



# PERFECTING *the* **PICK PATH** >>>

*Improve pick bin location names, optimize product positions, implement batch order picking, and enhance truck loading processes.*

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Distribution Centers are constantly changing. New products are being introduced daily and space is often at a premium. As companies grow priorities will change. What was once an unlimited focus on customer satisfaction will at some point need to be balanced with improving operating efficiencies.

Successful companies are the ones that have learned to balance the need to meet customer expectations with the need to operate efficiently. This article deals with the challenge of setting up the warehouse to operate efficiently while being mindful of the need to meet customer expectations.

When changes to the warehouse are being considered, some fundamentals concepts should be reviewed. Core components to review include:

- 1 **Determining the truck loading process**
- 2 **Naming pick locations and back slots**
- 3 **Positioning products along the pick path to achieve efficiency**
- 4 **Driving productivity and efficiency with smart order batching**

Companies that think through these fundamental concepts will have a much better opportunity to build efficiency into their operations.



## Step 1. Determining the truck loading process

Most food distribution centers have three or more pick areas. They have a freezer, a cooler and a dry area. The first question to consider is how do we want to pick and stage our customer orders? It is very common for orders to be picked in two parts. Freezer orders get picked and then staged by truck or stop in the freezer until they are ready to be loaded on to a truck. Cooler and Dry items are frequently picked together by customer or stop number and staged together in the cooler until the order is ready to be loaded onto the truck.

Many companies pick on electric pallet jacks and leave the orders on the pallets. When a truck is ready to be loaded, the pallets for that route are brought out to the loading docks. Trucks can be loaded by pallet, or packages can be floor stacked in the truck. This decision is generally made based on either traditional process (this is how we do it) or truck utilization limitations. It is faster to load trucks by pallet but loading by pallet requires more cube than floor stacking, so less customer orders can be loaded on a truck when loading by pallet.



The other major consideration in determining to load by pallet or floor stack, is the amount of repack that is distributed by your company. Small amounts of repack can generally be added to the top of a pallet, but if more than 20% of your packages are repack, then you may want to consider floor stacking or a hybrid of both pallet loading and floor stack.

If you are considering pallet loading be sure to include shrink wrapping as a step in your process.

✓ **Best practice for case-in, case-out operations:**  
*Pick and load by pallet.*

✓ **Best practice for repack operations:**  
*Floor stack packages in your trucks.*



## Step 2. Naming pick locations and back slots

The naming convention you use to label the locations where products are placed in your building serves two purposes. First it identifies each location similar to the way your home has a post office address. When an employee is looking for a product the location name will direct the employee to the correct spot in the warehouse. The simpler you can make your naming convention, the easier it will be for new employees to learn where products are.

The second purpose is to create a pick path. When employees are picking customer orders, the pick path determines the route they will follow to get to the various products the customer has ordered. Generally, the naming convention will start at one end of the warehouse and proceed to the other end. Each aisle can be represented by a letter, and each section in that aisle can be represented by a 2-digit number.

A section is the space between two pallet uprights. Once the employee is at the section you can then direct them to a position and a level in the section. The position can be a number and the level can be a letter. So, a typical location name where a product will be located could be A10-2A.

This would be aisle A, section 10, position 2, on the floor. The dash is used to make it easier for the employee to separate the location parts. If you have many pick areas in your building, you may want to assign a letter to each pick area. For example: A could be dry, B could be cooler, and C could be freezer. Then a typical product location could be AA10-2A. In this case, the product is located in the dry area, in aisle A, section 10, etc.

Take care when adding pick area identifiers to locations. The letter used for each pick area will affect the sequencing of items in the pick path.



If the same picker is picking dry and cooler items and you want the dry items picked before cooler items be sure to assign a letter to dry and cooler that will make that happen.

If C is used for cooler and D is used for dry, then cooler products will most likely appear first on your picking documents. Assigning A as the identifier for dry and B as the identifier for cooler, will cause dry items to display first along the pick path.

Additionally, if you have multiple coolers, determine the pick path you want your picker to follow, and then name the areas, aisles, and sections accordingly. When assigning names to the sections, it is important to think about how you want the pickers to pick the orders.

