

# Supply Chain Management Best Practices



## Warehouse Picking Strategies

*“The majority of labor cost savings can be achieved through proper picking strategies.”*



## Accuracy, Efficiency and Warehouse Picking:

Accuracy matters in warehouse operations to have a unified standard on how inventory is handled and stored. In addition to just having an accurate inventory picking procedure, functionality within warehouse technology can also lead to improvements in other areas such as reduced labor cost, improved customer service levels and maximum utilization of warehouse space. With advanced technology, such as efficiency gains through Warehouse Management Systems (WMS), can allow companies to achieve the proper flow of inventory within the warehouse through automation and creating a streamlined supply chain movement methodology.

The Picking functionality in warehouse management systems is a core functionality designed to move the paper picking process to a wireless device. Warehouses come in different shapes and sizes. Some are “wide open” in a square shaped space. Others are contained in buildings on multiple floors, utilizing elevators to transport materials. Warehouses will have varying ceiling heights. Some might have yard space. Materials handling will differ by product shape and size.

As a result, the warehouse racking infrastructure will vary by product size. Many warehouses keep large products in bulk stacks or pallet racks. While with small products, picking efficiency may be increased by storing smaller products in flow racking or static shelving.

Product velocity and order types also affect warehouse layout and consequently the picking strategies. Companies that ship single-sku pallets of product to customers will have significantly different warehouse operations than ones that ship trailer loads of mixed-sku pallets (grocery is a good example of this).

Even subtle differences in customer requirements for consumer products wholesalers will have substantial effects on the materials handling and picking. Operations that ship to retail distribution centers will have different fulfillment requirements than those that ship directly to stores. Everyone can probably agree that customer demand appear to only be increasing recently and that supply chain movement is becoming ever so complex.

Warehouse Management System, have an abundance of picking styles that will accommodate a warehouse manager’s fulfillment strategy independent of warehouse layout, product size, velocity and order characteristics.

## Different Picking Styles for Different Objectives:

**Wave Picking:** The Wave Picking function allows a picker to gather multiple orders simultaneously on a pick run. Orders are picked directly into serialized shipping cartons. The advantage of Wave Picking is that orders are picked and packed and checked in a single handling step using barcode scanners.

Wave picking is very effective for operations that pick to cart when there is an average of one or two shipping cartons per order. It is also effective for high volume operations that pick product out of flow racking to conveyor belts that whisk away boxes after they have been filled.

**Batch Picking:** There is a subtle difference between Batch Picking and Wave Picking. Rather than picking multiple orders directly into shipping cartons, Batch Picking does not prompt the picker to specify the sales order during the gathering process. The result is a “Batch” of product for multiple orders is gathered, and then sits in a staging area until distributed into the individual order pallets or cartons for shipment.

The advantage of Batch Picking is that more product cube can be gathered in a single pass of the warehouse. However, warehouses need to ensure that they have enough space to stage the orders that have been batch picked.

Batch picking is effective for operations that will benefit from maximizing order consolidation, especially in larger warehouses where the amount of travelling required to gather orders would be substantially decreased by maximizing the cube gathered in a single pass. Operations with limited picking equipment resources (like man-up or narrow-aisle equipment) should consider batch picking to maximize equipment utilization.

**Cluster Picking:** Cluster Picking is a workflow that can significantly reduce average travel time per pick. With Cluster Picking, multiple orders are grouped into small clusters or waves. An order picker will pick all orders within the wave in one pass using a consolidated pick list. Usually the picker will use a multi-tiered picking cart maintaining a separate tote or carton on the cart for each order.

Wave sizes usually run from 4 to 12 orders per wave depending on the average picks per order in that specific operation. In operations with low picks per order, Wave Picking can greatly reduce travel time by allowing the picker to make additional picks while in the same area.

