

A Project Report on

“MIS in Organised Retail”

**TOWARDS FULFILLMENT OF THE PROJECT REQUIREMENTS
OF POST GRADUATE DEGREE IN MASTER OF MANAGEMENT
STUDIES
OF MUMBAI UNIVERISTY**

SUBMITTED BY:

Amit Gupta

MMS-II

ROLL NO: M0703

BATCH 2007-2009

UNDER THE GUIDANCE OF

PROF. RAKESH WALKE

CORE FACULTY - MARKETING

**FR. C. RODRIGUES INSTITUTE OF MANAGEMENT STUDIES,
VASHI, NAVI MUMBAI**

STUDENT DECLARATION

I, **Mr. Amit Gupta**, studying in the Second Year of Master of Management Studies course at Fr. C. Rodrigues Institute of Management Studies, Vashi, Navi Mumbai, hereby declare that I have completed the project titled "**MIS in Organised Retail**" as a part of the course requirements for MMS Programme.

I further declare that the information presented in this project is true and original to the best of my knowledge.

Date:

Place:

(Signature of the student)

CERTIFICATE FROM THE INTERNAL GUIDE

I, **Prof .R. C. Walke** hereby certify that **Mr. Amit Gupta**, a student for the Master of Management Studies course at Fr. C. Rodrigues Institute of Management Studies, Vashi, Navi Mumbai, has completed a project on “**MIS in Organised Retail**” under my guidance during this year.

His work and output has been found to be satisfactory.

Date:

Place:

(Signature of the Guide)

ACKNOWLEDGEMENTS

This project was done in partial fulfillment of the requirements for the degree of Masters in Management Studies.

The three things which go on to make a successful endeavor are dedication, hard work and correct guidance. Able and timely guidance not only helps in making an effort fruitful, but also transforms the whole process of learning into an enjoyable and memorable experience.

This project proved as an excellent opportunity for me to apply the concepts learnt in the course of my program at the institute. I am also thankful to **Fr.C.Rodrigue institute Management College** for giving me this opportunity which helped me in gaining knowledge about **management of information systems in organized retail industry**.

I am deeply indebted towards **Prof. R. C. WALKE** for guiding me in preparing this project. I take this opportunity to thank all the people without whose help, guidance and inputs it would not have been possible to make the project report a success.

Finally, I would like to thank all those who were directly or indirectly related to my project.

- Amit Gupta

EXECUTIVE SUMMARY

Industries in our modern day are facing tremendous pressures like society conformation, technology innovation and market competition. These three forces describe by Boyett and Boyett, (1995) catalyzed an organization to initiate goodwill responses, improve their technological platform and invent systems to automate their operational processes. These are efforts contributed to retain their competitive edge thus preserving their existence.

The challenge of retailing is to strike the balance between cost optimization and maintaining the level of service. The trade-off between these factors is a dynamic one and retailers have to endeavour to strike a balance towards it all times. Technology has become the basic fabric of the retailing industry today. Perhaps the most important fact is that retailers who do not understand the ways to use technology for competitive advantage will be left out in the competition.

This study is an effort to understand the applications of information technology in the modern retail industry, like in supply chain management, store management, point of sale and customer relationship management. With the help of case studies and a brief customer survey the current industry scenario is also studied.

Table of Contents

Organized Retail Industry	2
What is Retail?	2
Stages of retailing	2
Popular formats of retailing	3
The retailing challenge	5
Concerns among retailers	5
Indian Retail Industry	7
Application of Information Technology in Retail	7
IT in Supply Chain Management.....	8
IT in Purchasing Management.....	9
IT in Forecasting Demand.....	9
IT in Performance Measurement	10
IT in Inventory Management	11
IT in Just In Time.....	12
Store management	13
Building Blocks of Store Management.....	14
Tools for Improving Store Management	15
Improving customer satisfaction	15
Selling profitably.....	16
Motivating associates	16
Store Management Software	17
Case in Focus: Infosys' "Shoppingtrip360"	18
IT in Point Of Sale	18
POS - Evolution from ECR.....	19
Effect of POS Implementation.....	20
Expenses Reduce, Sales Increase: How?.....	20
Constraints in Implementing POS.....	22
The boon for independent retailers	23
Case in Focus: Lilliput	23
IT in Customer Relationship Management	24
Role of Technology	25
Turning Data into Insight	25
Attention to Privacy.....	26
Leveraging information in building customer relationships	26
CRM Retail Software Benefits	27
Case in Focus: Mitchells	27
ERP Systems in the Retail Industry	29
Problems with Legacy Applications in the Retail Sector	30
Main Components of Retail ERP	31
Advantages of Using ERP in Retail.....	32
Case in Focus: ERP implementation in Pantaloon retail.....	33
Highlights from Customer Survey	355
Conclusion	37
Bibliography	38
Online Resources.....	38

Organized Retail Industry

What is Retail?

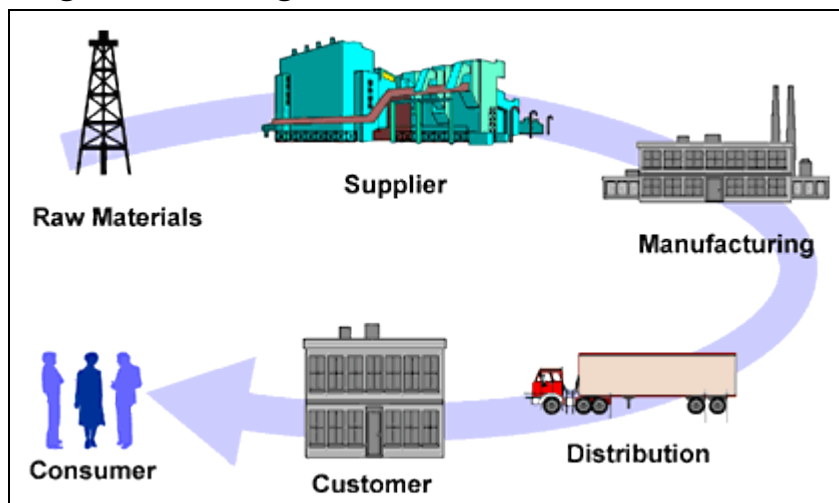
The everyday definition of retail can be described as the act of selling of goods and merchandise from a fixed location. In other words retailing is a distribution channel function where the retailing organization will buy products from certain manufacturers and then sell it directly to consumers. A retailer is a reseller from which a consumer purchases products.

The origin of the word retail is considered to be from the French word '*retailier*' which means to "cutting off, clip and divide" in terms of tailoring. To use the concept, retailing directly converts into the meaning that it is breaking of products in larger consignments into smaller packages for general consumption.

Perhaps the concept of retail exists from the times of established currencies if not from the times when the barter system was prevalent. However, the irony of the Indian retailing industry is that even though it is one of the basic financial activities carried out in an economy, it is considered to be the newest when taken in the form of an organised sector in itself.

The retail industry in United States is considered to be most evolved. This fact is proved by the fact that the biggest retail corporations of the world that appear in the top 50 ranks of the Fortune 500 list are all headquartered in United States. The famed list is headed by Walmart Stores Inc. and there are other very reputed like Home Depot, Kroger, Costco and Target. The significance of this fact is that the organised retail sector is driven by the practices of the United States Retail industry and the concepts are based around the same.

Stages of retailing



Retailing does not only comprise of selling the products to customer but it is also taking care of the entire product movement cycle. This path from manufacturer to the consumer has a very important stage known as the Retail Supply Chain. The retailing cycle involves the following key components:

1. Suppliers and/or Manufacturers
2. Logistics Partners
3. Warehouse
4. Distribution Centres
5. Stores
6. Customers

Popular formats of retailing

Since the retail industry covers a wide range of corporations, it can be classified in various formats. However the most popular format of classification is by the type of business channel the retailer implements to do business. Some of the popular categories are:

Mom-and-Pop Stores: This is represented by the small, individually owned and operated retail outlet. It is often seen that these are family-run businesses which cater to the local community and are capable to provide high level of service. However they often have a limited product selection.

Mass Discounters: These are the type of retailers who sell either general or specialty merchandise. But their forte is in offering discount pricing to their customers. Compared to department stores, mass discounters offer fewer services and lower quality products.

Warehouse Stores: This is a form of mass discounter retailer. The prices offered by these types of retailers is even less than traditional mass discounters. However, the constraint on buyers is that they need to make purchases in quantities that are greater the quantities that can be purchased at mass discount stores. The level of service is often low and product selection can also be limited. Also notable is that these stores are of warehouse style where customers might be found selecting products off the ground from a shipping package. Another form of warehouse stores is warehouse clubs where customers need to be members to be able to make purchases.

Category Killers: Major retailers also focus on a concept of specialty stores wherein they service by providing multitude of options within that product category. In Indian parlance, the concept of “category killers” is often found in the product categories as electronics (The E-Zone), office supplies (Office Linc) and Books (Crosswords).

