



Operate safely, improve reliability, and optimize performance.



# Engineering expertise. Process optimization. Increased operational certainty.

**Maintenance. Reliability. Performance.** When it comes to Lifecycle Services, Emerson provides you with the solutions you need to increase profitability and actualize the full potential of your automation investment.

Our Flow Lifecycle Services team of experts leverages its industry-leading engineering experience and knowledge to amplify plant efficiencies. From Startup Services to Audit Services to Process Adherence protocols, we partner with you to keep your plant running consistently while improving your asset reliability and achieving your business goals.

Better insights. The right expertise. Emerson's Lifecycle Services team improves reliability to strengthen plant performance.

## **Industry Trends**

69% of U.S. business leaders are worried about cyber threats<sup>1</sup>



50% of experienced personnel are expected to retire in the next decade<sup>2</sup>



80% of the production capacity lost due to unplanned shutdowns is preventable<sup>3</sup>



A top reliability program delivers operational savings 5–10 times over maintenance savings<sup>4</sup>



- 1. PwC, 17th Annual Global CEO Survey, January 2014.
- **2.** Society of Petroleum Engineers, "The Great Crew Change: A Change for Oil Company Profitability." April 16, 2011.
- 3. ARC Advisory Group, March 2011.
- **4.** Reported by Emerson's Reliability Consulting based on multi-industry study of Best Practices.





Emerson provides the best fit-for-purpose flow technologies that utilize inherent service data to deliver early insight and enhance the performance of critical process units in the most cost effective manner. Leveraging our proven system design processes, best-in-class measurement and control technologies, and field-proven best practices, our flow systems **enhance operational effectiveness** and **improve capital efficiency**.

#### Emerson offers Lifecycle Services solutions in the following areas:

- Acoustic & Discrete
- Density & Viscosity
- Distributed Sensors
- Flame & Gas Detection
- Flow
- Gas and Liquid Analysis
- Blending & Transfer

- Marine Measurement & Analysis
- Pipeline Integrity
- Pressure
- Tank Gauging
- Temperature
- Wireless Networks & Infrastructure
- Gas & Liquid Custody Transfer

## Reduce threats. Assure outcomes.

Working with you, our Flow Systems and Solutions team helps you identify and end any potential and hidden risks through our **Project** and **Operational Certainty** programs.

Both Project and Operational Certainty empower you with the processes and efficiency you need to move your project to Top Quartile performance, where opportunities exist to save millions of dollars.



## **Project Certainty**

The industry has reached a tipping point. Projects can't be sustained with current budget and schedule overruns. Decoupling dependencies, eliminating bottlenecks, and allowing concurrent work streams create new-found efficiency and cost savings. We help you create high impact strategies to meet your goals.

Built on our innovative technology and engineering-based approach, Project Certainty improves capital efficiency and ends one of your greatest project vulnerabilities: project schedule performance. By engaging early during engineering and design studies, we help you define your project goals and identify the high impact strategies needed to trim costs, reduce complexity, and shorten delivery.

## **Operational Certainty**

Ensure safety, improve reliability, optimize production, and minimize emissions. From an operational perspective, you want to leverage all of these factors. Our Operational Certainty process works in parallel with our Project Certainty process. It combines our expertise and consulting services with our comprehensive automation technologies portfolio and new Industrial IoT solutions to enable you to achieve Top Quartile performance in these areas.

## **Your Challenge**

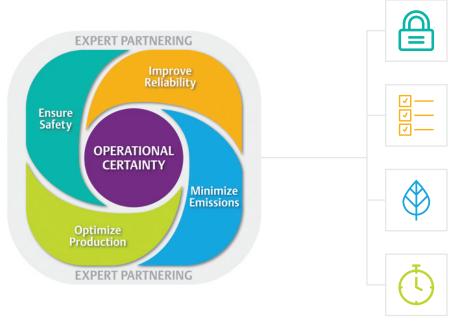
Each project is unique. So are the potential and hidden inefficiencies. How do you identify—and address—each and every cost and schedule threat so your project can achieve Top Quartile performance?

### **Our Solution**

Working closely with you, we help you carefully define your project goals. Then, through our differentiated technologies and processes, we engineer and customize solutions that enable you to trim costs, reduce complexity, and maintain measurement integrity.

## Operational Certainty helps you achieve Top Quartile performance

Through Emerson's Operational Certainty program, you'll be able to ensure safety, improve reliability, minimize emissions, and optimize production so your project can achieve Top Quartile performance.



