



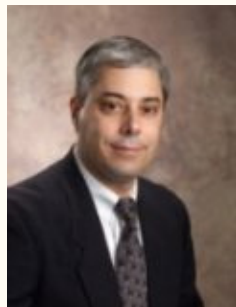
The Distribution Factor

Helpful Information and Ideas for the Distribution Professional

Volume II, Number 6
July 20, 2007

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Distribution Factor!**

E-mail:



Sam Flanders, President 2WMC

This month, I'm please to introduce a special series focusing on how distribution operations can be leveraged by changing the focus from the warehouse to the entire supply chain.

In our video of the month, I look at a new twist on pick to light, which actually is a portable "put" system.

Also, this month, I am introducing a new type of story based on a client case study. In this month's issue I will look at a neat strategy called "Order Completion".

Finally, my operations spotlight will look at one of several different powered vehicle options that can help you to be more productive in the warehouse.

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- [Put DCOF 2007 on your Calendar - REGISTER NOW!](#) Click to learn about "The Distribution Center Operations Forum" which will be offered Sept. 26-27 (Philadelphia), Oct. 3-4 (Chicago).
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Feature Story: 20 Ways to Use the Supply Chain to Your Advantage



Receiving and the Supply Chain

Part I - Focus on Receiving

This month we introduce Part I of a multipart series looking at distribution from a supply chain perspective. It is all too easy to view your distribution operation as a closed system that simply has to deal with the materials that are brought into the distribution center and ship them in the most efficient manner possible.

Receiving in some facilities "just happens". However, with a little planning and tracking of problems, you can work with vendors to improve their service to you and document issues that need to be resolved.

This series investigates what might happen if you think outside of the "warehouse box" and consider how changes made outside your distribution center may end up benefiting your operation and saving you money. This month we focus on the receiving function.

1. Implement a Vendor Scorecard

Use a "scorecard" to keep track of how your vendors are doing. Vendors will include both freight carriers and the companies who have sent the products. Develop a simple, objective rating mechanism that your receiving personnel can use. You can assign grades for: right quantity, proper labelling (both pallet and cases), received undamaged, no defects in merchandise, and received within the specified delivery window. Flag vendors who fall below a minimum grade you've defined as acceptable or who have a significant failure. The scorecard can provide an objective

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Free Material Handling Resources!

2. Simplify Receiving and Inventory Management with better Labeling

Developing standardized labeling for pallets and cases can help your receiving operation. Try to get your vendors to provide standardized labelling can include both human readable information and bar coded information, such as a bar coded PO number.



An example of a good label

Labeling and bar codes on the outside of boxes can also help with cycle counting and inventory management, long after you have completed the receipt of this product.

3. Schedule Receipts Rationally

Do you currently schedule all your receipts? If not, would scheduling appointments help to smooth activity out on the dock? Consider setting up a master receiving schedule so that all purchases have a desired "receipt window". Also, consider your peak shipping periods when scheduling receipts.

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Video of the Month: Pick to Light Cart

Pick to light has been around now for almost 20 years, and it is widely used for high velocity picking in fast moving SKU environments. However, did you know that pick to light can be used to pick items stored in slow moving areas as well? This capability is made possible by mounting the pick to light displays on a portable cart, and talking to the cart by RF or stored instructions.

A "Pick to Light Cart" can be used to direct both the picks and the puts. The next pick location can be identified via a central display on the cart, a display worn on the wrist, or via technology such as voice. Lights mounted under individual order locations on the cart can then identify the put to order locations.

While voice systems can also direct puts to numbered locations on the cart, pick to light has an advantage when there is more than one order with a particular item. The cart display can say "Pick 6", then on the cart lights can display the "put to" quantities for multiple orders. For example, we might put 2 to order A, 3 to order C, 1 to order F (total of 6 units transferred). This pick and deal function can facilitate product transfer more quickly than a voice system

[Click Picture to Play](#)



Video Courtesy:

Dematic

Requires Flash

Clicking the graphic to the left will open a new window and play your video.

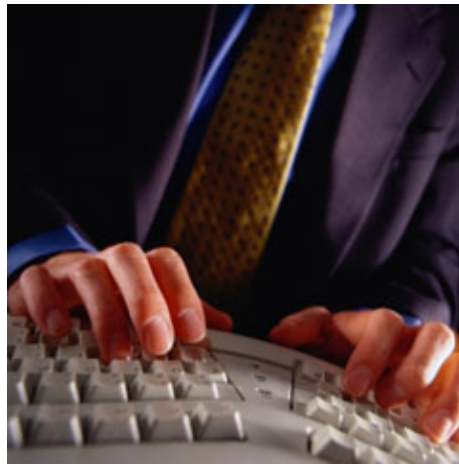


Above: A Daifuku PTL Cart
Photo Courtesy: Daifuku

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Case Study – Using Data Analysis to Optimize Your Picking Operation

Click the icon above to be taken to our White Paper page. This page has 4 different white papers of general interest to those who manage order picking operations. There are two white papers on general order selection, and there are also papers on carousels and voice directed picking.



"Data analysis" is a name given to the process of evaluating and interpreting historical electronic data. In distribution environments, we most commonly look at historical product and order data, to look for patterns and opportunities that are not apparent from observation alone. This month I look at a specific type of analysis which can be done for operations that have a very small number of SKUs common to many orders.

