It Has To Be Here Somewhere!

Throughout the past year, a prolonged shortage of commercial credit has stymied growth opportunities for a multitude of businesses. Those companies who positioned to develop a consistent record of liquidity in late 2009 are now reaping the rewards of proper planning and execution. With supportive banks, these firms are better able to capitalize on new business opportunities, be they related to supplier rationalization, volume expansion, or emergency supply opportunities.

Among these top performing companies, a common theme stands out: total control of inventory. The following white paper discusses the primary reasons for loss of inventory, while offering basic insights into means of better control.

Executive Summary

Key Findings at a Glance

1. Lost or misplaced inventory impacts almost every organization, regardless of size or complexity. And while inventory shrinkage is a common problem, businesses able to manage this loss create disproportionate improvements in profitability, cash flow, and capital management
2. There are 8 common reasons for loss of inventory: premature use, identification, unit of measure, data entry, storage, damage, theft, no cycle counts
3. Simple techniques and behaviors can rapidly improve loss rates, with direct impact on not only inventory and asset intensity, but on customer satisfaction levels, direct and indirect labor, and expedited logistics costs.

Key Questions for Executives

1. Are you satisfied with your organization's control over raw, finished goods, and WIP inventory?
2. How does your firm compare to industry standards for inventory loss and damage?
3. Who in your organization is responsible for overall inventory intensity?
4. What profits could be created by a 50% reduction in inventory loss or damage?
5. Does this justify an investment in better people, processes, and equipment?

Over the past year we've seen literally hundreds of businesses struggle with the need to balance customer satisfaction and cash flows. Be it a request related to lead time, payment terms, or inventory levels, salespeople are often asked to make ever larger commitments to secure future—and often current—business. Each of these commitments in turns draws down vital cash reserves. But where can a company find more cash to fund growth and create stability? We recommend looking inside at your worst practices first!

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The amount of time we spend looking for inventory within the four walls of our warehouses can be staggering. Lost inventory seems to affect almost everyone at one time or another. Business owners, managers, and the poor gophers that are sent out to look for the product "one more time" are all equally frustrated by the practice. Searching for inventory can be one of the most expensive endeavors we can undertake.

Losing inventory is typically related to one of the following:

1. Premature Use - An item is removed from the dock before it has been checked into stock.
2. Identification - An item is identified as one thing when it is actually something else. This is very common at the time of receipt and check-in. This problem can also occur at the time of shipment.
3. Unit of Measure - An item is counted in the wrong unit of measure. Again, this is very common at the time of receipt and check-in and also occurs at the time of shipment.
4. Data entry- An item or quantity is entered in the system incorrectly. This can occur at the time of receipt or shipment as well.
5. Storage- An item is put away in the wrong bin location. This can occur in one of two ways. The item is put in one location and another location is recorded, or the item is put away with the wrong product. This commonly occurs when a pallet contains mixed product but is put into storage as one item.
6. Damage- An item is damaged during day-to-day activities. Rather than face the perceived consequences related to the damage, some of our people can be very creative in disposing of the evidence.
7. Theft- As much as we hate to think about it, some of us are affected by theft, either internally or externally.
8. No Cycle Counts – Cycle counts do require a great deal of discipline. Unfortunately, many organizations will "opt out" of cycle counting before the real benefits materialize.

There are a number of things we can do to combat the loss of inventory. Remember that the key to attacking lost inventory is to reduce your exposure to the areas listed above. Let's address each area in more detail.

Premature Use

A fairly common scenario in fast paced operations is a loss of product between receipt and putaway. A sales rep needs a sample for a presentation. A customer is waiting at the counter for an item that has been on backorder for weeks. An order selector needs to complete the transfer order by 9:00 AM to make the shipment to another branch. An engineer needs to measure the prototype before he can update the program on the CNC machine. These individuals rifle through the receipt that is staged on the dock and take what they need. In many cases they intend to let the receiving clerk know what they did, but they get busy with other priorities and forget. The receiving clerk comes back from break and checks the order in, noting a shortage that becomes a point of contention with your carrier or supplier.

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Or worse yet, the receipt has already been checked in and less is put on the shelf than was received on the system.

The first rule of the dock is to check things in immediately and put the inventory away as soon as possible. Your dock should not be considered a long-term staging or storage area. The longer items remain on the dock, the more likely they are to disappear or become damaged. Wherever possible, limit access to the dock area. If items must be removed from the shipment prior to check-in, make it an exception to the rule and account for it with a practical process (e.g.: a log sheet that is filled out and always kept in a specific location).

Identification and Unit of Measure

Make a point to train your staff in the proper identification of item numbers and unit of measure when handling product. Misidentification can lead to multiple errors – your inventory is typically overstated on one item and understated on another. Most of your veterans do not have a problem in this area. However, if you are like many distributors your veterans have moved into branch management, outside sales, or counter sales. Most of the new recruits tend to start out in the warehouse, your area of greatest exposure. Recognize that your staff is your number one asset and you are asking them to manage your number two asset, your inventory. Although it is a challenge to find the time to train properly, this is critical to your success. Remember, if you can't find the time to train your people properly, you probably won't find the time to fix their errors either.

