



Thomas R. Cutler

Lean SCM drives digital Kanban growth

Kanban, the 'pull' method of keeping production lines suitably stocked with inventory when needed, is proving as the leanest methodology for a demand-driven supply chain...

Lean procurement requires digital kanban because it is ultimately a demand driven supply chain lean optimisation tool that allows for both flexibility and responsiveness thereby eliminating waste, increasing productivity, and holding to the cardinal rule of continued process improvement.

Distributors must continually innovate to maximise productivity and reduce total costs; initiatives of process improvement and waste reduction result in cost-saving efficiency. Productivity is output, efficiency and production. Waste is identified in many ways, yet ultimately is any activity that requires allocated resources but adds no value from the customer's perspective. Some activities, while not directly adding value to a product or process, such as time spent on equipment maintenance or an accounting function, are necessary in the production of goods or services and must be perpetuated. Non-value-added activities must be reviewed and constantly reevaluated, identified as waste and eliminated.

Foolishly, many distributors still maintain inventories of a million plus items. Using extensive networks of distribution centres to ensure prompt and reliable deliveries to their customers, success is still not guaranteed. Despite long-standing relationships with thousands of manufacturers needed to

maintain, repair, and operate all types of facilities, many distributors lack an integrated approach which costs customers time and money. Lean methodologies represent problem-solving tools and must allow distributors enterprise-wide integration with the firm's core strategy.

Purchasing organisations wrongly assume that 'just-in-case' inventories are less costly than the cost of downtime or lost production. Preparing for an emergency or downtime situation usually creates inventories of items never used. Lean procurement activities must be directly related to production; otherwise they are waste. Many organisations have lean strategic sourcing initiatives implemented, yet find nearly half the purchases are spot buys or unplanned.

A key component to a lean initiative is the use of Kanban, the 'pull' method of keeping production lines suitably stocked with inventory when needed and in the correct quantity. Kanban is the signal needed for inventory replenishment, and as a product is consumed, an order for the utilised inventory is automatically placed. Given the challenges of lost or duplicated Kanban paper cards, digital Kanban is the leanest methodology for a demand-driven supply chain.

Supplier consolidation lowers costs and improves productivity as long as there is a complete understanding of the customers' needs and goods are distributed by a demand supply chain. According to Stephen Parker, CEO of North Carolina-based Datacraft Solutions, "The reduction of waste associated with rarely used items in inventory allow distributors to focus on core competencies and production effort is vital. No time should be wasted sourcing and procuring infrequently used items. There are very few digital Kanban systems, and the old Kanban card system has severe restrictions when there is an external supplier in the supply chain. Digital Kanban re-orders based only on actual consumption are electronically communicated during each phase of replenishment."

'Daily Demand Import Interface' (DDII) provides alternative sources for inputs necessary to derive optimal inventory levels for large numbers of parts or card sets within the existing product base. Using a DDII tool allows distributors to quickly and easily upload 'Average Daily Demand' data and reset the calculation.

DDII web applications have three major components: Import Demand, Calculation Reports, and Print Cards.

■ **Import Demand:** Allows distributors to modify and upload new card set information into a pull-based Kanban solution. Users must be able to download current card set information and make changes (such as minimum reorder quantities and delivery schedules).

■ **Calculation Reports:** The 'calculation reports'

interface must provide users with the ability to see all uploaded and processed demand data. The data is then processed and validated; valid data is accepted and any errors are flagged for users to review, correct and resubmit.

■ **Print Cards:** The 'print cards' component enables users to print new cards for any card-sets modified during a DDII session.

Parker suggested that, "In many organisations the groundwork for what needs to be built, in what quantities, and by when has already been analysed. The new and exciting approach to 'Intelligent Load Leveling' provides the ability to upload/import data...it is essential for managing the replenishment and on-hand balances required to accommodate defined or changing schedules."

Demand-driven replenishment creates a tier of distribution and supplier networks; while forecasts may prove helpful in predicting 'big-picture' demand, most often they are terrible indicators of the precise products that will be needed. As distributors expand operations, the critical data is less accurate as each layer in the distribution system impacts the supply chain. [12.0](#)

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