



**Industrial Automation & Control Lifecycle Services**  
Reduce risk and maximize your site's automation ROI through customized services for your operational needs.



# You can't protect your automation system investment without the right skillset.

No matter your industry, the challenges are similar. Your control system is at the heart of your operation, and yet you don't have enough people with the right skills to maintain the control system and optimize its output. Even if you had the skill, you don't have the time and bandwidth to establish a cost-effective maintenance schedule, prevent slowdowns and outages, and meet the constant demand for greater productivity, output and faster time-to-market. You need help – but it has to be affordable and customized to you.

“As much as 5% of production capacity is lost each year due to unplanned shutdowns. Estimates show nearly 80% of these losses are preventable.”  
–ARC Advisory Group



“One estimate is that 30% of the existing workforce will retire in the next 5 years and take a large slice of the operating and commissioning experience into retirement.”  
–Kolmetz.com



“End users have decided to focus on core competencies and outsource automation system maintenance due to the increasingly specialized knowledge set and labor required to keep automation assets running optimally.”  
–ARC Advisory Group



“A top reliability program delivers operational savings 5-10 times over maintenance savings.”  
–Reported by Emerson's Reliability Consulting based on multi-industry study of best practices

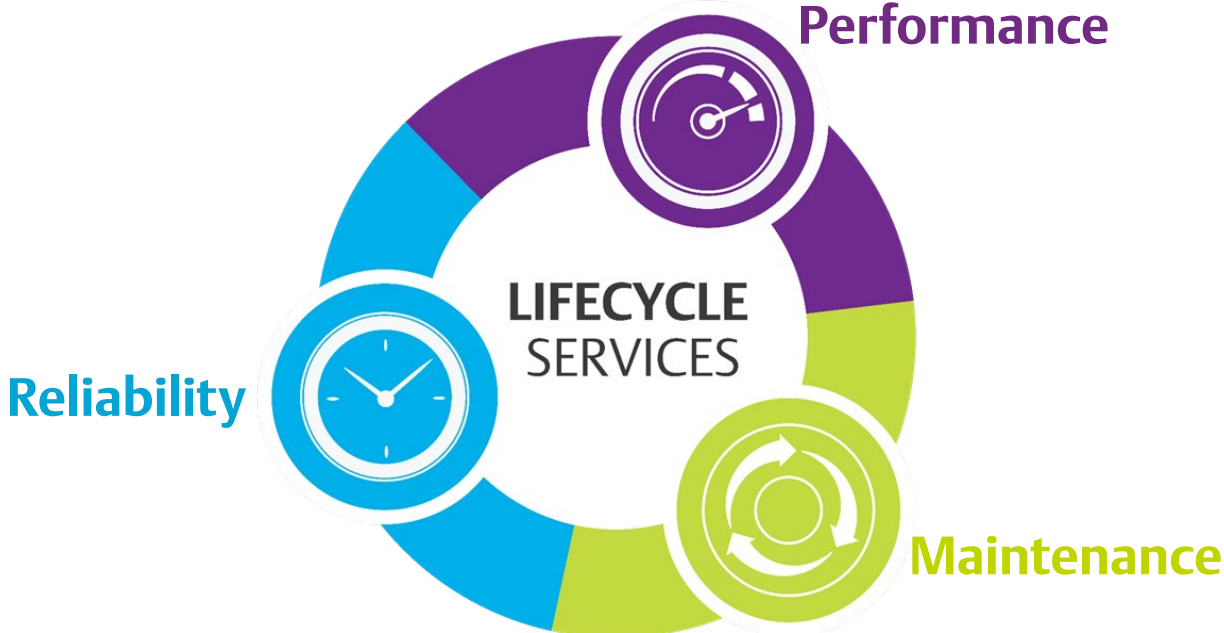


“Some employees expressed concerns over gaps in appropriate training... 62% are waiting to receive technical training that they feel they should have already received.”  
–SPE Research



What if you could get the help you need to optimize and maintain your control system expertly and cost effectively with one phone call?

Take your control operations to the next level in quality and safety with customized services.



