The Definitive Guide to Warehouse Picking

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Getting the wrong order in the mail or during product pickup can be extremely disappointing. Worse, it can affect a retail brand's perception and mar the shopping experience for the average customer. But that's not all, errors in order picking cost retailers a lot of money too. Yet, this happens daily with many retailers.

In 2020, customers returned about $428 billion worth of merchandise to US retailers. Also, about 23 percent of eCommerce product returns were sent back because they were the wrong items. This means that there was a mistake in the picking or packing phases –both of which are key steps in the warehousing process.

This seemingly simple mistake costs retail brands billions of dollars in returns every year. This is one of the reasons why every warehouse manager must do everything humanly possible to optimize the picking process in their distribution center.

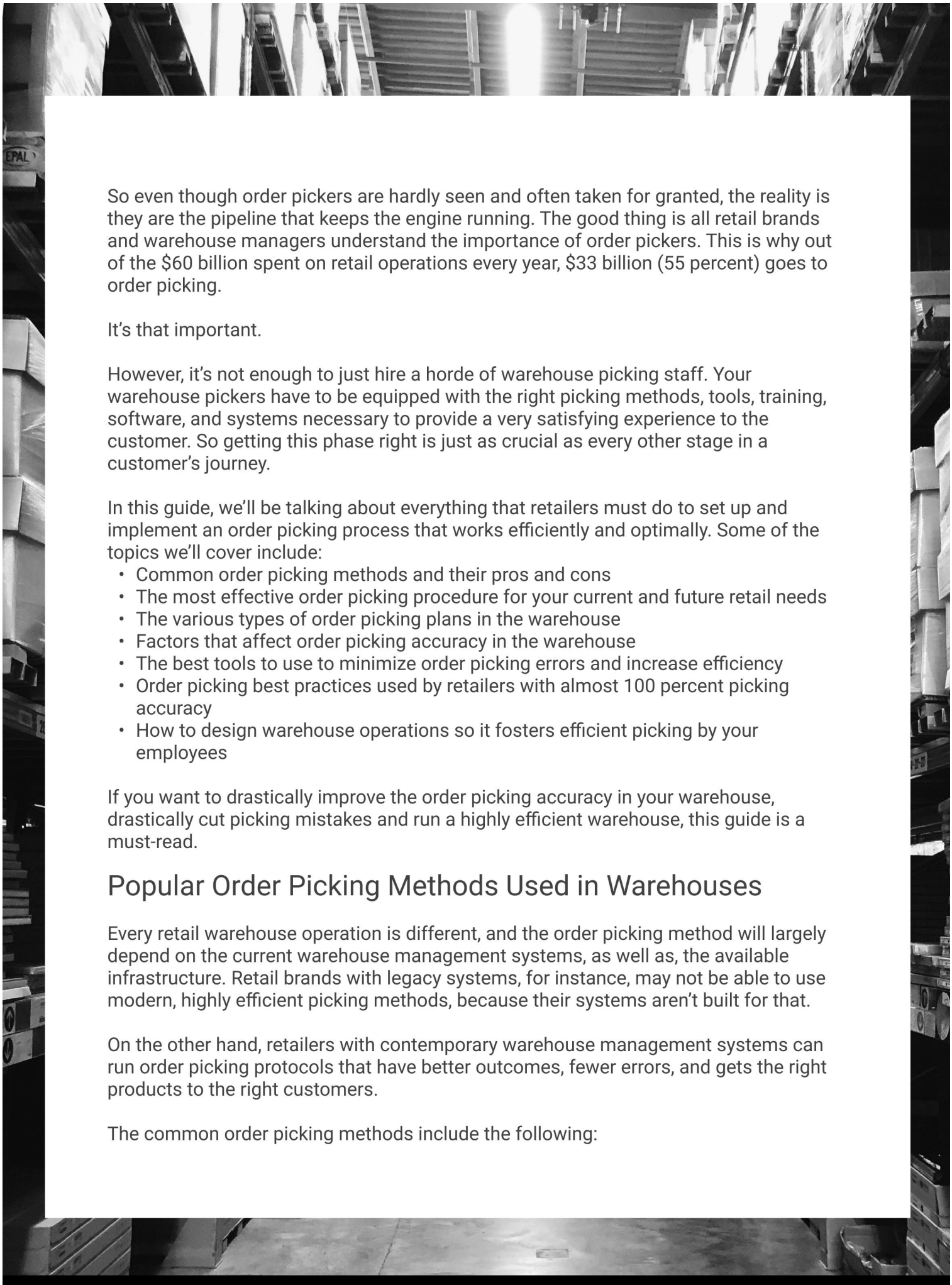
Order Picking is a Vital Part of the Warehousing and Supply Chain Process

