



Accelerating Onion Processing, Enhancing Consumer Safety and Protecting the Brand

Waterman Onions Achieves an Always-On View Over its Fast-Paced Logistics Operations

SUMMARY



Customer

Waterman Onions

Partner

[Acetemium](#)

Industry

Food production

Challenge

Optimise inbound operations, onion sorting and onward shipment by turning paper-based and manual processes into electronic workflows.

Benefits / Outcomes

- Fast, accurate and efficient processing of deliveries
- Streamlined workflows which save time
- Reliable and powerful mobile platform built for the longterm and with visibility over cost of ownership
- Hugely improved data insights which will be used to further improve operations

Solution

- Zebra DS3608-ER Ultra-Rugged Barcode Scanner
- Zebra MC3300 Rugged Mobile Android Computer
- Zebra XSLate L10 Rugged Tablet
- Zebra ZT411 Industrial Printer
- Zebra OneCare™ Maintenance Plan
- Zebra DNA™

Netherlands-based [Waterman Onions](#) is hugely passionate about onion production. With its onions grown in the mineral rich, clay soil of the Flevoland region, it's able to limit pesticide usage to grow sustainable crops. Its customers, including retailers, wholesalers, processing facilities and peeling companies, know that a Waterman Onion is among the world's best and aims to meet the highest certification and food safety requirements.

A lot goes into ensuring customers receive great onions. Not least ensuring that the vegetables adhere to quality standards. This puts an onus on the fast and efficient processing of incoming goods. Over the last 12 years, Waterman Onions has grown from one production hall with 20 employees to three halls with more than 100 employees. It now dries, sorts, packs and ships 150,000 tonnes of onions across the world each year.

Traditionally the company had used manual, paper and pen-based workflows to process incoming onion loads, manage orders, validate product quality and orchestrate onward logistics. For example, drivers were given paper-based instructions to unload onions. On busy days, more than 30 trucks are unloaded. The onions are destined for sorting machines or are stored as 'stock field crop', but Waterman Onions was unable to properly check whether the load ended up in the right place. Furthermore, food safety regulations were becoming stricter, and quality controls were being tightened which increased the paperwork load.

To move to more agile operations, the company looked to deploy a state-of-the-art, future-ready solution, as Jurrien Van den Berg, Waterman Onions' IT manager explains, "To protect our brand, ensure consumer safety and achieve even higher customer satisfaction, we needed insight into all onions and across the entire supply chain."

With these goals in mind, the company set out on a project to digitalise the tracking and tracing of onions, to efficiently manage logistics and provide a real-time view over every order's progress.

Mapping Processes into a New WMS

To make the shop floor completely paperless, the project team set out to deploy a new warehouse management system (WMS) to coordinate orders.

“We deliberately chose not to use a standard WMS,” observed Van den Berg. “We wanted a system that would adapt to our complex processes, not the other way around. For example, our machines all register in a different way. And because we are so dynamic, we may well have new machines in a year that we control and operate differently. So our WMS has to be versatile and capable of easily integrating with new technology.”

With the need for versatility a key requirement, Waterman Onions asked its long-term IT consultant, Newminds, to develop a bespoke ‘StoPro’, storage and processing solution.

“We created a detailed functional design, together with our employees on the shop floor, mapped to our workflows,” said Van den Berg. “Many of our employees have been with us a long time, and we wanted to embed their knowledge into our new systems. With the platform coordinating operations, our teams are confident in their tasks, even if, for example, someone is absent. Overall people are more empowered. It has become a system for all of us.”

Digitalising Operations

A solution like StoPro is only as good as the quality and timeliness of the data it receives. And with the need to label and scan the 11,000 boxes and crates used to transport and process onions across its facility, Waterman Onions looked for new mobile computing solutions to empower its team to easily capture data as orders are processed. After asking for recommendations as to whom it should work with on this part of the project, the name Actemium, a specialist in using technology to enhance industrial processes, came up time and again.

“We needed a party to guide us through this unknown territory. And when we spoke to Actemium they were very accommodating,” said Van den Berg. “The first meeting was fact-finding, but Actemium soon gave its first piece of advice saying it would be better to work with 2D data matrix codes instead of 1D barcodes. That guidance immediately felt good. Actemium also advised us on the platform we needed to make the factory paperless including the best mobile computers, handheld scanners, rugged tablets, including vehicle-mounted tablets and production machines. They also recommended label printers, ways to better manage our wireless network and mobile device management (MDM) solutions.”

