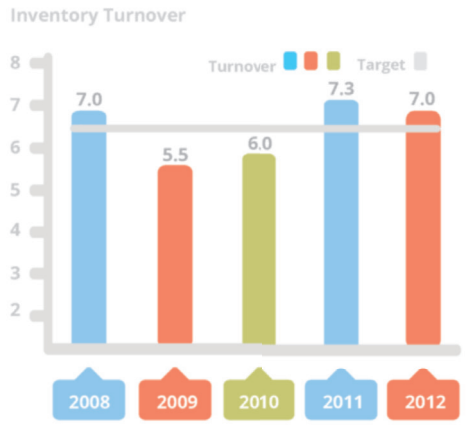
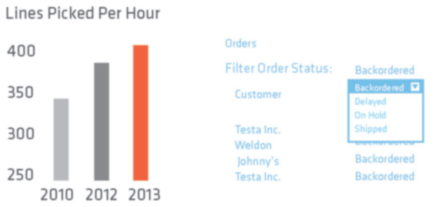
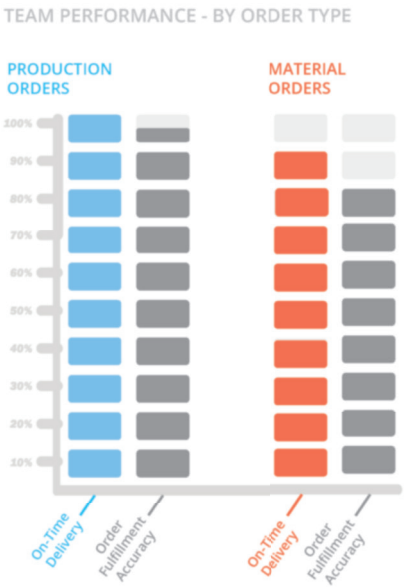
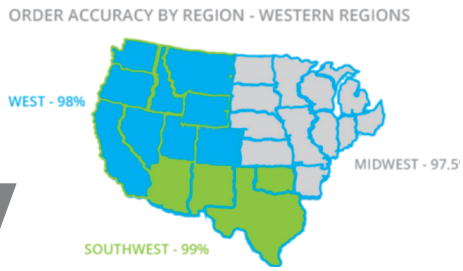
THE WAREHOUSE OF THE FUTURE

Honeywell

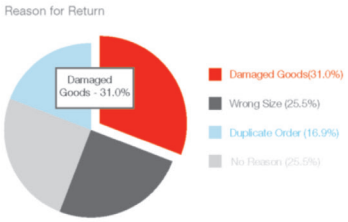


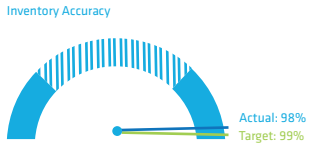


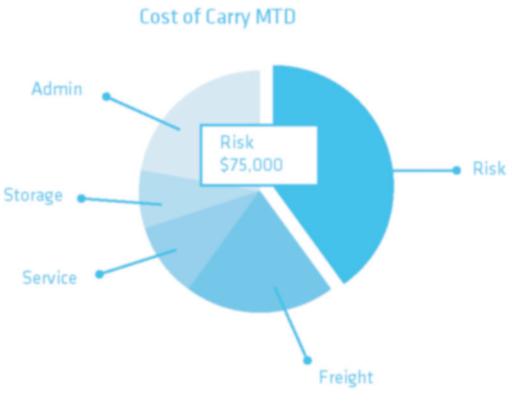




A strong understanding of your supply chain KPIs and metrics will quickly surface opportunities for increased profitability.







INTRODUCTION TO THE WAREHOUSE OF THE FUTURE

In the realm of technology, innovation takes on many forms. From groundbreaking, disruptive innovation to incremental improvements of existing technology, successful IT innovation requires disciplined management and creative foresight to transform novel ideas into business value and turn business value into bottom line profit.

The Warehouse of the Future will still be about achieving key operational metrics, exceeding customer service requirements and supporting the need to move goods more profitably.

