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MOVERS & SHAKERS

JANUARY 15, 2007

Smartening Retail

With the retail industry all set for a boom in India RFID can get that competitive edge

Retailers bring a multitude of manufacturers and consumers together on a single platform making it possible for products to be sold and business to take place. Retailers add value to products by making it easier for manufacturers to sell their merchandise and consumers to buy them.

Retail Market Size

The Global Retail Story: Retail has played a major role all over the world in increasing productivity across a wide range of consumer goods and services. The impact can be best seen in countries like the US, the UK, Mexico, Thailand and China. Economies of countries like Singapore, Malaysia, Hong Kong, Sri Lanka and Dubai are also heavily assisted by the retail sector.

United States: Retail is the second-largest industry in the US. The retail industry employs more than 22 mn Americans and generates more

than \$3.8 tn in retail sale annually, ie approximately \$11,690 per capita. Retailing is a \$7 tn sector. Retail trade accounts for about 12.9% of all business establishments in the US.

Wal-Mart is the world's largest retailer employing with over 1mn associates in the US and another 3,00,000 worldwide. Wal-Mart has become the most successful retail brand in the world due its ability to leverage size, market clout, and efficiency in its SCM among other things to create market dominance. Wal-Mart was also the market leader in implementing RFID.

Implementation of RFID can single handedly solve various problems like stock outs, inventory management, recalls and shrinkage

India: Retail is India's largest source of employment after agriculture. It has the deepest penetration in rural India, and generates more than 10% of India's GDP. With approximately 12 mn retail outlets, India has the highest retail outlet density in the world.

Majority of the retail market continues to be unorganized. At present the organized sector accounts for only 2-4% of the total market. The level of retail sales per head remains one of the lowest in Asia.

The share of organized retail in India was about 0.7% (\$1.1 bn) in 1999, has increased to 3.2% (\$7 bn) of the total \$225 bn pie, in 2005. The Indian retail sector is worth roughly \$292 bn, and roughly 5% of this is classified as organized retail.

Indian retail industry is moving towards organized retailing. There are various mandates developing in the retail industry to which all the suppliers have to comply (Wal-Mart, Target, Tesco, etc.). Retailers face various problems like stock outs, inventory management, recalls, theft, shrinkage, customer relations management (CRM) and product counterfeiting. Implementation of RFID can single handedly solve the above-mentioned problems faced by the retailers.

RFID Standards for the Retail Industry

EPCglobal is leading the development of industry driven electronic product code (EPC) standards to support the use of RFID and the associated EPC network. This will facilitate immediate, automatic and accurate identification of any item in the supply chain of any company, in any industry, anywhere in the world.

EPC uses five key pieces of information: the company code, product code, serial number that uniquely identifies the item, a header that defines different types of tags, such as those in the consumer products industry, and a filter value that allows a company to read only pallet-level tags, ignoring



case-level tags or vice versa.

The International Standards Organization (ISO) has approved the EPC Gen 2 Class 1 UHF standard, publishing it as an amendment to its 18000-6 standard RFID air interface for item management using devices operating in the 860 MHz to 960 MHz ISM band.

Areas of Focus for RFID in Retail

Automated Checkouts: Checkout is a source of great frustration for consumers. The results of one survey report that 72% of respondents rated checkout efficiency as very important. RFID technology can calculate the total cost of merchandise in the cart automatically. Hence, RFID speeds the checkout process, reduces errors at the cash register, increases customer satisfaction and reduces theft.

FIFO (First in First out) not Enforced: This leads to situations where the stocks received earlier could still remain unused leading to inefficient utilization of resources. Also many a time the products have to be discarded after the due date, leading to wastage and associated costs involved.

Increased Collaboration in the Supply Chain: Collaborative planning, forecasting, and replenishment (CPFR) activities are the main processes involved in supply chain collaboration.

Maintaining Shelf Stock: Inventory availability remains one of the hottest issues for consumers. It is estimated that 33% of out-of-stock items are located in the store, just not in the correct location.

- Inaccurate store inventory levels are cause of true out-of-stocks.
- Receipts, sales data and cycle or physical counting are typically the only updates for store inventory systems.
- Additionally, a typical product movement such as shoplifting or employee theft will not be captured until the next cycle or physical count.

- Consumers picking up products and then putting them down in another location, where they are lost until a store associate locates and re-shelves the product.
- Associates not stocking or storing products in the relevant location.
- Selling through the entire display quantity before store associates

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can identify the trend and restock the location.

- Losing product in the backroom or other storage areas only to find it again later.

Mobility: Mobility means technologies that can be used to access information on the move, wireless point of sale, electronic shelf labels and client applications to improve customer service within the store. Also, Wireless workstations that enable managers on the floor to check inventory information, sales trends and labor schedules.

Physical Count of Items and System Records not Synchronized: This is possible because the goods may have been

issued physically, but the system may not reflect because the updates are done at pre-determined frequency. Similarly, goods may have been physically received in the store but the system is yet to be updated.

Pricing Accuracy and Localized Pricing: Smart shelves with digital price tags can ensure pricing speed and accuracy. With the increase in the use of price optimization applications, RFID allows for immediate local pricing based on the results from the optimization output. This can reduce promotional re-pricing time significantly.

Product Recalls: While product recalls may not be a common occurrence for store operators, when they do occur they are costly and difficult to execute. Today, the only way to guarantee that all recalled product is removed from the store is to pull every item of that SKU from the shelves. This costs the store operator added expense in labor and removes some satisfactory product from the shelves.

Returns/Warranty Authentication: A recent television commercial for a large US electronics retailer satirizes a consumer attempting to return a purchased item without a receipt. As the customer is searching in his wallet for the receipt, the store associate keeps trying to tell him that the receipt is not needed since they store all the information needed in the store's computers.

Shrink/Theft: Shrink occurs when an item is misplaced, lost in the warehouse or stolen. According to the NRS survey, shrink averages 1.71% of sales in the retail industry. Return fraud is another area of store shrink that is difficult to track accurately.

Web-enabled Solution Further, these web-enabled solutions allow the Information to be configured, monitored and managed in Real-time from one central location irrespective of the distribution of physical location.

—Homi Limbuwala, VP, Business Development (International), SkandSoft Technologies