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ON  
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TRANSFER OF TECHNOLOGY FOR SUSTAINABLE  
GROWTH AND DEVELOPMENT: LESSONS AND EXPERIENCES**

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# Application of Technology in Retail Industry

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## Introduction

Technology is like a catalyst. It enhances the efficiency of any activity or process where it is applied in the correct manner. Tehchnology has had a strong presence in business from times untold. The magnitude of advancement has been different in different places.

## Need for Technology

During olden days the neighbourhood retailer used to know his customers along with his family members by their first name the contact was very personal and frequent. Thus the retailer was like a member of the family.

Besides this, the number of alternatives available in each product was minimal .thus selection was not a problem. Most importantly with the limited range of products and number of brands a customer never felt like personally exploring the possibilities for a better product/brand or may be a better bargain.

## Application of Technology in Retail Industry

Technology can be applied or rather is being applied to different departments or retailing it will be good if we study the departments' one and then see the technology applications

Technology Application in Merchandising

Merchandising includes planning, sourcing, placement of orders, stocking, warehousing etc. let us examine the application of technology in each of these functions:

### A) Sourcing

Before sourcing, the retailer has to decide on the number of categories he will maintain and the depth of product/brand range in each category. After that, short listing and selection of vendors has to be done. Finally planning of detailed orders is required.

## **B) Stocking/Warehousing**

Here the technological element is maintaining data of stock received. Necessary changes are made on regular basis as per the consumption at the store. A retailer decides upon the re-ordering level based on consumption and delivery lead time.

## **Technology Application in Store Management**

It includes human resource management, finance and accounting, store displays, security and miscellaneous issues. Technology has contributed in each sphere depending upon the scope. From the HRM perspective, man power planning is now done with the help of the systems software is available which shows the total position of the available staff. It can also shuffle personal based on the programming done.

## **Marketing and Customer Relationship Management**

Every store would like to promote itself they have been employing all novel methods to ensure and enhance the footfall into the store. Most importantly every retailer strives to have a number of loyal customers such customers not only remain loyal to the store but also tend to influence their peers store selection towards the specific store. Now a days all the big retail stores use available software to store data about customers and their purchases. This is then classified to find the most valuable customers and their purchases, frequently visiting customers, most highly demanded categories, colours and varieties etc.

## **Data Warehousing and Data Mining**

Information technology is being used to collect information on customer profile. Purchases, timing of purchases, frequency of purchases etc. Data warehousing refers to compiling of above information related to customer purchasing behaviour an example of how data can be used to draw inferences and take decisions is illustrated by two simple cases below:

## **Customer Interfacing Systems**

Point of sale systems use scanners and bar coding to identify an item, use pre-stored data to calculate the cost and generate the total bill for a client. Tunnel scanning is a new concept where the consumer pushes the full shopping cart through an electronic gate to the point of sale. In a matter of seconds, the items in the cart are hit with laser beams and scanned. All that the consumer has to do is to pay for the goods.

## **Payment**

Payment through credit cards has become quite widespread and this enables a fast and easy payment process. Electronic cheque conversions a recent development in this area, processes a cheque electronically by transmitting transaction information to the retailer and consumer's bank. Rather than manually process a cheque, the retailer avoids it and hands it back to the consumer along with a receipt, having digitally captured and stored the image of the cheque, which makes the process very fast.

## **Internet**

Internet is also rapidly evolving as a customer interface, removing the need of a consumer physically visiting the store.

## **Factors Influenceing Technology Selection**

Since every store wants to have a modern image, at times they make an erroneous decision regarding technology adoption. Since each store is not equal on all business parameters, thus technology adoption has to be dealt on a case to case basis. Certain factors must be kept in mind by the retail store owner before going to any technology.

### **A) Is there a need for technology adoption at all ?**

Any technological products need high investment, trained personnel and periodical updation. A retailer should first look into the return on investment considering recurring cost and initial investment.

Can the job in focus be done manually or with some cheap technological substitute? For instance, for recording simple day to day retail activities of a small retail store, large investment in customised software is not necessary. Any general software is sufficient.

### **B) Volume of the Business**

Most important factor is what sort of volumes the retailer is operating with. Larger volumes do necessitate technological interventions. Here it is very important to note that large volume is a relative term. The biggest store in a small town can be much smaller than a medium sized store in a metropolitan city. Large volumes of business justify investment in technology.

### **C) Nature of the Products Dealt With**

Each retailer deals with a set of products for instance Westside and pantaloons deal with trendy apparels and hence form part of fashion industry. Since fashion is very temporary in nature, they have to take aid of technology to gather data about latest fashion trends in India and abroad. This helps them to have a proper hold on the production planning and control.

### **D) Availability of Financial Resources**

Investment in technology involves large financial outlays. A retailer should have sufficient resources to invest in technology. Such investments should not be made from working capital or else retailer may not sufficient funds to purchase required stock and run day to day operations.

## **Technolgiaal Trends in Retailing**

### **A) Point of sales (POS) software**

Point of sales (POS) software refers to software used to capture information at the point of sales. Efficient POS software has become necessary for achieving competitive edge. To stay competitive, a retailer needs to develop ability to buy better, turn inventory faster and market smarter. POS

ensures all these. The system works on the principle that key to survival is profits and key profits is awareness of what is happening at the point of sales.

### **B) Electronic Retailing**

Although it is not latest as far as international retailing is concerned, however in India it is still an early stage. In electronic retailing the internet is used as a platform by the retailer to communicate with the customer and offer products and services on sale. In India ebay, Baze.com, tir internet, Rediff etc. some of the examples of e-tailing. However now a days large chain retailers are having their own websites like bigbazar.com, my westside.com website etc. to enhance the sales by electronic retailing.

### **C) Interactive Projection Displays**

Interactive rear projection displays allows the viewer to control the contents to display on a screen with a touch. It can be used to promote services or offerings within the shop window. This actually facilitates window shopping. They are run on touch screen technology.

### **D) Attention Seeking Display Units**

Attention Seeking Display units can be installed within the store or even outside. Their main aim is to seek attention from the passers-by. These illuminated and uniquely designed units carry promotion messages as well as vital information about some specified products.

### **E) Vending Machines**

Vending machines have been recently installed in selected railway stations for vending platform tickets. Milk vending machines also exist. Presently opportunities are being explored in this area with more emphasis on new features and users.

### **F) Radio Frequency identification (RFID)**

This is a wireless technology which is presently revolutionizing the retail information system. A basic RFID system will have a transceiver, an antenna and a RFID tag also called as a smart tag. The antenna emits radio signals which activate the smart tag, following which the transceiver decodes the data from the tag into the computer. This has been used for tracking. RFID has been very successful in accurate tracking. However, due to the very high price of RFID, its large scale adoption has not yet been possible.

## **Recations While Handling Technology in Retailing**

1. A retail store before adopting any new technology should spend time in studying the utility and effectiveness of the application.
2. Any technology transfer without proper training support and updating is useless. When moving a new technology, a retail organisation must be very clear on these issues.

3. It is an always in the interest of the retail organisation to have its own data processing or technology using staff.
4. At any point, retail organisation should not assign the handing of processes which are technology oriented only to one or two personal.
5. In post WTO era, issues related to copyrights and title of technology is very critical.
6. As a part of disaster plan a crisis management plan should be in place to tackle situations arising out of system failure or snags in the software.
7. While acquiring any technology one important aspect is its price. This is also a decisive factor for acquisition.
8. In traditional organisations existing for long periods, older people resist the implantation and introduction of any technological products.

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