

IT in Retail Industry



Flow of Presentation



- Why IT in Retail
- Roadblocks
- Technology evolution
- IT in retail of Grocery
- IT in retail of Apparels

Why IT is required in Retail?



- Supply Chain improvement.
- Improve the accuracy of demand forecasts and production plans.
- Reduce unsold inventory through online auctions.
- Efficiency across business functions
- Data processing and analysis
- Customer experience and loyalty.
- Advertising and promotions
- Multi-channel retailing

Roadblocks



- Theft and Crime
- Product complexity
- Supply chain challenges
- Process complexity
- Staff Training
- Empowered Customer

Information technology in Retail



Radio Frequency Identification (RFID)

- As name implies, RFID is an ID-identification-system
- Relies on a small chip that is implanted in a tag.
- The chip can record and store data, such as a serial number, price or purchase record.
- Electronic scanner can use radio signals to read or track the ID tag.



Use of RFID in Retail



RFID Smart Labeling

- Monitor unattended inventory
- Shipping and Receiving applications
- Provide real time tracking and locating of tagged items on shelves



Check-out Process

- Reduce time spent in line
- Reduce labor/time cost of employees
- Streamline check-out process with ability to scan multiple items and pay for them all at once



Inventory Control

Use of Point of sale (POS)



- Point of sale (POS) systems is electronic systems for Capturing data at the time and place of sale.
- Uses computers or specialized terminals that are combined with cash registers, bar code readers, optical scanners and magnetic stripe readers for accurately and instantly capturing the transaction.
- Basic point of sale systems currently in use includes:
 - Standalone electronic cash registers, also known as ECRs
 - ECR-based network systems
 - Controller-based systems
- POS software can also allow for functions such as pre-planned promotional sales, manufacturer coupon validation
- Eg Wipro



Note/Modifier	Promotion	Discount	Side Order	Item Detail
Main	Menu Name	Price	Quantity	Amount
Y	Side Salad	\$2.00	1	\$2.00

Eat-In

Modifier

Barcode : _____

↑ ↓ [Icon] ↶ ↷ =

Cust Card ID	Select Cust	Sales	Customers :1
	Anonymous C	admin	Table:Table 1

Points: _____	0	Tip: _____	\$0.00
SubTotal: _____	\$2.00	Total CRV: _____	\$0.00
Total Tax: _____	\$0.00		
Total: _____	\$2.00	Paid: _____	\$0.00
		DUE: _____	\$2.00

Entrees	Wines	Sides
Side Salad \$0.00	Garlic Mashed Potatoes \$0.00	Brown Rice \$0.00
House Fries \$0.00	Baked Potato \$0.00	Rice Pilaf \$0.00
Sweet Potato Fries \$0.00	Mac & Cheese \$0.00	White Rice \$0.00
Seasoned Shoestring Fries \$0.00	Sauteed Mushrooms \$0.00	Fresh Fruit \$0.00
Beer Battered Onion Rings \$0.00	Sauteed Veggies \$0.00	Cup of Soup \$0.00

- Area_2&3
- Table 1
 - Table 2
 - Table 3
 - Table 4
 - Table 5
 - Table 6
 - Table 7
- ↑ ↓

⏪ Reload Menu Position Select Category ⏩

Check	Credit Card	Debit Card	Cash	Split Order	Close	New	Receipt
Gift Card	Multiple Payments	House Account	Issue Gift Card	Force Return	Post Order	Save/Hold	



- **SmartOps System**

Smartops(acquired by SAP) enterprise software solutions support many initiatives and challenges associated with different manufacturing and distribution industries from Lean Manufacturing, Just-In-Time (JIT), and Six Sigma initiatives.