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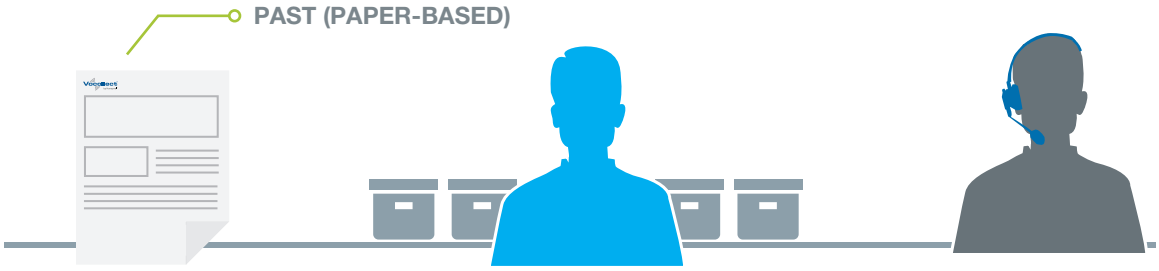
The Warehouse of the Future

Over the past few decades, warehouse and distribution center (DC) management has evolved from a model governed by manual labor and paper-based tracking to one in which technology plays a vital role in better utilization of available resources and growing space restrictions.



Source: Honeywell

Today's modern warehouse incorporates a deft mix of highly evolved technologies and optimized business processes, while maximizing human interaction to provide increased labor throughput to help ensure supply chain success. Many organizations have invested heavily in Automated Control Systems (ACS) and Warehouse Management Systems (WMS) to enhance the automating and streamlining of standard tasks to substantially improve their operating efficiency and reduce transaction costs. The seamless integration with ERP and other inventory control and management systems, along with optimizing existing business processes, continues to provide improved efficiency with enhanced visibility of management information.

The confluence of emerging and evolving customer demands continues to drive a very real need for improved distribution center processes and systems – and innovative technologies to support them.

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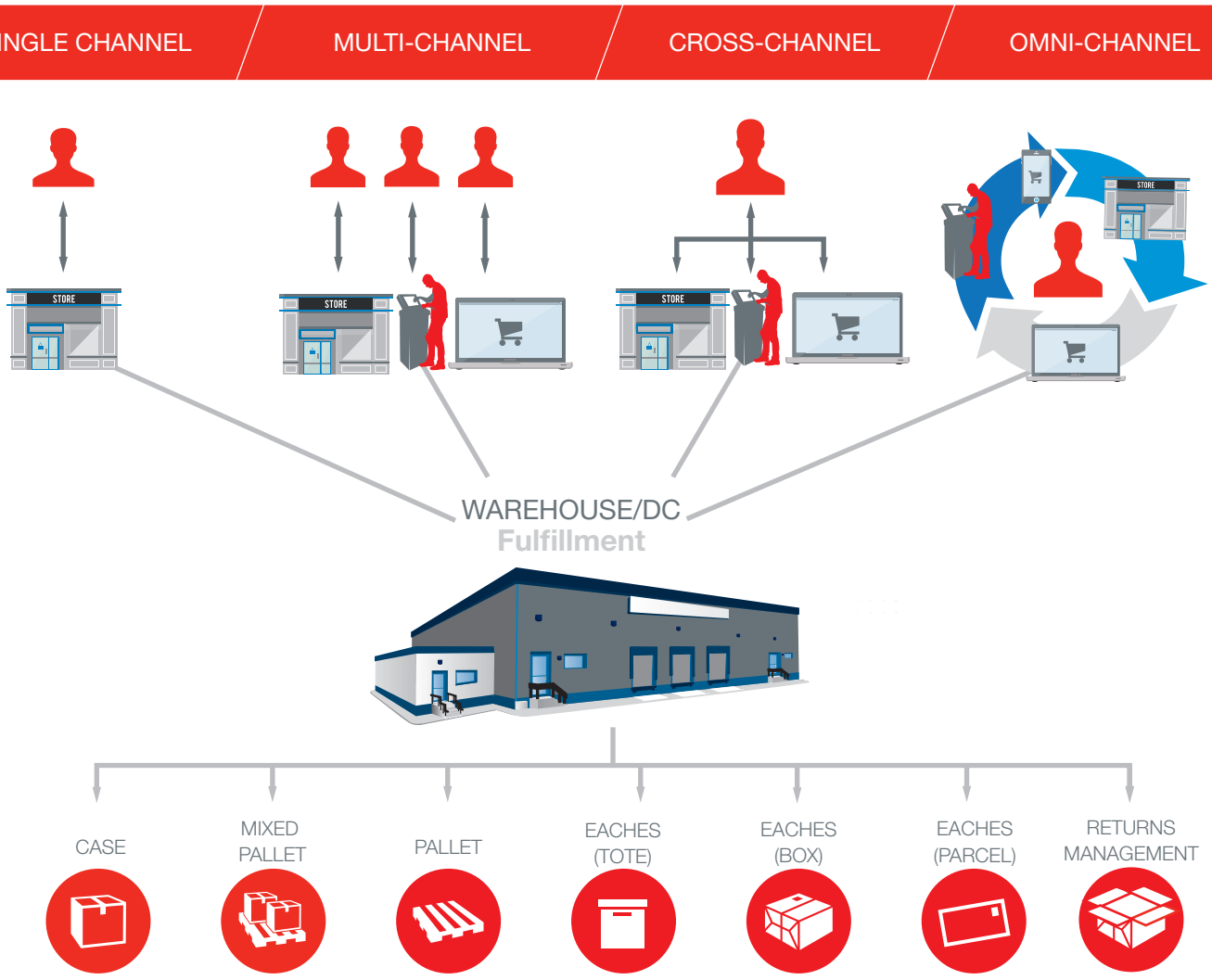
Welcome to Omni-Channel Order Fulfillment

