ECS SOLUTIONS INC.

JTM FOODS CASE STUDY

The Challenge

JTM Foods challenged ECS Solutions and Blentech to create a SCADA system that included the full spectrum of process automation for their new state-of-the-art production facility. JTM wanted to expand their production capability with a new state-of-the-art facility featuring a Process Automated Kitchen. They wanted to track their process from the ERP Order through the procedural execution of the receipt and material tracking to a finished product. There were multiple solutions evaluated for each of the key aspects, via different islands of software. JTM operates efficiently with a very lean, experienced workforce, however, they prefer to minimize the requirements to support and sustain multiple technology platforms.
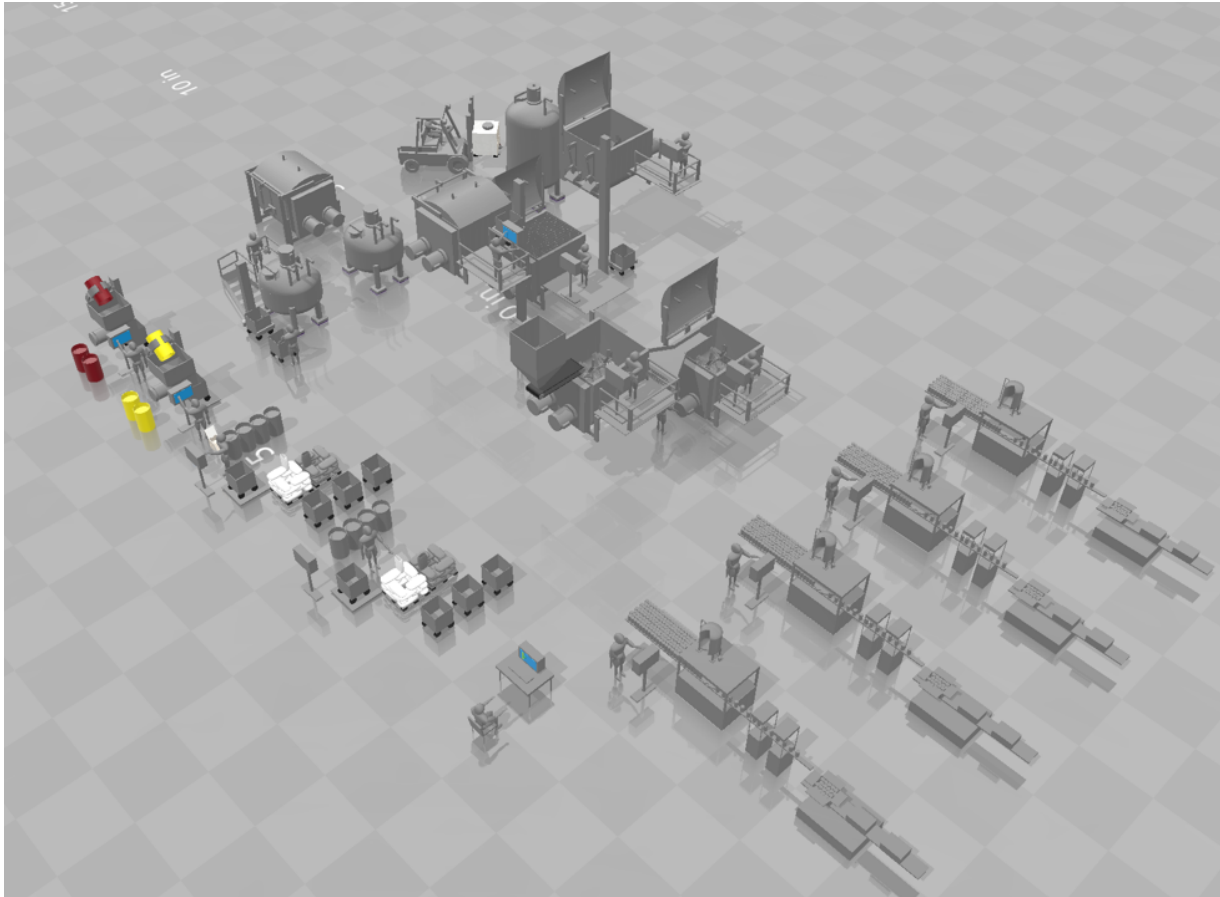
JTM's goal was to have one unified process that could provide all required solutions and features with the primary objective of the platform being flexibility, ease of use, and sustainability. They wanted to be able to make modifications in house with minimal expertise, without having to rely on a third party integrator to modify, adjust parameters, fine tune the process, and add new products and recipes.

Solution

Ignition by Inductive Automation allowed ECS to bridge all the software islands together into one cohesive application. The following departments at JTM's new facility are using Ignition as a platform to collaborate, increase productivity, troubleshoot issues, and develop new products.