Department Stores: These retailers offer mid-to-high quality products and strong level of service. However in most cases these retailers do not fall into the full-service category. Even though the Department stores are classified as general merchandisers; some retailers may opt to carry a more selective product line. For instance, while Big Bazaar carries a wide range of products from grocery to electronics, Shoppers Stop focuses primarily their products on apparel and lifestyle products.

Boutique: These are usually small stores catering very specialized or niche products which is often high-end merchandise. Also in all cases the level of service is very high for this format. They often follow a full-pricing strategy and have prices which are more than the prices of merchandise available in any of the other formats.

Catalogue Retailers: The concept of this form of retailing is that the customers will place orders after seeing products from a published catalogue. Tata Sons retail venture Croma utilizes this business channel. Orders can either be delivered by in house logistics or a third-party shipper. The format utilized by McDonalds and Pizza Hut outlets for their delivery model can be identified as this format.

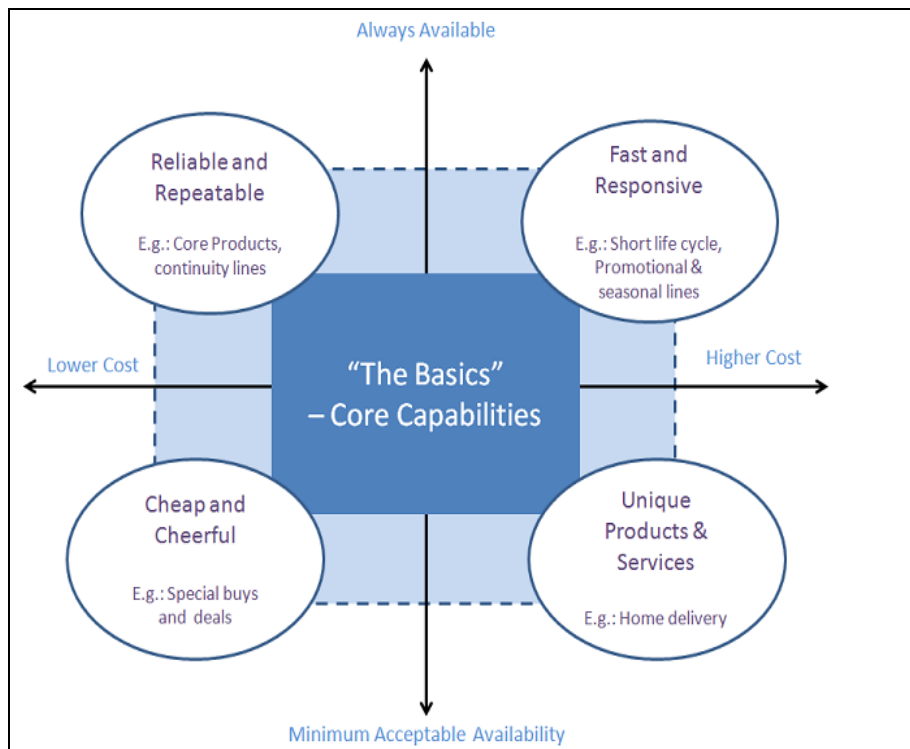
e-tailers: In this format the retailer principally sells via the Internet. There are thousands of online-only retail sellers of which Ebay is the most famous in India. The benefit of this format for customers is that it is open 24X7 and for the retailer is that it does not need to stock the merchandise.

Franchise: This form of retailing comprises of a contractual channel where one part the franchisor controls the business activities of the other party franchisee. The franchisee has access to the franchisor’s business methods and other important business aspects, such as the franchise name. In return the franchisee shares a part of the revenue with the franchisor. The common examples are McDonalds and Pizza Hut.

Convenience Store: As the name implies these general merchandise retailers cater to offering customers an easy purchase experience. Convenience is offered in many ways including through easily accessible store locations, small store size that allows for quick shopping, and fast checkout. The product selection offered by these retailers is very limited and pricing can be high.

Vending: This form of retailing involves utilizing automated methods for customers to quickly purchase the desired product. This can be interactive kiosks and vending machines. The presence of vending machines for purchase of smaller items, such as beverages and snack food, is already common in case of products like beverages and magazines. However newer devices are entering the market which will be able to vend more expensive and bulkier products. By access of either Internet or telecommunications link, these systems will enable customers to use credit cards.

The retailing challenge



The challenge of retailing is to strike the balance between cost optimization and maintaining the level of service. The trade off between these factors is a dynamic one and retailers have to endeavour to strike a balance towards it all times.

Concerns among retailers

In the global context, for retailers to be successful need is to address various issues which are inherently related to their business. The key issues include:

- **Customer satisfaction:** Customer satisfaction is one of the most important factors which determine the success of business. Only way to keep customers loyal is by making them satisfied. Needless to say the retailers need to have strategies in place that build relationships with customers and hence customers keep returning to make more purchases.
- **Ability to Acquire the Right Products:** The ability to provide the right product will make the customer satisfied. As most retailers do not manufacture the products they sell, they need to collaborate with their suppliers in order to provide the product demanded by customers. Hence, the retailers who constantly identify the products the customer will demand and negotiate with suppliers to obtain these products.

- **Product Presentation:** Often the suppliers provide the basic product and retailers need to generate interest about the product while presenting to customers. The merchandising of the product from packaging stage to putting on the shelf is very crucial. Hence the retailers need to employ creative people who understand and can relate to the market.
- **Traffic Building:** Retailers need to focus on marketing aspects as well. The main focus is to create customer interest using promotional methods. The best way to measure the customer interest is by the number of people visiting a retail location or website which more commonly known as footfalls and the measure is known as footfalls per square feet. Traffic Building is actually a judicious mix of promotional techniques such as advertising, including local newspapers or Internet, and customer loyalty programs and specialized promotional activities, such as coupons.
- **Layout:** Layout of the store covers attributes which are much more than the physical dimensions of the store and product arrangement. For most retailers, the layout should be of great visual appeal to customers as well it should cover the basics of ergonomics. Many retailers often keep renovating according changing trends and create makeovers to create the right shopping atmosphere (Motifs, objects, light, sound) can add to the appeal of a store. In the online context also the layout of a website is very important as factors like easy site navigation and usability are crucial deciding factors for success.
- **Location:** The decision of setting up a store is incomplete without incorporating the significance of location. Stores located in easy access and which have high visibility, might command higher land usage fees but may hold significantly more value than lower cost sites that yield less traffic. It is important to evaluate the trade-off between costs and benefits of locations before arriving at a retail decision.
- **Technology:** Technology has become the basic fabric of the retailing industry today. Perhaps the most important fact is that retailers who do not understand the ways to use technology for competitive advantage will be left out in the competition. The use of technology is present in each and every of retailing including customer knowledge (Customer relationship management software), product movement (Use of RFID tags for tracking), point-of-purchase (Scanners, kiosks, self-serve checkout), web technologies (Online shopping carts, purchase recommendations) and many more. Retailers will not only need to implement technology in their operations but also challenge their ways of doing it to succeed.

Indian Retail Industry

The organised retail industry has started in the late 1990s and after a decade it has surpassed all expectations. It is undoubtedly one of the most fast growing sectors of the Indian economy and big players from other industries are focussing on retailing like never before. Some of the key attributes of the Indian retail industry as of today are:

1. It is the 5th largest retail destination globally. This phenomenon has been fuelled both by the increase of both domestic retailers as well international retailers setting up their operations in India.
2. The Indian retail industry has shown tremendous growth. In exact numerical terms the retail industry had done business worth US \$ 25.44 billion in the financial year 2007-08 whereas the level business done in financial year 2006-07 was US \$ 16.99 billion. This is an overall industry growth rate of 49.73%.
3. The Indian retail industry boasts of the largest number of retail outlets in the world. There are total 12 million retail outlets out of which 5 million sell food and related products.
4. The industry has been the delight of all consulting organization. The recent report from AT Kearney has declared the industry tops the Global Retail Development Index (GRDI) for the 3rd consecutive year.

Application of Information Technology in Retail

The Indian organized retail industry is the fastest growing in the world. To keep pace with the rapid expansion, companies are forced to leverage technology to bring in operational efficiency. With the government of India allowing 100% FDI in retail, major retail companies have started entering the Indian market. The competition is getting tougher by the day and companies are using technology as a differentiator. The following sections highlight the various operational areas of retail industry and how information technology is used for competitive advantage.

IT in Supply Chain Management

Supply Chain may be defined as the series of companies that eventually make products and services available to consumers, including all of the functions enabling the production, delivery, and recycling of materials, components, end products and services.

Supply Chain Management may be defined as the systematic, strategic coordination of the traditional business functions and the tactics across these business functions within a particular company and across business within supply chain for the purpose of improving the long term performance of the individual companies and the supply chain as a whole.