A "train the trainer" approach works well in these situations. Spend some time reviewing best practices with your warehouse supervisor or lead person. Emphasize the importance of sorting items at the time of receipt. Make sure all carton labels are visible and check them against packing lists one item or carton at a time. Make clear notations on the document that will aid in the entry of the receipt, regardless of whether you use bar code scanners in the process. Discuss the various units of measure that the new recruits are likely to encounter (each, tens, per hundred, per thousand, dozen, pounds, ounces, inches, feet, bag, card, clamshell, etc.).

If you carry multiple lines, emphasize the differences in unit of measure between one vendor and another. Pay attention to finish and color codes that may follow a base item number. Also stress the potential confusion when handling cases, master packs, and inner packs. The same rules will apply to shelf replenishment, order picking, and cycle counting. Make sure your supervisor spends some time with the new recruit familiarizing them with your processes and documents. At this point apply the rule of two -assign the recruit to spend at least the first two days working alongside your best two material handlers, and then continue to review their output for the first two weeks.

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Data Entry

Automate the data entry process wherever possible. Consider utilizing bar code technology to reduce your exposure. Studies have shown that a competent typist will make 1 entry error for every 300 keystrokes. Bar code scanning yields a read error rate of 1 in 1 million for a typical UPC code used to identify most part numbers. Wedge scanners introduced into the receipt process will not only eliminate data entry errors but product identification will also become much more accurate. Picking verification on the outbound side will provide the same benefits.

In addition to gaining accuracy through automation, steps within a process can be eliminated or at least accomplished more quickly. Scanning items within a receipt process provides other system users with real time visibility into the status and availability of inventory. Under a manual system, paperwork is often placed in a folder or tray and keyed into the system in a batch function at the end of the day. Paperwork can be lost or misplaced. The legibility may come into question. And the delays in the process can lead to more instances of premature use.

I've found the best way to win converts to data entry automation is to show them how they will benefit from the change. First document the steps required to complete the process manually. Make sure all the steps are sound and necessary and support an automation infrastructure. Make sure <u>every one</u> of your products carries a scan able barcode. Make sure your storage locations and staging areas are labeled with bar codes as well. Next, begin to introduce scanners at work stations to replace paper or the entry on a keyboard. Receipts can be done accurately in half the time. Sales order transactions can be completed over the counter in 1/3 the time. Orders can be picked in up to half the time as well. Your users will quickly notice that steps in the process can be eliminated and that the each process takes far less time to complete.

Storage

Bin locations are critical to tracking your inventory accurately. Many organizations are leery of using bin locations because they feel it will disrupt how they do business.

The typical distributor starts out with a few small manageable lines. They place all the items in product number order on the shelf. Over time they add more lines and their existing lines continue to grow. There is no longer room in a vendor section for the entire product offering so items spill over into the next aisle. As new items are introduced they play musical chairs with the product to maintain an item number sequence.

There is a better way! Introduce bin locations into your operation. Many of the distributors I've worked with think that you have to run a large distribution center before bin locations are beneficial.

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Bin locations are always beneficial regardless of your size because they introduce an extra level of control and provide you with added flexibility as well.

Some software packages limit the field size of your bin. Some require you to enter each bin into a maintenance file. Others will ask for a starting and ending sequence of bin locations. Still others allow free form entry with little to no verification necessary. Find out from your information systems department or software vendor how your particular system addresses bin locations.

There are many ways to actually structure a bin location. I recommend an alphanumeric sequence to break up a long string of digits:

- Zone - We start out with an alpha zone indicator – typically tied to the zone itself. Some examples would be S for showroom, W for warehouse and Y for yard. Consider how your bins sort within your software package when assigning the zones.
- Aisle – Next we use a one or two character aisle number, depending on the number of aisles within your zone. Leave yourself some room for growth. You may change your racking, material handling equipment, or add some walls at some point. This may increase the number of aisles within your bin scheme.
- Section or bay- This is the area from pallet rack upright to upright or shelf divider.
- Shelf level- We introduce an alpha character at this point to break up the string. Start at the floor level with A and move upwards … B, C, D, etc. This approach allows you to add additional shelf levels without having to play musical chairs with every product by location on your system.
- Bin slot- This is usually only used for pallet locations to signify pallet 1and 2 on an eight foot beam or when carousels or drawer units are used to store multiple items in an enclosed area. For most supply houses' purposes we find that stopping at the shelf level is adequate.

Zone	Aisle	Bay	Shelf	Slot
W	12	21	A	3

You will need to determine how your system sequences the bin locations for order picking and directed put away. Some systems will simply follow an alphanumeric sequence. Others will allow you to sequence the pick path separately from the bin location itself. It is helpful to the order pickers to keep all the even bays on one side and the odd bays on the other side of an aisle as well.

