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Honeywell Voice Solution Case Study
Delhaize Serbia
Food

A warehouse full of ideas

Belgian food retail group Ahold Delhaize in Serbia has opted for a central logistics hub for the supply of 431 supermarkets across the country. To facilitate its order picking, the company invested in Honeywell Vocollect Voice Solutions' voice technology in 2018.

In Stara Pazova, some 40 kilometres northwest of Belgrad, food retail group Ahold Delhaize has operated one of Serbia's largest logistic centres since 2014. This is where dairy products, fruit, vegetables and products from the dry goods range are stored on an area of 70,000 sq m. Three shifts are run here for the order picking process, and the goods are distributed to 431 domestic supermarkets. Every day around 250 trucks are loaded and unloaded at 100 stations and dispatched – all this with an error rate of virtually zero.

Smoothly implemented

This is achieved with the aid of three completely different picking systems: While dairy products are picked using handhelds, the concepts of the two larger storage areas for fruit and vegetables and the dry product range are based on a pick-by-voice solution from Honeywell Vocollect Voice Solutions. The transition from handhelds to speech terminals took place in 2018, with the Špica Sustavi system house ensuring a swift and smooth implementation. "Raising productivity while not having to do without the customary functionalities of the old solution was of primary importance to us," explains Nemanja Ivković who, in his role as director, bears overall responsibility for the dispatch centre. Ahold Delhaize took the decision to switch the picking method back in 2015. Subsequent visits to reference sites for existing installations tipped the scales in favour of a solution from Honeywell Vocollect Voice Solutions.

"One of the greatest advantages of pick-by-voice is the fact that our employees have both hands free for their work and are given clear instructions," explains ICT Supervisor Dejan Šarović. He added that the system was easy to understand and that induction periods were extremely short. "New pickers are ready to work after only one to two hours, which delivers a time advantage of more than 60 percent compared with handheld order picking," Šarović says. The training team has to conduct training course for around 30 new employees.

Personal voice profile

An integral part of the short induction phase is the one-time setting up of the individual voice profile in the customary working environment. In this phase, which takes around 30 minutes, each employee speaks the instructions and commands used at Delhaize into the headset's microphone in his own personal tone and dialect.

These data are stored in the system and are then used in the subsequent communication between the picker and the Honeywell Vocollect Voice Solution. As soon as the voice profile has been created, the employee can start working in practice. ==After several days of training on the job, the picker is fully productive, which dramatically reduces the induction period compared with the previous system.==

In a joint collaboration with Špica Sustavi, Ahold Delhaize developed original and partly unique solutions for efficient voice-controlled workflows. 140 voice terminals of the Talkman A730 model are in use, along with the same number of cordless SRX2 series headsets. Around 50 of the devices are used for put to store picking. This process involves transferring the fruit and vegetables delivered on pallets early in the morning and selected within a few hours for each individual supermarket, while maintaining the strictest quality standards.

Put to store picking

As part of the process, the warehouse management system (WMS) programmed by Ahold Delhaize receives the orders and order data from its 431 own locations and calculates the optimal picking sequence from the complete pallets and the orders actually placed. These are then transmitted by VoiceXtreme, a middleware developed by Špica Sustavi, translated into specific pick orders and sent via WLAN to the voice terminals. The voice terminal converts the data into voice commands which are then sent by bluetooth to the headset of the operator. Commands can be repeated if necessary.

The put to store picking process implemented by Ahold Delhaize is considered unique in the logistics sector, and there are only a few warehouse management systems that can deploy it. The first step involves transferring the full pallets delivered in the morning to a level storage place with a barcode where they are then "married" by scanning in their new position. At the same time, the number of empty pallets calculated for each customer order are delivered individually to the picking zone, with each of these pallets having its own barcode. This enables the WMS to direct the order pickers accurately via VoiceXtreme and Talkman to the full pallets which are necessary for initiating the actual picking process.

Errors eliminated

Once the full pallets are picked up, the order picker is given his pick orders via the headset that lead him in a sequence to the available empty pallets. Once there, the order picker first reads out the check digits which are immediately confirmed by the Talkman. Directly after this, the headset informs him of the exact quantity which needs to be lifted from the current position on one of the full pallets to the mixed pallets. "This system practically eliminates errors when loading the mixed pallets," emphasises site manager Ivković.

It is, however, not only fruit and vegetables which are picked with a very special system but also the range of dry products. Together with Špica Sustavi, Ahold Delhaize's IT department has realised a unique combination of pick-by-voice, the scanning of individual barcodes and put-to-light that enables virtually zero-error multi-order picking. The low-lift order pickers deployed in this area of the warehouse are equipped with long forks and light gallows with green and blue LED spotlights. The spotlights are positioned at a distance of 1.20 m along the lifting forks above the individual pallet.

Integrated scanners

After the voice-guided pickers have read out the correct check digits on the rack location, a beam of light marks the pallet assigned to the respective order. An

additional display mounted on the gallows also shows the quantity of articles to be retrieved. "This enables the order picker to clearly recognise the order to which the picked position belongs," Šarović comments. In the future, he wants to extend the tried-and-tested solution by up to three pallets and three active LED spotlights.

Other special features of the solution include the integrated checking of the goods delivered to the picking station. Before the first container of a new pallet is picked, the system requests the numbers of the barcode attached to it. When answering, the picker can choose whether to read out the last four digits of the barcode or use the scanner integrated into the Talkman instead. The employees generally choose to use the Talkman that must be taken out of the vehicle mount for this purpose. Thanks to bluetooth, the device can remain in the mount for the rest of the time, which makes the work a great deal easier.

Sound database

Another advantage of voice-guided order picking consists of the possibility now offered of analysing data. "Through analysing the picking processes Ahold Delhaize can, for instance, calculate for the first time exactly how much time was taken up by picking, moving around the warehouse and other activities. "We found out that only one third of the hours worked was taken up by picking and two thirds by moving between the aisles," Šarović comments. His intention is to substantially improve on the pick proportion in the future.

Conclusion: Ahold Delhaize ensures quality to the highest possible standards and a minimum error rate through the processes developed in house involving voice-controlled order picking. Moreover, the data generated and documented based on the system provide an excellent database for in-depth analyses and further optimisations.

Quotes:

"Raising the productivity without having to do without the customary functionalities of the old solution was of primary importance to us." Nemanja Ivković, Distribution Centre Director, Ahold Delhaize

"One of the greatest advantages of pick-by-voice is the fact that our employees have both hands free for their work and are given clear instructions." Dejan Šarović, ICT Supervisor, Ahold Delhaize

Voice results

Goals:
- Minimised error rate
- Increased productivity
- Multi-order picking of the dry product range
- Accelerated handling and transfer of fruit and vegetables
- Retaining of familiar functionalities

Application:
- Voice Solution combined with pick-to-light for multi-order picking and
- Multi-pallet picking for the swift handling and transfer of fruit and vegetables

Installation:
- 170 SRX2 headsets
- 170 A730 Talkman
- VoiceCatalyst 2.1 voice control software
- VoiceConsole 5.x

Results:
- Induction period reduced to 2 hours
- Exact analysis of picking processes
- Database for the targeted optimisation of routes and picking times
- Minimum error rate