

the Journal

JANUARY 2023

from Rockwell Automation and our PartnerNetwork™

THE BIG PICTURE

A MODERNIZATION STRATEGY
THAT LOOKS BEYOND SIMPLY
REPLACING LEGACY EQUIPMENT
CAN HELP MEET BOTH CURRENT
AND FUTURE NEEDS.



PACKAGING OEM USES
MODERNIZATION
FOR LONGEVITY

HOW TO ACHIEVE OPTIMAL
CONTROLLER TUNING

2022 AUTOMATION FAIR
WRAP-UP



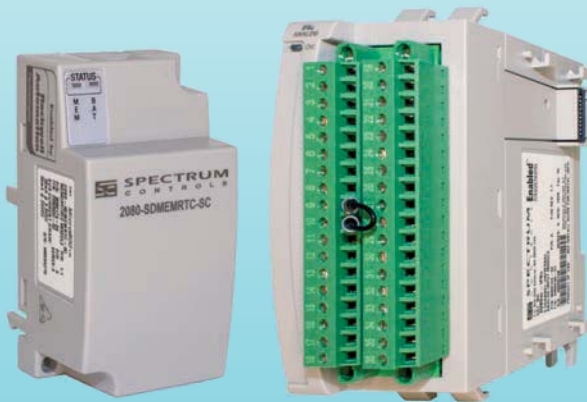
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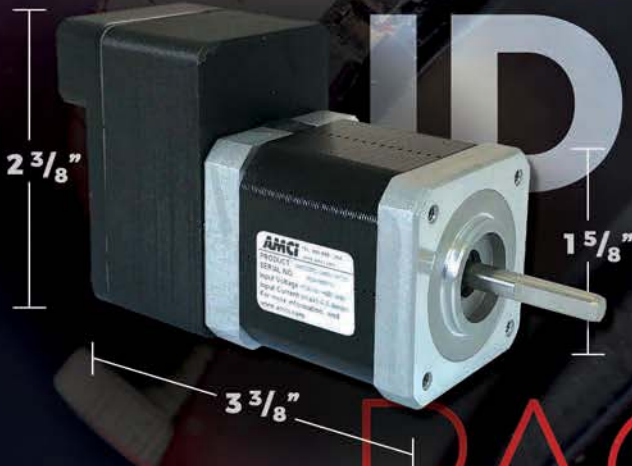
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SPECIAL REPORT

Keys to Planning & Maintaining an Industrial Network Infrastructure

In this report from Panduit, learn how to set up a network and improve uptime by using a process that includes planning, design, implementation and continuous improvement.

<https://bit.ly/pandtj22net>

WHITE PAPER

Edge Computing Creates Better HMI/SCADA Solutions

This white paper from *The Journal* and Stratus Technologies explains how to design a control-system architecture with the edge and DCS, and how to digitize and manage standardization and scalability.

<https://bit.ly/edgestj22wp>

PODCAST

Proper Termination & Grounding of VFD Cable Shields in the Field

In *The Journal's* "Automation Chat" podcast with Southwire, learn best practices for terminating and grounding VFD cable shield and how to ground cables at intermediate termination boxes.

<https://youtu.be/jLPqLVvMRg>



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the **Journal**

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JANUARY 2023, VOLUME 30, NO. 1

JOURNL-BR079A-EN-P



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Shiny Gifts for Our Industry

I am in awe of how technology is advancing, getting smarter, more clever and more productive. I sometimes feel like a child on Christmas morning when first seeing the gifts under the tree — oh, the possibilities and excitement.

Just think about it: Whether your company is small or large, many innovations and trends in smart manufacturing are helping OEMs, producers and manufacturers provide better business outcomes. Artificial intelligence (AI) and machine learning (ML). Hyperautomation. Data integration and smart analytics. Edge computing. The cloud. Fog computing. Robotics and cobots. Digital twins. Adaptive learning. Augmented reality (AR). Single Pair Ethernet. They're like shiny gifts for our industry.

Smart systems and machines are changing how OEMs design and manufacturers operate. Plants and machines have to be better connected, more efficient, more flexible and safer. But you already know that.

What some people don't know — or have learned the hard way — is that as they plan to modernize legacy components and equipment, including some of the innovations I listed above, it's important to look at not just what technology they'll be upgrading, but how they'll be implementing it. It's scalability and potential to provide business value down the road. Creating a long-term view will help create a modernization plan that provides benefits both now and in the future.

