

# A Lesson from Cool Hand Luke

The international supply chain demands special collaboration

By Steve Geary

*"What we've got here is failure to communicate. Some men you just can't reach. So you get what we had here last week—which is the way he wants it. Well, he gets it. I don't like it any more than you men."*

In the supply chain, poor communication often results in major breakdowns that can quickly turn a supply chain executive into a victim—just as it did to Paul Newman in Cool Hand Luke.

But while the need for communication may seem obvious and simple, when you take a hard look at the supply chain, making communication happen isn't easy. Improved communication outside of the four walls is the overall goal. As technology improves, we continue to find opportunities to deploy new solutions to reduce uncertainty. Electronic data interchange (EDI) was a tentative start, and with new developments in distributed computing based on Java and XML technologies, supply chain practitioners now have at their disposal a step-function improvement in tools to extend visibility.

## Understanding the Need to Communicate

A well-organized company can generally execute successfully at the 90% level. While this means that favorable outcome for any one of a set of 10 scheduled events is highly likely, simple probability calculations also say that there is only a 35% chance of success that all 10 will happen. Such simple math demonstrates a disturbing likelihood: An international orga-

nization facing a very simple scenario that requires the coordination of only 10 independent events will likely fail two times out of three, absent human intervention and containment processes.

Since which of the 10 events will fail to execute cannot be predicted, a supply chain professional must be prepared for any of the 10 to fail. As a result, they typically expedite orders, check order status at frequent intervals, deploy inventory "just-in-case," pad lead times, or find other creative ways to buffer. All of these activities are costly and are the direct result of a lack of visibility and clear two-way communication among all participants in the supply chain.

Since supply chain performance is inherently unpredictable and chaotic, practitioners should seek not buffers but effective and timely communication, as a safeguard against uncertainty. This shift has fundamental implications on the role of supply chain professionals, creating more of an emphasis on communication and feedback, rather than of command and control, and uncovering problems as they occur, leaving more time to react.

## Is EDI Right for Communication?

Since the 1980s, EDI has been available as a tool to improve communication with trading partners. But its acceptance has been less than universal. According to a leading global contract manufacturer, less than 2% of the company's 5,000 active suppliers communicate with the contract manufacturer using EDI. And while penetration is somewhat higher in certain pockets—like the automotive vertical—it is clear that the adoption of EDI as a mainstream communication vehicle will not happen.

## Beyond EDI

Federal Reserve Chairman Alan Greenspan, in remarks before the US House Committee on Financial Services, said: "New technologies for supply chain management and flexible manufacturing imply that businesses can perceive imbalances in inventories at a very early stage—virtually in real time—and can cut production promptly in response to the developing signs of unintended inventory building."



Type of Uncertainty*	Sample Communication Initiatives	Some Associated Financial Opportunity			
		Inventory	Cost	Market Share	Profitability
<b>Supply Uncertainty</b>	Real-time visibility into supplier schedules and inventories allows for commitments based in fact	Reduced buffer inventories reduces investment in inventory	Lower holding costs, warehousing costs, expediting (freight and human) costs	Adding supplier availability into the decision making process allows companies to take advantage of sales opportunities based on actual component availability	Real-time visibility removes friction from the supply chain, reducing total supply chain management costs and improving margins
<b>Demand Uncertainty</b>	Real-time visibility into channel inventories allows for management of demand fluctuations, market opportunities, and channel obsolescence	Reduced buffer inventories reduces investment in inventory	Lower holding costs, warehousing costs, expediting (freight and human) costs	Balanced inventory deployment in response to actual channel behavior creates incremental sales	Real-time visibility removes friction from the supply chain, reducing total supply chain management costs
<b>Control Uncertainty</b>	Reconciliation of demand patterns between forecast regenerations allows for the proactive management of schedules, suppliers, and inventories	Pipeline management reduces cash-to-cash cycle time	Better stability leads to lower operating costs	Lost sales due to stockouts mitigated	Better Return on Assets (ROA)
<b>Process Uncertainty</b>	Capture of order cycle time information, from purchase req. generation through sales order creation and subsequent shipment, until time of receipt allows for management of order fulfillment lead times	Tighter execution based on predictable cycle times reduces investment in inventory	Reliable execution against schedule avoids non-compliance penalties	Management of order life cycle processes leads to more reliable performance, allowing incremental market share growth	Incremental sales (market share) based on more reliable commits lead to high margin drop-through

\*Uncertainty framework courtesy of the Logistics Systems Dynamics Group at Cardiff University: <http://www.cf.ac.uk/carbs/lom/lisdg/>

But while there have been tremendous improvements in technology within the enterprise, companies are now more and more reliant on activities and inventory outside of their four walls. Rather than relying on vertical integration and control, organizations are now frequently aligned in tightly knit trading networks and rely completely on each other's competencies

Technological advancements in internet-based virtual private networks (VPNs), value-added networks (VANs), VAN replacements, and extranet technologies have allowed companies to overcome proximity cost and access limitations that have plagued previous communication efforts.

Where EDI and other earlier technologies have failed, XML (eXtensible Markup Language), the emerging language of the internet, is offering a highly flexible industry standard for communicating and collaborating throughout the supply chain. Because of its inherently flexible semantic structure, XML is a cornerstone in emerging communication standards such as RosettaNet and OAGI. Even established EDI providers are racing to incorporate XML technologies.

From this technology, a new class of software for supply chain event manage-

ment (SCEM) is emerging that uses the internet to provide tools for on-demand visibility across and into increasingly complicated supply chains. SCEM brings together information from multiple participants in a trading community and allows for synthesis of information across the extended supply chain.

Until recently, the adoption of SCEM has been limited by companies reluctant to entertain new investments in today's harsh business climate, especially in those enterprises still reeling from the daunting costs of their ERP systems. As a result, the future of supply chain management lies in the services model, which offers reduced costs and shorter time to value. Such services, available on a subscription basis, collect, aggregate, and analyze data between and among suppliers, partners, distributors, and customers to reduce the major supply chain execution obstacles of supply, demand, control, and process uncertainty.

**Justifying an Investment in Communication**

To uncover communication opportunities in the supply chain, a simple matrix can be created, with financial opportunities on one axis and areas of

opportunity on the other. Within each cell, specific communication goals are identified. The matrix then guides the financial quantification of each opportunity:

It is important not to let technology and security concerns rule the planning. Instead, companies need to define the information flow necessary for the extended supply chain to improve communication and collaboration. After identifying specific opportunities with partners, suppliers, and distributors, this "opportunity matrix" can be shared with company technologists. This approach allows a broad search of existing technologies for communication solutions.

With many solutions available for supply chain collaboration, effective communication across trading communities is key. All of this supply chain work needs to be done in close conjunction with trading partners to ensure mutual business goals are achieved. By working collaboratively toward improved communication, any technology-based initiative is anchored in mutual business opportunity. **WT**

*Geary is vice president of product management for Tilion (www.tilion.com).*