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Kuiper Leda Supply Chain Defense

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January 25, 2007

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Supply chain management is the process of planning, implementing, and controlling the operations of the supply chain with the purpose to satisfy customer requirements as efficiently as possible (Wikipedia, 2007). Supply chain management spans all movement and storage of raw materials, work-in-process inventory, and finished goods from point-of-origin to point-of-consumption. Organizations increasingly find that they must rely on effective supply chains, or networks, to successfully compete in the global market and networked economy.

Kuiper Leda Supply Chain Defense

Kuiper Leda has the option to manufacture one or both of their products in house, or outsource some of the products. Companies outsource for many reasons. According to Supply Chain Today (2005), some of the advantages to outsourcing include:

- Cost reduction
- More flexibility with manufacturing and capacity
- Lower labor costs
- Capital does not need to be invested in machinery or plant capacity
- Not a core competency so outsource it
- Flexibility

By choosing to outsource, Kuiper Leda will be able to focus on those activities in which they have a distinctive advantage (Keep Media, 2006)

Kuiper Leda Measures

Supply-Chain Measures For Growth

Key growth measures related to demand/supply management processes often include customer service level (order fill rate), measured as the percentage of orders filled during first

attempted completion (no backorders) and perfect order rate, measured as the percentage of completed orders for which no errors occur during order fulfillment, transportation, and billing (Industry Week, 2001). Growth measures for sourcing/procurement activities typically include percentage of materials that arrive just in time for production purposes and lead times, measured by raw material requisition to receipt cycle time, which may include inside-plant planning, receiving, kitting and supplier lead time from demand identification until the material or component is available for production or shipment. Manufacturing-related growth measures are likely to focus on quality, including percentage of defect-free orders to total orders; percentage of units returned to total units shipped and order to delivery time.

Key growth measures for logistics activities are likely to include on-time delivery, measured as the percentage of orders delivered to customers on the promised date compared to the total number of orders delivered (Industry Week, 2001). In-transit time is also used, calculated as the average elapsed time for the longest lead time item to move from the distribution center to arrival at the customer location. Order accuracy is another common performance measure, calculated as the percentage of orders delivered correctly compared to total orders delivered.

Supply-Chain Measures For Cost Minimization

Cost minimization performance measures related to demand/supply planning typically include inventory turns and measures of excess/obsolete inventory (Industry Week, 2001). Inventory turnover is also a leading metric for working capital efficiency. Procurement-related cost minimization measures are likely to focus on the cost of purchased materials and services. In a relatively stable product mix environment, total cost of purchased items as a percentage of revenue or cost of sales is often utilized as an aggregate measure of procurement effectiveness

for cost minimization. An often overlooked, but important, measure for cost minimization in procurement is inbound transportation expense, measured as a ratio of total inbound transportation costs to total purchased material value.

Key cost minimization measures for manufacturing include total direct manufacturing costs (materials, direct labor and overhead allocations) as a percentage of revenue or cost of sales. Indirect costs (e.g. MRO, utilities, and insurance) are often measured as a ratio of total indirect costs to revenue, cost of sales or total direct costs (Industry Week, 2001). First-time quality and/or scrap rate are frequently used as measured for cost minimization in manufacturing. Capacity utilization is also utilized, although this is more commonly used as a measure of fixed asset utilization. Logistics-related cost minimization performance measures typically focus on freight and storage costs as a percentage of cost of sales or revenue. Other measures that may be considered would include fleet operating costs, if the company operates a privately-owned truck fleet and fleet utilization as a percent of fleet capacity. Measures related to return logistics costs (i.e., costs associated with product returns) are also utilized.

A significant opportunity for cost minimization in supply-chain management is related to the tax consequences of asset ownership, location, timing, transfer costs among related entities and similar issues. Tax effective supply-chain management is a subject gaining much attention today.

Supply-Chain Measures For Working Capital Efficiency

Inventory turnover is a primary measure of demand/supply planning effectiveness, particularly as it relates to working capital efficiency (Industry Week, 2001). Inventory is typically one of the largest components of working capital, particularly for manufacturing and

distribution companies, along with accounts receivable. Many firms also measure inventory investment as a percentage of sales.

Procurement-related working capital efficiency performance measures are also likely to focus on inventory investment, such as the percentage of raw materials and purchased components and products compared to total inventory investment (Industry Week, 2001). More recently, performance measures are focusing on the amount of purchased materials or products which are available via consignment or vendor managed inventory (VMI) programs, as a means of deferring or reducing inventory investment.

Working capital efficiency performance measures for manufacturing also tend to focus on inventories (Industry Week, 2001). Most manufacturing firms utilize some metric related to the absolute amount of work in process (WIP) inventory, as well as the percentage of WIP inventory to total inventory. However, often overlooked, may be a significant investment in maintenance, repair and operations (MRO) inventories, which may be expensed at the time of purchase, but held in inventory for later use. Because these inventories are not visible, they often represent a significant investment that is inadequately managed.

Working capital performance measures for logistics activities are likely to focus on finished goods inventory turns and order fill rates at distribution centers and other storage points in the distribution network (Industry Week, 2001). Some companies also measure overall order-to-delivery cycle times as a means of assessing supply chain responsiveness.

Supply-Chain Measures For Fixed Asset Utilization

Key fixed asset utilization performance measures for demand/supply planning would include fixed production/distribution infrastructure investment as a percentage of revenue or total assets (Industry Week, 2001). Capacity utilization measures are also often utilized.

Manufacturing-related fixed asset utilization performance measures focus directly on investment in plant, property, and equipment related to production as a percentage of revenue. These measures should also include investments in manufacturing systems, as these can represent significant capital commitments.

Fixed asset utilization performance measures for logistics are likely to focus on investments in storage facilities (warehouses and distribution centers), as well as truck fleets and other transportation infrastructure, as a percentage of revenues or cost of sales (Industry Week, 2001). The bottom line is that if your firm is not measuring supply-chain performance, there is a good chance that opportunities to leverage investments already made and create further competitive advantage are being missed. Effective metrics should not only provide an indication of current performance, as well as the magnitude and rate of improvements that have occurred, but should also spotlight those areas requiring further efforts.

Conclusion

Successful supply chain management requires a change from managing individual functions to integrating activities into key supply chain processes (Wikipedia, 2007). Some key supply chain processes are customer relationship management, customer service management, demand management, order fulfillment, manufacturing flow management, supplier relationship management, and returns management.

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