

Voice Directed Warehouse Solutions

Improve Productivity, Accuracy and Flexibility



Voice Warehouse Benefits

- ▷ **Dematic voice warehouse solutions deliver discernible benefits in terms of productivity, accuracy and flexibility for new operations and those looking to modernise and upgrade.**

VOICE TECHNOLOGY

Voice Technology is now recognised as one of the most effective methods for increasing the productivity, accuracy and safety of many distribution centre operations.

HANDS-FREE, EYES-FREE OPERATION

Operators wear a portable, belt-mounted voice terminal and headset. Workers are able to hear instructions and perform tasks without having to look down at a hand-held computer screen or sort through paper lists.

The voice terminal communicates wirelessly in real time with the host computer or Warehouse Management System, prompting the operator through each assignment, with verbal instructions. The operator verbally confirms the correct task has been executed via the headset microphone. The voice system verifies this and then gives the operator the next task.

OPTIMISED RECOGNITION

Voice recognition is optimised for warehouse operations as operators “train” the terminal to their unique voice, a task that needs only be done once.

The voice system understands each operator regardless of their accent or dialect, allowing non-native speakers to operate at maximum performance levels.

The system stores each picker’s voice template. When a picker arrives for work he picks up any voice terminal from the charging bay and as he connects his personal headset to the voice terminal, his voice template is automatically loaded and ready for his first pick assignment.

SIMPLE TO TRAIN

Each picker trains the system to understand her voice in a once-only session that takes around 20 minutes.

Training time is cut by up to 50% over other picking methods. Voice operators can be productive in a matter of hours and reach maximum productivity faster than with alternative technologies.

DEDICATED AND 3RD PARTY TERMINALS

Voice is available on dedicated voice terminals which provide the highest levels of recognition performance and robustness of operation.

Alternatively, voice-enabled screen terminals can deliver the benefits of voice, thereby providing the highest levels of functionality and flexibility.

VOICE

Voice technology alone has significant benefits, but its capabilities are fully realised when it is seamlessly integrated with leading pick-to-conveyor, zone routing systems, and Pick Carts.

