

Musgrave Voice Picking Case Study

Case study: Musgrave Retail Partners Ireland

Industry: Grocery retail

Application: Voice picking

Product: WCS

Short summary: Implementation of voice picking within grocery retailer, Musgrave Retail Partner's two warehouses in Ireland to improve productivity and accuracy.

Background

Founded in Cork, Ireland in 1876 today Musgrave is one of Ireland's largest and most successful companies with annual sales approaching 4.6bn Euros. With its retail partners it employs more than 44,000 people and has 1360 stores. Its supply chain delivers to 686 stores in the Republic of Ireland with 3400 deliveries a week. The company has 4 warehouses that total 580k square feet, and packs a total of around 2 million cases each week for distribution to its network of retailers across the UK and Ireland. The company stores products across each warehouse that consists of ambient, chilled and fresh foods. A customer of Worldwide Chain Stores (WCS) for many years, Musgrave has been using WCS's Warehouse Management System for 18 years and gaining the value of a functionally rich system that continues to support the needs of the business.

Having used technology to its advantage to maximise its growth opportunities for a number of years, in 2007, driven by the desire to further improve accuracy and efficiencies the company embarked on a process to review the value of integrating voice technology for picking within its warehouse environment.

Moving from paper to voice

The existing paper-based system at that time was complex and prone to error. Typically, orders within the ambient warehouse would come directly into the warehouse from its network of retail partners, and would be split into paper picking orders then divided by section across the warehouse. Each assembler or picker then had to pick up to a three cage assignment and drive through the warehouse picking items according to the list, before delivering the paperwork back to the onsite office. Any amendments would be made by office staff for that operation. Within the chill warehouse a pick-to-zero operation was in place, and the very nature of this operation meant it was hugely paper-based with pick labels generated for the picker to follow and label cases to be loaded onto a container. Both systems across ambient and chilled were prone to error, with no checks in place to catch discrepancies, the company realised investment in new technology was critical.





The review process involved visiting other retail sites to gain insights into the use of different technologies including RF and pick to light, Brendan Fitzgerald, Industrial Engineer from Musgraves commented, “After a thorough evaluation we realised that voice directed picking offered us the most versatility within our operation, it could be used across numerous parts of the warehouse including loading, receiving and picking and was a perfect fit.”

The company embarked on a test project at its Cork facility to assess the impact of voice picking on accuracy, productivity and retailers and would allow it to determine an implementation timetable for a full roll out of voice picking across its operations.

Productivity and accuracy gains achieved

Musgrave saw some early benefits from its voice implementation, Fitzgerald commented, “When we moved to voice-directed picking for both chilled and ambient, one of the key immediate benefits was allowing the picker to be hands-free, they were no longer carrying around papers and pens and ticking boxes. The headset meant they were able to hear all the information required, and were able to query anything they needed to. Within ambient specifically, the picker was able to confirm he was in the correct location before picking which immediately had an impact on errors. The improvement in accuracy and productivity was substantial.”

The new voice directed system has allowed for a much more ‘free flowing’ environment, where productivity gains have seen an 8.2% lift. Not only that but with accuracy increasing, there have been savings in overall head count as the business is able to be more lean with its staff needs and today has reduced the number of warehouse staff significantly since the implementation of the project. Ultimately within the retail environment, deliveries are now no longer needing to be checked, and as a result goods are reaching the shelf quicker, and shelf availability has increased.

Fitzgerald continued, “We’ve been able to achieve 99.8-

99.9% accuracy, which leaves very few errors within our operation and critically at the retailers back door, where they have been able to eliminate the costs associated with having to check all deliveries and so are able to position staff in more customer facing positions.”

Integrating voice with the WMS

The voice directed work system integrates seamlessly with WCS’s Warehouse Management System, with all voice-based transactions allowing for real-time maintenance of inventory levels and better synchronisation of replenishment activities. Pickers are allocated the best next picking assignment so as to drive efficient DC operations. Josh Makan, at WCS said, “Accuracy and productivity are critical in modern distribution centres and the use of voice technology delivers this by utilising hands-free, eyes-free communications. Voice operation is particularly suitable for picking frozen and chilled foods, where gloves hamper the handling of paper or the use of radio data terminals. Musgrave is leading the way in its use of voice as it looks to implement across its loading function, and ultimately within receiving.”

Achieving maximum return on investment

Since starting its voice implementation, Musgrave has recouped its initial investment and continues to see a return of 660k euros per year. It continues to achieve very high levels of accuracy and productivity gains remain near 9%. Fitzgerald concluded, “voice has been an integral part of our warehouse operation now for a number of years and it continues to allow us to achieve high accuracy and productivity results. Taking voice into other areas of our operation is compelling, we are trialing across loading and will look to implement in the future within receiving, replenishment and PI. The accuracy levels make it a very compelling proposition for many areas of warehouse functions. The ROI figures speak for themselves, far exceeding any results we could have achieved from other competitive technologies.”