With one zenon project OEM offers thousands of options

Volpak standardizes packaging machine controls

Volpak S.A.U. is an original equipment manufacturer (OEM) and a leading brand of packaging machines, including horizontal form-fill-seal (HFFS) machines, for flexible packaging in the consumer goods market. To make the development and maintenance of its machines easier and to optimize user experience, Volpak wanted to standardize the machine control interfaces across its different product types. To create this harmonized look and feel, Volpak chose the zenon software platform from Austrian industrial automation software specialist, COPA-DATA.

Volpak sells its machines globally from its headquarters in Barcelona, via subsidiaries in 126 countries. It supports customers with machine sales, parts, maintenance, equipment modernization, production support and consultancy services across several vertical markets. Volpak is part of Coesia, a group of innovation-orientated industrial and packaging solutions businesses headquartered in Bologna, Italy. Machines are marketed under two brands: Volpak and Enflex.

MEET CUSTOMER NEEDS AND MINIMIZE COMPLEXITY

Volpak's specialist machines include equipment for the beverage, chemicals, dairy, food, home care, personal care, pet care, tea and coffee sectors, among others. Across this extensive

machine range, there had been a great deal of variation in the brands of PLCs used and in the human-machine interfaces (HMIs) used by operators to control the machines.

Over time, the control interfaces of different machine families had diverged in their look and feel. Customer requests and hardware preferences added to the variation and complexity of the different HMIs. Individual customers favored different PLCs and had specific reporting requirements. This meant Volpak had to maintain many different automation platforms.

These differences made it harder and more time consuming to roll out changes across the product sets and to maintain the systems effectively. To minimize the burden of this adaptation and subsequent support, Volpak wanted to abstract its automation platform from the control layer. This way, it could

zenon as HMI on a Volpak machine.

accommodate customer preferences while making ongoing maintenance and support easier. It sought a solution flexible enough to meet all customer requirements – and Volpak found it in COPA-DATA's zenon software platform.

CHOOSE THE RIGHT BASIS FOR STANDARDIZATION

"We chose to standardize on zenon because we saw it could offer a modern, intuitive look and feel with supervisory control and data acquisition (SCADA) functionality while keeping the total cost of ownership low," explains Agustí Martinez, Technical Platform Owner, Standard Platforms & Systems supervisor at Volpak. "We'd gain performance improvements, ensure ease of use, and benefit from a maintenance cost reduction."

The multi-disciplinary project began with sales and marketing specialists asking customers what they liked about existing HMIs and what new features they would like. The team also canvassed the technicians who install the machines on potential improvements. Once the user specification was drawn up, Volpak worked with a graphic design agency to optimize the design of the graphical user interfaces (GUIs).

Usability was a top priority. Offering two different sizes of touchscreens, the new solution supports modern control options and gestures, including swipe and enlarge, for easy operation and navigation. Each machine offers guided procedures to further support operators. It indicates the steps the user must follow and the checks to ensure each step is completed properly. This way, Volpak's customers can reduce the training hours required to introduce a new operator or machine.

INTEGRATED DOCUMENTATION AND REPORTING

The familiar look and feel and intuitive design are standardized for every machine across the entire Volpak and Enflex product ranges. This adds to user comfort and minimizes training and onboarding time and effort for customers, while strengthening brand recognition and user experience for Volpak.

"One of the new features that really makes a difference for Volpak and our customers is the integrated documentation," says Agustí Martinez. "Users can access a spare parts list with active part selection through the 3D and machine drawings, electrical schematics and the manuals that are accessible through the new interface based on zenon."

Active help and troubleshooting have also been added and are available to users intuitively. For example, if an alarm shows on the system, it is accompanied by a root cause explanation and a suggested way to fix the problem.

AN IMPROVED EXPERIENCE FOR VOLPAK CUSTOMERS

"Many improvements have been made possible through our use of zenon," reports Agustí Martinez. "We've added significant value to our machines while keeping costs in check. In some cases, the sum of these many small details have been decisive in us winning machine orders."

In particular, zenon's native e-Signature and CFR21 capabilities have added significant value for Volpak's customers in the global pharmaceutical sector. The compliance and audit trails, with a centralized database for multiple devices and aligned time stamps, are another attractive feature appreciated by many customers. In addition, the machines now conform

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AGUSTÍ MARTINEZ, TECHNICAL PLATFORM OWNER STANDARD PLATFORMS & SYSTEMS SUPERVISOR VOLPAK.

with PackML, the industry standard for controlling packaging machines within automated manufacturing systems, ensuring consistency and facilitating further integration.

The zenon software platform enables flexible reporting options, making it easy for Volpak to meet its customers' diverse reporting requests. Because of the engineering time and effort saved by standardizing on zenon, Volpak is able to offer these reporting functionalities to its customers at no extra cost. Today, these capabilities are natively available to everyone who chooses a Volpak equipment.

REDUCED ENGINEERING EFFORT AND A PATH TO THE FUTURE

Standardizing on zenon has saved time and effort in systems development that go beyond the simple act of standardization. Because zenon can be configured through parameterization rather than programming – the original low-code / no-code approach – engineering effort is minimized. Even non-technical staff can use the system. For example, simply by selecting the appropriate machine configuration in zenon, the required code is automatically created in zenon Logic, zenon's integrated soft PLC used to abstract the automation layers. This no-code project creation minimizes errors and saves considerable time through automatic engineering.

zenon's agility, vast array of native functionality, integrated object libraries and unparalleled connectivity with third-party systems – with more than 300 drivers and protocols natively supported – streamlines engineering effort while offering maximum hardware and system flexibility and agility.

"We now have one project we can adapt to everything!" enthuses Agustí Martinez. "zenon is preinstalled on every panel – regardless of the PLC preferences of the customer. With zenon, we have 30 machines, one manual, and thousands of options."

The ultimate goal is to offer entire production and packaging lines built by the Coesia Group with zenon delivering visibility and control of the entire line. " With all zenon's advantages we are able to combine our machines more often with other Coesia machines in a complete packaging line. This way we provide a seamless experience and increased performance for our customers," emphasizes Agustí Martinez. "Day by day, we are discovering new possibilities and new capabilities. The project is a real success and we haven't yet seen the limits of zenon!"

HIGHLIGHTS:

▶ Harmonized look and feel across product range

▶ Single zenon project applied to 30 different machine types

▶ Reduced engineering time and simplified support for OEM developers

▶ Intuitive HMI eases operator comfort

▶ Guided processes reduce operator onboarding time

▶ Improved digital support with integrated machine schematics, manual and enriched help options

▶ Support for electronic signatures and CFR21

▶ Enhanced reporting options

▶ Partially automated project creation for quicker implementation