You can learn more about how to do this and why it's important in our cover story starting on page 16. And I hope you're excited about innovative technologies as I am.

Until next time....




Theresa Houck

EXECUTIVE EDITOR

EDITOR'S INVITE Join Executive Editor Theresa Houck and Chirayu Shah from Rockwell Automation for our "Automation Chat" podcast, "How Industrial Analytics Work & What's Coming Next," to learn about the role of advanced analytics in improving business results, and analytics trends and how they affect you. Listen on your podcast app, or watch their conversation on YouTube at <https://youtu.be/s9KcmUIXqR4>.





Smart starts here

82% of companies using smart manufacturing have experienced increased efficiency.

Allen-Bradley smart devices deliver real-time operational information, allowing you to make informed decisions and prevent unplanned downtime.

To get started on your smart journey, contact your local Rockwell Automation representative.

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by ROCKWELL AUTOMATION

Helping You Differentiate and Win

“How can we go faster?” I've been asked this question repeatedly as I've witnessed our customers turning to disruptive technologies to seize this window to win.

This notion of speed and acceleration as the premium currency is nothing new. The seismic shift in IT to cloud-based operating models — which then brought AI and IIoT capabilities to the edge — proved that speed means being first to unlock new opportunities and create new markets. It means capturing the lion's share of opportunity and the annual recurring revenue (ARR) that will grow for years.

It means **winning**. At Rockwell Automation, we're witnessing that moment in the manufacturing industry, where our customers are in their own race to differentiate and to win. And increasingly — as demonstrated by our most recent earnings results — they're turning to us to help them.

From EV companies relentless to get to market, to oil and gas customers accelerating clean energy programs, to biotechs in the high-stakes race to deliver next-generation therapeutics to patients, our customers are asking us to help them produce world-changing outcomes, and fast.

These companies are recognizing the “power of the **and**” — the breadth of the Rockwell Automation portfolio can unlock their business value faster, and with minimized risk.

And they believe our collective technical and industry experts are advisors and practitioners that will guide them there. While our product and capabilities are resonating, our people are our unfair competitive advantage for customers. That's where the rich legacy of the Rockwell Automation and partner ecosystem continues.

In the Americas, we're obsessed with creating a winning customer experience — one grounded in the distinct needs of each industry, led by our experts, and digitized with modern processes and systems to meet our customers where they are.

Thank you for running this race by our side. We're making a market — and a movement! — together.

With gratitude,




Gina Claxton

PRESIDENT

AMERICAS REGION
ROCKWELL AUTOMATION



How Rockwell Automation OEM Partners Can Help You



Johannes zu Eltz

VICE PRESIDENT
GLOBAL MARKET ACCESS

ROCKWELL AUTOMATION

The Rockwell Automation PartnerNetwork™ ecosystem serves as a foundation for mutually beneficial business outcomes for our customers and our partner ecosystem. We differentiate ourselves by combining access to the top end-to-end industrial technology, expert support and services, trusted partner and customer relationships, and a broad international presence.

Our network of market-leading operation technology (OT) and IT organizations around the globe empower customers to increase efficiency and efficacy, achieving standout success.

But it's not just about what we can offer — it's also about how we offer it. Rockwell Automation does the hard work of integrating and streamlining our myriad of in-house and partner products and services for fast time-to-value and lower total cost of ownership.

We also are a consistently recognized world leader in ethical business practices, and we work with organizations that share those values.

And that differentiation extends to our original equipment manufacturer (OEM) community. Finding the right OEM is critical to the success of your manufacturing operation. OEMs pair their electrical and mechanical expertise with deep application knowledge to provide state-of-the-art manufacturing equipment.

Serving all major industries and key OEM segments, from automated material handling to heavy industrial equipment, Rockwell Automation OEM Partners offer solutions ranging from single machines to multipart lines and full facilities to meet user manufacturing demands and facilitate a sustainable digital future. They show a commitment to use Rockwell Automation content across their portfolio, and together we search for the most innovative solutions to suit user needs.

World Class Solutions

As organizations look to disruptive technologies to create flexibility in production, implement digital transformation strategies and optimize IT/OT technologies, it's important to have the right OEMs to deploy innovative machines that easily integrate into existing operations.

