

Do Something Now

By Jon Schreibfeder

The goal of effective inventory management is to “meet or exceed customers’ expectations of product availability with the amount of each item that will maximize a distributor’s net profits”. We have never met a distributor that disagreed with this goal, but we see many distributors experiencing “challenges” and frustrations when dealing with their stocked inventory. These frustrations include:

- Stockouts of products that customers expect to be available for immediate delivery
- Excess inventory and dead stock tying up both valuable warehouse space and money that could be invested in other needed products
- Having to examine detailed usage history when deciding what products need to be replenished
- Not understanding what are truly the “best buys” offered by vendors
- Confusion when deciding whether a product in a branch location should be replenished with a vendor purchase order or a transfer from a central warehouse

In addition to causing ulcers and keeping business owners up at night, these frustrations cost money:

- Not having the products that customers want drives them to your competitors as they seek better service.
- Cluttered warehouses reduce warehouse productivity, resulting in a high cost of filling orders.
- The realization that dead stock and excess inventory is not worth what you paid for it - it is worth what someone is willing to pay you for it.
- Not having an automated replenishment system causes replenishment to turn into a cumbersome, time-consuming process. And there is always the risk that buyers will be overwhelmed by the volume of information they must sift through and overlook products that need their attention.

The economic challenges we face today are resulting in an increasingly competitive business environment. There is increased pressure on profits as more distributors try to expand their market areas and customers. In order to achieve success (or even survive) you must implement policies and procedures that lead to the goal of effective inventory management and invest in state-of-the-art “best practice” software.

Yes, comprehensive “best practice” software is expensive. And there is substantial effort necessary to implement a successful, effective inventory management program. But the potential benefits are phenomenal. Though every distributor’s situation is different, we have often seen reductions in inventory value of over 35%, while maintaining a high level of customer service. The payback for the total cost and effort of implementing the system can be obtained in just a few months.

Policies and Procedures

No computer system will produce the results you want unless it has good information. To achieve effective inventory management, make sure that these policies and procedures are ingrained in your corporate culture:

Make Sure All Employees Understand the Cost of Bad Inventory Management: Your company incurs expenses in doing business. Like any other expense, material losses, whether from theft, breakage, misplacing warehouse stock or just bad purchasing decisions must be paid for with gross profit dollars. If a company's average gross margin is 25% (a respectable number for many firms), the organization earns a 25 cent gross profit for every dollar of sales. The replacement material, along with all of your other expenses, has to be paid for with this 25 cents on the dollar.

The following chart shows the additional sales necessary to make up for various amounts of lost or damaged material:

| Average Gross Margin % | 15% | 20% | 25% | 30% |
|------------------------|----------|----------|----------|----------|
| Value of Lost Material | | | | |
| \$50 | \$333 | \$250 | \$200 | \$167 |
| \$100 | \$667 | \$500 | \$400 | \$333 |
| \$250 | \$1,667 | \$1,250 | \$1,000 | \$833 |
| \$500 | \$3,333 | \$2,500 | \$2,000 | \$1,667 |
| \$1,000 | \$6,667 | \$5,000 | \$4,000 | \$3,333 |
| \$5,000 | \$33,333 | \$25,000 | \$20,000 | \$16,667 |
| \$10,000 | \$66,667 | \$50,000 | \$40,000 | \$33,333 |

This is what we call an "acid-stomach" illustration. After determining the real cost of lost and damaged material, many business owners reach for the bicarbonate of soda to relieve their heartburn. And the figures in this chart don't take into account the other costs you incur when inventory is lost:

- Additional expenses incurred ordering emergency shipments and "fighting fires"
- Labor wasted searching for missing material in the warehouse
- Disappointing customers by promising material that exists in the computer system but can't be found

Record All Material Leaving Your Warehouse: Do you have salespeople who take, without paperwork, a sample of a product to a customer? They probably don't think they are doing anything wrong, but they have created a discrepancy in your inventory management system. Your computer does not know that the item was removed, so the on-hand and available quantities of the product are not properly adjusted. As a result, one of the following situations may occur:

- The item is not reordered at the proper time because the system thinks there is more inventory in the warehouse than is actually there.
- A customer may be promised the item because the computer shows the item as in stock. But after the customer has driven 20 miles to pick up the product, you discover that the "cupboard is bare".

Establish a rule that cannot be broken: NO MATERIAL LEAVES A WAREHOUSE WITHOUT THE PROPER PAPERWORK!

Yes, this means that your counter people will no longer be able to “swap out” one item for another with a “no paperwork exchange”, and your customers may be slightly delayed as appropriate paperwork is produced. But this policy is essential for effective inventory management. After all, does your bank allow its employees to take samples out of the vault without proper paperwork? What is the difference between the bank’s inventory and yours? Your inventory must be converted to cash before it can be used to buy food, clothing, professional football tickets, and other necessities of life.

