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Thought Leadership Series

Sustainable Slotting Elevates Distribution Capabilities

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In today's environment where disruption and destabilization are constant, it is critical to address challenges and adjust to new market conditions. For example, in 2022 and continuing into 2023, many eCommerce and retailers responded to supply chain disruptions and delays by storing extra inventory in their distribution centers (DC). Target and Walmart both have reported that their inventories have grown dramatically, Walmart by a reported 33%[1]. This strategy has had a wearing effect on warehousing operations as extra inventory occupies prime inventory slots all while new and seasonal products continues to be delivered to DCs. While these companies begin to mark down and discount the overflow inventory, it shines a light on how a sustainable slotting solution can become essential to an operation's productivity in normal and disruptive times. Compared to automation solutions that can have long lead and integration timelines, a sustainable slotting solution can be integrated, many times, between 6-10 weeks and can be an important first-step in an operation's automation journey.

"We thought it was prudent for us to be decisive, act quickly, get out in front of this, address and optimize our inventory," Brian Cornell, Target, CEO[2].

1 https://www.dcvelocity.com/articles/55138-no-vacancy-at-the-warehouse
2 https://www.msn.com/en-us/money/companies/target-warns-of-squeezed-profits-as-it-rolls-out-aggressive- plan-to-get-rid-of-unwanted-inventory/ar-AAYaQsU

The Initial Reslot

Warehouse slotting is the process of arranging or slotting inventory in an optimal manner to meet an operation's goals and objectives. Typical outcomes can be:

- Minimizing costs
- Boosting productivity levels
- Reducing steps taken by pickers
- Improving order quality and accuracy
- Adhering to safety and ergonomic standards
- Maximizing capacity

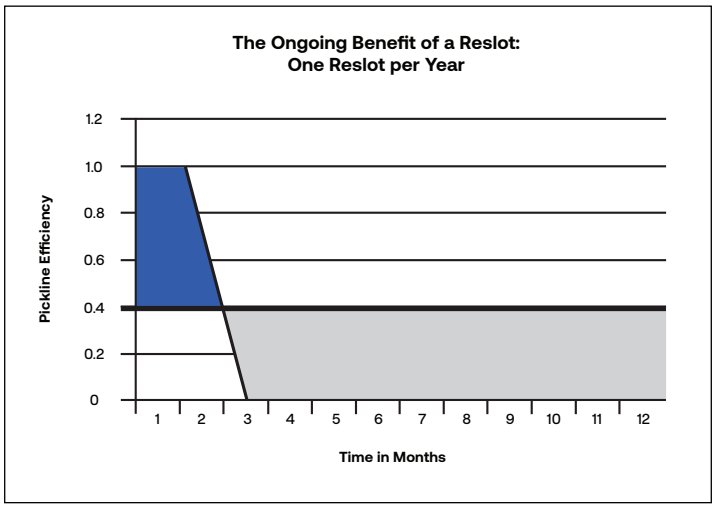
The initial reslot is when a slotting software is used to produce product movement data that is used to qualify products and drives where to slot them. An initial reslot is using all the product's characteristics (size, dimensions, weight, turn times, etc.) and physically moving and arranging all or part of the current inventory for optimal operational efficiency. This reslotting effort is labor intensive and can take time to complete.

Some companies will find that a full reslot might be too much of a disruption to day-to-day operations, or they don't have the labor on hand to complete a reslot in a reasonable time. Some slotting optimization software can map the return on investment (ROI) for each slotting move or set of moves, offering operators the ability to prioritize the work plan for optimal impact and ROI.

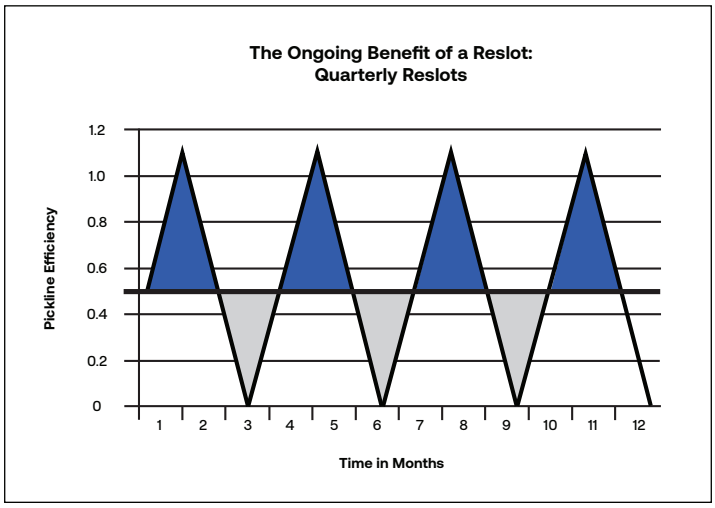
Sustainable Slotting

Sustainable slotting is the practice of doing consistent, smaller scale reslots after the initial reslot. Sustainable slotting moves inventory centered on new operational data, based on velocity, promotions and product characteristics. This allows a warehouse to retain their newly optimized operating levels, while continuing to fine tune their operations.

