

# Case Study

## Capacity

Location: North Brunswick, NJ

Industry: Third-Party Logistics

Application: E-Commerce Order Fulfillment

Lightning Pick Solution: LP Put | LP Carts



### 3PL Capacity implements Lightning Pick light-directed fulfillment solutions to increase speed and accuracy in serving e-commerce clients

#### Company Profile

Headquartered in North Brunswick, New Jersey, third-party logistics (3PL) warehousing and fulfillment service provider Capacity LLC serves a variety of omni-channel and e-commerce clients from facilities located near the ports of Newark/New York and Los Angeles/Long Beach. The company stores, picks, assembles, kits and ships orders on behalf of its customers, which include both household names and global brands.

#### The Challenge

As the U.S. e-commerce market has grown—with 2016 total American online spending hitting \$394.9 billion, a 15.1% increase over 2015 according to the Census Bureau of the U.S. Department of Commerce—so too has Capacity's business.

The company passed the 10 million orders mark in 2016. With future growth expected and a need to better accommodate seasonal peaks in order volume, Capacity's management team began looking to evaluate order fulfillment solutions that would support dramatically increased throughput. Specifically, the company sought to implement a semi-automated order fulfillment system to improve picking speed and accuracy, as well as overall throughput rates.

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The Lightning Pick system allows us to do that. Or, if we add a new client into the system, the software is flexible enough to allow us to easily switch a storage slot over to a completely different product line altogether."

Jeff Kaiden  
CEO  
Capacity



**LIGHTNING PICK**



# Boosting 3PL Fulfillment

## **The Challenge** (Continued From Page 1)

One of the goals was to minimize touches, explains Capacity's Chief Strategy Officer Thom Campbell, who co-founded the company with partner Jeff Kaiden, Chief Executive Officer. "With our paper picking environment, we had six eyes on each order: a picker, a packer and a quality control (QC) supervisor who confirmed that the right units were picked," he explains. "However, my partner Jeff Kaiden and his father Allen Kaiden come out of a consulting background. Allen was with NASA in the mid-1960s, then left and started his own civil engineering practice designing warehouses and distribution centers. Jeff grew up in basement with a whiteboard looking at throughput analysis, time and motion studies—all of these things inform how we do business," Campbell adds. "Based on our own data and process evaluation, we knew there was a faster and more accurate way to handle our clients' orders."

## **The Solution**

Capacity's leadership team chose to partner with light-directed picking solution provider Lightning Pick for a semi-automated order fulfillment system. Lightning Pick engineered a two-part solution including LP Cart mobile pick-to-light carts for batch picking of required stock keeping units (SKUs) and LP Put put-to-light put walls for sorting and organizing picks into discrete customer orders prior to pack out.

## The Solution (Continued From Page 2)

“Because Capacity is fulfilling orders for multiple clients in a single facility, they needed a flexible way to pick different items stored in different areas of their warehouse at different times of the day. They also needed to get those picks to a single pack-out area for sorting into different unique orders,” explains Peter Gerbitz, System Sales Manager at Lightning Pick. “A conveyor installation would be too permanent; because they handle a lot of orders for multiple clients with three to five items per order, they needed a flexible way to pick from specific areas, then route those picks to a single location fulfill those orders,” he continues. “In their situation, the cart worked very well because associates could take one out and pick 16 batches at one time, then bring those batches to a sorting area equipped with put walls for the fast sorting required of a high-volume e-commerce fulfillment operation.”

At the start of the batch picking process, a Capacity team member registers pick destination totes to a roaming pick cart. Light modules on each cart indicate the required SKU's storage location within the warehouse. The picker guides the cart to the first item location and scans its barcode, then route those picks to a single location to fulfill those orders. This prompts specific light modules on the cart to illuminate, displaying the number of units to be picked. Picked units are placed into their corresponding totes and the picker presses a button on the light module to confirm the pick. The same process is repeated until all picks for that batch are complete.

