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American Eagle Outfitters goes waveless

The apparel company moves to Waveless Optimized Picking and Packing at its new direct-to-consumer distribution center. The results are now rippling through the supply chain.

SOMETIMES IT TAKES A BIT OF RADICAL RETHINKING TO REVOLUTIONIZE a company's distribution.

"At first, you naturally want to compare it with wave picking, evaluating it against what you already know," explains Rick Stukus, senior general manager at American Eagle Outfitters. "But as soon as you forget what you know, you begin to understand and you get it. Waveless philosophy is a huge shift in your thinking."

Stukus is recalling the mind shift he had to make before recognizing the huge productivity gains possible through Waveless Optimized Picking and Packing. It's a process that has radically altered the way the apparel retailer does business at its new direct-to-consumer distribution center in Ottawa, Kansas.

Traditionally, direct-to-consumer distribution (Internet and catalog fulfillment) has relied on a series of processing waves for segmenting, selecting and sorting. While this methodology is an industry staple, the folks at American Eagle have ditched the waves in favor of a waveless optimized solution from Vargo. Vargo, an integration, software and equipment firm, provided American Eagle with a facility design coupled with its Continuous Order Fulfillment Executor (COFE) software that keeps work constantly flowing while optimizing the facility's workers, sorting systems and pack stations.

In normal wave picking, a large group of orders drop for processing as one wave. Items needed for the orders are then batch picked together from various picking zones and brought to a central location, such as a pack area, to be sorted for individual customers. Problems arise, however, when picks are not properly coordinated. Equipment is often tied up while waiting for all items to be gathered for packing. Further, the wave itself cannot end until every order is complete, at which time the equipment and systems are finally freed for the next processing wave. Pickers may also be left idle awaiting the next wave, and sortation equipment and pack stations are greatly under-utilized waiting while each and every item finds its destination.

In contrast, waveless optimized batch picking continuously

assigns new orders to pickers and optimizes their pick paths to reduce movements. An order can be dynamically inserted into a pick path at any time with the goal of reducing travel and optimizing the utilization of personnel and equipment.

The pick assignments are relayed to workers wearing RF wrist scanners. The devices direct batch picking of SKUs required for multiple orders into totes. A worker will pick items into the tote until it is full or until instructed to release it to be sent to sorting. Vargo's COFE software coordinates the fulfillment process with the facility's Manhattan warehouse management system.

The facility's large Dematic crossbelt sorter is used to divide the

batch picks into individual orders. The sorter consists of about 370 crossbelts that glide in a circular path past 480 accumulation locations. The totes containing items are conveyed from the pick module for semi-automatic induction. Items are dynamically assigned to an order accumulation destination and the crossbelt sorter gently rolls the product off into the assigned chute.

Once all items for an order have been gathered, a light indicates that the order is ready to be packed. A worker pushes a mobile pack station riding on rails to the proper chute. Each item is then removed, scanned for accuracy, and packed into a carton that is sealed and labeled directly at the workstation. Because of the waveless processing, the pack chute is immediately made available to another order.

"Being able to quickly turn our sorting and packing is critical to productivity," says Stukus. He adds that the Vargo design for the facility and the addition of Vargo's software have paid dividends and American Eagle's performance results have exceeded expectations. "We are considerably less costly now for doing our direct-to-consumer distribution, and we have a large return on investment for this facility. Vargo has a product here that is special, and they have been a great partner for us. Their customer service has been phenomenal."

For more information on Vargo, call 877-876-6384 or visit www.VARGOcompanies.com.



To watch a short video showing how waveless processing works at American Eagle's new direct-to-consumer distribution center in Kansas, go to www.dvelocity.com and click on The SPEED Challenge.