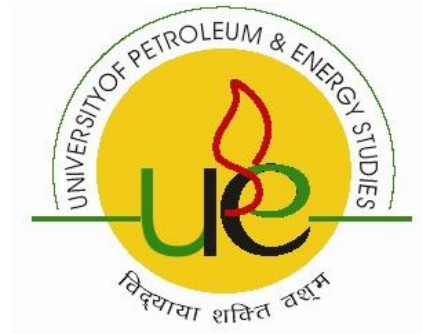


# **IMPORTANCE OF WAREHOUSE IN FMCG SECTOR**

**Dissertation Submitted in the partial Fulfillment of  
MBA (Logistics and Supply Chain Management) Degree**



***Submitted to: -***

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**MBA (Logistics and Supply Chain Management)**

**(2013 – 2015)**

## **DECLARATION**

This is to certify that the dissertation report titled “**Importance of Warehouse in FMCG sector**” submitted to the University of Petroleum & Energy Studies, Dehradun, Uttarakhand, by **Ms. Richa Goyal**, in partial fulfillment of MBA (Logistics and Supply Chain Management) course, is bonafide work carried out by her under my guidance and supervision. To the best of my knowledge this particular work has not been submitted anywhere else for any other Degree. She has made an earnest and dedicated effort to accomplish this dissertation work.

I wish her all the best for her future endeavors.

**Dr. Saurabh Tiwari**

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**Uttarakhand.**

## **UNDERTAKING**

I hereby declare that the Dissertation entitled “**Importance of Warehouse in FMCG Sector**” submitted in partial fulfillment of the requirements for the award of the Degree of Masters in Business Administration is a record of original research work done by me under the supervision & guidance of Dr. Saurabh Tiwari and the Dissertation has not formed the basis for the award of any Degree/Diploma/ Associate ship / Fellowship or similar title to any candidate of this or any other University.

Place : Dehradun

Date :

RICHA GOYAL

## **ACKNOWLEDGMENT**

We think if any of us honestly reflects on who we are, how we got here, what we think we might do well, and so forth, we discover a debt to others that spans written history. The work of some unknown person makes our lives easier every day. We believe it's appropriate to acknowledge all of these unknown persons; however it is also necessary to acknowledge those people, we know who have directly shaped our lives and our work.

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# **EXECUTIVE SUMMARY**

The Indian logistics business sector has advanced from customary transport organizations to an undeniable logistics administration supplier, which offers different production network administrations, for example, transportation, warehousing and other worth increases. Generally, there existed just unadulterated transport or warehousing administration suppliers of the in-house nature. The pattern changed towards giving altered administrations and began being outsourced to concentrated players in the business. Along these lines rose the idea of outsider logistics (3PL), where organizations give outsourced or outsider logistics administrations to organizations for part, or some of the time the majority of their production network administration capacities. Outsider logistics suppliers normally have some expertise in coordinated operation, warehousing and transportation benefits that can be scaled and tweaked in view of economic situations and the requests and conveyance administration prerequisites for their items and materials.

In the complete logistics worth chain, warehousing structures a discriminating association. Warehousing, which shapes 20% of the total logistics business, was for the most part used as godowns to store items from the season of era till the season of use. Over the whole deal and with the changing piece of the division, traditional circulation focuses have changed to assembling and stockpiling centers, where unrefined material, widely appealing and delivered items are assembled, diverse, set away and coursed to the point of usage/ bargain. The warehousing market in India is obliged to create at a rate of 35 to 40% yearly, demonstrating high potential for advancement all through the accompanying couple of years.

In the past, warehouses were referred to as cost centers and rarely adding value. But the increasing need for transfer of products across cities, countries and

continents resulting from movement of production to the Far East, the growth in e-commerce and increasing demands from end users have seen a change about the perception of warehouses. They are vital components within today's supply chain. They form the integral part of the supply chain in which they operate, and so trends such as increasing market volatility, product range proliferation and shortening lead times, all have effect on the roles the warehouse is required to perform. Warehouses are most likely involved in various stages of sourcing, production and distribution of goods, from the handling of raw materials, work-in-progress through to finish products.

It is therefore apparent that different activities take place at a warehouse and thus, require different nature of facilities, staff as well as equipment to suit each function. With the vast nature of difference, warehouse operations could easily be the most costly element of the supply chain.

In the FMCG industry, improved warehousing and logistics solutions are major drivers of productivity development. Warehouse can play a key role in the integrated logistics strategy and its building and maintaining good relationships between supply chain partners.

Warehousing affects customer service and firm's sales and marketing success. A warehouse smoothens out market supply and demand fluctuations. When supply exceeds demand, a demand warehouse stores product in anticipation of customers' requirements when demand exceeds supply the warehouse can speed product movement to the customer by performing additional services like marking prices, packaging products or final assembling etc.

The report tries to figure out what endeavors are being taken up by the enormous FMCG Companies in India to improve the warehouse facility through various warehouse functions, methods and designing.

The report tries to figure out what endeavors are being taken up by the enormous FMCG Company in India like BRITANIA to enhance the productivity and adequacy of store network and logistics by knowing the importance of warehouse through proper methods, functions and needs.



# **TABLE OF CONTENTS**

**Declaration**

**Undertaking**

**Acknowledgment**

**Executive Summary**

**INTRODUCTION**

**LITERATURE REVIEW**

**RESEARCH METHODOLOGY**

**OBJECTIVE**

**RESEARCH DESIGN**

**TYPE OF DATA**

**METHOD OF DATA COLLECTION**

**METHODOLOGY**

**SAMPLING DESIGN**

**TOOLS FOR DATA ANALYSIS**

**FRAMEWORK OF THE STUDY**

**SCOPE OF THE STUDY**

**LIMITATION OF THE RESEARCH**

**INDIAN SCENARIO**

**INDUSTRY CLASSIFICATION**

**ROLE OF WAREHOUSING IN FMCG SECTOR**

**TYPE OF WAREHOUSES**

**WAREHOUSING FUNCTIONS**

**STEPS IN DESIGNING WAREHOUSES FOR FMCG**

**WAREHOUSE OPERATION IN FMCG SECTOR**

**OPPORTUNITIES FOR WAREHOUSING IN INDIA**

**CREATING A COMPETITIVE WAREHOUSING MARKET IN INDIA**

**WAREHOUSE OPERATION AT BRITANIA**

**LOCATION OF WAREHOUSES**

**OVERALL DEPOT PROCESS MAPPING**

**WAREHOUSE MANAGEMENT**

**WAREHOUSE SAFETY**

**HANDLING OF GOODS AT WAREHOUSE**

**CONCLUSION AND DISCUSSION**

**REFERENCES**

# **INTRODUCTION**

## **INTRODUCTION**

The Fast Moving Consumer Goods (FMCG) industry in India is one of the largest sectors in the country and over the years has been growing at a very steady pace. The sector consists of consumer non-durable products which broadly consists, personal care, household care and food & beverages. The Indian FMCG industry is largely classified as organized and unorganized. This sector is also buoyed by intense competition. Besides competition, this industry is also marked by a robust distribution network coupled with increasing influx of MNCs across the entire value chain. This sector continues to remain highly fragmented.

