

Using Supply Chain Collaboration to Offset Southern California's Infrastructure Challenges

By: Jon DeCesare, CEO, WCL Consulting, Inc.



Today's corporate global supply chains are constantly pressured to move goods and information faster, more dependably, and at minimum costs. While faced with these challenges the North American ports, highways and rail infrastructures capacities make these goals extremely difficult to reach.

Southern California is a global gateway for goods and services that move in and out of and within the Southern California region via a multifaceted system of transportation services and agencies. This system plays a vital role to link the region to the rest of the state and to the nation. By 2020 truck traffic alone on the region's highways is projected to increase by more than 65 percent and freight movement by rail will soar by more than 200 percent.

Southern California has some of the most congested highway, rail, and airport facilities in the country. According to the Texas A & M University 2005 Urban Mobility Study Report the Los Angeles-Long Beach-Santa Ana and San Francisco-Oakland areas rank as the number 1 and number 2 worst areas for congestion and traffic delays in the United States. The study confirmed that urban areas are not adding enough capacity, improving operations and managing demand well enough to keep congestion from growing. Congestion occurs over longer portions of day and delays more travelers and goods than ever before. This creates substantial delays for all users of the transportation systems and imposes costs

on goods shipped through the regional freight transportation system.

At the 3rd Annual Logistics Summit this past October held by Tejon Ranch, tier 1 importers, steamship lines, marine terminal operators, third party logistics providers, truckload and less than truckload carriers, ports and other global supply chain stakeholders discussed today's Southern California goods movement challenges and potential solutions. A message running throughout the summit discussions was the importance of collaboration among global supply chain stakeholders.

There is a clear pattern developing where leading-edge corporations are using their supply chain strategies and tactics to gain a competitive advantage in the market place. These firms have implemented effective collaboration systems and processes which have helped to offset the infrastructure shortfalls, congestion, and delay issues.

A. What does collaboration mean?

A generally accepted definition of Collaboration includes the following elements:

- Real time sharing of data with key customers and suppliers
- Aligning people and organizations
- Aligning processes and practices

Collaboration is perhaps the most overused term in supply chain management; overused in the

sense that very little “true” collaboration is currently going on. Much of this lack of progress can be attributed to the inability of firms to share real-time key data and information with strategic customers, suppliers, and supply chain partners. The “ideal” state of having seamless, real-time information available at all times is the definition of visibility. Visibility is one of the core elements for successful collaboration.

Visibility that extends beyond the firm is what will enable firms to compete “supply chain to supply chain.” In order to achieve the necessary level of visibility, supply chain partners must be “connected.” That is visibility is enabled through connectivity. Firms that have real-time (or near real-time) information about products, customers, and order fulfillment across the supply chain are more effective and deliver customer service that surpasses their competitors.

Sometimes the problem is the firm itself – they haven’t integrated processes within their own four walls. This is contrasted with leading edge firms which place significantly more emphasis on data visibility / synchronization than other companies. This has enabled them to achieve substantially greater visibility of information throughout the supply chain from customer finished goods inventory upstream to the suppliers’ supplier finished goods inventory. Leading edge firms have also extended this level of information visibility to encompass their global supply chain activities.

B. Why is Collaboration More Important Today?

The need for collaboration between supply chain members is more evident today than ever before. Events on the domestic and global stage have increased the need for collaboration in order to develop and present actionable information. A recent study found that over 80 percent of almost 400 North American and European companies surveyed operate on a global basis. Most have distribution, sales, and/or marketing centers outside their home

markets. While globalization presents a great opportunity, it also presents its own challenges. Global supply chains create much higher information demands than domestic movements. Enabling the exchange of information on a real-time, seamless basis is a challenge for logistics and supply chain managers not used to dealing with this level of complexity.

On the domestic front, product life cycle management is gaining popularity as a means of achieving maximum product profitability across the entire offering. The growth rate of new product introduction in the marketplace shows no signs of slowing. Managing the new SKUs, in addition to the existing ones, in an efficient manner requires firms to share data with its key suppliers, customers, and other supply chain partners. In other words, they need to collaborate.

There are several current issues in supply chain management behind the trend towards more collaboration:

- Orders to suppliers progressively upstream from the end-customer are inflated to buffer uncertainty and prevent stock-outs. This amplification of demand uncertainty up the supply chain, known as the “bullwhip effect”, results in excess inventory and inefficiencies in the supply chain.
- In the absence of reliable demand information, vendors must second guess customer needs and ‘push’ product which creates much more waste than if the product was ‘pulled’ or demand-driven.
- Even when partners agree to share information, demand forecasts and orders are often distorted unless developed jointly by the partners.
- Collaboration can reduce waste in the supply chain, but can also increase market responsiveness, customer satisfaction, and competitiveness among all members of the partnership.

