

E supply chain management

[Business](#), [Management](#)



E-supply chain management processes and activities include the following:

1. Supply Chain Replenishment - Supply chain replenishment encompasses the integrated production and distribution processes. Companies can use replenishment information to reduce inventories, eliminate stocking points, and increase the velocity of replenishment by synchronizing supply and demand information across the extended enterprise. Real-time supply and demand information facilitates make-to-order and assemble-to-order manufacturing strategies across the extended enterprise. Supply chain replenishment is a natural companion to Web-enabled customer orders.

2. E-Procurement - It is the use of Web-based technology to support the key procurement processes, including requisitioning, sourcing, contracting, ordering, and payment. E-procurement supports the purchase of both direct and indirect materials and employs several Web-based functions, such as online catalogs, contracts, purchase orders, and shipping notices. E-procurement can improve the operation of the supply chain in various ways:

- * Online catalogs can be used to eliminate redesign of components in product development.
- * Visibility of available parts and their attributes enables quick decision making.
- * Online purchase orders expedite the ordering process.

- * Advanced-shipping notifications and acknowledgments streamline delivery.

From the purchaser's perspective, e-procurement can help better manage supplier relationships and accounts and allows for more effective tracking of orders. From the supplier's perspective, e-procurement enables them to respond more rapidly and effectively to the requirements of purchasers. Both

purchasers and suppliers report that e-procurement can assist them in better managing their business process and cash flows.

3. Supply Chain Monitoring and Control Using RFID - This is one of the most promising applications.

4. Inventory Management Using Wireless Devices - Many organizations are now achieving improvements in inventory management by using combinations of bar-coding technologies (or RFID) and wireless devices.

5. Collaborative Planning - Collaborative planning is a business practice that combines the business knowledge and forecasts of multiple players along a supply chain to improve the planning and fulfillment of customer demand. Collaborative planning requires buyers and sellers to develop shared demand forecasts and supply plans for how to support demand. These forecasts and supply plans should be updated regularly, based on information shared over the Internet. Such collaborative planning requires B2B workflow across multiple enterprises over the Internet, with data exchanged among partners dynamically. This topic is discussed in Chapter 11.

6. Collaborative Design and Product Development - Collaborative product development involves the use of product design and development techniques across multiple companies to improve product launch success and reduce time to market. During product development, engineering and design drawings can be shared over a secure network among the contract firm, testing facility, marketing firm, and downstream manufacturing and service companies. Other techniques include sharing specifications, test

results, and design changes and using online prototyping to obtain customer feedback. Development costs can be reduced by tightly integrating and streamlining communication channels. Lately, social networking has been used to solicit feedback from customers.

7. E-Logistics - E-logistics is the use of Web-based technologies to support the material acquisition, warehousing, and transportation processes. E-logistics enables distribution to couple routing optimization with inventory-tracking information. For example, Internet-based freight auctions enable spot buying of trucking capacity. Third-party logistics providers offer virtual logistics services by integrating and optimizing distribution resources. A company may even consider collaboration with its competitors to improve its supply chain. Infrastructure for E-SCM

The key activities just described use a variety of infrastructure and tools. The following are the major infrastructure elements and tools of e-supply chains:

- * Electronic data interchange (EDI) - EDI is the major tool used by large corporations to facilitate supply chain relationships. Many companies are shifting from traditional EDI to Internet-based EDI.
- * Extranets - Their major purpose is to support inter organizational communication and collaboration. For details on success factors for using extranets in e-SCM.
- * Intranets. These are the corporate internal networks for communication and collaboration.
- * Corporate portals. These provide a gateway for external and internal collaboration, communication, and information search.
- * Workflow systems and tools. These are systems that manage the flow of information in organizations.

* Groupware and other collaborative tools. Many tools facilitate collaboration and communication between two parties and among members of small as well as large groups. Various tools, some of which are collectively known as groupware, enable such collaboration. Blogs and wikis are beginning to play an important role. A major purpose of these tools is to provide visibility to all, namely, let people know where items are and when they arrive at certain locations.

* Identification and tracking tools. These tools are designed to identify items and their location along the supply chain. From a traditional bar code system, we are moving to RFID. Wireless and GPS technologies are also increasing in popularity.