

Chapter 28

Information Management Systems in the Supply Chain

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ABSTRACT

This chapter analyzes the importance of technologies as drivers for managing supply chains. The focus will be on the advantages of the use of information technologies to improve company's efficiency to be competitive and for the reduction of costs, improvement of operations, improvement of relationships with customers, suppliers and partners, shortening of delivering times, streamlining and optimization of business processes and operations. The use of new technologies contributes to improve efficiency of supply chain management: raw material suppliers, component manufacturers, finished product manufacturers, wholesalers and retailers. Technologies allow an integrated approach to planning, control and monitoring of product flows, from suppliers to end users. They aim at improve customer service at reduced overall costs, and leads to the development of important relationships with logistics providers, suppliers, and customers in order to enhance information exchange and the coordination of business activities, which are the key advantages of an integrated supply chain with the collaboration among all the participants in the value chain.

INTRODUCTION

All the new and the mainstream business are facing global competition and it is imperative that they reduce costs, improve their operations and the relationships with customers, suppliers, and partners, reducing also delivering times and optimize their logistics processes. These goals are being achieved with the adoption of new technologies. They contribute to improve efficiency of supply chain management which focuses on the inter-organizational management of goods flows between independent companies in a supply chain, such as raw material suppliers, component manufacturers, finished product manufacturers, wholesalers and retailers.

DOI: 10.4018/978-1-7998-0945-6.ch028

Information Management Systems in the Supply Chain

Lambert et al (1998) have defined supply chain management as the integration of key business processes from end users through original suppliers that provide products, services and information that add value for customers and other stakeholders. The technologies specifically the information systems enhance information exchange and allow the coordination of business activities, which are the key advantages of an integrated supply chain. They improve communication, data, information and documents exchange among customers and suppliers.

Analysing the advantages of using information systems and business intelligence processes it's possible to say that they enable faster completion of tasks and activities, accelerate data preparation and transmission times, increase reaction speed to markets and support the decision-making processes enhancing efficiency.

Companies using Information System are more capable of responding to a dynamic environments maximizing supply chain efficiency. In order to create an intelligent value chain network, it is essential to companies to implement an information system with analytical tools that enable the extraction of relevant information from all of these sources.

In order to accomplish all these goals, the present chapter will discuss the concepts of information management systems, business intelligence and their appliance to the supply chain.

INFORMATION MANAGEMENT SYSTEMS IN THE SUPPLY CHAIN

Information Management Systems

Information management systems have the potential to change organizations and promote the emergence of new businesses. Their main goal is to enhance information flow and facilitate the decision making process. An information management system is one of the few elements of supply chain that can offer both improved performance and lower cost.

It enables companies to maintain key information in an accessible format and helps to take operational and planning decisions. The adoption and successful implementation of software and network technology contribute in a large way for the supply chain success facilitating the flow of information and enhancing the efficiency of supply chain activities.

Logistics activities are key activities in the supply chain, including planning, designing, implementing and managing the flow, storage of materials and information exchange in order to support basic logistics functions such as procurement, distribution, transportation, inventory management, packaging and manufacturing. Information technologies are seen as a resource of a company, as a source of its competitive advantage and serve as a catalyst of change in a company.

With the growing trend toward the use of international supply chains and e-commerce, logistics service providers for product warehousing, transportation and delivery are placing greater emphasis on information technologies in order to remain competitive globally. In the last decades, innovative technologies that have deeply affected the way business are performed and the way that companies compete. Innovations in digital commerce play a key role in managing inter-organizational networks of supply chain members. The internet represents a powerful technology for commerce and communication between supply chain participants as well as a technique for the improvement of supply chain management.

The fact that Information Technologies have a positive impact on efficiency as well as the overall performance of every company that uses them, regardless of its primary activity, is already well known.

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