Apperture
SOLUTIONS

Large Manufacturer Elevates Operator Performance & Improves Overall Effectiveness

Alarm Management is a timely topic for any process control manufacturer whose operators are inundated with alarm flooding, or who is looking to adopt an alarm rationalization strategy. At Apperture, we work with paper mills, chemical plants, life sciences companies, specialty chemical, nuclear facilities, and the mining/processing industry, so we have a breadth of experience to tap into, state-of-the-art tools to support our recommendations, and the experts to ensure that our customers experience a successful outcome.
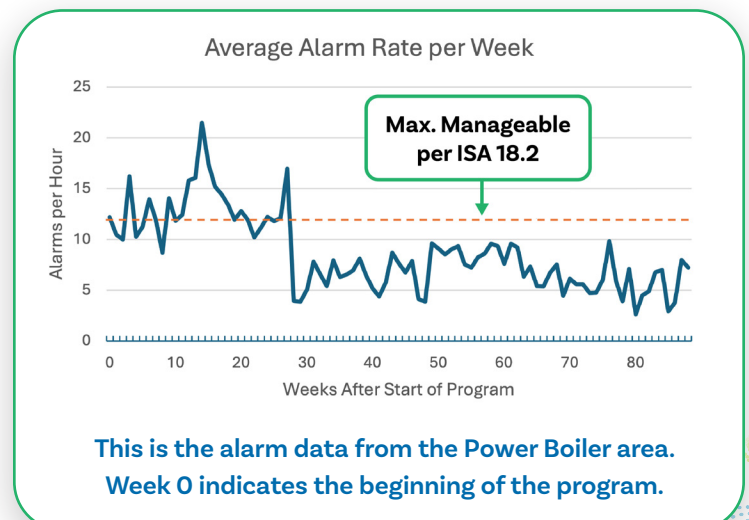
THIS STORY MAY SOUND FAMILIAR

Many companies upgrade to more current levels of their DCS for a variety of reasons—to take advantage of more features and modern technologies, as well as better integration and reporting. As part of this manufacturer's migration journey, their alarm management data carried forward, but since it previously had not been part of an overall alarm philosophy, there was too much data and little prioritization of alarms. This impaired the operators from effectively and consistently responding; therefore, they needed to adopt a rationalization approach. The goal was to adopt a process that would allow them to move closer to the ISA standard, especially since many of their long-term operators (who had 'tribal knowledge') were retiring. Newly hired operators could not only benefit from this approach—but also needed adequate training to fully apply these new technologies, stay compliant, and ensure safety.

"Working with Apperture on Alarm Rationalization has been transformational in the sense that we now have our team focused on the alerts that they need to address, rather than be de-sensitized to what is happening."

- Operations Manager

AgileOps™ Operations Management Software was our technology of choice for our client. The software is designed to assist with the process of alarm rationalization—the systematic review and optimization of alarm systems to enhance their effectiveness, reduce alarm fatigue, and improve overall plant safety and efficiency—as well as move them toward the highly desirable ISA 18.2 standard. This software also ensures that our client gets the most value out of the alarm management system because every alarm is actionable; the alarm system loses its appeal when an operator wastes time sifting through nuisance alarms.


Average Alarm Rate per Week

Max. Manageable per ISA 18.2

Alarms per Hour / Weeks After Start of Program

This is the alarm data from the Power Boiler area. Week 0 indicates the beginning of the program.

The objectives of their program were to:

- Prevent (and eliminate where possible) alarm floods that can overwhelm operators

- Increase operator effectiveness, by rationalizing meaningful, relevant, and actionable alarms, eliminating 'bad actors' (excessive alarms), and conditionalizing alarm logic

- Incorporate state-based alarming, allowing them to dynamically manage alarms relative to a state change in the process

- Focus on critical issues, ensuring that operators are alerted to those issues requiring immediate attention

- Reduce downtime and maintenance costs

- Stay compliant with standards and regulations—ensuring the safety of their people and equipment, as well as the community and environment

To address the training issue, **Mimic™ Simulation Software** allows us to create a real-time, dynamic simulation of plant behaviors, enabling new operators to gain hands-on experience in a controlled environment. Simulation technologies, such as Mimic, empower industrial manufacturers to mitigate the impact of the knowledge gap resulting from the aging workforce, upskill the current workforce, and ensure the continuity of operations and expertise in the long term. This program takes the operators through fifteen different exercises based on actual events—each one demonstrating a real issue they could potentially face in the field.

Measurable Impact Skilled Operations Have on Operational Performance
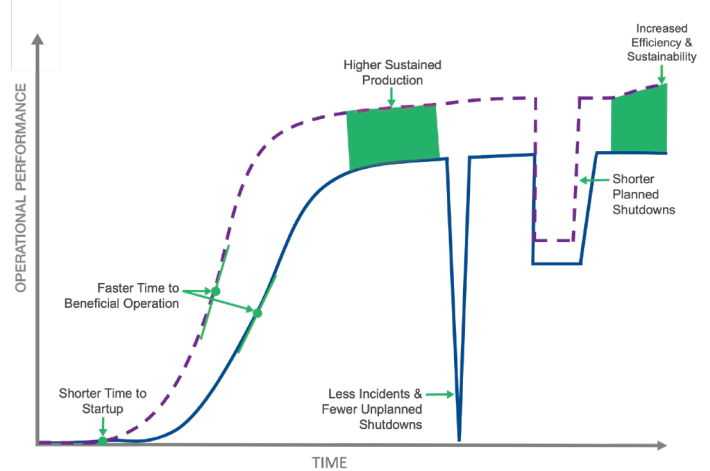
Reduce Unplanned Operational Downtime by **49%**[*]

By improving operator decision-making and incorporating into MOCs and continuous improvement programs

Improve Operator Effectiveness by **31%**[*]

By building confidence in decision-making and improving efficiency of executing operating procedures

In the future, our client is considering replacing much of their current training with Digital Twin technology, as well as creating a larger-scale training program across the facility. Mimic can provide that capability, giving them industry exercises in the actual environment where they'll be running a process.

Apperture Production Optimization Services

We offer a wide range of services to improve process performance and efficiency:

- Planning, dynamically managing, and consistently measuring equipment utilization

- Architecting and implementing strategies that deliver optimal control, reducing variability and minimizing disruptions and abnormal situations

- Enriching the operator environment through digital simulation and assessment tools, while defining a work environment suitable to today's technologies

Apperture Managed Services

Our Managed Services professionals are an extension of your team—focused on improving operations and lowering costs by minimizing process downtime and risk. That's why we focus on your objectives, your timetable, your ability to do the work and get trained, and your organization's appetite for change.

Apperture
SOLUTIONS

5001 South Miami Boulevard, Suite 110, Durham, NC 27703
AppertureSolutions.com | 919-566-1104