OEM Partners design, develop and deliver flexible and efficient equipment to increase business agility, optimize productivity and turn machine data into transformational information capital. They collaborate with Rockwell Automation specialists and other partners within our ecosystem to provide end users with a competitive advantage.





OEM Partners collaborate with Rockwell Automation specialists and other partners within our ecosystem to provide customers with a competitive advantage.

This level of collaboration is reflected in the OEM Program structure, with partnerships ranging from OEM Bronze Partners, who provide Rockwell Automation solutions on a project-by-project basis, to OEM Platinum Partners, who deliver best-in-class solutions across the globe built on a Rockwell Automation platform.

You can learn more about the innovative approaches our OEM Partner community delivers by browsing the case studies available on our website.

More than 3,600 global OEM Partners work with Rockwell Automation to improve machine performance and help you gain the benefits. With extensive knowledge of Rockwell Automation technology, they can collaborate with you to design equipment for your specific needs. To find the right OEM Partner for you, visit our OEM Partner Locator at <https://rok.auto/oem>, or talk with your local Rockwell Automation representative.

Better Together

We know that no single supplier can be everything to everyone. Rockwell Automation believes "We are Better Together," and we do our part by delivering an expansive, global partner ecosystem of market-leading technology, excellent support and services, and an integrated and streamlined approach to business. You can succeed locally or on an

international scale by using our network's breadth of technologies and services that no single vendor can provide alone.

We offer end-to-end solutions built in-house and by our selective yet vast partner ecosystem, tailored to address your business challenges.

Want to Be an OEM Partner?

As a Rockwell Automation PartnerNetwork member, you can use the global reach of our ecosystem to differentiate yourself in the marketplace. We can help enhance your visibility and solve customer issues together.

The OEM Program provides program participants with a chance to collaborate commercially and technically to identify new business opportunities, increase market awareness, expand into new markets, and improve technical competency and functional excellence in applying Rockwell Automation products and solutions.

Learn more about our OEM Program by visiting <http://rok.auto/oem>.



INTERESTED IN JOINING THE ROCKWELL AUTOMATION PARTNERNETWORK?

If your organization is interested in becoming a company in the Rockwell Automation PartnerNetwork™ and helping customers with your exceptional knowledge and service, you can use the global reach of our ecosystem to differentiate yourself in the marketplace. We can help you enhance your visibility, and we can solve customer issues together.

Learn more about the Rockwell Automation PartnerNetwork, including how to become part of our partner community, at <https://rok.auto/partnernetwork>.

News Noteworthy

Rockwell Automation Wins 2022 Tech Innovator of The Year

The company also topped two product categories of the GLOBEE Golden Bridge Awards.

The GLOBEE Awards has named Rockwell Automation a winner in the 14th Annual 2022 Golden Bridge Business and Innovation Awards. This annual program honors the outstanding achievements of business organizations of all types and sizes from around the world and the people behind them. More than 100 judges from several countries representing a spectrum of industry experts served as judges.

Rockwell Automation was recognized in the following categories: FactoryTalk® Edge Gateway™ for Best New Product and Service in Technology Software; Plex Production Monitoring for New Product or Service Innovation in Artificial Intelligence; and Rockwell Automation as Tech Innovator of the Year.

FactoryTalk Edge Gateway lets users interact with real-time industrial data, break data silos and uncover insights needed to improve operations. It simplifies and automates the collection, contextualization and organization of industrial equipment data across machines, devices and automation assets at source, supporting high data integrity from the outset.

Plex Production Monitoring connects to plant-floor machines and systems for instant reporting and visualizations, creating

a closed-loop for measuring productivity and other production KPIs in real time. It is designed to deliver accurate visibility in manufacturing and can connect to larger manufacturing execution systems (MESs) or enterprise resource planning (ERP) systems to form a connected



digital manufacturing environment. Teams can use the solution to measure, adapt and improve quality, performance and availability.


See the complete list of 2022 winners at <https://globeawards.com/golden-bridge-awards/winners>.

HPS Unveils New Power Quality Lab

Rockwell Automation Technology Partner Hammond Power Solutions Inc. (HPS) has opened a new HPS Power Quality Lab at their headquarters in Guelph, Ontario. It allows HPS to demonstrate their range of power quality products through real-time testing.

