

# ***Inventory Reduction: Getting Lean, Mean and Effective***

***by: R. Michael Donovan***

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Companies today must be fast and nimble enough to react quickly to changes in customer demand and do it with little 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 cost too much, require too much working capital, and contribute to erratic and longer lead times.

## **EXECUTIVES ARE OFTEN CONCERNED WITH INVENTORY LEVELS**

In a survey conducted by R. Michael Donovan & Co., Inc., 82 percent of the senior executives who responded said that excessive levels were a major concern for them. Some saw inventories as just a vehicle that absorbs massive amounts of cash while others understood that high inventories were also an indication of other serious problems. Also, the monies unnecessarily tied up in inventory could be better spent elsewhere such as: new product development, expanded marketing and sales, modernization, reengineering, expansion, acquisitions, debt reduction among others. Even though inventories are under constant analysis and manipulation, permanent inventory reduction opportunities go largely untapped as evidenced by the fact, most manufacturers consistently carry too much inventory. Yet, well-intentioned efforts to reduce inventory, more often than not, get only temporary results. Without effective business process changes, the organization can easily slip back to old ways with inventories (and costs) just climbing up again.

## **WHY SHOULD THE CEO GET INVOLVED?**

In some cases, inventory is so bloated that a high percentage of it will become obsolete before it is sold. Worse, too much inventory is a certain indicator that more serious and costly business process and system problems exist, which are very likely deeply rooted in the organization. Some of these problems include poor forecasting, inadequate product specifications, ineffective production scheduling, low quality, bottlenecks, long cycle times, product and process problems, high costs, poor vendors and wrong performance metrics to name a few. For instance, poor sales forecasts are often used to schedule production and vendors sometimes for months in advance. When actual customer demand is not what was forecasted, as is often the case, inventory quickly accumulates, salable throughput decreases, and customer service goes down. Then, the cycle just keeps repeating itself, further compounding cash flow, profit and service problems.

## HOW GOOD IS YOUR ORDER-TO-DELIVERY PROCESS?

Too many companies limp along with well-intentioned, but ineffective approaches to their order-to-delivery process. As a result, management is often frustrated by the inability to solve the inventory and service dilemma once and for all. Why do companies repeatedly fail at achieving consistently high levels of customer service and permanent inventory and cycle time reductions? The 25 self-assessment questions that follow will help you to “benchmark” your capabilities. These assessment questions are intended to assist executives to evaluate their circumstances and to identify potential improvement opportunities. One way in which to utilize these diagnostic questions is to have your entire management team (1) answer each question; (2) meet and discuss each question that received one or more ‘no’ answers; and, (3) outline your corrective action needs. During step (1), as you proceed through the diagnostic questions, you should make appropriate notes about particular areas of concern. The notes could be very helpful during subsequent discussions and corrective action planning.

### Foundation Disciplines

	<u>YES</u>	<u>NO</u>
• Every product has a well-defined manufacturing and inventory deployment strategy?	<input type="checkbox"/>	<input type="checkbox"/>
• We have clearly defined organizational accountability for performance of each segment of inventory?	<input type="checkbox"/>	<input type="checkbox"/>
• Our inventory record information is real time and 99% plus accurate?	<input type="checkbox"/>	<input type="checkbox"/>
• Our bills-of-material are 100% plus accurate?	<input type="checkbox"/>	<input type="checkbox"/>
• We create little to no inventory obsolescence as a result of engineering changes?	<input type="checkbox"/>	<input type="checkbox"/>
• Our forecasting processes and demand variability is integrated with a service oriented inventory deployment strategy?	<input type="checkbox"/>	<input type="checkbox"/>
• We have a comprehensive and effective Sales and Operations Planning process that is management’s handle on sales, production and inventory plans?	<input type="checkbox"/>	<input type="checkbox"/>
• We start the assembly process <u>without</u> any material shortages?	<input type="checkbox"/>	<input type="checkbox"/>
• We use distribution requirements planning (DRP) to plan inventory for distribution centers?	<input type="checkbox"/>	<input type="checkbox"/>
• We have a comprehensive and dynamic inventory performance monitoring system that pinpoints problems before they occur?	<input type="checkbox"/>	<input type="checkbox"/>

