



## Reduce inventory, improve performance

Today, the ‘value’ that a manufacturer offers his customers is more important than having just the lowest overall price. Today’s customers are demanding short lead times, quality products, on-time delivery, good customer service and a good price. The consequence of non-compliance to these customer demands may result in losing business.

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**C**ompanies today need to be quick and nimble to react to changes in customer demand and do it with little or no waiting inventory.

Gone are the days when manufacturers could stockpile large quantities of raw materials, load-up the shop floor with work-in-process, and pack warehouses with finished goods. The old ways caused inconsistent and long lead times, high costs and required more than necessary cash for their working capital.

Almost all of the senior executives and CEOs I interacted say that inventory reduction is a major concern. They see

inventory as something that absorbs massive amounts of cash and recognise that high inventories are an indication of serious problems. The money tied-up in inventory could be better spent elsewhere as in new product development, acquisition of new markets, acquisitions – vertical or horizontal, plant modernisation, re-engineering business processes, capacity expansion, reducing debts, etc.

### Watch out

Companies need to watch out for their inventories as high inventories are definite indicators of inefficiencies. Where inventory is bloated much of it may



become obsolete if the designs change or there is damage to it. Excess inventory is an indicator of business process and systems problems that has developed roots deep across the organisation. These could be due to forecasting, insufficient product specifications, production techniques or methods that are not effective, poor quality, bottlenecks, definitely long and imbalanced lead times, product & process problems, inappropriate performance metrics, etc.

These problems can proliferate. Long lead times contribute to a requirement to forecast, and long-range forecasts are inaccurate. Most marketing departments have difficulty forecasting this month's orders; imagine the chaos twelve or twenty four months down the line. When I walk through various factories I cannot stop wondering, "Why these people cannot use the science of 'demand rate' and get closer to reality?" When actual customer demand is not what was forecasted, unsold inventory accumulates in inventory piles, while expensive expediting is used to produce the products that are in short supply. Saleable throughput reduces while customer service follows similar path. Commonly, the cycle just keeps repeating itself, further compounding cash flow, profits and service problems.

### How to reduce inventory

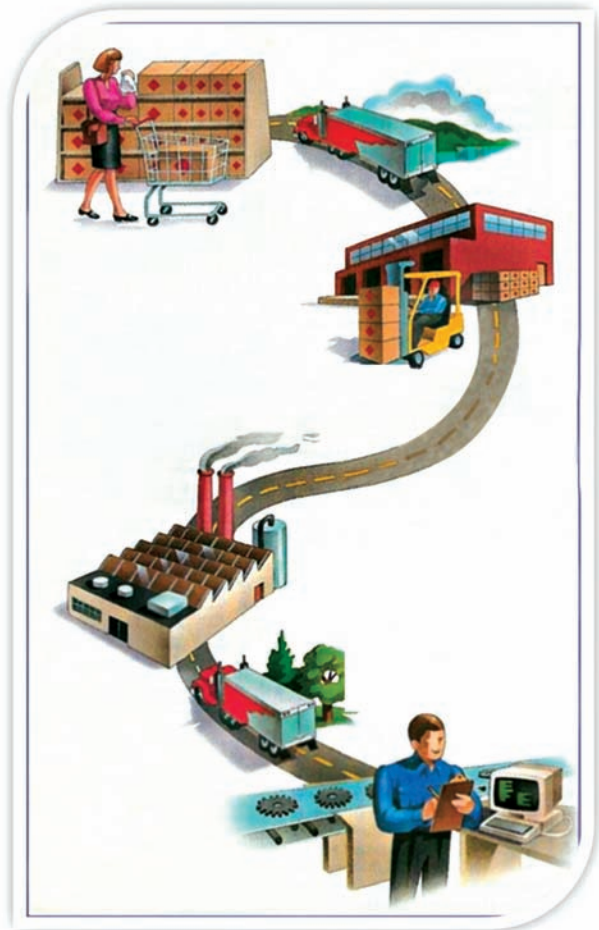
Most executives agree that disproportionate inventories cause cash-flow problems and need to be reduced in order to free up cash for other purposes. How can we do this? One of the major impediments to inventory reduction is the mistaken notion that by just improving inventory management the inventory will disappear. The real culprit is the inefficient business processes that cause excessive inventories to exist in the first place. Here are some suggestions that will help to reduce inventory:

**Inventory control:** Not paying attention to inventory control is one of the primary reasons that give rise to excess inventory. Managements must be positively driven towards material

shortages and finding solutions to avoid such occurrences. It is important for managements to exhibit the correct body language so that those incharge of functions that control inventory develop proper attitudes towards it. Remember, it is inadequacies in the business processes that create the need for inventories or buffers. Managements must address the cause, and not the result. By identifying the causes that gave rise to the reason of this inventory, and finding solutions to eradicate the problem at its grass root level, is the way to move forward.

