Vocollect Case Study

Liqun Group
(Qingdao Island, China)

Precise and Efficient Distribution to Every Retailer

Voice Results

📋 Objectives
– Use in both normal ambient and refrigerated environments
– Improve overall productivity and accuracy levels
– Reduce training time
– Must be future-proof and scalable

📋 Application
– Order Selection

📋 Installation
– Vocollect seamlessly integrates with 'home grown' WMS
– Vocollect Talkman T5 Mobile Computing Devices
– Vocollect SR Series Headsets

📋 Results
– Go-lives within one-month implementations
– Average productivity improved by 28%
– Order fulfillment accuracy improved to 99.98%
– Training time reduced by 50%
– One hour versus two days for worker proficiency

📋 ROI
– Payback in less than 12 months

📋 Future Plans
– Expand voice to clothing and pharmaceutical divisions
– Expand voice beyond picking workflow to put-away, transfers and replenishment

Vocollect Thaws the Bottleneck of a Refrigerated Warehouse

Liqun Group is a large Chinese conglomerate with a diversity of businesses that include chain stores, logistics and distribution centers (DCs), hotel chains, pharmaceuticals distribution, drugstore chains, real estate, hi-tech manufacturing, e-business, travel agency operation, and financial services.

The Liqun DC established in Jiaozhou, a county-city in Shandong Province, boasts China's largest, most modern and advanced third-party logistics (3PL) center. The facility covers an area of nearly 500 acres and operates entirely in a paperless warehouse environment. Through the adoption of best-of-breed technologies for various aspects of its operations, Liqun's DC has successfully deployed voice technology, RFID and RF scanning – making it the first Chinese 3PL services provider to implement "smart" warehousing.

But prior to becoming the efficient distribution powerhouse it is today, Liqun's vast operations struggled with numerous technological challenges as they expanded its fresh foods and food produce business amid new governmental standards for food safety and hygiene.

The Challenge
Overcoming legacy limitations and future-proofing operations

Liqun's DC for agricultural produce cold-storage delivery and fresh food processing was set up with the objective of supporting centralized purchasing, production and distribution, while maintaining food product quality and safety. However, the set-up didn't account for the limitations of RF equipment in a refrigerated environment. When the operations went live, Liqun encountered a series of bottlenecks to its operations.

For example, the barcode labels on the products, pallets and storage locations would get frosted and could not be scanned, or the display screen of the RF equipment would get misted over. To aggravate matters, workers had to wear thick gloves when picking in cold storage, making it difficult for them to press the keys on the RF devices, leading to wrong inputs. A new solution had to be sourced, and quickly.

> "The results have been impressive. We see a 28% gain in efficiency compared to RF – a figure that surpassed our expectations. During the six years that we've been using RF picking, we have tried unsuccessfully to attain what it took voice a fortnight to accomplish. What's more, after implementing voice, our error rates declined to near-zero. This is another outstanding number previously unrealized."

Zhang Minggang
General Manager,
Qingdao RuiTong
Hi-Tech Co. Ltd,
Liqun Group

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The Results

According to Zhang Minggang, General Manager, Qingdao RuiTong Hi-Tech Co. Ltd, a Liqun Group operation, Vocollect Voice was a good investment. Not only did the voice deployment greatly benefit its DC operations, but as a harbinger of its success, Liqun also won the 2009 Technological Progress Award organized by the China Logistics and Purchasing Technology.

Liqun had already implemented voice in 2009, but only for its dry goods area, an ambient temperature operation. It was thus natural for Minggang to extend Vocollect's voice technology to their refrigerated warehouse, both to improve operational efficiency and also to eliminate the inherent problems caused by the limitations of RF scanning. With the implementation of voice completed for Liqun's refrigerated and temperature-controlled environments, in 2011 the company became the first facility of its kind in China to adopt Vocollect's world-class voice-centric solution for boosting productivity levels and improve efficiency of its logistics operations.

The simplicity of use of Vocollect Voice is a key advantage. Once a picker has completed his task, he will be prompted by the system to the next assignment. This saves time and also enhances operational efficiency, as order selectors go about their duties using the most efficient and logical route. Through voice, paperwork is greatly reduced and there is little duplication of activity throughout the warehouse.

Another benefit of using the hands-free, eyes-free Vocollect Voice solution is increased productivity through personalized voice-directed dialogues, which creates a more focused environment for the picker with no distractions and thus improves overall safety.

Many results have been realized from the deployment: order accuracy has grown to 99.98% and higher. In moving to voice from RF scanning, productivity soared by 28%, and did so within two weeks after implementation. Reduced training time was also a huge benefit for the company.

With RF picking, training is an intensive process, taking several days or even weeks to get a worker familiarized with the workflow and the use of equipment. With voice, basic proficiency can be achieved in under an hour. In fact, after 15 minutes of training, the system captures and profiles an individual's specific and unique speech characteristics. From there, workers are ready to be assigned their tasks.

Another key benefit in a multi-lingual environment: voice gives everyone a common tongue. With so many different dialects and accents being used across mainland China, comprehension is critical to accuracy. But with voice technology – easily understood instructions and responses ensures that Liqun's pickers are uniformly precise in the execution and fulfillment of assignments.

Once associates are familiar with the voice system, they tend to view voice as a "cool," cutting-edge technology. They take pride in the fact that the company has given them the best possible tools to work with, and they enjoy having the ability to handle their tasks more efficiently, especially with the eyes-free, hands-free benefit of voice. Another boost to employee satisfaction: the voice equipment is light and easily worn, unlike the bulky RF scanners they used to have to carry around for long periods of time. With the freedom of mobility, they can do more in a shorter span of time. The system also boosts workplace safety, especially when moving products around or operating machinery like a forklift.

Overall satisfaction levels have increased with all stakeholders. Workers are happy to complete more tasks with less effort, the company is delighted that the distribution and delivery work flow is smooth, and staff satisfaction level is high. Finally, Liqun's customers – the retailers –are pleased to have their orders fulfilled quickly and correctly each and every time.

Moving forward, the company intends to deploy the use of voice in its clothing and pharmaceutical divisions and to expand its use beyond picking to other workflows such as put-away, transfers and replenishment. Liqun hopes to eventually streamline all core processes and achieve a consistently high level of operational performance and productivity company-wide.

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About Vocollect by Honeywell

Vocollect by Honeywell is the leading provider of innovative voice-enabled workflow and data collection solutions that help companies with mobile workers run a better business. Together with a global team of over 2,000 Vocollect Certified Professionals, Vocollect enables companies to save more than $20 billion annually by further optimizing operations, improving business decision capabilities, and delivering the industry's premier worker experience to nearly one million mobile workers who process more than $5 billion of products every day in challenging industrial environments. Vocollect integrates with all major WMS and ERP systems and supports the industry's leading handheld computing devices.

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