Real-Time Environmental Controls and Energy Savings for 1M Square Feet of Production Facility

Challenge

Since its founding in 1964, Commonwealth Brands has grown to be one of the largest tobacco manufacturing and distributing companies in the United States. Their state-of-the-art facility in Reidsville, North Carolina, has more than 1M square feet under-roof, and closely controlling the indoor environment of the building is key to producing high-quality tobacco products.

Mr. Tommy Pruitt, Site Engineer at Commonwealth, and his team do a great job of monitoring and adjusting the environmental system as needed. He did, however, find it increasingly time-intensive and difficult as the facility's environmental system aged and passed the 20-year mark. Even finding replacement parts for some of the older components became extremely difficult.

Mr. Pruitt kept his management apprised of the situation, and they all soon realized the environmental system and controls needed to be completely overhauled and upgraded. They astutely understood that in addition to ensuring that product quality was

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optimized, the upgrades could also provide significant energy savings if done right.

Solution

Commonwealth sought out Brady's expertise in environmental controls and building management. Brady recommended and designed an open-platform system for Commonwealth. Both Mr. Pruitt and his management are very pleased with the flexibility the open-platform system provides them. "The open-platform system allows us to retain control over our system maintenance," he explains, "and we appreciate that Brady suggested this rather than trying to push a restrictive brand on us that would limit our O&M options."

In collaboration with Mr. Pruitt, Brady included energy-saving strategies in the design where they could best be integrated into the system. Along with the open-source platform, the inclusion of high-efficiency components is also helping Commonwealth achieve their lean manufacturing goals.

Brady recommended another key design strategy for the system—web-based controls that would allow real-time monitoring and adjustments to be made from any location, on- or off-site. "Brady works as a member of our team rather than just another contractor doing some work for us," Mr. Pruitt says, "they are very responsive and collaborative, from the project manager to the on-site installation team."

Installing a system across 1 million square feet of facility is a big job, so the project was planned in phases to be completed over four years. As with the design team, Brady's technicians are highly skilled in both the technical aspects of the work and in Brady's focus on communication and teamwork with the client. The same Brady technician completed all phases of installation throughout the four-year time period, providing continuity and seamless installation. "Having the same technician throughout the project was a big help because he became thoroughly familiar with the layout of our large facility as well as our expectations for people working within the facility," explains Mr. Pruitt. "He was also very responsive and provided us with 24/7 service."

As is common during most projects of this size, Commonwealth sometimes needed to adjust the installation schedule or workflow to accommodate production needs. That was no problem for Brady, as Mr. Pruitt attests, "there was no hassle when we needed changes, as Brady was always flexible and positive during those times."

Results

Commonwealth is now enjoying their state-of-the-art environmental management system in ways they could only have dreamed of previously. Mr. Pruitt is able to monitor the indoor environment from anywhere at the facility, even as he walks through the building with tablet in hand. Making real-time adjustments is just as easy thanks to the web-based control capability of the new system. "I can even monitor and make adjustments after hours from any off-site location that has internet access," he reports. What does all this mean for Commonwealth's production and products? It means faster response time for needed adjustments, consistent environmental conditions at the facility, and consistently high-quality products.

Commonwealth is also realizing substantial savings in operating costs thanks to the energy-saving design features of their new system. So far they have saved $100,000 per year in energy costs just from having a better control system. Add the other lean manufacturing savings from the upgrades and their savings are even greater.

Mr. Pruitt and his management are very pleased with Brady's work on this project, so much so that they have retained Brady for other projects. A new access control system is being designed and installed at the facility, and other component upgrades are in the planning phase. Brady appreciates and enjoys working with Commonwealth as much as they appreciate and enjoy working with Brady.