



# Lucas Delivers Profitable Growth at Ace Endico



Ace Endico is a growing regional foodservice distributor in New York State. With growth comes the challenge to maintain and improve service while shipping larger volumes from the same physical space. For Ace Endico, the key was to pick more cases in the same number of hours and load trucks more efficiently so drivers could leave on time to meet delivery targets and customer service levels. Rob Johnson, Night Warehouse Manager, says that Ace Endico's previous order selection process using wearable computers and barcode scanners made a hard job even harder, especially in the face of the growth demands.

"There was a high level of frustration with the RF system," says Johnson. "New people had trouble adapting to it, and in retrospect we were asking them to adapt to a system that was cumbersome. There were also issues due to bad barcodes and scanner troubles. It really slowed them down." The scanning solution helped Ace Endico achieve high levels of selection accuracy, but executives and managers wanted more.

"The main things we needed were better productivity and accuracy and an easier, faster way to get new employees up to standard," says Murray Hertzberg, President of Ace Endico. "Better selection accuracy helps us eliminate re-ships, which reduces our shipping costs. And since we are growing, we needed to be able to select orders more efficiently." Hertzberg and his management team felt that a voice-directed selection system would address the accuracy, productivity and training challenges, in addition to improving safety for workers.

## Selection and Implementation

Ace Endico selected the Lucas solution, which had incorporated best practices developed over hundreds of implementations into a comprehensive warehouse optimization solution. The solution includes unique AI-based optimization that is embodied in Jennifer™, the brains, voice and orchestration engine of the solution. Secondly, the solution includes multi-modal voice-directed applications and a management console. The multi-modal voice-directed application runs on rugged mobile devices that could be used in freezer, cooler and dry areas of the DC.

## Eyes- and Hands-free Picking - How it Works

The previous RF-based selection system at Ace Endico used wearable computers with ring scanners, in addition to pre-printed case labels. Selectors would read the labels or computer screen to determine what items and quantities to pick. They would scan each case they picked, or, if the product did not have a barcode, they would key enter the quantity using the wearable computer, and place the appropriate label on each case. They would also scan or key-enter catchweight information, and key-enter lot or date information, if required.

The voice-directed process with Lucas eliminated the need to read labels or screens, and replaced scanning and manual key-entry of additional data with spoken commands. "We are

still using labels for the benefit of the drivers,” says Hertzberg, “but the men are picking cases without reading the labels, so they are listening to the commands with their heads up, which is more efficient and also much safer.”

Rather than scanning or keying in information, selectors confirm they are at the correct location and picking the right quantities by voice. When selectors arrive at each pick location, they speak three digits of a five-digit code (or check string) that is printed on a label at the rack location. “We have had no issues with voicing check strings and no mechanical issues with the devices,” says Johnson. The system includes variable check digits so that managers can change which three of the five numbers (first three, last three, middle three, etc.) users need to speak in order to confirm their locations. This helps prevent selectors from memorizing the numbers.

Speaking the quantity picked is easier and more efficient than scanning or manual entry, says Johnson. Likewise, selectors can scan or voice-enter catchweights, and speak date and lot numbers, which is more accurate and efficient than key entry on a wearable terminal. In and of itself, voice direction and speech recognition makes the job easier and more efficient for selectors. In addition to the inherent advantages of the voice-directed process over RF-based order selection, FoodSelect provides a more efficient workflow that drives additional productivity gains.



### **Eliminating Non-Productive Time**

With the previous scan-based process, selectors at Ace Endico could pick two orders in a single trip through the warehouse by grabbing two strips of case labels. Selectors had to manually manage the two strips of labels to be sure they were using the right labels, adding time to every pick. The issue was even more pronounced in the narrow-aisle PIR (planned inventory reserve) sections of the warehouse in which selectors could pick several orders at a time using man-up trucks.

With the new Lucas system, the server automatically merges the picks for more than one assignment into an optimal pick sequence, and prints the labels for all of the orders in pick sequence in a single strip. The Lucas mobile application gets the pick assignment from the server and tells selectors which location is next and selectors can periodically check that they are using the correct label by asking Jennifer™ the current label number. Jennifer™ also directs the selector to put each case on the correct pallet, helping to avoid other shipping errors. Besides speeding up the selection process, the mobile applications also improved the efficiency of the PIR merge process by which the items picked in the PIR aisles are merged onto order pallets picked in the other aisles.

Ace Endico made other changes in the selection process to further reduce travel and eliminate non-productive time for selectors. For example, as part of the prior scan-based process, staff in the shipping office would print and assemble packets of labels that were printed by the ERP system. Selectors would have to pick up their case labels at the shipping office between every assignment. With Lucas, the case labels are printed on printers on the warehouse floor as soon as a selector asks for his next assignment.

“The selectors don’t have to come to the office to talk to the clerk, and that’s a few minutes saved per assignment,” says Johnson. “Now the selectors stay out on the floor and the clerk has more time to do other things. A lot of the indirect time has gone away.”

