Many articles on “How to Reduce Inventory” are long on theory and short on action items. Here’s one that’s not.

**Step 1:** Make Sure the Inventory Records are Right. How recently have you done a full physical inventory? When your warehouses go to pick stock that’s showing in the system, are they often unable to find it? Your inventory accuracy needs to be close to 100% to ensure that you are getting the most from the working capital being charged to you. Some businesses have discovered millions of dollars of working capital which turned out to be bogus when a physical-to-system reconciliation was done. So before you can reduce inventory, you have to be sure exactly what you have!

**Step 2:** Find the inventory that’s in “black holes.”
As a corollary to your inventory accuracy exercise, be sure ALL your inventory locations are included in your accounting. When inventories get high, odd things happen that wouldn’t happen in normal circumstances. For example, an additional warehouse or storage facility, perhaps one not recognized by your order entry or ERP system, may be pressed into temporary service. Too often, this “unrecorded” inventory location is forgotten altogether (out of sight, out of mind). Distributed worldwide warehouses make this all the more possible, as do consignments without written and carefully monitored procedures for tracking and limiting their inventories. Find all these hidden “holes” (use the “institutional memory” in your colleagues’ brains) and make sure they are part of the official record so that they too can be eliminated.

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**Step 3: Identify and dispose of worthless inventory.** Worthless inventory does not improve with age. Material can be defined as worthless if it has no identified demand (including consumption). Inventory can fall into this category for a number of reasons:

- Over age
- Out-of-Spec
- Excessive rework (e.g., would take 3 years to “rework” – by which time you know you will have created more rework)
- “Heels” (partial boxes left-over at the end of a lot)
- Obsolete
- Raw or semi-finished material no longer needed because of a bill-of-materials change.
- Earlier “formulas” of a developmental product that now uses a different formulation.

If there is no identified demand for it, bite the bullet - get rid of it!

**Step 4: Identify and make plans for nearly-worthless inventory.**

In addition to the obviously worthless inventory in Step 2, there is usually a large amount of material for which there may be some demand but not nearly enough to draw the inventory down in a timely manner. Examples include:

- Transition materials or scrap.
- Unavoidable by-product or co-product created while making product which DOES have demand.
- Product for which last customer has converted to another product.
- Stocks of developmental products that never “took off” as expected.

Disposing of these materials is usually a bit more complex than for worthless inventory, if only because there is more resistance to writing off their large volumes. In the case of the first two bullets, developing a market for these products is the most desirable way of disposing of them, especially since they will of necessity continue to be created. Coordinate with sales to find an outlet – even if it covers only variable cost, it’s better than leaving the inventory sitting idle or having to write off the entire amount.

For products for which the last customer has converted to another product (a situation which proper inventory management would never have allowed to happen), approach the last customer who used the product and offer a special deal if he’ll use up the remaining inventory of the older product.

As for developmental products that never quite took off, this can be the toughest of the nearly-worthless inventory for sales to “let go of” emotionally. Hope, however, is not a sales plan. The business process should include sales at a (set) minimal rate within a (set) maximum time frame; if the sales have not developed by the drop-dead date, then the inventory does no one any good, and should be written off.

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**Step 5:** Determine reasonable “rebalancing regions” to analyze separately.
Moving inventory among over- and understocked warehouses can be a fine way to improve your inventory turns, but shipping material back from Asia if it originally shipped to Asia from the US is probably not going be feasible in the long run. All warehouses in the Eastern US, however, might be fair game for at least evaluating the tradeoffs of rebalancing inventory among warehouses. The remaining steps assume that you are working on total inventory within a “rebalancing region,” unless otherwise noted.

**Step 6:** Within a “rebalancing region,” determine highest inventory SKUs in dollars and days of supply.
Since working capital is the bottom line, reducing very high levels of a $0.02 per lb. (or per part) item will not be as beneficial as reducing more moderate levels of a $2.00 per lb. (or part) item. Hence, identifying the dollar value for each SKU is a necessary first step. Simultaneously, calculate the days of supply within each rebalancing region based on the average forecast for the next three months. For the top 20% of your SKUs by dollar value, put together a table of SKU, total dollar value, quantity, and days of supply. Be sure that if there is no demand for the next three months, you enter a very large number (e.g., 999) instead of 0 as the days’ supply. Sort the table in descending order of days of supply. If the days of supply for all of these items is higher than, say, twice their production cycle plus lead-time to the most distant warehouse in the region, continue. If not, reduce the list to just those for which the days of supply is higher than that value.