Once all the units have been picked, the cart is wheeled to the sortation area for distribution into individual customer orders. The totes are first unloaded from the roaming pick cart to a cart dedicated to the batch sortation space. That cart is then taken to a put wall, where a Capacity team member pulls a tote from it, scans it and scans each item within it. This triggers the illumination of light modules in front of each put wall cubby, indicating orders requiring that item. Upon placement of the item into each put bay, the operator presses a button on the light module to confirm placement.

Once all the required products are sorted on the sortation side of the put wall and an order is complete, a corresponding light illuminates on the other side of each open-ended put bay. This alerts packers to start the pack out process for that order. Capacity team members then scan the boxes for fulfillment, remove the units from the bays, and pack the units for shipment.



LP Put Walls



LP Carts



### **The Solution** (Continued From Page 3)

The entire picking system is directed by Lightning Pick's eponymous software. In addition to driving the light modules—regardless of their installation format (pick cart or put wall)—Lightning Pick software sequences and coordinates their independent functions and simultaneous interactions with Capacity's warehouse management software (WMS).

It also of controls and directs the integrated cart and put wall systems. When controlling the pick carts, the software's integrated batch optimization functionality tracks each cart's real-time location in the warehouse and directs the collection of additional, single-line picks along the travel path.

Further, the software enables dynamic location assignment, allowing Capacity's light-module system to be easily reset to pick orders for different clients from different storage areas during different timeframes or shifts as needed.

"Our picking dynamic changes frequently, because we're fulfilling individual purchase orders from a specific client that have a beginning and an end. Once the purchase order is done, we need to clear it out and get onto the next one," explains Capacity CEO Kaiden. "The Lightning Pick system allows us to do that. Or, if we add a new client into the system, the software is flexible enough to allow us to easily switch a storage slot over to a completely different product line altogether."

Additionally, the entire installation is both scalable and modular, enabling Capacity to easily add more pick carts or put walls as needed should their operational needs change.

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Jeff Kaiden  
CEO  
Capacity

## The Results

Since the Lightning Pick LP Cart and LP Put solutions were integrated in October 2016, Capacity has made tremendous gains in both processing speed and accuracy, according to Kaiden and Campbell.

When previously picking from paper-based lists, Capacity's fulfillment associates could process around 2,500 orders in a normal workday. Now, with the new light-directed fulfillment systems in place, the teams can handle 12,000 or more orders in a normal shift—and even more during extended shifts.

"We are just beginning to mine the data surrounding our productivity, but on a maximum throughput day when we are working shifts around the clock, we are getting as many as 1,000 e-commerce orders through the put wall in any given hour," says Campbell.

Further, Kaiden cites the availability of real-time productivity data and minimal training required to use the system as additional benefits. "We don't want the folks who are putting up to 1,200 units in an hour into the put wall to be thinking about anything other than what I like to call their 'video game,'" he notes. "Training a new person on the system is like training somebody to use a video game. Scan the unit. See the light. Press the button. Scan the unit. See the light. Press the button. It's really easy to get into a Zen-like flow with both the cart and the put wall."

Additionally, the new system eliminated the need for three separate Capacity team members to check each order, saving time while simultaneously increasing accuracy, adds Campbell.

"With the newly installed system we scan each unit twice and the software validates that the correct picks have been applied to each order—all but eliminating error rates," he says.

With the new solution installed, Capacity's leadership has seen that accommodating seasonal order volume peaks is easier, as the system can be flexibly scaled up or down as needed.

"Partnering with Lightning Pick, Capacity is better prepared than ever to deliver the goods," concludes Kaiden.



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For more than 30 years and across 500 installations worldwide, Lightning Pick has delivered advanced light-directed technologies on time, on budget, every time. Our best-in-class pick-to-light, put-to-light, pack-to-light, pick carts and other solutions optimize material handling processes — from manufacturing through order fulfillment. Today, we're the number one provider of light-directed solutions in North America, providing our customers increased productivity, higher quality and improved process efficiency.



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