
Integration of "SCM with ERP" & Benefits of ERP System and its Use in Supply Chain Management

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Abstract: ERP is a software system designed to integrate the main business activities in a company. Nowadays companies are well doing to serve customers but surviving in today's competitive world is some difficult to them. In order to persist and stick ahead in today's competitive marketing world companies are extended their limits in the search of organizational skills and technologies. Out of these most commonly used techniques are Enterprise Resource Planning and Supply Chain Management are the two most primarily used terms in the present competitive world. The important factors are there to improve the speed of production at low cost and with more productivity in order to stick and persist in the competition of the present globalized economic scenario. There is a serious need for unification of information across to proper planning of enterprises' resources and supply chain activities in business. The supply chain activities will increase the effectiveness of various inputs and on the other side of the coin the ERP systems will improve the overall effectiveness of the resources to reduce the cost of production and operations. With the help of ERP and SCM organizations will achieve the best results in stipulated time and attract more customers towards its quality production. This paper throughout the information on how the combination of ERP (Enterprise Resource Planning) and SCM (Supply Chain Management) are helpful to the company to attain extensive Competitive Advantage in the present market scenario.

Keywords: Enterprise Resource Planning, Supply Chain Management, Organization, company, Competitive Advantage

1. INTRODUCTION

Before 1960's ERP was not developed in businesses have functioned as an organizational structure which was divided as the functional fields, here each functional field was separated different departments and its activities. In this way, every department is completely inaccessible to other departments. For Example, marketing and sales might be different from supply chain management. That concludes what happens in one department and activities are not related to other departments. These departments are interdependent, each department needs required data and information from other departments. Enterprise Resource Planning (ERP) is one of the latest technologies that many organizations have adopted. ERP system is integrated management of the important business process in an organization. ERP is an software package which is used for to manage the all-important business functions or activities in organization. such as Human resources Financial,, Supply chain management, marketing, production, and other important business functions. enterprise-wide Packages that combines all important business functions into a single system with a shared database system. These software packages can be worked up to a certain limit to the specific needs of the organization. Supply Chain management is a critical component of modern ERP package systems. Between 1990s to 2000s supply chain applications are more developed and more advanced in business organizations which are included in ERP packages. Supply chain involves the major activities in business such as planning, controlling, execution and monitoring of all supply chain activities in the organization. Supply chain management has a basic part of ERP solutions adopted by several organizations. Manufacturers need to commune with suppliers and partners to acquire the raw materials at the right time and at the right place to carry finished goods to a competitive market. Businesses are focused on several supply chain strategies to boost their plant productivity, increase product quality, and to reduce manufacturing costs. As the operations of production become more extensive and globalized in nature. the combination of SCM becomes more important to achieve greater outcomes or results. ERP software packages can support various modes, such as make-to-order, engineer-to-order, and configure-to-order and provide operations and logistics support to across various sites in real time. ERP software packages smoothen the path to their products go through from supplier to warehouse and finally to store and its reach to the customer. The combination of the Supply chain management and ERP allows manufacturing of products and distribution process to businesses the ability to gain greater impact into all operations and logistics while increasing speed, increase production, and overall customer satisfaction.

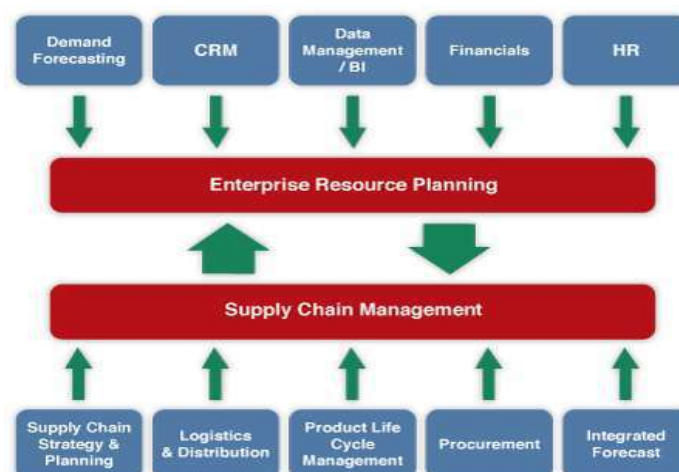
Combining Enterprise Resource Planning & Supply Chain Management

Combining an supply chain management with Enterprise Resource planning can helps to business organizations to improve their supply chain planning (include selecting the marketing channels and controlling the quantities of stock and inventory storage and inventory required for the demand) by offering a simple, easier and flexible way to change the parameters within the supply chain. ERP systems allow visibility over supply chain platforms, handling the inventory procurement and supply of goods is made easier.

