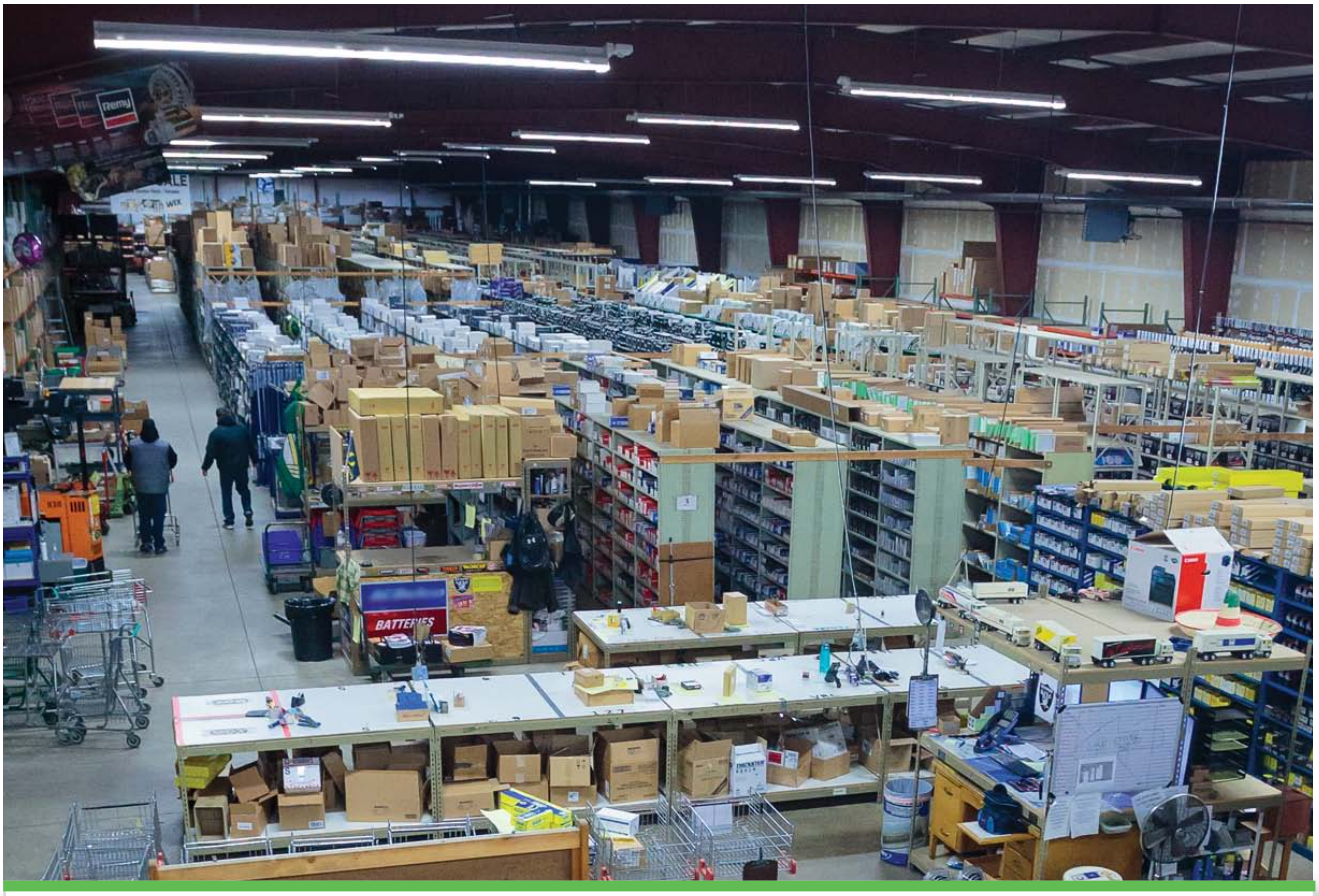
NEWCASTLE SYSTEMS

Powered Process Improvement

A GUIDE TO INCREASE YOUR MANUAL PICK RATES



INTRODUCTION

The evolution of order patterns to few or single line items is putting greater pressure on anyone who needs to pick, pack and ship orders from their distribution center. Even the most challenged companies can easily improve throughput with their manual processes by removing unnecessary travel, handling and paper. Mobile powered pick carts can be very helpful to allow for a simple low tech, low cost batch and cluster picking option. Continue reading for more tips on how to improve accuracy and productivity in your order picking process.

