

The Put Wall: Versatile Facilitator of Omnichannel Distribution

Effective Means of Diverse Product Consolidation Across Multiple Channels

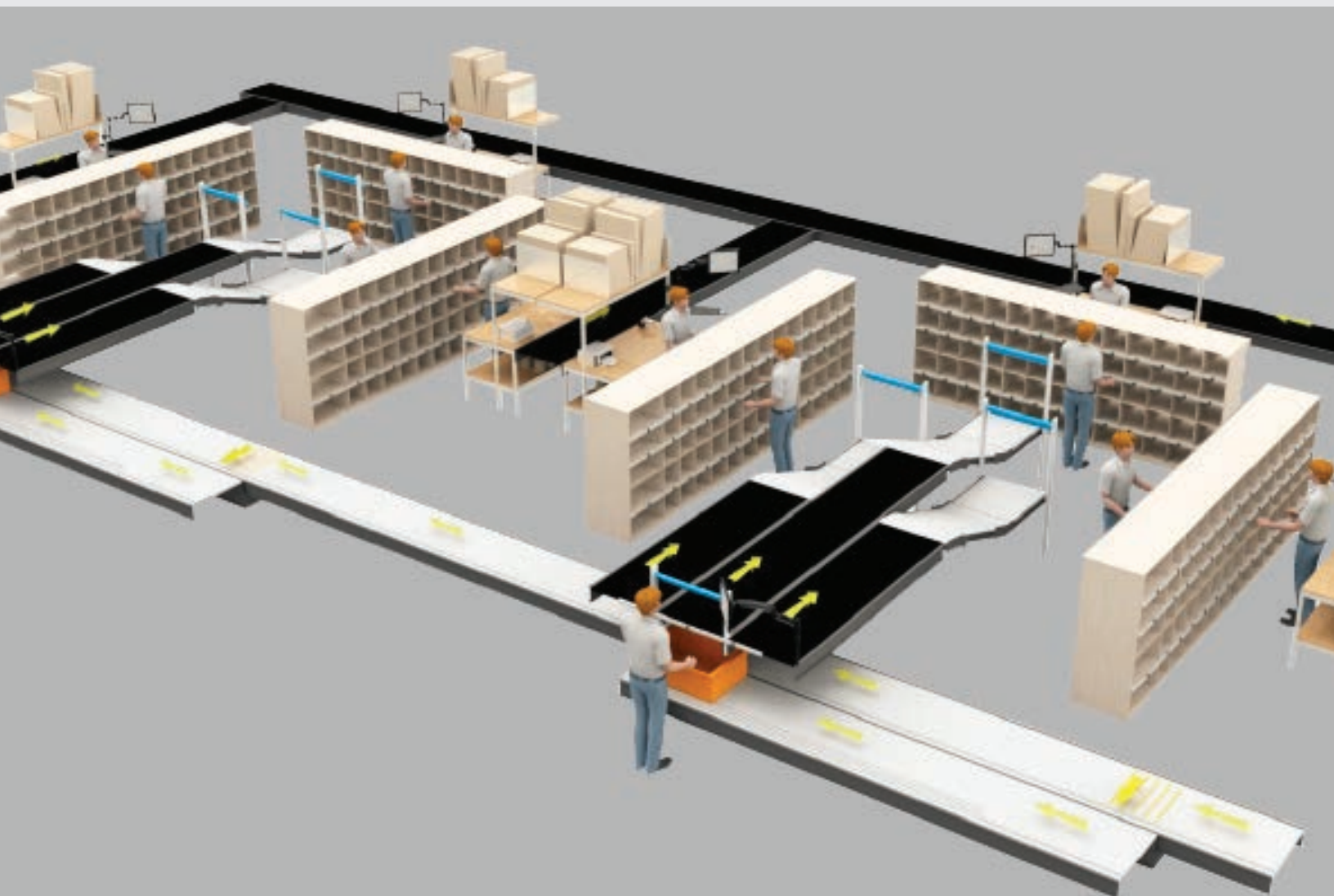


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The Put Wall: Versatile Facilitator of Omnichannel Distribution

A put wall is an effective means of consolidating diverse products across multiple channels within a distribution center (DC). With more facilities forced to expand their operations to enable the fulfillment of e-commerce, direct-to-consumer (DTC) orders, put walls are playing an increasingly vital role. The purpose of this white paper is to demonstrate how put walls are being deployed to transform the productivity and accuracy of modern e-commerce fulfillment applications. Through easy integration with manual and automated picking workflows and advancements in technology, put walls are helping retailers achieve omnichannel distribution efficiencies.

What Is a Put Wall?

A put wall is a cabinet-like structure that's divided into a series of compartments, also known as *cubbies* or *chutes*. In a typical put wall scenario, one side is staffed by one or more operators who put product into assigned cubbies for their respective orders; the other side is staffed by one or more operators who then pack out these orders. Alternatively, the put wall can back up to a takeaway conveyor where the operator places items into cubbies with totes and pushes the completed orders onto the conveyor and off to a pack station.