The lab will primarily be used to host consultants, distributor specialists, partners and end users who want to experience the capabilities of HPS power quality products firsthand. HPS engineers also can test new concepts and carry out qualification testing on new products.



 The new HPS Power Quality Lab in Guelph, Ontario, provides real-time testing and demonstration of line side power quality products.

PARTNERNETWORK BRIEF



John Hargis

Mersen Appoints New VP, Distribution Sales. John Hargis has joined Mersen as VP Distribution Sales and Customer Care U.S., reporting to Ferran Sacrest, VP Sales & Customer Care Americas. Hargis replaced Tom Pankratz, who retired. Hargis has 20+ years of experience in the U.S. electrical industry, the majority of which he spent with a division of Emerson - Appleton Group, where he held several positions of increasing responsibility in the U.S. and internationally. In his last position, he was the West & South Region director of Appleton, the largest for the group globally.

It provides testing and demonstration of line side power quality products such as transformers, line reactors, active harmonic filters and passive harmonic filters; and load side products such as load reactors and various types of dV/dT filters with various cable lengths. Visitors also can test HPS power quality products on other types of VFDs not already installed in the lab.

A typical session is roughly an hour in length and can include a tour of the Guelph plant. Contact a local HPS representative or regional sales manager to request a time slot. Email Sanela Ligata at sligata@hammondpowersolutions.com for more information.

Rockwell Automation Promotes Robin Saitz to CMO


Rockwell Automation, Inc. has promoted Robin Saitz to vice president, Global Marketing and chief marketing officer (CMO). She reports to Scott Genereux, senior vice president and chief revenue officer.

Saitz has global responsibility to lead marketing of the company's full portfolio. With a focus on driving demand and building the brand globally, she oversees industry strategy, marketing communications, analyst relations, demand generation and commercial marketing.

She joined Rockwell Automation as part of the company's acquisition of Plex Systems in September 2021. Most recently, she led marketing for software as a service (SaaS) in the Software & Control business segment of Rockwell Automation as the Plex and Fiix CMO. Fiix was acquired by Rockwell Automation in January 2021. The SaaS and Rockwell Automation marketing teams will come together under Saitz's leadership.

Prior to joining Plex, Saitz held CMO roles at Avecto, a cybersecurity solutions provider (acquired by BeyondTrust), and Brainshark, a sales enablement software company. Robin spent more than 20 years at PTC, including her role as senior vice president of Global Marketing and Operations. She started her career as an engineer in packaging design.




 Robin Saitz is the new Rockwell Automation chief marketing officer.

Edge Computing Webinar Now Available On Demand

Increased demand, staffing issues and complex digital environments have industrial firms seeking a single platform that delivers engineering, operations and maintenance savings. Moderated by Theresa Houck, Executive Editor of *The Journal From Rockwell Automation and Our PartnerNetwork™* magazine, this webinar, "How to Use Edge Computing to Protect Mission-Critical Monitoring & Control Operations," explains how to use the edge to increase system efficiency and reliability, and how to digitize and manage standardization and scalability.



 Jason Andersen (left), Vice President, Business Line Management, Stratus Technologies and Eric Belgard (right), Automation & Controls, Enginuity Global LLC.

The on-demand webinar features presenters Jason Andersen, vice president, Business Line Management at Rockwell Automation Technology Partner Stratus Technologies, and Eric Belgard, Automation & Controls, Enginuity Global LLC.

Panelists share case studies about how they fortified protection of Rockwell Automation monitoring and control functions by using a fault-tolerant edge platform and a modern PlantPax® DCS, HMI/SCADA, FactoryTalk® Historian software and other tools. This includes how upgrading the famed Bullwinkle Oil Platform slashed system response time by 1,000% and consolidated 12 applications and 5 servers onto a single edge platform.

View the on-demand webinar at <https://bit.ly/strat0922tj>.

Rockwell Automation and Cognite Form Strategic Partnership

Rockwell Automation, Inc. and Oslo, Norway-based industrial data software provider Cognite, announced a strategic partnership that combines Rockwell Automation FactoryTalk® software with Cognite's Industrial DataOps platform, Cognite Data Fusion, to create an industrial data hub ready for enterprise-wide scaling.