Most successful distribution companies have established policies and procedures for processing the following types of transactions:

- Normal stock receipts – From previously issued purchase orders and transfers
- Unexpected stock receipts – The stuff that just shows up on your receiving dock
- Requisitions – A request for material to be consumed within your company
- Emergency requisitions
- Sales
 - Orders to be delivered
 - Orders to be picked up
 - Cash sales
 - Direct shipments
 - Orders for non-stock products
- Transfers to other warehouses or facilities
- Assembly orders
- Bin-to-bin transfers within your warehouse
- Returns of stock material
- Returns of non-stock material
- Returns of damaged material
- Returns to your supplier
- Adjustments to on-hand quantities – Who is allowed to approve adjustments? Under what circumstances?
- Scrapping and writing-off stock

Cycle Count to Ensure that On-Hand Quantities Remain Accurate: In order to receive all of the benefits of a good inventory management system, stock balances must be at least 97% accurate, *every day of the year*. This means that the actual available quantity of every item in the warehouse is no more than 3% greater or less than the available quantity displayed on your computer inquiry screens. If the computer says there are 100 pieces of an item on the shelf, there should be no less than 97, nor more than 103. Note that 97% is the *minimum* acceptable standard. One hundred percent accuracy is the optimal goal that you should strive to attain. Cycle counting is the process of verifying the accuracy of the on-hand quantities of a certain number of products, every day. Cycle counting will ensure that all of your material movement is accurately recorded.

Our research shows that the more often a product is received or shipped, the less accurate its computer stock balance is. This makes sense. Every time someone goes to the bin is an opportunity for a mistake (or to coin the new term, “unquality event”) to occur. For example, material can be put away in the wrong bin, or the wrong product can be taken to fill an order.

The ranking method of cycle counting directs you to count the items with a large number of dollars flowing through inventory (i.e. with the highest annual cost of goods sold), or the products with the largest number of transactions, more often than slower moving products. Ranking theory is based on “Pareto’s Law” (named for the 19th century Italian economist Vilfredo Pareto) which basically states that, in general, 80% of the results of any process is produced by 20% of the contributing factors. Applied to inventory, this means that approximately 20% of your inventory items are responsible for 80% of your stock sales.

Pareto came up with this theory over 100 years ago. We have found that it doesn’t generally apply to many businesses. In fact we have often found that only 10% - 13% of inventory items will usually account for 80% of sales, and no more than 50% of stocked products will account for 95% of sales. You can obtain the advantages of a rank-based cycle count with less effort than Pareto might have predicted.

After ranking your products, develop a cycle counting schedule. We suggest the following:

- “A” rank items (responsible for the top 80% of activity) are counted six times per year.
- “B” rank items (responsible for the next 15% of activity) are counted two times per year.
- All other products are counted once per year.

Frequently counting your “A” items will allow you to uncover the reasons for inventory discrepancies. As you correct your policies and procedures, your computer on-hand quantities will consistently be more accurate. When you have confidence in the accuracy of your inventory, reduce the frequency of your cycle counts. *You may be able to assume that your slowest moving products have accurate counts and skip counting these products!* An occasional audit of the quantity of selected fast-moving products will ensure that quantities in your computer continue to agree with what is on the shelf.

Implement State-of-the-Art “Best Practice” Inventory Management Software

There are literally hundreds of inventory management software packages on the market. All of them promise to replenish inventory with the right quantity of the right item at the right time in the right location. But each of these systems has a unique set of features. If you are considering implementing effective inventory management, you need to be sure that the software you implement:

- Includes a comprehensive set of tools that will allow you to quickly change the productivity and profitability of your investment in stock inventory
- Is easy for your employees to understand and utilize
- Seamlessly interfaces with your current systems and operations

Before you invest in a system, demand proof that it has proven capabilities to quickly and permanently increase the profitability and productivity of your investment in stock inventory. Here is a list of features to look for, along with an explanation of how they will pay for themselves in a short period of time:

Differentiate Between Usage and Sales or Shipment History. Do you have any unusual sales activity? For example:

- Will you occasionally sell an unusually large quantity of a product?
- Will you miss sales because you don't have adequate inventory in stock?
- Will you substitute one product for another because the requested product is out of stock?
- If one branch is out of a product, will you ship it to a customer from another one of your company's locations?

If you base replenishment decisions on history that includes these "exceptional" situations, you won't make good decisions. You will restock products that your customers don't want and not bring in inventory that you need to achieve your desired level of customer service. A "best practice" system differentiates between usage and actual sales or shipments. When posting a transaction to usage, it determines if you should replenish inventory with this quantity, of this item, in this warehouse, to meet your customers' future needs.

Separate Items with Sporadic Usage from those with Recurring Usage. Many systems will stock all products based on some monthly average of usage. However, items with sporadic usage are not sold or used on a regular basis. But if you've committed to stock a product you want to be sure you have enough in stock to fill a normal or typical sales quantity. For example, if a customer orders 12 connectors at a time, we want to be sure we have at least 12 in stock. It doesn't matter that the item is only ordered twice a year or an average of two pieces per month. If your system does not identify sporadic usage items and maintain them in inventory based on a multiple of the normal sales quantity, you will waste money on small quantities of products that are inadequate to meet your customers' needs. And worse, you will disappoint your customers by not having the quantities of products they need available for immediate delivery.