The integration of put walls into fulfillment processes can vary widely, often depending on the mix of technologies available and business case of the specific operation. As a rule, the upstream picking process dictates put wall deployment, and the put processes are optimized accordingly. Note: some of these upstream processes are detailed subsequently in this paper. The basic idea is that demand is aggregated via the upstream picking process, and then items are distributed to the appropriate cubby to consolidate orders at the put wall.

Traditionally, put wall cabinets are designed with fixed, uniform cubby sizes, although modern material handling equipment providers have recently made significant advancements to put wall hardware and software that will enable a wide range of configurations in cubby sizes.

Put walls are also enabled by technologies that direct the operator to place items in the correct cubby and then confirm when an order is complete and ready to be packed out. These enabling technologies include: radio frequency (RF) scanners, and voice- and light-directed systems. Selection of the preferred technology primarily depends on the rate of throughput required – with RF being the lowest rate, and lights enabling the highest throughput. Each option helps enable the necessary degree of automation to ensure picking, putting and packing order accuracies.

While put walls have originally been introduced in manufacturing environments – primarily for in-line kitting of assembly processes – today they are used broadly in distribution and order fulfillment centers:

- Direct-to-customer orders (e-commerce fulfillment)
- Distribution to retail outlets (put-to-store)
- Receiving (cross-dock)
- Returns (reverse logistics)

Drivers for Wider Put Wall Adoption

The need to meet or exceed rising consumer expectations has introduced additional complexities to order fulfillment processes. As the number of online orders continues to grow annually, the pressure is on retailers to address these challenges and meet online service level agreements. Their primary challenges include:

SKU proliferation – the number of items consumers order (and retailers must be prepared to fulfill) continues to grow. This means infrequently ordered items must still be accounted for in the fulfillment process.

Changing order and product profiles – from small to large products to orders of widely varying sizes, product and order profiles are dictating ever more flexible order processing and handling requirements.

Omnichannel diversification – to keep up with the demands of omnichannel fulfillment, many retailers are converting their existing facilities to incorporate e-commerce distribution into their supply chain operations.

Retailers are integrating put walls to deal with these complexities, reduce order errors and increase throughput.

A Sample of Put Wall Scenarios, From Simple to Sophisticated

Put wall utilization is typically determined by the method of upstream picking and/or sortation used in the facility. Whether DCs rely on operator-to-goods batch picking or disparate zone picking processes, or opt for the mechanized precision of an automated storage and retrieval system (AS/RS), put walls serve as points of demand consolidation to drive order fulfillment efficiencies.



Scenario One: Batch Pick to Put Wall

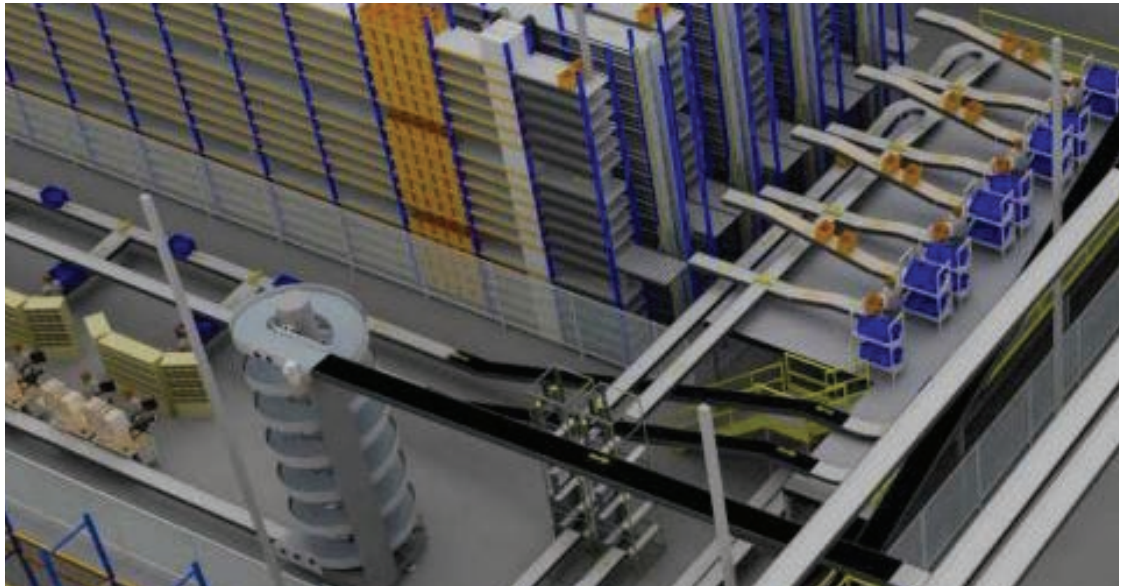
This scenario allows pickers to aggregate demand in batches to minimize picking execution, then distribute items to their respective orders at the put wall (e.g., 10 units picked in one batch, then distributed into 10 different put wall cubbies). The same principle also works for case picking, where cases with one SKU are picked and distributed to multiple orders at the put wall.

