



SUPPLY CHAIN MANAGEMENT IN ELECTRONIC ENVIRONMENT

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Abstract

The concept of supply chain management (SCM) has occupied serious research attention in recent years. This concept goes beyond intra-organizational boundaries to achieve a greater value of the entire supply chain network. Supply Chain Management means coordinating, scheduling and controlling procurement, production, inventories and deliveries of products and services to customers. The SCM is the backbone of E-commerce, a very critical component of E-commerce. Supply Chain Efficiency means having the right product at the right place at the right time, can save money/reduce costs, and can enhance cash utilization.

Keywords: *Electronic, SCM, E-Market, Management.*

Introduction

Major international companies have seen that the electronic sharing of non-confidential data and information can shorten delivery, marketing and financing cycles while maintaining acceptable inventory levels, thereby reducing cost and liberating working capital throughout the trade chains. Optimizing the supply chain results in efficiency gains for all parties, and minimizes the complications and risks involved in international trade and shipping. Electronic information flows also make it much easier to act proactively when a potential control issue looms: the situation at each stage of the execution of an international shipment is visible, instantly and constantly. Finally, increases in efficiency and security may also add to cash market liquidity. Such major change does not happen overnight. We have seen the telex and fax gradually being replaced by email. But what to do with electronic data which is not standardized? How to make optimal use of Internet technology? How to bring the community of coffee exporters, traders, importers, roasters, carriers, warehousemen, government authorities, financial institutions and other service suppliers closer together in sharing data, thereby avoiding duplication and errors? How to create efficiencies for each member of the community in their function within the supply chain and for the coffee community as a whole? What about the security of the data transmission? Will such comprehensive data be used effectively and without compromising the competitive advantage individual companies may have developed over the years?



Various global shippers have focused their efforts on providing browser-based information services on contracts, delivery orders, shipments and quality. These initiatives have played a meaningful role in the process of automation and creation of supply chain visibility. But in the long run they are not a sustainable solution because they do not allow for efficient, industry-wide data integration. Two mainstream solutions have now evolved:

- E-marketplaces for commodity trading, and
- Secure messaging platforms to allow for data integration within the supply chain.

Supply Chain Management in E-Environment

The development of SCM has gone through several stages. The first stage defines the era of internal logistics as important functions in an organization. In the second stage, the logistics are transferred from the decentralization to the centralization of basic functions, leading to new altitudes in optimizing costs and customer service. The third stage testifies the drastic expansion of logistics, including new concepts of interest in connection with the internal operations of the analogue functions performed by business partners in the supply chain. As the concept of integration in the supply chain expands, the old concept of logistics is being replaced in the fourth stage, an integrated approach to supply chain management. With the implementation of the Internet technologies in the concept of SCM, the fifth stage appears, supply chains in an e-environment, e-SCM.

E-SCM provides supply chains with resources for the implementation of the strategic options of the SCM original model. In the late 1990s, organizations recognized that they were not only isolated entities defining the business strategy for their existence, but also a part of a much broader environment in which various business systems exist. ERP systems and the EDI technology impose serious limits to communications and the information range and erect barriers by restraining the participation of organizations. On the other hand, the integration of the Internet and SCM provides the entire supply chain with a possibility of creating a value for their customers, by defining a plan for achieving agility, creating a flexible system and high-performance networks with a Web accessible to customers and suppliers and a critical flow of information. Therefore, the application of the Internet technology gives a new dimension to the concept of SCM. E-SCM is a three-stage process. The first stage is characterized by the integration of processes and functions within an organization. The second stage is characterized by the cross-integration of operational functions in the supply chain partners, such as transportation, inventory in supply chains and supply forecasting. The third stage is the highest level of achieving synchronization functions in the entire supply chain from the whole purchasing network into a single virtual organization able to optimize



the competencies and resources from anywhere and at any time in the supply chain in order to gain an insight into market opportunities, by using the Internet capabilities

Using e-business tools has created major changes in the SCM, in the field of the product and processes design, e-markets and exchanges, planning cooperation among organizations and managing the execution of customer orders. Supply chain networks are highly complex, interdependent structures with a number of related suppliers, service providers and customers who are also members of other supply chains. Individual elements of the supply network interact at different levels:

- Products level
- Information level
- Relations level
- Institutions level
- Finance level

Therefore, designing an efficient supply chain network involves an analysis of the key components and requirements of stakeholders with interfaces at the horizontal and vertical levels, in order to achieve an effective interaction between the participants in the supply chain and improve the performances of processes, functions, organizations and the entire supply chain.

Characteristics of Supply Chain Management in E-Environment

With the appearance of the Internet technologies, the concept of supply chain management assumes a completely new dimension. The main problem that was a barrier to the total activation of SCM models was a mechanism that would allow a connection between business systems. The Internet overcomes this gap. Actually, in the entire supply chain, an access to and display of database data, forecasts, an inventory, and capacity planning, product information, financial data and other aspects of organizations needed for effective decision-making are allowed. To ensure operations, the full benefit and advantage provided by the implementation of e-SCM, it is necessary to define:

- E-information,
- E-collaboration, and
- E-synchronization.

E-Information



E-SCM enables a completely new insight into the functioning of information throughout the supply chain. Today, the fundamental competitive advantage is speed, being the fundamental attribute of information obtained from the Internet. Organizations acquire capital using e-information on the basis of the created system allowing a simultaneous use of data about the supply chain in real time. In this way, it is possible to manage the supply chain in any situation and electively respond to the planned as well as unexpected situations. E-information allows greater transparency and more control throughout the supply chain. The aim is to strengthen the organization with more efficient models of process management in supply chains as well as provide managers with an insight into the key events in order to timely implement potential corrective measures. Information about unforeseen events allows a management efficient analysis, as well as planning and forecasting in the supply chain. E-information ensures a deeper and broader relationship between organizations in the supply chain network, while facilitating cooperation at all levels, from product design to customer services.

E-Collaboration

E-SCM allows organizations to achieve successful relations with partners throughout the supply chain and create a channel structure without “cracks”. If information between networked business partners is better synchronized, the whole supply chain is able to work as if it were a single organization. At the same time, the supply chain network is created with traditional entities such as suppliers, manufacturers, distributors and retailers, as well as a new kind of intermediaries, such as virtual/contract manufacturers, service providers and on-line trade exchange. The realization of completely new sales methods and new sales channels is also enabled. For a business to be successful, organizations must keep pace with new principles of cooperation within the supply chain. This includes the establishing of the partners network throughout the supply chain supported by web connections.

E-Synchronization

To accept challenges of operating on the market, organizations must adopt new methods of timely connecting e-information. It is the transfer of e-information in the quickest possible way through the supply chain and the interconnecting of all parts of the network in order to form a smooth supply chain, i.e. e-supply chain synchronization. The goal of synchronization is to achieve a direct link between demand and supply in all parts of the supply chain network by using ICT resources.

Conclusion

Nowadays, realize effective supply chain management has already becoming the strategy



choice to develop valid compete, the fast developed E-Marketing provide important means for effective operational supply chain management. It use the network platform, maximum relate the customers, retailers, manufactures, suppliers and employers, improve greatly the level of enterprise management, let both supply and demand can receive market information in a very short time, improve the product rate and economic benefit, reduce the production cost and fasten the products circulate, enhance the core competitive force of enterprise. With the spread and improve of E-Marketing technology, it will surely push the further development of supply chain management, and the enterprise who can realize and solve the problems with it can preempt market opportunities.

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