**Advanced Strategies**

	<b><u>YES</u></b>	<b><u>NO</u></b>
• The impact on service and inventory from cycle time reduction has been properly analyzed and quantified?	<input type="checkbox"/>	<input type="checkbox"/>
• We have mapped all supply chain processes clearly identifying value added and non-value added activities, bottlenecks, queues, cycle times, etc.?	<input type="checkbox"/>	<input type="checkbox"/>
• We have specifically defined the barriers that prevent us from achieving increases in service and reductions in inventory and are actively removing the barriers?	<input type="checkbox"/>	<input type="checkbox"/>
• We have organized and trained multi-functional teams that are aggressively working on relieving bottlenecks and improving flow and balance to achieve high velocity throughput?	<input type="checkbox"/>	<input type="checkbox"/>
• We have decreased our manufacturing and vendor leadtimes by at least 50% over the past 3 years?	<input type="checkbox"/>	<input type="checkbox"/>
• Our lot sizes and set-up times have been reduced by at least 50% over the past 3 years?	<input type="checkbox"/>	<input type="checkbox"/>
• We have reduced queues and work-in-process inventories by 50% or More over the past 3 years?	<input type="checkbox"/>	<input type="checkbox"/>
• Our processes perform to a level where no inventory buffers are required to protect against quality problems?	<input type="checkbox"/>	<input type="checkbox"/>
• We have agreements with key vendors for short cycle deliveries and mutually agreed upon goals for continuous improvement?	<input type="checkbox"/>	<input type="checkbox"/>
• Our approach to supply base management has each critical vendor's processes certified to a "no inspection required" status?	<input type="checkbox"/>	<input type="checkbox"/>
• Our vendor delivery dates are very predictable?	<input type="checkbox"/>	<input type="checkbox"/>
• We can <i>precisely</i> predict our delivery leadtime/date for customers or to replenish inventories?	<input type="checkbox"/>	<input type="checkbox"/>
• We have an active on-going program for vendor delivered, point-of-use inventories?	<input type="checkbox"/>	<input type="checkbox"/>
• Our production supervisors spend little to no time expediting materials or firefighting due to shortages?	<input type="checkbox"/>	<input type="checkbox"/>
• Our primary performance measurements and reward system are heavily weighted toward short cycle times and quick response?	<input type="checkbox"/>	<input type="checkbox"/>

### **HOW IS YOUR SCORE?**

If you checked 'yes' to all of the questions, your company is more advanced than most. In fact, all 'yes' answers would indicate that your company is in an elite class of top performing companies. Of course, 'yes' answers are only indicators of near and longer-term business success. However, 'no' answers are solid indicators that improvements are necessary to help ensure your business success.

### **EVALUATE PAST PROGRAMS**

Lastly, to evaluate your past efforts at improving business processes and inventory performance, try the following:

- Make a list of every improvement program your company has initiated in the past five years where better customer service and inventory performance should have been a result;
- Then compare the expected results with the permanent and measurable results that were actually achieved.

The answers from the 25 yes-or-no questions along with a candid evaluation of your current and past improvement programs will, for many, result in a question: Is there a better way?

### **TAP THE "HIDDEN CASH RESERVE"**

Most experts agree that top heavy inventories are a giant cash vacuum that needs to be turned off in order to free up cash for investment in revenue growth activities. So, how can this be accomplished? One of the major impediments to inventory reduction is the mistaken notion that just improved inventory management is all that is required to get the job done. The real culprits are the inefficient business processes that cause excessive inventories to exist in the first place. Here are eight suggestions:

#### ***DON'T ALWAYS BLAME INVENTORY CONTROL***

Certainly some aspects of excessive inventory investment are the result of Inventory Control, but often their behavior is motivated by management's certain negative reaction to material shortages versus periodic and less severe response to excesses. For the most part, inventory excesses can only be significantly reduced or eliminated when the cross-functional business processes that cause the need for excessive inventory buffers to exist are fixed. It is futile to think inventories can be isolated and singularly managed. Inventories are invariably the result of how well many cross-functional business processes really work.

