

Thought Leadership Series

# The Slotting Decisions Shaping Warehouse Performance



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## Executive Summary

Distribution leaders are investing significant capital in automation to improve warehouse performance. The challenge is those investments take months or years to fully implement, while performance targets still need to be met each day.

Slotting offers an affordable way to improve performance while preparing for automation. However, effective slotting goes beyond placing fast-moving products closer to shipping docks. Every SKU decision can affect picker travel and replenishment, as well as other areas of the operation. Across thousands of SKUs, teams must balance those tradeoffs and determine which improvements are worth implementing.

## Key takeaways

- **Evaluate the impact of every inventory move:** Look beyond item velocity to understand how placement decisions could affect picking, replenishment and overall warehouse performance.
- **Prioritize changes that deliver value:** Focus on high-impact moves where the operational benefit justifies the effort to implement.
- **Build a slotting strategy that evolves with demand:** Make ongoing adjustments as demand and SKU mix change while creating a stronger foundation for future automation.

## One inventory move has a ripple effect

Item velocity is one of the first considerations in slotting. Fast-moving products need to be positioned where they can be picked efficiently, but velocity alone doesn't determine the best location.

Consider a fast-moving SKU that requires a picker to travel too far. Moving it closer to shipping may improve productivity, but the new location could be smaller and require more frequent replenishment. Ordering that SKU frequently with another product in the original area could increase total travel elsewhere in the pick path. Concentrating several high-volume SKUs into the same zone can also create bottlenecks that affect throughput.

Product characteristics can also determine where an item belongs. Fragile inventory may need to be positioned later in the pick path to reduce damage. Ergonomic requirements can affect where certain products should be handled, while temperature requirements or hazardous material rules may restrict where inventory can be stored. Evaluating these factors together provides a better view of how one proposed move could impact the overall operation.

The experience of the team running the facility matters, too. Operators know where congestion develops and where replenishment regularly interferes with picking. They understand facility-specific rules that developed over the years of working in that building. Some of that knowledge may never have been formally documented and won't show up in the data. Bringing that operational experience into the slotting strategy helps ensure recommendations reflect how the facility operates.

## A practical slotting plan

Warehouse leaders must also consider the effort required to put a slotting plan into practice. An analysis can identify thousands of moves that produce the strongest theoretical result, but physically making those moves requires labor and can disrupt daily fulfillment.

A plan requiring every item in the facility to be moved may look strong from an optimization standpoint but could be difficult to execute. “The expected operational benefit has to justify the work required to achieve it,” says Matthew Zeyak, Slotting Product Manager at FORTNA.

A recommendation requiring 5,000 moves deserves different scrutiny than one requiring 500. In many cases, a smaller number of high-impact moves can deliver enough benefit to justify the effort without creating a major reslotting project. Teams can prioritize the moves with the greatest potential benefit, then continue adjusting as demand changes.

## Understanding the impact before making the move

Before moving hundreds or thousands of SKUs, warehouse leaders need to understand what they can expect in return.

- How much picker travel can be reduced?
- What happens to replenishment?
- Could congestion shift to another part of the facility?
- How does a proposed configuration perform against actual order activity?
- Does the expected improvement justify the labor required to implement it?



Answering those questions before inventory is moved gives teams a way to compare strategies and determine which changes are worth making.

Technology can evaluate more potential decisions than a team could work through manually. The operations team brings the facility knowledge and business context needed to interpret those results. Together, they give leaders greater confidence in which recommendations to act on.



## Improve the operation while preparing for automation

Slotting can move on a very different timeline from a major automation project. Many changes don't require new equipment or reracking. Once an opportunity is identified, implementation may result in moving inventory from one location to another. Improvements can begin in days or weeks while a larger automation project continues towards go-live.

Start by placing SKUs in the right general areas of the facility. Inventory placement can drift over time as products are placed where space happens to be available. Eventually, product location can reflect years of individual decisions instead of where those SKUs belong based on current demand.

Addressing these issues before automation goes live gives the future operation a better foundation. It can help prevent existing congestion and replenishment issues from being carried into the automated operation, allowing the organization to realize value from its investment sooner.



## Slotting moves with demand

A slotting plan reflects the demand and SKU mix at a point in time. As that picture shifts, the value of the original plan can erode. New products enter inventory, while others are discontinued. Order patterns can also change which SKUs need priority placement.

For example, a grocery operation may make smaller adjustments around weekly promotions without moving the entire facility. Seasonal demand for home improvement can affect certain product positioning. Aftermarket parts facilities with large SKU assortments and less variability may adjust over a longer cycle. The right cadence will vary by business.

Making effective adjustments depends on current, reliable data. As *DC Velocity* recently reported, the sheer speed and volume of inventory flowing through supply chains mean there are plenty of opportunities for error—as well as opportunities for the data to become outdated. For slotting, decisions based on yesterday's demand can quickly become less relevant to the operation running today.<sup>1</sup>

Revisiting the slotting analysis over time allows for targeted adjustments based on current demand. This helps preserve more of the productivity gained from the original slotting work without waiting for performance to decline.

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<sup>1</sup><https://www.dcvelocity.com/technology/is-data-the-most-valuable-thing-in-your-dc>

## Optimize slotting with FORTNA OptiSlot DC™

FORTNA OptiSlot DC™ brings advanced optimization software together with the customer's operational expertise. It can evaluate thousands of potential slotting decisions simultaneously while considering travel time, item affinity, replenishment, ergonomics and business priorities.

The expected impact can be visualized and estimated before inventory is moved, giving warehouse leaders greater confidence in which recommendations to implement. FORTNA trains customers on the software using their actual facility data, helping them apply the analysis to their own operation. As demand and SKU mix change, that analysis can support smaller, ongoing adjustments. When demand moves, inventory needs to move with it.

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# FORTNA

## FORTNA CAN HELP

As a systems integrator, FORTNA helps distribution operations connect slotting strategy with overall performance goals. Whether optimizing an existing facility or preparing for future automation, FORTNA brings the expertise to help organizations get more from their operations.

Contact us today at [www.FORTNA.com](http://www.FORTNA.com)