Why Modernize
Plan your Journey to Smart Manufacturing
As technology continues to drive innovation, staying competitive requires you to drive increased performance from your automation systems.

Enabling the convergence of Information Technology (IT) and Operations Technology (OT) into a single, unified architecture ultimately means faster time to market, greater flexibility, more informed business decisions and reduced risk across the entire enterprise.

Legacy systems operate in isolation and outdated equipment is costly to run. Justifying the risk and expenses of modernizing control systems can be a challenge, while the threat of obsolescence may seem less daunting than modernizing. But the benefits outweigh the risk.

- Do you want to extract more data from your operations?
- Do you need to cut operating costs?
- Could aging or obsolete technology be impacting your productivity and escalating risk?
- Is your automation system truly optimized?

Rockwell Automation can help you confront the headwinds you’re facing, and help you leverage contemporary technologies to optimize your processes and equip your employees for greater performance and efficiency.

$20B in lost productivity due to unscheduled downtime
Why Now

Today’s modern platforms can help you realize gains in equipment utilization and production flexibility, while lowering your overall operation, maintenance and energy costs.

Contemporary equipment can lessen the burden of maintaining spares for aging parts, while enabling access to leading-edge technologies that allow your business to grow and innovate, opening the door to an expanding global presence.

Ultimately, these integrated systems allow you to scale your manufacturing footprint to the specific needs of your business and offer you easier access to actionable, plant-wide information.

Rockwell Automation helps our customers achieve these results – and prepare for the future of Smart Manufacturing – through our vision of The Connected Enterprise.

Manufacturing will change more radically in the next five years than it has in the last 20. Are you ready?

The Connected Enterprise is enabled by our integrated control and information portfolio, enhanced by contemporary technologies such as mobility and cloud computing, and supported by a full complement of products and services designed to ease the journey. Modernizing your processes and technologies is the first step in achieving The Connected Enterprise and realizing the value that Smart Manufacturing can deliver.
Customer Success

The journey to Smart Manufacturing does not have to be overwhelming. Through our Connected Enterprise vision, you can successfully manage incremental change and realize near-term benefits. Rockwell Automation understands exactly what succeeding in this journey looks like because we’ve done it ourselves. We can help you develop your roadmap and then help you achieve it.

Canned good producer transforms energy utilization

A canned good producer’s aging control system could not keep up with increased demand. They didn’t have access to real-time information and suspected they were wasting considerable resources including energy and water. After upgrading their control and information architecture, they not only met increased demand, but reduced natural gas consumption by 38%. They also reduced CO₂ production by 3,000 metric tons and water use by over 100 million gallons per year.

Reduction of CO₂ by 3,000 metric tons and water use by over 100 million gallons per year

Sausage manufacturer increases productivity by 100,000 lb/year

A sausage manufacturer in North America suspected that the legacy control architecture in their plants was responsible for product giveaway and revenue loss, but lack of relevant information meant they couldn’t quantify this. By upgrading their control and information architecture, they achieved a 0.1% increase in productivity which equated to over 100,000 pounds of sausage per year. Imagine the impact to the revenue stream when they stopped giving away their product.

100,000 pounds of extra sausages from a 0.1% increase in productivity
Assess

To be successful with any modernization plan, you have to understand where you’re starting from. That means taking stock of every part of your operation: your people, your processes, and the technologies you use all play a part.

The assess stage is all about understanding your current state – what makes up your operation, and where do your risks lie. It’s a process of identifying what opportunities you are missing and what technology-driven functionality you’re not realizing because your current operations simply can’t support it.

"What is it that you cannot do today?"

WHAT TO CONSIDER

- **Do you have workforce limitations?**
  Are you lacking skilled workers to run your current equipment?

- **Are you struggling to meet regulatory compliance requirements?**

- **Are you suffering from excess downtime** due to equipment failures and maintenance shutdowns?

- **Are you getting the most out of the data locked away in your systems?** Or maybe you have an abundance of data, but no means to act on it.

- **Maybe your network isn’t robust enough** to meet increasing communication and security challenges.

In considering your modernization plan, there are a few key pieces that may not be immediately obvious when it comes to your workforce.

Examine your operations and your employees’ daily activities. Study how they function and what they need to be effective. And then factor those considerations in as you develop your Modernization plan.

Deciding when and how to modernize is a balance of managing **opportunity** and **risk**.
How do you do it?
The assessment stage evaluates all facets of your existing operations.

- Information infrastructure (hardware and software)
- Controls and devices (sensors, actuators, motor controls, switches, etc.) that feed and receive data
- Networks that move all of this information
- Security policies (understanding, organization, enforcement)

Especially critical is an examination of the people and processes that manage this framework.

Rockwell Automation® provides a full suite of Services to help you understand your lifecycle management requirements and develop a plan to address them.

Training Assessments help you establish a benchmark for the knowledge levels of your workforce.

Lockout/tagout Audits, Arc Flash Analysis and Scalable Safety Assessments provide a comprehensive approach to help improve the safety of employees working with machines and energized electrical equipment.

Installed Base Evaluation™ (IBE) On-site collection and consulting service that pinpoints automation obsolescence risk by enterprise, facility, line, machine, panel and identifies MRO inventory risks and optimization opportunities.

Network & Security Assessments fully assess your industrial IT assets and identify and remediate potential performance and security issues.