### **Industry Classification**

The FMCG industry is volume driven and is characterized by low margins. The products are branded and backed by marketing, heavy advertising, slick packaging and strong distribution networks. The FMCG segment can be classified under the premium segment and popular segment. The premium segment caters mostly to the higher/upper middle class which is not as price sensitive apart from being brand conscious. The price sensitive popular or mass segment consists of consumers belonging mainly to the semi-urban or rural areas who are not particularly brand conscious. The price sensitive popular or mass segment consists of consumers belonging mainly to the semi-urban or rural areas who are not particularly brand conscious. Products sold in the popular segment have considerably lower prices than their premium counterparts.

## **What are Fast Moving Consumer Goods (FMCG)?**

Products which have a quick turnover, and relatively low cost are known as Fast Moving Consumer Goods (FMCG). FMCG products are those that get replaced within a year. Examples of FMCG generally include a wide range of frequently purchased consumer products such as toiletries, soap, cosmetics, tooth cleaning products, shaving products and detergents, as well as other non-durables such as glassware, bulbs, batteries, paper products, and plastic goods. FMCG may also include pharmaceuticals, consumer electronics, packaged food products, soft drinks, tissue paper, and chocolate bars.

A subset of FMCGs is Fast Moving Consumer Electronics which include innovative electronic products such as mobile phones, MP3 players, digital cameras, GPS Systems and Laptops. These are replaced more frequently than other electronic products.

White goods in FMCG refer to household electronic items such as Refrigerators, T.Vs, Music Systems, etc.

The Indian FMCG sector is the fourth largest in the economy and has a market size of US\$13.1 billion. Well-established distribution networks, as well as intense competition between the organized and unorganized segments are the characteristics of this sector. FMCG in India has a strong and competitive MNC presence across the entire value chain.

It has been predicted that the FMCG market will reach to US\$ 33.4 billion in 2015 from US \$ billion 11.6 in 2003. The middle class and the rural segments of the Indian populations are the most promising market for FMCG, and give brand makers the opportunity to convert them to branded products. Most of the product categories have potential for growth is huge. The Indian Economy is surging ahead

by leaps and bounds, keeping pace with rapid urbanization, increased literacy levels, and rising per capita income. The big firms are growing bigger and small-time companies are catching up as well.

### **List of FMCG Companies in India**

- Britannia
- Colgate Palmolive (India) Ltd.
- Dabur India Limited
- Emami Limited
- GlaxoSmithKline Consumer Healthcare Limited
- Godfrey Phillips India Limited
- Godrej Consumer Products Limited
- Hindustan Unilever Limited
- ITC Limited
- Marico Limited
- Nestle India Limited
- Nirma Limited
- Procter & Gamble Hygiene and Health Care Limited
- Radico Khaitan Limited
- Tata Tea Limited
- United Breweries Limited
- United Spirits Limited
- Weikfield Products Company India Private Limited

## **ROLE OF WAREHOUSING IN FMCG SECTOR**

In the FMCG industry, improved warehousing and logistics solutions are major drivers of productivity development. Warehouse can play a key role in the integrated logistics strategy and its building and maintaining good relationships between supply chain partners.

Warehousing affects customer service and firm's sales and marketing success. A warehouse smoothens out market supply and demand fluctuations. When supply exceeds demand, a demand warehouse stores product in anticipation of customers' requirements when demand exceeds supply the warehouse can speed product movement to the customer by performing additional services like marking prices, packaging products or final assembling etc.

The warehouse is thus a link between producer and customer. Warehouses are planned space for the storage and handling of goods and materials with the appropriate equipment equipped. The activities of warehouses include transportation consolidation, break bulk, product mixing, cross-docking, protection against contingencies, smoothing of supply chain and provide value added services. Thus, there is a strong correlation between the warehousing activities and the FMCG sector.

Successful warehouse layouts must accomplish the following objectives, regardless of material being stored:

The objectives of warehouse layout and operation can be easily recognized, but warehouse layout problems are complicated by:

- large varieties of products that need storage,
- varying areas of required storage space and
- Fluctuations in product demand.

## **TYPES OF WAREHOUSES**

### **On the basis of Ownership:**

i. Private Warehouses - The warehouses which are owned and managed by the manufacturers or traders to store their own stock of goods exclusively are known as private warehouses.

ii. Public Warehouses - The warehouses which run to store goods of the general public are known as public warehouses in which anyone can store his goods on payment of rent. An individual, a partnership firm or a company may own these warehouses. The functions and operations of these warehouses are managed by government.

iv. Bonded Warehouses - These warehouses are owned, managed and controlled by government as well as private agencies together. Private bonded warehouses have to obtain licence from the government. Bonded warehouses are used to store imported goods for which import duty is yet to be paid. They are owned by dock authorities and are found near the ports.

v. Co-operative Warehouses - These warehouses are owned, managed and controlled by co-operative societies and provide warehousing facilities at the most economical rates to the members of their society.

### **On the basis of benefits realized:**

#### **Benefits Realized from Strategic Warehousing**

ECONOMIC BENEFITS SERVICE BENEFITS

(5 basic economic benefits) (Five basic service benefits)



- Consolidation                      1) Spot Stock
- Break bulk                         2) Assortment
- Cross dock                         3) Mixing
- Processing/postponement      4) Production Support
- Stock piling                        5) Market Presence

## **On the basis of locations/positions**

### **1. Market-positioned warehouses**

Market-positioned warehouses are located near to the customers and markets (point of product consumption) with the objective of serving them with a large variety and low volume of items. These warehouses may be owned by the firm or the retailer (private warehouses), or may be an independent business providing warehouses service for profit (public).

### **2. Manufacturing-Positioned Warehouses**

Manufacturing positioned warehouse are located near to the manufacturing facilities in order to support manufacturing on the inbound side and to facilitate assortment-creation and shipping on the outbound side.