Do you want them to go up one aisle and then down the next? Or do you want them to go up and back in each aisle. To make this pattern happen, the sections need to be numbered with this in mind.

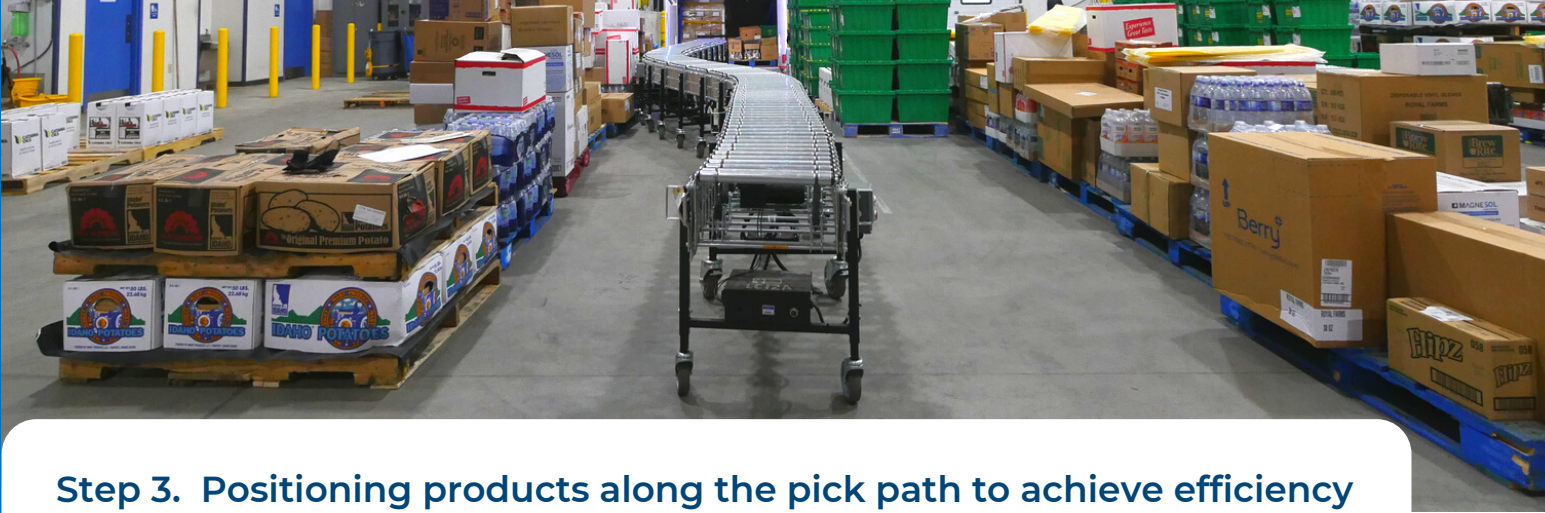
Aisle A starts with section 10 in the front on the right and section 11 on the left. Aisle B will need section 10 as the first section at the back end of the aisle.

The section numbers will increase as the picker moves towards the front of the warehouse. If you are planning to implement this weaving pick pattern, be sure there is space at the back of the aisle for your pickers to move into the next aisle.

✓ **Best practice for case-in, case-out operations:** *Pickers follow a weaving pattern as they move through the aisles. They start at the front of aisle A and then start at the back of aisle B. This will bring them to the front of aisle C, etc.*

✓ **Best practice for repack operations:** *Repack operations are typically designed so the picker walks along an oval conveyor line. They start each order at the same spot. Assign bin location names to follow and support the conveyor layout.*





### Step 3. Positioning products along the pick path to achieve efficiency

The sequence that full case products are picked by pickers will have a major impact on your drivers. It is very common for products to be positioned in the warehouse based on weight. The heaviest products should be picked first so they are on the bottom of each pallet. To facilitate this happening, heavy products should be located at the very start of the pick path.

This will eliminate your pickers searching through orders looking for the heavy products to help them build a solid pallet. This admittedly gets more challenging when you are picking multiple stops on one pallet, or picking dry products and cooler products on the same pallet.