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### **Improved Training, Ease of Use, and Management Reporting**

Johnson draws another sharp contrast between the RF system and the Lucas solution. “New people had trouble adapting to the old system, but now they have a tool that is easy to learn. It helps them rather than hindering them. With the RF system it would take two weeks before we would let someone go out and pick on their own. With Lucas, they are picking on their own within 1-2 days.”

He adds that it would take new selectors as long as 90 days to hit pick rates of 110-120 cases per hour, the targeted minimum productivity rate. “With the voice-directed mobile applications, they can focus on picking and putting the items on the pallet, and within weeks they are able to meet our productivity standards.” Other built-in functions ensure selectors are following special customer requirements. As one example, the application will provide a ‘heads up’ message to selectors when a customer doesn’t want labels on their products. “That’s a customer service issue,” says Johnson. “Before, the guys just had to know and remember it, but with the application and Jennifer, she reminds them while they are picking.”

In addition to a better, easier order selection process, Lucas also provides a suite of Web-based management tools, which managers use to track and manage operations throughout the work day. Using the management console, managers can see at a glance the status of picking across loads. “We can see how much is left in each department and move workers from one area to another so all areas finish up at the same time,” explains Johnson. “As a result, our dock isn’t getting as jammed up. It has allowed us to become more of a flow-through operation.”

In addition, the productivity module provides real-time tracking of selector productivity and indirect time. Managers are sharing productivity information with selectors throughout the shift. Previously managers could only calculate productivity after the fact.

“The selectors can check their current productivity rates when they go on break so they can see how they are doing,” says Johnson. “There is a real competition to beat the number and a real sense of camaraderie and motivation to do even better.”

### **Adding Voice in Loading and Replenishment**

In addition to voice-directed selection, Ace Endico is also now using Lucas mobile applications for truck loading and replenishment. The loading module helps eliminate loading errors and improves efficiency and safety since workers no longer need to look away to read terminal screens. The loading teams are “more productive and more accountable” says Johnson. In addition, the loading module helps Ace Endico track other assets sent out on the delivery trucks such as pallets for back hauls or products being returned to vendors.

The replenishment application has been “phenomenal,” says Johnson. Previously, let down workers didn’t always fill slots to maximum, so the night shift team spent an average of 10-14 hours per night doing let-downs to fill shorts. Order selectors also spent more time picking



from reserve locations, which impacted their productivity. Likewise, managers and clerks had to spend hours investigating and correcting “drops.”

Within two weeks of rolling out the mobile applications in replenishment, Johnson says the forward picking slots were now filled to capacity, reducing shorts and helping the night team as a whole do their jobs more efficiently. “The drop report used to be more than 10 pages long. Now it is more like 1 and a half pages, most due to other issues, not replenishment.”

Today a single worker on the night turn spends about three hours per shift filling shorts, compared to more than 10 hours before. “This also reduces the time we spend investigating issues,” adds Johnson. “I have more time to do other things, the assistant manager can spend more time on the floor, and our clerk has more time to do audits.”

In addition to the time savings, Johnson points out that this is ultimately a customer service issue: order selectors don’t spend time doing let-downs or picking from reserve, so they can pick orders more efficiently and get the work done earlier, ensuring trucks leave the dock on time.

## Results

According to Hertzberg and Johnson, Lucas delivered immediate improvements in productivity and accuracy. “Our case picking rates were about 135-145 cases per hour in the old system and now it is about 180, which is a greater than 25 percent increase in productivity,” says Hertzberg. In addition, selection errors were reduced by 44% within months of implementation. Johnson says that selectors are setting new records for perfect accuracy, including some who are picking for multiple months with no errors.

“We have improved the productivity and quality of life for selectors,” Hertzberg adds. “Since selectors are paid on an incentive basis, their pay packages have increased dramatically. It’s a real win-win. The workers get bigger paychecks and we get higher volumes shipped with the same number of people.” Hertzberg adds that the efficiency improvements with the Lucas solutions have also allowed Ace Endico to switch from a five-day work week to a four-day, 10-hour schedule. “We have been trying to move to a four-by-ten schedule for a long time, which is something that the men have really embraced.”

“Night crew morale is also much better,” adds Johnson. “They realize we are giving them a tool to dramatically make their workload easier, as compared to before, where there was a high level of frustration with the RF system.” Improved morale has translated into reduced staff turnover.

“We used to turn over 100 percent of our staff every year,” says Hertzberg, “but it has decreased dramatically since we installed the Lucas solution. So now we’ve had twelve months of strong growth with no operational issues. We are handling increased case volumes and we have reduced overall hours worked, improved our levels of service, and also enhanced safety for our workers.”

## About Lucas Systems, Inc.

Lucas Systems helps companies transform their distribution center operations and continuously adapt to changing market dynamics. We dramatically increase worker productivity, operational agility, and customer satisfaction.

Our solutions are built on 23-plus years of deep process expertise and smart software using AI and voice technologies. Our solutions feature Jennifer™, the brain, voice, and orchestration engine that drives performance improvement gains. Make the smartest moves at the lowest cost with Jennifer™.

For more information, visit [www.lucasware.com](http://www.lucasware.com).