Wonderware helps efficient production of diabetes products
by Wonderware United Kingdom

“With the help of the Wonderware system involving the Wonderware Historian, InTouch HMI and iDAS products, we have achieved tremendous connectivity on site. We have been able to connect to programmable logic controllers, a building management system (BacNet), several Atlas Copco compressors, Wago terminals and a Carrier Comfort Network (BacNet), to name but a few.”

George Cameron, Facilities Electrical/Controls Project Engineer, LifeScan Ltd.

Company Overview
LifeScan Ltd. – Inverness (Scotland), United Kingdom
As a leading maker of blood glucose monitoring systems for home and hospital use, LifeScan is dedicated to improving the quality of life for people with diabetes with its OneTouch brand products. LifeScan is a Johnson & Johnson company. LifeScan Scotland was created in 2001 when Johnson & Johnson acquired the UK assets of Inverness Medical Ltd, a medical device company established in Inverness in 1995 to design and manufacture glucose test strips, and design electronic meters for the global diabetes market. Over 1,300 people are employed at the Inverness facility, which is regarded as a centre of excellence for those working in the field of diabetes. With a focus on future development, LifeScan is committed to “creating a world without limits for people with diabetes.” The company relies on outstanding research and development professionals to realise this vision.
Major issues

At Inverness, a mix of equipment supports the manufacturing plant, including heating, ventilation and air conditioning systems, boilers, chilled water, compressed air, vacuum, steam generation, high voltage switch rooms, and condition monitoring units.

The key problem facing LifeScan was that its legacy Building Management System, Programmable Logic Controllers, and controls all featured closed or proprietary protocols. There were many SCADA (Supervisory Control and Data Acquisition) and Building Management System front ends and very limited information available. Few companies could support the company’s range of systems.

The solution to be implemented had to be designed to ensure open systems connectivity, and compliance with the Federal Drug Administration (FDA) 21 CFR Part 11 rule on electronic records and signatures, and ASM (Abnormal Situation Management – the process of developing valuable alarm/page design in the SCADA/process industry) principles. There needed to be much greater flexibility and control over software development.

Key metrics

The Wonderware system using the products Wonderware Historian, InTouch HMI, and iDAS, was installed by Caledonia Technologies, Westmont and Wonderware United Kingdom in the Facilities Department. The system architecture was developed by Wonderware United Kingdom. Today, 20 people use the system – mainly shift and project engineers.

“Wonderware products and technology were chosen because of LifeScan Scotland’s stringent requirements and because they met the required industry standards,” says George Cameron, LifeScan Scotland Facilities Electrical/Controls Project Engineer. “They have so far replaced Mitsubishi MX SCADA systems, and are also set to replace York Facilities Manager. The Wonderware system is simple to use, with the training needed for implementation just onsite user awareness training.”

Over the course of 2008, the system will utilise the Internet and company Intranet for enhanced communication and control capabilities.

Initial results and benefits from the system were increased productivity, efficiency, asset utilisation, availability, quality and responsiveness.

“The system has evolved in two ways, through a strategy of replacing the legacy equipment, and also specifying new equipment with open protocols,” says Cameron.

Additional benefits accruing to LifeScan from the system are better alarms, visualisation, trending and data availability, remote access, and SCADA alarms.

Now, to better operate its facility, LifeScan is using metrics gained from the system, such as characterising plant issues through analysis of trending and an improved alarm philosophy.

Further plans for implementing Wonderware systems include installing the ActiveFactory software and deployment of wireless InTouch HMI stations. Additional benefits that LifeScan expects to gain from these implementations are faster response times for breakdowns, condition based monitoring, and the more efficient use of site utilities.

Because there is no data available as yet, it is too early to say in what ways the use of the Wonderware system has impacted the bottom line in regards to plant operating performance. Other benefits LifeScan expects to see with the system include energy efficiency and greater system availability.

Next, Cameron expects to involve management with the system and is looking for Inverness to become a leading site for Johnson and Johnson.