

# Improved Information Connectivity and Visibility throughout the Global Supply Base

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## ABSTRACT

*Although the literature frequently examines achieving an integrated supply chain and participating in information sharing with supply chain partners, there is little guidance given to firms on how to progress to a state where these goals can become reality. This paper examines the struggles of one firm in moving toward information sharing with its suppliers and its hopes of achieving an integrated supply chain. This paper reveals lessons learned from the difficulties the firm encountered during the integration process. Despite putting an information system in place, the company discovered that people issues matter as much, if not more, than technology issues.*

*Keywords: Global Supply Base, Information Sharing, Information Visibility, Supply Chain Integration, Supply Chain Management*

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## INTRODUCTION

*Globalization and global supply chain operation, and supply chain visibility have become buzzwords for organizations in recent years. Customers demand more data concerning shipping, especially as businesses attempt to move toward just-in-time inventory management or to incorporate lean philosophies into their firms' practices. Unfortunately, one part of the global supply chain that hasn't kept pace with these increasing demands is the shipping function<sup>1</sup>.*

This lack of data, or lack of information visibility, is a problem for many firms who trade with multiple supply chain partners in multiple locations. Many of these companies lack the information technology infrastructure necessary to collect the information from partners. Hence, visibility should be one of the greatest benefits to emerge from supply chain event management (SCEM). Concurring with this, Marabotti (2002, pp. 2-3) notes that event management has the potential to yield huge payoffs within a short time frame, especially for those organizations needing to

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- Monitor large numbers of markets, channels, customers, suppliers and products
- Support new product launches
- Track key performance indicators, and
- Balance supply and demand.

This paper explores one firm's efforts to integrate its supply chain and share information among global supply chain partners. We first review the literature concerning information sharing and its benefits. We then turn to the experiences of this particular organization, describing its attempt to link systems with the systems of its suppliers. We conclude with a discussion of its successes and failures and lessons learned.

### Supply Chain Integration and Information Sharing

A significant issue facing today's organizations is the need to integrate their supply chains with those of suppliers and customers. Poirier (2002) notes that today's companies are devoting much energy and effort to teasing out the value that might otherwise remain hidden from sight in their supply chains. Yet, despite the benefits from integration and connectivity, Poirier is quick to acknowledge that the "passage to connectivity is not as smooth" as it is often portrayed (Poirier, 2002, p. 18).

A review of the supply chain management literature indicates that researchers continue to explore fully the supply chain, highlighting its importance to organizational operations, organizational competitiveness, and the achievement of competitive advantage. In particular, numerous researchers have honed their focus on supply chain collaboration, and the amount and type of data, information, and knowledge necessary to effect such collaboration. Anderson et al. (2005) use a model to test the impact of variations of lead-time (longer versus shorter lead-times) upon fluctuations in demand, and thus, lead-time variability and its impact upon the bullwhip effect. Viswanathan et al. (2007) examined forecasting and planning among members of a multi-tier, or multi-echelon, sup-

ply chain. They developed a simulation which indicated that members of a supply chain are best able to forecast demand when their calculations take into account the historical demand of their supply chain partners. Additionally, the authors examined a "synchronized inventory replenishment" scheme between suppliers and retailers, and determined that synchronized inventory replenishment (a supplier ships based upon a fixed order interval established by a retailer) can assist in lowering costs for the retailers.

Other researchers have examined different ordering schemes. Choudhury et al. (2008) deploy a simulation to measure the value of information in a supply chain. This is accomplished under different conditions of known information. The researchers, for example, measure the difference between Retailer Managed Inventory (RMI) versus Traditional Information (TI) sharing, and between Vendor Managed Inventory (VMI) versus TI sharing. In their modeling both demand and inventory information was shared with the supplier. Their results indicate that VMI is most cost effective.

Different collaboration models are incorporated into some of the information sharing research. Kahn et al. (2006) examine the supply chain from a collaborative planning, forecasting, and replenishment (CPFR) perspective, noting that the literature predicts that utilization of CPFR principles to manage demand have had positive impacts upon the organization. The authors focus, in particular, upon the information technology (IT) dimensions of collaboration, and how collaboration between supply chain partners can lead to the possibility of knowledge creation throughout the supply chain. Alternately, Elofson and Robinson (2007) use simulation to test Collective Customer Collaboration (C3) system (entails a group of customers taking part in product design as well as committing to product purchase). Their simulation indicates that supply chain performance is boosted through the C3 system.

Supply chain research, and, in particular, information sharing research, has been performed against a knowledge management (KM) backdrop. In building supply chain excellence

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