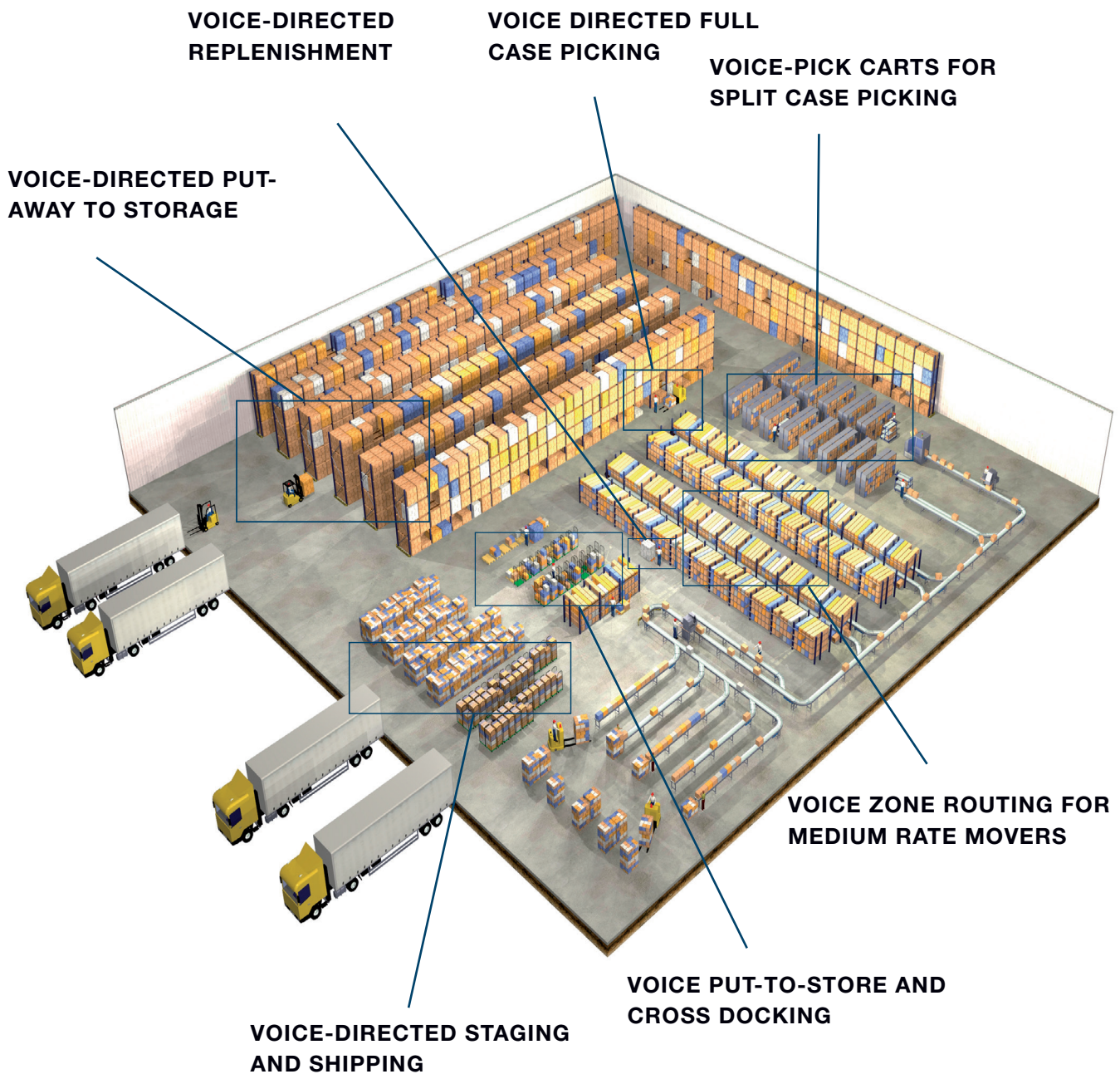
Benefits

- Hands-free, eyes-free picking
- Increased picking performance, up to 35% greater than picking with paper or RF terminals
- Accuracy of 99.9%
- Reduced operator training time
- Real time visibility into operator and staff performance
- Interface-ready to host and Warehouse Management Systems
- Improved worker ergonomics

Applications of Voice

IMPROVING ACCURACY AND PRODUCTIVITY THROUGHOUT THE DC

Voice warehouse solutions maximise productivity and increase accuracy in many applications throughout the distribution centre.



Applications of Voice - Beyond the Pick

▷ **Picking is the primary application for Voice, but other functions can realise the productivity, accuracy, and ergonomic benefits of Voice. Tasks can be interleaved to ensure operators are used at optimal efficiency.**

PUT-AWAY

Voice in receiving and put-away of product increases productivity and accuracy by directing the operator to the put-away location, using a quick verbal or scanned verification of the location, and the hands-free, eyes-free placement of the product.

REPLENISHMENT

Voice-directed replenishment is very accurate due to verbal checks of the license plate of the pallet and the location check digit verification. Voice provides greater management visibility compared to paper.

PUT TO STORE AND CROSS DOCKING

Put to store and cross docking follow a similar process. Products are taken around a grid of store locations in the form of a pallet, cage or shelf location for each shop.

Voice can be introduced into this operation for a faster and significantly more accurate process with improved management visibility. The picker is directed to the store location, verifies the correct location by reading the check digit, and is then told how many of each product to put in that location.

CYCLE COUNT

Inventory counts can be carried out by voice, either during picking or as a specific task.

QUALITY CONTROL

Container contents can be quickly checked by voice without any additional equipment. The operator can carry out quality control anytime, anywhere, and in real time.

STAGING AND SHIPPING

Voice-directed shipping will ensure that the correct despatch units get onto the correct truck trailers. Voice direction ensures the process is extremely accurate.



Benefits of Voice in Other Applications

- Improved productivity
- Increased accuracy
- Operators can interleave tasks to optimise efficiency
- Greater situational awareness
- Improved ergonomics through two-handed handling
- Reduced potential for forklift truck damage and accidents
- Improved management visibility
- Lower training overhead

Traditional Voice Picking

Voice technology has been traditionally associated with picking due to the potential benefits it delivers in terms of picking productivity, accuracy and order transparency.

With verbal instructions, the voice terminal prompts the operator through each picking assignment. To verify the correct location and product being picked, pickers read the location's assigned check digit or the last three digits of the product barcode. The voice system verifies this and then tells the picker with the quantity to pick.

