Supply Chain Management Systems

A Supply Chain Management (SCM) system is an application system for planning, optimizing and controlling of volumes, due dates and capacities along the whole Supply Chain.\(^1\)

The term Supply Chain Management can also be used as a synonym for Operations Management.\(^2\)

SCM systems illustrate the processes within a company as well as processes between different companies along the supply chain. Thereby processes of the company and processes of suppliers, distributors, logistic service providers and customers could be monitored. Moreover, with planning scenarios bottlenecks within the supply chain could be identified early.\(^3\)

An important pre-condition for a successful application of SCM tools are interfaces to the existing Enterprise Resource Planning (ERP) and Production Planning and Control (PPC) systems. SCM tools source master and transaction data from external ERP systems, process them and return the results to the external systems.\(^4\)

Benefits of SCM Systems

- Improvement of delivery dependability and customer orientation
- Reduction of stocks
- Cost reduction within the procurement, production and distribution network
- Decrease of processing time\(^5\)
- Avoidance of the bullwhip-effect

Types of SCM Systems

The SCM market could be classified into five categories:

1. Integrated SCM and eBusiness Suites:

Software vendors who started with “Advanced Planning & Scheduling Functionalities” and developed their modular products to almost complete SCM tool suites. Vendors: e.g. i2 Technologies, Manugistics and SAP.

2. Specialized SCM-Suites:

These software suites offer specialized solutions in different fields of task scheduling. These solutions are less extensive than those of the first category. Vendors: e.g. Adexa, Aspentech and DynaSys.

3. Functional Extended ERP Systems:

Vendors of this category develop SCM functionalities as an extension of their Production Planning and Control (PPC) and Enterprise Resource Planning (ERP) systems but their core business are still traditional systems. Vendors: e.g. Infor Global Solutions and Oracle.

4. Niche Vendors:
These software solutions are customized for special subtasks of SCM or for particular target groups. The vendors don’t offer complete SCM systems or tool suites. Vendors: e.g. flexis and SupplySolutions.

5. Chain Execution-Suites/-Software:

This category contains vendors whose software solutions enable and support the management, execution and controlling of supply chain activities. Vendors: e.g. Descartes.  

Use of SCM Systems in eCommerce

eCommerce is the electronic trade with goods and services. eCommerce means an electronic integration of processes across companies using information- and communication technologies in order to eliminate media disruptions. In eCommerce business processes and information transfers are conducted electronically in order to improve the efficiency of processes and to accelerate them. For instance, Chain Execution-Suites/-Software is an efficient support for eCommerce solutions.

Conclusion

It is very difficult to compare SCM software solutions of several vendors. The vendors use different names for the same functions which leads to intransparency regarding the software functionalities.

However, to make the effort to search for the best system and to implement it pays off: The objective of SCM systems is to optimize the efficiency of the whole supply chain. With SCM systems companies can improve the integration and coordination of all partners along the supply chain and consequently reduce costs. Moreover, storage spaces and lead times could be minimized. Additionally, with these systems it is much easier to forecast customer demands and to avoid the bullwhip-effect, which is caused by a lack of information flow between suppliers. Nevertheless, companies are today forced to continuously improve their, information management systems, internal processes and develop all kinds of Supply Chain Simplification to produce their products at lower costs, thus, remaining competitive in the market.

Further Information

- SCM Software http://erp-software.org/supply-chain-management-software/
- Business software muss sich rechnen http://www.computerwoche.de/top100/2010/software/2354238/index4.html


7) Information which are available electronically passed by phone, by fax or in written form to other companies.
