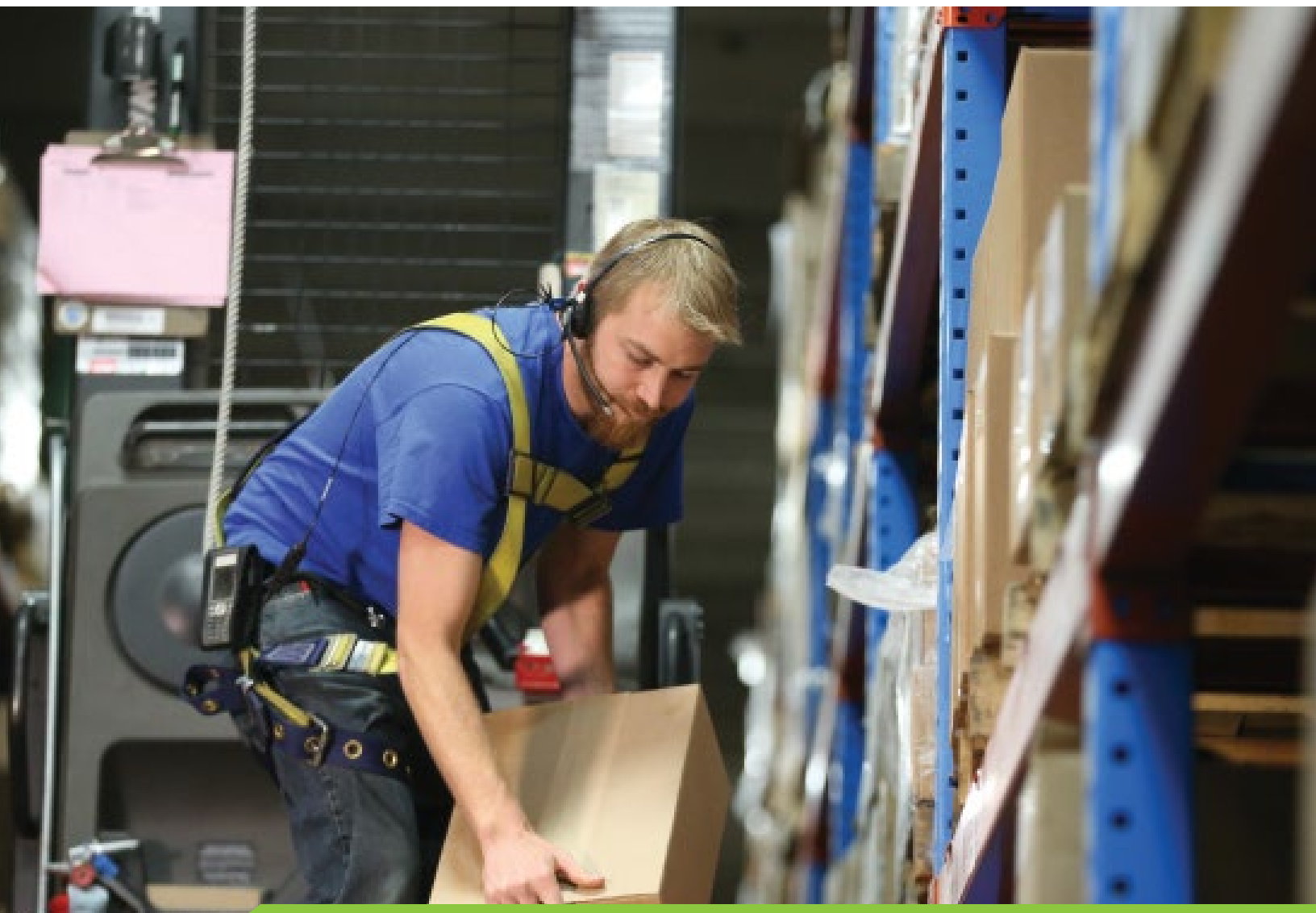


# Merrill Corporation

Document security drives need for improved order fulfillment accuracy



## Intelligrated Voice™ exceeds quality objectives

Document security drives need for improved order fulfillment accuracy



Merrill Corporation is a leading third party logistics provider (3PL) of complex, confidential and regulated documents primarily for the health care and financial industries. Their customers are held to strict regulatory standards to maintain privacy and confidentiality. To reinforce their commitment to quality, Merrill sought a more reliable and automated method to ensure order fulfillment accuracy. Intelligrated Voice offered not only increased fulfillment accuracy but also integrated with a wide range of distribution center (DC) processes that resulted in significant productivity and efficiency improvements.



