

Supply Chain Collaboration: Success in the New Internet Economy

Supply chain collaboration is continuing to emerge as a fundamental change toward new methods of conducting business. Closely united partnerships with emphasis on greater supply chain visibility and proactive response to changing market conditions are going to be the requirements rather than the goals placed on businesses. Today's technologies are accelerating the race toward the development of new business models and collaborative solutions. This trend is encouraging heavy investments in technology infrastructure as businesses prepare to be part of this new business environment.

Companies preparing for this new economic model are faced with several key challenges:

- Support of multiple technologies
- Support of multiple collaborative business models
- Scalability of collaborative solutions

Disparate systems and processes present challenges to businesses looking to execute on the supply chain collaboration vision. As business transactions that have historically been internally focused now need to become external to the organization, your ability to succeed will be based on your ability to provide an integrated view across your business processes. Organizations that rely on human intervention or lack integrated systems will run into scalability issues as the business world begins to transact at an accelerated pace. Response times expressed in days will no longer be an acceptable measure as the business world continues to move towards the real-time exchange of information.

The emergence of trading exchanges for specific business transactions such as procurement and transportation adds additional complexity to the underlying infrastructure challenges. Very few companies will have the luxury of dealing with a single exchange. Most businesses will need to comply with the specific business process and data requirements of multiple trading exchanges. This will again force issues of infrastructure flexibility to the forefront in order to support multiple business

channels and trading partner relationships.

Internet-based communications technologies surrounding the transfer of XML-formatted data will continue to evolve. Many existing trading partners will require support of EDI-based transactions for years to come while more forward-looking companies will require conformance to XML-based standards. The proliferation of multiple XML-based standards will fuel the requirements for flexibility at a trading partner level. Businesses will be forced to support multiple communication technologies and partner-specific communication standards well into the future.

A seamless 360-degree customer and partner view of your business is critical to your continued success. All outward-facing systems must be integrated across your internal organization. Throughout the process of customer contact, order placement, procurement, production, and fulfillment your outward communications must be consistent, timely, and accurate. As you prepare your business for collaborative commerce, you must ensure that your systems are tightly coupled, flexible, and allow you to extend your reach outside the walls of your business.

Challenges of Supply Chain Collaboration

Supply chain collaboration occurs when two or more companies share the responsibility of exchanging common planning, management, execution, and performance measurement information. Collaborative relationships transform

Tom Anthony is the Supply Chain Collaboration Strategy Manager for PeopleSoft, Inc. Tom has been with PeopleSoft's product strategy organization since 1998. Working with world class manufacturing and distribution operations for the past 10 years, he has worked to build unique supply chain solutions for the consumer packaged goods, high-tech, and wholesale distribution markets. Tom serves on the U.S. Chamber of Commerce Logistics Council and is committed to the development and support of next-generation supply chain solutions.

how information is shared between companies and drive change to the underlying business processes. Businesses are looking toward collaboration as an opportunity to optimize their supply chain and relationships with their trading partners. Supply chain collaboration poses complex challenges to supply chain partners in that there is a broad spectrum of collaborative initiatives, disparate standards for communication, and various levels of trading partner competencies and business processes. Collaborative relationships will require suppliers and consumers to support multiple simultaneous business models and communication media in order to fully realize the benefits of collaborative business. Your business systems must be flexible enough to support the variances in technologies and business models that can be as unique as the trading partnerships themselves. Collaborative business stands to reap the benefits of a highly effective supply chain when systems are able to support the broad spectrum of trading relationships across the end-to-end business process.

The term collaboration is used broadly in today's market and encompasses multiple functional areas. It is important to recognize the functional areas of collaboration as well as the initiatives that are taking place within each area. The figures within this article illustrate several of the collaboration initiatives that are currently underway and then describe the processes involved.