Even though warehouse picking can seem like a simple activity, it's not. The entire retail supply chain relies on the accuracy of the picking staff or employees to provide a satisfactory customer experience.

The average retail warehouse and the entire distribution network is similar to the human circulatory system in the sense that, like the heart which supplies oxygenated blood to other parts of the body and removes carbon dioxide from the bloodstream, the warehouse serves as the central point from which products are sent to various micro fulfillment centers, pickup stores and ultimately, the right customer.

Without the heart, the body stops functioning. However, the distribution center, like the heart, relies on the veins and arteries (warehouse staffers and order pickers) to do a proper job of keeping the blood flowing in the body. If these don't work, the victim may suffer catastrophic injuries and even lose their life.

The same applies to the warehouse supply chain operations. A sub-optimal picking process or system that delays orders or delivers the wrong products is bound to produce very unhappy customers - who are likely to tell others of their bad experience.



So even though order pickers are hardly seen and often taken for granted, the reality is they are the pipeline that keeps the engine running. The good thing is all retail brands and warehouse managers understand the importance of order pickers. This is why out of the $60 billion spent on retail operations every year, $33 billion (55 percent) goes to order picking.

It's that important.

However, it's not enough to just hire a horde of warehouse picking staff. Your warehouse pickers have to be equipped with the right picking methods, tools, training, software, and systems necessary to provide a very satisfying experience to the customer. So getting this phase right is just as crucial as every other stage in a customer's journey.

In this guide, we'll be talking about everything that retailers must do to set up and implement an order picking process that works efficiently and optimally. Some of the topics we'll cover include:

- Common order picking methods and their pros and cons
- The most effective order picking procedure for your current and future retail needs
- The various types of order picking plans in the warehouse
- Factors that affect order picking accuracy in the warehouse
- The best tools to use to minimize order picking errors and increase efficiency
- Order picking best practices used by retailers with almost 100 percent picking accuracy
- How to design warehouse operations so it fosters efficient picking by your employees

If you want to drastically improve the order picking accuracy in your warehouse, drastically cut picking mistakes and run a highly efficient warehouse, this guide is a must-read.

Popular Order Picking Methods Used in Warehouses

Every retail warehouse operation is different, and the order picking method will largely depend on the current warehouse management systems, as well as, the available infrastructure. Retail brands with legacy systems, for instance, may not be able to use modern, highly efficient picking methods, because their systems aren't built for that.

On the other hand, retailers with contemporary warehouse management systems can run order picking protocols that have better outcomes, fewer errors, and gets the right products to the right customers.

The common order picking methods include the following:

Pick-by-Paper

Pick-by-Paper is the oldest and most common method of item picking and works just as it sounds: associates fulfill orders by picking items from a paper list.

Order fulfillment using pick-by-paper is the most common picking method in warehouses and retail environments because it can be done without the costly addition of technology. Picklists are generated - either manually by a human or automatically by a computer - and recorded onto a paper picklist that an associate will then use to fulfill an order or series of orders.

In addition to being used by smaller warehouses, pick-by-paper is also optimal for warehouses with a limited number of SKUs. This makes sense at this stage, seeing as a retailer that caters to just one or two items can easily make the lists of orders to be picked.