SCM gives a value-enhancing and long-term benefit for the organisation. Firms with large inventories, many suppliers, complex product assemblies, and highly valued customers have a lot to gain by good practices in SCM. The cost of inventories was over \$2.2 trillion in U.S in 2000. Transportation and inventory carrying cost in U.S totalled \$434 billion in 2000 (U.S Central Bureau's Annual Survey of Manufacturers).



The best way to leverage the potential of SCM is by the efficient use of IT in this area. The importance of IT in SCM has long been acknowledged but little work has been done in this area. But with growing competition and greater emphasis to keep price as low as possible the companies are looking towards strengthening their supply chain.

IT can be used in SCM in various areas such as:

- Purchasing Management
- Demand Forecasting
- Performance Evaluation

- Inventory Management
- Implementation of JIT
- ERP Systems

IT in Purchasing Management

Electronic data interchange was developed in 1970 to improve the purchasing process. The rapid advent of internet technology in the 1990's spurred the growth of non-proprietary and more flexible internet based e-Procurement systems. Earlier critics argued that e-Commerce have been over inflated and it results in larger expenses than its savings. Today though many well managed e-commerce firms are beginning to thrive as users realize the benefits of their services.

The material user initiates the e-procurement process by entering a material request and other relevant information. This is then submitted to the purchasing department. After verification of this the buyer transfers this data to the e-procurement system and assigns qualified suppliers to bid for it. Suppliers connected to this system receive the bid instantaneously. The purchasing department maintains a list of preferred suppliers for each category of material. Thus the buyer is able to submit the bid request to numerous suppliers within seconds.

The traditional manual purchasing system is a tedious and labour intensive task. The new e-procurement system is a time saving system. It also results in a lot of cost saving as manual tasks are reduced. This system is much more accurate than the manual system. It allows mobility to the system. Audit trails can be maintained for all transactions in electronic form thus increasing the trackability. This system results in overall better management. This also results in various benefits for buyers.

IT in Forecasting Demand

Forecasting provides an estimate of future demand and the basis for planning and sound business decisions. The goal of a good forecasting technique is to minimize the gap between actual and forecast demand. All the factors that influence demand, the impact of these factors and there time frame must be considered in developing an accurate forecast. Also buyers and sellers should share all the relevant information about the forecasting so that a correct decision can be made.

Various forecasting techniques are as follows:

- Jury of executive method
- Delphi method
- Sales force opinion
- Consumer survey
- Simple average forecasting
- Moving average
- Weighted moving average
- Exponential smoothing
- Regression analysis

Some of the forecasting software used are:

- **Forecast Pro Software:** It is used by over 15,000 companies in 84 countries. The software is easy to use and has a built in expert selection system that analyzes the data, selects the appropriate technique for forecasting, builds the model and calculates the forecast.
- **Smart Software:** This software is used by companies such as HP, Mead Corporations etc. This is designed to run on Windows 95, 98, 2000, XP.

IT in Performance Measurement

It is said that “You can’t improve what you can’t measure”.

Performance measurement is the use of statistical evidence to determine progress toward specific defined organizational objectives. The daunting task of measuring performance for organizations across industries and eras, declaring the top performers, and finding the common drivers of their success did not occur to anyone until around 1982, when Tom Peters and Bob Waterman got down to work researching and writing **In Search of Excellence**. This publishing sensation challenged industrial managers’ actions and attitudes, and inspired researchers and scholars to further pursue the theory of high performance. This task becomes more complex as corporations diversify into multiple industries. A researcher must take this into consideration when conducting a comparative analysis of companies.

Performance Measurement Guidelines in SCM:

- Total SCM cost
- Supply Chain production flexibility
- Supply chain delivery performance
- Supply chain e-business performance
- Supply chain perfect order fulfillment

The evaluation of performance of the suppliers, material etc. requires a lot of data and continuous evaluation is required. Due to large volume of information available it has become almost impossible to do this evaluation process manually and thus the role of IT in this area has been increasing. One of the most recognized methods for integrating supply chain and measuring their member's performance is the **Supply Chain Operations Reference (SCOR)**. This model is used as a supply chain management diagnosis, benchmarking and process improvement tool by manufacturing and service firms in a variety of industries across the globe. This follows weighted approach to the areas that need more competencies.

IT in Inventory Management

In traditional supply chain inventory management, orders are the only information firms exchange, but information technology now allows firms to share demand and inventory data quickly and inexpensively. The inventory management directly influence how how effectively the organisation deploys its assets and capacity in producing its goods and services. The problem of inventory is compounded in an integrated supply chain, where a missed due date or stock out cascades downstream, affecting the entire supply chain.

In this area IT is used in The Chase Production System in which the capacity is adjusted in the demand pattern. It is also used in Master Production Scheduling, listing the exact end items to be produced in a specific period. IT is also used in Material Requirement Planning and Manufacturing Resource Planning.

Case in Focus

International Truck and Engine Corporation is a fortune 500 manufacturer of make-to-order trucks and buses. It has a huge network of dealers in more than 50 countries. The company has annual sales of about \$6.7 billion in 2001 and sold about half a million trucks in 2001. Its main feature is the make-to-order trucks according to customer specifications.

This helps in reducing the inventory and provides a opportunity to charge a price premium for its trucks.

But to manage this information is a complex task. It required a system that could handle more than 173,000 models and feature combination. The new system needed to handle all aspects of product change effectively and efficiently, including the ability to interface and communicate with existing systems. The company opted for Trigent Configuration Solution as its manufacturer. This system had information imbedded in it. This information was used to process truck orders. Dealers and company is also connected.

The results were an increase in the revenue by 150% and increase in profits by 120%. Also the BOM records were reduced from 7.2 million to 250,000. The system enabled International to differentiate its products and compete effectively in a market plagued by an oversupply of used trucks.

IT in Just In Time

Just-in-time (JIT) is an inventory strategy implemented to improve the return on investment of a business by reducing in-process inventory and its associated carrying costs. When implemented correctly, JIT can lead to dramatic improvements in a manufacturing organization's return on investment, quality, and efficiency.

Implementing lean/JIT practices significantly reduces lead time. Lean/JIT practices mediate the influence of IT integration on lead-time performance. Process improvements that result from lean/JIT practices are important contributors to the success of IT integration. Even companies that have experienced success in reducing lead time through lean/JIT practices may benefit from IT integration practices such as those embodied in enterprise resource planning systems. Two general approaches have been taken to reduce lead times in manufacturing: information technology (IT) integration within and between firms in the supply chain and process improvements that, as a group, are often referred to as lean/just-in-time (JIT) manufacturing practices. IT integration refers to information systems that electronically transmit information within firms and between firms.

Although these IT integration and lean/JIT initiatives are complementary in concept, in practice they are often considered to be competing. The sense of competition stems from two major sources. First, the source of organizational expertise required is quite different for each approach, IT professionals in the case of IT integration versus manufacturing management and manufacturing engineering for the lean/JIT approach. Second, the financial resources and top management attention required by each of these approaches often obviate initiating both IT integration and lean/JIT in a large scale at the same time.

Case in Focus

The example is about one of the most well known companies of the world, Dell Computer Corporation. Product goes in and out of Dell so fast that there is barely any time to see whether it is in the warehouse or manufacturing. Dell refers to this as a combination of just in time process and e-commerce and the main reason for its success.

Dell started in 1984 as a build-to-order organisation based on telephone call orders and the inventory was always low but never close to today's levels. Material arrives at Dell two hours prior to assembly. The internet can be used to compress time and that's what Dell has changed itself into. With the use of internet they can get a better pulse on their customers needs at any given time and also feed the data to the suppliers. The suppliers have also been brought close to each other by the use of internet and help in the implementation of JIT.

Store management

Store management involves selling profitably and satisfying customers, while keeping the store associates motivated to accomplish the first two objectives. As the benefits from better supply chain management and supplier collaboration no longer offer any competitive advantage, retailers are now focussing on customer's in store experience to differentiate themselves. The store is the place where the retailer's strategy and efforts converge. The level of customer's satisfaction with in the store shopping experience is the retailer's ultimate test.

AMR Research states that a customer will stop shopping at a retailer after 3 negative experiences. These include a product running out of stock, rude or uninformed sales associates. The lifetime value of these lost customers can be \$ 200,000 or more as estimated by Wall mart. Observing inconsistent store management tops the priority list of over 90% of the retailers and further more than 71% of the retailers believe that efficient store management is very important for the overall business success.

Traditionally, the retail industry has taken a limited view of store management with the primary goal being channelling of the retail workflow. All the other tasks such as communications and corporate task assignments are taken separately so that the store can concentrate on its primary goals. On the contrary, the scope and focus of store management should cover all in-store activities such as customer service, store promotion, new product launch, receiving inventory and store manager- associate relation.