Cost has historically been a barrier to the technological implementation of col-

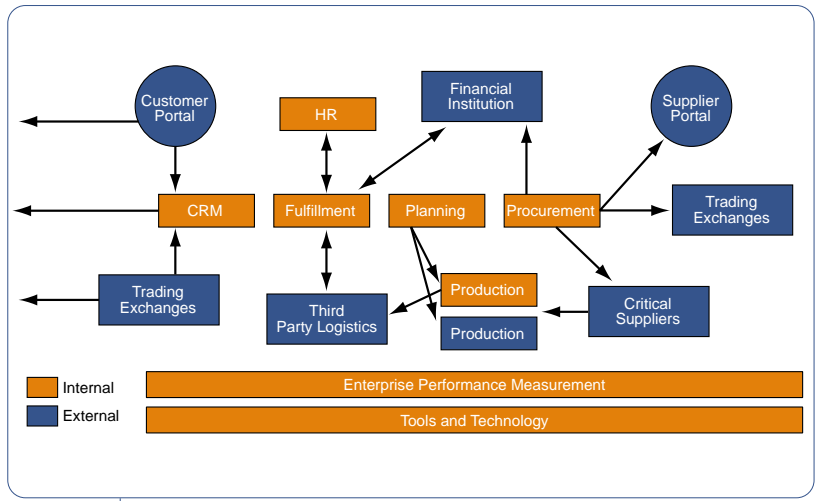


Figure 1.0 Enterprise Performance Measurement – Tools and Technology

laboration initiatives; however the Internet and XML-based messaging has emerged as a medium for low-cost information exchange between business partners. These technologies are acting as a catalyst for change in the development of new standards to support collaborative business models. Pilot programs have already shown that collaborative solutions can provide significant strategic direction in the areas of reduced inventories, reduced stock outs, improved customer service, and improved supply chain process efficiency.

The consumer packaged goods (CPG) sector has historically been a leader in developing and implementing collaborative initiatives. Consumer products companies started building EDI-based collaborative solutions through the development of the UCS standards. The Efficient Consumer Response (ECR) initiative focused on solutions for VMI and customer replenishment. Today, the Voluntary Interindustry Commerce Standard (VICS) organization is supporting the development of the CPFR standards for the CPG industry. Notables such as Kimberly-Clark, Sara Lee, Procter & Gamble, and Hewlett Packard are piloting CPFR initiatives with leading retailers like Wegmans and Wal-Mart and achieving the benefits of collaborative commerce.

The collaborative business model that is used between trading partners is based

on the depth of their trading relationship. For example, within inventory replenishment there are multiple models for how the customer orders and item quantities are determined. The simplest trading relationship for replenishment is based on a pull model where the customer determines the appropriate item balances and places an order with the supplier when the goods drop below minimum inventory levels. As the trading relationship matures, the supplier may agree to manage the replenishment of inventory through a VMI model. In this model, the supplier will maintain visibility of current customer inventory balances and create customer orders for replenishment based upon the customer's sales forecast. For more strategic relationships, CPFR could be used to further strengthen the overall supply chain visibility and management. In a CPFR model, the supplier and customer work together to develop a joint sales forecast and agree to parameters of acceptable variances. Customer point of sales information is tracked against the joint forecast and when variances are not within the agreed upon tolerance levels, both the supplier and customer are notified so that the appropriate action can be taken. This proactive approach to the inventory replenishment process requires close interaction between the trading partners

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For more on supply chain initiatives: uchneat.ASCET.com
srivastava.ASCET.com

For more on standards, see: uchneat.ASCET.com

For more on partnerships, see: ramanathan.ASCET.com

For more on competencies, see: prince.ASCET.com

Initiative	VMI	CPFR	Scan Based Trading	Procure to Pay	Item / Product Information	Catalog Management	Order to Cash	Promotions Management	Third Party Logistics	Transportation Planning	Trade Fund Management	Electronic Bill Presentation	CPC
Area	Replenishment		Buy Side	Sell Side			Fulfillment		Fulfillment	Mfg.			

Collaboration Initiatives	Description
Vendor Managed Inventory (VMI)	Supplier manages a customer's inventory levels using either traditional Min/Max/EOQ or forecasting replenishment models.
Collaborative Planning Forecasting and Replenishment (CPFR)	Supplier works with the customer to develop a joint sales forecast that is used as the basis for replenishment. Actual sales vs. forecast are compared to alert parties of variances so that proactive action can be taken.
Scan Based Trading	Suppliers provide manage customer inventory levels and provide goods on consignment. Customers exchange point of sale information with suppliers to drive both replenishment and billing activities from actual sales activities.
Procure to Pay Transactions	Traditional transactions that are used for placing a purchase order, communicating changes, and acknowledging receipt with a supplier.
Item / Product Information	Suppliers and customers share information related to items that they purchase/sell. This initiative is focused on keeping the information in synch across multiple suppliers and customers.
Catalog Management	Customer centric exchange of supplier catalog information with facility for customers to place orders against new products/items with minimal data entry.
Order to Cash Transactions	Traditional transactions that are used receiving sales orders, communicating changes, sending an advanced ship notification, and invoicing a customer.
Promotions Management	Suppliers provide notification to customers for planned promotions, exchange activity information against a promotion
Third Party Logistics	Suppliers can outsource the fulfillment of goods to a third party logistics (3PL) provider to service smaller regions, or to handle excess inventory. The 3PL must receive sales order information and send back shipment details.

