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Fortifying The Weakest Links

Exploring the changing landscape of supply chain management.

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CTI

Much like the term collaboration, supply chain management has become the hot topic of the day. Market leaders in every industry are busy building chains and their vendors are busy trying to become links.

Much of this frenzy is a by-product of the common knowledge that once a chain is formed, it is nearly impossible to break the links and displace another vendor. So the race is on.

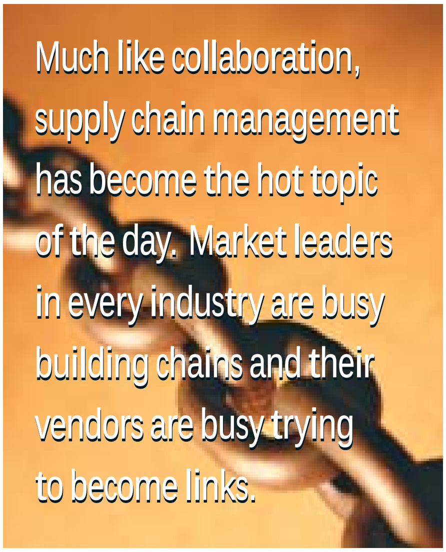
Seldom has the technology sector seen such a strong and urgent market demand. After all, in order to master supply chain management, most companies find themselves reviewing their communications, software and hardware platforms.

AMR Research indicates that companies will spend approximately $7.8 billion dollars purchasing and installing supply chain management systems this year. In response to this tremendous opportunity, nearly every technology company now claims to provide a supply chain management solution.

However, in order to measure the merits of these offerings, a brief review of the changing landscape of supply chain management is in order.

Identifying Links

To get started, let's get our hands around what sup-



ply chain management is, where it came from and where it is going. Very simply, the supply chain encompasses all of those activities that take place between customers and their vendors that move goods from the raw materials stage to finished goods reaching the consumer.

Components include sourcing, buying, scheduling, making, warehousing, shipping, and customer service, and supply chain management is the coordination of all of these activities.

The benefits of successfully implementing a supply chain management solution, according to research conducted by the Voluntary Inter-Industry Commerce Standards Council, include 30 percent reduction in inventory levels, 15 percent reduction in transportation costs, 20 percent reduction in transaction costs, and a 10 percent increase in customer service levels.

According to AMR research, 80 percent of supply chain management customers have met return on investment expectations within a two-year period. With these numbers, it's pretty easy to see what is causing the stampede.

Supply chain management (SCM) initially began as a top down initiative, primarily focused in the consumer products industry. Large manufacturers were being pressed by retailers to increase speed to market and reduce cost and inventories, while at the same time increasing shelf availability for a growing number of SKUs. Achieving these formidable objectives obviously must require the cooperation of the consumer products manufacturers' vendors.

As a result, the first SCM initiatives came out of the logistics and purchasing departments. Those departments would be responsible for finding ways to persuade vendors to work in a shorter lead time, faster turnaround, smaller order environment. In fact very often, today's supply chain manager was yesterday's purchasing manager. It was a very logical evolution.

Today, it is common to see the energy propelling the adoption of supply chain technology coming up from the vendor community rather than forced down from the purchasers. The reasons are threefold. First, being supply chain proficient is a strong competitive advantage. It responds directly to large customer's stated strategies and promotes value. Second, being a link in the chain automatically builds a sizable barrier to competitors. Price reductions do not buy new business in a tightly linked supply chain. Third, there is a question as to a company's ability to remain viable if it doesn't incorporate the benefits derived from participation in a supply chain.

Visibility

As to where supply chain management is going, I will use a CTI case study to illustrate the technical and strategic changes that are taking place across the landscape.

The first stage of supply chain management evolution focused on visibility. The theory is pretty simple: If trading partners all have visibility to past performance and current production status, they all would be able to react faster and more accurately.

Many vendors today provide visibility to information that resides in their own systems. Not many vendors can gather information from multiple systems and compile that information into a valuable real-time window. In the case of CTI's customer, the objective was to show not only historical information and current production status, but also to show expected delivery times to the customer's dock.

This effort requires the reporting solution to gather information from a business system, a production system, a quality system, and a transportation link — all from different vendors.

