



CASE STUDY

SOLUTION

Untrained voice solution 3iV Crystal, powered by MCL voice

APPLICATION

Order picking in warehouse

HOST SYSTEM

SAP

HARDWARE USED

Motorola WT4090 VOW

CUSTOMER

Unilever Greece

Next generation voice solution

Voice solutions have found their place in logistics, in particular for the optimisation of order picking processes. In today's mature market, customers are looking at 'next generation voice solutions', which offer more than the traditional advantages such as improved efficiency, increased productivity and reduced error rates. Key decisive factors to select a voice solution are now:

- easy adaptation to changing parameters in their operations
- more agile workforce planning
- changing end-customer requirements, sometimes imposed by law
- operational savings
- lower total cost of ownership

Zetes has been continuously enhancing its market leading voice solution 3iV Crystal and integrates the latest innovations so its customers can enjoy all benefits a voice solution can offer today.

Key Features

Untrained or speaker independent

As technology evolves new features and possibilities are becoming available. Next generation voice solutions now offer an 'untrained' or 'speaker independent' approach, which means voice operators no longer need to train the voice system by registering individual commands, but can start immediately with the execution of their tasks.

Powered by MCL Voice, the speech platform of R&D daughter MCL Technologies, Zetes' voice solution 3iV Crystal offers customers this 'untrained' approach, which translates into instant productivity gains and savings, in particular for companies that face a high rotation of staff or strong seasonality.

The cornerstone of this flexible and adaptive approach is phonemes based recognition technology, which allows recognition of complete spoken words in a predefined language, without voice training required. It opens up new markets scenarios where the operator is no longer limited by giving the answer as a single and previously

recorded word or digit only. Now, the operator can ask the system for detailed and complex information, or give sentences as an answer. There is no need for the operators to change their natural way of talking.

Flexible data-input: voice only or combined with screen, keyboard, scanner, ...

Zetes' 3iV Crystal, powered by MCL voice, runs not only on voice dedicated devices, but on all industry standard hardware devices. In comparison to traditional voice dedicated devices, the latter allow various ways to enter data: voice, screen, keyboard, scanner, etc. The system-user interaction can thus be completed with intuitive screen prompts (if present), barcode scanning for batch number tracking, input of catch weight, RFID scanning, and much more. As a result, processes that were previously too complex to be handled by voice only can now also be optimised.

Processes optimised

Voice picking remains the killer application for voice solutions, but thanks to more flexible data-input and system-user communication others processes can now benefit from voice as well:

- quality control
- goods receiving
- put away
- multiclient picking
- ...

SAP Integration

An SAP system offers many different ways to integrate in real-time with third party solutions. Each of these methods does offer their own specific functionality and are used therefore in different situations. Zetes 3iV Crystal supports many of these interfacing methods. Based on today's requirements and the customer's outlook, Zetes will choose and advise the right interfacing method for each mobility or voice solution implementation.

Supported interfacing methodologies: ITS Mobile integration, SAP Console, (custom) RFC's integration, IDOC exchange, ...

Use case: voice picking at Unilever

As one of the first countries within the Unilever Group, Unilever Greece decided to implement a voice picking solution for their new warehouse in Schimatari (Greece). Following an intensive selection process, in which they tested and benchmarked several systems, they decided to implement Zetes 3iV Crystal, powered by MCL voice, running on Motorola WT4090 VOW.

Direct integration with SAP

Custom RFC's

The implementation involves a direct integration with SAP using custom RFC's that are specifically designed to give a fast and real time feedback to each of the voice operators. The solution eliminates the need for any middleware or intermediate business logic layer, as it is using SAP's standard integration options.

All info stored in one location

With this approach, Unilever is able to continue keeping their critical business data available at only one location: their core ERP system SAP. The voice solution is managed directly and the individual sessions for voice operators are tracked directly with the already existing tools inside SAP.

Real-time communication

The voice application residing on the Motorola VOW devices process the voice dialogues with the operator in real time and exchange the data with SAP by use of RFC's. The MCL-Bridge for SAP was installed on the host, next to the SAP server, acting as a communication bridge for all the voice devices in real time.

Implementation time: 1 month

The whole picking process was implemented in approximately 1 month's time. This included the development of 6 custom RFC's inside the SAP environment. The implemented RFC's included all common activities for the voice pickers, such as: "User login", "Ask for job", "Ask for pick line", "Confirm picked line", "Close carrier", "Logout".

Adapted to all users

Every voice dialogue has 2 different experience levels: Starter and Experienced.

- **Starter:** Usually new voice operators will start with the 'starter' level, which provides them with explanatory voice instructions ('go to alley 7, rack 7A, pick 3 units').
- **Experienced:** When they are more experienced, operators can move to the 'experienced' level. Instructions now will be shorter ('7 - 7A - 3'), so less time is spent listening to the task which brings about additional efficiency improvements.



Productivity, accuracy & efficiency gains

When moving from a paper-based solution to a voice solution organisations can typically expect a 20 to 25% productivity gain. In the case of Unilever no picking solution was implemented prior to the voice system, so there is no data available to compare. However, the implementation of the voice system imposed a standardised operational method that results in an error free order picking process. It also allows Unilever to easily introduce new (flex) workers to their warehouse, who can start working immediately and will automatically follow the same way of working.

20 pickers up and running

Currently the order picking process is executed by 20 pickers, split over 2 shifts. All operators were workers at Unilever, but had no experience with the daily use of voice technology. All of them have successfully adapted to working with voice devices, regardless of their technology skills and age (ranging from 30 to over 50 years old).

About Zetes

Zetes (Euronext Brussels: ZTS) is a leading supplier of solutions for optimising supply chains, identification and mobility. Through the intelligent application of automated identification technologies, we connect goods and persons to IT systems, providing customers with easy data exchange, total process monitoring and real-time updating.

Zetes' voice experts have been developing and implementing voice solutions for almost 10 years. Its market leading voice solution 3iV Crystal runs in more than 1500 projects with over 150.000 users.

Headquartered in Belgium, the Zetes Group employs more than 1000 people in offices across EMEA.