Department	Ignition Use
Research and Development	Formulation Management and Recipe Control: Authorized personnel can make product changes, formulation changes, and add recipes from their office and plant floor.
Schedulers/Controllers	Integrated with existing and other management systems to effectively schedule, issue production orders, work orders, and manage inventory
Material Managers	Weigh and Track Ingredients, provide traceability
Supervisors and Maintenance	View and troubleshoot historical information about the process to minimize downtime and increase productivity
Process Operators	Control the equipment confidently, efficiently and safely
Quality Assurance	Obtain relevant process and procedural data to support their children nutrition label declaration(s), nutrient profiles and government agency submissions (i.e. USDA, FDA)

JTM's application features included:

• Configurable Scalable security on every object and button
• Alert Navigation – alerting the problem and effectively driving the operator to an area for correction
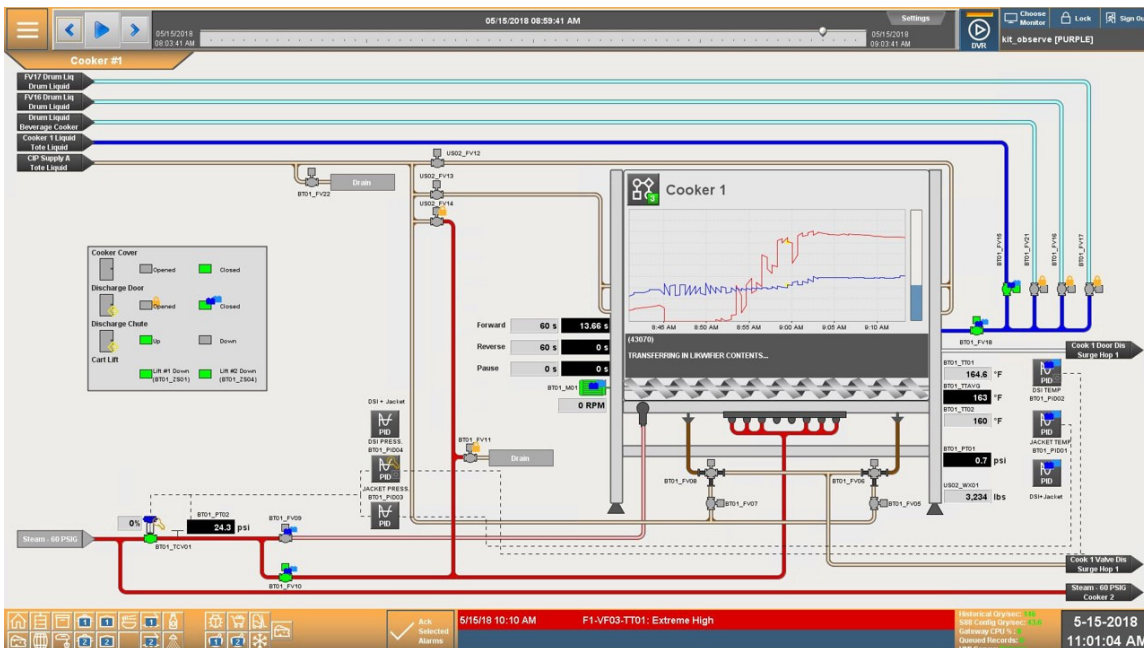
- A full model of ISA-S88. Including advanced faceplates for interacting with Units, Equipment Modules, Control Modules, and Instruments
- An interface to FactoryTalk Batch View using Ignition Templates and a WebAPI

- Pipe animation – All pipes are animated with color and flow for ease of following material activities
- DVR replay function – Allows to graphically look at the HMI and replay what occurred
- Interface into customer ERP system that allows selection of and updating of available material lots
- Formulation management interface that allows users to audit and edit advanced process recipes.
- CIP automation and historical trend reporting

"My relationship with ECS has been great…The team members care just as much about what is going on as I did (do), which is greatly appreciated." – Kevin Maas, Plant Manager and Process Engineer JTM Food Group

Result

With JTM's new state-of-the-art process automation kitchen, they can make great products even better and enhance the quality. The collaborative efforts between OEM, integrator, and customer provided an innovative solution that utilized a variety of new technology to control the ratios of product. The real-time data collection and product historical trends provided by one cohesive platform enable speed to market improvements and new products, troubleshooting issues for quick resolutions, and supporting data for nutritional label declarations.

JTM is a family owned business with a very collaborative culture. With everyone seeing the same information and analyzing the same data; communication, productivity, and efficiency have been improved significantly. Supervisors are helping R&D with new formulations, Material Managers are helping Schedulers understand ordering and Inventory, and everyone is helping solve problems. **In just a few months of production, JTM has created, controlled, and tracked hundreds of batches and dozens of products.**