

Chapter 101

E-Procurement Systems as Tools for the Development of Supply Chains

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ABSTRACT

The Supply Chain Management is a strategy that has allowed the organizations that have established in their business models a competitive advantage. The supply chain is a network of elements, where different key process such as: procurement, manufacturing, distribution, inventory, customer services, and information should be managed and controlled to meet customer requirements. To achieve this goal, different tools have been developed to help to the key processes of the supply chain; one of these tools is the e-procurement system, which helps an organization to control the interactions with the most crucial suppliers.

INTRODUCTION

Christopher (1998) considered to Supply Chain Management as new strategy in the business models. A supply chain is a network that enables the distribution options for procurement of both raw

and finished materials, which can be transformed into finished goods and distributed to the end customer through various distribution channels. Commonly, the main goal of a supply chain is satisfy the customer's requests as soon as they appear. To achieve the above goal it is necessary that the processes and key activities are carried out in a supply chain quickly and effectively. One

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of these processes is the procurement on line that with advances of technology has had a great develop in recent years. This process is well-known as e-procurement. E-procurement increases efficiency by reducing the cost of human resources in purchasing activities, but e-procurement is more than just a system for making purchases online, because a properly implemented system can connect companies and their business processes directly with suppliers while managing all interactions between them. It provides those who use it with a set of built-in monitoring tools to help control costs and assure maximum supplier performance. It provides an organized way to keep an open line of communication with potential suppliers during a business process. E-Procurement helps with the decision-making process by keeping relevant information neatly organized and time-stamped. Well-managed e-procurement helps reduce inventory levels. Knowing product numbers, bid prices and contact points can help businesses close a deal while other suppliers are struggling to gather their relevant data. E-Procurement systems that allow multiple access levels and permissions help managers organize administrative users by roles, groups, or tasks.

E-PROCUREMENT AS SUPPORT IN THE DEVELOPMENT OF SUPPLY CHAIN

The Supply Chain Management as Competitive Advantage

The companies that competing in a global market must identify and develop their strategies to meet the challenges that market requires, such as: products with high quality, low price and the time required. One of these strategies is the Supply Chain Management, which has proven success factor in world-class industries (Gunasekaran & Ngai, 2004).

Today many manufacturing companies have as their main strategy, improving their production systems using methodologies or tools such as: Just in Time (JIT), Total Quality Management (TQM), Lean Manufacturing, Kaizen among other. The application of these techniques and methodologies have very good results in business processes, however, the Supply Chain Management to Thomas and Griffin (1996), is the most advanced state for the purchase, acquisition, production and distribution companies, because it includes suppliers and end users.

The main elements in a supply chain are (Figure 1): suppliers, logistics and customers (Rushton et al, 2010). To Council of Supply Chain Management Professionals (CSCMP, 2006) *Logistics* “is the planning, implementation and control of the effective forward and reverse flow and storage of goods, services and related information between the point of origin and the point of consumption in order to meet customer requirements”.

The actual representation of the supply chain is through the inter-relation of elements above mentioned and others activities at different levels (Figure 2).

Jay W. Forrester (1961), professor of MIT is considered the pioneer of the formal study of supply chain. Using a basic structure of a supply chain and through the System Dynamics methodology found that delay and feedback information between the elements of supply chain originated the Amplification Effect or Whiplash that occurs when a small change in demand causes a mismatch (increase) in inventories of the elements of a supply chain. At present, this effect is known as the Bullwhip Effect and is still studied by different researchers (Lee et al, 1997).

The Importance of Supply Chain Management as a competitive advantage is that in every company there are movements of raw materials, finished goods, money and information that must be managed and controlled from suppliers to end customers (Waters, 2003).

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