- **Warehouse management system(WMS) software**

Integrates human activity with IT and is effective in managing warehouse business

Begins with receipt of Supplier and ends with shipments to customer



- Maintain real time physical inventories
- Maintain distribution records
- Streamline warehouse administration
- Merchandising flow can be accelerated

Warehouse Management System (WMS) Functionality

Warehouse Design	Inventory Tracking	Receiving
Putaway	Pick-and-Pack	Shipping
Labor Management	Yard and Dock Management	Reporting



Supply Chain Management (SCM) Applications

System Save & Close Save & New Close

System Actions

Search By: WR #

For: []

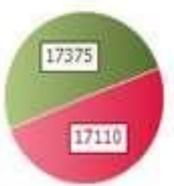
View all Records Search

Search Tasks Repack Cargo Invoices Print Labels Attach File Follow Up Annotations Reminder Options Log Close

Recent Transactions

- Recent
- 1). 0000000016
 - 2). 0000000015
 - 3). 0000000014
 - 4). WR003
 - 5). MRC-002185
 - 6). TEST_01
 - 7). WR001
 - 8). MRC-002306
 - 9). MRC-002235
 - 10). 0000000013

Profit Analysis



Quick

Transaction Logs Task List Tracking Status Follow Up

Warehouse Receipts New Record

Warehouse #: 0000000016 Date In: 04/11/12 03:14 PM Division: [] Status: OPEN

Shipping Inst. #: [] Expire: 05/11/12 PD Order #: [] User ID: []

Shipper Name: Customers Address: [] City: [] State/Province: [] Zip/Postal Code: [] Phone: [] Fax: []

Consignee Name: Customers Address: [] City: [] State/Province: [] Zip/Postal Code: [] Phone: [] Fax: []

Third Party Name: Customers Address: [] City: [] State/Province: [] Zip/Postal Code: [] Phone: [] Fax: []

Agent Name: Customers Address: [] City: [] State/Province: [] Zip/Postal Code: [] Phone: [] Fax: []

Co-Loader: []

Mode: AIR Bldg/Whse: [] Origin: [] Destination: [] Dest Country: [] Ult. Destination: [] Service: [] Currency: 0.00

Receiving References Hazardous Imports Airline Carrier

Inland Carrier: [] Date: [] Freight Amt. \$: 0.00 0 % Check #: [] COD Amount: 0.00 0 % Check #: [] Carrier Terms: PREPAID Scan PRO Numbers

PRO Number Details

No records are available. Right-Click to add.

Received by: [] Driver: [] Checked by: [] License: [] Pictures by: [] Plate: []

Handline Mark OSD Information Containers

Information Technology in Reliance Fresh



- Software – SAP
- Billing counter- Scanners
- Inventory Management-
Hand Held Terminals



Reliance Fresh, Subhash Chowk, Gurukul

IT in Grocery Stores



Locating Products

- Aisle411 empowers anyone with a mobile phone to find products within retail stores



Self-Serve Scanning



- Hand-held in-store scanners as well as its mobile app enable shoppers to scan bar codes and let customers ring up purchases as they stroll through supermarket aisles.



Management Alerts When More Register Are Needed



- A system which counts the number of people entering and leaving the store using heat-sensitive infrared sensors.

Supermarket Mobile Apps

Kid-Friendly Carts



Technology in Apparel Industry



- **Virtual Mannequins:**

This was shown by team Lab Hanger at FRAPBOIS Exhibition. In this, customers were shown triggering virtual mannequins while removing a hanger from the rail.

- **Augmented Reality:**

American Apparel with the help of Vuforia app used this concept at the point of sale to unlock a range of options.



Technology in Apparel Industry



Browse and Order Hubs:

M&S Browse and Order Hubs T allow users to browse the catalogue or scan barcodes on items and explore product information.

Virtual Reality Catwalk Show:

Topshop in 2014 used this technology to live stream a virtual reality experience of its London Fashion Week show.



Technology in Apparel Industry



- **Virtual Rail:**

M&S virtual rail allow their customers to browse through the entire catalogue with the help of head height enabled screen. Not only this, it also recommend the items according to your search.

- <https://econsultancy.com/blog/64408-12-more-examples-of-digital-technology-in-retail-stores/>



Conclusion



- Retail industry is now greatly influenced by technological advancements. Recent studies have shown that retailers are more interested in investing in the online sector as it is very fruitful in the long run, cost effective and reach to a large number of customers at a time.
- The introduction of information technology in the retail sector has not only helped the industries flourish at a fascinating rate but has also helped people reach the global market easily