### **3. Intermediately-Positioned Warehouses**

Intermediately-positioned warehouses are located between manufacturing and market-position warehouses. They help in consolidation of assortments for shipments from different manufacturing facilities.

## **WAREHOUSING FUNCTIONS**

The warehouse is an integral part of the logistical systems and the effectiveness of customer service depends to a great extent, on the way warehouse operations are carried out. The warehouse is a service function in the supply chain of the company and it performs the following functions:

- MATERIAL STORAGE FUNCTION
- MATERIAL HANDLING FUNCTION
- INFORMATION HANDLING FUNCTION

### **MATERIAL STORAGE FUNCTION:**

The primary function of a warehouse is to store material till it is delivered to the customers. As the manufacturing and the consumption cycle never match, manufactured material has to be stored somewhere till the demand for the same is generated. Storage is designed to accommodate the four functions:

**HOLD:** Holding is the most primary function of the warehouse. Depending on the demand or the order booking pattern and the delivery schedule promised to the customer by the marketing department, goods are dispatched from the warehouse. The material holding function has to be carefully planned considering variables like product categories, product mix, product characteristics, shipment arrival time, expiry dates etc.

**CONSOLIDATION:** If supplies are originating from various sources in small quantities, it may be economical to collect these small shipments at one Centre, to combine them, and make into a large shipment to send it to the customers.

Consolidation will ensure cost saving on freight.

**BREAK-BULK:** The function of this facility is directly opposed to that of the consolidation warehouse. Here the material that has arrived in bulk is divided into small shipments to deliver to the end customers.

**CROSS DOCKING:** This is similar to the break bulk activity, except that it involves multiple suppliers. The usage of this warehouse is for a short period of time. The material arriving in bulk is broken into smaller consignments for further dispatch to customers. The materials stay in the warehouse for a maximum of 48 hours. It is commonly used in retail chains.

**MIXING:** A warehouse is sometimes used as a product mixing point in the case of companies having a number of plants manufacturing different components, which are combined, at a convenient place, to make the final product.

#### **MATERIAL HANDLING FUNCTION:**

This function is divided into the following three activities-

**LOADING AND UNLOADING:** The unloading activity is performed when goods arrive at the warehouse. The material is offloaded from the transportation vehicle. Loading is the last function performed in the warehouse. The material packed in boxes is loaded on the transportation vehicle. Loading includes additional efforts of bracing the load to prevent damages.

**MATERIAL MOVEMENT:** These activities are carried out either manually or with the help of material handling equipment. The incoming material, which is unloaded has to be moved to its assigned place for temporary storage, while during order picking the material has to be moved from storage to the packing area and then to the loading area.

**ORDER FILLING:** The final activity of material handling is order filling. This includes the selection of material from various lots at various locations in the warehouse, as per the customer's order. This activity is done manually or with the help of robots.

**INFORMATION HANDLING FUNCTION:**

For effective and efficient customer service, it is essential for marketing personnel to know the availability of stocks and the likely dispatch schedule. The following information is required:

- Goods inwards
- Inspection and auditing
- Goods outwards
- Stock outs
- Excess stocks
- Invoicing
- Warehouse expenses
- Transit damage and breakage
- Consignment tracking

Information is power and it helps in taking speedy decisions in today's competitive environment for building a competitive edge over the rivals. Hence proper warehouse information system enhances the quality of customer service to both internal and external customers of the organization.

## **STEPS IN DESIGNING WAREHOUSES FOR FMCG**

### **1) Goal setting**

Understand what the main objective is? Whether to reduce warehouse costs, or to offer better customer service (e.g., faster shipping or delivery of products)? The Goal setting must be in align with the company's objectives.

### **2) Information gathering and analysis**

We can gather information regarding:

- Types of items to be stored
- Frequency and volume of shipments and deliveries.
- Month to month fluctuations in inventory.

### **3) Layout planning**

Layout plan must consider:

- product type (size, weight, solid / liquid/ gas, perishable),
- storage type (Vertical or Horizontal) and
- The material handling equipment's.

### **4) Implementing**

Implementation is a very crucial job necessary for setting up or re-organizing an existing warehouse. Many industrial equipment companies offer implementation as part of their services and assists in proper execution of the design selected.

## **5) Maintenance.**

How the facility will be maintained on an ongoing basis is an important thing to consider. Procedures for taking regular inventory or continuing excellent safety procedures and maintaining equipment in good condition are necessary to keep our organization running smoothly.

## WAREHOUSE OPERATION IN FMCG SECTOR



In a multiple warehouse, the warehousing operations can either be centralized or decentralized. In decentralized warehousing operations, each warehouse is considered as a separate entity. Thus each warehouse will have a separate safety stock, there will be orders from lower warehouse to the upper warehouse and there will be in-transit stocks. Each warehouse will optimize inventory individually. This type of decentralizing will be advantageous for the following situations.

Consumption centers are located at different places and at distant places. The transaction of goods is very high. The advantages of such system are

- This prevents obsolescence and also prevents accumulation of surplus materials and
- This offers service where it is needed.

But the system has the disadvantages of having high running cost due to increased stock and personnel in each warehouse and due to handling of more information. As against this, in a centralized system of warehousing operations, order processing, storing of safety stocks and control stock movements will be done centrally by a central warehouse. The important requirement for this centralized system is a well-established information system. But this system has the following advantages:

- 1) Orders for multiple items on a single source can be bunched together.
- 2) There will be reduction in safety stock by a factor equal to a wherein is the number of warehouses.
- 3) Similarly total inventory cost is also reduced by a factor equal to n.

These reduction in inventory costs adequately justify the cost of information system. In such a centralized system, the central warehouse will have to do the additional record keeping and decision making required in a branch warehouse operation. That is, it should keep track of each branch's current stock of each item, its rate of sale at each branch, the amount currently on order and amount in transit. The central warehouse, with these above information's will have to make decisions about when and how much to reorder from the factory. If the decisions are made on the basis of outdate, incomplete and erroneous information, many of the decisions will late turn out to be wrong, a consequence that will raise costs and reduce sales.

### **Storage systems**

The type of materials passing through warehouses varies enormously, with different sizes, weights, shapes, levels of fragility and hazard characteristics. A major benefit of unit loads such as pallets is that they enable the use of standard



storage systems and handling equipment, irrespective of what is handled. Nevertheless variations in throughput and order picking patterns make it appropriate to have different types of storage system, with different operational characteristics, so that systems can be selected that most closely match the needs of the wider system within which they are to operate.