INCREASED PRODUCTIVITY

In a picking operation, voice increases productivity when pickers hear instructions as they are working, rather than having to stop to read a screen or list. They are focused on the product in the location. The picker has his hands free so does not have to put down and pick up a pen and paper or a hand-held device. Scanning is not essential.

The picker simply picks the quantity instructed and verbally confirms the quantity she has picked back to the system as he is placing the product onto the cage/pallet. In this way, she is given the next location to go to before he is even travelling.

INCREASED ACCURACY

The constant confirmations by the picker in real time makes it almost impossible to make a cross-pick, eliminating costly picking errors and the need for staff to put them right or settle claims.

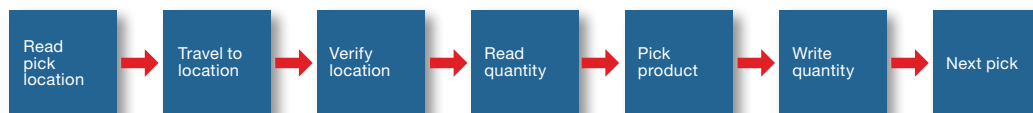
REAL TIME MANAGEMENT

As the system is constantly updated in real time, the supervisor is kept aware of pickers' performance and order completion status.

An additional benefit of the workload being monitored centrally is reduced demand on the supervisor's time, allowing him to focus on other key activities.

Voice Picking vs Paper & RF Picking

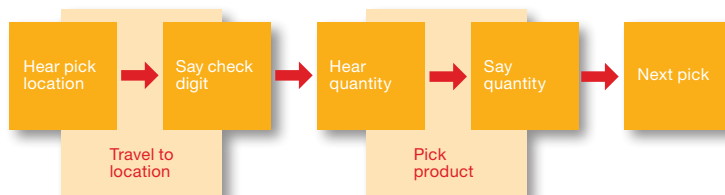
PAPER



RF



VOICE



TIME



Voice Warehouse Zone Routing and Pick Carts

- ▷ **Voice warehouse picking maximises the productivity and accuracy of split case picking by seamlessly integrating the pick operation with the pick container.**

During peaks, multiple pickers can be added to a zone because each picker is directed by their own terminal, avoiding the potential confusion associated with multiple pickers in PTL systems.

In the event of a short pick, the operator can immediately be redirected to replenish the location and then finish the pick. A picker who is not required in the zone routing system can be redirected to other parts of the DC.

VOICE ZONE ROUTING SYSTEMS

Zone Routing systems improve the performance of order fulfilment by conveying orders directly to pickers in zones. Orders are only sent to the zones where picks are required. This reduces travel by pickers and improves the responsiveness to orders.

When a pick container enters a zone, the picker scans or reads out part of its barcode and then is directed by voice through the pick sequence.

Voice picking is ideal for systems with a high number of products, as cost is dependent on the number of pickers. This is different from Pick-to-Light (PTL) solutions where each location requires a display.

BENEFITS OF ZONE ROUTING SYSTEMS:

- Cost per picker, as opposed to cost per locations for PTL
- Up to 35% increase in productivity over paper or RF terminal based zone routing systems
- Accuracy of 99.9% or higher
- Increased flexibility, with multiple pickers in a zone to handle peaks in volume
- Pickers can be redirected to the operations





VOICE PICK CARTS

Voice Pick Carts are a highly effective solution for picking in non-automated systems. An operator picks discretely to multiple orders on a single trip, reducing the total travel time per order. In a typical configuration, the Pick Cart will have 3-4 shelves to accommodate the shipping containers for up to 40 orders.

Each picker is directed to the most efficient pick path via voice commands. When the picker arrives at a pick location, they confirm the location via check digit. Once confirmed, the

operator is instructed as to how many items to pick to each discrete order container on the Pick Cart.

BENEFITS OF VOICE PICK CARTS:

- Ideal for picking items in non-automated systems
- Increased productivity
- Increased accuracy
- Cost proportional to number of pickers
- Flexibility to changing workloads



About Dematic

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Headquartered in Atlanta, Dematic is a member of KION Group, one of the world's leading suppliers of industrial trucks and supply chain solutions.

Power the Future of Commerce.

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