Waterman Onions decided to build its long-term mobile device strategy around Android™, selecting a range of rugged devices from Zebra’s extensive Android portfolio. The decision to use enterprise-grade rugged devices was dictated by the environment. The Waterman Onions’ warehouse is a challenging place for sophisticated technology. This is due to the high levels of dust in the air, the need to work for continuous periods of time and the chances of devices being regularly knocked or dropped.

For its forklift trucks, Waterman Onions selected the Zebra DS3608-ER Ultra-Rugged Barcode Scanner. The device, which created a new category of rugged scanners, is exceptionally robust and can read barcodes from forklift trucks at over 20 metres away. This means that drivers can capture codes without having to exit their vehicle. The scanner is fixed into the cab using a Zebra certified Gamber Johnson docking station, which also houses the Zebra XSlate L10 Rugged Tablet.

The tablet was selected because of its versatility and ruggedness. The device is used by drivers to view and manage work orders and can be easily removed from its dock if teams need to view data and collaborate in real time.

Waterman Onions also uses the MC3300 Rugged Mobile Android Computer to periodically carry out inventory checks on its 11,000 crates and cages. And, to track crates, Actemium has installed The Zebra ZT411 industrial printer at the inbound dock. The printer is used to create barcode labels for cages supplied by farmers, and which are not owned by Waterman Onions, so they can be tracked and traced as they move through the onion processing stages.

“Our staff love this new solution. They can work paperlessly, have live insight into the arrival times of trucks, and have a better view over real-time data to make more informed and effective decisions which ultimately enhance customer satisfaction.”

Jurrien van den Berg,
IT Manager,
Waterman Onions

As they coordinate the management of onion processing, the mobile devices are business critical. Actemium has therefore provided a package of services to protect the devices over their planned lifecycle. This includes the use elements from Zebra Mobility DNA™, a suite of software, utilities and apps, which makes it easier to deploy, secure and get the most out of Zebra's mobile devices. Within the package is LifeGuard™ for Android, which provides security updates for the expected lifecycle of the devices and way longer than the three years typically guaranteed by Android. In addition, the technology is protected by Zebra OneCare Essential™ Support and Service with next-day device replacement if needed.



Scaling Performance Gains: A Stepped Approach to Paperless, Efficient Operations

Waterman Onions is working diligently toward the launch of StoPro. The new system is already running in the reception department. Employees work electronically and have instant insight into the arrival times of trucks and better oversight and control over the different type of stock received. Van den Berg calls this situation 'semi-live,' "Some employees are already so used to it that they can no longer do without it."

In phase two, the production area will go live. This is the part of the process in which onions are processed into packaged batches for delivery to customers. In phase three, electronic workflows will be rolled out to enable the efficient forwarding of onion and onion products. From that moment on, Waterman Onions will have a complete overview of all processes. Its teams will be able to make more informed decisions thanks to a real-time view of operations. All the tasks they need to manage will be visible on the rugged, reliable and powerful mobile devices.

The warehouse team is delighted with their new devices reporting that they're highly intuitive, robust and reliable. The scanner, with its powerful and accurate scan engine, can read barcodes which are faint, scratched, or otherwise compromised to avoid the problems caused by failed reads. And, with its extended range, drivers can remain in their cab when scanning codes saving valuable seconds. The ZT411 printer is highly robust and the print quality, complemented by the adherence of the Zebra labels, ensures that tracking labels are clear and remain fixed to cages and crates as they journey through the warehouse.

Waterman Onions' new technology platform will be in place over the long term. And thanks to LifeGuard for Android, and the fixed cost for service and support, it knows that its devices will always have the latest security patches and also, what they will cost to run with no hidden surprises.

The business is now collecting a huge amount of data that it never had before. And looking forward, Actemium will help Waterman Onions use its improved data picture to deploy machine learning and artificial intelligence to support proactive learning and ongoing operations improvements.

To learn more visit [zebra.com](https://www.zebra.com)



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