Updates to Process Line Expose Workforce Knowledge Gap at Cheese Plant

TechConnect™ Application Support agreement helps minimize downtime and improve operations.

Background
The cheese plant operates a batch application process line 24x7 at a single site. Their batch application uses complex recipe control and tracking involving multiple servers and the interoperation of various products. In an attempt to improve efficiency, the plant updated their entire process line with new Allen-Bradley® controllers, Human Machine Interface and FactoryTalk® Batch software.

Solution
A TechConnect Application Support agreement provides technical support tailored to your needs. For example, a cheese plant selected the following Application Support options to improve its production environment:

- Knowledge Management - a customized Knowledgebase of site-specific incident solutions and operating procedures
- 24x7x365 Application-Level Support

Results
With this Application Support agreement, the cheese plant:

- Improved efficiency and inventory control in their batch application
- Saves $200,000 per year

The Challenge
When the cheese plant upgraded their process control system to FactoryTalk Batch, they recognized a knowledge gap between their employees and the new system. The company employs skilled technicians with control systems expertise and sought batch expertise to maintain their updated batch application. In addition, the plant manager noticed inconsistencies in product quality and inventory that resulted in lost revenue.

The Rockwell Automation Solution
To address these issues, the cheese plant purchased a TechConnect Application Support agreement including 24x7x365 support and the Knowledge Management option. With Application Support came a designated technical support team who became intimately knowledgeable with their production systems to support their specific batch application and provided the expertise needed to fill their knowledge gap. Moreover, our engineers continue to teach the plant’s internal engineers to help develop their workforce. With the Knowledge Management option, internal engineers gain easy access to solution documents to improve their ability to handle issues. Having the ability to view solution details on the plant’s on-site equipment also helps them to easily identify and solve recurrent issues and improve efficiency.
After-Hours Outages

The cheese plant experienced an after-hours outage that caused the entire process line to shut down. Rockwell Automation Technical Support accessed the system remotely to discover that the SQL server hard drive was full. We immediately cleared space on the hard drive to restore operations temporarily. The next day, a root-cause analysis identified that automated back-ups had failed for the SQL server database, causing the hard drive to fill completely. We devised a plan to implement a Database Administrator strategy to prevent the hard drive from filling completely if a back-up fails.

In a separate instance, manual changes made to the operating sequence resulted in periodic outages, predominately during second and third shifts. An investigation by Technical Support determined that coding changes to the PLC® controller were required. HMI security settings were also modified to prevent the issue from reoccurring, which reduced outages during second and third shift.

Material Inventory Discrepancy

To solve issues with product quality and material inventory discrepancies between the raw material inputs and product outputs, the plant worked with Rockwell Automation Technical Support to review the entire batch process. Our engineers implemented new programming code that discovered inaccurate weight measurements in several stages of the plant's process. As a result, they recommended replacing defective scale units and performing calibrations more frequently to verify ingredient measurements for accuracy and consistency. This practice improved product quality and the plant's ability to track and control inventory, saving the customer at least $80,000 per month in lost revenue.

As a global initiative to further improve upon their inventory discrepancies, the cheese plant decided to update and convert their inventory tracking system to SAP. Prior to the migration, several modifications to the application were required. As a trusted partner, we designed a programming code that allowed SAP to communicate with the plant’s process controllers and prevented downtime during the migration.

Results

Through the partnership established under a TechConnect Application Support agreement, the cheese plant developed its workforce knowledge and transitioned successfully to a more innovative batch system. Through our support efforts, the cheese plant benefitted from overall process improvements including product quality and inventory management gains. By making the most of our Application Support engineers’ expertise, the plant saved $200,000 per year that would have been devoted to maintenance of the plant’s batch system.