Water Wastewater Plant Software Upgrade Wrings New, Actionable Information Flow from Legacy Hardware

FactoryTalk VantagePoint Software Reveals Hidden Efficiencies and Cost Savings in Water Treatment

Solutions
Manufacturing Intelligence
- FactoryTalk VantagePoint software provides visibility into production and a comprehensive picture of the factors contributing to operations performance
- FactoryTalk Historian software automatically identifies, gathers and stores real-time process and production information, including data from legacy systems

System Design and Delivery
- Rockwell Automation Solution Provider, Grantek designed, configured and implemented complete Rockwell Automation information solution

Results
Improved Efficiency
- 720 hours saved annually generating compliance and ad hoc reports
- Estimated savings of one man-year in automation of billing process
- Every employee securely connected to role-appropriate data via a Web browser with a normalized contextual model providing reports or raw data 24/7

Improved Data Collection
- Eliminated error prone data transcription process
- Data aggregation and store now available
- IT has a single platform that can support any application

Challenge
Every enterprise wants to improve. It does so by understanding where it is today and mapping out a clear path to achieving better results for tomorrow. Undertaking this journey demands technologies that provide accurate, actionable information. But more often than not, facilities have a mix of legacy systems from a variety of vendors that make accessing the data needed for improvements more difficult than ever.

Recently, a Canadian water/wastewater operation that encompasses six separate treatment plants recognized its need to not only increase visibility into existing systems, but spot trends that would help them better predict their production needs. Because a range of issues might diminish a plant’s ability to deliver water supply – from flow issues and spiking electrical usage to greater-than-average demands by one water user on the network – the operation needed real-time visibility into factors that affect flow. Gaining this information would allow the facility to react to specific issues affecting the fluctuation in demand, without having to risk inaccuracy by “guessing.”
The facility also sought a way to improve the accuracy and efficiency of data collection and reporting. The existing reporting system relied on daily log sheets assembled by local operators from six different treatment plants. The forms often contained anecdotal information rather than actual or comprehensive metrics. Not only was this manual process extremely time-consuming, it also limited managers’ ability to take immediate action on problems.

**Solutions**

The water/wastewater operation enlisted Grantek, an Ontario-based systems integrator and its partner, Rockwell Automation, to identify areas in need of improvement and implement a manufacturing intelligence strategy that could help them reduce risk of downtime and optimize operations. Grantek’s solution is centered on FactoryTalk VantagePoint software from Rockwell Automation. FactoryTalk VantagePoint software taps into information from systems across operations that has been automatically identified, gathered and stored by FactoryTalk Historian software – including systems developed by a number of different vendors and varying widely in age. The FactoryTalk VantagePoint application provides visibility into production by putting all this data into context through a Web-based reporting tool that gives users a comprehensive picture of the factors contributing to the performance of their operations.

By marrying FactoryTalk VantagePoint software with the specific information demands of the water/wastewater operation, Grantek modeled the physical units of the facility (highlift pumps, intake pumps, e.g.) and plant processes (chlorination, filtration, e.g.), logged those names into a library, and created drag and drop functionality that provided for a quick and easy migration. The software was scalable and compatible with the operation’s legacy systems, and leveraged the enhanced visibility and reporting capabilities inherent in the application.

Grantek’s solution also provided easy-to-use reporting on key performance indicators, enabling users – whether operator, line supervisor, plant manager or executive – to hone in on the suitable level of detail for their role. Because the FactoryTalk VantagePoint user experience is very intuitive, the water/wastewater operators can now access role-appropriate information with a simple click-through on the Web-based system.

“Role-appropriate visualization is critical to creating value for our customers,” says Rick Hargreaves, Grantek regional manager. “While an operator needs particular information to make quick decisions on the floor, a manager may only seek high-level dashboard displays that allows taking measure of the whole system with a quick glance.”

The software further simplified the water/wastewater plant’s systems management by eliminating the need to know where the data came from. Information seekers no longer need to jump through complex data management hoops to find necessary information.

“Water facilities use a lot of chemicals,” Hargreaves explains. “Want to know how much? We created a reference tag that combines data from all the chlorine monitors across the enterprise with the click of a mouse. It significantly enhances an operator’s ability to access information with very little training.”

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**Results**

In a regulated industry, the ability to quickly provide information is critical to avoiding downtime, fines, or worse. FactoryTalk VantagePoint software changed the water/wastewater operation’s information gathering and reporting process from a four day ordeal, consuming an average of 2 to 4 people to about a half-hour of a single employee’s time.

In addition to saving valuable time, the water/wastewater facility benefited from a solution that reveals hidden inefficiencies. After Grantek used FactoryTalk VantagePoint to create a billing system for the facility to replace its manual entry spreadsheet system, management found a $100,000 billing error that had previously gone unobserved.

“Our ultimate goal for any operation is to build a system that provides accurate, real-time information to decision-makers,” says Hargreaves. “We know from experience that FactoryTalk VantagePoint software can fix the problems our customers bring to us, but it can also fix problems they don’t even realize they have. It’s this access to data that empowers operators with the ability to make improvements that ultimately save time, money and create a culture that promotes continuous plant improvement.”

The results mentioned above are specific to Grantek’s use of Rockwell Automation products and services in conjunction with other products. Specific results may vary for other customers.
Grantek is a leading provider of integrated manufacturing automation services. The company’s innovative solutions are designed to increase clients’ return on investment and reduce time to market through improved manufacturing productivity, product quality, asset utilization and integrated technology.

Grantek’s clients are among the most respected manufacturers of global brands, as well as niche manufacturers seeking improved performance and competitive advantage. Since 1980, Grantek has been enabling better processes that turn into greater profit through new plant installations, continuous improvement initiatives, conversion of nonautomated facilities, and support, maintenance and troubleshooting.

Through a total system solution approach and the dedication of professional staff, the Grantek team guarantees a manufacturing facility, line or process that has been skillfully designed, professionally engineered and executed for a vertical startup.