Great Service begins with Warehouse Efficiency

This post is not for Senior Level managers or Executives to go out in their warehouse(s) and start making changes; because you won't, nor should you. That is not your job and you don't want it to be. However, if you want to understand why the order cycle time is too long and your staff can't get orders shipped in a timely manner, or why you are spending unnecessary dollars on labor, then you should use this as a guide to understand why and have your warehouse operations audited. This could serve as an action item for those responsible for your warehouse operations.

Service

Every distributor wants to deliver the best service, and most feel that they are providing it. In distribution, a big element of service revolves around the order cycle; from the time the customer places the order to the time it is delivered. Small Business owners, maintenance men, contractors and many other types of customers use distributors so they can carry little to no inventory and depend on their distributor to get what they want, *and fast*. That is why they like efficient online distributors like Amazon. If you cannot perform, your customer will go somewhere else.

So how does a distributor deliver the necessary services that allows them to obtain, keep and satisfy their customer base? It all starts with preparation, efficiency and analyzing data; but most important execution. To achieve and improve service, I want to concentrate on ranking items, especially for your warehouse slotting. Whether you have a WMS system, automation or none at all, it is imperative that you rank your items and understand why. There is not a one-size fits all here, so your DC Managers must be proactive and fully understand why it is important. Of all the functional duties in a warehouse, picking orders are the most time-sensitive. The efficiency must be at its' best in order to reduce cycle times.

Product ranking should be done for both sales and operations. I like to rank items in four (4) areas that I label "**SPVV";** where (**S**) is for SALES; (**P**) is for PROFIT; (**V**) is for VOLUME (referred to as demand); and the other (**V**) is for VELOCITY (referred to as Hits). You can certainly classify any way you want but make sure your ERP software has data fields for this, otherwise it will be manual (which is not that hard to accomplish with a simple spreadsheet). For this article, I reference a hit as every time a product is ordered and picked from a location. For example, ten (10) orders with an order quantity of one (1) each, is ten (10) hits. One order, with an order quantity of twenty (20) is one (1) hit.

For obvious reasons, rankings have different values. In organizations that sell both large expensive items and small inexpensive items, the items can have rank values that are drastically different, which is why I choose to have multiple rankings. For example, the large item (like a high-tech piece of equipment) may sell for $50,000, and the inexpensive item can be a pack of "O-Rings" that cost ten cents ($0.10) per pack. Now let's assume (its ok to do that for this exercise), that your sales force sells one (1) piece of the equipment per month and two-thousand (2,000) packs of O-rings per month. The equipment generates sales of $600,000 per year, and the O-ring generates sales of $2,400 per year. Ask any sales rep, sales

manager or executive what is the most important item and I am certain that they won't tell you the O-ring. That is the Sales and Profit ("S" & "P") in the rank. Conversely, if the O-ring gets sold ten (10) times a day, that is ten (10) HITS PER DAY. Your buyer must be aware that he/she cannot run out of that item because (obviously) it is a very important item to your customer. Your warehouse staff must go to that pick location ten (10) times every day, so it has more activity for them. That is the volume and velocity ("V & "V") in the ranking. So, from a service element and efficiency standpoint, the DC manager and the buyer should pay much more attention to the O-ring than the $50k piece of equipment. In fact, the equipment may not even be a stocking item. If it is, it shouldn't be in a prime picking location.

Wasting time

Research over the years has proven that in a traditional warehouse, close to seventy-five percent (75%) of time is wasted by staff walking around and searching for items during both the pick and put-away process. Think about that. How much money can you save and how much service improvement can you get if you use common sense and logic when you layout your warehouse space. Even if you have a WMS, you will still need to shrink the footprint of your popular items to gain the most efficiencies. A WMS system can tell the operator where to go, or where to go next, but if your layout is inefficient, it doesn't help because they still have to travel to get it. If you are in a warehouse that is under (10,000) square feet, it may not matter too much (and you probably don't use a WMS), but if your building is 100,000 square feet (~400' x 250') or larger, think of the potential lost time; even if the staff are riding lift trucks or other powered equipment. The key here is to not let your employees get lost in the forest of racking in the large warehouse; it provides a great excuse and it is a great place to hide, waste time, or have a mini warehouse meetings with other staff. Think of the activity generated for the O-ring, how much time can be wasted if it is located far from the dock and/or on a third or fourth level of the racking. Multiply that travel, ten times (10x) per day. That is just one item, and you may have fifty (50) items with similar characteristics. Do the math.