Data Analysis can be done in house or by hiring an outside consultant.



Click on the icon above to be taken to our material handling resource locator guide. This guide is interactive, easy to use, and driven with an icon-based interface. Using it, you can quickly locate information on systems, software, and equipment. Each area provides links to vendors as well as a brief description of each technology. Try it out and bookmark it for future reference!

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At WMC, we are experts in helping our clients save money. We do this by helping clients select solutions that meet their specific needs. Unlike many systems and

Case Study: Order Completion Analysis

A favorite analysis of mine for small SKU environments is called "Order Completion Analysis". Using the analysis, we first rank the SKUs by unit movement velocity, fastest to slowest. We then take the top 10 SKUs and determine what percentage of orders can be 100% completed with just those SKUs. The same analysis is repeated for the top 20, 40, 80, etc SKUs. Recently, I performed this analysis for a client who had approximately 400 SKUs in total. We found that when looking at only the top 150 SKUs by unit movement, we could complete about 80% of their orders. The other 250 SKUs were only required for about 20% of the orders. As a result, a recommendation was made to put the 150 SKUs together in a special "fast pick" area, and this enabled the picking of 80% orders to occur much more efficiently.

A word of warning: if you do put your fast movers together, make sure that the pick system can handle the volume of pick activity. Aisles need to be big enough, and if a conveyor system is used, it must be able to handle the order volume. If not, congestion and traffic jams can occur and "elbow bumping" may become unacceptable.

Order Completion Analysis is just one example of many analyses that can be done to enhance a picking operation. Historical data can be used to perform "What Ifs?" to see which opportunities have the greatest value to the operation with a minimal labor effort, and the question can be asked before any physical changes to the operation take place. The results can provide highly objective information about the potential for operational improvement.

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Technology of the Month - Part I - Do You Have the Right Vehicles?

equipment providers, including some who call themselves consultants, WMC has nothing to sell you other than our experience. We work exclusively for you and represent no other system or equipment provider.

We evaluate low or no cost solutions first, and then show you what you can do before you invest in capital solutions. We then show you the true value of those capital solutions by evaluating only the additional savings that they may provide - a step often skipped over by salespeople.

We understand all types of order selection systems, including voice directed picking, pick to light, carousels, AS/RS systems, sorters, A-Frames, and RF scanner based systems. We can help you figure out which solutions are best for your operation.

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A Look Ahead to Next Month

Feature Story:

Focus on the Supply Chain:
Optimizing Materials from Vendors

Video of the Month:

Bubble Wrap on Demand

Operations Spotlight:

Focus on Fire Safety

Technology of the Month:

Man up Truck Order Picking Applications

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As your operation grows, the type of order selection vehicles that will work best for you may change. Growth often means increasing numbers of SKUs, and larger on-hand quantities. It is not uncommon for shelving storage requirements to grow to cases on pallet rack shelving, and then to full pallet loads of a single SKU. In a business where items are constantly added and changing, you may find that SKUs will proliferate. All of these factors can combine to create extra travel that can place a growing burden on your order picking staff. Fortunately, there are some powered vehicle options that can help. This month, we talk about a system called a "tugger"



Above: A stand-up Tugger. Carts can be attached in a "train" formation behind this device.

Below: A Traditional Tugger Used to Haul Baggage at Airports



Batching Orders can Cut Down on Travel

For operations that have a steady flow and backlog of orders it is easy to sort orders into common groupings, and then pick a group of orders together. Orders that are picked together on a single picking run are often referred to as a "batch", and picking a batch of orders almost always cuts down on the total traveling distance needed to fill the orders. Manually pushed carts are the lowest cost vehicles used for order batching, but you can also batch orders and combine them with a powered vehicle. When "Batching" you can pick to order, or you can pick by item, and sort things out on the back end. Tuggers can help with either batch picking strategy.

A tugger is a vehicle that can tow carts behind it, with each cart carrying several orders. Since the tugger is a powered vehicle, carts with heavy items or large numbers of items can be towed with ease. As a result, the operator can pick larger batches than they could if they were using a manual push cart.

A tugger may have a chain of carts behind it, with each shelf containing requirements for a particular order. Alternately, it is possible to pick all the materials for the batch en-masse without placing to order, and then pick from the shelves of the carts once they are delivered to the pack station.

To make these applications concrete, here are a couple examples:

Farm Supply: (Pick Units First, then Create Orders)

Consider a farm supply picking operation where customers order only a few items and units per order. Items are big and bulky, such as a bag of fertilizer, or a 5 gallon pail. A tugger can be used with a chain of carts to pick the individual items for a batch of several orders to shelves on the cart. The picker would use a pick list that summarizes the pick location and total quantity of units needed to satisfy all orders. Items from a stock location would be picked to a single shelf and placed together, even when they are required for multiple orders. When the cart is delivered to a pack station, the packer can select those items from the tugger carts that belong to a particular customer order.

Battery Distribution: (Pick to Order on the Cart)

Consider a specialty battery distribution center that is picking car batteries, a very heavy commodity. Here we have many one or two item orders. If we use a cart with "cubbies", where each cubby can hold a single order, the tugger can move around the warehouse while the order selecting associate picks and places batteries to order cubbies. As each battery is picked from the stock location, it is then placed to a specific cubby designated for a single customer order. When the carts are dropped off the packer just pulls the battery(ies) and

paperwork out of a single cubby to ship the order.

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