Supply chain management confine many components for manufacturers, such as planning, scheduling, monitoring, execution, and finance. The capacity to monitor and improve supply chain activities in organization real-time. It is a key element of its production. Contrasting actual activity against projected goals is made easier with ERP combination, as it manages the information across the various departmental platforms, so that any differences are identified and those can be identified.

2. NEED FOR INTEGRATING ERP AND SCM

The web chain is having an important effect on how the firms will commune with other departments and to their customers. Previous tripping blocks for supply chain combination with ERP such as unrestrained transaction costs between the partners, lack of information, and the challenges of maintaining complex interfaces between functional organizations are all dissolving on the network. Since suppliers are located all over the world, it is important to combine the supply chain activities both inside and outside of the organization. This needs an enterprise-package information system for allocating information on different value-added activities along the supply chain. across the relationship between ERP and SCM has been deliberated to some extent, a still large amount of research is needed to be performed in order to facilitate the client organizations and ERP software vendors will help in developing an combined Supply Chain.ERP is a system that effectively integrates all information required by the operating process functions that are including accounting & finance, human resources, production, marketing, material management, quality management, allocation of resources and distribution, and sales of organization or process of reengineering and information technology. ERP is an modern combined information technology system that combines all the enterprise activities such as internal function & working processes, standardizes of internal data processing procedures, and combines the operational data is generated by various functions. Future trends of ERP will integrate Supply Chain Management (SCM) to provide enterprise management for more accurate information. SCM is a concept or module which looks at an organization as a chain of interconnected organizations and thus providing a through the perspective of the entire business. The supply chain activities can be modeled to reduce inventory, reduction in lead times and cost. The challenges for business organizations on today is to understand the factors that play an important role in using ERP systems abilities and their implications on Supply Chain combination to allow them to engage successfully and using their outcomes to improve the organization's performance. Successful improvement of ERP applications requires a smooth integration of a large number of factors. The ERP system and Supply Chain Management can be combined as shown in the following image:



Integration of SCM with ERP

The benefits of the integration of SCM and ERP as shown in the figure are to help identify, measure and integration of the ERP and SCM implementation process and technical transformation. Thus, this combination helps the company to Improve their business responsiveness and communications, Lower costs of production (operational and IT infrastructure), Employ state-of-the-art supply chain planning methods, Improving operations and logistics planning. Improved decision-making and decision making strategy, Achieve strategic procurement solutions. To Achieve information transformation and operations expertise and combination of all enterprise activities and solutions. We need to perceive that the combination of the supply chain transfer to the internal and external combination of SCM with ERP in the sense of that internal business processes are to be integrated and better organizational processes are to be incorporated with ERP systems. This combination of the internal organizational network chain explains that the process of intra-organizational activities and functions such as purchase, operations, warehousing, material management, transportation, and production (Croom et. al. (2001). Indeed, the question affects to the degree to which of these processes are integrated should also address the information technology systems supporting them. The smooth flow of intra-organizational processes are closely integrated, the competitive advantages of an organization or firm may not continue to contrary to external combination or integration and cooperation between partners. Information coordination within an organization takes a major place through supporting core processes by the same package system and database. Information combination in the supply chain is a higher-order split of information because while it is likely to split the information by using any communication channels or device (e.g., telephone, fax, mail, etc.), information combination indicates the systematic methods of the information exchange process.

3. ENTERPRISE RESOURCE PLANNING (ERP)

The ERP was developed in 1990 by Gartner¹ but it's started in the 1960s on that time the concept of erp is applied to inventory management and control over the manufacturing sector. history of ERP passed back more than 100 years. In 1913, engineer Ford Whitman Harris was developed the Economic Order Quantity (EOQ) model, and a paper-based manufacturing system for the production scheduling in the organization. For decades are going, EOQ was standard for manufacturing. Toolmaker Black and Decker were changed the game of erp in 1964 when it was the first company to acquire a Material Requirements Planning 1 (MRP) are that integrated EOQ concepts with a mainframe of the computer. MRP-1 remained standard for the manufacturing activities until manufacturing resource planning (called MRP II) was developed in 1983. MRP II featured modules as a key software architectural component and integrated core manufacturing components are include purchasing of raw materials, bill of materials, scheduling & forecasting and contract management. For the first time, the different manufacturing activities or tasks are combined into a common particular system. MRP II also provided an entrancing vision of how organizations are purchase software packages to share and combine enterprise data and boost operational regulations with better production efficiency, reduced inventory, and inventory carrying the cost. As computer-based technology was developed through the 1970s and 1980s, those concepts are similar to MRP II are developed to handle the all-important business functions & activities behind manufacturing, finance, customer relationship management, and human resources. By 1990, advanced technology analysts had a name for this new type of business management software - as Enterprise Resource Planning.

