How to Attack Discrepancies in your Inventory

Article By: Jaime Marulanda

Almost every business that maintains inventory has invested in software and information systems to help keep track of stock levels and manage inventory properly. Regardless of the type of business, inventory control systems are available and are incorporated into point of sale systems, warehousing products, distribution systems, among others. Regardless of the investment made to combat the discrepancy war, you most likely have your inventory off by some percentage. More likely than not you’ve also probably blamed the technology, developer, support personnel, or anyone else involved in the process. The problem usually has nothing to do with the technology itself, but with the physical management of the asset. Each business has their way of doing things, and the problems usually lie in those procedures.

Such procedures don’t always take into account the critical factors that come into play when dealing with inventory. The following three steps are compiled suggestions based on years of conducting inventory analysis and developing inventory systems. These steps often clarify and identify the source of the problem, which is critical upon the development of a corrective action plan. Yes, some will require additional investments in personnel and/or technology; nevertheless, such investments will be significant in reducing the discrepancy issue to a level that is manageable and acceptable.

Conduct a Pareto Analysis (also known as an ABC Analysis):

Vilfredo Pareto, and Italian economist, in 1907 wrote the Pareto Law which stated that about 80 percent of Italy’s wealth was in fact held by about 20 percent of its population. This rule became known as the 80/20 rule and is as true for inventory as it is for mostly every concept relating to value. In terms of inventory value and sales value, 80 percent of the sale will be represented by 20 percent of the items in inventory. Therefore, an analysis in inventory was developed based on this law and this analysis is known as the ABC Analysis of Inventory. Inventory is categorized into the three groups, A, B and C, which allows for more efficient management of said category products. Type A products are high rotation items that represent the most popular items, while B represent the next most active items. C items are then the slow movers. In terms of percentages based on the ABC Analysis, A items will represent about 12% of the total inventory and roughly 75% of the sales, B items will represent 25% of the total inventory, and C items will represent the last 63%. As a control strategy, it is therefore critical to have a tight control on all A type items, given that these will account for the vast majority of sales and are a very manageable percentage.

Higher cycle counts should be performed on these items given that they account for the most movement. Other strategies such as holding lower quantities and placing more frequent orders can also reduce not only the amount of capital invested in inventory, but also can reduce the amount of risk involved in holding the asset. It should be noted that this should be done only if you have a very clear customer service level number analyzed. Poor execution of a high rotation strategy can lead to bad service levels and thus can negatively impact the business.

Cycle Counting:

Cycle counting is a must for inventory control. Most of the excuses I hear are that it is difficult to monitor cycle counts of 10,000 SKU’s. And, while I agree that it has the potential to be difficult if not properly executed, there are strategies to make such an activity manageable. Let’s take the example of an arbitrary SKU count of 10,000 distinct products. Based on step one above, the total count for Type A, B, and C items would be 1200, 2500, and 6300 items respectively. For cycle counts, 10,000 items would be a bit unmanageable. However, 1200 items are quite controllable. The idea of this step is not to be overwhelmed but to create a continuous process as seamless as selling. Given that most stores, warehouses, etc have a period of low activity, cycle counts should be conducted during this time and the items counted should be broken down into smaller
units that can be quickly and effectively accomplished.

For a store with 10,000 total items, 1 – 2 employees can be used to count 100 - 200 items at a time per day. This would complete a full cycle count for the most important items within a week. Just with this done once a month, about 80% of your inventory value would be accounted for. In reality, B and C type items should also be cycle counted, just not as often. Depending on your inventory value and rotation, cycle count strategies can be developed where A type items can be counted 2 – 3 times a month, B items once every 2 – 3 months, and C items about once every 3 – 4 months. Take into account that such counts should be broken down as specified above to make the process manageable.

Inventory Tracking:

Once step one and two are completed, the resulting data should be analyzed in order to take action. This is where percentages become increasingly important. Before continuing, you must establish your target percentage of acceptable discrepancy. This percentage varies from business to business but should be such that the margin is acceptable and the business can live with such discrepancy. Let’s say, for example, that I want inventory accuracy up to 97%. This gives me an acceptable discrepancy of three percent.

Starting with A type items, you should calculate your discrepancy per item. Each will provide a number. Say for example item 123 had a physical count of 142 but you should in fact have 144 of the item. You do this for every item and total the physical count of the items and also total the quantity that you should have for the item as well. You then divide the total of what you actually have (physical count) by the total of what you should have and multiple by 100. This will give you the accuracy. If you want the discrepancy percentage, simply subtract the result from 100. If this is less that your target goal, then you need to look closer at the results and place more emphasis and items where the discrepancy is too high. If the result is off by a large margin, then you need to conduct cycle counts more often. If the margin is closer, then you can look at individual items that seem to have the high discrepancy. To do this, do the same percentage operation but for each individual item totals. Although this may seem overwhelming, it should be noted that such an operation can be quickly done in Excel.

Once this is done, you should have a discrepancy percentage result for all items. Now it is time to take action. For such items that are with high discrepancy rates, you can place them closer to supervision. In retail, this can be established by bringing the items to the front near end caps that are clearly seen by employees running the registers. You can also place them where surveillance cameras capture movement. Additionally, supervision can be established in the warehouse area or where the items are kept. These items need to be cycle counted constantly. The supervision alone will reduce the discrepancy. If the problem is theft, someone will eventually be caught by the constant supervision or the theft will stop or diminish given that everyone will be aware of the heightened alert.

Although the preceding three steps are not the only way to reduce the discrepancy issue, such steps are critical and should be taken by all business owners managing inventory. They are part of a solid inventory management strategy and that can decrease the loss in inventory as well as increase sales and improve service levels. In the following weeks, I will write additional articles that delve deeper into the inventory management issue including examples of how to conduct an ABC analysis and a sample development of a cycle count strategy.

JAIME MARULANDA

Software engineer from Florida International University in Miami, FL with a Master’s degree in Management of Information Technology. Currently finishing a Doctorate degree in Management of Information Systems and Technology with a dissertation titled The Effect of Collaborative Technologies on the Profitability and Inventory Efficiency of Micro-Retailers. Owner of Sigma Software Solutions, Inc. and professor of Management of Information Technology at Northwood University in West Palm Beach, Fl.