For more firms to truly collaborate four areas need to be addressed:

- 1.) C level executives of the organization must make collaboration a top priority. The signal from the top that this is an essential capability for leading edge supply chains will communicate to the whole firm the importance of this initiative.
- 2.) Greater attention is needed to focus on the entire supply chain working together. Currently it appears most companies limit their efforts to the direct downstream partner. This degree of coordination is too limited to achieve the desired level of supply chain performance.
- 3.) Technical issues are in many cases an impediment to collaboration. Technical issues revolve around data accuracy and alignment. A firm that isn't aligned internally will find it almost impossible to integrate with other supply chain partners.
- 4.) True collaboration requires that supply chain partners be focused on the same key processes and practices.

C. How do firms' supply chains benefit from improved collaboration?

Increased collaboration with suppliers and external business partners is among the best ways for companies to improve product availability without continuing to undermine turns or inflate inventories. Utilizing collaborative practices can drive down costs across the supply chain. Companies that master this capability have an opportunity to create competitive advantage.

The supply chain at Whirlpool Corp. in 2000 was broken. Indeed, a manager there at the time quipped that among the four major appliance makers in the U.S., Whirlpool ranked fifth in delivery performance. "We had too much inventory, too little inventory, wrong inventory, right inventory/wrong place, any combination of those things," says J.B. Hoyt,

who was then supply chain project director. He says a sales vice president approached him one day and said he'd accept even worse performance from supply systems if they would just be consistent rather than wildly bouncing back and forth between good and poor production and shipping plans.

So in 2001, Benton Harbor, Mich.-based Whirlpool embarked on a multi-project global overhaul of its supply chain systems.

Whirlpool CIO Esat Sezer says that by 2000, the company had grown by acquisition and geographic expansion to the point that old systems, stitched together by spreadsheets and manual procedures, couldn't cope with the exploding complexity. "Our supply chain was becoming a competitive disadvantage for us," he says. Availability - the percentage of time a product is in the right place at the right time - was an unacceptably low 83%, even as inventories remained too high overall.

The homegrown supply systems were primitive and not well integrated with the company's SAP ERP system, which had been installed in 1999, or with a legacy production scheduling system, Sezer says. And they weren't integrated with the systems of major wholesale customers or suppliers of parts and materials. "The plans we were creating weren't linking back into reality," he says.

By all accounts, the supply chain overhaul was a smashing success for the \$13 billion company. CPFR cut forecasting errors in half. APS boosted availability in North America from 83% to 93% (it's at 97% today), reduced finished-goods inventories by more than 20% trimmed 5% from freight and warehouse costs.

Last, but not least, collaboration is just good business sense. Supply chain members that align their planning and execution processes and capabilities are able to collaborate to make the "right" decisions based on high integrity, highly visible information. This enables each supply chain member to execute the first time, and every time, at the highest degree of efficiency possible based on optimized plans.

What does it all mean for logistics professionals today? Collaboration is needed to:

- Increase the degree of real-time information sharing, particularly on a global basis
- Reduce the complexity in information sharing and coordination as the number of supply chain members increases.
- Ensure successful product life cycle management of new and existing products.
- Increase the reliability of planning and execution of “optimized” plans.

“The value of supply chain visibility, however, goes beyond customer satisfaction, as important as that may be. It also enables managers to shift their inventory and transportation modes if needed to respond to changing circumstances,” says Peter Bradley, Chief Editor, DC Velocity, July 2005

“The better visibility you have, the less inventory you need to keep. Inventory reductions are the greatest bucket for savings to be had in the supply chain.” - Steve Banker, Service Director, ARC Advisory Group, DC Velocity, July 2005

D. What are examples of strategies which improve collaboration?

Leading companies are jumping ahead of their slower rivals and are establishing positions of dominance, based in large part on their ability to work collaboratively with carefully selected trading partners. At this advanced level, the linked partners have achieved online visibility, inter-enterprise collaboration, and leading-edge application of technology to gain the most benefit from their supply chain initiatives. Boeing, Colgate-Palmolive, Wal-Mart, Intel, Kraft Foods, and Procter & Gamble are examples of companies in this category.

In contrast, some companies have focused their supply chain efforts entirely inwardly. They have relied on internally generated process improvements aimed at reducing costs in specific functional areas. Though these efforts have been beneficial, they fall well short of the

solid bottom-line gains recorded by the industry leaders. The forest products and construction industries tend to exemplify this second category.

Capturing original demand data as close to the source and time of demand as feasible – and concurrently relaying this information to all partners in the supply chain network are vital to leading-edge collaboration. To ensure a synchronized model, this demand data might be required by tier-one, tier-two, and tier-three suppliers. This data could also be made available to third-party logistics providers (3PLs) so that they could more efficiently position transportation capabilities and more accurately estimate warehouse requirements.

Within the next year or so, expect to see a sharp acceleration in the number of companies that have purchased state-of-the-art RFID systems and incorporated them into their supply chain operations. RFID technology is designed to provide users with enhanced visibility across their supply chains – i.e., accurate information about the quantity, location, and status of all products, at all points within their supply chain.