Every day your plant suffers from a series of small inefficiencies that keep you from optimum operations. Sometimes those small events result in unplanned shutdowns that, even if they're fixed rapidly, steal productivity and slow time-to-market. Emerson's lifecycle services for industrial automation and controls are designed to both reduce your risk of major events and optimize operations to maximum output. Emerson offers a menu of individual lifecycle services, technology and processes, all powered by experts and customizable to your requirements and budget.

- Primary Support
- Educational Services
- Resident Engineer
- Emergency Onsite
- Spare Parts Management
- System Upgrades
- Preventive Maintenance
- Sustain



**Faster time to market.**

Emerson's lifecycle services comprise valuable programs, such as startup and commissioning offerings, enabling faster time to market. Each service adds another layer of protection to your return on investment.

**Higher sustained production with less variability.**

To achieve top performance, you need your team focused not just on what could go wrong, but also on what can be made better. Continuous optimization of your control systems can make a significant difference in output and the bottom line.

**Shorter planned shutdowns and targeted scope.**

Just because a shutdown is planned doesn't mean it's efficient. When downtime is scheduled, you need a clear plan and the skill of a race car pit crew getting maintenance done right to get you back to full operation in record time. Emerson can help.

**Fewer incidents and unplanned slowdowns.**

While your team is focused on preventing catastrophes, smaller slowdowns may be robbing you of productivity. Having experts focused on constant enhancements can keep your normal operating level at an optimized high.

**Enhancements drive increased efficiencies.**

You're so busy keeping operations at status quo, it's hard to have time to plan improvements that could deliver an incremental enhancement to productivity. Emerson lifecycle services provide continuous upgrades and improvements.

## Primary Support

Access experts for better decisions and reduced risk.



## Common Challenges

In an increasingly fast-paced environment of advancing technologies, automation system managers are constantly feeling the pressures to manage security updates, software releases, standards and best practices. This evolving environment challenges managers' abilities to keep systems running at peak performance while cost-effectively managing automation investments over each asset's lifecycle. Also, their need for experts that immediately resolve and troubleshoot issues affecting their bottom line is critical to the success of an organization.

Failure to effectively address these challenges can lead to serious and costly disruptions. Hourly downtime costs from these disruptions can range from thousands to hundreds of thousands of dollars, depending on the industry.

[Emerson.com/primarysupport](https://emerson.com/primarysupport)



## Our Solution

Primary Support is the core element of your lifecycle services program. It is designed to optimize the reliability, security and performance of your system, while identifying risks and recommending proactive and corrective actions.

From getting started to 24x7 access, we are here to move you from onboarding to mastery and to keep you running when you need us most.

## Customer Benefits

- **Rapid and efficient issue resolution:** Improves incident management with 24x7 expert technical support during emergency time.
- **24x7 expert technical support:** Can help troubleshoot and fix system issues. Our experts are available anytime via a variety of means including email or phone, to help resolve problems quickly and reduce downtime.
- **One central location:** A primary interface for customers to effectively access software and firmware updates and access knowledge base articles specific to your needs.
- **Software updates:** Major and minor software updates can be downloaded directly from the Primary Support website, so you don't need to wait for the DVD media to be shipped to you.