#### **Ensure Safety**

- Seamless and reliable integration
- Precise measurements
- Reliable in varying conditions and environments

#### **Improve Reliability**

- Utilize cloud engineering
- Decouple dependencies
- Improve information management

#### **Minimize Emissions**

- Reduce energy footprint
- Gain visibility into site energy performance
- Establish and manage energy targets

#### **Optimize Production**

- Eliminate unnecessary work
- Automate steps to reduce hours
- Utilize standardized technologies

## **Our Operational Certainty process in action**

By leveraging our industry expertise, consulting services, comprehensive automation technologies portfolio, and new Industrial IoT solutions, we help you achieve Top Quartile performance in the areas of safety, reliability, production and energy management.



Custody Transfer Systems meet the best accuracy measurement of liquid or gas product flow through the customer's "cash register"



Over 5,000 systems built globally in the last 40 years



Regional choice of project implementation (five major locations)



Purchase individual products or a full solution with Flow Systems and Solutions



Standard designs are available for faster delivery, yet customizable to specific site requirements.



Consolidated contracting by issuing one PO to Emerson for a single project requiring several integrated products ("one-stop-shop")







## **Flow Lifecycle Services**

Built on the foundation of three process-proven approaches, our **Flow Lifecycle Services** focus on the maintenance, reliability, and performance of your plant.



Executing an effective maintenance strategy for the lifecycle of your plant can be a daunting task. Emerson's **SureService™ Program** can help simplify that undertaking. You can choose from four packages of bundled services to find the right mix of maintenance activities that will help you operate safely, consistently, and economically—while improving your asset reliability and further preserving your investments. Progressive tiers provide you with flexibility to decide how much to involve Emerson in taking care of your plant maintenance, reliability, and performance goals. Each of the tiers build upon one another, allowing you to tailor a package that best meets your needs.

#### Offerings are available for:

- Micro Motion<sup>™</sup> Coriolis Flow Meters
- Rosemount<sup>™</sup> Magnetic and Vortex Flow Meters
- Rosemount<sup>™</sup> Ultrasonic Flow Meters
- Emerson's Flow Metering Systems
- Micro Motion<sup>™</sup> Density and Viscosity Meters
- Roxar<sup>™</sup> Multiphase Metering, Corrosion, and Erosion Instrumentation



## **Maintenance Services**

#### Keep your plant operating safely, consistently and economically

- Reduce measurement uncertainty and sustain accuracy with regular maintenance and calibration
- Benefit from a comprehensive measurement system approach to service
- Manage regulatory documentation



# **Reliability Services**

#### Improve your asset reliability and preserve your investment

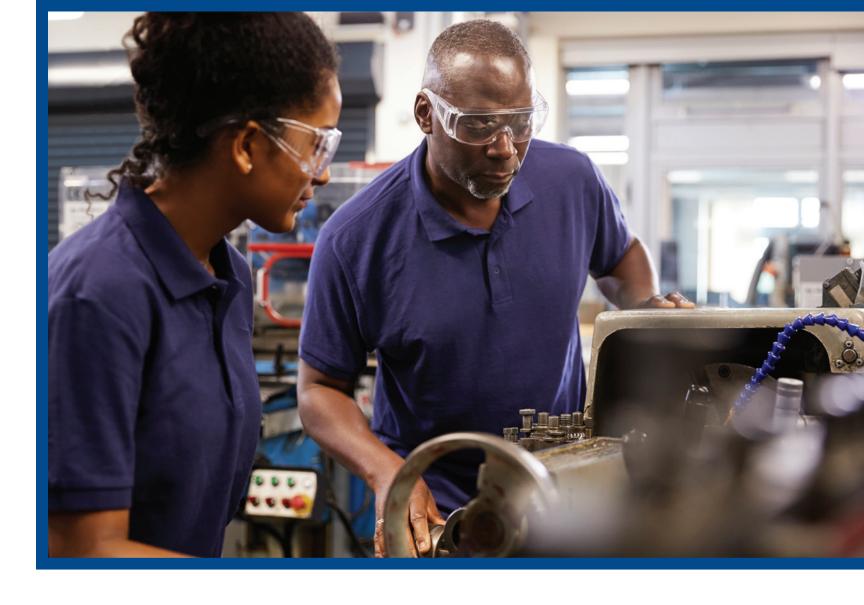
- Reduce emergency service requests and shutdowns
- Achieve plant balance and minimize losses with reliable and accurate data
- Improve decision making with diagnostic monitoring and reporting



