

## SPEAKING UP FOR MORE TRANSPARENCY.

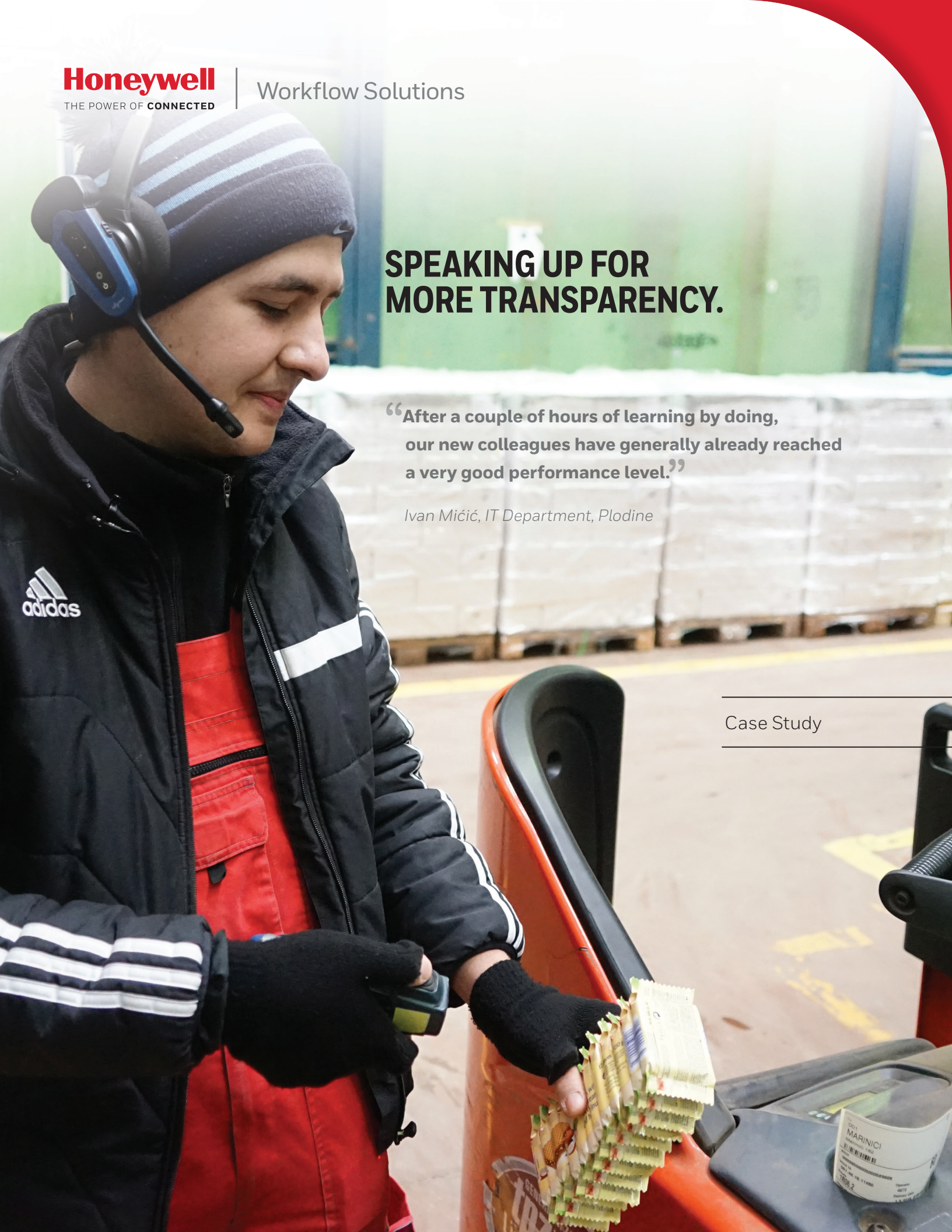
“After a couple of hours of learning by doing,  
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a very good performance level.”

