

## Who Needs Accurate Warehouse Inventory?

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### Introduction

One of our clients supplies consumer goods to a large chain of retail stores. The retailer, with thousands of locations across the US, told us that shrinkage in their retail stores is over 10%, mainly due to theft. It was fascinating to us that this hugely profitable company did not hire more people to keep an eye on things in each store. Even more intriguing is their conclusion that while 10% shrinkage in the stores is tolerable, warehouse accuracy to parts per million is essential. How can this be?

The only logical explanation is that living with and **knowing** about the theft being done in stores is far less than the damage caused by **not knowing** what you have in your warehouse. Our experience suggests it is very difficult, if not impossible, to “fly blind” within your supply chain. In fact, the most common prescription we see for supply chains with poor inventory visibility is mountains of inventory. One Malaysian tobacco producer said that half the bales of tobacco hold, “are just to be safe.”

If the goal is to have the right inventory at the right place at the right time, can you achieve it without a finely tuned, accurate and comprehensive Warehouse Management System (WMS)? Our experience shows that while a WMS is only one component of a successful supply chain, it is a necessary condition of success. There are repeated stories of companies failing due to finding out, too late, that they had too much or too little inventory, when their systems were telling them a completely different story.

### Damage from “Unrecognized” Shortages

Everyone knows about one kind of unrecognized shortage, where you said you could deliver but couldn't find the inventory the computer showed you had. Customers are never happy when they get the truth. The whole problem is far worse than that. We often hear individual distribution centers (DCs) within a supply chain bragging that their reported shortages are less than 2% (or in other words, that they have greater than a 98% service level). The first problem with this statement is that the figure is an average over all SKUs. In reality, what you find is that for some SKUs, there is enough inventory to satisfy your great grandchildren, while for others, there are shortages that have lasted for days, weeks, and in some cases, even months. A WMS cannot be considered complete without having the ability to track such data.

When someone comes into a retail location to buy a product and finds it is out of stock, they may either substitute another product immediately, come back once or several times to find the product, go to another location to find it or simply do without it. The point is that none of these impacts of shortages are recorded anywhere in the system. Even if the customer asks the retail clerk about the shortage, it is rare that the clerk

reports it to the DC. By the time the DC acknowledges the shortage, it usually means that one or more retailers are screaming about it.

A shortage that impacts sales typically occurs long before the DC records it. This brings us to the second problem with statements of reported shortages. What determines how much potential sales were lost due to the shortage is a function of time – over what period was the item out of stock or even in danger of stock-out? This information is not recorded by SKU in most warehouse management or distribution management systems. In other words, the damage to the supply chain is not just in terms of how many products are out of stock, but for how long and in how many locations. If your regular grocery store is repeatedly out of stock of your favorite ice cream, how long will it be before you change grocery stores permanently **without anyone in the supply chain being aware of it?** When you do, the entire supply chain has permanently lost sales.

### **Damage from unrecognized “Un-shortages”**

Many supply chains never know they suffer from this ill. Imagine you have plenty of product in the warehouse, unfortunately, the computer shows you have none. When a customer calls for the item, you tell them you are out but to please come back and buy again later. Let down, they may not return but, oops, here comes the order the system or buyers automatically placed when the computer showed it was needed. What are you going to do with those surpluses?

### **Ineffective Ways that Owners Deal With Too Much Inventory**

Most warehouses are painfully aware when they have too much inventory. Either their physical space is consumed or their measurement of inventory turns provides negative feedback. In either case, by that time, the damage is already done.

The decision maker now has no choice but to take drastic action to correct the situation. Sometimes, the action is to push the inventory to the next link in the supply chain. We have seen this done by brute force, in the case where the owner of the warehouse is a manufacturer who has control or influence over the retail channel. More likely, they have a sale, doing damage to themselves and their channels in two ways. First and obviously, they lose margin on their products through sale discounts. Second, the customers who buy sale items no longer need items the channel wishes they were selling. For example, if a discount entices you to snap up a 2004 Chevy you no longer need the 2005 model GM desperately needs you to buy.

It could be worse. We have a client who leased temporary additional warehousing space and had to accept logistics nightmares and loss of accuracy and inventory control.

### **Unrecognized Inventory**

In order to know what action to take, warehouse and procurement people need to know not just how much is in stock, but how much was ordered and still on the way. Ideally, it would also help to know if an ordered item has already been produced by the factory.

When an SKU is out of stock, there may be no need to order, if the product will be re-supplied within the next few days. In addition to doing everything possible to prevent shortages, the WMS, in combination with the replenishment mechanism, should be seeking to stage deliveries regularly to minimize replenishment time. The key problem is

not giving the warehouse visibility of enough of the supply chain's inventory – what is on order, what is on the way, what exists in other parts of the supply chain, etc.

