

RFID and Labor Management Systems Selection in the Logistics Industry

Cheryl A. Tibus, Mercer University, USA

Linda L. Brennan, Mercer University, USA

EXECUTIVE SUMMARY

Faced with increasing competitive pressures, a logistics company in the United States sought to reduce its cost structure by implementing two information systems. The Labor Management System (LMS) was specifically designed to improve warehouse worker efficiency and the Radio Frequency Identification (RFID) system tracked the movement of products, pallets, and shipment. This case presents an overview of the logistics industry, background on the business need to consider new systems, and the requirements of the company in its system selection. Details of the technologies considered are included. The reader is then faced with the challenge of analyzing the options, and making a recommendation for systems selection. After analyzing this case study, the reader should be able to:

- *Define logistics functions, supply chain management, and third party logistics (3PL) services*
- *Describe LMS and RFID systems*
- *Identify the expected costs and benefits of the proposed technologies*
- *Develop a multi-factor evaluation for vendor selection*
- *Make a recommendation based on the evaluation, financial data, and other considerations.*

Keywords: Alignment of IS Plans with Business Plans, Competitive Use of IS, Executive Steering Committee, Information Technology Adoption, Input Operations, Interdisciplinary Teams, IT Alignment, Operational Computing, Operational Support Systems, Requirements Analysis, System Selection

ORGANIZATIONAL BACKGROUND

A2B Logistics (A2B) is headquartered in the Southwestern United States, with locations, primarily warehouses with transportation management functions, across the United States. The company is considered a third party logistics (3PL) services provider, with a stated mission of

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“helping customers through the management of change and information in the supply chain” (A2B Logistics, 2008).

Logistics and Supply Chain Management

According to the Council of Supply Chain Management Professionals (www.cscmp.org), the logistics function includes sourcing and procurement, production planning and scheduling, packaging and assembly, and customer service. It is involved in all levels of planning and execution—strategic, operational and tactical. Logistics management is an integrating function, which coordinates and optimizes all logistics activities, as well as integrates logistics activities with other functions including marketing, sales manufacturing, finance, and information technology.

Logistics definitions vary by perspective. Russell (2000) contrasts the way the term is used in common culture as, “handling the details of an activity,” with a customer perspective of “getting the right product to the right customer, in the right quantity, in the right condition at the right place, at the right time, and at the right cost” (p. 15). Meeting customer service requirements is the primary value driver for a logistics provider. This must be accomplished while minimizing the supply chain costs while maximizing the profits to the provider (Rutner & Langley, 2000).

Coyle, Bardi, and Langley (2003) suggest that a logical extension of the logistics concept is supply chain management. Supply chain management encapsulates the flow of activities, data, raw materials, finished products and various services in an effective and efficient manner as they travel through a variety of organizations in route to the final customer.

Third Party Logistics

Third party logistics (3PL) companies are used as an integral step in an organization’s supply chain:

Supply chain management encompasses the planning and management of all activities involved in sourcing and procurement, conversion, and all logistics management activities. Importantly, it also includes coordination and collaboration with channel partners, i.e. suppliers, intermediaries, third party service providers, and customers.

Logistics management activities typically include inbound and outbound transportation management, fleet management, warehousing, materials handling, order fulfillment, logistics network design, inventory management, supply/demand planning, and management of third-party logistics services providers (Council of Supply Chain Management Professionals, 2008).

3PLs are considered the third party between the supplier and the customer, handling varying degrees of the logistics involved in the storage, transportation and delivery of raw materials and/or finished goods. In order for a manufacturer to outsource this function, a 3PL must be able to “add more value to their customer’s business than the customer would be able to achieve themselves” (Berglund, Laarhoven, Sharman & Wandel, 1999, p. 64). This value added is manifest as improved customer service and reduced costs, resulting from a combination of outsourced functions including (Vaidyanathan, 2005):

- Transportation
- Warehousing
- Freight consolidation and distribution

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