Along with a comprehensive view of store management, it is important that all the retailer operations and IT initiatives take a holistic look towards store management. For example, a

point of sale upgrade would improve check out efficiency, but it could also impact other areas like customer profile management programme or attendance maintenance for the store employees.

Therefore keeping the holistic approach in mind, three building blocks of store management are taken into consideration:-

- Selling profitably
- Satisfying customers and
- Motivating employees

Building Blocks of Store Management

Efficient store management depends on how well the various marketing strategies are implemented by the store employees to sell profitably and be motivated thereby leading to a high level of customer satisfaction. Now let's take a closer look on the three building blocks of store management.

Selling profitably depends on:-

- Products in the stock
- Informed store employees who can help customers pick the right product
- Point of sale systems with right pricing strategy and promotion information.

Customer satisfaction can be ensured by:

- Providing products that the customer wants
- Swift checkouts
- Store associates being at the right place at the right time

Sales associates can be motivated by:

- Proving them the right tools and adequate job training
- Empowering them to make decisions
- Providing them some control over their work through flexible working hours and appropriate benefits.



Building blocks of store management

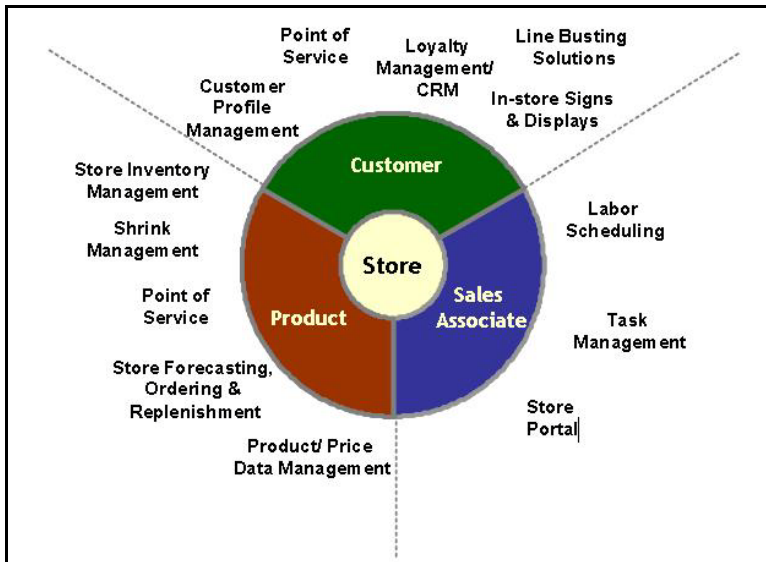
Tools for Improving Store Management

Selection of right tools for the implementation of various building blocks of store management is very critical for a store's success.

Improving customer satisfaction

Today, the point of sale is transforming into the point of convergence of all the channels including store, web, catalog and all the services that a customer may demand. This process has been accelerated by the use of customer-enabling devices such as kiosks, portable/ handheld shopping devices, self check out and employee enabling devices. POS systems these days enable customer recognition, tracking purchase history, making personalized offers, providing product and pricing information and line busting.

Some retailers use web based kiosks successfully for line busting as well as improving customer service. One of the major recent advances enables the associates with mobile computers or laptops to perform POS functions resulting in automatic queue busting. The plasma screens and in-store signs can be used for dynamic promotions by including various updates and price discounts based on the product demand.



Tools for achieving store management

Selling profitably

Store inventory management processes help channelize the various in-store activities and hence allow retailers to:

- Achieve a centralized, accurate and near real time view of store inventory.
- Facilitates store managers to fine tune orders using local knowledge and experience.
- Flag items that are needed on the sales floor immediately, during the receiving process.
- Effectively manage store to store transfers and return processes.
- Reduce problems of excessive back shop inventory and insufficient on shelf stock.

End to end pull based planning packages enable store level forecasting and replenishment. These systems make store ordering automatic and reduce stock outs by nearly 35-50 percent, while achieving only 2-3 percent reduction in the store level inventory. Retailers can also use product/price data management processes to improve price integrity at the store level, increase speed to shelf for new items and promotions and reduce data management costs in the value chain. Tools such as Cashier Monitoring Service (CMS) and sales audit software can significantly reduce shrink.

Motivating associates

To improve employee motivation and manage labour costs effectively, retailers can leverage improvements in workforce management processes and algorithms such as:-

- Linking labour forecasts to store schedules based on sales forecasts and operating budgets.
- Linking schedules to time and attendance, payroll and provide exception management through alerts.

- Providing real time optimal workforce assignments across different activities considering variables like employee preferences, skills, availability, payroll budgets, corporate policy on part time / full time, etc.
- Enabling local overrides of centralized forecasts and schedules.
- Providing performance and utilization tracking.
- Calculating key metrics against stated goals and generating reports for enhanced visibility.
- Matching skills with organizational requirements and employee preferences.
- Enabling self-service for common administrative tasks like leave applications, online utilization status etc.

A new concept called task management is gaining a lot of popularity among retailers. The specialized software helps co-ordinate and prioritize unplanned tasks in stores. It ensures clear understanding of corporate priorities at the store-level along with execution compliance. Retailers who have implemented this software have:

- Saved 7-15 hours a week of the store manager's time which can be now used for customer facing and production activities.
- Achieved up to 99% recall compliance.
- Reduced up to 95% of email reminders to the manager

Task management works well with employee store portals, which can provide role-based, self service opportunities for employees such as:-

- Store managers' access to real-time pricing data, inventory levels and promotional efforts.
- Merchandiser participation in enterprise -wide procurement collaboration and reaction along with appropriate responses to sales information.
- Online learning to help sales associates stay current and hone their customer service skills.
- Information on current scheduling, benefits and salary through personalized intranet for rotated and relocated store staff

Store Management Software

To keep your retail business running smoothly, you need a cost-effective store management system. SAP solutions is a company which makes such store management processes.

Store management systems need to cater to the fast-changing needs of customers today. These systems must quickly gain fast and reliable, accurate, and insightful customer information in many ways, including:

- Quick receipt of payment monies
- Kiosks where customers can view information on products or store services
- Mobile point-of-sale devices for upsell opportunities, used by sales associates in the store while showing other products, or anchored in changing rooms

Point-of-sale store management systems need an inherent flexibility to deliver the right customer service. These systems must be driven by access to real-time customer information. Retailers can then deliver personalized offers and services that are up to the minute and targeted to each individual. An example of such a system is given below:

Case in Focus: Infosys' "Shoppingtrip360"

Infosys Technologies Limited has launched ShoppingTrip360 to help retailers and consumer packaged goods (CPG) companies achieve greater visibility into in store activity. ShoppingTrip360 is a platform which enables a suite of managed-information services to create a 360-degree view of real-time in-store shopper and shelf activity.

ShoppingTrip360 comprises of a network of wireless sensor-based applications within the store that allows people (shoppers), places (retailers) and products (CPG companies) to collaborate in real-time by creating an information ecosystem. This permission-based, implicit and seamless exchange of information delivers value to shoppers, retailers and CPG companies. By gaining insights into shopper and shelf activity throughout the store, ShoppingTrip360 delivers a paradigm shift in the in-store shopping experience and enables Retailers to know the total number of shoppers and their shopping trip paths, allowing them to gauge in-store energy demand based on occupancy, or open new checkout counters when lines start forming. They can also monitor shelf-level inventory of fast moving products without using expensive RFID tags. Shoppers to use a concierge service on their cell phones to organize their shopping trip. While at the store, they may access their shopping list, locate products, retrieve recipes, and download coupons, with personalized promotional offers that could be redeemed electronically.

The technology behind ShoppingTrip360 is based on Infosys' intellectual property and designed to operate with existing store and information technology infrastructure. Clients subscribe to ShoppingTrip360 services and pay for the information that enables business benefits.

IT in Point Of Sale

Point of Sale (sometimes also known as Point of Service) as per the literary connotation is the actual location where the monetary transactions between the buyer and the seller of goods take place. It is usually used to indicate a retail shop or the check out counter in shops, supermarkets, casinos, hotels, restaurants, stadiums, reservation counters at airports and railways and all other types of retail enterprises. Nowadays, the term POS is used to

describe the system which is in place at the counter, consisting of both the hardware and the software components and it has evolved from the Electronic Cash Registers (ECR) system.



A retail counter

POS - Evolution from ECR

ECR (Electronic Cash Register) was programmed in software which was proprietary in nature and hence the ECR was very limited in terms of functionality and had no communication capabilities. However, it was affordable to most of the small and mid size retailers. The Electronic Cash Register simply gave a sales total for the day or more sophisticated registers that provided sales by department reporting via a cash register tape at the end of the day. Far too expensive for small retailers, there were also the more sophisticated registers used by larger retailers that were connected to mini or main frame computers to track individual sales by product number.

