FOREVER PARTNERS: BONDTECH MAKES LASTING CONNECTIONS WITH THE PI SYSTEM™

When John Brainard first started working as a Process Control Engineer at Bondtech, he noticed immediately that the company had a problem. A manufacturer of autoclaves, core lechers, and vulcanizers, Bondtech strives to be more than just a vendor. "We don't want to just sell you a machine and then walk away," Brainard said during his presentation at PI World San Francisco 2019. "If you're buying our equipment, we want to be your forever partner." But the dream of being a forever partner was costing Bondtech a lot of time and money. A lack of access to customers' asset data was driving up maintenance costs and hindering the company's ability to service machines once they were sold. Fortunately, Brainard had worked with the PI System before. "I knew the data historian and I knew the analytics capability. I knew of the notification capability. So I knew that I wanted to center the solution around [the PI System]," he said.

Prior to implementing the PI System, Bondtech's lack of real-time data for its equipment meant it had to rely on self-reporting from customers when there was a problem with a machine. Techs were constantly flying all over the country to diagnose and service machines, and the lack of data sometimes made it difficult for Bondtech to tell whether a problem was covered by warranty or not. Even simple changes to a machine's PLC would often require a time and money consuming excursion. What Bondtech needed was a secure connection to its remote, customer-owned machines that wouldn't compromise the privacy or security of anyone's data.

To help solve these and other issues surrounding remote connectivity, Bondtech partnered with HMS Networks, an OSIsoft technology partner that creates edge devices and communications systems. HMS used its open-source VPN technology to help Bondtech build a secure bridge between its customer-owned assets and the PI System. HMS edge devices provide PI System-compatible time stamps so that incoming buffered data remains consistent with previously recorded data. It also offers cellular connectivity and data buffering options for assets in locations with no or unreliable internet service.

On one occasion after Bondtech had rolled out the solution to several of its customers, maintenance staff at a site in Hawaii suddenly disconnected the HMS device from the network. Thirty five days later when the

CHALLENGE
Access OEM data from remote assets to monitor customers' equipment.

SOLUTION
The PI System help connect to remote assets and enable remote maintenance.

BENEFIT
Reduced maintenance costs by >$250K in the first year and improved customer satisfaction.

Bondtech offers its customers access to PI Vision dashboards with equipment KPI and weekly and monthly performance stats.
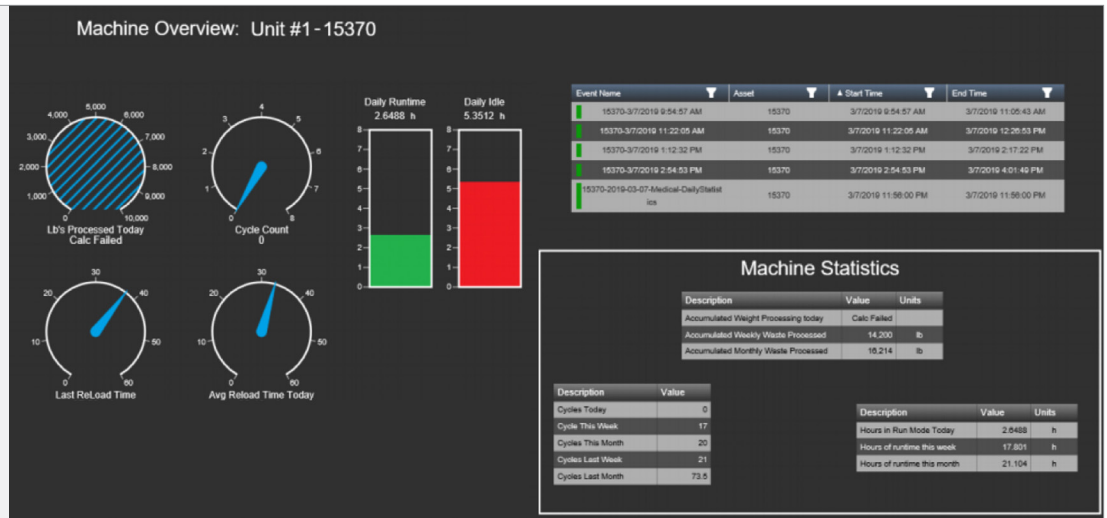
connection was finally reestablished, all the data that had been buffered on the edge device was automatically backfilled into the PI System. "There was no interaction, I didn't touch a thing. All of sudden I saw all the trends for the last 30 days. It just buffers all this data… I don't have to do anything. It just works," Brainard said.

The HMS system offers a variety of different connectivity methods to move data from remote devices into Asset Framework (AF), a contextualization layer of the PI Server. Data coming from other PI System customers is transferred using PI Cloud Connect, a cloud-based service from OSIsoft that allows you to connect to other PI System servers effortlessly.

"PI [is] a great platform to build a remote monitoring solution on top of," Tom McKinney of HMS said during the presentation. "The system is designed to allow you to manage users. You can create different types of users that can see certain types of data." The PI System's ability to manage user access provides an important security control when bringing in data from a variety of different customers.

With the PI System, Bondtech can now monitor the health and effectiveness of its machines on behalf of customers. The company can often

diagnose and even fix problems remotely. On one occasion, a customer contacted Bondtech about a problem with a pressure release valve. "Without having to send a technician out there, we were able to figure out what [the problem] was, and ship the valve out overnight. They replaced it and were back up and running. It gives us that live connection that we would never get to our equipment remotely before," Brainard said.

Bondtech now provides its customers with web-based PI Vision dashboards for monitoring and an alert system using notifications. Such capabilities give Bondtech's customers new insights into their own equipment. "We've had customers who say they want their own PI System through what we've been presenting," he said.

Since implementing its PI System solution supported by HMS, Bondtech has saved an estimated $250K on travel costs alone. Customer satisfaction has also increased. "Keeping a finger on the pulse helps us keep customer communication and connection throughout the lifecycle of the machine," Brainard said. With the help of the PI System, Bondtech is now well on its way to being the forever partner it dreams of being.

PARTNER: HMS

HMS

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PI is a great platform to build a remote monitoring solution on top of."

— *Tom McKinney, Director of Business Development, HMS Industrial Networks*

For more about BondTech and the PI System, watch the full presentation here.

Brainard, John; McKinney, Tom, "Machine Remote Service and Provisioning Solutions with the PI System (Bondtech)." <https://www.osisoft.com/Presentations/Machine-Remote-Service-and-Provisioning-Solutions-with-the-PI-System--Bondtechx/>

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