## **Performance Services**

#### Optimize your plant performance and achieve your business goals

- Conduct shutdowns, turnarounds, and planned outages with on-site help from certified Emerson engineers and consultants
- Increase confidence with experienced installation and startup
- Develop personnel and improve safety with training and education



Lifecycle Services	Maintenance	Reliability	Performance
24 Hour Phone Support	•		
Emergency Response Services	•		
Repair	•		
Parts Management	•		
Preventative Maintenance		•	
Calibration Services		•	
Obsolescence Planning		•	
Startup & Commissioning		•	
Flow System Auditing Services			•
Operating Procedure & Manual Development			•
Report Management			•
Remote Monitoring			•
Educational Services			•
Process Verification & Testing Services			•



# Operate safely, reliably, and economically

**Maintenance Services** provide the support and expertise you need to keep your plant operating efficiently and effectively. When a major project is on the line, having an experienced, knowledgeable team onsite can be essential to staying on schedule and on budget.

Emerson's global network of skilled service professionals provides parts, expertise, and hands-on service to accurately diagnose and repair your equipment and devices. With both factory and regional service centers, we offer unmatched local support around the world. From repair/replace assessments and device refurbishment, to calibration and upgrades, Emerson's broad portfolio of services includes everything required to keep your plant operating at peak performance, day in and day out.







## **Your Challenge**

A comprehensive maintenance strategy requires that you have detailed, proactive maintenance activities and the right support team. How do you access the skilled personnel and proven processes required to keep your plant operating long into the future?

#### **Our Solution**

Our Maintenance Services team of experts keeps your system running smoothly while protecting your control system from critical issues and security breaches—all while getting faster resolution and secure support.

#### **Maintenance Services**



#### **Technical Support**

At Emerson, we're dedicated to delivering technical support at any time and place you might need it. Whether it's startup services, comprehensive maintenance, or on-demand troubleshooting, our knowledgeable, results-oriented staff will help keep you operating at peak efficiency 24 hours a day, 365 days a year.



#### Repair

Emerson's global network of skilled technicians provides parts, expertise, and hands-on service to quickly diagnose and repair your equipment and devices. With both factory and regional service centers, we offer comprehensive local support around the world to keep your plant operating at peak performance, day in and day out.



#### **Emergency Onsite Services**

Emerson's extensive network of certified product experts is available and equipped to provide fast, onsite assistance when remote support capabilities cannot solve an issue. Service can be customized according to your plant's performance history, age, and complexity to help eliminate unplanned costs and minimize downtime.



#### Advanced Repair & Replacement

Emerson's advanced repair and replace service can provide refurbished units to replace obsolete, non-stock, or hard-to-locate assets and parts, helping you keep costs down while assuring full regulatory compliance. Parts can be delivered often on the same day you order.



#### **Scheduled Onsite Services**

Even the most sophisticated equipment requires routine maintenance to keep it in top operating condition. Emerson's scheduled onsite support service enables you to ensure that critical maintenance services are performed regularly, so you don't have to divert manpower from other important tasks.



#### **Service Support Agreements**

Emerson's SureService™ offers four different service packages ranging from core maintenance services through fully outsourced service support. You can tailor an optimal maintenance strategy that best suits your operation.







# Improve reliability. Preserve investment.

Accurate and reliable flow metering equipment is critical to the bottom line of any facility that handles fluids. Emerson's certified service experts can audit your flow metering operation to ensure on-spec performance and recommend cost-effective best practices for increased reliability and reduced operating cost.

From calibration and verification, to safety systems, to site evaluations and walk down, Emerson's broad portfolio of **Reliability Services** includes everything required to improve and preserve your asset reliability and investment.







## **Your Challenge**

You need to support production changes and demand for increased throughput, while minimizing variability, all within a set budget. But how do you achieve your lifecycle objectives and lower your total cost of ownership?

#### **Our Solution**

Our Reliability Services helps you stay proactive to avoid system surprises while increasing your systems availability and reducing risk. And it ensures you can secure critical parts promptly.

## **Reliability Services**



#### **Startup & Commissioning**

Getting a facility or process up and running under a tight timeline can be challenging as you integrate complex technologies that require specialized skillsets. Emersoncertified experts help enable you to address potential regulatory, operational, and project risks early to ensure a safe, timely start-up.