Pick-by-paper is a pretty simple and straightforward process as most orders are filled using the discrete picking method – that's picking orders one at a time. However, as retail operations expand, order volumes increase, SKUs multiply, warehouses expand, and pick paths become longer, many retailers still stick to this method, even though it's less efficient and accurate.

Pick-by-paper is often described as tedious, error-prone, labor-intensive, and time-wasting, pick-by-paper is by far the most popular order-picking method in warehouses across the globe. Why is this? The problem with the pick-by-paper method in many eCommerce or retail operations is that it has many downsides:

- Longer picking travel times
- Reduced productivity
- Rising picking errors leading to less picking accuracy
- Increased labor costs
- Less labor efficiency

Ultimately, paper-based picking methods end up costing the retailer more in operational expenses. It is estimated that retailers end up spending 60-70 percent of labor costs on traveling instead of order picking.

So, are paper-based picking systems worth it? Well, that depends on your current operational situation.

If you run a medium to large-sized retail business, the pick-by-paper method will hurt your business' supply chain efficiency – even if it was great in your early stages. As a result, you may want to consider other more efficient picking methods that are better suited to your retail operations - like vision or voice picking.

But if you have a relatively small retail operation with a small SKU base, and limited stock or inventory, pick-by-paper is a practical solution. This is because it is easy to implement, it is cheap and it works.

Pick-to-Light

Pick-to-light, also known as Pick-by-Light (PbL), is a light-directed system that shows a warehouse picker the exact location of the item and the number of items they need to pick. Pick-to-light systems can help operators accurately pick over 450 items per hour.

So when the picker acknowledges that he or she has picked the item, the quantity of available product units is automatically updated in the warehouse management system and verified by the inventory management system. This way, there's always real-time data on how many units of an item are available at every point in time.

Even though pick-to-light systems can be quite expensive in terms of equipment setup and maintenance, retailers who use them enjoy near-perfect order picking accuracy. Even though pick-to-light systems can be quite expensive in terms of equipment setup and maintenance, retailers who use them enjoy near-perfect order picking accuracy. Also, compared to other picking systems like pick by paper, PTL is capable of eliminating picking errors by 70-90 percent. For instance, if the operator hasn't picked the number of items required, the lights will stay on until they do.

It can also be integrated into a warehouse's current warehouse management (WHM) system, supply chain management (SCM) infrastructure, or enterprise resource planning (ERP) system. For retailers, the trade-off can be worth the expense in terms of better worker productivity – can be as much as a 30-50 percent increase, and cost savings.

This is possible, thanks to a combination of its guidance system, automatic acknowledgment features, and increased pick-and-put efficiency throughout the picking process. Pick to light systems require very little training (usually less than an hour), which means just about anyone can use the systems, regardless of their educational backgrounds.

And because the system uses a combination of lights, indicators, and numbers, warehouse employees do not need to understand or master any language. This creates an opportunity for diversity in employment and comes in handy during those peak periods when warehouse staff need to hire lots of temporary labor to meet high volume demands.

Retailers who use pick-to-light technologies enjoy considerably error-free order picking, improved labor utilization, and enhanced productivity operations because of its simplicity and cost-effectiveness. While PTL isn't as ubiquitous as other picking systems or methods, like vision or voice picking, it's fast gaining ground.

Vision Picking

Also known as pick-by-vision, this contemporary approach to warehouse picking works by providing order pickers with guided visual cues projected on their Head-Mounted Displays (HMD) throughout the picking journey. If there's an error, the mistake is flagged and the picker can correct it immediately. This saves retailers from making costly mistakes brought on by returned orders.

Vision picking is rapidly growing in popularity because of its hands-free approach to order picking, as well as its ability to improve worker productivity. Surveys show that vision picking in distribution centers or warehouses can result in 25 percent more productivity and very minimal error.