The Warehouse of the Future will be subjected to pressures from an increased number of smaller orders via a growing number of sales channels. Much of today's conversation is around the need to improve customer order synchronization and to seamlessly support customer order requests. The Warehouse of the Future will be focused around achieving omni-channel order fulfillment excellence.



Source: Honeywell

The graphic above shows how the order management world has transitioned over time while the warehouse itself has continued to be responsible for fulfillment since multi-channel order options have become available and viable.

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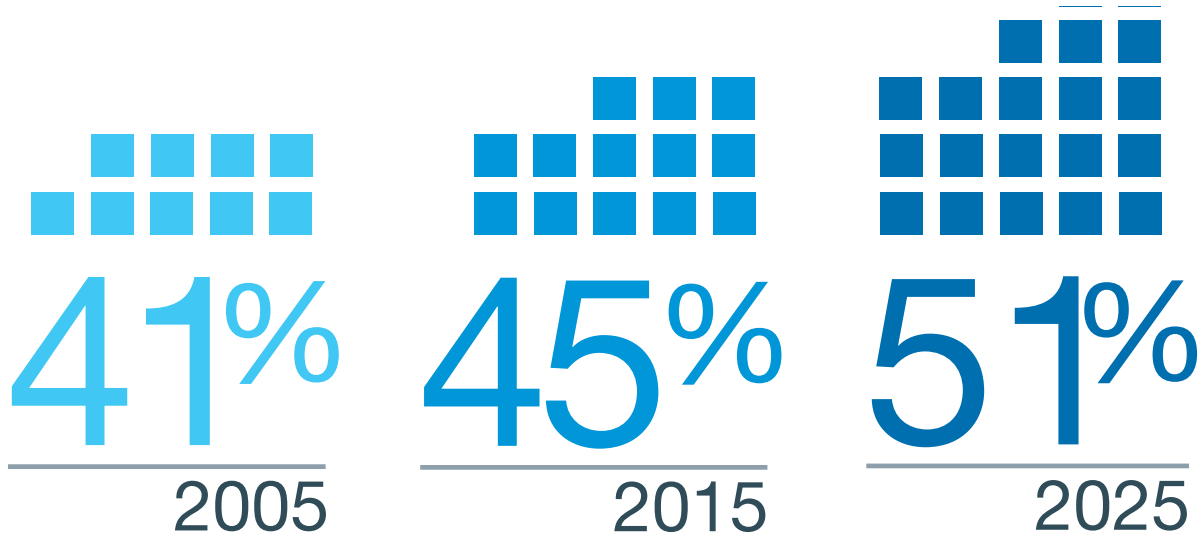
Omni-channel order fulfillment is nothing new to the distribution center. It's just a new term for how businesses are now required to support a growing number of e-commerce order channels. While the challenge of meeting the needs of e-commerce is nothing new, the changing product mix from a mixed pallet and case world to more of an "each" world is a change. And the future will only show an increase in the percentage of "each" orders.

This change will help drive an increase in the overall use of batch picking processes. Batch picking will enable more 'each orders' to be picked and will greatly reduce an extraordinary amount of wasted travel time resulting in greater workforce productivity.