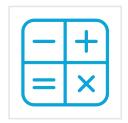
#### Safety System

Emerson's safety system services make it easier to maintain a safe working environment, meet regulatory requirements, and support your systems throughout their lifecycles. Our certified specialists will verify modifications are done in compliance with the latest safety standards.



#### **Calibration & Verification**

The accuracy and functionality of your measurement system is core to quality, process efficiency, and safety. Emerson's calibration and verification services include onsite visits from experienced professionals who will certify that your devices and instrumentation are meeting performance and safety standards.



#### **Upgrade Services**

Emerson's upgrade services assist you in identifying assets that will reduce operational costs and improve reliability, if upgraded. Our experts analyze and define how innovative automation solutions can impact your specific plant economics.



#### **Site Evaluation & Walk Down**

A proactive approach to maintenance allows you to minimize operating costs, reduce risk, and make better business decisions. Emerson's site evaluation and walk-down services assess the reliability, security, and performance of your systems, helping you maximize your return on investment.



#### **Service Support Agreements**

Emerson's SureService™ agreements allow you to tailor your support to be focused on routine maintenance, improving the reliability of your operation, or improving performance to meet bottom line business objectives.







# Optimize performance. Achieve goals.

Your business demands continual improvements of your capital efficiency to optimize production and improve reliability—all while lessening costs, reducing complexity, and accommodating change. Safety is always a top priority, and meeting regulatory requirements is a necessity.

Emerson's suite of **Performance Services** helps you meet demands beyond your current workforce's capabilities. Whether it's training, the development of cost effective best practices, or on-site, hands-on assistance, we provide the service and support needed to reach your goals.







You need to be able to take advantage of the built-in functions of your modern control system so you can get the full return on your automation investment. But how do you ensure priority access to process experts 24 hours a day, every day?



#### **Our Solution**

Our Performance Services help augment your team with expert knowledge so you can achieve your business goals.

## **Performance Services**



Flow Metering Certainty

Small measurement errors can significantly impact custody transfer or fiscal flow

measurements. Emerson's Measurement

they impact your process or profitability.

Uncertainty Analysis services can help

you detect and assess issues before

#### **Asset Performance**

Emerson's experts can provide guidance on the best way to plan, execute, and maintain your assets to achieve a higher return on your automation investment. With our asset performance services, you'll improve profitability and achieve asset management and reliability goals.



#### **Improvement & Optimization**

Emerson's control performance improvement and optimization services can help you develop strategies for getting the most out of your control systems. Our experts analyze your process and provide valuable guidance for increasing efficiency, maximizing uptime, and reducing risk.



#### Connected Services

Emerson's Connected Services leverage streaming data from your instrumentation to detect undesirable conditions that might otherwise go unnoticed. Our experts provide actionable recommendations for performance improvement.



#### **Educational Services**

Improve your workforce with a full range of training options from Emerson's Educational Services. Train new hires, improve your current workforce, or help your team adapt to new technology or products. Courses are offered through our regional training centers or locally at your facility.



#### **Service Support Agreements**

Emerson's SureService™ agreements allow you to customize your performance-improvement support needs, from training and installation through consulting services to remote monitoring of equipment operation and health.





# **Lifecycle Services**

Budget pressures. Resource constraints. Accurate and reliable flow measurement points are vital to ensure a safe operation, no matter the challenges.

Emerson Lifecycle Services provides you with the expertise, technology and processes needed to help ensure you **operate safely, improve asset reliability,** and **optimize process capabilities.** 

Working with you, our Flow Lifecycle Services team of experts helps you identify and end any potential and hidden risks, creating Project and Operational Certainty for your plant. With Project and Operational Certainty, you're empowered with the processes and efficiencies you need to move your project to Top Quartile Performance, where opportunities exist to save millions of dollars.







## **Service Solutions For Every Challenge**

Today, projects are larger, more technical, and running at a faster pace than ever before. Excess cost and delays are robbing shareholder value. To reduce costs, complexity, and effectively face the challenges that arise, you need to **ensure safety, improve reliability, optimize production,** and **minimize emissions.** We can help you create Project and Operational Certainty—so you can achieve Top Quartile performance.

400+ Certified Service Experts
Available Globally



# Maintenance. Reliability. Performance.



Emerson Lifecycle Services provides customers with the expertise, technology and processes that can help them operate safely, improve asset reliability and optimize process capabilities.

To ensure flow solutions and services are closer to our customers, Emerson operates a global network of sales offices, technical support, and accredited service centers. For the location of your nearest support center, or to contact Emerson about a specific request, please visit us at Emerson.com/ContactUs.



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