**Step 7:** Evaluate days’ supply by individual warehouse within the “rebalancing region.”
With your remaining list, look now at inventory by individual warehouse. Again, recalculate dollars and days’ supply based just on demand for that SKU at that warehouse. Is there far too much in one warehouse while there’s far too little in another? If so, consider the cost of relocating the inventory vs. that of making more for the under-stocked warehouse. If the costs are right, rebalance the stocks (at least within your working model) before continuing.
**Step 8:** “First, Do No Harm.”
Take a leaf from the Hippocratic Oath: the easiest way to reduce excess inventory is to stop buying/making more of it and let sales bring the inventory down. Check your rebalanced list against production schedules/plans to ensure you’re not making or planning to make more of already over-stocked materials. Alter plans or schedules accordingly, and update future inventory projections.

**Step 9:** Evaluate alternate ways of moving/selling inventory.
You have now rebalanced the inventory within your warehouses, but you still may find excesses that cannot be brought down to reasonable levels within an acceptable time period. For these SKUs, consider whether there are other ways to move the material:

- Can the material be converted into another which does have demand? Offer a promotion. Turn an inventory problem into a marketing opportunity by offering your best customers a slightly reduced rate if they take double their normal monthly amount. It is true that this will merely move demand from one month to another, but if the need to bring down working capital is great enough, this can still be a viable option.
- Can an excess SKU be repackaged economically into a needed SKU (say, bags to boxes or vice versa)? Better yet, can customers be enticed to take their second choice (i.e., the original) package?
- Can this material be substituted for another, even if the material to be substituted sells for a somewhat higher price?
- Can an opportunistic market be found for the excess material? Businesses sometimes remove their brand name from material, repackage it in plain brown bags, and give it a generic name for sales into a region far distant from their prime customers.
- Is this a material (often a raw material) for which a swap can be arranged with your competitors for another material for which your supply is short, or for which your supply and your need are in different regions of the world?

All such possibilities must of course be measured for cost/benefit tradeoffs, including the message you may inadvertently be sending to the marketplace. Nonetheless, knowing where your excesses are provides options for what to do about them that the uninitiated cannot even examine.
Step 10: Make the Ultimate “Sacrifice.” If, after analyzing all the possibilities above, you still have certain inventories vastly in excess, you may have to consider just writing them off. “Vastly in excess” will vary by business and by how critical it is that your working capital reach a certain target by a certain time. Inventory cannot be managed in a vacuum, because writing off inventory means a hit on earnings. If it must be done, it is best done at the beginning of a quarter, so that the earnings impact will be seen in time for the business to do whatever it thinks appropriate to try to offset that loss. No one wants to scrap “good” inventory, so the most important lesson is not to allow yourself to get into this position again.

About the Author:
Jane Lee spent the last 30 years in Supply Chain Planning, first as the Global S&OP Leader for a billion dollar specialty polymers business in DuPont. As a consultant, Jane has helped distributors and manufacturers across different industries right-size their inventory levels and optimize their inventory spend. She has consulted with clients in the paper, inks, mining, chemicals, glass, film, food processing, optical fiber, and semiconductor industries to evaluate their supply chains and suggest how they can move toward best-in-class and implement world-class Sales and Operations Planning. Jane holds degrees from the University of Delaware and the University of Virginia.

About Cutwater:
Cutwater creates software solutions for wholesale distributors to help make sense of their ERP data, especially inventory data. Management is always interested in lowering inventory. The main purpose of our software is very clear: Cutwater’s AIM (Advanced Inventory Manager) provides a way to figure out where inventory is out of line with demand - either too high OR too low.

We are a Microsoft® Certified Partner and are now pre-integrated with Microsoft Dynamics® (GP/NAV/AX/SL) as well as Epicor’s Prophet 21®. Our parent company has been around for 20 years, and Cutwater is the branch that works specifically with small to midsize wholesale distributors. We have offices in both Wilmington, Delaware and Antwerp, Belgium.

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