The partnership will provide a unique, unified, edge-to-cloud industrial data hub that makes operational, engineering, enterprise and visual data understandable and comparable for manufacturers. It will be designed to transform raw data into high-impact applications for real-time decision-making and improved workflows that support safe, productive and sustainable operations.

This partnership also will further enhance the edge-to-enterprise capabilities from Sensia, the joint venture between Rockwell Automation and Schlumberger.



CUBIC Becomes a Rockwell Automation Company

Rockwell Automation, Inc. has completed the acquisition of CUBIC, a company that specializes in modular systems for the construction of electrical panels. The company, headquartered in Brønderslev, Denmark, serves fast-growing industries such as renewable energy, data centers and infrastructure.

CUBIC's established partner model will allow Rockwell Automation to expand its partner network for intelligent motor control offerings in Asia, Europe and Latin America; and broaden market access in renewable energy and data center solutions.

CUBIC will be reported as part of the Power Control Business in the Intelligent Devices operating segment of Rockwell Automation.



Rockwell Automation Welcomes More Platinum Partners

Rockwell Automation, Inc. welcomes new Platinum Partners to its PartnerNetwork™ ecosystem. This is a global recognition that means anywhere in the world, the partner can offer customers the program's benefits, such as extended warranties; enhanced access to technical, sales and marketing platforms; joint events; and introductions and interactions with many global brands Rockwell Automation supports.

Rockwell Automation welcomes the following Platinum Partners:

Systems Integrators

Barry-Wehmiller Design Group, Inc. (U.S.) provides a range of services, including packaging automation, process engineering, facility design services, utility system engineering, and more. www.bwdesign-group.com

Electro Controles del Noroeste (Mexico) is a system integration company with expertise in process automation, instrument specification, PLC/HMI programming, information technology and more. www.ecn.com.mx

EOSYS (U.S.) delivers innovative technical solutions to automate, monitor and secure industrial systems. www.eosysgroup.com

Intech Process Automation (U.S.) helps customers with their digital transformation and adoption of IIoT technologies across various industries around the world. www.intechww.com

Interstates, Inc. (U.S.) is a systems integrator that can automate plant equipment, and collect and provide data reporting from operations to give an owner real-time tracking and control. www.interstates.com

RoviSys Company (U.S.) provides integrated strategies, solutions, systems, and services that advance the performance of industrial companies. www.rovisys.com

Sinci Gdl S. de R.L. de C.V. (Mexico) offers complete services in automation, industrial processes, machinery and related disciplines. www.sinci.com

SPI - Integracao De Sistemas LTDA (Brazil) integrates cutting-edge technologies to support projects that accelerate customer productivity through innovation management, systems implementation and more. www.integradora.com.br

Original Equipment Manufacturers (OEMs)

CMC Machinery (Italy) designs, manufactures and supports innovative and disruptive technology for the mailing, graphic arts, ecommerce and logistics industries. www.cmcmachinery.com

Tetra Pak (Switzerland) is a major food processing and packaging solutions company providing safe, innovative and environmentally sound products. www.tetrapak.com

Southwire's Acclaimed Edge Retires

After 30+ years of leadership in manufacturing and nearly a decade with Southwire, a Rockwell Automation Technology Partner, Kathleen Edge, the company's executive vice president of Operations, retired at the end of 2022.

She joined Southwire in 2013, and most recently led the company's wire and cable operations, including its single largest strategic initiative, modernization. Prior to her time in Operations, she was integral in the transformation of the company's Human Resources team.

Rebecca Cranford, senior vice president, Manufacturing, has assumed leadership for all wire and cable manufacturing. Aaron Asher now serves as SVP of Wire and Cable Distribution and Materials Management. Cranford and Asher; Nilesh Sivaramakrishnan, SVP of EHS, Lean, Quality and Process Engineering; and Will Berry, SVP of Modernization, report directly to Norman Adkins, president of Wire and Cable and chief operating officer. ●



Kathleen Edge, vice president of Operations for Southwire, has retired.





Modernization projects require you to look at the big picture of not just what technology you're replacing, but how, so you can plan for the long term.

ARTICLE BY

Nick Creath

GLOBAL PRODUCT MANAGER, FIELD LABOR,
ROCKWELL AUTOMATION

• **W**hen you replace older plant technologies with their smarter, more capable modern counterparts, you create opportunities to improve productivity, throughput, visibility and more. But to realize these enhancements, you need to think about not only *what* you're replacing, but also *how*.