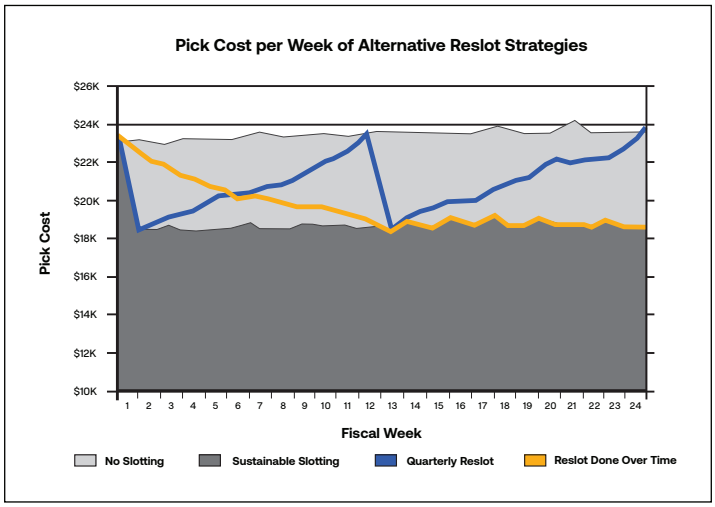
As the seasons change, promotions are launched, new products are introduced and others begin to phase out, the optimal state implemented from an initial reslot can begin to degrade. By bringing a sustainable slotting practice into play, it gives an operation the ability to make critical inventory slotting adjustments as fluctuations in product mix and velocity arise, ensuring efficient and productive operations.



Impact from initial reslot on picking efficiency.



Sustainable slotting on a quarterly basis with more potential savings realized throughout the year.



Impact of implementing sustainable slotting to support optimal slotting all year long.

Sustainable Slotting Supports Supply Chain Resilience in the Face of Disruption

The frequency and timing of sustainable slotting efforts will depend on an operation's needs and fulfillment goals as well as their destabilizing events, which can be seasonal or promotional in nature. Examples of destabilizing events include:

- Product volume changes
- Product mix changes
- Product influxes
- Product shortages
- Seasonal demands
- Promotions
- Safety and regulatory changes

Much like a destabilizing event, a disruptive event interrupts routine operations and can also cause the need for adjustments, much like the current inventory overstock[3]. Unlike a destabilizing event, a disruptive event is often unforeseen and unpredictable. Disruptive events (e.g., pandemics, national disasters, socioeconomic factors, etc.) can drive up costs and bite into already thin margins within the warehouse. With both destabilizing and disruptive events, warehouse operators need to be flexible as well as have the ability to analyze, adjust, adapt and act quickly.[4]

3 https://www.forbes.com/sites/stevendennis/2022/06/07/too-much-of-a-goods-thing-retailers-are-drowning-in- inventory/?sh=7af6851412fd
4 https://www.forbes.com/sites/forbestechcouncil/2022/06/02/the-warehouse-in-2022-where-do-we-go-from-here/

Sustainable slotting software provides the ability to make adjustments rapidly, and when paired with other technologies like visualization tools and digital twin technology it can work to quickly identify pain and pinch points.[5] Operators can quickly assess what items are best designated to forward pick locations and which can be sent for picking from reserve areas; identify congestion points along the pick path and adjust item placement; ensure weight sequencing to reduce breakage; and/or boost productivity.

Sustainable slotting optimization offers substantial benefits to elevate distribution capabilities serving as a logical first step towards automation with a relatively low cost of entry. A sustainable slotting strategy based on operational data that evolves as new challenges and obstacles arise are key to continued improvement and productivity.

5 https://www.mhi.org/publications/report

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FORTNA CAN HELP

Keeping productivity and customer satisfaction levels high while keeping costs low can prove challenging in dynamic warehouse environments. It is important to consider the impact and continued benefit of deploying a strong sustainable slotting strategy. FORTNA's intelligent slotting optimization software, FORTNA OptiSlot DC, with digital twin technology offers the ability to balance your goals and objectives to improve your operations and secure results with rapid ROI.

Contact us today at **www.FORTNA.com**