Six Steps to Effective Inventory Management

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Organizations can take two different approaches with regard to inventory. They can assume it is a necessary evil and inject a special inventory reduction program whenever cash gets tight. Or they can make strategic decisions on the level to carry, put an active inventory management process in place and continually improve the business results. Following the active inventory management strategy helps create world class lean inventory.

Inventory should be viewed as cash that could have been spent in other ways. Anything above what the customer needs is waste. Unfortunately accounting treats it as an asset. But as anyone that has dealt with inventory knows, storing it, counting it, finding it, and picking it becomes much harder as the inventory grows. Below are the six steps we recommend to move from reactive inventory management to lean, active inventory management.

1. Understand and characterize your demand

Inventory shortages or excess is the result of supply being out of sync with demand. With a better understanding of demand, supply can be more closely aligned to it. So understanding your demand is always the first step. This means establishing a forecast or improving an existing forecasting process. While there are diminishing returns in spending too much effort on forecasting, there can be large returns in lowering the forecast error for long lead time items. The trick is to put in just the right amount of effort. This amount of effort can be identified by understanding how much randomness is intrinsic in each demand stream compared to how much of the demand is predictable. Randomness is one of the elements identified in a good forecast process. Randomness can't be forecasted, but extra stock can be carried to mitigate the effects of it. On the other hand, we don't need to carry safety stock for predictable demand. Using this level of precision typically reduces inventory 30% over blanket safety stocking policies.

2. Characterize your supply and inventory costs

Sporadic emotion based ordering is more likely the cause of high inventory than most companies are willing to admit. Attack this by giving accurate and effective tools and information to the purchasing agents. They need to understand the global impact of their decisions. They need the right tools to balance the freight costs, volume price breaks and the implications of inventory carrying costs.

Following a strong methodology to understand the cost of inventory drives the right kind of decision making. Each purchasing decision stands on its own as a chance to order just the right amount of inventory or the wrong amount; therefore the impact of each cost variable should be quantifiable during each purchasing decision.

Inconsistent and poor supplier performance is a problem that can cause supply to be out of sync with demand. Measuring their performance and providing feedback to them can improve delivery; thereby reducing stock outs and excess inventory. Rarely do we suggest using inventory to cover up poor performance from suppliers.

Inventory should be viewed as cash that could have been invested in other ways.

3. Stratify your inventory

The bad news on inventory is that you have to do a lot of things really well in order to achieve high turns and maintain excellent customer service. The good news is that Pareto is alive and well in the inventory management process. It is not unusual to have 90% of the dollars tied up in 10% of the inventory items. If the lion's share of effort is applied to the 10% of items, a majority of the benefit can be realized. This presents a strong case for automating much of the inventory management process, and only injecting people on an exception basis.

There are many ways to stratify your inventory, though it is generally a good idea to evaluate multiple stratifications. Each view presents the opportunity to discover new insights. Useful stratifications include an A, B, C category analysis by Customer, Cost, Profit or Hit frequency.

4. Establish goals for each category and measure performance

Create goals for each category. This can be done by a macro assessment. For instance, we currently have 1.3 months of inventory for category A. If we lower this to 1.0 months of inventory, where are our problems? Or one can take an analytic approach and establish desired service levels for each category. By using the intrinsic randomness and forecast calculated in step 1, we can compute the optimum inventory positions for each item. This can then be rolled up to establish a benchmark for the entire inventory category. We recommend the latter approach because it places the inventory manager in a position to understand the opportunities available and communicate to management the strategic inventory positioning and service level expectations.

5. Develop a process to track and analyze high deviations from your goals

Now it's time for the real fun! Nothing goes as planned. Get ready to drill into these issues. When high deviations occur, a root cause analysis will assist in discovering the business policy misalignments, performance issues, and malfunctioning processes. This is all about improving your business operations.

6. Refine goals and adjust processes

Inventory issues fall into three categories:

1) **The things that can be fixed now**
2) **The things that can't be fixed until later**
3) **The inventory that is unexplainable**

Refine your goals to only include the processes that you plan on fixing. These processes should be related to inventory issues that fall into categories 1 and 2. Isolate category 3 inventory isues, the unexplainable, into a special disposition category. Work on category 3 but but don't focus on it; it will become too discouraging. Rather, focus on categories 1 and 2 where efforts will generally lead to success. Use this process to identify issues and refine your operations.

Conclusion

The six steps to effective inventory management are not something one does only once; rather it is a journey in process refinement. One can start very simply and then drive toward excellence by reiterating this process. With time and practice you can expect the right inventory in the right place at the right time.

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