Modernization projects that focus on like-for-like replacements of legacy technologies may help mitigate obsolescence risks. But if you're not thinking bigger, then all the potential innovative technologies that offer to help improve your operations go unused. And that's something you can hardly afford to do in a time of skills shortages, supply chain disruptions and rising costs.

That's why it's time to start thinking more comprehensively about modernization projects.

Importance of the Big Picture

Modern technologies lay the foundation for smart manufacturing, because data can be accessed and shared to support better decision-making. And they can connect people, processes and technologies to make your operations more efficient, collaborative and flexible.

Smart sensors, for example, can give workers richer insights into both process parameters and device health. This can help staff better monitor operations and more quickly respond to sensor issues before they evolve into downtime events.

Similarly, smart devices with built-in predictive algorithms can help technicians identify maintenance needs earlier, well before devices fail.

New technology can also reduce knowledge gaps in your operations, using diagnostic data and digitalized, in-context work instructions to reduce reliance on acquired, on-the-job learning of technologies. Also, the next generation of workers coming into your plants will more likely be familiar with modern technologies than legacy technologies introduced decades ago.

Put simply, each new technology you deploy as part of a modernization project can propel you further on your smart manufacturing journey. But for this to happen, you must make sure projects address the specific needs of your plants.

Assess Your Current State

A thorough assessment can provide an understanding of the current state of your operations so you can decide where to take your operations in the future. At a minimum, assess your installed base to identify what technologies you have in place. You might have a general awareness of what technologies are "older," but few manufacturers know the life-cycle status of every piece of technology.

Ideally, you'll also assess other aspects of your operations affected by your modernization projects — factors



TIPS FOR USING OUTSIDE SUPPORT

With any modernization project, decide if you have the resources to complete your projects on your own or if you'll need outside support. Some manufacturers have a preferred system integrator, and others opt to work directly with the technology vendors.

If you're using outside support, try to simplify the project where possible. Working with multiple vendors complicates projects. So, look for vendors that offer comprehensive support to reduce the number of vendors needed or that can coordinate multiple vendors on your behalf.

Also, seek a vendor that can deliver the smart solutions you need, tailor them to your specific applications and implement them in your preferred approach.

Your upgrade might require that you put certain legacy machines or lines into a maintenance phase until funding is available or other critical needs are addressed. Specialized services like parts-management agreements for at-risk parts, repair or remanufacturing services, and remote or in-person technical support can help keep assets running until they can be modernized.



BLOG

Private 5G Offers Sustainable and Agile Operations

This blog from Rockwell Automation explains how industrial Private 5G is a digital-transformation enabler for smart manufacturing to help deliver business outcomes such as sustainability and agility. 5G was designed with ultra-reliability, low latency and a range of spectrum options to meet the demanding requirements of the Industrial IoT (IIoT) and automation. See why EtherNet/IP™ is ready for industrial Private 5G, and get case studies of 5G in use. Read the blog at <https://rok.auto/3DAc6Zz>.



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People for Process Automation

such as plant network capabilities, data needs, staff skillsets and cybersecurity. This can help further guide your projects by identifying issues they can address, like skills gaps, reporting processes that can be automated, and cybersecurity vulnerabilities.

With an understanding of where your operations are today, you can plan your projects. This involves first identifying the specific problems you want to solve or performance improvements you want to make, whether that's throughput, security or something else. Then, you can set the scope, budget and timelines to achieve those goals.

Real-World Examples


Recently, modernization projects have helped manufacturers keep production systems up to date and realize significantly better business outcomes.

In one case, a canned good producer needed to replace an aging control system that couldn't keep up with higher demand. One pain point of the control system was that it didn't provide real-time information, and the producer suspected they were wasting considerable resources in production.


Upgrading the control and information architecture helped the producer meet increased demand. It also helped cut natural gas consumption by 38%, CO₂ production by 3,000 metric tons and water use by more than 100 million gallons per year.

In another case, an agricultural product producer decided to upgrade its legacy distributed control system (DCS) as part of a product line expansion at one of its plants. The legacy human-machine interface (HMI) system gave plant staff limited-to-no visibility into key production data.

