

Bokomo Weet-Bix

Centralised control enables Bokomo Weet-Bix to increase the benefits offered by Schneider Electric's CitectSCADA



Bokomo Weet-Bix



Project at a glance

Project Type

Food & Beverage

Location

Malmesbury, Western Cape, South Africa

Applications

Food Industry Process Control

Plant Structure Components

- SCADA Server

CUSTOMER BENEFITS

- Enhance process control
- Enhance production efficiency
- Reduced operating costs
- Reduced downtime

Scope

Bokomo's Weet-Bix factory is situated outside the town of Malmesbury in the Western Cape Province of South Africa. Bokomo has been in operation since the 1920's and is one of South Africa's leading producers of breakfast products. As an award winning consumer product, Bokomo's Weet-Bix is the single largest selling breakfast cereal in South Africa and has been around for more than 75 years. The actual Weet-Bix biscuit consists of whole wheat which is cooked in a mixture of water and syrup and then moulded and dried into its familiar rectangular shape.

The production of all Weet-Bix which is sold in Southern Africa takes place at this factory. Production takes place on six production lines which mould, dry and pack the biscuits. An additional services line controls the entire process whereby the wheat is prepared for the production lines, which include transferring wheat from the storage, cooking and rolling the wheat and preparing the special syrup which is added to the cooking process.

SSE Cape is a well know company which has been providing IT solutions to industry for over twenty years and have been involved with the automation process at Bokomo Weet-Bix since its inception. SSE Cape had been responsible for the original installation and commissioning of Schneider Electric's CitectSCADA at Bokomo Weet-Bix and have ever since been



Bokomo Weet-Bix Production Line

Solution

involved with all aspects of service and support on the automation and control software at the factory. Cris Trimble from SSE Cape explains that, "Although all production processes are fully automated, process control is distributed amongst seven primary servers.

Each primary server is dedicated to a specific production line or controls specific aspects of production while at the same time acting as a standby server for one of the other primary servers.

This format of decentralised or distributed control evolved over the lifespan of the factory, with new primary servers being added along with each new production line and was configured as such primarily from a cost point of view. The first installation consisted of a 5000 I/O server and later a 15 000 I/O server was added."

Challenge

Bokomo's Weet-Bix factory had reached the point where production capacity needed to be expanded and a new production line for an exciting new "bite-size" product had to be implemented.

Considering that all Weet-Bix consumed in South Africa is produced at this factory, it was essential that the upgrade run flawlessly with as little disruption to production as possible. It was imperative that the integrity and quality of production of this well trusted breakfast cereal should at no stage be compromised.

Exploring their options together with a Schneider Electric System Integration Partner, Bokomo decided to centralise the automation and process control function. This would entail maintaining Schneider Electric's CitectSCADA as the operating and monitoring backbone of the automation and process control system while migrating from the current configuration of seven primary servers running large amounts of I/O to two unlimited I/O servers. A dedicated control room would be constructed to house the new servers. The communication medium to process control components would be upgraded to Ethernet and the network protocol would be upgraded to TCP/IP.

Careful planning and management of the server migration was essential to ensure limited production downtime during the changeover.

Jan de Villiers, Production Manager at Bokomo Weet-Bix, says that, "Our approach includes the deployment of Schneider Electric's industry specialists who understand our business processes and systems, and to perform upfront planning and management ensure limited production downtime during changeover."

Once the control room had been configured, all that remained was to systematically transfer control from the old servers to the new. SSE Cape configured the two unlimited I/O servers and installed the Ethernet network in preparation for the server migration. The upgrade to TCP as network protocol required minor CPU upgrades to certain of the control hardware. The new CPU's would only be swapped with the

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Old ones once the production line had been stopped. Thereafter the Ethernet cables would be plugged in, the configuration on the new server would be tested and once the ‘all clear’ had been given, the production line would immediately go back into full production.

The services of SSE Cape helped Bokomo to achieve a competitive advantage and hassle-free systems through innovative, integrated applications and superior project management. The result of the diligent planning was demonstrated when SSE Cape achieved server migration at Bokomo Weet-Bix in two days and without any major disruptions to production.

Schneider Electric’s CitectSCADA has once again demonstrated itself as a flexible and extremely reliable workhorse for any plant’s automation, process control and monitoring requirements. Easy configuration and the ability of the software to integrate seamlessly into an altered operating environment while maintaining production and product integrity had in no small part contributed to the successful server migration at Bokomo Weet-Bix.

Benefits

Through implementing a configuration of centralised control, Bokomo Weet-Bix is better positioned to take full advantage of Schneider Electric’s CitectSCADA. The benefits of better communication and coordination between different operations will translate into more streamlined process overviews, enhanced process control and greater production efficiency.

As the operating and monitoring component of PlantStruxure™, which is the new Process Automation Architecture of Schneider Electric, CitectSCADA with its powerful visualisation capabilities and operational features will deliver actionable insight faster, enabling operators to respond quickly to process disturbances and thereby increase their effectiveness.

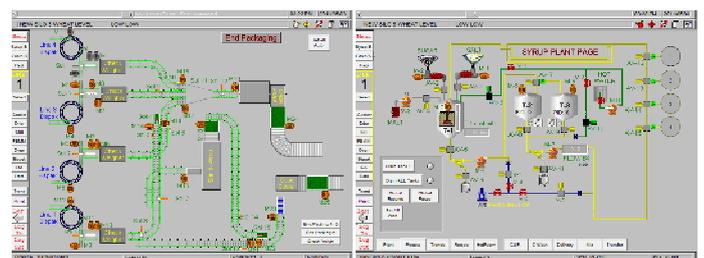
Easy configuration coupled with a single portal of access to their entire production system, allows for quick and effective changes to be made to recipes and other production parameters and allows these changes to be updated throughout the entire plant at the touch of a button. In factory automation and other mission-critical applications, hardware failure can lead to production loss and can result in potentially hazardous situations.

The redundancy of Schneider Electric’s CitectSCADA will tolerate failure anywhere in the system, with no loss of functionality or performance.

Powerful graphics and user friendly interface allows for easy navigation and provides the operator with an intuitive and consistent user interface. The Intuitive Process Analysis tool is a powerful process analysis tool which provides an overall view of the entire plant, delivering actionable insight to the operator faster and improving efficiency and productivity. For Bokomo Weet-Bix this means that the status of all production lines, including the services line, can be monitored from a single station. Critical levels of production inputs can also be viewed easily.

Thanks to the scalability of CitectSCADA and the two Unlimited I/O servers, this should prove to be the last server migration Bokomo Weet-Bix will ever undertake. Future expansion of production infrastructure will no longer require any further expansion of control and monitoring software. Any number of new production hardware can be seamlessly integrated into the existing configuration.

The benefits of centralised control will also decrease engineering and commissioning time on the new “bite size” production line, which will reduce costs and result in shorter start up time. Schneider Electric is proud to have their CitectSCADA controlling and monitoring the production of South Africa’s best selling breakfast cereal and thereby assisting Bokomo Weet-Bix to “Make The Most of Their Energy”.



CitectSCADA Mimic Pages