## Educational Services.

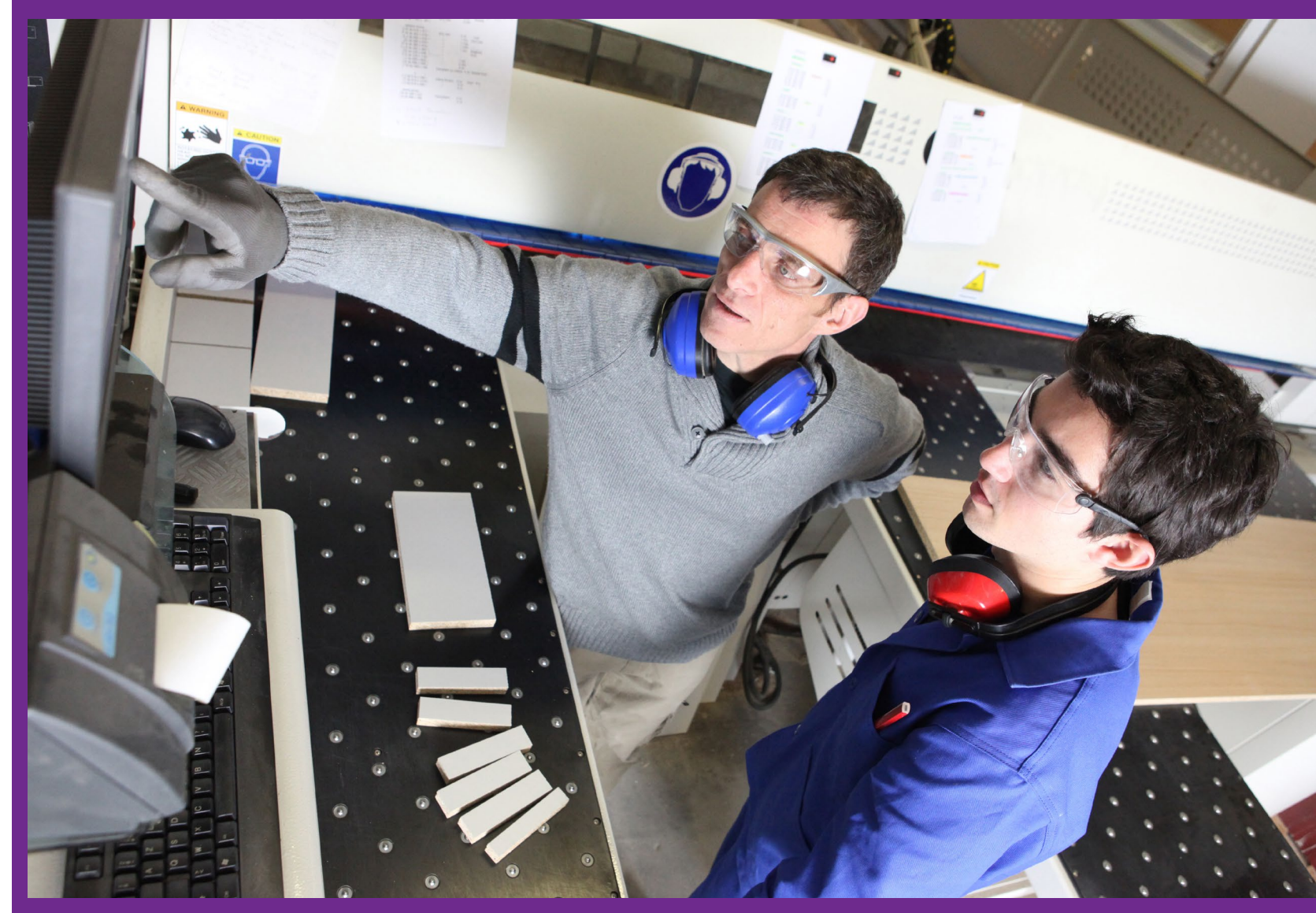
Maximize the ROI of your employees.



### Common Challenges

The lack of a skilled workforce is a challenge for today's plant managers. While technologies, such as IIoT, are driving change, they are also creating a demand for new advanced capabilities in personnel. Finding already trained workers becomes more difficult every day, so top industrial companies must develop the talent they have with education and training.

[Emerson.com/education](https://www.emerson.com/education)



### Our Solution

Improve your workforce, boost job satisfaction, increase employee retention and help your team adapt to new technologies or products with a full range of training options from Emerson's Educational Services. Courses are offered via the web utilizing eLearning or virtual classroom, locally or at your facility, through our regional training centers or through a blended learning approach.

### Customer Benefits

- **Enhance skills and performance:** Our classes feature a high level of application expertise and practical field experience from Emerson certified instructors to help transform your team to be more productive and versatile.
- **Targeted training designed for your needs:** Comprehensive, customized training programs are designed to your job or application requirements.
- **Hands-on training:** Our unique learning environment, including role-based training, provides your team with practical skills to help ensure your facility's peak performance levels and profits.
- **Flexible training and delivery options:** Modules are offered in an easy, intuitive setting and in a variety of formats. Online automation courses are regularly updated.

## Resident Engineer

Optimize with onsite assistance from a system-trained engineer.



### Common Challenges

Perhaps your new plant or expansion is about to go through site acceptance testing or another critical short-term operation. You know you'll need experienced engineers with specialized expertise at your plant for the next six to 12 months. Your team may lack the skillsets you need among your current workforce and it's hard to find contract engineers who are experienced with the control technologies you use.