The key factors influencing the choice of a storage system are:

- The nature and characteristics of the goods and unit loads held;
- The effective utilization of building volume-horizontal and vertical:
- Good access to stock;
- Compatibility with information system requirements;
- Maintenance of stock condition and integrity;
- Personal safety;

When comparing the costs of different storage systems, it is not only the storage equipment cost that should be taken into account. Other cost elements that could be affected by the choice of system include:

- Space-land, building and building services;
- Fire protection;
- Handling equipment including maintenance;
- Staff;
- Information management systems.

One way of classifying storage systems could be:

- Bulk storage for solids, such as silos, bunkers and stockpiles;
- Loose item storage, ex casting and fabrications held loose on the floor;
- Pallet storage systems;
- Small item storage for individual items or small unit loads;
- Non-standard unit loads such as long loads

The location of stock within a store is an important aspect of stock management and can be considered at different levels of detail. For ex, the overall positioning of stock within particular areas of the warehouse can influence the total amount of movement required to get material into and out of stock. It can also affect the efficiency with which order picking operations can be carried out by affecting the distance order pickers have to travel to get to required stock.

### **Fixed and random stock location**

The effective storage capacity of a given installation is influenced by whether individual product lines are held in fixed and dedicated locations, or whether any product line can be located randomly in any available storage location.

If a fixed location system is used, any specific location can be used for its designed product line, and never for any other product. Consequently the installation must be designed with enough capacity to hold the maximum stock of every product line.

With random location, when any empty location can be utilized for any product line as required, the size of installation can be reduced, since the probability of every product being in stock at maximum stock level at the same time is virtually nil. In this case, the required storage capacity can be calculated from the sum of the

average stock levels for all product lines, inflated by a factor, say 10%, to account for fluctuations about the average.

Random location is often used for reserve storage, which tends to take up the largest area in a warehouse, and fixed location for order picking stock, which enables the use of concepts such as popularity storage- fast-moving product lines located to minimize picker movement.

### **Palletized storage systems**

#### **Block staking**

Block storage does not use any storage equipment. Loaded pallets are placed directly on the floor and built up in stacks, one pallet on top of another to a maximum stable height. The pallet loads must be capable of carrying the superimposed pallets, and the top of each load should be flat enough to provide a stable base for the next pallet.

Block stacking is suitable for that part of the product range where there are few product lines, each with high stock level, and where very strict FIFO movement of stock is not required. The advantages are good use of area, flexibility to change the layout of the block and quick to stock for rapid throughput.

#### **Drive-in and drive-through racking**

Although this is a racked storage system, it is operationally similar to block storage. There should only be one product line in each row, and the effective utilization of the pallet positions is about 70%. The racking structure supports the weight of the pallets so this system is suitable for high stock product lines, where strict FIFO movement is not required, but where the pallet loads are not strong enough or of regular enough shape to carry superimposed loads. This system

consists of vertical support frames, tied at the top, with cantilever pallet support beams at different heights.

### **Push back racking**

This type of racking is a comparatively recent development. Like-drive-in racking it gives high-density storage and can be built to any height up to the maximum lift height of the lift trucks accessing it. Pallets can be stored up to about four deep in the racking, on either side of the access aisle. The basic operational difference between this system and block stacking or drive-in racking is the increased selectivity achieved. There should be no mix of product lines in any one lane, but there can be between the lanes in any row.

### **Adjustable Pallet Racking-(APR)**

Adjustable pallet racking is probably the most widely used type of pallet racking, and offers free access to every pallet held. It can be built to match the lift height of any forklift truck. Unit loads other than pallets can be stored using APR, and there is a range of accessories such as drum supports and channel supports for post pallets to facilitate this.

The conventional way of laying out APR is to have one row single deep at each end of the installation, with back-to-back rows in between. This gives every truck aisle access to two rows of racking, and minimizes the number of aisles required.

APR is a flexible, versatile storage system, which gives excellent stock access. It is simple in concept, easily laid out, and damaged parts are easily replaced. It can be suitable for fast-moving and slow –moving stock, and for product lines with high or low levels of palletized stock-holding. However, APR does not make good use of volume of building volume.

## **Double deep Racking**

If some loss of totally free access to stock can be accepted, although not nearly as severe as in block, drive-in or push back storage, space utilization can be improved using double deep racking. This supports pallets on pairs of beams as in APR, but improves space utilization by eliminating alternate access aisles, and using a double reach fork-lift truck, which can access not just one but two pallets deep into the racking.

## **Powered Mobile racking**

Powered mobile racking is effectively single deep APR, with the racking, except the end or outer rows, mounted on electrically powered base frames. Operationally it has similar characteristics to APR, but it is slower in use, and the pallet position utilization is likely to be similar to APR at 90 to 95%. This type of storage is expensive in equipment and floor costs, and it tends to be slow in operation. However it gives very dense storage, and is suitable for the typically large number of product lines forming the 'Pareto tail' of a product range, where individual product lines have low stock and low throughput. It also finds use in cold-storage applications where space costs are especially high, and however temperature variations are reduced by cutting the air space in the storage area.

## **Pallet live storage**

Live storage systems are made up of inclined gravity roll conveyors, laid out side by side and at a number of vertical levels. Pallets are fed in at the higher end and removed as required at the lower. Such a system imposes FIFO. The only accessible pallets are at the out feed end, so any one lane should only hold pallets of the same product line. Pallet live storage systems are suitable for very fast-moving product lines. They can provide effective order picking regimes, which

automatically refill empty locations, and also provide physical separation between picking and replenishment operations.

### **Small item storage systems**

As with palletized storage systems, there is a range of different types system for holding small items. With small item storage it often happens that different systems are incorporated into one installation. For ex, drawer units and cabinets may be built into a shelving installation. Consequently the concept of standard equipment sizes and modularity is important for small item storage systems. The following lists are some of the storage systems used for small items:

- Shelving
- Tote bins
- Drawer units
- Dynamic systems –mobile and live storage
- Mechanized systems- carousels and mini loads

## **OPPORTUNITIES FOR WAREHOUSING IN INDIA**

India has become a manufacturing hub for most industries. The main reasons for this are increasing domestic consumption and the cost-effectiveness of outsourcing manufacturing activities. Some industries have gained tremendous traction over the last few years, cashing in on the ongoing trend of the economy. These include the following:

- Automotive
- Retail
- Pharmaceutical
- Agriculture

## **CREATING A COMPETITIVE WAREHOUSING MARKET IN INDIA**

Changing business dynamics and the entry of global 3PLs have led to the re-modeling of the supply chain including logistics and warehousing services in India. From a mere combination of transportation and storage services, logistics is fast emerging as a strategic function that involves end-to-end value added solutions that improve efficiencies in the supply chain. Increasingly, warehouses are being used to serve several important functions, beyond mere storage of products. This has made it imperative for warehousing players to overcome the challenges they face and maintain, and how improve and sustain competitiveness. Various measures such as skill development, policy initiatives and government measures, and IT adoption and increased investments in the sector can be effective in increasing the competitiveness of the warehousing players. There are several functions that warehouses perform today, apart from their general functions of being physical storage points, such as shipment consolidation, break bulk operations,

processing/postponement, assortments, stockpiling, product mixing, value addition, distribution, customer service, billing or invoicing and at times even order-taking, etc. Besides, several other core and non-core activities carried out by warehouse service providers include inventory management, proper handling practices including usage of warehousing equipment like stackers, pallet trucks, documentation management, communication management, etc. These functions require varied skill sets and hence, warehouse service providers today need to develop proficiencies in a diverse set of both core and non-core activities. The government has played a significant role in fostering the growth of the warehousing market in India. It has encouraged 100% FDI in some categories of warehouses and has also reframed its tax structure to make the sector more lucrative for investments. Investments in SEZs, logistics parks, dedicated freight corridors and improving the port facilities is helping the market attract many private participants to provide sophisticated services that meet global standards. This in turn is reducing logistics costs and making India more competent in the global logistics market. The warehousing players that are successfully competing today are the enterprises that have developed a culture of success through appropriate IT interventions that has enabled them to stay ahead of others. The layered service providers (LSPs) and warehousing players with heavy infusion of technology are much better adapted to meet business needs and compete in domestic as well as global markets. The organisations that have succeeded in being competitive are those that have demonstrated both the willingness as well as the competence to improve their offerings over a period of time through appropriate technology interventions. In the highly agile but complex environment of Just-in-Time and Kanban inventory management, the unpredictability of warehousing performance is unacceptable to customers. Any failure in the supply chain ultimately results in heavy losses to the manufacturer or sellers. However,

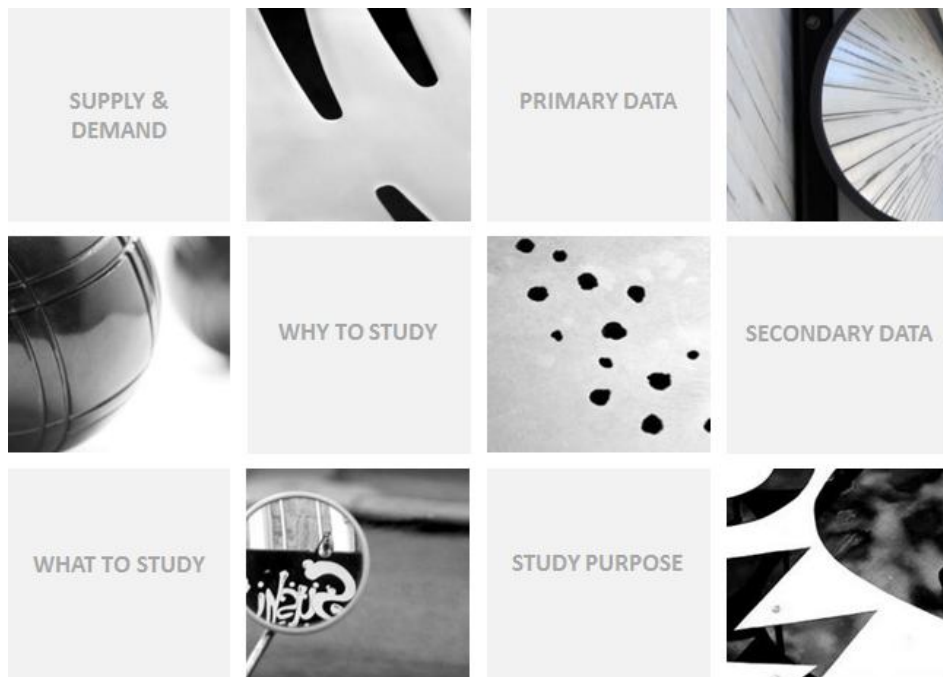


warehousing has yet to accept the accountability and impact of non-performance at the warehousing end on the manufacturing side. The manufacturers and sellers are demanding clear service level agreements with the various intermediaries in the supply chain. The warehousing service level performance and its competitiveness will be highly dependent on the internal targets of their performance indicators. It will be important for warehousing players to measure and monitor their KPIs to ensure quality of service. These KPIs could be around factors such as cost, resources, IT efficiency and effectiveness and space utilisation. Though few warehousing service providers have internal KPIs, there are challenges to monitor in the absence of processes, appropriate management information tools and other relevant IT interventions. Manual interventions tend to provide a distorted picture of performances for internal evaluation of service levels.

# **LITERATURE REVIEW**

AUTHOR	RESEARCH PAPER TITLE	CONTEXT
G. NAGARAJAN; DR. J. KHAJA SHERIFF	EMERGING CHALLENGES AND PROSPECTS OF FMCG PRODUCT DEVELOPMENT IN INDIA	This article provides inputs for a clear understanding of the consumer mindset towards FMCG products. It focuses on some of the fundamental issues pertaining to the emerging challenges and prospects of marketing FMCG products (new product launch) in India.
V.E.Mohan	Warehousing & Inventory Management	Various techniques of racking used in warehouse
D. wickramarachchi	Enhancing the Effectiveness and Efficiency of Warehouse	Focus: Warehouse Operation
Cyrus Guzder	The Indian Warehousing Industry: An Overview	The main objective of this paper is to understand the Indian warehousing industry in detail.
Rachna Nath	Building warehousing competitiveness	It focuses on the evolution of the warehousing sector in India and the opportunities that the Indian landscape offers for the growth of its players.

# RESEARCH METHODOLOGY



## **OBJECTIVES**

- The main objective of this report is to find out the measures that can be adopted to improve warehouse operations to increase the work efficiency and turnover and to study the importance of warehouse in FMCG companies.
- To study the present warehouse operations of BIL.
- To identify the issues related to warehouses.
- To get the feedback from staff members working in warehouses.
- To add up new ideas for development of warehouse.
- Suggestions viable recommendations to be implemented in the area.

### **Important advantages of warehouse management are:**

- Track exact stock location within one storage location with FIFO.
- Provides put away functionality for palletizing etc.
- Provides better picking functionality.
- Allows for picking locations with replenishment when falls below a defined quantity.
- Allows segregation of stock types within a warehouse.

