



---

*White Paper*

# Supply Chain Synchronization

©2001 CarrierPoint

# Supply Chain Synchronization

## Is it Just the Latest Fad?

### In the Beginning

Quick Response, the US's answer to the "Just in Time" challenge, began in 1987 when domestic manufacturers realized that the accelerating rate of production moving overseas would require dramatic measures to stop the hemorrhaging. Since US manufacturers were physically closer to retailers and consumers, they believed this gave them an advantage in identifying demand and getting product to the consumers in shorter cycle time. Shorter cycle time would in turn reduce idle inventory and forced markdowns. Conceptually similar to "Just in Time," Quick Response focused on consumer goods (apparel at first) and attempted to communicate better consumer demand information through the supply chain.

Although it was not intended, Quick Response rapidly became a way for retailers to demand smaller initial orders and replenishment quantities, which proved detrimental to their suppliers. In fact, many manufacturers found themselves needing to build inventory to meet retailers' demands for faster replenishment. Because this was highly undesirable, members of the consumer goods pipeline hatched the concept of business process synchronization. With business process synchronization, trading partners shared plans and forecasts, inventory status, and purchase order status information. It was the next logical step in the evolutionary process, but it was rudimentary in that any link in the supply chain received only partial information and then *only from its immediate trading partners*. Retailers buying from manufacturers in the US received no factory information from the Far East, and factories received no information on consumer demand. Although an improvement on Quick Response in the attempt to relate "adjacent" trading partners, it failed to support the entire spectrum of the supply chain, which truly links all components from raw material straight through to the consumer in one trading network now generally known as a trading community.

This failure to link all trading partners has led to supply chain synchronization, which recognizes the need for visibility throughout the entire supply chain. Specifically, retailers want to review factory status information to assess likely arrival dates and substitutions, and adjust accordingly. Manufacturers want increased visibility into their factories' production, and factories want to begin receiving retail plans and forecasts to predicate their capacity decisions on more than purchase orders.

Looking at this trend, it becomes clear that Quick Response became the current "supply chain synchronization", and as a business strategy it makes a tremendous amount of sense. Optimally, with complete visibility into each of the components of the entire supply chain, the consumer will be better served, inventory will be optimized, and forced markdowns will be reduced even further.

### The Technology Challenge

When the Quick Response concept and related standards were originally developed, the consumer goods industry believed that supply chain synchronization would be fairly advanced by now. The initial technological breakthrough (the label and communication information standards for individual product sales) paved the way for better communication among trading partners. In the ensuing years, standards organizations continued to develop and refine standards to further support the goal of supply chain synchronization.

While most consumer goods companies have improved their internal supply chain operations through the use of these standards, true supply chain integration is still embryonic. Companies have effectively suboptimized supply chain results by focusing on their own operations, sometimes to the detriment of their trading partners. For example, many retailers (and even transportation companies) continue to make demands on manufacturers without taking responsibility for absorbing some of the resulting increased costs. Each retailer has its own set of

# Supply Chain Synchronization

## Is it Just the Latest Fad?

requirements, which are frequently difficult to interpret and can change quickly. Carton label changes are imposed with little consideration of the impact on manufacturers, especially in the absence of industry standards. Few retailers share meaningful plans and forecasts with their suppliers or work with them on combined plans and forecasts. CPFR (collaborative planning, forecasting, and replenishment) is in the beginning stages, and no communication standards are currently operational.

It is clear that supply chain synchronization requires technological solutions. Surprisingly, in a recent study by KPMG and the Massachusetts Institute of Technology, respondents indicated “much discussion about... strategic applications of information technology to improve supply chain processes...but few companies report making the required technology investments.” One reason could be the difficulty of identifying systems that truly support supply chain integration. Added to this, inertia tends to set in if a company believes it must change all of its key operations and systems to attain the benefits of supply chain integration. It is very difficult to make individual trading partners in the supply chain, each with their own goals, function as a synergistic whole.