*Merrill needed a Voice automation system that could deliver significant order accuracy improvements and throughput gains.*

### Manual picking processes buckle under strain of increasing SKUs

Prior to using Intelligated Voice, Merrill's DC managers relied on a largely manual process to pick and fulfill orders. It presented multiple opportunities for workers to make errors. Using paper pick lists at stationary terminals, workers made manual checks and notations along their picking paths. The process required them to make ad hoc decisions and often rely on memory to guide their next task. Murray Muff, Merrill warehouse manager, said that frequent interruptions and disruptions only compounded the problem.

**"The distractions in the warehouse increased the potential of an error," said Muff.**

With more than 28 different clients and 17,000 SKUs, it was becoming increasingly difficult for DC managers to maintain order accuracy. Each customer account had its own book of business that ranged from single sheets of paper to bound materials. The result was a complex mix of disparate order profiles made up of document "eaches" and assembled packages.

As an integrated creation and distribution provider, Merrill prints orders on demand, potentially to be filled and sent out the same day. To meet this urgent order requirement, Merrill's facilities are equipped with production areas for digital print, assembly and collation on-site. After printing, the basic workflow includes receipt of inventory and introduction into the DC system, followed by pick, pack and ship. Every step of the order fulfillment process must be executed flawlessly to ensure maximum quality.



*Intelligrated Voice enabled Merrill to replace many of its manual picking processes with accurate, efficient automated workflows.*

Because of the sensitive nature of information, customers are held to strict regulatory requirements. For example, the Centers for Medicare and Medicaid Services requests to be notified on receipt of incorrect documentation and may issue fines for errors in documentation distribution — the burden of which ultimately falls onto Merrill’s clients.

### Quality improvements drive search for Voice automation vendor

In addition to eliminating order errors, Merrill’s DC operators were also considering additional factors in their proposed transition from manual processes to Voice-enabled automation. Mike Zimny, director of operations, said Merrill’s second priority was to increase overall DC throughput.

**“Aside from giving our workers the tools to consistently pick the correct items and quantities, we also wanted to achieve 30 to 35 percent throughput gain in lines picked per hour,” he said.**

Muff, Zimny and other DC operation managers at the three facilities within this project scope also sought improved visibility to their respective facility’s daily workload, including:

- Orders remaining in picking queue
- Current and historic employee pick rates
- Real-time view of current activity on the floor

Merrill’s DC management team evaluated many of the industry’s leading Voice vendors in their search for the ideal solution. Most of these vendors dictated proprietary hardware and operating system lock-ins, offering canned solutions that didn’t address Merrill’s quality objectives.

**“We quickly discovered that Intelligrated was different,” Zimny said. “Instead of saying, ‘Here’s how you need to change your operations to work with us,’ they asked, ‘What do you want Voice to do for you?’”**

The team also realized that Intelligrated wanted to establish a true business partnership, one that addressed Merrill’s current needs and could evolve with them in the future. And since Voice technology was essentially new to Merrill, the management team wanted assurances that the selected vendor would support them from solution development, implementation and beyond. Intelligrated’s years of Voice expertise and proven track record helped instill this confidence.



*With Intelligrated Voice, Merrill supervisors can check worker progress in real time to determine if staffing adjustments are needed to complete work zones.*

### Differentiating features

Unlike other Voice vendors, Intelligrated Voice also offered many advanced features that appealed to Merrill’s DC management team, such as: different workflows for expert pickers to optimize productivity, real-time assessment of time to complete specific work zones and dashboards that could enable real-time staffing adjustments. The team was also looking for a system that could be deployed quickly and achieve rapid user acceptance.

Finally, Intelligrated was among the more economical solutions, with hardware alone costing 80 percent less than those vendors that required proprietary hardware and operating systems. Upon evaluating all Voice vendor proposals, Merrill’s management team agreed that only Intelligrated’s proposed solution met and exceeded their requirements.