## Reasons for Inaccuracies

The two inventory mistakes we repeatedly witness within supply chains are:

- **The use of forecast, rather than consumption data, to drive stocking levels across the supply chain and**
- **poor, untimely record keeping by stocking locations.**

Some clients have been convinced that legacy accounting systems can work like a modern WMS. Not surprisingly, those implementations take longer to realize the huge benefits from higher inventory turns and reduced obsolescence.

We had an interesting situation recently with a client whose inventory system reported **negative inventory quantities**. We responded that we thought this was impossible. In their world, it was not. Receipts and shipments were batch updated manually in their inventory system every day or two. Frequently, shipments were updated **before** receipts, creating the negative inventory quantities. If inventory data is days old and lacks accuracy, it is almost impossible to make good replenishment decisions.

## Six Criteria for a Good Warehouse Management Solution

A problem many companies find, when looking for an adequate WMS, is that providers charge \$500,000 to \$2,000,000 for software, plus license fees, plus modifications, plus annual maintenance fees, plus mandatory upgrades a few years later. The worst part is that there is no guarantee that the system will provide the expected return on investment, **especially when the WMS is not properly connected to the rest of the supply chain**. Many WMSs do not track or provide the necessary information or reporting that lead you to increased turns or decreased shortages. The end result can be that, after all the hassles, interruptions, delays, lost work and high costs, there are no tangible bottom line improvements.

To avoid this situation, demand that any vendor meet the following criteria:

1. A real-time WMS is essential to know exactly what is happening with your inventory at all times. You can accurately tell customers what you can do and what you can't. When IDEA implements inventory replenishment solutions, we begin by verifying inventory quantity and location data. Accurate and timely data is the foundation of two essential goals – reducing inventory while simultaneously maintaining or improving service levels.
2. A second "must have" criterion for any WMS is a connection to the end of the supply chain, to actual consumption data. If daily consumption data is not available, seek consumption data as frequently as available. Consumption, not forecasts, must drive inventory replenishment.
3. A third element of any WMS is the visibility beyond the warehouse, to what is on order, what is on the way, and what exists in other parts of the supply chain.
4. To meet the goals of both the warehouse and the supply chain, any WMS must provide reporting on lost sales (or the danger of losing sales). This reporting goes beyond shortages of SKUs. It must indicate the value of lost sales by taking into



account the sale or gross margin amount of the SKU **and** the number of days that the item is out of stock or in the danger zone. In our system, this is called Throughput Dollar Days. It provides focus and priority to procurement. With this report, purchasing can put their efforts to the SKUs and suppliers that will have the biggest impact on service levels and the company's profit.

5. A WMS must provide accurate inventory information to guide procurement on necessary actions. For companies with a small number of SKUs, you do not need a WMS report – just look in the warehouse for 5 minutes. However, when you have several hundreds or thousands of SKUs, buyers must focus on those few that are in danger of killing profits. The danger for many distributors today comes more from obsolescence than from carrying costs. The key indicator is not just how much inventory is in the warehouse at any point in time, but the dollars tied up in that inventory. In our system, this report is called Inventory Dollar Days. The goal is to reduce this amount, as a secondary priority, maintaining service levels.
6. Guarantees and penalties. Many software and logistics companies expect you to take responsibility for results. If a vendor asks you to implement their solution without any meaningful assurance of increased turns and reduced shortages keep looking. Vendors leave the scene when they have spent their budgeted time and cost for implementation. In other words, when they have achieved their own metric of completion – “the software is installed” or “we moved the goods from point A to point B.” The criteria for a good WMS solution is a vendor who is willing to take long term responsibility, not for technical results but real ones – reduced shortages, reduced inventories, increased turns and net profits.

So, without accuracy and real-time visibility your efforts to improve your supply chain, that is to sell more, will be less productive. Although accuracy is crucial it is not sufficient to maximize results. You need the tools mentioned above, including guarantees to rest easy. After you check off the sixth criteria, watch the earnings pour in.

<b>IDEA'S WAY OF THINKING</b>	<b>IDEA'S METHOD</b>
<ul style="list-style-type: none"> <li>• <i>Neither an accurate forecast nor changing vendors is required for success</i></li> <li>• <i>There is a way to both increase sales and reduce inventory</i></li> <li>• <i>Supply chains sell less when clogged with inventory</i></li> <li>• <i>In the long term, unless the supply chain sells more no link can sell more</i></li> <li>• <i>We must help clients gain buy-in internally and with supply chain partners</i></li> <li>• <i>The majority of our fees are based on improved return on inventory</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Verify the existence of inventory imbalances and the benefits of moving from a "Push" to a "Pull" system</i></li> <li>• <i>Gain top management buy-in to the assessment and support of the approach</i></li> <li>• <i>Build knowledge and understanding across the supply chain, at all levels</i></li> <li>• <i>Utilize systems that deliver actionable information, integrated with existing software</i></li> <li>• <i>Work with you until expected results are achieved</i></li> <li>• <i>Share the tools and know-how to continually improve results</i></li> </ul>
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