Projected Percentage of Distribution Centers Using Batch Picking



Source: Honeywell with directional guidance from Logistics Management Warehouse and Distribution Center Operations Survey- November 2013

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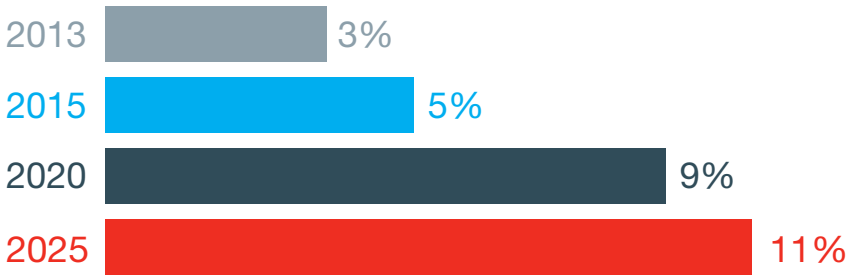
Changing Customer Expectations Will Drive Higher Transaction Costs

Regardless of industry, customer expectations today are higher than ever – fueled largely by the speed-to-market demands associated with e-commerce and social media engagements. Retail brick and mortar businesses are becoming more effective at leveraging their retail store infrastructure and local inventory presence. The 2013 holiday shopping season was a transitional year where many traditional retail market leaders fought back against the online world by opening on Thanksgiving evening in the United States. This behavioral change is a clear indication that the brick and mortar world is finally ready to fight pure e-commerce competition. While e-commerce will continue to grow as a percentage of overall consumer spend, the integration of multiple customer order channels (thus the term omni-channel) will provide today's brick and mortar retailer with a way to successfully challenge their pure e-commerce competition.

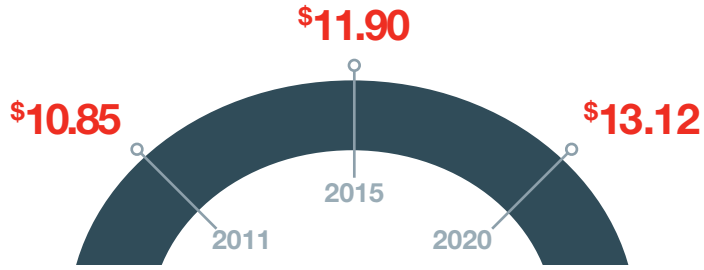
Traditional Retailers % of revenue through various e-commerce channels



Source: Honeywell Vocollect Solutions estimate with directional guidance from Logistics Management Warehouse and Distribution Center Operations Survey- November 2013

One of the biggest cost challenges from the explosive growth in omni-channel order fulfillment will be around continuously increasing shipping and transaction costs. It will be interesting to see how business will account for these fully-loaded burdened costs in their pricing and merchandising strategies.

Cost Per Transaction



Source: Honeywell estimate with directional guidance from F. Curtis Barry & Company

Based on the quality cost analysis performed by F. Curtis Barry & Company, the increase in prices for small parcel shipments continues to drive increased transaction costs.

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When you review the shipping cost increases from three leading shippers, you can see how a 10%+ increase in costs per year is realistic. The large number of returned goods, an estimated 20% of all orders from online shopping, will be a challenge to the profitability of most companies. It would not be a surprise to see Amazon.com increase its Prime Program annual cost by at least $25 per year to help absorb some of their increased shipping costs.

Shipping Cost Increases in 2014

Source: Available public information for general 2014 pricing increases.

How you think about your actual burdened costs of order fulfillment may impact your merchandise assortment. Businesses will need to evaluate the business case to bring back in-house e-commerce channel fulfillment versus the utilization of third-party logistics (3PL) organizations. These conversations will gain internal C-level momentum when the magic 10% of revenues is achieved. This is the business inflection point where the economics of internally managing omni-channel order fulfillment versus outsourcing will be a strategic decision and no longer a financial decision and may be an initial driver for some to use a 3PL for their "long tail" product selection.

The "long tail" of your inventory may require you to account for a greater cost per unit in your pricing approach and thus impact your total revenues.

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Ways Multiple Channels are Fulfilled	2013	2015	2020	2025
On our own from main DC	35%	33%	36%	40%
From our own retail stores	1%	5%	7%	11%
Separate DCs for different channels	26%	28%	30%	34%
Use 3PL for all channels	8%	9%	11%	12%
Use 3PL for e-commerce and own DC for other channels	6%	8%	9%	11%
Do not service multiple channels	17%	14%	12%	11%

Source: Honeywell estimate with directional guidance from Logistics Management Warehouse and Distribution Center Operations Survey- November 2013

The Future Will Require Greater Physical Flexibility

The number one strategic issue that will confront The Warehouse of the Future will center on having sufficient space and having the flexibility to appropriately support evolving omni-channel order fulfillment requirements.

