

GroceryWorks.com Provides Point & Click Shopping with Order Picking System

NOTE: GroceryWorks has ceased operations. Cisco-Eagle believes that the material handling system in this facility is worth discussing, though. If you have further questions about this application, please contact us.

Online grocery shopping distribution center. GroceryWorks.com was created for shoppers who want to order groceries online for convenient home delivery. It offers everything a conventional grocer offers and more: restaurant quality cuts of meat, fresh seafood, and produce that tastes right off the farm. GroceryWorks carries 10,000 top national brands available in traditional stores as well as unique items like fresh bread and chef-prepared meals.

The company utilizes a mid-range model to deliver groceries. GroceryWorks considered the other models in the online grocery industry, and found them lacking. GroceryWorks designed a distribution center with over 12,000 SKUs that delivers groceries through a transportation system for a finite circular area around the city. Customers can enter their ZIP code on the GroceryWorks site to ensure they are within the delivery area.

\$170 Million dollars in the grocery business was sold over the Internet in 1998, making the industry wide open for innovative new business models like GroceryWorks.

One business model in the online grocery industry utilizes local supermarkets and a truck force; the shopping is done by employees at local stores and delivered to customers. Another utilizes a central distribution center to cover an entire city. GroceryWorks creates smaller distribution centers that serve specific areas. This means faster, more flexible service from GroceryWorks' extensive grocery inventories than a shopper or massive centralized distribution approach can offer.

To meet its goals and timeline, the company had to create facilities in Dallas—fast.



The situation

GroceryWorks set a lofty goal in its plan to become operational and ready to deliver groceries to customers in the Dallas metroplex. The company intends to capture the online

company that could orchestrate an explosive multiple site roll-out in a short period of time. Cisco-Eagle did a fantastic job with the first site and has been an excellent partner. They took the bull by the horns and got it done." The company located Cisco-Eagle

"What makes this job exceptional is the timeframe in which it was executed."

shopping business in its initial Dallas area of operation by offering superior products, convenience and total flexibility. The customer focus is on busy, married couples with dual incomes and kids, who don't necessarily have time for conventional shopping. The goal is to save time for the consumer by shopping online for delivered groceries.

"We really were in a time crunch," said Jeff Waller, Director of Distribution. "We were looking for a world class material handling

through its web site, and wanted an operational system within 45 days.

The Desired Solution:

Cisco-Eagle had to design and implement a system that would deliver a peak of 24,000 orders a month—the equivalent of a thousand orders a day.

There would have to be logic for receiving and restocking items that came in daily.

As few as 30 people can pick 1,000 orders a day—the entire operation



GroceryWorks also needed a system to take the corrugated boxes out of the work areas quickly and efficiently. There had to be an area for bulk storage, and a system for tote circulation.

An average order consists of 4 large totes. This adds up to 35-50 items per order which equals 50,000 picks a day for the warehouse personnel. The desired output per picker was in the 175 to 250 picks an hour. The ease of picking the groceries would have to be driven by a robust Warehouse Management System (WMS) and a material handling system that will not slow pickers down.

Solution implemented

Material handling system, utilizing conveyors, flow rack, and static shelving as its major components.

The solution utilizes a combination of conveyor, rack and flow rack for picking. Orders



made on the GroceryWorks site are printed to tickets by the company's order processing system. The software converts the orders to cubes and calculates how many totes will be needed for the order, and prints pick tickets that are attached to the totes.

Totes are inducted into the aisle in which picks reside (driven by the WMS software). The totes move on gravity conveyor in a circular motion down each aisle. When that aisle is finished it will be "passed" to the next aisle via low-cost gravity conveyor as well. If the tote is finished (RF-directed picking with interface to a robust WMS tell when the tote is cubed out or completed picking) the tote will be manually pushed onto a power take-away conveyor which will transport the totes to the dock doors.

Relatively fast-moving dry goods are picked from flow racks, for first-in, first-out inventory control.

Slower moving items such as condiments are stored on static rivet shelving. After those, bulk items like cases of soda and bags of dog food are picked from pallet storage locations. Refrigerated and frozen items are picked into totes with special freezer and refrigerator

linings filled with dry ice to keep them cold for 10 hours and keep the items fresh. For pilferage items like tobacco products, GroceryWorks opted for wire security partitioning. Customized picking carts were created to quickly access the refrigerated and freezer areas.

The orders convey out of the picking areas and go through bar code scanning equipment. This automatically trans-

ports the totes to one of the company's fifteen dock doors. They then go into the GroceryWorks transportation trucks. The orders are planned in waves and are grouped according to delivery zones and time of delivery. Gro-



ceryWorks has state of the art software that figures all the variables and tells the WMS when to release the wave and start picking for 100% accuracies.

The powered trash conveyor runs overhead, for excess cardboard and paper from packing materials. This efficiently and cleanly removes packing materials from the floor, while requiring minimal employee time. The conveyor runs directly into a trash compactor.

The results

GroceryWorks got its system up and running in a very tight timeframe. "What makes this job so exceptional is the timeframe in which it was executed," said GroceryWorks' Marty Baker.

The conveyor runs at a constant 90 feet per minute, allowing pickers to pick up to 1000 orders a day—the peak order fulfillment projected. The system can use as few as 30 people to pick the entire operation.

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