## **RESEARCH DESIGN**

This is a kind of descriptive research study because it describes what is the current system or what exists in current warehouse operation management.

### **TYPE OF DATA**

- Primary and
- Secondary

## **METHOD OF DATA COLLECTION**

The study is carried out through secondary sources of data through research papers, industry reports, business journals, published articles, business magazines, newspaper articles etc. In depth analysis of indicator, reporting of inferences and recommendations has been carried out. A primary research was conducted with industry experts to better understand the practical issues associated. No standard questionnaire has been prepared as the people don't feel comfortable to answer formal questionnaire directly.

## **METHODOLOGY**

The project work is carried out through secondary as well as primary research. In-depth analysis through calculation of indicators, reporting of inferences and recommendations is been carried out. No standard questionnaire has been prepared as the people don't feel comfortable to answer the formal questionnaire directly.

## **TOOLS FOR DATA ANALYSIS**

Simple conventional methods of tabular analysis, observation and also by drawing inferences, this study has been done to understand the need for warehouse in FMCG Industry.

## **FRAMEWORK OF THE STUDY**

This study has been conducted by studying the available secondary data like research papers, industry reports, business journals, published articles, business magazines, newspaper articles etc. to be able to better formulate different perspectives around the subject matter. In-depth discussions with academic experts and industry operators have been carried out to understand the various practical aspects of warehouse operation in India.

## **SCOPE OF THE STUDY**

The scope of the project is limited because the study will consider only the warehouse operations and related issues in Indian market and will not include other factors which are affecting the FMCG Industry directly or indirectly. For the purpose of this study, the global and the Indian logistics industry have been analyzed. The emerging trends, the advancements in technology and their implications on the movement of the industry have also been studied.

## **LIMITATION OF THE RESEARCH**

- Primary research has not been conducted in this case due to the wide area of the study, given the cost, time and budget constraints.

- Since the data for study is collected from various sources and studies by different groups, there may be variations compared to actual situation. However, the degree of discrepancies has been kept to the minimum.



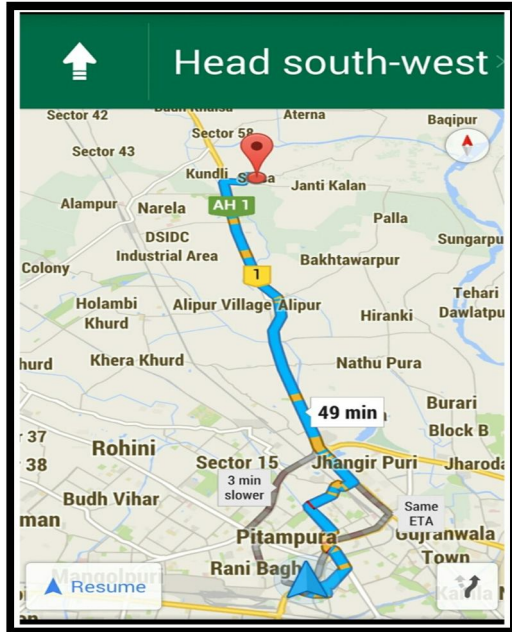
## WAREHOUSE OPERATION AT BRITANIA

### **Company overview**

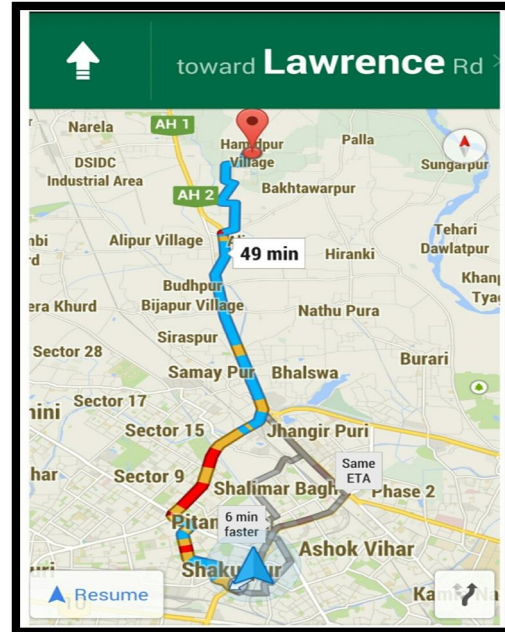
The story of India's favourite brands reads almost like a fairy tale. Once upon a time in 1892 a biscuit company was started in a nondescript house in Kolkata with an initial investment of Rs.295. The company we all know as **Britannia** today.

Britannia Industries Limited is an India-based company, which operates in two business segments: Bakery products, including biscuits, bread, cakes and rusk, and dairy products, including milk, butter, cheese, ghee, dahi, milk-based ready to drink beverages and dairy whitener. The Company's subsidiary, Daily Bread Gourmet Foods (India) Private Limited, is a manufacturer of gourmet bakery products, including specialty breads, cakes, pastries and cookies, which it sells through its own retail stores directly to consumers. The Company's products include New Britannia Tiger, Britannia NutriChoice Oat Cookies, Britannia NutriChoice Ragi Cookies, Veg Cakes, Britannia NutriChoice 5 Grain and NutriChoice SugarOut. Its subsidiaries include Manna Foods Private Limited, J B Mangharam Foods Private Limited, Sunrise Biscuit Company Private Limited, Sunrise Biscuit Company Private Limited, Britannia and Associates (Mauritius) Private Limited and Klassik Foods Private Limited.

## LOCATION OF WAREHOUSES



DEPOT CODE- DE54  
H.S. & COMPANY  
CFA- BRITANNIA INDUSTRIE LIMITED  
KHASRA NO. 76/7, 76/8  
VILLAGE- SERSA JANTI KALAN  
KUNDLI  
HARYANA