The definition of visibility today is real-time, enterprise-wide, Web-based, multi-system compatible with reports presented in an individualized format.

It is common today to see vendors expanding on the visibility solution and adding the capability of generating a purchase order from a report that is being displayed. The process is something like this: access the reporting system, open a historical report showing past orders, click on a product of interest, an order form comes to the window, fill out the new quantity and date information, and send the new purchase order to the vendor.

This first level of automation captured a lot of attention.

Drawbacks tended to be centered on two issues. First, the data was dead. In other words, the file that was sent was really not very different than a fax or e-mail. The person receiving the order still had to read and type.

Secondly, there was not a lot of comfort in not being certain whether the file was sent, lost, accepted, or ignored.

Systems Integration

The second stage of supply chain management evo-

lution focused on systems integration.

Systems integration is not a new concept. Computers have been communicating and working together for years, although somewhat clunky and incomplete. However, the dot-com cowboys did a marvelous job of moving systems integration up to a new level by furthering the development of a major component called Enterprise Application Integration (EAI).

This software component, when placed between disparate systems, could translate, reformat and convert various information so that many different types of systems, talking in many different ways, could all work together securely, completely and seamlessly. EAI middleware completely changes the definition of systems integration.

The definition of systems integration between many trading partners can, because of EAI, include many different protocols, languages, operating systems, and databases, all joined together to work as one in a secure environment.

In the case of CTI's customer, now their customer's different business systems provide CTI their electronic purchase orders, CTI EAI component does all of the conversions, sends the order through the Internet in a very secure XML language, and inserts the order directly into CTI's customer's business system without any manual intervention. At this level, SCM participants begin to realize savings from reduced transaction costs, orders are delivered evenly throughout the day, and responsiveness is significantly increased.

CTI's customer indicates a savings of $80 thousand per year in reducing the effects of data entry errors alone.

Sharing

The third stage of supply chain management evolution focused on sharing.

This is a somewhat new concept and capability, and only a small percentage of supply chains are actively working together at this level. Sharing fundamentally means that two companies make business decisions using shared real-time information. As in the case of CTI's customer, their roll stock supplier has complete information as to on-hand roll stock inventory. The roll stock supplier is provided consumption directly from the corrugator, they review a forecast to mill production schedule, and in return, send CTI's customer a proposed roll stock order. The proposed order is reviewed, adjustments are discussed and then a purchase order is approved.

In this case, a vendor is watching a customer's business operation, comparing it to its own production status and then working out an optimal purchasing solution. Sharing ends the days of purchase orders coming in blind, without give-and-take, and most importantly, without the consideration of other members in the chain.

Collaboration

The fourth stage of supply chain management evolution is focused on collaboration. In this sense, it is the joining of workflow processes among business partners.

This is indeed the new era of supply chain management. In this stage, companies re-engineer their internal business processes to include customer and vendor participants, as if they were members within their own organization. Now we have moved from the integration of systems to the integration of organizations — people working together across corporate boundaries.

In order to better clarify how this takes place, let's go back to the CTI customer example:

So far, the mill has reviewed on-hand inventory, they have monitored consumption at the corrugator, they compared forecast and mill production schedules, and sent a proposed purchase order that comes as a result of analyzing shared data.

Now we can take it further by introducing the next major step. Instead of ending with the purchase order, we can launch a business process between the two companies that, on the customer side, alerts them to contract and volume discount levels that could be leveraged, and alerts the sales department of the potential to leverage potential added volume. It also opens a dialog between the two, and facilitates the completion of an adjusted agreement on the vendor side

They each are provided greater opportunity by leveraging shared information while working as a single entity. The vendor sells more, the customer purchases at a better rate and they both do so at the optimal time.

The New Landscape

The changing landscape of supply chain management is not just about providing business partners a better way to automate the sending of purchase orders.

This new landscape includes companies working together in order to accomplish common goals. Strategic initiatives cross boundaries, people work together in collaborative processes, vendors enjoy higher levels of profit because they aren't forced to pay for inefficiencies through discounting, and ultimately, the consumer is provided greater choices at reasonable prices.

The supply chain evolution is one even Darwin would appreciate.**PBP**

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