**Map the processes:** Drastic reductions (50 to 80 per cent or more) in all forms of inventory, without harming value delivery to the customer, usually requires re-engineering of the order-to-delivery process to find ways of doing things faster, better, and cheaper. Spectacular rethinking of business processes will result in the significant reduction of lead times. This will eliminate the need for inventory buffers. On the sideline such improvements will improve the quality of your product or part and the very process itself.

**Manage the supply chain:** It is important to streamline the entire value chain to improve the order to delivery time. This will reduce cycle times and costs, therefore impacting profitability in a positive way. Managements have to allocate the necessary resources to speed up the order-to-delivery cycle and improve the entire supply chain with the result clearly visible in the customer





service performance and the reduction of all forms of inventory.

Manufacturers are establishing computer-to-computer links with suppliers and customers to provide them with a 'window' on their operations. Through this window, suppliers for example, can find out when the customer will run out of the item they supply and automatically restock it. This streamlining of the supply chain enables manufacturers to reduce inventory buffers, decrease cycle time and achieve significant cost reductions.

Many manufacturers are actively consolidating their supplier base, using few vendors, but establishing a much closer relationship with those they do business with. The buyer and supplier gain greater leverage through such relationships. The manufacturer and the supplier work together to improve products and operations and thereby reduce lead times, material costs, improve delivery time and deliver better value..

**Pull based demand:** This is one of the least understood and appreciated aspects of manufacturing and distribution. Manufacturing habits formed over years need a relook. To push or pull is no more a predicament. The result of push-type production is product flow imbalances, causing bottlenecks and reducing throughput. This results in

erratic output, high inventory, long cycle times, and reduced customer service.

Using the principles of pull and flow will help improve response, increase resilience, improve throughput and deliver better value to the customer.

One must treat stocking inventory as a waste even if it sounds unreasonable. Many manufacturers base raw material and finished goods inventory stocking levels on inaccurate long-term sales forecasts. The high cost of these 'bad numbers' depresses overall business performance. Companies that use a total 'push' inventory system will always end up with high inventories. An excellent method for achieving greater effectiveness with working capital is to obtain materials and put them through production so fast that inventory does not have time to become a 'liability'. Of course, this requires a well-designed order-to-delivery process that can have enormous benefits beyond just inventory reduction, especially in customer service.

**Performance metrics:** Even today it is not surprising to find manufacturers reward behaviours that increase inventory levels. Reward those behaviours that first bring inventory creating problems to surface, then work on solving those problems at their very grass root levels and improve the system that will not allow creation of inventory which is not flowing and being consumed. For example, measuring production efficiency, utilisation and standard hours produced (primarily for overhead absorption,) can result in the production of parts (that go into inventory) even when there is no other sane reason to do so. When the sales function is really measured, and operates on absolute rupee booking without consideration to product mix and timing, the inevitable results is more inventories in manufacturing or finished goods and perhaps lower customer service too.

**Cycle times:** Cycle time reduction always means reduced costs, reduced inventory levels, improved production predictability, increased customer service, and better quality. To reduce cycle time, manufacturers need to





streamline every aspect of their operations, especially the order-to-delivery process. Do this right and see the benefits.

**Develop flexible thinking:** When a manufacturer is rigidly set up to produce long production runs, there is a tendency to maintain higher than the necessary production levels even in the face of reduced demand. The 'inflexible' manufacturer maintains high production to absorb overhead. This may make some bad numbers look good, but the costs and inefficiencies are not eliminated; they are buried in inventory. And inventory is a great tool to measure conversion efficiency.

To minimise inventory and improve customer responsiveness, more and more manufacturers today are building flexibility into their operations, in how they operate, in order to quickly respond to changing customer demands. Today, the 'value' that a manufacturer offers its customers is more important than having just the lowest overall price. Today's customers are demanding short lead times, quality products, on-time delivery, good customer service, and a good price. The consequence of non-compliance to these customer demands may result in losing business - something manufacturers cannot allow to happen. **MMT**



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