



# Jack & Jill Ice Cream Boosts DSD Service With Voice-Directed Warehouse Optimization

Most people never think about the challenging logistics of ice cream delivery when they are buying a hand-scooped cone or other frozen treat. Jack & Jill Direct Store Delivery (DSD) has mastered the task of picking, transporting and delivering Jack & Jill ice cream and other frozen and refrigerated foods to shops and locations throughout the Middle Atlantic. In recent years the company has upgraded its warehouse technology to help make sure their delivery drivers get the right treats to your local store, every time.

# Delivery is Core to Jack & Jill's Mission and Success

Jack & Jill is a distributor of ice cream and frozen foods, beverages, and deli products serving convenience stores, drug stores and other retailers, foodservice customers, and independent grocers.

Founded in 1929, Jack & Jill operates one main DC in Swedesboro, NJ, shipping to 12 cross-dock facilities that support 110-115 direct store delivery (DSD) routes per day in the Mid-Atlantic U.S.. The number of daily routes increases to 135-140 during their peak season between April and September.

As a DSD company, delivery is core to Jack & Jill's mission and success. The company's services ensure retail customers have the right products in stock while also reducing their inventory costs and retail labor expenses associated with managing inventory.

To achieve its customer service goals, Jack & Jill is constantly looking for ways to improve accuracy and efficiency in delivery. That includes upgrading their warehouse technology and systems to optimize DC operations, which has downstream benefits for delivery drivers and customers.

"We are always looking for better ways to get the right products packed on our trucks and to make it easier for drivers to make their deliveries," says Ken Schwartz, CEO. "Our drivers are doing more than just dropping off products. They are checking products in and placing them in cases or on shelves. If we can help the drivers get products off the trucks more quickly and accurately, that is a big win."

## Key Results



**60%**

Reduction in picking errors



**1,000**

Reams of paper saved per year



**15%**

Increase in productivity



**Zero**

Loading errors have been made with Lucas



We wanted to increase accuracy, streamline the process, and eliminate the paper.

Ken Schwartz, CEO

# Picking and Delivery Challenges

Products are picked in multiple frozen and refrigerated areas of the Jack & Jill warehouse using large rolling racks or pallets that are loaded directly on delivery trucks or trailers. At each stop, drivers pull the items and totes off the racks and pallets and move them by hand cart into the store. At some locations they deliver pallets to customer docks.

## 2,000 Sheets of Paper per Day

Prior to 2019, orders were picked in the DC using printed rack sheets that were generated from information in Jack & Jill's Oracle ERP system. Rack sheets were made up of multiple customer orders, which were grouped together using detailed rules based on volume, weight and how racks could be loaded on the truck, explains Schwartz.

Each day, managers would print out rack sheets from the Oracle system, which they would hand out to workers in the DC. Printing, sorting and managing about 2,000 sheets of paper was a two-person job, according to Scott Van de Rijn, Director of Warehouse and Logistics. Supervisors spent the majority of their days managing paper, rather than managing work on the warehouse floor, he says.

Workers used the printed rack sheets to pick products while pushing the wheeled racks through the various frozen and refrigerated areas of the DC. Deli items were picked into totes placed on racks. Some larger orders were picked to pallets, using powered lift trucks. The frozen and non-deli refrigerated items were picked and placed directly on the racks, but they weren't organized by customer order or stop, which created a challenge for delivery drivers.



## The Challenges at Jack & Jill



### Paper Management

Supervisors spent the majority of their time managing paper.



### Inefficient Batching

Inefficient order groupings created challenges for delivery drivers.



### Frequent Returns

Incorrectly loaded orders caused returns and rushed deliveries.



### Picking Accuracy

Picking accuracy was less than 99 percent.



# Loading and Delivery Challenges

After picking, completed racks and pallets were staged on a loading dock, and they were then loaded onto trucks or trailers in a paper-based process. The trailers are driven to the satellite cross dock facilities where items are transferred to local delivery trucks in a manual paper-based process. In the paper-based loading process, racks or pallets occasionally would not be loaded on the correct trailer or truck, which would lead to returns and rush delivery of missing items to the cross docks or customers.

The local delivery process is also directly impacted by how orders are picked, packed and loaded on trucks. First and foremost, picking accuracy in the warehouse is key to ensuring orders are delivered complete and in full. With the paper-based processes, picking accuracy was less than 99 percent. “Before Lucas, we were probably at 98 percent accuracy on a good day,” says Schwartz.

Likewise, how items are sorted and loaded has a direct impact on how efficiently and quickly drivers can do their jobs, says Schwartz. “A lot of the driver’s time is in the truck. He or she could be delivering 60 frozen items to a store, and he has to find those sixty items on the racks. That could take 10 or 15 minutes. The ideal is to cut that down to 5 minutes so that all they have to do is grab everything and quickly check it.”

Jack & Jill’s leadership team wanted to improve the accuracy and efficiency in the picking and loading processes by moving to an intelligent, voice-directed system. “We wanted to increase accuracy, streamline the process, and eliminate the paper,” says Schwartz.





## The Lucas Solution at Jack & Jill Includes:



**Intelligent Work Orchestration**



**Voice-Directed Picking**



**Voice-Directed Truck Loading**



**Intelligent Order Batching**



**Easy-to-use mobile applications**



**Management Dashboards**



**Oracle Integration**



**Productivity Reporting**

## Intelligent Picking and Loading With Jennifer™ Voice

The Jack & Jill team evaluated a number of software providers and selected Lucas Systems based on software capability and flexibility, ease of use, integration with Oracle, and other factors. The company was also installing Oracle WMS around the same time as they were implementing the Lucas system.