Strategic sourcing reaches out to important suppliers, often inviting them to participate in the S&OP sessions, work on collaborative designs, and come up with solutions to match supply more closely with demand. The logistics, transportation, and warehousing functions establish global relations with qualified logistics services providers. As part of this effort, they introduce warehouse management systems and transportation management systems that enhance communication and visibility among all supply chain partners.

Marketing and sales enter the supply chain picture by empowering key customers to self-configure products and services often through an interactive online portal. Design and development take a decided leap forward in the third level. Leading-edge communication tools, - based on Internet technology and a carefully designed communication extranet – are now used to shorten the time from concept to commercial acceptance.

Business allies working together to discover savings through mutually beneficial initiatives that reduce cycle time, achieve faster time to market, and utilize assets more effectively.

Metrics are used to maintain and manage on-time delivery, fill rates, and returns to underscore the importance of satisfying customers. Network partners begin to use activity-based costing and balanced scorecards to turn the supply chain into a value chain of allies working toward the same strategic objectives. With information being shared electronically, network members can more readily identify opportunities to achieve higher performance levels. Joint teams are established to find solutions to specific customer problems.

Supplier relationship management (SRM) is emphasized as the company works with key vendors to enhance value for both parties. Collaboratively, they focus on the most important buy categories and look at the total cost of ownership to find any additional, hidden value that may have otherwise eluded them. A similar tactic is taken on the customer side. Customer relationship management (CRM) initiatives involving serious data sharing are launched with the goal of developing joint strategies and business goals that increase revenues for both parties.

A vendor-managed relationship with a customer could require that real-time Point of Sales data be available to the manufacturer back to the second-tier supplier. A customer that relies very heavily on promotions on a continual basis would need an aligned demand forecasting process for all members of the supply chain to be successful in this environment.

Leading edge collaborative supply chains focus on the following:

Supplier's Supplier	Supplier
Finished Goods Inventory	Finished Goods Inventory
Inbound Shipments	Order Status Information
	Inbound Shipments

Company	Customer
Raw Material Inventory	Demand Forecasts
Work-in-Progress Inventory	POS Data
Production (Own or Contract)	Finished Goods Inventory
Order Processing	
Finished Goods Inventory	

For collaboration to be efficient, the data sharing between parties should be primarily electronic – computer to computer – without manual intervention. This way, normal interactions are managed efficiently, and human intervention is used to manage exceptions. Leading edge firms rely on the electronic exchange of data for a majority of processes. Laggards use more manual means of communicating with suppliers and customers.

The top five domestic distribution processes in use: inbound logistics management, consolidated shipments, drop-ship programs, core carrier programs, and third party distribution – involve more than just a one-to-one (dyadic) relationship. The initiatives require collaboration between multiple parties to ensure that the maximum value is derived from the collective efforts. In particular, data visibility / synchronization with trading partners will not become a capability for the entire supply chain unless everyone works together to align practices and technology. That is not to say that everyone must have the same IT platform or software solutions. The alignment of processes for collaboration means that each supply chain member builds the necessary connectivity to enable real-time sharing of data.

E. What are the impediments to implementing successful collaboration strategies?

Impediments to Successful Collaboration

- Technical issues
- Strategies not aligned
- Lack of trust
- Lack of resources in my company
- Political constraints
- Collaboration not supported at the “C” level

- Still focusing on internal customers
- Geographical constraints
- Organization size mismatch
- Financial stability of the customer
- Financial stability of the supplier
- Financial stability of my company

Despite the potential benefits from these collaborative-commerce solutions, overcoming the cultural challenges associated with a new way of doing business may prove taxing to manufacturers and suppliers alike, says Kevin O'Marah, research principal at AMR Research in Boston. "It's really a question of people putting honest data into your forecast," O'Marah says. "This guessing game, this hedging game that happens is when there is no trust. I don't trust your forecast because you always cut your order at the last minute."

References:

Five Principles of Supply Chain Management, Supply Chain Management Review, Bud La Londe, May 2003.

Technology, Data, Relationships Underpin Successful Partner/Customer Strategies, Manufacturing Business Technology, Staff, March 2005.

Survey of Supply Chain Progress, The Five Levels of Evolution, Supply Chain Management Review, Charles C. Poirier / Frances J. Quinn, September 2003.

Collaboration: Enabling Synchronized Supply Chains, University of Tennessee / Capgemini, 2005.

Supply Chain Collaboration, InfoWorld, Heather Harreld, December 2001.

WCL Consulting is a management consulting firm providing supply chain management strategy, operations, technology, and organization solutions. Working across industries we are committed to our clients to create sustainable competitive advantage, improved financial results and optimized stakeholder value.

For more information call: 562-435-2600 or visit our website at www.wclconsulting.com