At its essence, this scenario allows the consolidation of orders with common items — first via the process of aggregation in the batch pick, and then through the distribution of picked items into orders at the put wall.

Scenario Two: Zone Picking to Put Wall

When there are designated product zones in a facility, this scenario allows item picking (batch or “eaches”) to take place in each disparate zone. The picker sends a tote from their respective zone to the put wall, where items are then distributed and consolidated into individual order cubbies. While still a relatively simple process, picking efficiencies are maximized by breaking order line items into individual zone picking tasks; order consolidation is then handled by the put wall operator.

This practice is becoming even more common as a method to handle the consolidation of SKUs of varying pick velocities. For example, items are staged throughout the warehouse in zones of slow-, medium- and fast-pick regions, depending on the frequency they are ordered. The put wall ensures accurate consolidation of these items.



Scenario Three: Mechanized Picking (Automation) to Put Wall

The picking process is automated in this highly efficient scenario, utilizing shuttle, carousel or mini-load AS/RS technologies to limit the amount of operator movement required. While automation may be used in any number of upstream picking processes, order consolidation still takes place at the put wall.

For example, if 25 percent of a retailer's SKUs come from an AS/RS system, these items are automatically batch picked as needed and delivered to an operator at the put wall station for order consolidation. Put walls can also be integrated into the sortation automation process, allowing sorted goods to be conveyed to the designated put wall station.

Scenario Four: Pick to Unit Sorter, Then to Put Wall

Various sortation solutions are often integrated into the picking process to help automate the delivery of individual products to a put wall. Instead of products arriving at the put wall in a batch tote or case of single or mixed SKUs, the sortation process breaks them into individual items that can be quickly put into their respective cubbies. This additional sortation automation between the picking and the put

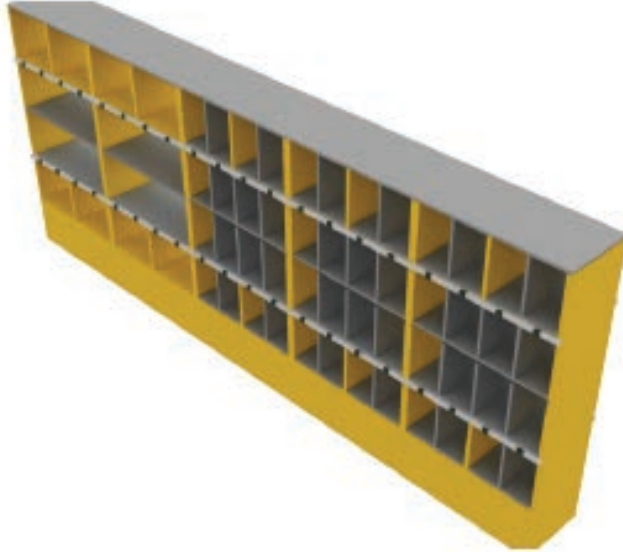
wall greatly improves overall process efficiencies in terms of accuracy and throughput. Because these solutions are designed according to specific throughput rates and order profiles, they are especially well suited to fixed-capacity and fixed-SKU count scenarios.

Scenario Five: Cross-dock (Receiving to Order Fulfillment) via Put Wall

To expedite the delivery of high-demand products, put walls can be deployed in the cross-dock receiving process. In this scenario, items are taken out of cases and distributed directly to the put wall. Once order demand is filled at the put wall, orders are conveyed to a pack-out station on the shipping side of the building.

For more information, contact Honeywell Intelligrated® by email at info@intelligrated.com, by phone at 866.936.7300, or visit www.intelligrated.com.

The Future Is Here: Configurable Put Wall Solutions



The next generation of put wall technology will enable customizable configurations to address the challenges of SKU proliferation and changing product and order profiles. Intelligrated is leading the development of this technology – combining the ability to customize put wall cubby sizes (hardware) with user-friendly programming (software) to configure the light-directed confirmations at the put wall.

This flexible, integrated put wall and light solution gives operators the ability to modify cubby sizes to accommodate small to large products and order profiles in the same put wall. Intelligrated's configurable put wall allows DC managers to expand their operations without having to do major material rework to their facilities. Both hardware and software are easily configured by the end user, requiring no special assistance or software engineer on-site. The software allows easy modifications to the put wall's light configurations, synchronizing the confirmation process with the newly customized cubby sizes.

Honeywell Intelligrated has both the material handling equipment and implementation expertise to help you integrate put walls into your fulfillment process.

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