Chapter 94
Samsung Company and an Analysis of Supplier-Side Supply Chain Management and IT Applications

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ABSTRACT

This chapter details the growth of Samsung Electronics Company in its innovative use of automatic identification and data capture technologies in managing supply chain relationships meet goals of operational efficiency and profitably. Through a combination of web and business literature sources and personal interviews, documentation of the company's successfully implemented supply chain management (SCM) applications as well as technological advancements and development are found in the chapter. SCM systems and IT applications documented at Samsung are designed to help provide assistance to other companies dealing with similar issues.

INTRODUCTION

Supply Chain Management

Supply chain management (SCM) is the oversight of materials, information, and finances as they move in a process from supplier to manufacturer to wholesaler to retailer to consumer. SCM involves coordinating and integrating these flows both within and among companies. It is said that the ultimate goal of any effective SCM-related system is to reduce inventory (with the assumption that products are available when needed). As a solution for successful SCM, sophisticated software systems with web-based interfaces are competing with web-based application service providers (ASP) who promise to provide part or all of the SCM service for companies who rent their service (Von Haartman, 2012).

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The discipline of SCM includes the active management of a company's supply chain activities to maximize customer value and achieve a sustainable competitive advantage. It represents a conscious effort by the supply chain firms to develop and run supply chains in the most effective & efficient ways possible. Supply chain activities cover everything from product development, sourcing, production, and logistics, as well as the information systems needed to coordinate these activities (Pradhananga, Hanaoka, & Sattayaprasert, 2011).

The organizations that make up the supply chain are linked together through physical flows and information flows. Physical flows involve the transformation, movement, and storage of goods and materials (Idris, Rahman, Hassan, Aminudin, & Alolayyan, 2013; Ketikidis, Hayes, Lazuras, Gunasekaran, & Koh, 2013; Mateen & More, 2013; Varaprasad, Sridharan, & Unnithan, (2013). They are the most visible piece of the supply chain. But just as important are information flows. Information flows allow the various supply chain partners to coordinate their long-term plans, and to control the day-to-day flow of goods and material up and down the supply chain. SCM flows can be divided into the product flow, the information flow, and the finances flow (Basu & Nair, 2012; Brito & Botter, 2012; Bulcsu, 2011). The product flow includes the movement of goods from a supplier to a customer, as well as any customer returns or service needs. The information flow involves transmitting orders and updating the status of delivery. The financial flow consists of credit terms, payment schedules, and consignment and title ownership arrangements.

SCM Basics

There are basic components that make up SCM: plan, source, make, deliver, and return (Sprovieri, 2008; Smith, 2011; Summers & Scherpereel, 2008). Planning is the strategic portion of SCM, as companies need a strategy for managing all the resources that go toward meeting customer demand for their product or service. A big major portion SCM planning is developing a set of metrics to monitor the supply chain so that it is efficient, costs less and delivers high quality and value to customers. Next follows source where companies must choose suppliers to deliver the goods and services they need to create their product. Therefore, supply chain managers must develop a set of pricing, delivery and payment processes with suppliers and create metrics for monitoring and improving the relationships. And then, SCM managers can put together processes for managing their goods and services inventory, including receiving and verifying shipments, transferring them to the manufacturing facilities and authorizing supplier payments.

Making is the manufacturing step. Supply chain managers schedule the activities necessary for production, testing, packaging and preparation for delivery (Tari & Sabater, 2004; Tiwari, Turner, & Sackett, 2007; Varaprasad, et al., 2013). This is the most metric-intensive portion of the supply chain, where companies are able to measure quality levels, production output and worker productivity. Delivering is the part that many SCM insiders refer to as logistics, where companies coordinate the receipt of orders from customers, develop a network of warehouses, pick carriers to get products to customers and set up an invoicing system to receive payments. Returning can be a problematic part of the supply chain for many companies. Supply chain planners have to create a responsive and flexible network for receiving defective and excess products back from their customers and supporting customers who have problems with delivered products.

There are several types of types of SCM software that deals with planning applications and execution applications (Sodhi & Lee, 2007). Planning applications use advanced algorithms to determine the best way to fill an order. Execution applications track the physical status of goods, the management of