



# Managing Automation System Health: Early Detection Prevents Costly Disruption

*“Without the right resources and expertise on site, small systems issues often become major process headaches.”*

Today’s modern automation systems consist of numerous commercial off-the-shelf (COTS) components integrated together. Many sites’ automation systems are large, often with an IT infrastructure comparable to a small- to medium-size business. These large and complex automation systems pose significant maintenance and troubleshooting challenges.

Proper system maintenance is difficult because it requires understanding many disparate technologies such as process control, networking, security, and computer operating systems. Finding personnel qualified to service these different technologies can be difficult. When these resources do exist, they are often overloaded and can only react to issues rather than preventing them.

## What if...

- You had a remote monitoring system and staff dedicated 24/7 to address these critically important automation system’s assets maintenance challenges before problems escalate and equipment damage occurs leading to a process disruption?
- This monitoring service would take total responsibility to immediately respond to alerts any time an automation system asset strayed from proper operating limits?
- They collaborated with local service experts and your maintenance personnel to ensure needed corrective action was taken to address the root cause of any problem detected?

## PRODUCTION LOSS

There are many consequences that result from a control system that is not properly maintained. Reduced functionality or unplanned shutdown due to automation system asset failure can often lead to production losses. Many sites are required through either regulatory agencies or internal policies to maintain proper records of their production and a loss of critical data could force the site to scrap product.

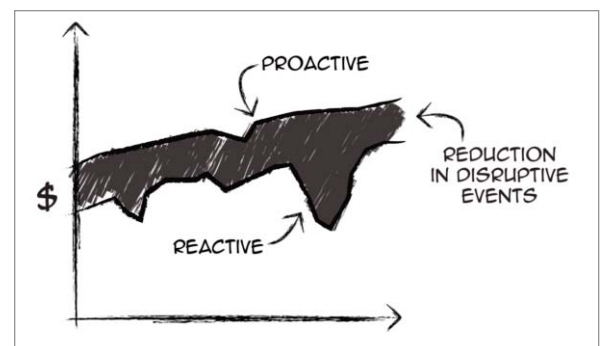
## HIGHER MAINTENANCE & EQUIPMENT COSTS

Reactive maintenance practices can also lead to reduced life of electronic equipment components. Equipment operating beyond recommended limits puts the site at risk of premature and unpredictable system failure.

## PROHIBITIVE DIAGNOSTICS COSTS

Sites can’t afford the staff required to manually monitor a system’s diagnostic information 24 hours a day, seven days a week. As a result, critical diagnostic information is often ignored or overlooked.

*With System Health Monitoring and proactive maintenance, a reduction in unexpected and disruptive events is possible.*



## EMERSON PROCESS MANAGEMENT SERVICES—SYSTEM HEALTH MONITORING

### REDUCED DOWNTIME

Emerson's System Health Monitoring solution ensures quicker issue resolution, resulting in reduced downtime, equipment failures and data loss—ensuring quicker issue resolution with the expertise of the remote monitoring team and local service providers. These experts help to quickly diagnose the root causes of problems, which decreases the impact and duration of equipment failure and downtime.

### PROACTIVE MEANS PRODUCTIVE

System Health Monitoring allows plant managers and maintenance personnel to proactively manage maintenance and administration of site control system infrastructure. By delegating manual monitoring of a system's health parameters to our remote monitoring engineers, your resources can focus on delivering quality product and bottom-line results; spending less time reacting to system issues, and more time focusing on making product.

### ROBUST MONITORING SOLUTION

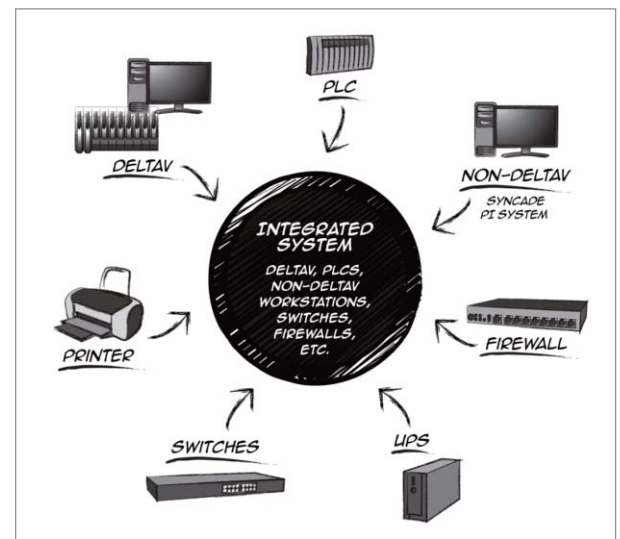
Emerson's System Health Monitoring solution dramatically enhances the ability of a site to maintain and administer their entire control system.

**Real-time Monitoring of Critical System Assets.** It repeatedly and automatically performs a set of health checks on control system assets like DeltaV™ controllers and workstations, non-DeltaV workstations, ethernet switches, firewalls, and UPSs.

**Proactive Detection, Root Cause Analysis and Notification.** When it detects a health condition, it sends an email notification to Emerson's remote monitoring center at the GSC. There the alert will be analyzed and diagnosed to determine the most likely root causes.

**Timely Expert Issue Resolution.** The remote monitoring engineers will then communicate with local service providers who will collaborate with the site on resolving the issue.

**“Although the system had flagged the issue, we unknowingly operated critical loops in simplex mode. Months later, the active controller was accidentally unseated and we lost 4 hours of production.”**



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