Utilize Multiple Forecast Formulas. Items with recurring usage (i.e., items that are sold or used on a regular basis) can have radically different patterns of usage. Even products in the same vendor line, next to each other on your warehouse shelf can be sold or used at different rates. Systems that only use one or two forecast formulas will overstock some products and understock other items. "Best practice" systems utilize a library of forecasting methods, applying the most appropriate formula to each stocked product. How does the system choose the best formula? It monitors the historic forecast error for each item using each forecasting method. The proper formula to monitor the forecast error is:

$$\text{Absolute Value of (Forecast - Usage)} \div \text{Smaller of Forecast or Usage}$$

The formula that results in the lowest forecast error is used to forecast future demand for that product. By improving forecast accuracy you are able to stock less inventory (freeing up valuable cash) while maintaining a high level of customer service. If your forecasts of future demand are not accurate, you are forced to overstock to maintain your desired level of customer service.

Be Able to Forecast into the Future. Many systems develop a forecast only for the current month. If more than one month's supply must be ordered, these systems will multiply this month's forecast by the number of month's supply that must be ordered. Or if a product has an extended lead time from the replenishment source, it will still base purchases on this month's forecast, even though the shipment might arrive four or five months in the future. Ordering

based on the wrong forecast can lead to inventory disasters. Imagine ordering Christmas lights in December based on the current month's forecast for delivery in April!

A best practice system has the capability to forecast demand and calculate replenishment parameters for each of the upcoming 12 months. This allows you to plan your purchases based on anticipated demand when you will receive a replenishment shipment, not on current demand when you are placing the order with the vendor.

The Ability to Incorporate Collaborative Information into the Forecast. A lot of systems base future forecasts solely on an average of past usage. After all, "what we sold in the past is a good indication of what we will sell in the future". But in a dynamic market, situations are continually changing. A best practice system will allow input from management, sales, customers and other sources when developing forecasts of future demand. It will also assess the accuracy of the estimates provided by each source of information.

Evaluate All Purchasing Opportunities. You have a limited amount of money available to invest in inventory. How do you know whether a specific "price break" or buying opportunity offered by a vendor is a good deal? Best practice systems allow you to translate any vendor offer into a monetary discount. They will also compare that discount to your cost of carrying inventory for the length of time it will take to sell the shipment, to determine what is truly a "best buy". This capability will allow you to invest in those opportunities that will provide you with the best return on your investment.

Guide You to Choose the Best Replenishment Source for Each Product in Each Warehouse. Many distributors today have multiple stores or branches, each stocking a number of products. In planning replenishment of products to smaller locations, buyers must decide whether to buy products directly from a supplier or transfer quantities from a central warehouse (also known as a distribution center). This can be a complicated decision. Best practice systems can help weigh the additional inventory investment that must be carried in a branch location if a distributor buys full vendor package quantities from a vendor, against the cost of "double handling" products as they pass through a central warehouse.

Provide Exception Reporting. Computer systems today have the capability to store vast amounts of data. Buyers, salespeople, and other employees can be overwhelmed if the data is not presented as meaningful information. A best practice replenishment system will present each employee only with products and other situations that need their immediate attention. As a result, employees can be as productive as possible, and they won't overlook critical circumstances that have been buried under a pile of other data.

Summary

We live in challenging economic times. Business owners who do not take decisive action to improve the utilization of their money and employees' time will find themselves at a competitive disadvantage. Yes, adopting new policies and procedures and implementing best practice software is expensive, and you're probably busy fighting the fires that occur on a daily basis. But taking these actions is probably the best investment you can make to help ensure your long-term business success. A well-thought out implementation plan will get you the results you are

looking for in the shortest period of time, with the least disruptions to your day-to-day business. The sooner you get started.....the sooner you will start reaping the benefits of effective inventory management!

About the Author, Jon Schreibfeder

Jon Schreibfeder is president of Effective Inventory Management, Inc., a firm dedicated to helping manufacturers, distributors, and large retailers get the most out of their investment in stock inventory.

For over 20 years, Jon has served as an inventory management consultant to over two thousand firms to improve their productivity and profitability. Jon has designed several inventory management computer systems and has also served as a distribution industry “troubleshooter” for two major computer companies.

A featured speaker at seminars and conventions throughout North America, Latin America, Europe, Asia, and the Pacific Rim, Jon has been awarded the title “Subject Matter Expert” in inventory management by the American Productivity and Quality Center. He is an advisor and guest lecturer in the Industrial Distribution Program at Purdue University.

About Absolute Value

Absolute Value supports middle market distributors with software solutions for forecasting and replenishment. Our best fit formula-based forecasting and multi-site replenishment solution allows you to lower your inventory investment while increasing customer service levels.

Absolute Value helps distributors by providing a complete forecasting and replenishment solution with ERP independence. The software can plug into an existing distribution system or legacy system without the pain, complexity, and cost of purchasing a new ERP system.

Blending end-user and software vendor experience with knowledge of state-of-the-art technology, the Absolute Value team has helped meet the needs of 300+ distributors.

For more information about Absolute Value:

678-905-1204

avinfo@absolutevalue-us.com