers
- Nearly eliminated barcode/keyboard errors
- Verify all cases on palette in a shipment
- Improved throughput
- Faster stock update
- NEW: employee performance statistics

Tools that can help

- Websites:
 - RFID Journal
 - RFID Update
 - RFID Switchboard
- EPC Global Value Model
 - Expected benefits: added revenues, added profit, reduced costs, increased service level
 - One-time/recurring EPC/RFID implementation costs
 - Expected payback period, five-year NPV