

CASE STUDY

Waveless WES Fuels Omnichannel Growth for American Eagle Outfitters



Increased

↑
Thru Put



Reduce
Capital
Investments
↑
Capacity

C³FE[®]
Waveless Order Processing
Starts Here

Fastest
Order
Cycle Time

Minim
WM
Function

Adaptive



Waveless WES Fuels Omnichannel Growth for American Eagle Outfitters

About American Eagle Outfitters

American Eagle Outfitters® is a leading global specialty fashion retailer that offers on-trend clothing, accessories and personal care products through the American Eagle and Aerie brands. AEO sells its products through its more than 900 American Eagle stores, 100-plus Aerie stores and online at ae.com. In addition to the on-trend clothing and accessories under the American Eagle brand, the company sells intimate apparel, activewear and swimwear under the Aerie brand. It also operates Tailgate, which specializes in vintage-style, graphic tees with messages focusing on everything from colleges to pop culture.

Summary

In 2018, U.S. retailers saw online sales for their businesses continue to outpace previous years, with e-commerce sales growing by 19 percent during the holiday peak between Thanksgiving 2018 and Cyber Monday, according to *Internet Retailer*. American Eagle Outfitters (AEO) was ready for the onslaught of orders because of the continued investments it has made in technology and in its omnichannel fulfillment capabilities. After deciding to bring inhouse all responsibilities for online fulfillment, American Eagle Outfitters turned to VARGO®, which had previously worked with AEO in 2007 when VARGO® designed the retailer's Ottawa, Kansas, distribution center. To handle the growing direct-to-consumer side of business, American Eagle decided to build a new fulfillment center, which opened in Hazle Township, Pennsylvania in 2014. The new facility, which replaced an older, conventional distribution center located elsewhere in Pennsylvania, also provided room for the retailer to grow as e-commerce increased.

COFE® directs the waveless picking in a continuous flow, crucial to enabling AEO to meet a 24-hour turnaround time for its e-commerce orders.

The Challenge

American Eagle's main customers fall into a demanding demographic — 15- to 25-year-old shoppers — and this millennial group wants their orders fast and accurate. In 2011, AEO was looking ahead to the projected growth in e-commerce and increased customer demands. At that time, AEO's four-year-old Ottawa, Kansas, facility — the first waveless fulfillment center built to handle direct-to-consumer orders — was the only existing AEO facility for handling e-commerce customer orders. AEO knew that it needed an additional fulfillment center. The challenge was that the retailer also needed a distribution center that would be able to handle store replenishment at the same time.



The Solution

VARGO® worked with American Eagle Outfitters to design the first fully waveless, omnichannel facility in Hazle Township, Pennsylvania. Built new from the ground up, the 1-million-square-foot facility is designed to handle e-commerce and store-replenishment orders. As the integrator, VARGO® managed every aspect of the design and installation of the fulfillment center, implementing the appropriate warehouse execution software solutions to maximize speed, efficiency, and expediency — essential to AEO's desire to be able to meet the increasing consumer expectations for fast delivery.

At AEO's Hazle Township omnichannel facility, VARGO® installed its Continuous Order Fulfillment Engine (COFE®), the waveless Warehouse Execution System that drives the omnichannel process from beginning to

end. VARGO® designed the facility so that when product enters the fulfillment center, it is sent to an “all active” environment capable of filling either store-replenishment or e-commerce orders. The active area can hold 250,000 cases of inventory.

COFE® directs the waveless picking in a continuous flow, crucial to enabling AEO to meet a 24-hour turnaround time for its e-commerce orders. The continuous flow, waveless WES enables real-time order processing, allowing retailers to fill for both efficiency and expedience, depending on the orders coming in. In a waveless system, each order is independent of all other orders, so if an order with priority shipping comes in, the WES sends that order to the top of the picking pool and it becomes the next order that gets processed in the fulfillment center.

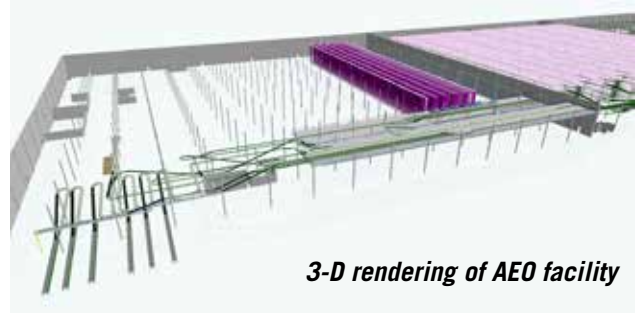
The Results

With VARGO®'s waveless WES driving operations inside the Hazle Township fulfillment center, American Eagle Outfitters successfully uses waveless picking for e-commerce and store-replenishment orders.

AEO attained a 99 percent-plus sorter utilization and shaved approximately one week from the supply chain. Waveless picking enables AEO to commit to and meet a 24-hour, service-level commitment for shipping its direct-to-consumer orders.

By the Numbers

- Building Size: 1 million square feet
- Channels supported: 2 (retail and direct-to-consumer)
- Peak workday operation hours: 20
- Number of pickers on peak workday 325-350
- SKUs: 50,000
- Inventory on hand (units): 12 million
- Inventory on hand (cases): 400,000
- COFE® order receipt to start processing time (e-commerce): 10 minutes
- Typical e-commerce order processing time (all orders): 70 minutes
- SLA target for priority e-commerce orders: 2 hours
- Theoretical number of daily retail units shipped: 540,000
- Daily E-commerce's direct-to-consumer units shipped: 750,000



3-D rendering of AEO facility

In addition, it didn't take long for AEO to notice the benefits during its critical peak holiday shopping period in 2014. In the first peak season that the new AEO omnichannel facility was open in Hazle Township, AEO received a higher than expected number of e-commerce orders. However, because all inventory is active, the retailer was able to use 220,000 units of inventory set aside for store replenishment to fill those direct-to-consumer orders. They were able to do this because of the omnichannel model and because COFE® seamlessly directs inventory to be used to fill the e-commerce orders.



During that first peak season, the fulfillment center processed the same number of orders during the six-day peak holiday shopping period as it had processed in the entire three-month period preceding the peak. The use of one inventory, one staff, one workflow engine and one facility to sort orders for both channels has proven to be a successful investment, providing a significant return on investment.

American Eagle Outfitters continues to invest in its Hazle Township facility by integrating robotics and an automated storage and retrieval system into COFE® to handle increasing order volumes and maximize floor space without having to hire more pickers. In addition, VARGO® and AEO have designs to install more cranes to receive, store and retrieve retail inventory and shuttles to pick products from the “all active” inventory. COFE® will continue to manage all of the operations inside the four walls.