However in 1973, IBM came up with the 3650 and 3660 Store Systems that were, in essence, a mainframe computer packaged as a store controller that could control 128 IBM 3653/3663 Point of Sale Registers. *This system was the first commercial use of client-server technology, peer to peer communications, Local Area Network (LAN) simultaneous backup and remote initialization. This was the beginning of the modern day POS systems.*

Effect of POS Implementation

According to the field research report prepared by Microsoft that interviewed over 580 retailers (who had deployed POS systems), with each interview lasting for more than 30 minute on average, the findings have been tabulated as below:

	High Performance ⁴	Mid Performance ⁵	Low Performance ⁶
Sales Increase	+ 20%	+ 10%	+ 5%
Expense Decrease	- 15%	- 8%	- 2%
Margin Increase	+ 25%	+ 15%	+ 8%
Net Profit Increase	+ 30%	+ 12%	+ 6%

Based on the above data we can say that the application of technology leads to increment in sales and reduction in expenses, thus causing a rise in profitability. However, it would be an erroneous statement to say the least. The correct interpretation of the data shown above can be stated as follows:

Technology by itself does not cause sales increases or expense reductions, but rather the way the information that technology provides is used causes the increased sales and reductions in expenses.

Expenses do not get reduced the moment the POS system is installed. Rather, there is an initial rise in the expenses due to the process of integration of the system into the working of the store and also the effort and the costs involved in the training of staff employed. Still, according to the retailers interviewed, after the initial period of six months, they did experience a reduction in expenses since lesser number of people was required for the clerical work and more attention could be paid to the customers needs and wants.

Expenses Reduce, Sales Increase: How?

➤ Reduction in check out time

Faster check out of customers at the transaction or billing counter takes place due to the scanning of the items that the customer purchases. The scanning of items through various technologies like RFID retrieves the item from the inventory

database and displays it along with its price on the screen of the cashier, which facilitates faster billing process. Such a smooth and quick process also prevents customers from diverting to the competitor due to long queues or during peak periods.

➤ **Faster approval of purchases from the inventory of the retailer**

The POS system enables the PC at the billing counter to be always connected either through LAN or some other networking technology to the central database of the

inventory. Thus, it enables faster purchase of the goods and enhances the experience of the customer.

➤ **Capturing the product detail**

The “out of stock” problem that most retailers experience due to inaccurate inventory management can be avoided by having a re-ordering **software** which would facilitate in increasing the in stock position of merchandise.

➤ **Software with related item or suggested item prompts**

When an item is scanned, if there is a related or add-on item available, the software will prompt the sales associate to ask the customer if they would like the additional item) which leads to increases in average transaction value.

➤ **Transaction Suspend**

This feature places a transaction in suspense while the customer either goes to their car to get their check or charge card or goes back to the store to get an additional item and resumes the transaction when the customer returns. This speeds up processing of customers in line behind this customer and reduces waiting time. It also makes it easier for a customer to add on items to their purchase.

➤ **Automatic store credits**

These credits can be given on returned goods which lead to a reduction in cash refunds and tracks returned items. These store credit notes are serialized and can be used just like a gift card and often small credit balances either are not used or lead to larger sales when they are redeemed. They also replace manual issuance of store credit notes which are time consuming and open to fraudulent use.

➤ **Capture of customer information**

This feature enables after-marketing to individual customers based on purchase habits and practices. Also particular customers due to their loyalty or high spending inclination can be given further discount on products or additional perks such as redemption of points they secure on purchases made in that store. This leads to high sales and a niche customer base which can be targeted for micro marketing strategies of the company.

➤ **Reconciliation**

At the end of the day, the owner can easily track the price of the products sold with the cash generated in the cash register, hence the occurrence of theft by the staff at the billing counter is greatly controlled.

➤ **Time Stamping**

All the transactions are time stamped implying the exact time of the occurrence of the transaction is registered in the system. This can be tracked by the retailer to determine the peak hours so that he can increase the shop floor assistants during that period, and also the low revenue hours for which he can offer incentives such as further discounts or free parking to attract customers.

➤ **Clocking In Period**

Sales associates clock in on the cash register and hence their work hours can be tracked. This saves time and money which was earlier employed for this process and also reduce the payroll staff as this data can be directly transported to them.

Constraints in Implementing POS

➤ **Training**

Usually, the managerial employees require training of approximately 20 hours whereas the unskilled staff requires approximately 40 hours of training. The training time can decrease depending upon the information technology education of the employees.

➤ **Initial Rise in Expenses**

According to the field research data by the Microsoft, initially the expenses rise due to the lack of integration of the system and the unease of the employees in using the new system.

➤ **Not every retailer can reap the benefits**

Many cost cutting measures are dependent on how the individual retailer uses the technology.

For example, a pure fashion retailer may not get relevant benefits from automatic replenishment as fashion changes so often that most purchases are not replenishment of existing product but rather new product. This hypothetical fashion retailer however, would reap extensive benefits from fast/slow seller reporting as well as a suggested item feature in the POS systems.

The boon for independent retailers

Independent retailers' survival depends on knowing the tastes of their customers. As a result, successful independent retailers have a fairly good idea of what to buy, but typically have a very difficult time deciding how much of any one item they should order at any given time. Classic independent retailer buying problems include buying way too much and recycling the same product year after year in hopes that it will finally sell; buying too little and losing sales because an item is out of stock at the wrong time; and buying too much at one time, tying up valuable capital and requiring extra storage space. Analyzing past seasons' sales of the same or similar merchandise can reveal buying patterns that are not intuitively obvious. Armed with this information, the retailer can improve merchandise turn while avoiding costly stock-out problems.

Taking the same sales information, but sorting it in different ways, can also reveal a retailer's best selling and most profitable merchandise vendors. This information is invaluable in negotiations for future buys and potentially improved prices. It can also help retailers decide whether to eliminate vendors whose product mix may be interesting, but nonessential to their business health.

Of course, all this information could be entered into a spreadsheet manually, but most independent retailers do not have the luxury of the time or employees to manage all the extra work. This is the crux of POS benefits – freeing independent retailers' time for more planning and analysis so that they can better compete with retail giants..

Business value can be achieved by capturing or calculating a few critical pieces of information: what is selling, how much is selling, when to buy additional merchandise, and who is the most likely customer for that merchandise.

Case in Focus: Lilliput

Lilliput entered the domestic retail market with the launch of its first store in Delhi in August 2002. Today it has a strong presence in the kids wear section, in both Indian and international markets. It has more than 140 brand outlets, and over 150 large multi brand outlets like Shopper's Stop, Lifestyle, Pantaloon, etc. The company has its presence in Bahrain and China. Lilliput was using Polaris Retail Excel solution for managing sales in stores, and Tally to manage company finance/accounting part. With growing number of stores and multiple transactions at the company, there was a need to record various business processes in a single database.

Thus, Lilliput was in search of a solution to support the growth of its stores. The company needed a solution, which would enable the employees to track individual orders, map inventory processes, and handle store operations more effectively.

Solution:

As the company was very aggressive with its expansion plans, a complete integrated solution was very much required to record data from various business areas in a single database. As per the requirements of the company, Lilliput zeroed in on LS Retail solution by Dynamic Vertical Solutions(DVS).

LS Retail is localized by DVS as per the firm's requirements in India. This customization makes it user-friendly, and can be implemented faster as an application, thus enabling Lilliput to integrate it within one month of implementation. Tectura was the implementation partner involved with DVS in the project. It provided a strategic fit since both Tectura and DVS are Microsoft Certified Dynamics partner.

Benefits:

- It's user friendly, scalable, flexible, reliable and easy to maintain
- It enables the management to track individual transactions from the POS to the general ledger
- Maximizes business value and efficiency
- Allows efficient data synchronization, and increases efficiency of warehouse users
It's user friendly, scalable, flexible, reliable and easy to maintain
- It enables the management to track individual transactions from the POS to the general ledger
- Maximizes business value and efficiency
- Allows efficient data synchronization, and increases efficiency of warehouse users

IT in Customer Relationship Management

Customer insight plays a major role in retail profitability. The current economy is customer driven and now requires revolutionary methods of differentiating a retail business in a crowded market place. Retailers are going beyond the brick and mortar store and trying to build relationships with the customer. The focus has shifted from transactions to building

relationships. Retailers started asking if they knew as much about their customers as they know about their inventory. To develop an effective strategy for CRM, the retailer must start with the following basic questions:

1. Who are the most valued customers (MVC)?
2. What do they need?
3. What motivates them to purchase?
4. Beyond transactions, how can one interact with MVCs in a relevant and profitable manner?
5. How can one customize aspects of the business to meet customer's needs and drive impact?