This technology uses augmented reality to identify where the products are, as well as the shortest route to get to them. This drastically lowers the chances of picking errors and boosts picking accuracy.

It also helps reduce travel time, which accounts for roughly 50 percent of picking time. This way, you don't end up paying order pickers for walking instead of filling orders in a fast, efficient manner.

Vision picking combines augmented reality, artificial intelligence, and machine learning technologies to deliver a seamless picking operation that not only improves the warehouse's supply chain efficiency but it also improves the ability of workers to get the job done very quickly.

Compared to pick-by-paper methods, warehouse operations that incorporated vision picking saw their picking speed increase by an average of 37 percent. Worker productivity in warehousing operations is key to fast order fulfillment and customer satisfaction. This is why logistics giant, DHL, implemented vision picking in their warehouses.

The company reported a 15 percent increase in worker productivity and minimized picking errors from the use of vision picking technology. With vision picking technology integrated into your warehouse management and order management systems, retail operations will experience the following benefits:

- Faster picking speed
- Reduced picking errors and early detection of errors if any
- The elimination of dead, base, or travel time – Does this by identifying the shortest route to the pick items and providing the most efficient navigation to the extraction location
- Faster and effective training for order pickers
- Improves personal safety in the warehouse – For example, Amazon is testing an AR-based "safe space" program that alerts workers when they're too close to each other. This is great for preventing and minimizing the spread of coronavirus and boosting morale among warehouse workers
- Provides audiovisual assistance to pickers
- Flexible system that adapts to demand requirements – this is great for high seasonal demand periods
- Fast inventory reconciliation between all channels – this ensures that customers don't end up paying for items that are out of stock
- Provides pickers with a digital pick list, marks the extraction container, and alerts the system after a successful pick

Ox offers an augmented reality-based vision picking solution that incorporates heads-up displays (HUDs) and helps transform your distribution center's operational efficiency.

With Ox, your retail warehouse and distribution center operations will run more efficiently. You'll also reduce travel time and optimize pick paths, improve picking accuracy, drastically reduce picking errors, and boost warehouse worker performance.

Pick-by-Voice

Voice picking, also known as voice-directed picking and Pick-by-Voice (PbV), is a super-efficient hands-free order picking method where the picking associate wears a microphone-equipped headset, used to verify items and their quantities. The multi-modal functions mean that 2-way communication is often enabled, so pickers can respond to operator queries when necessary. This high-demand picking method is being adopted by retail distribution centers.

Voice picking is a favorite for many retail warehouse operations because of its many advantages. These include:

- Improved picking accuracy by as much as 85 percent in surveyed distribution centers –overall, voice picking has a very low error rate; usually around 0.08 percent
- Voice picking platforms are designed to be easily integrated into your current warehouse management, order management, inventory management, and supply chain systems
- Easy to use as they a shorter learning curve and require very minimal training
- Eliminates the need for a paper-based picking process
- Optimizes the order picker's pick path –this means less travel time and faster order picking
- Increases warehouse workers' productivity –workers tend to pick more items with high accuracy when they don't have to multitask
- Lowers employee turnover – workers are generally happier when the picking process is simplified, their safety is assured and their error rates are down
- Reduces the risk of injury which is typically caused by distractions on the warehouse floor

Voice vs Vision Picking

When considering what type of picking technology is right for your retail business or warehouse, here are some facors to consider and how these common methods stack up.

	Paper Picking	Voice Picking	Vision Picking	Ox Vision + Voice Picking
Picking speed faster employees, faster order fulfillment	F	B-	B	A
Picking accuracy fewer miss-picks and miss-ships	F	B	B	A
Fulfillment efficiency like optimized pick routes	F	B*	B*	A
Fast & easy employee onboarding to help with peek season and new employees	A	C	A	A
Able to integrate with existing processes so inventory and orders are real-time	F	B*	B*	A
Hands-free to reduce mistakes and increase picking speed	F	A	A	A
Smart replacements when items are out-of-stock	F	C	C	A
Ability to bundle complimentary to sell more products and increase revenue	F	C	C	A

*Benefits vary by solution.