*A seamless implementation and rapid end user acceptance allowed Merrill to quickly exploit the benefits of the Voice system.*

### **Intelligrated Voice delivers unprecedented accuracy and productivity**

Shortly after selecting Intelligrated, the Voice solution was up and running in Merrill's facility in Sartell, Minn. The process began with Intelligrated conducting an on-site visit, and then closely collaborating with the management team during the development process. The actual time on-site for the physical implementation was only three days.

As the facility's DC manager, Muff expected numerous challenges, but was pleasantly surprised with the smooth and efficient implementation.

**"The support we've gotten from Intelligrated and the implementation experience have been nothing short of outstanding," said Muff.**

The facility's workforce quickly adapted to the Voice system, especially the younger employees who were particularly excited to test out the new technology. Once familiar with the system, all employees came to appreciate the system's value and much prefer Voice automation to the previous manual methods.

Almost immediately, the software's reporting capability allowed DC managers to share employee productivity data. Not only were employees receptive to the new feedback loop, they also quickly developed a healthy competition to post the best accuracy and productivity statistics.

## Voice-enabled functionality transforms warehouse operations

The Intelligrated Voice system was originally selected to replace manual sales order and production order picking processes in Merrill's DCs. The flexibility of the solution and the low cost of hardware enabled Merrill to quickly expand Intelligrated Voice into additional workflows. Processes currently managed by the Voice system include:

- Sales order picking
- Production order picking (kit builds)
- Inventory cycle-counting
- Slot verifications, ensuring right items are in each pick slot
- Full stock transfer, enabling repurposing of older RF equipment previously used
- Replenishment

Intelligrated Voice also eliminated manual paper processes in nearly all picking scenarios as well as the use of stationary terminals, while repurposing older RF equipment for other business uses. Due to the success of these processes, plans are in place to move Voice into other applications, such as:

- Internal receiving (from manufacturing)
- General ledger transfer process
- Setup for collation

## Undeniable results

Intelligrated Voice delivered dramatic accuracy and productivity improvements that far exceeded the DC management team's expectations:

- **Picking:** 65 percent reduction in errors, taking them from 99.73% to 99.90% accuracy, Merrill's most important parameter of quality
- **Throughput:** 45 percent increase in production throughput (exceeded goal of 35 percent)
- **Stock transfer:** improved accuracy and efficiency



## CASE STUDY

Since installing Intelligrated Voice, Zimny said that the staffing requirements in areas equipped with the technology were greatly reduced due to the increase in productivity.

“We were able to reduce staffing in those areas by almost 50 percent,” said Zimny. “Combined with the nearly 45 percent increase in productivity, we experienced a net production benefit of almost 100 percent,” he said.

Merrill’s Voice system is designed to exploit the experience level of individual workers. For the inexperienced worker, the system forces a quality check on each piece, requiring them to verify they are in the correct location before giving them pick instructions. Supervisors can set expert workers to require far fewer validation steps, and those workers can also leverage advanced functionality like combining multiple pieces of data into a single Voice response.

The Voice system’s Dashboard gives Merrill’s DC managers access to real-time management of the business, including visibility to key areas:

- All work activity in progress by zone
- Time remaining until assigned work is completed
- Picks left to be made or batches left to be worked

Equipped with this business intelligence, managers decide when to shift existing labor resources or bring in additional staff to meet demand.



*The Voice system can be configured to the experience level of the employee, where expert workers require fewer validation steps.*

### Voice-enabled process improvements

Merrill’s DC managers were able to maximize the utility of the Voice system by integrating it into several new and existing processes.

- **Train picking:** rather than discrete tote picking (picking an order to an individual tote), Voice allows the DC to install a picking process that leverages

container trains. This enables a batch picking approach to take place via a train of totes in a zone with workers picking to multiple orders within the train. Also allows for pick-and-pass of containers across zones and breaking or appending trains.

- **Reverse picking:** when picking activity is overly congested in a particular zone, Voice allows the picker to reverse the picking order and start from the back of the pick zone and move forward.
- **Automated replenishment/skip location:** gives workers the option to request a replenishment while at a pick location. If inventory is not available or if there are damaged items, workers can instruct the Voice system to skip a particular picking location, returning to it following a replenishment.



