



Chuck AMR: Case Study



Electronics repair hub doubles productivity with 6 River Systems

"If our customer is not satisfied, we're not satisfied"

CSAT Solutions, a reverse logistics business and electronics repair hub, derives its name from two words — customer satisfaction. For the Houston-based business that ships more than 7 million packages a year, this means providing excellent service to its primary customer, a major technology company. But it also means satisfying their client's customers — anyone with a personal computer or electronic device in need of repair.

"This is their information, and in a lot of cases, this is their life," Wayne Preston, Process Engineer at CSAT said.

CSAT was using manual carts and paper pick lists to fulfill customer orders. But with a growing volume of electronic parts flowing in and out of its warehouse everyday, CSAT needed to find a way to make its fulfillment process more efficient. The team wanted to:

- Improve fulfillment productivity
- Cut down needless walking in the warehouse
- Exceed SLAs for its primary customer
- Gain better insight into its fulfillment operation's performance metrics.

"6 River Systems is helping us improve productivity, accuracy and our time to fulfillment."

Gordon Mackenzie, VP of Technology, CSAT Solutions

Solution

The 6 River Systems (6RS) collaborative robotic solution caught CSAT's attention for several reasons, according to Gordon Mackenzie, CSAT's VP of Technology. 6RS provided a seamless WMS integration and was flexible to set up and deploy. The robots, called "Chucks", led warehouse associates through their work in active picking areas, keeping them on task. CSAT also liked 6RS' artificial intelligence capabilities, which manage and optimize pick paths to make warehouse associates more efficient.

CSAT started out with an 8-Chuck system to replace its manual cart and paper pick list operation. The team uses the robots to operate two types of businesses within their facility: inhouse repairs and direct shipments to external technicians.

Inhouse repairs: CSAT's technicians diagnose electronics (e.g. laptops, smartphones) in need of repair to determine which parts are required to fix the devices (e.g. motherboards, cables and small electronic components.) They place orders to the parts portion of their facility, a warehouse operated by a team of associates equipped with Chucks. Associates use Chucks to pick the parts. The Chucks then autonomously deliver the orders to a takeoff location on the repair floor, where the parts are then paired with the technicians who requested them.

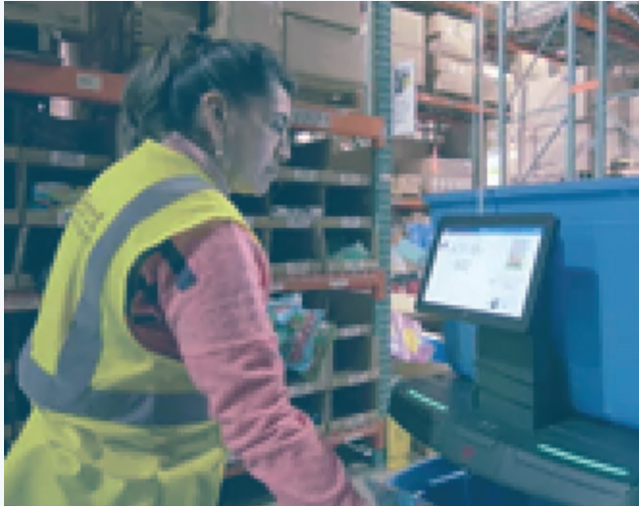
Direct shipment: The Chucks are used to fulfill parts that are shipped directly to field technicians who are located outside of the warehouse. These are individuals who repair electronic devices at offsite locations.

After a few short months, CSAT expanded the solution to 17 Chuck robots.



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Results

CSAT reduced non-value added walking, more than doubled productivity and significantly cut down its paper usage. CSAT's primarily Vietnamese-speaking warehouse staff was also able to learn how to use the Chuck robots quickly, because the robot "instructs on the fly," Wayne said.

"Our operators move less," David Koopmans, CIO of CSAT said. "They can collapse multiple orders into one efficient path that they didn't have in the past. It's a lot more efficient."

One of the biggest benefits of the system was the data it provided the team about its performance. These were insights that were difficult to obtain in the past, such as order data, operator rates, UPH, LPH and more.

"I don't think we were aware of all the data that we would get from the system," Gordon said. "This data helped us look at the problems we were facing in the operation. We're able to take that data and turn it into information and that's very powerful to help us navigate the changes we have to make."

In addition, the team at 6 River Systems has been enjoyable to work with.

"I think what attracted us to 6 River Systems' solution was the ability to work with a partner that truly partners with us and has the flexibility to adapt to our operation," David said.

Productivity: 2x

Paper Reduction: 99%

KPI Visibility: Better data insights

Keeping customers happy

With their partnership with 6 River Systems, CSAT is delivering on its commitment to customer satisfaction.

"Our customer has had a mission of technology transformation among their partners," Wayne said. "They're very pleased with the results they've seen so far."

Why do associates like the system?

It's because Chuck:

- Optimizes the picking route to reduce walking.
- Carries the totes, keeping associates hands-free.
- Confirms picks and indicates which container to put items into.
- Provides context specific reason codes which makes exception handling a breeze.

Key Statistics

2X

Productivity

99%

Paper Reduction



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