In the end, partnering with Rockwell Automation offers you a more thorough understanding of your known and quantifiable obsolescence risks, and lessens the chance of unplanned downtime due to unexpected or emergency migrations, as well as hidden obsolescence risks.
Plan

WHAT TO CONSIDER

In developing your modernization roadmap, there are a few key items to consider and document:

**Goals** – What are you trying to achieve?

**Scope** – What’s the extent of the modernization project?

**Budget** – What funding is available and how will it be allocated?

**Schedule/Timing** – What is the expected timeline?

**Resources** (personnel, etc. – who, how) – Who will complete the project?

---

Rockwell Automation has the tools, services and expertise to help you design a modernization plan.

**On-site Engineering** – Preventive maintenance contracts to support legacy products. Embedded lifecycle engineers can be contracted as well to develop a modernization roadmap and execute migration services under contract.

**Inventory Services** – including storeroom management, parts management agreements, and MRO inventory management.

**Training Services** – including on-site training, open enrollment and virtual classroom support, as well as specific certification curriculum.

**Product Lifecycle Status Tool** – This online tool can help you determine the lifecycle of your existing equipment and identify the most contemporary Allen-Bradley products, bringing you advancements in performance, flexibility and security.

**Integrated Architecture Builder** – Is a graphical, user-friendly application that allows you to automatically define and configure a contemporary control and information architecture including a detailed bill of materials based on legacy control systems.
WHAT TO CONSIDER

Who – will help you implement your modernization plan? Do you have the expertise in-house or do you need to partner with experts to help ease the transition?

Incremental/Phased or Rip and Replace – Will you take on the modernization effort all at once, or do you need to schedule it in phases to accommodate your budget and timeline?

Machine-by-Machine/Line-by-Line/Plant-by-Plant/Whole Enterprise – Will you start with one machine or are you ready to tackle your entire operation?

How do you do it?
Rockwell Automation uses a well-defined process in our approach to lifecycle management, which includes using industry standard hardware and software interfaces, modular design practices, and a focus on compatibility between product revisions wherever possible.

Custom Solutions
Our modernization services and support are available to help you realize the benefits of a modern automation control system. Our factory-trained Field Service Professionals are experienced and prepared to provide on-site assessments, migration planning services, start-up and commissioning.

Migration Packages
For less complex upgrades, an easy, affordable option is our packaged migration in which Rockwell Automation helps migrate your end of life or discontinued system using recommended replacement products.

This migration package may include everything needed to complete a successful migration, as well as one year of 24/7 support.

Do-It-Yourself
If you prefer to migrate without assistance, Rockwell Automation provides a number of tools, free-of-charge, to help you plan and migrate with as little disruption as possible.

"From project management to start-up, we can help define and implement an effective modernization strategy for your facility."
Rockwell Automation has the expertise, experience and tools to help you execute your migration and services to support you through and upon completion.

**Application Code Conversion** – Helps remove some of the pain when converting your application to the latest software with the RSLogix™ Project Migrator. This standalone software tool helps convert RSLogix™ 5 or 500® project export files for import into Studio 5000 Logix Designer®.

**Controller and I/O Wiring Conversion Systems** – Virtually reduce the risk of wiring errors with this fast and efficient method for converting from some legacy I/O solutions directly to modern replacements without removing any field wires from the existing swing arms.

**Network Interface Modules** – Allows you to keep your data transfer between a new controller and other devices on legacy networks. The use of network interface modules in a phased modernization allows the legacy network to remain in place while the new application is tested before switch over to a contemporary network.

**TechConnect™** – Remote Support provides access to product updates and experienced engineers to help supplement your engineering staff.

**Reserved Repair** – For the times when you cannot immediately migrate, but must keep legacy automation up and running, reserve repair provides access to repair services for discontinued products.

**Parts Management Agreement (PMA)** – Rockwell Automation owned inventory that is located on your site, or stored centrally at a Rockwell Automation facility.

**Last Time Buy Agreement** – Provides continued access to finished goods after the product has been discontinued. Predetermined minimum quantities and consumption rates apply.
What does success look like?

Modernization leads to improvements in overall safety productivity, and performance. Done well, you will see results.

Customers who successfully modernized are benefiting...

| Achieved Significant Improvements in Product Quality with new, real-time data collection capabilities | Reduced Downtime due to modernization of legacy hardware | Reduced Operator Training Time with intuitive system and simulation tools |
| Improved Security by regulating access to data assets | Increased Throughput with new control system | Enabled Operators to Perform Predictive Maintenance with historical and real-time performance data |
| Increased Production Efficiency by 70% with improved information collection | Improved Operator Productivity with automated process and access to real-time information | Increased Annual Productivity 4% to 5% with software solutions track-and-record data, pinpoint production trends and fit the needs of individual sites while providing enterprise-wide capabilities |
| Decreased Downtime by 30-60 Minutes with information and spare parts on hand | Full Return on Investment Justification of Worldwide retrofits from increased production output |

Realizing the vision of The Connected Enterprise yields improvements in both data and decision making. Relevant, actionable data enables more informed business decisions, tied to key performance indicators.

- Actionable Information
- Increased Overall Equipment Effectiveness
- Increased Safety
- Increased Security

$70\%$
Rockwell Automation, Inc. (NYSE:ROK), the world’s largest company dedicated to industrial automation, makes its customers more productive and the world more sustainable. Throughout the world, our flagship Allen-Bradley® and Rockwell Software® product brands are recognized for innovation and excellence.

Follow ROKAutomation on Facebook, Twitter and Google Plus. Subscribe to us on YouTube. Connect with us on LinkedIn.