When planning repack product positioning, some companies choose to locate products based on volume. By keeping high volume products at the beginning of the pick line, it will limit the total number of steps the picker takes to finish the order. If the high-volume products are together, the picker will need to go to the end of the pick line less often.

The other concept is to place products in the repack section based on vendor. By putting all of a vendor's products together it will make replenishment and cycle counting more efficient. This concept is only valid if you are using a scanning solution for picking so you can be confident that accuracy will not be impacted.

- ✓ **Best practice for case-in, case-out operations:** Position products along the pick path based on product weight. The heaviest products should be positioned at the start of the pick line.
- ✓ **Best practice for repack operations:** Position products along the pick path to facilitate replenishment.

### Efficiencies Add Up

# \$6,000

Annual savings per Picker

**The breakdown:**

When a picker who is earning \$15.00 per hour picks 100 cases in that hour, it costs 15 cents of payroll for each case. If we can reduce travel time by 25% and the picker can pick 125 cases in that hour it has now reduced the cost to pick each case to 12 cents per case.

A savings of 3 cents per case is \$30 for every 1,000 cases picked. If a picker picks 800 cases a night or 4,000 cases per week which is 200,000 cases a year. The savings is \$6,000 per year for each picker we have made more efficient.



## Step 4. Driving productivity and efficiency with smart order batching

Understanding that labor is the single biggest expense that warehouses incur, we want to help our employees to work with high efficiency. By reducing the travel time between picks we can make our pickers more productive.

When we pick multiple customer orders during a single pass of the warehouse, we can reduce travel time for our pickers. We call this combining of orders “order batching”. Order batching is an effective way to reduce the amount of time between picks and make pickers more productive.

On a rare occasion, a customer order will equal a 60-cube pallet. The vast majority of orders need to be evaluated and combined into logical pallets. Many operations do this manually. A supervisor sorts through picking documents and builds pallets based on experience.

The orders comprising the pallet are stapled together and handed to an employee for picking. This process of supervisors grouping orders is a simplistic order batching.

Software solutions can be very helpful in doing this analysis and review. Typically, in computerized order batching, all the orders on a route are reviewed and assembled into logical pallets. Instead of pickers picking a group of customer orders, they are now picking a single pallet.

Some software solutions allow part of the pallet to be picked by stop, so the heavy products are situated at the bottom of the pallet, based on customer, while lighter packages are batched together and placed on the top of the pallet. This allows the driver to be more efficient with the heavy cases and the warehouse to be more efficient with the lighter cases.

✓ **Best practice for case-in, case-out operations:** Computerized order batching creates efficient pallets for pickers and drivers.

✓ **Best practice for repack operations:** Batch customer orders to achieve higher picker productivity.



When you are considering changes to your building keep these core concepts in mind. They will help you to create a warehouse that is well positioned to have high picker efficiency

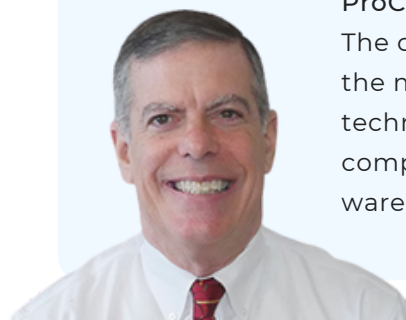
while maintaining accuracy. These two factors are key to maintaining high customer satisfaction.



## About ProCat Distribution Technologies

ProCat Distribution Technologies helps small to medium size distribution centers implement barcode scanning technology into their operations. ProCat has developed a suite of 14 modular software solutions that improve accuracy and productivity in

every part of a warehouse. PickRight, ProCat's order picking solution, has proven to achieve 99.99% order accuracy and a 90% reduction in customer claims. PickRight is able to interface with any ERP and does not require any changes to your current WMS.



Steve Stomel is the Founder & CEO of ProCat Distribution Technologies. The company was started in 2001 with the mission to bring cost-effective technology to food distribution companies. Today, over 200 warehouses rely on ProCat solutions.



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