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Which Warehouse Order Picking Method Is The Best For You?

That completely depends on your needs. The reality is there's a solution for your current retail situation. It all depends on your current system, your SKUs, KPI's and order volume. The best picking method is what works efficiently and helps a retail or eCommerce brand get the right order to the right customer in the shortest time possible.

For instance, small eCommerce retailers processing no more than 10-20 orders of the same items a day may get by with the pick-by-paper method. However, larger retail brands processing hundreds of orders per day for different items will struggle if they attempt to use the pick-by-paper method.

Smart warehouse managers who run medium to large-sized warehouses, end up using a combination of at least two of these picking systems for maximum efficiency.
Think about that for a moment: Imagine a picking system that utilizes the best of picking methods – in this case, vision picking and voice picking. You will enjoy incredible picking accuracy, drastically cut down on your error rates to the point where they're virtually non-existent, increase picking staff productivity and performance, while keeping costs down. This means that you get all of the upsides and none of the cons.

The good news is you can find the best of both worlds in Ox. Our platform offers world-class vision + voice picking solutions guaranteed to help your supply chain run very efficiently.

Retail warehouses and distribution centers that are powered by Ox are known to have very high picking accuracy, zero pick errors, improved productivity among warehouse staff and order pickers, and a super-efficient supply chain that runs seamlessly. This is because our AI-driven augmented reality-based warehouse management platform is designed to do just that.

How to Measure Success

Once you've optimized your fulfillment operations, you still need a way to track your progress and ensure that these measures work. To do this, you'll need to use the following crucial order picking KPIs:

- **Order picking accuracy** – Pickers have to get the order right from the get-go. You must aspire to a 100 percent picking accuracy rate in your distribution center.
- **Perfect order rate** – This is the amount of incident-free orders fulfilled and delivered by your warehouse, compared to your total number of orders.
- **Backorder rate** – A low backorder rate shows that your warehouse is great at forecasting product trends, inventory supplies, and purchases. Always maintain a high inventory-to-sales ratio to keep your backorder rates low.
- **Units per transaction (UPT)** – How many product units is your warehouse delivering per transaction? Understand that highly efficient warehouses have a high UPT.

To ensure that all these KPIs are met and more, consider the factors below. They influence your success rate:

- Comprehensive staff training
- Abundant floor space for inventory
- Optimum product volume at the warehouse
- Optimize picking routes –Iterate and tweak until you are satisfied (AR tech can help with this)
- Adopt velocity-slotting strategies – High demand products should be in prime slotting locations
- Enhance warehouse operations with smart automation
- Track and preserve all error data – This will help prevent hasty accusations or continuous poor performance of warehouse pickers

Conclusion

Now, more than ever, most off-mall, big box, and eCommerce retailers are under tremendous pressure to deliver customers' goods in record time. With most customers looking to pick up their items faster, every retail distribution center needs a picking method that works effectively, efficiently, and fast. You cannot afford to be behind.

The quest for a streamlined and highly efficient supply chain in your retail distribution center is tied to your warehouse's picking performance. If you have all the manpower but have no tools, you will have to deal with the nightmare of mispicks, significant picking errors, unreliable picking accuracy, poor worker morale, and tons of returns.

Worse, your delivery timeline will be outrageously long. With a platform like Ox, you can transform and streamline your supply chain such that it performs optimally and efficiently. Ox's augmented reality-based vision + voice pick technology is easy to use, integrates smoothly with your current supply chain system, can drive more efficient and improved picking accuracy in the warehouse, drastically cuts down on motion waste, boosts your revenues, and ensures fast order fulfillment.

Retail distribution centers like yours have seen at least a 15 percent increase in picking accuracy and pick performance, as well as a 3600 percent ROI on their investment. Let's help you transform your supply chain and warehouse management system today.

