Analysis of Warehause operations

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ABSTRACT. *in this article, warehouse management analytics is a powerful tool for optimizing warehouse operations and driving profitability, it involves the use of data analytics techniques to analyze various aspects of warehouse operations, such as inventory levels, order fulfillment, labor productivity, and more.*

KEYWORDS: *improved efficiency, warehouse management analytics, warehouse management system , types of installation and licensing*

INTRODUCTION

After the independence of the Republic of Uzbekistan, socio-economic changes began to be introduced into life in our country. Working in a warehouse in the future sounds like something out of a sci-fi movie, and it's not the imagination of futurists or gadget lovers. Even today, large Western companies are investing heavily in innovations that make all operations more convenient, accurate and secure. These technologies are being tested today and can be widely used in logistics centers and hubs in 5-10 years. In December 2019, DB Schenker announced that it had tested a robotic warehouse at its distribution center in Leipzig as part of the first project. This project does not involve upgrading all the equipment, but simply adds artificial intelligence machines to the warehouse, which make less human error and handle heavy loads perfectly. For now, this technology is very expensive, but it is planned to be implemented in the

company's warehouses in the near future. Robots are equipped with a visual perception system that allows them to freely move around the warehouse, maneuver between people and equipment, and ensure complete safety of navigation for themselves and others.[1]

Main part. Warehouse system service in the Republic of Uzbekistan organizing a show.

A warehouse or a complex of warehouses with service infrastructure jointly forms a warehouse. Warehouse management at an industrial enterprise the main task is to ensure proper nutrition of the industry with relevant material resources, their related to the organization of storage and the implementation of warehouse practices is to reduce costs as much as possible. The importance of warehouses in the logistics system and place Warehouses are one of the main parts of the logistics system.[2]

Logistics the system forms organizational and technical-economic requirements for warehouses, determines the purpose of the warehouse system and the optimal performance criteria, loads determines the processing conditions. In turn, the materials to the warehouse arranging placement (setting up a warehouse, storing products methods, etc.) with the rotation of stock in various operations of the logistics system has a significant impact on related costs, quantity and movement. In logistics, warehouses have both positive and negative significance. In the warehouse the downside of storage is that it is associated with keeping stock in a warehouse JOURNAL OF NEW CENTURY INNOVATIONS http://www.newjournal.org/ Volume–14-Issue-3-October-2022 90 the cost of goods increases due to expenses. This includes storage practices expenses, renting a warehouse, keeping warehouses in order related costs.[3]

1. Creation of an appropriate assortment in accordance with customer orders. Buy This task in procurement and production logistics is different from production stages with the necessary material and technical resources (in terms of quality and quantity) aimed at providing.

2. Storage and storage. The fulfillment of this task is a product to balance the temporary difference between production and consumption, on the basis of the created reserves, the production process is continuous and allows consumers to be supplied with products without interruption. Some in the distribution system of goods due to the fact that goods are consumed according to the season there is a need to save.

3. Consolidation of a batch of goods intended for shipment and cargo send in transport. Most of the consumers from warehouses to wagons or they receive much less goods than the trailer can fit, which in turn is such significantly increases the cost of goods delivery. Transportation filling a warehouse vehicle with cargo to reduce costs to consolidate non-bulky shipments from several customers can perform its function.

4. Service provision. High level of customer service warehouses can provide customers with various services: goods preparation for sale (product packaging, containers (special containers) filling, unpacking goods, etc.); the operation of the tools inspection, collection; product preparation for sale; shipping services in transport and others.[4]

- loading and unloading cargo;
- placing for storage (flattening goods and placing them on racks);
- packing and transporting goods;
- loading of goods into the warehouse.

A warehouse management system (WMS) is a set of policies and processes intended to organise the work of a warehouse or distribution centre, and ensure that such a facility can operate efficiently and meet its objectives.[5]

In the 20th century the term 'warehouse management information system' was often used to distinguish software that fulfils this function from theoretical systems. Some smaller facilities may use spreadsheets or physical media like pen and paper to document their processes and activities, and this too can be considered a WMS.

However, in contemporary usage, the term overwhelmingly refers to computer systems. There are 5 factors, that make it worth establishing or renewing a company's WMS. A successful implementation of the new WMS will lead to many benefits, that will consequently help the company grow and gain loyal customers. Number one, helping not only logistics service providers but also their customers to plan the resources and inventory accordingly, is real-time inventory management. Furthermore, when a company screens/scans a product for every movement in the facility, the location of products, inventory control and other activities are clear and the possibility of mishandling any inventories declined greatly. The third factor that emphasizes the importance of WMS systems is faster product delivery, which is very valued in today's fast-paced world with a highly competitive environment. [6]

The benefits of advanced WMS systems are not only seen when a company needs to send products to its customers/partners but when dealing with returns as well. Managing and taking care of customers' returns becomes much easier and more effective if the company is able to monitor and track the returned inventory. Lastly, a successful WMS implementation will help the company to perform all their operations seamlessly and thus lead to improved overall customer satisfaction.[7]

Research has made use of an approximate classification system based on 3 levels of complexity

1.Some common features of an advanced WMSA basic WMS supports inventory management and location control. The performance data that can be produced at this level is generally limited how much stock moves through the warehouse in a given period of time. A basic WMS is almost indistinguishable from a basic Inventory Management System

2.An advanced WMS can analyse capacity and stock levels, and perhaps track how much time and labour is spent on different activities. This allows it to generate data that measures efficiency and suggest ways to improve it. Outside of East Asia, Most WMS's in use today fall into this category. At this level, the duties

of the WMS may begin to overlap with or supersede those of a Warehouse Control System or Warehouse Execution System

3.A controlled WMS can exchange data with other systems, in order to take into account information from outside the warehouse (e.g.: manufacturing needs, customer orders, transportation) when planning activities, and vice versa. It may control or obtain feedback from automation or Iot devices, in facilities that have them. It may also continuously simulate or test strategies for improving operations, perhaps using machine learning. The most complex WMS's are almost indistinguishable from the most complex WES's.[8]

Types of installation and licensing

WMS software has historically been offered through a perpetual licence, giving organisations the permanent right to install it on their own on-premise servers, typically alongside a fixed period of updates and technical support which may be renewed at additional cost.[9]

As with many types of enterprise software, this provision model is gradually being replaced by hosted subscription services. Legacy enterprise software vendors typically offer both models, but incentivise their customers to move to the cloud.A WMS may be a standalone product, or can be a module or category of modules within a larger Enterprise Resource Planning (ERP) system, Shipping or Inventory Management Software, or Supply Chain Management System (SCMS). Installation type does not affect the level of functionality that may be achieved by a WMS, so long as sufficient computing power is provisioned and data is successfully synchronised with other systems.[10]

CONCLUSION

In conclusion, A warehouse management system provides many benefits. These may include real-time inventory visibility, reduced costs, error-proofing, productivity or efficiency gains. It’s true that costs vary from solution to solution depending on our needs. Even so, it’s important not to bargain hunt for our WMS solution.

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