Brewery Improves Efficiency in Multiple Areas with Ignition

Stone Brewing Uses Ignition for SCADA, MES, Historical Analysis, and More

Stone Brewing is the ninth-largest craft brewery in the United States — and is growing larger. Based in San Diego and founded in 1996, Stone Brewing added new facilities in Richmond, Va., and Berlin in 2016. To run its main brewery in Escondido, Stone uses Ignition by Inductive Automation® for supervisory control and data acquisition (SCADA) and for its manufacturing execution system (MES). Ignition is an industrial application platform with several tools for creating solutions in SCADA, MES, human-machine interface (HMI), and the Industrial Internet of Things (IIoT).

"We're always looking to improve process efficiency, and with Ignition, we can do that," said Garrick Reichert, automation engineer at Stone Brewing. With Ignition's unlimited licenses, tags, and projects, Stone is able to expand on Ignition whenever it wants. Stone began using Ignition in 2013, in its fermentation area, and the platform has been leveraged for additional projects ever since.

"With Ignition, if you can think of it, you can make it happen. The sky's the limit," said Reichert. He and his colleagues have used Ignition to update several processes. "It's replaced our 'Sneaker-Net,'" said Reichert, referring to the old method of employees walking around the plant and gathering information via paper and clipboard. With Ignition, Stone's real-time data is accessed from more than 50 computer screens.

Variety of Uses

Stone uses Ignition in the brewing process from start to finish. Current or future uses include control of pumps and valves, statistical process control (SPC), historical analysis, overall equipment effectiveness (OEE), management of recipes and

Stone Brewing's bottling line and numerous other processes run smoothly with Igniton.

work orders, tracking of critical downtime, tracking of key performance indicators (KPIs), ingredients consumption, and transaction of finished goods out to the warehouse. Many uses of Ignition will be expanded into the Richmond and Berlin facilities.

Ignition gives Stone the big picture as well as the details. "Sometimes I need to keep an eye on what's going on throughout the entire brewery at the same time I'm brewing," said Alex Rodriguez, senior brewer at Stone. "Ignition's great, because from the control room I can see exactly what's going on throughout the brewery."

Brewers get a lot of help from Stone's engineers, who use Ignition to quickly make changes to the application's screens when needed. "I've seen our Ignition project grow vastly in its capabilities," said Brittany Bellefeuille, automation engineer at Stone. "We've upgraded a lot of our screens, to give our operators more user-friendly data-entry points. And we've given managers the ability to look at reports quickly and easily."

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> — Garrick Reichert
> Automation Engineer, Stone Brewing

The reports have been well-received, Bellefeuille noted. "Our upper-level management really enjoys the reporting they get from Ignition," she said. "It's been requested that we do the same kind of reporting in our facilities in Richmond and Berlin."

Ignition has paid off for Stone in several ways. "We like Ignition because it's cost-effective," said Reichert. "The unlimited clients make it available to anyone on the plant floor. And everyone can track data in real time." And installation was easy. "Ignition is a very simple installation," he said. "It's easy to get up and going — and to expand from there."

Versatile Tool

Stone also uses Ignition to control its water reclamation facility. "We're in Southern California, a drought-stricken area," said Rodriguez. "So we have a water reclamation system, and we reclaim all of our wastewater. And it's all automated through Ignition."

Stone also appreciates Ignition's OPC Unified Architecture (OPC UA) capabilities, which allow it to work with nearly any programmable logic controller (PLC). "We have at least five different PLC types in this building," said Reichert. "We can just open the box, and OPC UA can connect to each one of them."

Once the connection is made, data flows and the insights begin. "Through Ignition, we learned that some of our fermentation chill times were really long," said Reichert. "We used that information to prove we needed to upgrade our systems, and get more efficient chilling. And now we've got our chill times down to under 48 hours."

That's just one of many examples of Stone leveraging the data for better processes. "Everyone at Stone uses the data," said Reichert. The company studies the data, formulates problem statements and targets, analyzes root causes, develops solutions, and then monitors and revises as needed, constantly improving its systems.

Bellefeuille likes the freedom Ignition gives her. "I like that Inductive Automation is continuously updating the Ignition platform, and the designer," she said. "So as a programmer, I can just focus on making my screens user-friendly, instead of on how to use the designer itself. That gives me a lot more time to perfect my screens."

She also used Ignition in a previous job. "When it was time for a career change, I really wanted to work at a place that made great beer, and also used Ignition," she said. "So that's how I came to be at Stone Brewing."

Bellefeuille uses the online training videos posted on Inductive University, Inductive Automation's free online learning center. She finds the videos to be fast and helpful when she needs a reminder on how to do something in Ignition. "Ignition always provides a lot of support for the programmers," said Bellefeuille. "There are videos available online, and there's a lot of support overall."

Stone Brewing's staff appreciates that, along with the varied capabilities of the Ignition platform. "It's pretty impressive, the number of things we use Ignition for," Rodriguez said.

Watch the case study online at:
bit.ly/ia-StoneBrewing