[Emerson.com/residentengineer](https://www.emerson.com/residentengineer)



### Our Solution

Emerson's Resident Engineer program places an experienced, PACSystems PLC trained engineer at your site for durations based on your need. These engineers are pre-qualified to meet or exceed Emerson's standards of excellence. Their skills include preventive maintenance, system troubleshooting, ongoing configuration changes and integrating disparate systems.

### Customer Benefits

- **Increase onsite expertise:** All resident engineers have a minimum of four years experience at Emerson's Global Service, where they gain in-depth skills and knowledge in troubleshooting issues of varying complexity. All have onsite field experience at customer plants.
- **Maintain reliability and availability:** Your resident engineer serves as your site's primary Emerson contact for resolution of PLC system issues, providing logic and configuration changes as needed, and troubleshooting PLC system and field issues.
- **Ensure seamless transition:** Your resident engineer can spearhead project activities such as testing, commissioning, loop checks, configuration changes and more, ensuring a seamless project-to-field transition.
- **Retain your engineer for as long as needed:** For individual assignments, resident engineers can be available for any needed duration – from a few weeks to a few years.

## Emergency Onsite Services

The emergency support you need from a certified consultant.



### Common Challenges

Unplanned events can happen at any time, leaving your facility at risk for downtime and financial loss. When you lack engineering and support expertise within your facility, especially after hours, and telephone support and remote system diagnosis cannot solve an issue, onsite assistance may be necessary. You need a team of qualified people available at a moment's notice who can help bridge the gap between an incident and smooth process recovery.

[Emerson.com/emergencyonsite](https://www.emerson.com/emergencyonsite)



### Our Solution

Our Emergency Onsite Service provide a control system expert for fast and efficient onsite support. In the event of a crisis, a highly trained, Emerson consultant is dispatched to quickly remedy your situation and return plant operations to normal. As an added convenience, the service can be customized based on your needs, plant performance history and system configuration.

### Customer Benefits

- **Reduce unplanned downtime:** Our control system experts are on standby to help reduce or eliminate any unplanned downtime, avoid production losses and provide expert local language onsite assistance.
- **Responsive and accessible service:** We provide immediate after-hours availability with priority response for fast, efficient onsite support. You will have access to our expert staff when you need them, 24 hours a day, 7 days a week.
- **Reduce training time and expenses:** Decrease the time and expense of maintaining engineering and support expertise within your facility, and avoid system troubleshooting skills deteriorating or getting lost entirely.
- **Gain high-availability assistance:** Budget in advance for the availability of expert onsite assistance and reduce the hassles of the dreaded spikes in your maintenance costs.

## Spare Parts Management

Minimize costly disruption to plant operations.



### Common Challenges

A poor spares strategy with onsite inventory not optimized can be devastating. When critical parts fail, you need replacement hardware components quickly to minimize costly downtime while waiting for parts to arrive. If those parts aren't available in your area, the disruption to plant operations can be difficult to overcome. Plus, the lack of a system that expedites payments also takes up valuable time and creates unnecessary headaches.

[Emerson.com/spareparts](https://www.emerson.com/spareparts)



### Our Solution

We help you take a proactive, calculated approach to managing your spare parts and achieving the correct levels needed to support your plant. Spare Parts Management services get you the parts you need, when you need them – whether they are shipped or managed onsite. We identify the spares to keep on hand while minimizing capital costs associated with unproductive spares.