What is ERP?

The acronym of ERP stands for enterprise resource planning. It refers to the systems and software packages which are used by the organizations for the effective decision-making process and to manage day-by-day business activities in the organizations, such as accounting & finance, human resources, marketing, project management, and products manufacturing. ERP systems fit together and define an excess of business processes and delegate the flow of data between them. By gathering of an organization's shared transactional data from various sources, ERP systems eliminate the data replication and provide data combined with a "single source of truth". Today, ERP systems are playing a crucial role in managing a large number of business organizations. To these companies, ERP is as essential as the fuel that needs to ride a bike.

Why ERP is required to businesses?

ERP software systems are designed for a better performance of the business organizations. every data structure is usually has a common database. ERP systems provide ingress to enterprise data from various activities using common constructs and definitions and common user past experiences. every business has their its own objectives to gain value in society and to improve customer satisfaction towards their business products. today businesses needs updated technologies with all complete important functions which can link the gap between the process of business and people. To run a large organizations which are involved with various departments and teams successfully, for this an ERP system will helps by synchronizing the all information & communication within the organization. ERP is an integration of software and it performs all important company's activities are to manage operations & production process. With the help of ERP software, the complete project value chain is placed and critical processes are elegant effectively.

Benefits of ERP Systems

An combined ERP system can produce indeterminable benefits to a business organization. However, there are also five measurable, important, and noticeable benefits are there, they include:

- Increased efficiency — Across the delivering more shop floor visibility, employees and employers can reduce lead time and make sure that -in employees are always gain knowledge through working on the right job. with the help of ERP organizations can increase their production capacity.
- Better inventory management — Allocate a product part number or barcode to every element of a finished good or product and the product itself allows users to see where every component came from, where it is, and, where it's needed in real-time operations.
- Decreased costs — With the help of ERP software employees can decrease their operational expenses and quality costs. A fully combined ERP system can reduces the overhead & inventory costs by elegant many of the processes that are involved in a job goes through from beginning to an end.
- Paperless operations — In organizations they having every file/document at there fingertips in the computer system and the data available from every department and it eliminates the need for printing and wase of unnecessary papers.
- Better-informed decisions —With the help ERP the total shop floor visibility gives to users a bird's eye view of every feature of their business processes.

Supply Chain Management:

Supply Chain management consists of manufacturers, suppliers, retailer, distributor, and customer. The supply chain aims to match the supply and demand, and profitably for the products and services. SCM involves planning, execution, control, and monitoring of supply chain activities. The purpose of supply chain management is to gain trust and collaboration with supply chain partners. The combined value creation process must be maintained from material procurement to the end- customer delivery, and this can be easily accomplished through ERP software.

Three types of flows in SCM:

- Material flow – Material flow is a physical flow which represents the activities of product from supplier to customers as well as the activities of product from customers to suppliers in case of servicing, repairing, etc.
- Information flow – Information flow represents the activities capacity, order tracking, delivery schedule of a product or service.
- Financial flow – Financial flow represents credit terms, invoices, and other ownership arrangements. This flow requires a greater level of co-operation between the employees of the supply chain.

Benefits of ERP on Supply Chain Management

ERP plays a crucial role in the supply chain management process by reducing time and material waste, increasing productivity and terminating operational inefficiencies in supply chain management.

- Automated workflow and speed negotiations.
- Improved productivity across the companies in the supply chain
- Reduced overheads, inventory, and operational costs
- Decrease production related errors and restrictions
- Increased flexibility to meet the changing market demands
- Statement for scalability and business extension
- Improve customer service satisfaction and customer retention to the organization.

The ERP and SCM combination integration is more important for the management of planning and distributing resources, and the implementation is faster, more efficient, and more qualitative in the supply chain process.

4. CONCLUSION

Every organization needs to keep a track of their resources and inventory. It is essential to monitor the Supply Chain correctly to achieve greater profits. Supply Chain Management becomes a key factor to ensure the proper and timely functioning of a firm. With the help of this paper, we can see how ERP can be combined with SCM to manage the supply chain activities. An ERP software is an IT solution which automates the tasks in a supply chain. Effective management of a supply chain can be done by using an ERP software package which provides the organization's data in a clear database. Ensure that an ERP software package has those capabilities to bridge the gaps between companies and customers.

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