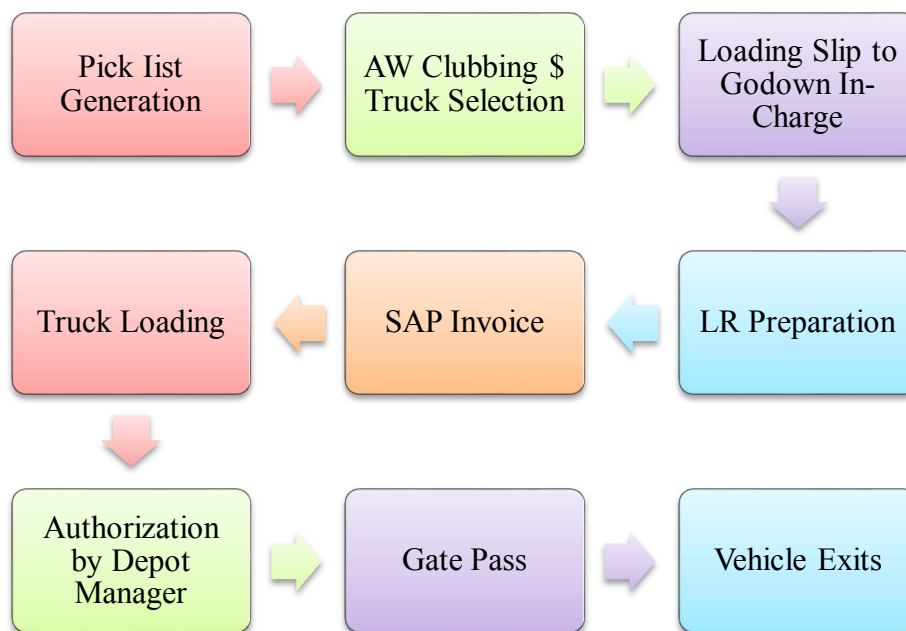
DEPOT CODE: DE62  
M/S CHARAN AGENCIES  
CFA- BRITANNIA INDUSTRIES LIMITED  
235/2, KHASRA NO. 241/1, 241/2  
VALLAGE- HAMIDPUR  
GT KARNAL ROAD  
DELHI- 110036

My study is based on three topics namely Depot process mapping, Quality audit, Cycle count. These 3 things are **the pillars which execute the working of a warehouse**: My study aim is to understand the working of the entire depot and identify the loop holes so that appropriate actions can be taken to maximize the efficiency.

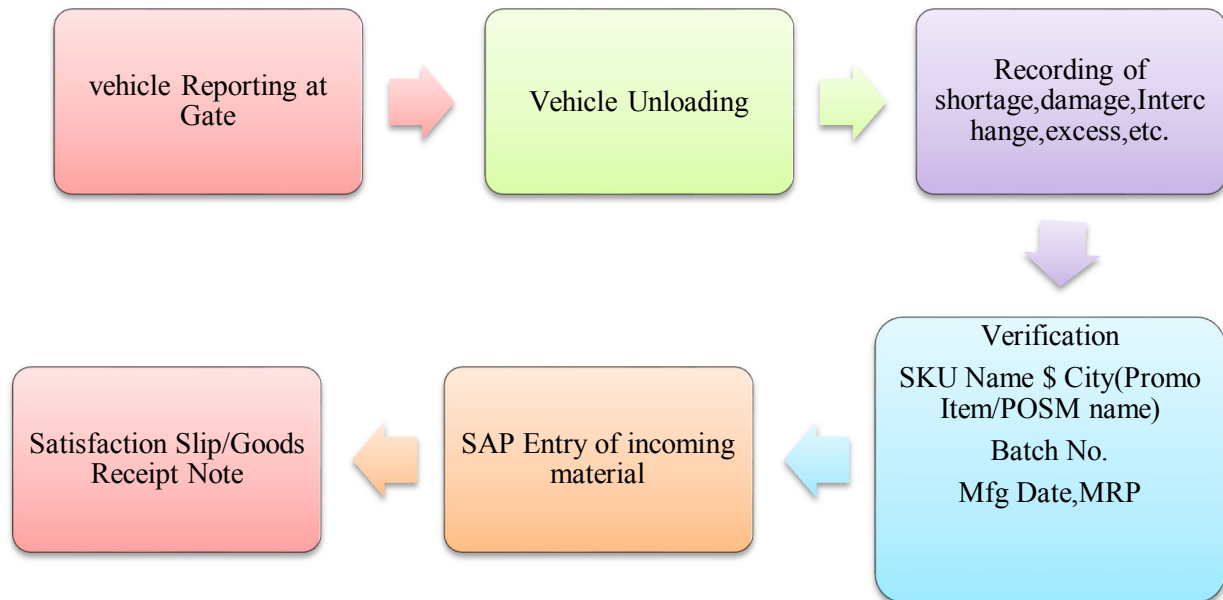
## OVERALL DEPOT PROCESS MAPPING

In this topic i gained the insight of the overall functioning of the warehouse. It mainly focused on the inbound and outbound activities involved in the depot and the documentation involved in it. Further i focused on whether they stick to the standard operating procedure or not.

- **OUTBOUND/LOADING**



- **INBOUND/UNLOADING**



## QUALITY AUDIT

Every quarter the quality person of the firm in charge does the suspense audit at different depots to ensure that functioning at various depots is proper. In auditing the person in charge checks the following parameters:

- Safety and hygiene conditions
- Whether there is a mismatch between the SAP and physical units
- To ensure that goods are properly segregated and safeguarded as per Britannia Industries Private Limited policies
- To ensure that stacking norms are followed properly to avoid inventory losses
- To ensure that space in the depot is adequately utilized to ensure optimum utilization of space and return on investments

## **CYCLE COUNT**

Counting of the SKU's on the regular basis is known as Cycle count. As it is difficult to count the batch size of every SKU's daily because there are many SKU's in the depot in case of Britannia so the counting of SKU's is distributed over the duration of ten days. No. of SKU's counted each day is pre-defined and at the end of ten days every SKU has been counted once. Cycle count is done to ensure that there is no mismatch between the units that are shown in the SAP system and the units that are present physically in the warehouse. If there is a mismatch then the units in the SAP system are changed accordingly.

## **WAREHOUSE MANAGEMENT: STACKING**

Storage management involves the movement of products from the bay /staging area to a storage location, stacking, recording the location and quantity, and updating of storage records so that the product can be found easily when it is needed.

- Rectangular Dimensions CBBs-Brick structure
- Square Dimensions CBBs-Honey comb structure
- Left over small lot size CBBs to be regrouped and restacked at the EOD.
- Judicious use of available pallets and tarpaulins.
- Post stock movement, pallets to be stacked properly.



## DAIRY PRODUCTS

- Cheese, butter and Dahi at or below 5 Degree C.
- Minimum 80% compliance to temperature condition is must during the day.
- Cold room temperature to be tracked on hourly basis.
- Temperature can be tracked remotely through Vtrack portal.



# WAREHOUSE SAFETY

## INTRODUCTION

When it comes to warehouse safety there are many benefits that are often overlooked. Safety procedures are frequently disregarded in a variety of workplaces due to insufficient time, inadequate resources or an opportunity to cut corners in an attempt to save money. However, when safety procedures are soundly implemented there are major benefits such as higher employee satisfaction as well as increased production. By minimizing the risk of injury, fewer workplace disruption take place and absenteeism associated with injury is also reduced.