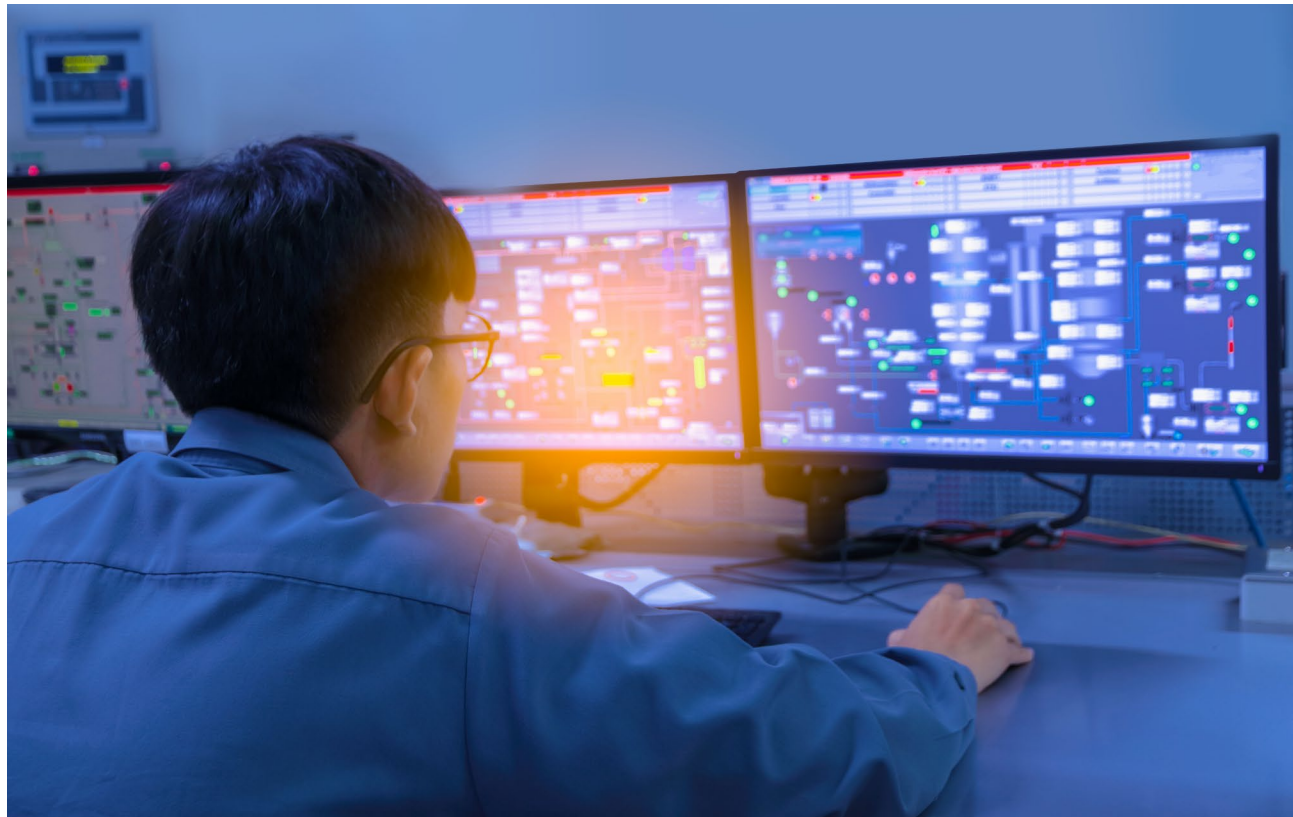
### Customer Benefits

- **Extended hardware warranty:** Supports the essential spares requirement for your programmable automation controller systems by providing direct access to replacement parts from Emerson.
- **Accomplish cost-effective maintenance:** Avoiding excess overhead on surplus spares provides budget certainty and good value. We give you confidence that the parts you need will be available quickly should you need them.
- **Reduce inventory costs:** Minimize ongoing related costs for storage, periodic check-out, inventory administration and upgrades. Reduce your spares inventory and invest your capital elsewhere.
- **Minimize lost production:** Having the right spares within reach – whether onsite or from a local provider – helps you achieve measurable and meaningful results in your system's availability and productivity.



## System Upgrades

Keep your plant running at peak performance.



### Common Challenges

When you're trying to maintain day-to-day operations, a system upgrade is a major endeavor that competes for priority with your team's other responsibilities. At the same time, the costs of not upgrading systems – increased maintenance, cybersecurity risks and compromised performance – are an even bigger consideration as your system ages. It makes sense financially and logistically to bring in experts to upgrade your control system with minimal disruption to your daily operations and maximum return on investment.

[www.emerson.com/systemupgrades](http://www.emerson.com/systemupgrades)



### Our Solution

Get the most out of your system with our standardized, proven, global process that leverages tools and best practices with Emerson engineers. Upgrade experts utilize years of experience to plan and test the upgrade to ensure a smooth transition to the new system. The approach includes upgrade evaluation for Offline, Online Software migration, or phased Hardware and Software migration, testing, planning and implementation for system hardware and software.