The important thing is to make use of bin locations. The more adventurous will recognize that storing items in bin locations will allow you to actually mix product on the same pallet or shelf. This will help you to condense product, use more cube within your building, and prepare for new receipts. Not all products will have to remain in vendor line groupings. This will allow you to be more efficient with your pick paths. Cycle counting becomes more manageable as well because most systems will prompt you to count an item by expected location. Searching high and low for product that is not stored by bin is one of the main reasons distributors give up on cycle counting.

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Damage

Most internal damage occurs because of poor material handling skills. Specifically, we have some poor forklift drivers out there. Getting your staff up to speed on proper forklift operation will go a long way towards reducing internal damage. Again, taking the time to train your most important asset to manage your second most important asset is critical. And encourage your people to report damage. Accidents happen. Reducing the exposure is what we should be striving for.

The most common damage occurs when forklift drivers fail to pay attention to the following:

1. Securing an unstable load with banding, tape, or stretch wrap.
2. Traveling forward with a load obscuring their view.
3. Traveling with the forks at unsafe levels.
4. Traveling with a load at unsafe speeds.

Entering a trailer or pallet slot with the forks high and angled upwards.

Proper forklift operation training and licensing can be arranged through most forklift dealers and many material handling organizations.

Theft

Theft is one of those things that are difficult to measure. Unless you catch someone in the act you really don't know if it is going on or to what degree. Internally, some of our people feel that they are not paid well enough and may help themselves to some product in order to make up the difference. Externally, some of our customers give themselves a price break when we are not looking.
Your warehouse and/or production team are your eyes and ears. Therefore, the best long-term means of controlling theft is to tie product loss to income for this group of staff. While penalties may feel like an effective way to bind staff and inventory, bonuses are far more effective. A concise and well crafted incentive system that includes inventory loss (and damage) for the whole of the production floor or warehouse will have a slow but steady impact on inventory shrinkage. When the men and women on the floor don't get their bonus because a coworker has stolen a pallet of goods, they'll often isolate the problem and rectify it without the need for management intervention!

You'll also need to keep an eye on your dumpster. One of the more creative ways to remove product from your building is to take it out with the trash and retrieve it after hours when no one is around. Another is for a shipping staff member or manager to take a bribe for "putting a toe under the scale." Watch for a pattern of cancelled orders. It is not uncommon for product to go out on an order, get sold under the table, and then the order is cancelled after the fact. Finally, pay attention to customers wandering through your warehouse. If you allow customers in your warehouse at all, at least make sure a staff member accompanies them.

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No Cycle Counts

Let's face it… taking daily cycle counts can be boring. Daily cycle counts can also give you insights into where errors are being made within your operation. And when done correctly, they can insure that your physical inventory accuracy level is consistently in the ninety nine point something percent range. The real key in making cycle counting work for you is to stick with it through the complaints, the odd hours, and at times the appearance of little to no benefit. The longer you conduct routine cycle counts, the fewer errors you will encounter. Boring is good!

Cycle counts are meant to be methodical. Solid counting systems require you to count certain sections or products more frequently. Some products may need to be counted monthly or quarterly and others only once a year. Most counts you take will yield little or no variance. This represents the boring part of the process for many. At the same time this can be exciting because the accuracy is likely a result of employing sound processes in other areas of your operation. When you do discover a deviance and follow the audit trail, this provides you with an opportunity to update a faulty process or train an individual prone to error. Either way, you will gain confidence in a system that can yield savings within these areas of your business:

1. Purchasing can confidently place orders with suppliers knowing that the amount of product in the system is accurate.
2. Sales and customer service can confidently inform a customer that a product is in stock when they need it.
3. A sale can be entered at the counter without the employee running back to the warehouse to verify that the product is really there first.

Eventually, you can even eliminate the costly, time consuming task of taking physical inventories altogether.

Remember, our main focus in reducing lost inventory is to identify the areas of exposure and do something positive to minimize or eliminate that exposure. Hopefully, some of the thoughts and techniques outlined above will allow you to spend your time on more productive endeavors.

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About the author

Charlie Frederick is a senior practitioner with Simplicity Tactics. Charlie has spent the past 25 years leading organizations through growth, change, and transition. His extensive background in working with supply chain and wholesale / retail distribution companies allows Charlie to relate extremely well to individuals at all levels within organizations across many industries. Charlie has managed several industry leading organizations in addition to conducting branch management, distribution center, and barcode technology best practice courses and seminars throughout the United States for distributors and trade associations.

About the firm

Simplicity Tactics provides hands-on problem solving and support to manufacturers, wholesale and retail distributors, service firms, and non-profit organizations across many industries. With expertise in areas as varied as commercial development, operational effectiveness and efficiency, and labor relations, the firm offers discrete council for organizations in transition.

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