

Total System Thinking

Organizational effectiveness in supply chain systems for the 21st century

HOW CAN BEVERAGE DISTRIBUTION CONTINUE TO EVOLVE WITHIN TODAY'S increasing array of stock keeping units (SKUs) yet remain focused on total system process management? Total System Thinking (TST) acknowledges how an improvement in one area can adversely affect another area of the system and promotes organizational communication at all levels.

As we move into the 21st century, the supply chain process, from order placement to payment, has required us to look for ways to handle the ever increasing complexity within each function comprising the system.

For decades, direct store delivery consisted of moving a few products to outlying areas for distribution. All of this was usually executed in a conventional sales system, and in most cases, sales delivery people loaded their own inventories daily.

In the past decade, market demand forced an unprecedented expansion of more product categories driving SKU complexity skyward, antiquating the tried and true supply chain processes of the past 40 years. The ability to handle the number of increasing SKUs in a warehouse, where, for example, pick lanes have now tripled in length, and managing inventory becomes a challenge within itself.

On the delivery side, using traditional side-bay pick methods requires drivers to pick complex orders on the street. More bays are required to pick from multiple brand and package categories. Additionally there are more SKUs per bay, adding search time at virtually every stop with no additional sales increases. Moving the build-to-order method within the warehouse can reduce overall stop time and relieve a large portion of delivery time and physical stress.

Customer order building seems an ideal opportunity to drive safety and efficiency within the delivery function. Ignoring principles of TST, however, could cause potential warehouse issues. Increasing the number of SKU picks could add significant cost and reduce efficiency.

Segmenting the warehouse-to-delivery process starts downstream at the delivery function. The reason we start here is that delivery and merchandising are the largest, most costly non-manufacturing functions, due to large fleet capital, fleet operating costs and labor.

In addition, these areas present the greatest potential for injury. The repetitive picking of product on the street using side-bay trucks leads to long-term injuries. Driving efficiencies in these functions can create significant savings.

Processes are emerging where customer orders are pre-picked in the warehouse then built on either pallets or carts. These are then loaded on rear end load trailers. The drivers deliver the orders straight from the trailer without touching the product, except to possibly merchandise it, reducing account service time by as much as 50 percent.

Delivery systems such as the lift-pallet or cart systems enable increased stops per standard work day and provide a safer environment for the driver on the street. Since these systems reduce the non-value-added handling of products, they support reductions in routes and delivery costs. The effect is that they push work into the warehouse currently done on the street, but the added loading costs do not erode the TST savings. Non-value-added product handling is reduced by 75 percent for drivers and 60 percent for the overall process when warehouse pre-picking is used.

While efficiencies will occur, other factors could rob the gains in delivery and push challenges back into the warehouse. For instance, accurate customer delivery data is required to stage and load product using the last-order-on-the-truck, first-order-off method. Missed deliveries or refused orders take away the effectiveness of the lift-pallet or cart system and push additional costs to the warehouse.

The need for quality data upfront is critical regarding load-building, truck-staging and well-planned load pick areas. This represents just the downstream functions that could be affected in a multiplying manner from the quality of the upstream functions such as sales, order generation, product sourcing and dispatch planning, to name a few.

When implementing process changes, even improvements, every action has reaction that could be positive or negative. Process improvement through TST maximizes profits by identifying opportunities for gains on both the revenue and operating sides. Begin realizing a greater return on investment by using Total System Thinking to solve today's SKU management and delivery challenges. **BI**

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