



Knowledge • Innovation • Dynamic Optimization

Direct-To-Consumer Order Fulfillment Center

Location: Northeastern United States

Project Challenge

Growth in the customer's direct-to-customer order requirements resulted in tilt tray sortation conveyor bottlenecks. There was an identified need for 15% greater production than the current sortation system could provide. The customer embarked on a process of sourcing an expansion to, or new tilt tray sortation conveyor system. The existing system was rated to sort 18,000 units/hr, but they were only able to obtain a peak of 13,000 units sorted/hr and during normal operations saw less than 11,000 units sorted/hr. The challenge was to provide the customer the greater production capacity, without capital investment in material handling equipment.

Project Solution

VARGO® Adaptive Software LLC (VAS) identified limitations in the current business processes and software systems that created bottlenecks at the tilt tray sorter system. The current operation used multiple "waves" in operating the sorter, causing significant non-productive time in transitioning from one wave to the next. The solution was to provide a "waveless", continuous order fulfillment process.

Adaptive Software

VAS' Continuous Order Fulfillment Executor (COFE) software was implemented to provide the ability to eliminate one wave operations, allowing for continuous sortation of product. By focusing on the completion of continuous individual orders, the sorter is able to continually process the incoming flow of product, eliminating pick wave transition time.

Result

The customer was able to realize the 15% extra capacity in the tilt tray system, and in fact much more. They are now entering their fourth year of continued use of the existing tilt tray sortation conveyor system, and are able to achieve hourly throughputs of 17,900+ units/hour, or greater than 99% utilization of the sorter capacity. All without spending \$14 million dollars on an additional material handling systems equipment expansion.



▶ **Corporate Headquarters**
3709 Parkway Lane
Hilliard, OH 43026
614.876.1163 phone
877.876.6384 toll free
614.876.0706 fax

Texas
4221 Freidrich Lane
Suite 150
Austin, TX 78744
512.851.2377 phone
512.851.2379 fax

California
1600 Shattuck Avenue
Suite 124
Berkeley, CA 94709
510.548.0143 phone
510.548.0169 fax

VARGO® INTEGRATED SYSTEMS INC.
VARGO® ADAPTIVE SOFTWARE LLC
VARGO® MATERIAL HANDLING INC.

VARGOcompanies.com