### Customer Benefits

- **Reduce maintenance costs:** Without regular updates, a system's maintenance costs will increase over time. By keeping your system up to date, newer technologies which cost less to maintain can be deployed.
- **Strengthen cybersecurity:** We are continually making advancements in security features and adding layered software and hardware security solutions.
- **Lower risk with expert implementation:** Simplify the task of system upgrades by having Emerson handle the associated risk assessment, specialized testing and implementation details.
- **Designed for results:** Emerson continually invests in technology and solutions designed to improve operator efficiency and plant performance.

## Preventive Maintenance

Operate safely, continuously and economically.



### Common Challenges

You are expected to keep your automation system running continuously, without negatively impacting production. But, when faced with persistent changes in technology and a shrinking workforce, your small crew must react quickly to each new maintenance problem. While you do everything possible to get your plant up and running quickly when the system goes down, it is even more taxing if you don't know the source of the problem or how to make improvements to avoid future issues. You need the people who built your system to help guide its maintenance strategy.



### Our Solution

Preventive maintenance keeps your control system hardware and software maintenance requirements up to date, and proactively identifies shortcomings that can impact system continuity and availability.

### Customer Benefits

- **Implement a standardized maintenance approach:** We help you operate your control systems safely and dependably day after day by changing the maintenance approach from fail and fix to predict and prevent.
- **Improve availability:** Maximize plant manufacturing availability and avoid loss of production through proactive software and hardware support maintenance methods to match your plant's operation needs.
- **Reduce operations and maintenance costs:** Emerson technical expertise will augment your capital efficiency by sustaining the useful life of the software and applications, and allowing you to work optimally with your present staff without additional hiring.
- **Make better, more informed decisions:** Emerson consultants highlight potential performance issues, allowing you to make more informed business decisions.
- **Understand the risks of hardware obsolescence:** An assessment of your system's lifecycle and health will provide a diagnosis of your system's state. The evaluation determines improvements to mitigate risk of system failures due to hardware obsolescence.
- **Improve safety, security and asset reliability:** Use the site evaluation service to analyze your system against benchmark standards to proactively improve your system reliability.

## Sustain Services

Maintain factory support whenever you modernize.



### Common Challenges

Legacy customers may have concerns about the availability of factory support for various Programmable Automation Control (PAC) systems post product line retirement dates. Modernization plans vary, with some planning to modernize their existing systems, while others choose not to modernize because of a planned closure of their site at some known future date. In either case, the availability of factory support beyond the product line retirement date is a concern. The Sustain Program provides a bridge of factory support for existing system, between the product line retirement date and completion of a modernization plan. Each Sustain Agreement will be customized to meet individual customer needs for future support.



### Our Solution

The sustain program bridges the support gap for retired products as you schedule and complete your modernization plans. Each sustain agreement is based on a thorough system evaluation, customized to meet your needs for future support, offers you access to refurbished units and provides a flexible schedule to perform system upgrades.

### Customer Benefits

- **Minimize risk of lost production:** A sustain agreement provides access to resources – both personnel and hardware – that reduce the risk of downtime or lower productivity as you modernize to the latest technology.
- **Expedite troubleshooting:** Our factory experts are highly trained and experienced to provide quick, dependable maintenance recommendations and answers.
- **Technical support:** The foundation of every sustain agreement, this service provides direct technical telephone support from Emerson professionals who can answer questions and troubleshoot system issues.
- **Gain predictable support costs:** Each sustain agreement includes pricing for every year covered by the agreement. This makes budgeting for future system maintenance much easier and more predictable.

# Develop proactive maintenance strategies to operate safely, improve reliability and optimize system capabilities and performance.

Operate consistently and economically, preserve your investment and strengthen plant performance. Access the right people and resources necessary to achieve your business goals.



To learn how comprehensive lifecycle services solutions address your operation's needs, contact your local Emerson sales office or representative, or visit [www.emerson.com/en-us/automation/control-and-safety-systems/plc-pac-consulting-services](http://www.emerson.com/en-us/automation/control-and-safety-systems/plc-pac-consulting-services)

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