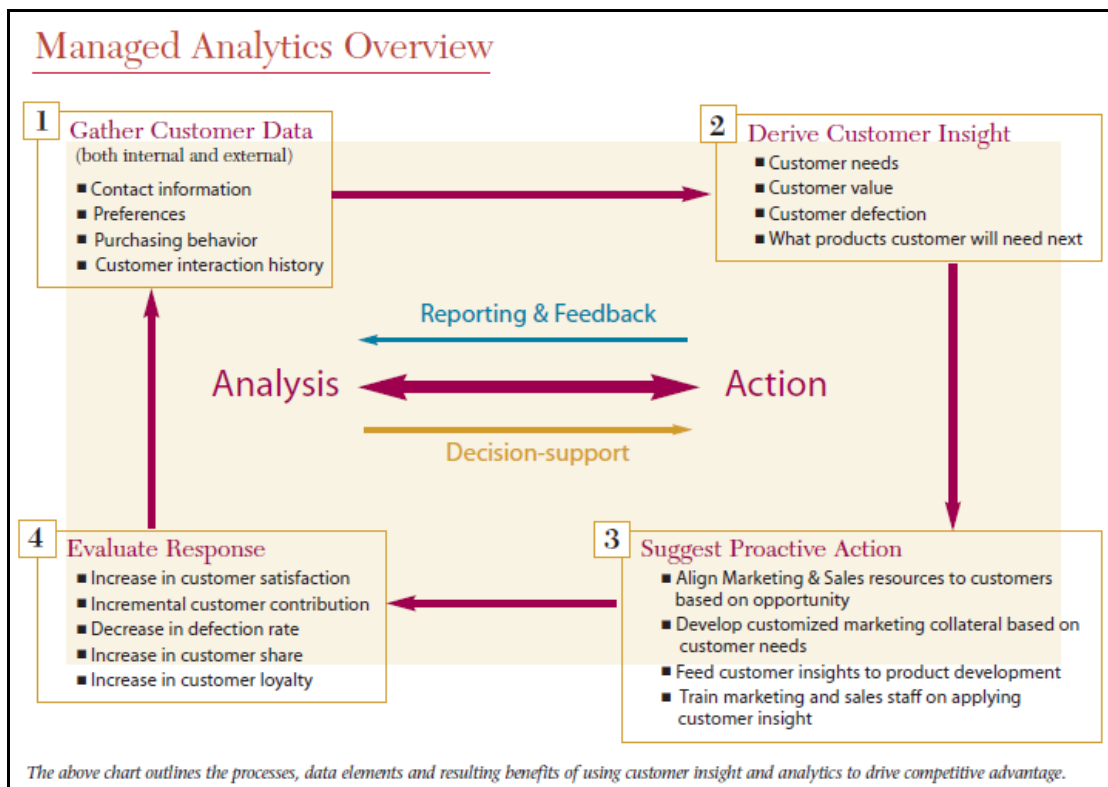
Retailers must find answers to these questions and act on that information to reap tangible benefits. Knowing how, when and what to offer to the customer can mean the difference between a profitable and an unprofitable business.

Role of Technology

Technology is one core competency that enables companies to generate opportunity and create value. Customer insight cannot be fully leveraged without technology to enable the relationship. Collecting, housing, analyzing and disseminating this insight into the right customer facing employee at the right time depends on technological infrastructure. If a retailer is able to identify its most valuable customers and anticipate their needs, it can leverage that information across marketing, sales and operations. Success comes when retailers are able to maximize the value of the customer information to create a meaningful in-store experience for their best customers.

Turning Data into Insight

The first step in CRM is to capture customer data. IT applications play a major role in this area. The foundation for developing long term profitable customer relationships comes from the use of customer insights derived from capturing customer behavior and preferences. These include past transactions, customer queries across multiple channels. Collecting customer data is however the first step. Understanding which customers are the most valuable to the business and what those customers need is where the data becomes actionable customer insight. This enables the retailer to identify the most valued customers and focus on building a long term relationship with them.



Turning Data into Insight

Attention to Privacy

Since CRM applications manage a huge amount of personally identifiable information of the customers, sufficient measures should be taken to protect the data. Violation of customer's privacy code erodes trust and may lead to significant brand dilution.

Leveraging information in building customer relationships

Customer purchase history is tracked by the system allowing the store to query data for specific items and advertise very cost effectively to individual customers. For example, a retailer would be able to identify for every new item that they receive of a specific product or brand what customers would most likely be interested in purchasing based on data from previous purchases of a similar product or that specific brand. They would simply query the database for every customer who purchased that particular item and then merge the data with a word-processing file. They could then send a letter or postcard telling the identified customers that a product that they may like has been received.

Most Valuable Customers: The customer database also allows tracking and reporting of gross margin by customer which allows retailers to identify their most profitable customers and reward them to increase their loyalty.

Loyalty Points: Many stores offer loyalty points to their customers which essentially reward customers for shopping at the store. The POS tracks each purchase and assigns

points for the total value of the sale as well as over time. This, while it builds loyalty and increases the likelihood that

the customer will shop in the store again, also increases sales by increasing the average transaction and number of visits.

Missing Persons Query is one of the most powerful tools in CRM. A retailer simply queries their data base for the names of every customer who has spent over a certain amount in the store in the past eighteen months, who has shopped more than five times and who has not been in the store in the past six months. This is a potential “missing person” someone who has been a good customer but for whatever reason has not been in recently. A letter is automatically sent to every customer who meets these criteria with a gift certificate to encourage them to shop again in the store. The results of this letter are substantial. It gets customers that might have been lost to the store back and they really appreciate the thoughtfulness of the store. Sales increases in excess of ten percent for this query alone are common.

CRM Retail Software Benefits

- Better Customer Service
- Customer Support through call center
- Handling of Post Sales Service
- Building of long term relationships with the customer
- Campaign Management
- Effective Selling Processes

Case in Focus: Mitchells

Mitchells, a Connecticut-based clothing retailer, turns one-and-done shoppers into loyal customers via one-one practices designed to meet the needs of individual customers, and most importantly, its MVCs. By systematically identifying customers and differentiating them based on their individual value and needs, Mitchells continues to build upon its successful customer strategy that has generated strong customer loyalty.

Serving an upscale customer base, Mitchells is a \$65 million family- owned clothing retailer with locations in Greenwich and Westport, Conn. (The Greenwich store, acquired in 1995, goes by its original name, Richards.) Mitchells employs nearly 200 people, 174 full-time and 20 part-time. At each location, the retailer tracks each of its approximately 150,000 customers' personal data and preferences, including size and style, stock keeping units (SKUs) bought and prices paid. In fact, chairman and CEO Jack Mitchell personally keep at his fingertips information about his top 1,000 customers.

Nearly 30 years ago, the company began tracking its customers' purchases by category (suits, shirts, etc.). The spotlight went on for CEO Mitchell back in 1989, when he and his son Russell purchased the company's IBM AS 400 and decided to track customers' purchases, not only by category, but also by actual SKU. "When Russell and I were looking at the system, someone from a marketing firm asked us if we knew as much about our customers as we knew about our inventory," he explains. "We realized at that moment that we didn't...and then the light went on! We decided the whole system would be 'architected' around the customer and then on what the customer bought."

That vision flourished and grew when Mitchells acquired Richards. "The most important benefit we bought was the relationship that the sales associates and the tailors had with their customers," recalls Mitchell. "They had worked some 45 years establishing those relationships, but didn't really know who their customers were." By introducing customized CRM technology, "we brought in a system behind the scenes to track the important customer facts and we gave them the technology to manage customer relations effectively and profitably," he adds. Today, Mitchells and Richards share a customized customer database built in-house that is completely integrated with their accounting and inventory databases.

Gathering that entire customer data begins with a profiling process in which sales associates ask customers for basic personal information, such as name and address. According to Mitchell, customers willingly provide the information because the retailer is respectful of its clientele's privacy concerns. "We never, ever share any privileged customer information with anyone—we don't sell or rent our customer lists. We've even gone so far as to make sure all this information is password protected," explains Mitchell.