WHITE PAPER

HIGH ORDER VOLUMES OF FEW LINE ITEMS ARE CHANGING THE DISTRIBUTION RULES

With e-commerce doubling every five years and expected to grow to $4 trillion worldwide in 2020, there is not going to be any foreseen change back to the days of less frequent, bulk ordering patterns.

Changing Order Patterns Creates New Challenges for Companies Both Large and Small

The "Amazon Factor" and changing order patterns has put pressure on anyone who needs to pick, pack and ship orders from their distribution center as part of their daily business. Customers want smaller orders (single lines) faster shipments (same day shipping), perfect fill rates (no back orders), accuracy (no errors) and easy returns, which are often free.

This creates a difficult task for many companies both large and small on how to process the volume of orders that often have only one item. Many refer to these as 'single line orders' or 'eaches' . Far too many companies believe that throwing extra labor at the problem is the solution, only to find that without robust processes and standards the variance in the quantity (pick rates) and quality (pick accuracy) is erratic.

Larger companies can afford automated systems such as carousels, vertical lift modules, conveyors and robots to bring goods to the picker. These all reduce travel time, handling and paperwork - three areas of waste all DC's can improve upon. However, slower moving SKU's still pose a problem for even the largest companies with heavy automation. They take up valuable real estate in picking zones only to collect dust between picks, so they struggle with how to store these. The expense of automation is prohibitive with most companies having only a median Capex investment of $266,000 according to the 2016 WERC study.

WAREHOUSE LANDSCAPE BASED ON THE 2016 WERC STUDY

CAPEX INVESTMENTS

Average
$1.2 million

Median
$266,130

EMPLOYEES

Average # in a Distribution Network
287

FACILITY SIZE

Average in Network
570,700 sq. ft.

Median in Network
246,341

Easily Improve Throughput by Removing Waste

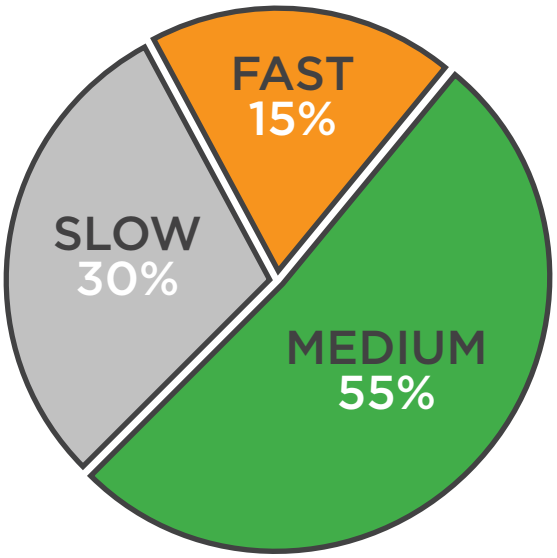
With picking contributing to 50% of labor cost in many DC's it's an area to target for anyone who can't afford the technology of larger, well financed companies. Manual picking remains a very robust alternative to companies that:

- can't afford automation
- have smaller items that are frequently picked
- have slower items that take up valuable real estate
- can create a smaller pick zone
- don't have the volume automation requires

With some lower cost ideas and investment, the most challenged companies can easily improve throughput with their manual process. Removing travel, handling and paper are the keys to success.

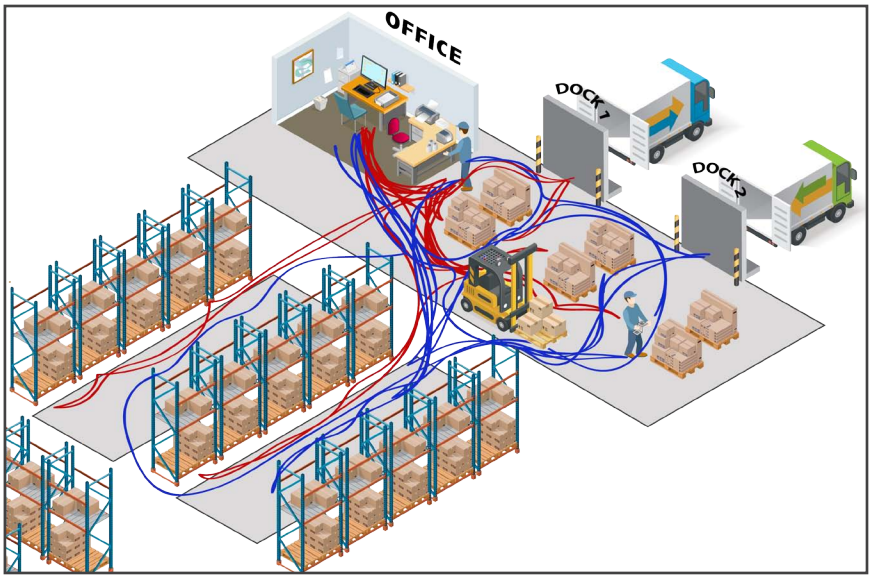
Creating a pick zone using Pareto's Law (80-20) will ensure items that get frequently picked are located closest to pack tables or shipping to reduce travel time. Many pickers walk past slow moving items multiple times a day. These should be moved, creating more space for faster moving items. Analyzing order reports will help classify items as A (fast), B (medium), or C (slow), but simply asking the pickers what locations they go to the most is very helpful as well.