Figure 2.0 Different varieties of Supply Chain Collaboration Initiatives

and helps reduce inventory levels through the supply chain.

Across the overall supply chain, a supplier must manage multiple distribution channels with multiple levels of relation-

ships from casual buyers to strategic partners. As the strategic level of partnership matures between the supplier and a customer, the collaborative business model used to support the relationship will likely

change as well. In addition, distribution channels may be limited in their ability to supply detailed and accurate information used to drive the replenishment process. This will result in suppliers needing to support multiple collaborative business models to support the broad spectrum of trading relationships.

In many cases, the requirements of multiple collaborative business models equate to multiple systems to support the business processes. Many collaboration initiatives in place today heavily leverage human intervention or utilize point solutions that are not fully integrated across the multiple business processes. There are also multiple technology alternatives that can be used to facilitate the collaborative process. The reduced cost of transferring information utilizing XML-based technology has in some ways added complexity to collaboration in that there is a proliferation of communication standards. A supplier will likely need to communicate via EDI, and multiple customer specific XML data formats for the same set of business transactions. The result is that suppliers not only need to manage multiple collaborative models, but must also manage multiple communication methods within each model.

The same statements can be made for both the supply side and the demand side of collaborative relationships. Customers must manage multiple supplier relationships in much the same way the suppliers must manage multiple customer relationships. Material can be forecasted and procured directly with the supplier and can also be directed through the use of a trading exchange. The additional business models associated with using a trading exchange increase the overall complexity of the supply chain.

In the end both suppliers and their customers must provide a seamless end-to-end process that can meet the business and technological requirements of their respective trading relationships. They will need a flexible solution that can support multiple business models and work seamlessly across their execution systems. Seamless execution will reduce the amount of manual intervention that is

often required in maintaining the trading relationships and will allow the process to flow through a common process stream.

Conclusion

For companies seeking to effectively develop and manage business-to-business and business-to-consumer commerce with customers and suppliers, you must utilize collaborative commerce solutions that enable comprehensive business process interaction for selling, buying, and developing products and services over the Internet. For example, PeopleSoft users enable their customers and suppliers to become part of the extended collaborative community exchanging business documents and information throughout the product, customer order, and purchase order lifecycle. They are leveraging Internet-enabled solutions that offer modular, best-of-breed functionality for back-end and front-end processes

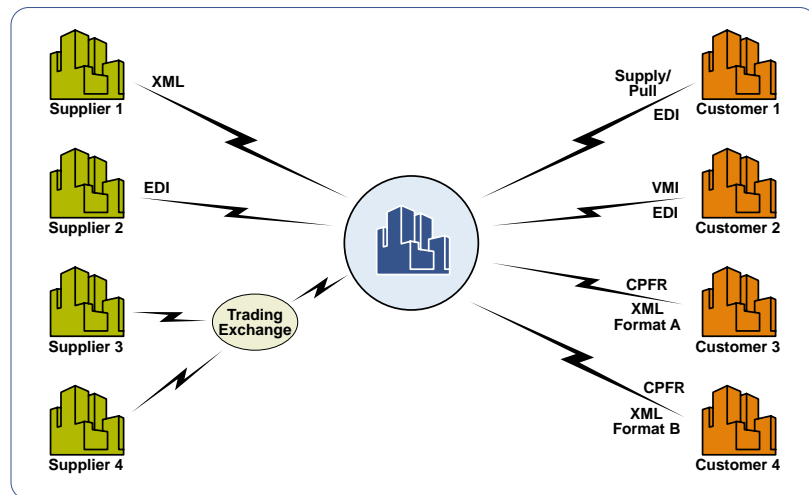


Figure 3.0 The Trading Exchange

including: procurement, forecasting, advanced planning, customer order fulfillment, and customer relationship management. These solutions provide secure,

direct interaction with customers and suppliers through the Internet that leverage leading-edge collaborative commerce techniques.