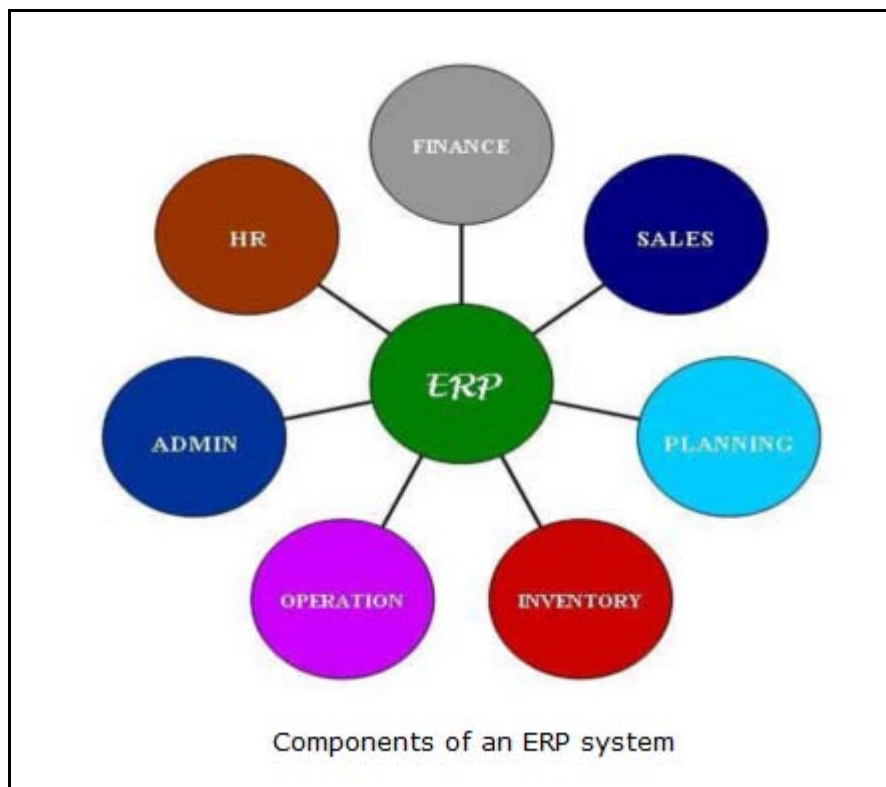
As a result, customers trust the benefits of sharing their information with Mitchells' sales associates, and go on to provide more personal data about their work and home lives, as well as their clothing preferences. "Customers aren't going to tell you their whole history on the first visit. But gradually you listen and you learn about them, and you know how to service them on a one-to-one basis," says Mitchell. "You've gone from a transaction to a relationship."

A new data report that Mitchell introduced this year, called profiling, highlights many of the key bits of personal information, such as business title, spouse or children's names, gathered by sales associates. Profile reports are prepared daily to gauge how many customers were profiled, and to provide associates with opportunities to update their customers' profiles or ask them for more information. The reports have become a management tool for Mitchells to measure its associates' success. In addition to its in-store efforts, Mitchells uses other methods, such as targeted direct mailings and telephone calls, to market to different customers differently. According to Mitchell, the company sends hundreds of individualized mailings each retail season, most of which feature personalized notes from sales associates about favourite brands or designers. Customers who have given

their permission may also receive phone calls about designer shows, or recently arrived stock in a favourite brand.

The retailer's MVCs, or customers that spend more than \$2,000 in any single sale, receive personal notes from Mitchell each year. He also sends a personal note to all first-time customers within three days of their initial visit. All of these relationship-building efforts, as well as the customer response to those efforts, are stored in Mitchell's database to track and improve the effectiveness of the company's varying efforts. Looking ahead, the organization's future goals include profiling 100 percent of its customer base as well as customizing its e-mail marketing efforts to include more relevant and targeted campaigns that meet the needs of its customers. The result is a sustainable competitive edge based upon the satisfaction, loyalty and trust of individual customers.

ERP Systems in the Retail Industry



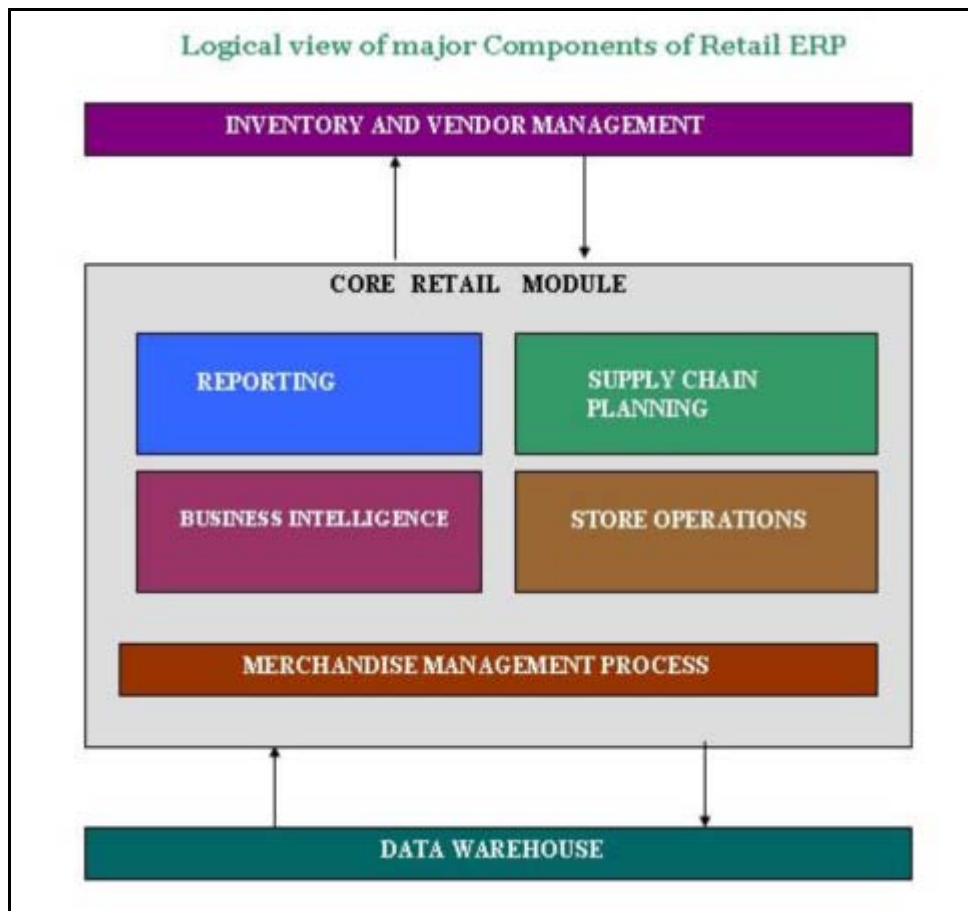
ERP systems refer to the software packages that integrate all the data and the related processes of an organization into a unified Information System. An ERP system uses a central database that holds all the data relating to the various system modules in order to achieve a seamless integration. Large retail outlets are increasingly implementing ERP to

facilitate administration and optimization of internal business processes across an enterprise. The system uses a single data source which is responsible for sharing information across various departments. ERP systems comprise function-specific components that are designed to interact with the other modules such as the Order Entry, Accounts Payable, Accounts Receivable, Purchasing, Distribution, Sales, Finance, Inventory Management, Human Resources etc.

Problems with Legacy Applications in the Retail Sector

- **Outdated architecture** - Most of the legacy enterprise applications in retail have an outdated architecture that is inflexible and rigid. This inflexibility and rigidity pose a challenge to the business efficiency. The lack of flexibility prevents the legacy software to be used with the contemporary products available in the market that may add muscle to the retail operations. Today's business environment demands real time adaptability from the software systems.
- **Limited scope** - Most of the legacy systems were designed to take care of specific problems tasks and as a result, lacked an enterprise wide approach to the problem solving process. This makes such systems unsuitable for use in the contemporary business environment that is highly competitive in nature.
- **High maintenance costs** - Legacy information systems are costly to maintain. The cost component is high because such systems are no longer used in the industry and require specialized personnel for maintenance purposes.
- **Integration and scalability problems** - Legacy software does not allow addition and integration of new applications. This prevents such systems from scaling up or integrating with similar systems used by the associates or business partners. Such integration and scalability problems tend to multiply as the size and scope of retail operations increases.
- **Increased risk to the business** - A combination of old and new information systems makes the whole system susceptible to failure or crash. The heterogeneity in the system is the primary cause of risk. The solution lies in a close knit, homogeneous information system that can integrate seamlessly with other such systems in real time while imparting the much-needed stability to the whole system.

Main Components of Retail ERP



Retail ERP System Components

Supply Chain Planning and Execution: This component helps retailers to keep track of the entire supply chain beginning at the manufacturer and ending at the consumer. A major cost in retail operations is in inventory. This module aims at better forecasting to reduce cycle times and consequently reduce operation costs. Currently retailers are sharing forecast data with suppliers and manufacturers for complete integration of the supply chains of all the partners. In this context, the concept of Collaborative Planning and Forecasting (CPF) is gaining prominence.

Merchandise Management: The Merchandise management component of an Enterprise Resource Planning (ERP) package covers all the activities centered on the merchandise offered at the retail store. This component includes activities such as:

- Maintenance and Management of retail outlet
- Keeping track of price items
- Inventory management
- Key reporting functions

The merchandise management component acts an integrated interface between other retail applications.

Retail Planning: This component helps the retailers in planning the various sales and promotional events aimed at boosting or increasing the sales of the merchandise offered at the store. This way, retail planning forms an important and critical component of the retail ERP systems as it performs the critical function of offering the planning activities that may be undertaken at the micro as well as macro level to give a push to the merchandise sales at the retail store.