*New employees can be trained to use Intelligrated Voice in less than an hour, helping them contribute to productivity goals the same day they are hired.*

### Simplified training process and rapid user acceptance

Merrill's DC managers quickly discovered that one of the greatest advantages of the Voice system is the vast improvement on the training and onboarding processes. Muff indicated that prior to the Voice system's implementation, a lengthy trainer shadowing period was needed for new employees.

**"It could take up to two weeks until an employee was fully trained and competent, and during that time we also lost the productivity of the trainer," said Muff.**

Voice reduces training time to as little as one hour by allowing a trainer or supervisor to dial into each new employee session and conduct interactive instruction and coaching. Once the trainer is comfortable with the worker's ability to understand the picking scheme, they can walk away and let the new worker perform standard work (with ever-increasing productivity).



*Voice enables the staffing flexibility to leverage existing resources to match fulfillment demand.*

**“What this means is that we can get employees up and running and fully competent in less than one day, freeing up resources and significantly reducing the investment in training,”** said Muff.

This also means that DC managers can now respond to peaks in order fulfillment demand by allocating internal resources from other departments to better manage peak volume periods.

**“We now have the option to pull individuals out of other areas, such as warehouse and receiving, and quickly put them on the Voice system to help with order fulfillment,”** said Zimny.

The Voice system at Merrill has many features to assist in the training process:

- **Audio logs:** Voice session transcripts can be very instructive to employees; assists with ongoing coaching and employee development
- **Three-way conferencing:** aids in coaching and resolution of individual employee challenges; drives employee performance objectives and procedural compliance
- **Admin tool:** allows managers to set up workflow parameters to ensure accuracy, such as the frequency of validations (which is very frequent with a novice worker, but potentially far less for an expert)



*Mike Zimny, director of operations, and Murray Muff, warehouse manager, oversee day-to-day operations in Merrill's Sartell, Minn., facility.*

### Ensuring customer satisfaction and retention

Intelligrated Voice is currently installed at three of Merrill's key facilities. The DC management team continues to work very closely with Intelligrated as a business partner to get the most out of the technology. Zimny said that Intelligrated's ongoing support is a reflection of Merrill's dedication to its customers.

"Their commitment to making sure our operations are successful is equal to our desire to provide our customers with the maximum quality," said Zimny.

He explained that Merrill's clients were thrilled with the improved accuracy, especially since they're handling health and financial documents with sensitive information. Intelligrated Voice has allowed Merrill to become a cutting-edge, just-in-time provider in these highly regulated industries.

"When we demonstrate the capabilities of the system to potential clients, they are blown away by the Voice technology and its role in all aspects of our distribution operations. It's often what helps really set us apart from other 3PLs," said Zimny.

### Advantages of Intelligrated Voice — results at-a-glance

With Intelligrated Voice, Merrill has greatly improved operational efficiency:

- **Greater fulfillment accuracy:** a 65 percent drop in picking errors
- **Improved throughput:** 45 percent increase in lines picked per hour
- **Increased staffing flexibility:** rapid startup; less expertise required; quickly achieves picking uniformity
- **Enhanced visibility:** shows managers the amount of time remaining to complete shift work and when to add more resources into specific work zones
- **Best-available technology:** modern approach that truly helps Merrill sell its services to new accounts and differentiate from alternative 3PLs
- **Fast ROI:** project payback in just over a year (<14 months)

### About Intelligrated

Intelligrated® is a leading North American-based, single-source provider of intelligent automated material handling solutions that drive fulfillment productivity for retailers, manufacturers and logistics providers around the world. Through a broad portfolio of automation equipment, software, service and support, Intelligrated solutions give businesses a competitive edge and optimize operational performance through increased flexibility, efficiency and accuracy.

Intelligrated designs, manufactures, integrates and installs complete material handling automation solutions including conveyor, IntelliSort® sortation, Alvey® palletizers and robotics, and automated storage and retrieval systems – all managed by advanced machine controls and software. Intelligrated Software offers warehouse execution systems, a scalable suite of software that manages the entire fulfillment process, including equipment, labor and business intelligence, integrated with voice- and light-directed picking and putting technologies.

From concept to integration to lifecycle support services, Intelligrated delivers dependable, sustained distribution and fulfillment success, and maximum return on investment. Intelligrated backs every project with 24X7 multilingual technical support and access to lifecycle service through a network of national, regional and local service centers.

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