



# Case Study

## Multi-site Operational Intelligence Standard

### Industry

Food and Beverage

### Application

Operational Intelligence, Historian, OEE, SPC, MES Integration

### Solutions

OSIsoft PI System, including Asset Framework, Coresight, DataLink, Integrator for Business Analytics; Rockwell FactoryTalk Historian SE; Microsoft SQL Server

### Benefits

Enabled use of 3rd party Operational Intelligence applications; Reduced IT support costs; Improved scheduling efficiency; Reduced equipment downtime.

## The Challenge

A global beverage producer required a replacement for numerous custom-developed legacy data collection and reporting systems in use at their 18 North American (NA) facilities. Their business operations depended heavily on these aging systems, but the technology used had become obsolete and increasingly expensive to maintain and improve. The company realized that selecting the correct replacement Operational Intelligence system infrastructure would be a critical decision with a significant impact on the company's future operations.

McEnergy Automation control system engineers played a key role in this multi-year implementation, working as part of our customer's team throughout the entire project – from evaluation and testing, through system design, implementation and on-going system support.

## The Solution

McEnergy Automation's MES Solution Architect was a primary technical resource during development of a functional specification and needs analysis, as well as the evaluation of potential solutions from several software vendors.

Once Rockwell FactoryTalk Historian SE was selected, a team of McEnergy Automation MES Engineers implemented an evaluation system in a production environment with several preliminary applications. These test applications were used to review system performance under loaded conditions, and further evaluate system tools that analyze, visualize and share the collected data.

Initial applications developed for the evaluation system included:

- Process optimization using SPC for multiple key process units
- Work in progress data for inventory management and scheduling
- Reduction of energy consumption in utilities department
- Packaging line equipment efficiency data collection

Our MES engineers participated in many meetings with the customer, Rockwell and OSIsoft to review the results of the evaluation system, select the most effective combination of system tools, and discussed product enhancements to meet the customer needs.

The final solution selected as a corporate standard for implementation at all NA facilities consisted of:

- Rockwell FactoryTalk Historian
- OSIsoft PI Asset Framework
- OSIsoft PI Coresight
- OSIsoft PI DataLink
- OSIsoft PI Integrator for Business Analytics
- Microsoft SQL Server Enterprise Edition



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## The Results

As a result of thorough evaluation and preparation, our customer was successfully able to implement an enterprise-wide rollout of an Operational Intelligence system infrastructure in a relatively short time. The new system provides the capacity and flexibility to carry them into the future. The system immediately provided benefits in improved productivity through reduced downtime, scheduling efficiencies, process optimization and energy savings.

## The Solution (Continued)

McENERY Automation performed these key roles for the NA rollout to 18 facilities:

- Configured and installed software for over 200 servers
- Full historian implementation at 3 initial sites with over 50,000 tags per site.
- Provided technical support and coordination for historian implementation at 15 facilities.
- Provided detailed improvements/corrections to all NA facilities after roll out.
- Assumed primary ownership of Historian and data collection functions for all sites after roll-out.

McENERY Automation provided these roles in the development of data delivery tools:

- Identified key PLC data points, configured Historian tags, bound tags to Asset Framework, and performed data analytics for improved accuracy of data for these applications:
  - LineView: Packaging equipment states to improve line OEE and reduce downtime
  - Coresight graphics for packaging line dashboard standards
  - Infor: Improvements in efficiencies in production planning and scheduling
  - PI Notifications: E-mail notifications for alarms used for preventative maintenance
- Provided technical support and oversight to several consulting firms developing reports and dashboards for replacement of existing in-house systems.