### Intelligent Order Batching

In addition to creating a paperless voice-directed picking process across the temperature-controlled areas of the DC, Lucas added intelligence to create more efficient groupings of orders on the racks, and to subdivide the racks into locations so that items for a given order could be grouped together. Better grouping of orders on the racks was intended to improve the delivery process.

In the new system, Jennifer – the voice and intelligence of the Lucas software – tells pickers what location to pick from, how many to grab, and in which rack location to place the items. In addition, Lucas creates a rack or pallet license plate that indicates which orders and items are on each rack.

“With paper, if we had a rack and we needed five boxes of ice cream sandwiches, we would put those five boxes together in one location on the rack,” explains Schwartz. “With Jennifer, its cubed out, and Jennifer will tell the picker what to pick and where to place each of those five boxes on the rack. So each of those 4-5 boxes of ice cream sandwiches are placed on the rack with the rest of the order.”



After they started using it, workers realized how much quicker it is. They appreciate that Jennifer is so much better than picking on paper.

Scott Van de Rign, Director of Warehousing and Logistics

## Voice-Directed Loading

The Lucas solution also includes a voice-directed loading application. In loading, Jennifer verifies that the correct racks and pallets are loaded on the appropriate truck or trailer, but she does not direct the sequence of loading.

Workers scan the license plate IDs (LPNs) on pallets or racks to confirm what they are loading, and they verbally enter the truck number and tell Jennifer where they are placing the racks on the truck. Jennifer validates the racks and pallets, and she tracks where items are placed. She warns workers if they attempt to load a rack on the wrong truck and she prevents workers from closing a truck or trailer if there are missing racks, pallets or totes.

Based on the information entered during the loading process, Jennifer creates a trailer map showing the location of all racks and pallets on the trucks. The load map aids drivers during delivery or cross-docking from trailers at depots. Drivers also benefit from the Lucas LPNs, which help them identify which racks contain which orders and items so they can off-load items from the trucks faster and more accurately.

## Management Console

In addition to the voice-directed loading and picking applications used by workers, the Lucas solution includes a management console that gives supervisors real-time insight on productivity, workflow, exceptions, and other operational data. Supervisors use the dashboards to manage orders and assign trailers to dock doors, in addition to monitoring performance throughout the shift.



# Accuracy and Efficiency Gains for Workers, Supervisors, and Delivery Drivers

Since implementing the Lucas solution, picking errors have been reduced by more than 60 percent. “Right now, in 2021 we are probably ten times better than where we were before,” says Schwartz.

“Before, in peak season we would have 300-500 pieces per day that wouldn’t be delivered to customers, for a variety of reasons – damage, driver errors, not on the rack. Now that is down to about 100 pieces a night,” says Schwartz. “We are at 99.8 percent picking accuracy on many nights.”

In addition, Van de Rijn says loading errors have been almost completely eliminated, “We haven’t had any loading errors in trailers delivered to our satellite facilities.” That has led to less re-delivery of missing items, fewer returns, and less double-work picking items that were not delivered.

Picking productivity at Jack & Jill has also improved significantly, although that was not the main objective of the project. “We weren’t tracking productivity very closely on paper,” says Van de Rijn. “We knew roughly what

different people were doing based on rack counts. We expect them to do 215 pieces an hour on average, and some are easily doing 250 an hour picking with Lucas. Our averages are now between 230-240 items per hour, so we’ve seen a productivity increase of at least 10-15 percent.”

Many of the warehouse workers were concerned that the process changes with voice – for example, segregating items by order – might slow them down. Dante Sisto, one of the order selectors at the DC says: “I didn’t think this was ever going to work, but man, I’m faster than I ever was.”

Adds Van de Rijn, “After they started using it, workers realized how much quicker it is. They appreciate that Jennifer is so much better than picking on paper.”

The warehouse updates, including the truck load maps and rack/pallet LPNs generated by Lucas, have also had downstream benefits, says Schwartz. “The new picking and loading process has also helped our DSD delivery drivers save some time at the delivery locations.”

## The Jack & Jill team selected Lucas based on:



### Intelligence

Lucas provided advanced software capabilities



### Integration

Lucas seamlessly integrated with Oracle ERP



### Usability

Lucas multi-modal mobile applications are easy to use



### Flexibility

Lucas provided flexibility to meet future demands

The warehouse also uses 50 percent less paper today, representing a savings of more than 1,000 reams of paper per year. Van de Rijn points to other paper-free benefits for supervisors, “By eliminating paper, we are freeing up the supervisors to get out in the warehouse. Before they were really tied down to a desk handing out paperwork.”



There is now always at least one supervisor on the floor to manage workers, and monitor what is happening in the DC. Managers are spending more time ensuring things are done properly, which has eliminated mistakes and improved the cleanliness of the facility. “Having the supervisors out on the floor has led to overall better performance in the warehouse,” says Van de Rijn.

“And the dashboards show supervisors and workers how many pieces each person is picking per hour. Now everybody knows they need to do the same amount. Those are huge benefits for us. The dashboards are incredible,” he concludes.

Jack & Jill’s warehouse upgrades have paid off in better service to the shops, restaurants and other locations they serve. That’s something to think about the next time you get an ice cream at your local shop or convenience store.

## About Lucas Systems

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 25+ years of deep process expertise and smart software using Aland 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™.