### ***REENGINEER ORDER-TO-DELIVERY***

Major reductions (20% to 50% or more) in all forms of inventory and increased service usually require the reengineering of the order-to-delivery cycle to develop a process to do it faster, better, cheaper. When you fix the business processes that caused the excess inventory buffers to exist in the first place, you will very likely shorten cycle time, decrease costs, increase quality, and improve customer service.

### ***IMPROVE SUPPLY CHAIN MANAGEMENT***

By streamlining the entire supply chain, a company can reduce inventory, improve time to market, compress cycle times, free up more cash, decrease costs, and improve profitability. World class manufacturers have allocated the necessary resources to speed up the order-to-delivery cycle and improve the entire supply chain with the result clearly visible in service performance and the reduction of all forms of inventory. Manufacturers are establishing computer-to-computer links (EDI) with suppliers and customers to provide them with a “window” on their operations. Through this window, suppliers for example, can find out when the manufacturer 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.

In addition, many manufacturers are actively consolidating their supply bases following a single vendor partnership approach that is a much closer and more cooperative relationship with selected suppliers. By becoming an integral, larger part of the customer’s and supplier’s businesses, both parties gain greater business leverage. The manufacturer or the supplier, in many cases, actually helps the other to improve operations and thereby reduce material costs, improving delivery timing, and the like.

### ***IMPROVE PRODUCTION SCHEDULING***

This is one of the least understood and appreciated aspects of manufacturing control. However, the common and unfortunately accepted result of poor production scheduling invariably is in manufacturing flow imbalances, causing bottlenecks and reduced throughput. This inevitably results in erratic output, more inventory and longer cycle times. The old illogical scheduling logic used by most MRP II and ERP systems needs to be replaced with an approach that works *for* you rather than *against* you.

### ***USE EFFECTIVE PERFORMANCE METRICS***

It’s surprising that many manufacturers actually reward behavior that tends to bloat inventory levels everywhere. For instance, if production performance is based on efficiency, utilization and standard hours produced for overhead absorption, you can be assured that parts will get produced and put into inventory even when there is no other rational reason to do so.

### ***UTILIZE “PULL” BASED ON DEMAND***

Many manufacturers base raw material and/or finished goods inventory stocking levels on inaccurate long-term sales forecasts. The high cost of these “bad numbers” if they aimlessly drive operations, as they often do, depresses overall business performance. One result is that companies that use a total “push” inventory system will end up with high inventories. An excellent method for achieving greater effectiveness with working capital is to acquire materials and put them through production so fast that inventory doesn’t have time to become a “liability”. Of course, this requires a well-engineered order-to-delivery process that can have enormous benefits beyond just inventory reduction.

### ***REDUCE CYCLE TIMES***

Cycle time reduction almost 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. If this is done right you will by necessity “fix” many support functions as well.

### ***DEVELOP FLEXIBLE MANUFACTURING***

When a manufacturer is rigidly set up to produce long production runs, there is a tendency to maintain higher than necessary production levels even in the face of reduced demand. The “inflexible” manufacturer maintains high production to absorb overhead in inventory making “bad” numbers look good. This practice inevitably results in cash being frozen in inventory and less than desirable customer service.

To minimize inventory excesses and improve customer responsiveness, more and more manufacturers today are building flexibility into their operations -- flexibility in how they operate in order to quickly respond to changing customer demand. Today, the VALUE that a manufacturer offers its customers is more important than having just the lowest overall price. Value includes short lead times, quality materials, on-time delivery, good customer service, and a fair price.

### ***GETTING IMPROVEMENT STARTED***

Providing top-notch customer service and enhancing profits are critical goals to the success of your company. Attaining these critical goals requires specialized know-how and a commitment to act. We can provide the know-how -- you and your organization must be committed to action. The first step is to have us conduct a brief diagnostic review of your specific situation. The investment is very low considering the potential return from our improvement recommendations. Upon completion of the review, everyone involved will understand the specific areas that need focus, the degree of emphasis required and what measurable results can be achieved by following a well-planned program. Call us at 1-800-745-4101 to discuss your specific situation.

## **ABOUT R. MICHAEL DONOVAN, INC.**

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