Analyzing Order Reports Helps to Classify How Quickly Items Move



Racking distance should be kept as narrow as possible to maximize warehouse space and allow pickers to grab from either side if possible with minimal travel. Consider the height of frequently picked items to reduce bending or straining. Flow racks are great to replenish cases from the rear so productivity is not interrupted.

Moving to paperless batch picking is ideal if a company has a wireless infrastructure and IT support to transfer pick tickets to a laptop, tablet or RF device. Many companies are still using paper based picking where workers are grabbing a piece of paper, walking to a location, picking one item, walking back to the pack table and repeating the process only to walk back to the same location ten minutes later. It's like going to a five different grocery stores making five trips, when one store has everything you need.



Mobile Powered Pick Carts Greatly Improve Accuracy and Productivity

Mobile powered pick carts can be very helpful to allow for a simple low tech – low cost batch and cluster picking option. They are lightweight, adjustable and designed to power laptops, scanners, scales and printers for up to 24 hours. In a batch pick scenario, a picker reads their screen directing them to a location and then picks single or multiple orders into a tote, before moving onto the next item and location. The full cart is then presented to a pack station for sortation, inspection, packing and labeling. In a cluster picking application, pickers place items directly into shippable cases and can weigh and label the items right on the cart, bypassing the pack function, which is often a bottleneck. **Motion can be 50-75% of any manual picking process so just cutting this in half greatly improves productivity.** Picking volume gains are typically 30+% when removing all the extra travel, handling and paper. This ROI allows for reducing manpower, overtime and extra shifts. Pickers can be deployed to more value added jobs like QA to maintain order accuracy and customer service if needed.

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If accuracy is critical due to customer service levels or item value, then adding "pick lights" to a mobile station can be very productive. After operators arrive at their directed location, they simply need to scan the item, read the quantities under the lit lights, put the items under that light into a bin or box and then push the light to turn it off. They then move onto the next location and repeat the process. Accuracy and productivity both increase when data entry is removed from the process.

Voice directed picking can also be integrated with mobile powered carts to increase accuracy and productivity and ease training of new employees.

Hands free operation greatly increases pick rates and with mobile power items can be weighed and labeled on the cart in a cluster picking application to further increase output.

Work standards for picking is critical to create stability and predictability in your process. If an industrial engineer is not available, you can do a time study of your process looking for an achievable rate that is realistically attainable. Follow your picker from the moment they receive an order until the time the order is dropped off. Look for bottlenecks which can be removed that don't add value to the process. Once these standards are in place, consider some type of gaming or incentive program so pickers have a reason to over achieve.

Four Tips to Help Improve Your Single Line Process

To summarize, don't allow a small budget to hinder your picking output. If you are struggling with orders being held up at different stages in your warehouse, picking alone won't solve all your problems. Inbound, outbound, putaway, returns and QA all need to get better to survive against best in class companies. Improving how you handle small orders will allow you to compete while you work on the other areas. Do these (4) things to help improve your single line order process:

1) Optimize your pick zone and storage so the fastest movers are close by, easily found and easy to reach. Keep the square footage as small as possible.
2) Have pick tickets transferred to a computer screen to remove paper.
3) Batch pick to reduce travel time and handling.
4) Create measured standards to increase stability in your process.

Good luck in your fight to compete.

POWERED PROCESS IMPROVEMENT

ABOUT NEWCASTLE SYSTEMS

Newcastle Systems is committed to providing innovative solutions that help make Auto-ID technology and other hardware truly mobile and information more readily available across an entire enterprise.

Loss of productivity and inefficiencies such as wasted steps to the printer, inaccurate inventory counts, improper labeling, time delays, manual processing and incorrect shipments are just some of the challenges that are alleviated with a mobile powered workstation.

73 Ward Hill Ave. • Haverhill, MA • 01835 • USA • 781.935.3450 • www.newcastlesys.com

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