*Ivan Mičić, IT Department, Plodine*

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Case Study

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**Plodine, a Croatian retail chain, has raised the picking performance of its central warehouse eightfold through using the speech technology of Honeywell Vocollect Voice Solutions and a modern warehouse management system.**

**SUMMARY**

800 percent: Croatian retail chain Plodine has raised its picking performance by a stellar figure in its around 10,000 square metre central warehouse in the vicinity of Rijeka. Until the end of 2016, around 40 operators working here in three shifts achieved little more than 1,000 orders a day. With team numbers virtually unchanged, this figure was raised eightfold to up to 8,000 orders by the end of March 2018.

**Both hands free**

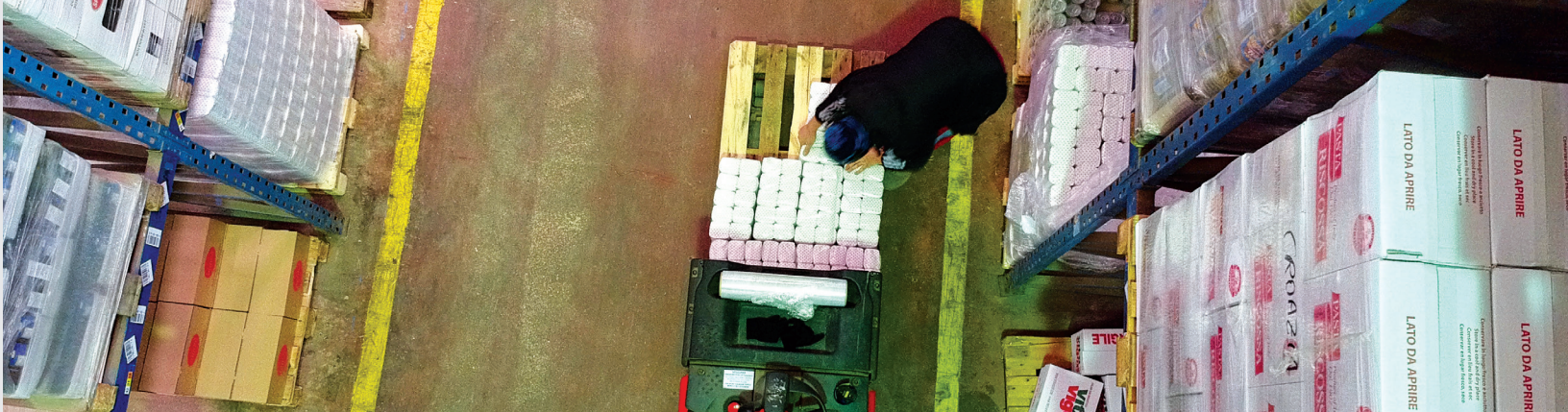
This extraordinary result was achieved by two new solutions for warehouse management and order picking introduced by the high-growth company in 2017. A conventional paper-based picking solution which worked in combination with a warehouse management module as part of the Virga ERP system was replaced. Virga is a Croatian merchandise management system aimed at small and mid-sized companies.

Together with system vendor Spica Sustavi, a decision was made for the Accellos One warehouse management system which is linked up via an interface VoiceXtreme, developed by Spica, to the voice-operated order picking system of Honeywell Vocollect Voice Solution. The easy learning ability and ergonomic advantages were the main arguments in favour of the pick-by-voice solution. "Our order pickers now have both hands free and can keep their eyes on storage locations and products without having to look at a display or a paper list in between," explains Project Manager Ivan Mičić who works in Plodine's IT Department

**Orders flow**

Originally the two systems were to be introduced in two stages. However, during the process, it became clear that a parallel and therefore much more efficient implementation was easily possible as Spica Sustavi was able to provide a central point of contact for both solutions. A further interface exists between Virga and Accellos One. Orders received daily in the ERP system from procurement were first divided into articles which are stored and those not stored. Ultimately Plodine keeps stocks of only 30 percent of the extensive range of around 10,000 positions in its own central warehouse. The other 70 percent are delivered directly to the markets by suppliers although the percentage proportions vary depending on the season.

