Global Food Manufacturer Reduces Downtime, Costs, Increases Quality with Manufacturing Intelligence

Grantek Systems Integration Delivers FactoryTalk® Solution from Rockwell Automation to Provide Production Information Across 65 Plants

Challenge

- Production data and information between multiple production processes, technologies and systems at 65 facilities wasn’t being utilized by key decision makers
- Lack of insight into root cause of batch loss

Solutions

Manufacturing Intelligence

- FactoryTalk VantagePoint software provides a comprehensive picture of the factors contributing to operational performance in easy to read, role-based dashboards, tapping information from FactoryTalk Historian SE, SQL servers and Microsoft SharePoint

System Design and Delivery

- Rockwell Automation PartnerNetwork Solution Partner, Grantek, designed, configured and implemented the complete information solution

Results

- Reduced line-stop occurrences by 50 percent
- Increased transaction-completion speed from 25 minutes to less than two minutes
- Reduced failure resolution time by 15 hours per transaction
- Saved $200,000 per year on SAP admin expenses

Background

Food manufacturers need to turn out a greater variety of packaged foods to satisfy a wide range of demographics. At the same time, they must address growing food safety and sustainability concerns. Producers must meet these challenges while improving the bottom line by making more product in a more sustainable and efficient manner.

Challenge

For one such global producer, meeting batch quality standards was further complicated by an acquisition strategy. While good for revenue, it left them responsible for food production in 65 locations across North America. Different plants had different equipment, varying manufacturing processes in place, and a wide-range of control and information solutions. Management was tasked with improving batch yields and getting production information from all locations fed into an SAP system. To properly investigate the root causes of batch loss, and make sure vested parties from the plant floor up to enterprise management had access to consistent and timely production information, the company needed a common information solution for process monitoring and reporting.
Solutions

The company turned to Grantek Systems Integration, a Rockwell Automation PartnerNetwork™ program Solution Partner for Control, Process and Information, who audited the manufacturers existing information systems to provide insight and counsel on the best solution for improving production. Grantek’s audit revealed a lack of governance, scalability and support needed for effective and efficient information sharing at the enterprise level. Additionally, there were no standards around control system-to-SAP interfaces, reconciliation or error handling. This was not only making integration of plant-floor information with SAP costly, the system was also unreliable. Many plants couldn’t handle SAP outages, meaning information collected during outages was simply lost.

To remedy this situation, Grantek implemented a manufacturing intelligence solution utilizing FactoryTalk® VantagePoint and FactoryTalk Historian SE from Rockwell Automation.

Grantek installed a framework that mapped and blueprinted all of the customer’s manufacturing-facing SAP modules for every production facility scenario, and provided a bi-directional store and forward system so SAP data collection would continue during outages. The framework incorporates FactoryTalk Historian SE software and a SQL server to collect and archive historical and real-time data directly from the from production equipment, and optimizes historical data storage.

The team implemented an open, Web-based reporting platform using FactoryTalk VantagePoint software “that aggregates information from multiple data sources – SAP, Microsoft® SharePoint®, the historian and SQL server – and provides easy access to real-time data and key performance indicators via any Internet browser.

“FactoryTalk VantagePoint is unique because it allows us to essentially create a yellow pages of the company’s disparate information. They were able to leverage the dashboards and drill down into data to understand where problems were arising even without completely understanding all of the technology that made the solution possible,” said Ian Tooke, business solutions practice manager for Grantek.

Results

After implementing the new framework and manufacturing intelligence solution in the 65 production centers, the company was able to reduce line-stop occurrences reduced by 50 percent. For example, they found inadequate materials to run production and warehouse locations at all plants causing unscheduled line stops, and were able to correct the issue by interlocking the information from flowing from SAP.

Additionally, the new system saved the company at least $200,000 per year on administrative expenses, and, each plant now runs without risk of data loss due to SAP outages. Transaction completion speeds improved from 25 minutes to less than two minutes, and failure resolution time per failure has been reduced by 15 hours.

“With true manufacturing intelligence at their fingertips the manufacturing operations team was able to move from a “fix-it and restart mentality” to an “observe and prevent” operating approach,” said Tooke. In a shorter amount of time, the food manufacturer can now manufacture more food at higher quality, driving dollars straight to the bottom line.

The results mentioned above are specific to Grantek System Integration’s use of Rockwell Automation products and services in conjunction with other products. Specific results may vary for other customers.