The new realities of e-commerce and evolving customer ordering practices will force companies to change the way their warehouses are organized and operated. More facilities will perform annual reviews and analyze their inventory slotting approach. The continuing growth of SKUs and smaller e-commerce orders will force organizations to create more "mini-warehouse zones" within their existing physical structure.

No more will the support for e-commerce orders be "hidden" in a corner. These "mini-warehouses" will be mainstream and a common operating practice.

There is some expectation that as more businesses scale their omni-channel order fulfillment activity, they will begin to increase their investments in their own facilities and dedicate greater real estate to support various channels.

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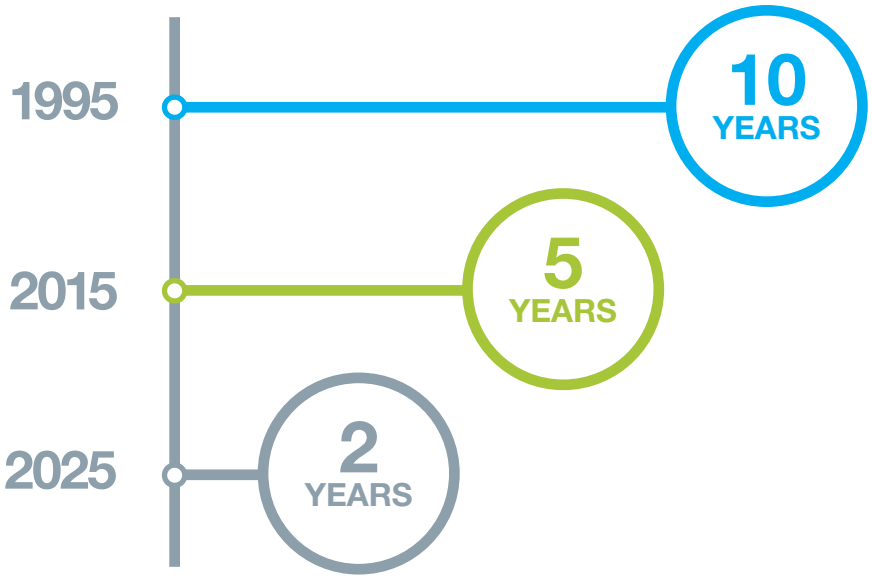
Multi-Year Investment Commitment Payback Expectations

Payback horizons shrink as warehouse technology + logistics capabilities expand.



Source: Honeywell estimate with directional guidance from Logistics Management Warehouse and Distribution Center Operations Survey- November 2013.

The evaluation and application of new technologies for warehouses is far from a simple buy-install-use-benefit scenario. The "long-term" view of warehousing technology and logistics will shorten to the point where most organization's planning horizons will shrink to as little as 18 to 24 months. Companies will need innovative solutions that have paybacks in months, not years. This shorter time horizon could adversely impact multi-million dollar automation project opportunities.

Changing business requirements will dramatically impact investment payback horizons when deciding on making multi-year infrastructure investment commitments.

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The Workforce of the Future

Despite persistent high unemployment which will continue over the next decade, warehouse labor will continue to be scarce and evolving. The workforce of the future will have a larger mix of non-native speaking workers. While these non-native speakers may be conscientious, hard-working and driven, language barriers will continue to challenge them to perform at desired levels. This is a common issue confronting businesses around the world. For example, the influx of non-native speaking workers from Eastern Europe is causing workforce assimilation and integration challenges for many Western European businesses. Factor in high turnover in warehouse jobs, and the labor pool shortage is amplified. This is an operational nightmare and will become a top challenge over the next 10 years and voice technology is an option to easily assimilate and integrate these non-native speaking workers.