### The Future

Is supply chain synchronization the ultimate concept? In reality, it is only one of the steps towards the integration of all components of the supply chain.

To date, the majority of supply chain efficiencies has come from improvements within the four walls of each individual company. Certainly, there has been collaboration between trading partners in terms of improved communication (EDI and current internet based web information exchanges), better information (point of sale data and the CPFR initiatives), and a general willingness to work more closely together. But the efficiencies have been gained through improvements that any CEO can effect at his or her own workplace by putting in place the appropriate company-wide initiatives aimed at improving the internal business process. Now comes the most difficult part. True coordination between and among all trading partners.

To take the next step, it is critical that companies not only agree to communicate and work together, they must also begin to function as a single entity. In such a synergistic scheme, inventory management will yield the greatest return. To make the quantum leaps necessary for improved inventory efficiency (the next step beyond supply chain synchronization), all companies throughout the supply chain must begin to think entirely differently. In effect, they will need to act as if the US (and eventually the entire world) is one big distribution network, rather than a collection of individual, loosely linked, suboptimized distribution facilities. The essential paradigm shift lies in reconceptualizing the US as a giant, virtual warehouse.

Creating such an enormous virtual warehouse will require the immediate visibility of highly detailed and accurate information to all trading partners. Many companies have multiple warehouses and use enterprise software to route orders to the right warehouse, selecting whichever distribution center stocks some or all of the products, is logistically optimal, or can fill the order most cost effectively. If trading partners could trust each other to provide accurate inventory status information, including information on raw materials and production status, then the same strategic logic could be used to optimize inventory management among trading partners. This would call for a more complex network of information and physical location.

Information of just this level of detail and accuracy, now available through the use of Internet information exchanges (although not in general use as yet), enables this paradigm shift to take place. For example, if a retailer has detailed production and inventory information from its manufacturers, available on a real time basis through Internet technology, then the manufacturers and offshore suppliers become a virtual extension of the retailer. If you take this one step further back, the retailer and manufacturer can consider the offshore supplier as a virtual member of the

# Supply Chain Synchronization

## Is it Just the Latest Fad?

same company. With this type of information, the retailer can make highly informed decisions as if it were manufacturing the product itself. Products can be shipped to the retail store directly from the manufacturer or even from the offshore supplier, depending on the best logistics decisions made by these three companies working in concert. Or, they can be shipped directly to the consumer (for direct purchases) from any of the three. We are beginning to see some of this, with manufacturers doing some direct shipping for their retailers using the retailers' product and shipping container marking.

With this strategy, the US, and eventually the entire world, will become one big distribution center.

It will take many years, if ever, for such a global virtual distribution center to emerge from this type of closely integrated distribution network. But this concept provides a desirable objective, which should motivate significant improvements in physical inventory management and related information. Evolution toward this paradigm provides greater efficiencies whether or not we ever attain the ultimate goal, as the concept itself encapsulates the strategy espoused by the industry for inventory efficiency.

So, to answer the question posed at the beginning of this article, is supply chain synchronization just the latest fad? The answer is an emphatic NO. It is, though, the latest link in the evolution toward a total integration of production and inventory management that will eventually optimize replenishment and inventory levels, thus bringing the consumer what she wants, when and where she wants it, at the best price.

---

### **About The Author**

**Neil Thall** – Neil Thall has served as Executive Vice President of Manhattan Associates since January 2000. Mr. Thall joined Manhattan in February 1998 as Vice President, Supply Chain Strategy, and then became Senior Vice President, Professional Services in June 1999. Mr. Thall served as President of Neil Thall Associates, a software development and management consulting subsidiary of HNC Software, Inc. that specialized in inventory management, Quick Response and vendor managed inventory initiatives. Prior to 1992, Mr. Thall was employed by Kurt Salmon Associates as National Service Director, Retail Consulting, where he specialized in the development and implementation of information systems for major department stores and specialty and mass merchant chains.