Slotting Product

Many DC managers make the mistake of storing "like" items (or families) together. They keep all the screws together with screws, all the gloves with other gloves, all the hats with other hats etc. This is the best way to lose efficiency and incur errors. You are not in a supermarket where all the potato chips are together and the customer can look and ponder to find the one they like the best. You will hear the argument that "when I want to check the gloves, I know where they all are". Well that happens so minimally as opposed to the efficiency gained in the process of shipping orders, (and it is a ridiculous argument). That philosophy of inefficient slotting, will cost you time and wasted dollars when your goal is efficiency and speed. If your product locations are correct in the ERP system, you won't have that problem! For locations, think of every slot as an address and every product number should be thought of as a combination of the product number and the location. For example, product 12345 in location A47 should be thought of as product 12345-A47 and the secondary (or overstock) of that same product that is in location B94 should be referenced as 12345-B94. While that may seem to be crazy, when it comes to efficiency and with a WMS, it is logical. The exception to storing in families' rule is for

overstock. Overstock can be stored together. But keep it close to the primary pick slot to speed up replenishment.

Location, Location, Location

Think of pick slots like Real Estate. The prime property has the most value. The person with the most money can purchase the most valuable property. Now think of each hit as a dollar value. The product with the most hits, has the most money to purchase the most prime pick slot. And that makes sense since the locations that you go to the most are prime. The fastest moving items should always be placed in a strategic area so that you reduce the footprint and the time to search. Rank your products by descending hits and begin a virtual layout of your area. Here is where you should be creative and defy the standardization of racking or storage types; be unconventional. You don't need (or want) to have symmetrical racking for every product. You should create a "POD" for fast movers and design it the way you feel best, based on the configuration of your facility and the products that will be housed in the rack/shelving. Use carton flow, single select rack, shelving and even the floor if it calls for it. Because different products have different characteristics, so should your rack design and layout. The layout can be a single row, two (2) sided, a horseshoe or an octagon. You create it. No matter how you provide a layout, make it efficient. Picking bulk items is different than picking small items. You don't want to stack heavy items on light items and you don't want staff pushing or pulling heavy items throughout the process; save those until the end. Since these items are the most popular, they will be purchased, received, put away, picked and replenished the most often, so make sure your fast pick area is closest to your dock doors. This will cut down on unnecessary movements in all aspects of the process; fast in, fast out. Think of it as you would cross docking.

Now that you know the products with the most hits, you now begin the logical slotting process. The top hit items should be at the most reachable spot possible with the least effort, as it will be accessed most often. Make certain that your location and product marking labels are large and human readable, as well as barcoded. Instead of having "like items" or "families" together, you now have the fastest movers together. Why waste precious real estate for items that don't move. When a customer orders a box of your most popular #8 screws, what has the greater chance of error, having the hat next to the screw and the screw next to the glove, or having a #6 screw next to a #8 screw and then a #10 screw and a #12 screw in succession; (storing in families)? Having one box of screws between gloves and hats has far less chance of error than choosing between four (4) types of screws which are probably in the same size, style and color carton. In this example, the only noticeable difference in packaging may be the screw size (i.e. #6, #8 etc.). So you ask "what if two (2) of the screws have the same number of hits?" DON'T PUT THEM NEXT TO EACH OTHER! Separate them by 1-2 bays in the rack. The point here is to eliminate as many chances of error as possible.

Review Periods

Products in many industries have seasonality as well as changes in their popularity. I suggest a quarterly review of the hits and potentially a re-slotting of your items. It only makes sense. In the world of HVAC, you certainly don't want heaters stored in the prime pick location in the summer. Come the Fall, you

better believe that they will move quicker. If you don't review your items and their hits, you may have an efficient situation today, but (in the future), you will be missing items that should be located properly, reverting to some levels of inefficiencies. The same can be said for items on sale. If the "widget" goes on sale for the season or even a month and you are sure that it moves quickly, create an area for "sale" items because there is a good chance it will be a fast mover (even if only for that period). The Pareto principle (80/20 rule) exists for a reason; because it is real. However, I have found it to be more skewed. In sales and in the DC it is closer to (90/10). Be certain that your staff is prepared for it. After all, there is a lot at stake with satisfying customers and saving time to provide great service and efficiencies to save operating expenses. There is a lot to be gained by this exercise.

This information will work in most distribution operations. The fact that there is a lot of similarities and product characteristics in distribution makes this information relevant. However, there are differences and idiosyncrasies in every business and as I previously stated, it is not a "one-size-fits-all".

Should you need to take a deeper dive on the subject, feel free to contact me.