Voice Technology Supports All Key Languages

Source: Honeywell

Voice technology reduces non-native worker on-boarding and training time by up to 50%

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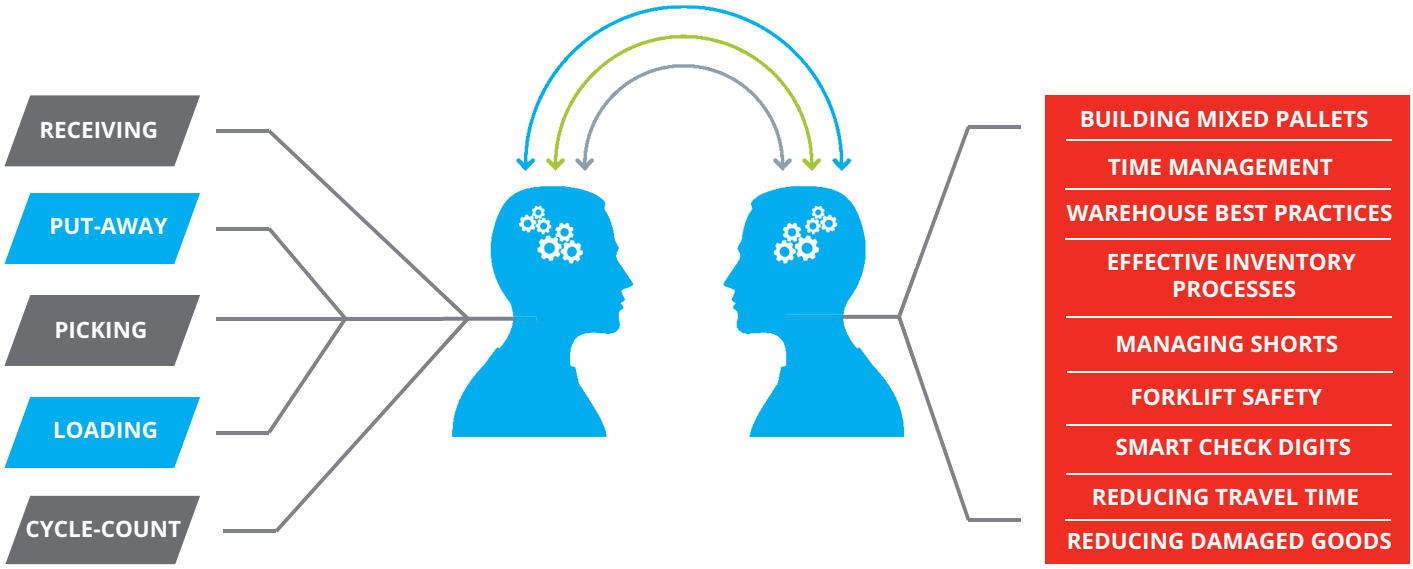
An Aging Warehouse Management Team

As aging warehouse management retires, there is also an associated loss of "tribal knowledge" – that hard-to-replicate intelligence of warehouse operations that is gained through long-term experience. Preserving and transferring this knowledge is a considerable challenge confronting warehouse management and human resource professionals. For this reason, you will see increasing adoption and utilization of voice-directed technology solutions that can help capture best practices to ensure increased worker throughput, improve overall productivity and dramatically reduce worker learning curves.

Capturing Best Practices to Ensure Continued Excellence



Source: Honeywell

The Warehouse of the Future will drive more organizations to better capture existing processes in order to better optimize their internal best practices to ensure the changing workforce successfully assimilates and integrates into their existing teams. Voice-directed technology provides an excellent approach to achieving greater operating excellence.

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Our Commitment to Innovative Technology

Honeywell is the recognized leader in supply chain and warehouse solutions and we are committed to helping deliver the promise of The Warehouse of the Future. Our domain expertise enables us to identify many key aspects of The Warehouse of the Future. One innovation that you no longer have to wait for, however, is the ability to enjoy the benefits of voice-directed work and robust scanning capabilities, provided in one, modern form factor.

The Honeywell Vocollect A700 Solution is the industry's first purposely designed solution for industrial environments and to help organizations streamline their omni-channel order fulfillment needs, realize improved warehouse efficiency and accuracy for a lower operating cost, and help ensure businesses are able to support their customer service level metrics.

Warehouse and distribution center management benefit from Honeywell Vocollect solutions broad, best-in-class implementation methodology experiences of our services teams, including our worldwide partner network of authorized business partners. Vocollect voice has been successfully integrated with more than 200 WMS and WCS systems, including many in-house developed systems operating on IBM iSeries (AS/400). So you can rest assured that we can integrate Vocollect voice with your present IT infrastructure, with ease.

With almost one million mobile workers using Honeywell Vocollect voice to deliver more than $5 billion dollars in goods to customers each day and the businesses they work for saving over $20 billion annually, we hope you agree that there has never been a better time to find your voice.

To learn more about how Honeywell Vocollect solutions can transform your warehouse operations for operating excellence, visit vocollect.com

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