

ROI for use of RespectRFID in Retail

Assumptions

A mythical chain of stores which are 1% the size of Wal-Mart: Having 50 stores which are each 110,000 sq foot
RespectRFID tags on virtually all items - average selling price \$25

Labor reduced

Reduce number of items which have to be locked up then unlocked for sale (which will increase impulse sales)
Reduce manning for electronics, video games, jewelry, etc.
Reduce the amount of manual inventory checking. RespectRFID totals entire inventory - even if in multiple shelves
Reduce the labor for shelving (mis-placed, return of goods, and if mfg applies tag - original shelving)

Sales increased

Web sales shipped directly from local stores - quicker and lower cost
Shopping pleasure: no alarms at doors, can check stock on web before coming to store
Store alerted when out of stock
Customers increasingly find products on the shelf - restocking from distribution centers and other stores
Lowered prices: If store chooses to share some of profit increase due to RespectRFID with customers
Cyber clerk - cellphone with location features gives help for people for whom local language is difficult or impossible, as well as provide help to people with disabilities such as: blind, stutter, dyslexic, wheelchair, walker, ...

Loss reduced by at least 80%: shoplifting, boosting, employee theft, employee fraud

Advertising Reduced

Less advertising needed when customers become aware of benefits of shopping at RespectRFID store

(\$ in Millions)

\$2,450 estimated as 1% of Wal-Mart 2003 sales all stores

10.00% Labor is 10% of sales - industry average

Labor

10.00% Reduction in labor costs due to Respect

Reduced

\$25

1.00% Resulting labor cost savings as a % of sales

10.00% Increase in sales

Sales

6.00% Increase in operating profit resulting from increased sales (based on Wal-Mart Annual report)

Increased

\$15

0.60% Resulting increase in operating profit as a % of annual sales

Loss

2.00% Average loss in US and Canada retail is 1.7%

Reduced

\$47

0.10% Anticipated loss after using RespectRFID =(95% reduction)

Advertising

3.00% Retail advertising cost as a % of sales (varies 1% -> 6% depending on type of store)

Reduced

\$15

20.00% Guess of reduction of advertising cost due to RespectRFID

Gross Profit

\$86 Annual increase in gross profit - before deduct RespectRFID costs - see below

Annual cost of tags

\$2,450,000,000 Mythical store sales 1% of Wal-Mart \$245,000,000,000

98,000,000 # of tags =sales / \$25

\$0.45 cost of tag and installation (much higher cost than higher volume of Wal Mart tag usage)

\$44,100,000 Annual tag cost (Wal-Mart estimate has billion tags/year)

Cost per store

110,000 Square foot/store

100 Aisle length - estimated X 12 Distance between centers of aisles- estimated

1,200 Square feet of retail store coverage by 2 nodes

600 Square foot of coverage per node

\$1,500 Cost per node, installed X 183 Nodes/store - again higher cost due to lower volume

\$275,000 Cost for nodes/store

+ \$100,000 Cost of training per store

+ **\$350,000** Cost for software and other hardware per store (computer, wireless displays)

\$725,000 Cost of all HW, SW and training per store

Cost for all stores and distribution centers

50 Stores

\$36,250,000 Deployment costs for just stores

10% Guess of additional deployment costs for distribution centers

+ **\$39,875,000** Total deployment costs: stores + distribution centers

= **\$83,975,000** Total 1st year costs

Return On Investment

\$85,750,000 Gross Profit increase due to use of RespectRFID (from previous page)

- **\$83,975,000** Total 1st year costs

= **\$1,775,000** Net profit increase in first year due to use of RespectRFID

ROI less than 1 year!

Subsequent years

\$85,750,000 Gross Profit increase subsequent year of use of RespectRFID

- **\$44,100,000** Annual tag costs

- **\$7,975,000** Costs for annual upgrade and maint.= 20% of original deployment costs

= **\$33,675,000** Net profit subsequent years

Thus, every \$1 spent on RFID will return **\$1.65**