The Impact of Data Synchronization Adoption on Organizations: A Case Study

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ABSTRACT

Data synchronization is required for supply chain management in the B2B e-commerce environment. This case study examined the impact of the adoption of data synchronization on three large consumer product goods organizations. The study identified process and structural inadequacies that developed as the result of the implementation, as well as how these organizations recognized benefits and future opportunities after data synchronization adoption. The findings revealed the significance of internal alignment around data cleansing and accuracy, as well as opportunities for improved external alignment from a systems perspective. Synergy created between product item management, data synchronization, and internal champions existed at all three companies. The workflow re-design, process improvements and standards development imposed on these organizations by the clean data requirement of data synchronization provided the greatest benefits from the data synchronization process. [Article copies are available for purchase from InfoSci-on-Demand.com]

Keywords: B2B E-Commerce; Data Synchronization; Organizational Change; Supply Chain Management

INTRODUCTION

Since the development of Internet based e-commerce over a decade ago, organizations have been focusing on enterprise application integration and B2B integration and interoperability in between the intra-enterprise and trans-enterprise heterogeneous e-commerce systems (Spanos et al., 2007). From the standpoint of B2B connectivity and purpose, B2B integration means transaction categorization (Cullen &
Webster, 2007). In the view of B2B channel relationships, coordination among B2B partners is the key to successful application integration in B2B e-commerce (Gibson & Edwards, 2004; Kim et al., 2006). In the B2B process design perspective, systematic business process design is the central issue of B2B integration (Al-Naeem et al., 2005). Yet, few studies have reported the organizational impact of data synchronization, an IT premise for B2B integration currently taking place in the e-commerce industry.

The Uniform Code Council (UCC) and the European Article Numbering Association (EAN) began the data synchronization initiative in 1998 at the request of the consumer products industry. The goal was to exchange standardized item information electronically through a global network (Garcia, 2006). Once standardized, item information could be synchronized between the retailer and supplier so that both parties had the same information for existing and new items. As shown in Figure 1, the flow of item attribute data from suppliers to buyers ensures that accurate and synchronized data transmit throughout the supply chain.

To efficiently implement data synchronization, organizations must first identify and store accurate item information to populate the required data fields. Organizations may find that designing new business processes by leveraging the now standardized and accurate item data provides strategic advantage and productivity improvements. The Food Manufacturing Industry (FMI), Wegman’s, Accenture, 1Synch, and Grocery Manufacturer’s of America (GMA) designed a joint study (SYNCH, 2006) that identified process improvements derived from the supplier’s data synchronization processes. These improvements included

**Figure 1. Global data synchronization network (Adapted from (UCC, 2004))**

- Source Data Pool
- Recipient Data Pool
- Supplier/Seller
- Retailer/Buyer
- Register Data
- Request Item Information
- Publish Data
- Confirmation
- Load Data
- GS1 Global Registry™
Online Shopping Experience: A Conceptualization and Preliminary Results
www.igi-global.com/chapter/online-shopping-experience/30396?camid=4v1a