### **General safety guidelines to help keep our warehouse safe:**

- Ensure safety equipment is used at all times



- Eliminate any potential safety hazards



- Clearly label designated hazards zones



- Always use safe lifting techniques



- Provide training and refresher courses



**. Personnel safety rules that each employee is required to follow in a warehouse:**

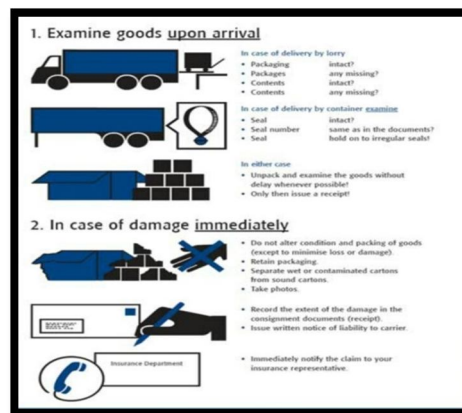
- Before loading and unloading a truck, set the breaks.
- Do not misuse the pallets and trolleys.
- NO SMOKING signs should be posted.
- Check the trucks daily or after each shift.
- Do not store highly combustible chemicals in a warehouse. These should be kept in a separate storage area.
- Avoid stacking material on the floor. Use tarpaulins and pallets.
- Do not use defective ladders; report them immediately to your supervisor.
- Good housekeeping is an aid to safety. All employees shall keep tools, equipment, and work areas clean and orderly.
- Each employee should know the location of fire extinguisher in their work area. The area in front of a fire extinguisher should be kept clear for ready excess.
- Do not do any job that appears unsafe; ask your supervisor for guidance.



# HANDLING OF GOODS AT WAREHOUSE

## RECEIPT OF GOODS

- Closely monitor the CBBs while receiving them from transporter to check if there are any visible damaged CBBs
- Ensure ropes tarpaulins are untied using ladders and no one climbs on CBBs
- Strictly avoid throwing and rough handling of cartons at the time of unloading.



## GODOWN

- Keep the godown clean, hygienic and free from pests.
- Store goods in a dry condition; make sure that there are no water leakages in the godown.



## STACKING

- Stack CBBs only as per the stacking norms mentioned on the CBBs.
- Do not stack CBBs of different products together.
- Store loose packets separately to avoid breakages.
- Do not store CBBs in wrong orientation; store according to the stacking norms on the CBBs.



## HANDLING

- Do not throw CBBs while loading/unloading.
- Never climb and sit on the CBBs
- Use pallets and trolleys as per their capacity for avoiding falling and breakages.



## SORTING AND DELIVERING

- Maintain FMFO.
- Maintain bin cards as per the daily salable quantity.
- During delivery, keep heavier boxes at the bottom and lighter boxes at the top.
- Keep market returns separately- do not mix with normal goods.

PHYSICAL PROCESS

PROCESS IN SYSTEM



CREATE MATERIAL  
MOVEMENT IN SAP

UNLOAD GOODS

TRANSFER REQUIREMENTS

Goods receipt area

Automatic



CREATE AND ASSIGN  
DESTINATION STORAGE OF  
GOODS

HANDLING AND  
STORAGE OF GOODS

CONFIRM STORAGE VIA  
SAP



CHECK QUANTITY

STOCK AVAILABLE



## **CONCLUSION AND DISCUSSION**

Warehousing forms an important constituent of the supply chain as it is where manufactured goods are collected, stored and distributed to the point of consumption. Warehousing in India, accounts for about 20% of the Indian logistics market and is expected to grow at a rate of 35 to 40% annually, displaying high potential for growth over the next few years. Changing business dynamics and the entry of global 3PLs has led to the re-modeling of the logistics and warehousing services in India. From a mere combination of transportation and storage services, logistics is fast emerging as a strategic function that involves end-to-end solutions that improve efficiencies. The growth of organised industry sectors such as retail, automotive, manufacturing, pharma and agriculture, etc, in India is expected to give rise to more integrated supply chains requiring better services, processes and storage facilities. Increasingly, warehouses are being used to serve several important functions, beyond mere storage of products, requiring warehouse service providers to expand their scope to include more sophisticated services. Dynamic market requirements have made it imperative for Indian warehousing players to overcome challenges and maintain, improve and sustain competitiveness. Various measures such as skill development, policy initiatives and government measures, IT adoption and increased investments in the sector can be effective in increasing the competitiveness of the Indian warehousing players. However, this journey can be smoothed and simplified if the challenges and concerns are addressed with collaborative efforts among all stakeholders including the government and its agencies, policy-makers, entrepreneurs, investors, logistics service providers, manufacturers, farmers and sellers. The mutual integration among them will rewrite the success story for the logistics and warehousing industry. Various initiatives will have to be undertaken to reduce the skill gap in the warehousing sector in India. This will necessarily require a multi-pronged approach by various industry stakeholders. In addition, the training needs to be tailored to the

requirement of warehousing such as cold chain, ICDs, etc. The training methods will also need to be upgraded using technology such as e-learning, online distance courses and practical classes through simulation. In the changing market scenario mass awareness initiatives need to be identified to reveal the importance of warehousing and career opportunities in this sector. The roll-out of GST is expected soon but the full implementation could take few months. The government will have to work overtime for its pan-India implementation. Along with GST, the government will need to increase its coordination with state governments at all levels. India's warehousing technology market is growing steadily, with the upswing in demand from the logistics, retail, and manufacturing sectors, as well as through government promotion. Increase in IT adoption and knowledge infrastructure is seen to provide a boost to the growth and maturity of warehousing players in India. IT adoption carries the potential to increase the competitiveness of warehousing players by delivering substantial operating savings while also improving the quality of order fulfillment.

## **REFERENCES**

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- <http://log.logcluster.org/mobile/response/warehouse-management/index.html>
- <http://www.shelfplus.com/material-handling-hotline/10-ideas-for-a-more-efficient-warehouse-operation/>
- <https://www.inkling.com/read/supply-chain-logistics-management-bowersox-4th/chapter-9/warehouse-operations>
- [https://www.pwc.in/en\\_IN/in/assets/pdfs/publications-2011/building-warehousing-competitiveness-india.pdf](https://www.pwc.in/en_IN/in/assets/pdfs/publications-2011/building-warehousing-competitiveness-india.pdf)
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### **Books:**

- Warehouse Management – A Complete Guide to Improving Efficiency \$ Minimizing Costs in the Modern Warehouse-Gwynne Richards
- Excellence in Warehouse Management-Stuart Emmett