How to Improve Warehouse Order Picking Accuracy and Speed

When considering the risks discussed throughout this article, it's vital for retailers to increase speed and accuracy in order to remain competitive.

There are a number of ways to accomplish this - whether you're struggling or just looking for new ways to innovate and optimize.

Hands-free Technology

One of the best ways to improve efficiency and accuracy is to make your order picking process error-proof. Many retailers have accomplished this using hands-free technology that allows employees to keep their eyes on what's important - the items they're picking - instead of bulky hardware.

In fact, heads-up display was as much as 88% faster than using pick-to-voice, pick-to-paper, and pick-to-light solutions alone. Ox's vision + voice picking solution works best here.

Employee Training

Getting an employee up to speed is expensive and time-consuming. While new employees learn about your products and organization of your warehouse, they're making mistakes and wasting a ton of time. Hands-free tools like Ox can actually help reduce this learning curve significantly so your associates are more productive, faster.

But training isn't just important for new employees, the most efficient warehouses run regular drills to identify potential speed bumps and provide strategies to smooth them.

Reduce Travel Time

Order picking accounts for over $30 billion in annual warehousing expenditures in the US alone, which means reducing the time it takes for your associates to fulfill an order can pay dividends.

As already discussed, batch picking can help increase efficiency and maximize your existing workforce. By enabling your associates to pick up multiple orders at once, ideally in an optimized pick route, your picks-per-hour will skyrocket.

The best way to approach this is using machine learning technologies that can automatically batch orders and generate optimized pick routes - without you having to lift a finger.

Horizontal Picking

Consider prioritizing a horizontal picking system, which is considered to be much more efficient. If you have to arrange vertically, place fast-moving products on the lower, easy-to-reach shelves.

Warehouse Picking Best Practices for Retail Distribution Centers

One of the keys to running a high-efficiency distribution center is the implementation of picking best practices in your warehousing operations. Naturally, you'd already have optimal warehouse management, inventory management, and order management systems. These best practices will complement these systems and help you utilize them to their best performing levels.

Every high performing retail warehouse or distribution center practices the following:

- High-SKU Zoning is a priority – fast-moving products with high volume orders should be in the same zone (think warehouse within a warehouse)
- Plan your picking waves ahead of time
- Minimize human involvement by utilizing goods-to-picker tech/equipment e.g. carousels
- Set up your effective warehouse management, order management, and inventory management system to incorporate lean management practices – this means optimizing your systems to reduce or eliminate operational waste
- Open up more communication lines between distribution center workers and warehouse management
- Optimally design the warehouse for logical flow – every preceding step should logically and automatically flow into the next
- Prioritize human pickers' safety – personal safety and protection from the Covid19 virus is a necessity; without it, workers' morale will be low and it'll affect productivity and your fulfillment outcomes

You'll also need to implement one or more of the following warehouse order picking plans:

- **Batch or multi-order picking** – Often requires pickers to combine multiple orders into one picking instruction. This helps order picking staff increase efficiency, save time, and maximize pick volumes.
- **Zone picking** – Known as pick-and-pass, this requires workers to be assigned to a part of the warehouse where they'll fill specific SKU orders. This works great to reduce motion waste and improve order fulfillment rates.
- **Discrete picking** – Also known as picking by SKU, this is the common picking plan where an order picker gets a list of orders and fills them one at a time. It's an inefficient plan for multiple SKU orders and will only work for small-sized retail operations with small order volumes and limited SKUs.
- **Wave picking** – This is like doing your picking at set times instead of throughout the day. Works for boosting optimal performance among workers.
- **Cluster picking** – This is like going shopping for multiple people. Only instead of working with one list at a time, you have all carts and are filling all of them at the same time as you move around the store.

Each picking plan has its pros and cons. You'll have to figure out the best plan for your operation. Some retail distribution centers often interchange their order picking plans when necessary.

For instance, the warehouse supervisor can switch from regular batch picking to zone picking if there's a large order that needs to be filled very quickly.