White Paper

How SugarCreek's Automation Strategy Helps Fuel Future Growth

A leading protein processor finds the right tools to improve its operations

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Introduction

As SugarCreek continues to grow, it needs its automation system to grow with it.

That's an achievable goal for the privately-held protein processor, which is on pace to hit $1 billion in annual revenue in the near future. The company has invested in the technology and the people necessary to implement a comprehensive, effective automation strategy to both meet current demand and support future growth and expansion.

One of those technology investments is the Ignition industrial application platform, which SugarCreek has leveraged over the past eight years for MES, alarm notification, reporting, monitoring and control of its refrigeration and wastewater systems, and more. Since moving to Ignition, one of the key lessons the company has learned and now applies to its future projects is the importance of the right tool for the job.

"What we've kind of run into is that we figured out that we can do anything with the platform with the right programming resources and with the right scope of the project," says Dan Stauft, Director, Operational Technology. "A lot of the stuff that we did early on was we threw something together and just threw it out to the end user to say, 'Is this going to work?' Because they didn't know what they wanted. They didn't know the capabilities. So, we just kind of fed them with examples of what it could do. And then we kind of pared down to the important stuff."

By paring down to the important stuff, SugarCreek is able to focus on what capabilities its employees really need, how those employees need to access those capabilities and how to collect and manage data to improve its operations. But to do that, it has to focus on defining the right tool for the job.

"What's the right tool for the job? It's not always a hammer," says Stauft. "And that's the trick."

Order of operations

SugarCreek has clearly defined processes for its manufacturing lines, and while they're always looking for ways to improve, the fundamentals of automated production are in place. That gives the company the flexibility to look for other areas where automated solutions can be helpful.

At one time, SugarCreek had a system where a scheduler at each plant was using an Excel spreadsheet to schedule trucks. But the company was having issues with customers complaining about long load times, disputes over how long it was taking or should take to load trucks or trucks coming in late. So Stauft and his team built a tracking system within Ignition that allowed for tracking shipments at each facility.

"We enabled the shipping and receiving guys to actually physically check in trucks, assign load teams, check out trucks, allocate pallets," says Stauft. "And it gave us some really cool metrics. Because when you're doing that, now all of a sudden, you can see who are the customers that are always late, who are the customers that we've got issues allocating loads, who are the load teams that are the most proficient. Pretty cool stuff."

The next step was revamping corporate safety reporting. OSHA regulations dictate what metrics have to be tracked and reported, but SugarCreek was handling them at each site instead of companywide. A member of Stauft's team built a tool to allow the local sites to report safety data into Ignition; those reports are then available for a company-wide look at safety data without having to gather the information on a site-by-site basis.

"Anybody can pull up any site's data at any given time," says Stauft. "You don't have to find the safety manager and get ahold of him on a Saturday night if you're looking for something that happened last week."

Defining the right tool for the job

SugarCreek has been able to build a number of solutions to extend the capabilities of its automation system. However, a system that is limited only by users' creativity can present a unique challenge. While the flexibility and expandability are helpful for tasks such as scheduling and managing safety data, the key is to define what is and isn't needed, because resources are finite.

"Because the platform is so powerful, you can get blinders on because you want to restrict what you think you can do, but it can do everything," says Stauft. "And then it's just a matter of, OK, how much manpower do you have to be able to do it? Because we do everything in-house unlike many. So, we've got restricted resources, and it's a matter of conflicting priorities."

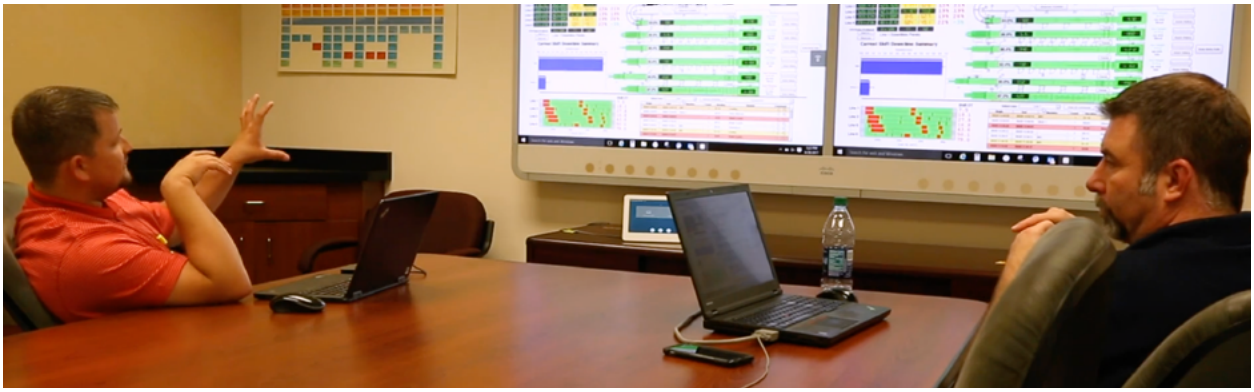
Defining and ranking those priorities is the key question when it comes to looking at new ways to expand upon the existing systems. As Stauft says, SugarCreek has templates for every type of production line it has, and can apply those to get new lines up and running quickly. But when tools go beyond that, it becomes a question of whether developing a new solution is a better idea than buying something off the shelf, or even if the solution is needed in the first place.

Solutions aren't just one-offs; regardless of whether they're developed in-house or purchased from a vendor, they need to be maintained, supported and upgraded. That requires staff time and expense, so an evaluation of what is being asked for and what it will mean for development and support is necessary to make the business case for building a better mousetrap.

Consider employees using tablets on the production floor, which by this point is pretty common in food and beverage manufacturing operations. SugarCreek has been using them, with the initial purpose being for users to report downtime events. A machine stops, then a person reports the code for why it stopped.

But a request from a user led to an extension of that capability. Stauft and his team developed the capability to add pictures to reports. Now, users can take pictures of problems, submit them with descriptions of what they're seeing and send them to management for real-time reporting of problems that aren't just machine stoppages. It can be quality, safety, maintenance or anything else that is out of spec.

"They hit a button, and boom, everybody gets the issue with pictures and annotations on it," says Stauft. "That's proven to be pretty powerful."



The bottom line

Modern automation platforms are flexible and adaptable, and there are a myriad of software options to integrate into them to do just about anything imaginable. But that flexibility can lead to mission creep and devoting resources to a solution that may not be necessary or the most effective solution, so clearly defining the right tool for the job is a critical first step.

In some cases that's in-house development, taking advantage of the automation platform's capabilities. In others, it's buying a solution from a vendor.

But regardless of how you tackle a challenge, knowing the full scope of the solution is important. Development, support and upgrades require time and resources, and those are finite. If you turn to an outside vendor to provide a solution, then you need an understanding of how it will work with your existing systems and how to best capture the data from it in a usable manner.

Data is key to making good decisions, both in production and what you do with the tools you have available. As Stauft says, it's not just quantity. Quality matters as well.

"The only thing worse than no data is bad data."