

SCADA system built within Wonderware Archedra technology provides robustness and ease-of-maintenance in yogurts production

by Astor Sp. z o.o.

“Wonderware Archedra technology allowed us to build modern and far-reaching SCADA system giving Bakoma employees full access to process data and allowed them to stay in line with every production detail to ensure quality of production work orders.”

Artur Zielinski,
System Developer, Atempol



VALUE DRIVERS	KEY METRICS	Company Overview
<p>Goals</p> <ul style="list-style-type: none"> • Modernization of old Control System and SCADA system; • Integration and standardization of operators HMI applications; • Functional extension of old SCADA system capabilities; • Provide ease-of-maintenance and remote development availability. <p>Challenges</p> <ul style="list-style-type: none"> • Plenty of existing visualization applications and distributed, but not integrated SCADA stations, • Implementation and set-up process executed on running production line, • Lack of remote maintenance access to plant applications, • Lack of users management functionality. 	<p>Wonderware Solutions</p> <ul style="list-style-type: none"> • InTouch HMI; • Wonderware System Platform. <p>Results</p> <ul style="list-style-type: none"> • Wonderware System Platform based SCADA system gave users broad-perspective software solution ensuring ease-of-maintenance and extension capability; • Users have access to accurate pieces of information about the process in real-time; • System redundancy provides system robustness; • System administrators are provided with modern users management based on Archedra technology security system; • Software Development Engineers have remote access to running application and are able to support solution in real-time. 	<p>Bakoma Sp. z o.o. – Szymanów, Poland Bakoma Sp. z o.o. is the biggest Polish milk haberdashery manufacturer. The company was established in 1989 and, from 1997. it was quoted on stock exchange. Production of wide line of yogurts, cheeses and milk-desserts is performed in modern production plant near Sochaczew (Poland). To maintain the highest quality of its products, Bakoma implemented a control system for the analysis of the critical points (HACCP), so that everything produced by Bakoma follows the International standards ISO 9001. These efforts were appreciated and well estimated by the market and consumers all over the world: Bakoma dairies are being sold not only in Poland but also in USA, England, Ireland, Portugal, Slovakia, Hungary, Romania, Lithuania, Estonia and Russia.</p>

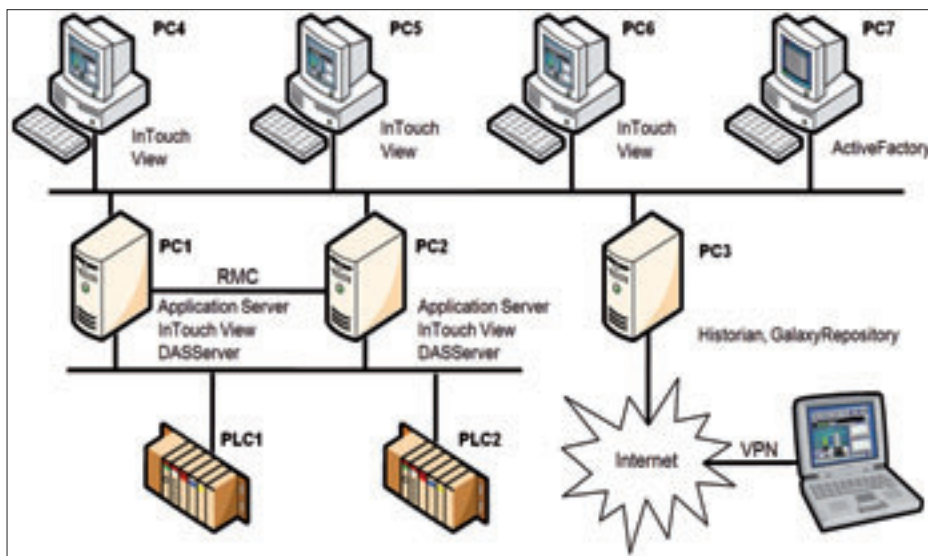
Food & Beverage

InTouch HMI, Wonderware System Platform

Bakoma has a strong market position in Poland and as well as other markets, such as: USA, UK, Ireland, Portugal, Slovakia by increasing export volume. The quality of the products is ensured by being compliant with the international ISO 9001 standard. Moreover the company has set-up and maintained the HACCP system. In 2007, the board of directors decided to make an investment in the implementation of a new control system and Wonderware-based SCADA (Supervisory Control and Data Acquisition) solution. It was a crucial step to be up-to-date with technology and increase production robustness and quality.

Implementation process

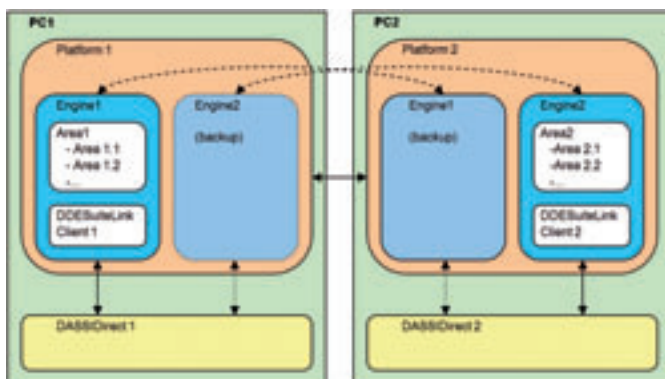
According to Bakoma production lines, high-availability requirements Wonderware ArchestrA-based system was implemented in 3 steps to minimize production downtimes. In the 1st step, there was an exchange in control system modules and Ethernet network. During the 2nd phase of the project engineers started tests of the SCADA system, it was running parallel with existing SCADA application to ensure functional compliance. In the last phase, remote control system peripheries were connected to new controllers and production was successfully started.



System structure

Key factors which have inclined Bakoma to use the Wonderware solution are as follows:

- Scalability of the Wonderware ArchestrA technology;
- Ability to integrate old operator interfaces to 1 comprehensive InTouch HMI application;
- Ease-of-maintenance by remote access to Wonderware Development Studio.



Application diagram

Wonderware SCADA system is based on two redundant Wonderware System Platform and 5 operator stations running with InTouch HMI. Real-time connectivity to PLC controllers is provided by Wonderware Device Integrations servers.

A big role in SCADA solution is played by Wonderware Historian server collecting all production alarms, activities and historical data values. Engineers are allowed to remotely-access application by Wonderware Development Studio functionality.

Key Metrics

Benefits from the investment made are visible at first glance. Far-reaching software solution based on Wonderware ArchestrA technology ensures easy development of further functions.

Wonderware Historian functionality improves information flow and gives employees right context-based data in the right time.

Built-in Wonderware System Platform redundancy enables Bakoma to handle unforeseen application failures and avoid production profits loss. It is worthy to say that the logic structure of the application created within Wonderware Development Studio hosts over 5000 application objects and almost 200 visualization windows. Moreover, the system is able to handle this amount of data effectively and even allows for extended functionality in real-time.

With Wonderware SCADA solutions Bakoma's production excellence became a real "low-hanging fruit".

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