

The main title of the case study, written in a large, white, sans-serif font against a dark blue background. The text is centered and reads: "Emerson Process Management and Dust Networks Bring Scalable, Cost-Effective Water Usage Monitoring to GlaxoSmithKline".

SUMMARY

Emerson Process Management's Rosemount® Smart Wireless flow and pressure transmitters monitor new water storage tanks and measure water usage with networking technology that makes it easy to add new process instrumentation in the future and avoids high installation costs.

CHALLENGE

Adding a new process monitoring system must avoid high installation costs and allow for efficient, non-disruptive expansion in the future.

SOLUTION

Emerson Process Management installed Smart Wireless Rosemount flow and pressure transmitter nodes which use Dust Networks SmartMesh wireless mesh networking technology. The nodes self-form a secure wireless network that communicates data through a SmartMesh network manager and into the pre-existing Emerson Process Management PlantWeb™ digital infrastructure. Dust Network's intelligent network allows new authenticated nodes to be added without disruption to the network.

THE CHALLENGE

The GlaxoSmithKline plant in Cork, Ireland, is a strategic operation manufacturing many of the active ingredients used in the formulation of prescription drugs. In an effort to increase productivity, GlaxoSmithKline wanted to add two new water storage tanks and measure water usage.

"GlaxoSmithKline is continuously looking to improve plant performance by increasing the number of parameters measured," explained Emmett Martin, Site Services & Automation Manager, GlaxoSmithKline. "Water is a considerable overhead to the plant so it is important that we monitor flow rates to manage consumption, and to help identify any usage trends."

The new tanks and piping system were installed about 100 feet from the main control room. But when it came to installing a monitoring system, GlaxoSmithKline looked for a solution that avoided the considerable costs associated with opening a trench and laying cables for communications and power. They also wanted a system that was easy to expand without disrupting processes or data collection.

THE SOLUTION

GlaxoSmithKline selected Emerson Process Management's Rosemount® Smart Wireless flow and pressure transmitters. Using Dust Networks® SmartMesh® technology, the Rosemount Smart Wireless product family creates a resilient, reliable and secure wireless mesh sensor network over which to transmit sensor data without digging trenches and laying cable, reducing installation costs significantly.

Dust Networks' SmartMesh wireless mesh network product family of motes and managers is a resilient and reliable wireless mesh networking solution with comprehensive security management and advanced network management. The self-forming, self-healing and self-sustaining intelligent network is easily scaled and can support large, dense networks. Additional Rosemount Smart Wireless transmitters can be installed by the plant's own facilities technicians. The network will automatically discover them, authenticate them, and add them to the network.

Emerson Process Management and Dust Networks Bring Scalable, Cost-Effective Water Usage Monitoring to GlaxoSmithKline

"We are more than satisfied with the solution, which is proving to be reliable with no signal loss. Based on a successful implementation, at some point in the future we are perhaps, looking towards a plant with no wires." Emmett Martin, Site Services & Automation Manager, GlaxoSmithKline.

THE RESULTS

Ten Emerson Smart Wireless devices were installed, including six Rosemount pressure transmitters, two Rosemount flow transmitters and two Rosemount level transmitters. The new system is helping GlaxoSmithKline better understand water usage throughout the plant and also test the wireless technology.

"We are more than satisfied with the solution, which is proving to be reliable with no signal loss," summarized Martin. "Based on a successful implementation, at some point in the future we are perhaps, looking towards a plant with no wires."

IN CONCLUSION

"We have deployed our Smart Wireless field devices, enabled by Dust Networks' technology, in real-world environments and our customers have been thrilled with the results," said Bob Karschnia, vice president of technology for Emerson Process Management.

WHY WORK WITH DUST NETWORKS?

Dust Networks, a pioneer in the field of wireless sensor networking, is defining the way to wirelessly connect smart devices. Using standards-based network technology, Dust Networks provides reliable, resilient and scalable network solutions with advanced network management and comprehensive security features.

ABOUT EMERSON PROCESS MANAGEMENT

Emerson Process Management, an Emerson business, is a leader in helping businesses automate their production, processing and distribution in the chemical, oil and gas, refining, pulp and paper, power, water and wastewater treatment, metals and mining, food and beverage, life sciences and other industries. The company combines superior products and technology with industry-specific engineering, consulting, project management and maintenance services. Its brands include PlantWeb, Syncade, DeltaV, Fisher, Micro Motion, Rosemount, Daniel, Ovation, and AMS Suite. To learn more, please visit <http://www.emersonsmartwireless.com>.