**Zone Picking:** Zone Picking is the order picking version of the assembly line. In Zone Picking, the picking area is broken up into individual pick zones. Order pickers are assigned a specific zone, and only pick items within that zone. This method divides up aisles of bins so that individual pickers only work in a specified number of aisles.

In Zone Picking it's important to balance the number of picks from zone to zone to maintain a consistent flow.

Zones are usually sized to accommodate enough picks for one or two order pickers. Creating fast pick areas close to the conveyor is essential in achieving high productivity in zone picking. Zone Picking is most effective in large operations with high total numbers of SKUs, high total numbers of orders, and low to moderate picks per order. Separate zones also provide for specialization of picking techniques such as having automated material handling systems in one zone and manual handling in the next.

**Sequential Zone Pick (Pick and Pass):** With Sequential Zone Pick, one picker picks all the products in one area of the warehouse. Orders are moved from one zone to the next as the picking from the previous zone is completed. Conveyor systems can be used to move orders from zone to zone or, in a more manual process, the picker hands off the rest of the wave to the next picker in another area of the warehouse.

**Simultaneous Zone Pick (Pick and Merge):** With Simultaneous Zone Pick, pickers in different areas (zones) of the warehouse work on the same order at the same time. The cartons are then consolidated and/or re-packed downstream when zones have been completed. Simultaneous Zone Picking can prevent the problem of slowdowns in picking because of hold-ups in a particular area or due to a bottleneck in the packing.

The goal of zone picking is to create greater speed in the picking process. Zone picking also allows specialization based on skill level. For example, fork truck operators can be assigned to a zone that exclusively houses large items that must be picked with a lift. Zone picking also has a potential positive effect on employee morale by having pickers take pride and ownership in their area and can result in less operator fatigue and the end of shifts due to reduced travel distances.

## Warehouse Picking Strategies Objectives:

- Keep pickers picking...not waiting...Keep a queue of orders and/or products available to the picker. This requires an effective replenishment strategy if you are using a forward pick/reserve storage layout.
- Keep pickers picking...and not doing non-pick tasks...Do not bog pickers down with other tasks such as carton erection and taping, labeling, wrapping, adding dunnage, etc. Pickers are typically your most skilled warehouse resource.
- Minimize product touches...Ideally, it is best to design your pick process so that there is sufficient accuracy at the time of picking to eliminate the need for subsequent checking and repacking. Each unit of product is touched only by the pickers' hands before the carton is sealed and transported to an outbound truck.

- Minimize travel...Pick from both sides of the aisle from properly sized pick modules. Unused space between pick modules and pick lanes can unnecessarily lengthen a pick path. Segregate slow movers from fast moving SKUs to avoid repetitive, unproductive travel past them when not needed.
- Consider picking very slow moving SKUs from reserve storage rather than forward pick bins. Seek opportunities to batch pick many smaller orders in one trip. Pick all one-line, single-piece orders together since no sorting is necessary to break them down into a discrete order level.
- Remember that the majority of labor cost savings can be associated with proper picking strategies which can significantly minimize the pickers travel times and therefore boosting the bottom line.

## Reducing Labor Costs:

It's worthy to note that Warehouse Technology Systems are specifically designed to coordinate the most efficient route for inventory travel. By doing so, companies can recognize intangible benefits such as better customer service perceptions through increased order accuracy and fewer returns. However, there is also a measurable, tangible savings that you should be able to quantify which is a marked reduced labor cost figure gained through better and more efficient movement of inventory.

Consider, that administrative labor is reduced as less time is spent correcting errors. Fewer errors and timelier, accurate information also mean fewer, more productive meetings for managers and executives. In general, automated data collection lowers labor costs by reducing overall setups, idle time, cost of expediting, and time spent correcting errors.

## Additional Information:

We hope you found this article of value. We have many additional articles on our website and we also can partner with your company if there is need to explore other supply chain management technology solutions. We can consult with you to give solid guidance on strategies and systems that have led to success from our vast industry experience. We look forward in hearing from you. Our contact information is below.

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