The orders to be processed by the central warehouse are relayed from Virga to Accellos One and then translated into specific picking orders. These orders are then sent via WLAN to the voice device which goes by the



name of Talkman. This device converts speech into the voice commands which are then sent by bluetooth to the headset of the operator. The voice commands consist of the location in the warehouse and the number of articles to be retrieved. In Rijeka, 39 A730 Talkman and just as many wireless SRX 2 headsets are in use

### **Clever trick**

This equipment is supplemented by a personalised headset microphone which is plugged into the electronic module of the headset at the start of each shift. The headset microphone encapsulates a personal NFC chip which enables the right speech profile to be recognised and loaded. This is done by the employee holding the Talkman and the headset together for a short while before starting to work. The two devices recognise each other and form a logical unit.

Other special features of the A730 include the integrated scanner which plays an important role at Plodine: Lack of space means that a number of small articles share the same area in the warehouse in some instances. In order to avoid confusion, Plodine came up with a special trick. As soon as one of these articles is picked, Accellos One automatically triggers a command via the Talkman for an additional scan of the retrieved article.

### **Check digits with different colours**

With most articles, reading the check digit displayed in the location of the warehouse is sufficient. However, here as well, Plodine played it safe and Spica Sustavi came up with a system with four different digits separated by colour. An algorithm calculates and specifies the colour of

the right check digit for each order position which must then be read out by the operator. "In this way, we ensure that our employees do not simply learn digits and can then speak into the Talkman without looking at the shelf," Ivan Mičić explains.

The two security mechanisms enable the order pickers to work faster with virtually zero errors. "Since introducing speech-controlled order picking, we have been able to significantly reduce the error, rate which was one of our most important project goals," emphasises Danko Marčinko from Spica Sustavi.

### **System with inbuilt intelligence**

Another important effect of the new system is significantly enhanced transparency. All movements in the warehouse and the current picking process can now be followed on the screen and analysed. In conjunction with the new warehouse management, each stored article can now be easily located, which was not always the case in the past. "Up until 2017, only the employees working in the respective area knew the exact warehouse location. Each colleague was a specialist for his own 'product island'," Mičić recalls. Searching for articles frequently took longer when employees were ill or on holiday.

All this know-how is now in the intelligent system. This has ultimately also accelerated the process of training new employees, which is frequently the case given the strong seasonal fluctuations. "Explaining the Talkman takes only five minutes," Ivan Mičić says, and then adds: "Setting up the individual speech profile then takes another 30 minutes. This involves recording a series of short commands and standardised answer texts. "This is how the voice system learns to recognise the pronunciation, accent and dialect of the individual employee and adjust perfectly to the individual person – rather than the other way around," Danko Marčinko comments. The Honeywell Vocollect Voice Solution is so flexible that, if necessary, our employees can continue to speak in their mother tongue when communicating with the computer.



## Voice results

### Goals:

- Minimised error rate
- Enhanced safety
- Increased productivity
- Improved working conditions
- Greater employee satisfaction
- Roll-out to other storage areas (fresh produce)

### Application:

Voice Solution for order picking

### Installation:

- 39 SRX2 headsets
- 39 A730 Talkman

### Results:

- Significantly increased picking performance
- Optimal ergonomics
- Minimum error rate
- Lean processes
- Accelerated workflow

## Further implementation planned

As soon as the speech profile has been set up, the new order picker starts his work. "After a couple of hours of learning by doing, our new colleagues have generally already reached a very good performance level," Mičić reports. Order pickers specialising in specific areas of the warehouse is no longer necessary anyway as all areas of the warehouse are now mapped in the system.

No wonder that the solution has met with enthusiastic acceptance by all employees and will now be introduced into Plodine's cool storage.



## For more information

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