Store Operations: This component takes care of all functions related to the operation of the store. It includes activities such as:

- Store Inventory Management
- Sales Audit
- Returns Management
- Perishables Management
- Labour Management
- Customer Management
- Promotion Execution

Corporate Administration: This component serves the information needs of the management. It includes the following functionalities:

- Process Management
- Compliance Report
- Accounts Receivables
- Accounts Payable
- General Ledger
- Asset Management
- Human Resource Management

The corporate administration component mainly falls in the category of Decision Support for the managers. It gives an idea of the overall health of the organization. Moreover this module is used to provide various compliance reports to regulatory bodies. These reports not only enables adherence to industry standards, it also enables the management to formulate effective strategies to achieve desired results.

Advantages of Using ERP in Retail

Configuration and Scalability: ERP systems allow a high degree of scalability allowing the system to grow with the organization. It also allows a high degree of customization.

Phased Implementation Support: Most ERP packages allow phase wise implementation support. This allows companies to give the users sufficient time to familiarize themselves with the ERP package before the complete suite is deployed. Also following the big bang approach introduces the risk of integration problems of the ERP with the existing software, which is mitigated by the phase wise implementation.

Support for Advanced Functionality: Most ERP systems have advanced decision support modules aiding the managers to devise effective strategies. These systems include:

- Formulating Price Strategies
- Merchandise Planning
- Inventory Optimization
- Store Execution

Workflow Automation and Enterprise Process Management: This allows the workflow to be smooth and seamless across the organization. This includes functionalities like automated order placement when the reserve inventory reaches a threshold.

Technology and Application Integration: ERP allows integration of processes running on different platforms. This includes interaction with legacy systems as well as external entities such as suppliers and customers.

Graphical User Interface Support: This facility makes it easier for non-technical users to use the application.

Optimal Utilization of Resources: ERP implementation allows optimal utilization of resources which results in reduction in costs and higher profits.

Reduction in Overhead and Inventory: Inventory accounts for a major share in the cost of doing business of a retail industry. ERP systems enable companies in better forecasting which leads to reduction in lead times as well lesser inventory requirements. This in turn leads to a substantial drop in cost.

Timely Responsiveness: ERP systems allow companies to respond to customer demands more quickly.

Knowledge Transfer between Industries: ERP enables sharing of knowledge between industries which in turn stimulates innovation and growth. Companies integrated in the supply chain exchange information for collaborative forecasting through ERP implementation.

Case in Focus: ERP implementation in Pantaloon retail

More than eight years after it forayed into the retail business, Pantaloon Retail decided to implement SAP to keep itself competitive in the rapidly growing Indian retail market. Store operations have never been as important to retailers as they are now. Successful retailers are those who know that the battle for customers is only won at the frontline, which in the case of a retail chain is at its stores. Pantaloon was regularly opening stores in the metros

and there was an urgent need for a reliable enterprise wide application to help run its business effectively. The basic need was to have a robust transaction management system and an enterprise wide platform to run the operations. The company was looking for a solution that would bring all of its businesses and processes together. After a comprehensive evaluation of different options and software companies, the management at Pantaloon decided to go in for SAP.

The Solution

Some of the qualities of SAP retail solutions are that it supports product development, which includes ideation, trend analysis, and collaboration with partners in the supply chain; sourcing and procurement, which involves working with manufacturers to fulfil orders according to strategic merchandising plans and optimise cost, quality, and speed-variables that must be weighted differently as business needs, buying plans, and market demand patterns change; managing the supply chain, which involves handling the logistics of moving finished goods from the source into stores and overseeing global trade and procurement requirements; selling goods across a variety of channels to customers, which requires marketing and brand management; managing mark-downs and capturing customer reactions, analysing data, and using it to optimise the next phase of the design process.

The implementation

The implementation was outsourced to a third party. The implementation was done by the SAP team with help of Novasoft which is based out of Singapore. Some people from Pantaloon also assisted in the project. About 24 qualified people worked on this SAP implementation. SAP was chosen as the outsourcing party on a turnkey basis. This project was headed by Pantaloon's Chief Information Technology Officer, Chinar Deshpande.

Three Phases

SAP implementation is not a single phase process. The project was divided into three phases. The first phase involved blueprinting existing processes and mapping them to the desired state. In this phase, the entire project team worked on current processes within the

structure of the organisation, analysed and drafted them. This blueprint was later used in the formation of new states of the solution. Since the SAP would combine all the processes, each and every one of these had to be evaluated. In the second phase, the SAP platform was developed with the help of Novasoft's template which was predefined by SAP after evaluation of Pantaloon's needs and expertise in retail solutions. The last phase in this project was for stores to switch over to the new system and for current data to be ported. Before the SAP implementation, all the data was unorganised. This data had to be migrated to the new SAP application. The project was flagged off on 15th June 2005 and took about six months to finish. It went live at the head office on 1st January 2006. The stores went live on SAP from 1st January 2006 to 30th June 2006.

Benefits and Challenges

The key challenges in this project were not in the implementation. Rather, the difficulties were faced during the data migration and in managing the interim period when the project was underway for about six months. Migrating unorganised data to an organised format is a challenging task. Pantaloon has not been able to see immediate benefits from this implementation. This application certainly has long term benefits which will be seen when the performance of various aspects will be analysed. Pantaloons have already started working on MAP (Merchandise Assortment Planning), Auto-Replenishment and Purchase Orders. These systems would optimise their inventory and cut it by about two to four weeks (depending on the line of business).

Maintenance & Hardware

This application is currently being used by around 1,200 employees across the organisation. For maintaining this implementation and its related applications, Pantaloon has an in-house team and it has outsourced ABAP resources. They are also in the process of setting up a SAP Competency Centre. The system runs on a HP Superdome server on HP UNIX 11i and the database is from Oracle. The cost of this project was about \$10 million.

Highlights from Customer Survey

ERP Packages in use:

The retailers can be classified as large and medium size retailers. Some of the retail giants in each category are as follows:

Medium size retailers:

1. Reebok: Package used is Logic Apparel. Logic Software is the organization that developed this software. It is based in Chandigarh. Some of its other esteemed customers are Killer Jeans and Levi's.
2. Nike: Package used is the same as used by Reebok i.e. Logic Apparel.
3. Adidas: Package used is Shopper Retail.

Large size retailers:

1. Shopper's Stop: Package used is JDA, which is a US based software.
2. Westside: Package used is SAP, which is used by quite a few major Indian retail giants.
3. Pantaloons: Package used is SAP.

We conducted a survey at some of the retail outlets namely Reebok, Nike, Adidas and Levi's and made a few observations:

1. Educational qualification of the person at POS (point of sale): Passed 12th.
2. Computer usage in the store: Adequate. The classifications being Less, Adequate and Excessive.
3. Some advantages of using computers are fast billing, appropriate knowledge of stock and database, proper inventory management.
4. Not aware of the terms ERP and CRM but aware of the softwares being used at the outlet.
5. Investment in IT is directly related to customer satisfaction.
6. Proper training is given before using the software.

The story in numbers:

1. 51% of the retailers believe that their inventory control system helped increase sales.
2. Average increase in sales from an inventory control system is around 16.7%
3. The average decrease in expense from an inventory control system is around 14.3%
4. 53% of the retailers believe that their customer database helped increase sales.

Conclusion

The mood is upswing in this sector as more and more players are joining this sector with huge investments and the focus is in every stage of this service oriented industry. Basic operational information systems like Computerized Inventory Management, Point of Sale Systems are just to name a few, will be with every player in this sector. The key challenge will be to source, develop or deploy those information systems which will have both backward and forward integration capabilities. More and more retailers will look to diverge to all the different formats and likely to create synergy between these different formats so as to reach to the same customer at all times. Gartner Inc. predicts that the online shopping will be such a key component of business that it will contribute around 11% of total revenue when considered on industry wide level.

Need of the hour is to have that the visibility of this convergence by retailers and before treading on the path of any technology upgrades, they foresee the integration challenges.

Bibliography

Books

1. Retail Management - S.N. Mitra.
2. Supply Chain Management - James B.Ayers, Mary Ann Odegaard.
3. Retail Management: An Introduction - V. V Gopal
4. Retail Management - Michael Levy.
5. Retail Management :Text & Cases - Swapna Pradhan

Online Resources

1. Wikipedia, the free encyclopaedia - www.wikipedia.com
2. Customer Relationship Management - www.crminfoline.org
3. Infosys Shopping Trip 360 - www.fibre2fashion.com
4. IT innovations in Indian Retail - www.expresscomputeronline.com
5. RFID Technology -
www.microsoft.com/industry/retail/businessvalue/rfidoverview.mspx
6. Store Management - www.infosys.com
7. ERP - www.sap.com