HMI screens were also overly complex and colorful, which made it difficult for staff to quickly interpret and respond to abnormal conditions. And more than

 **SPECIAL REPORT**

Keys to Planning & Maintaining an Industrial Network Infrastructure



The industrial network infrastructure is a valuable business asset. In this special report, “Keys to Planning & Maintaining an Industrial Network Infrastructure,” learn about the vital business areas needed to plan and maintain an industrial network’s evolutionary path.

See how to improve uptime by using a process that includes planning, design, implementation and continuous improvement, and get insights about tools like Single Pair Ethernet, structured cabling and Time Sensitive Networking. Download the report at <https://bit.ly/pandjt22net>.

4,000 alarms programmed into the system made it almost impossible for staff to quickly recognize and respond to legitimate issues.

The modern DCS implemented in the facility gave operators clear-cut benchmarks for desirable data ranges, so they could quickly identify if equipment and processes were abnormal. A simplified presentation and more strategic use of colors also helped important data stand out.

And better alarm design reduced the facility's alarms by 50%, helping operators see legitimate threats without the distraction of nuisance alarms.

And then there are digital twins, which are becoming a key part of many manufacturers' conversations as they plan and implement digital transformation initiatives. These living digital replicas of a physical object or system are redefining what's possible in manufacturing and offering possibilities that include:

- **Optimizing the machine's design and refining its performance before you order parts or cut steel.**
- **Testing and debugging a machine's controls before you connect the physical controller and machine at a customer's site.**
- **Reimagine training, maintenance and other activities by bringing them into a virtual-reality or augmented-reality (VR/AR) environment.**

Evolving with the Times

During the pandemic, some manufacturers used remote access and AR to support projects when travel and in-person meetings were restricted. This helped keep projects moving. And it has the potential to make modernization projects more efficient and less costly in the future by reducing travel requirements and simplifying logistics.

Regardless of how modernization projects evolve, one principle will remain true: Those focused on innovation have the most to gain. ●

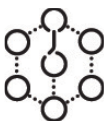
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How Packaging OEM Uses Modernization for Longevity

Learn how investing in research and development, automation and technology keeps family-owned Triangle Package Machinery thriving.

ARTICLE BY

Mike Bacidore

CONTRIBUTING EDITOR





● Celebrating its 100th year in business, Chicago-based Triangle Package Machinery, an OEM Partner in the Rockwell Automation PartnerNetwork™, still operates with the freedom and innovation of a family-held machine-building company. The OEM designs and manufactures packaging machinery and reinvests profits into research and development (R&D) to continue its legacy.

The company hosted a group tour at its 120,000-sq.-ft. manufacturing plant in Chicago during the 2022 Automation Fair® event. With more than 200 employees, Triangle offers sanitary food packaging equipment, including tray loaders, horizontal cartoners, combination weighers, rotary pouch equipment and vertical-form-fill-seal (VFFS) machines, which account for more than 70% of its business.

Triangle's longevity comes from continuing to innovate and update legacy features to stay competitive and meet new compliance and customer requirements.

For instance, when Triangle migrated from Rockwell Automation Kinetix® 6000 drives with MPL motors to Kinetix 5500 drives with V-series single cable motors, benefits abounded. The company (and its customers) experienced improved flexibility, maintainability, sustainability, a smaller panel footprint and simplified installations.



PODCAST

Rockwell Automation PartnerNetwork: Power of Collaboration For Customers

*** Winner of the Award of Excellence for Best Podcast from the 2022 APEX Awards of Publication Excellence in Corporate Communications.*



Did you know Rockwell Automation has a global network of prominent companies that provide products and services compatible with Rockwell Automation solutions? It's the Rockwell Automation PartnerNetwork™, and these technology suppliers, system integrators, OEMs and distributors collaborate to provide the right automation and manufacturing solution for customers.

In this episode, Executive Editor Theresa Houck talks with Johannes zu Eltz, Vice President of Global Market Access with Rockwell Automation. He explains how and why the company has built this powerful ecosystem of collaborating companies. Here's a hint: It's all about the customer.

Listen on your podcast app or on the web at <https://bit.ly/tj0922pn>, or watch our chat on YouTube at <https://youtu.be/cuva3Cge9tg>.

However, the cost savings from the reduced energy-input requirement needed by the single-cable design of the servo was the ultimate highlight.

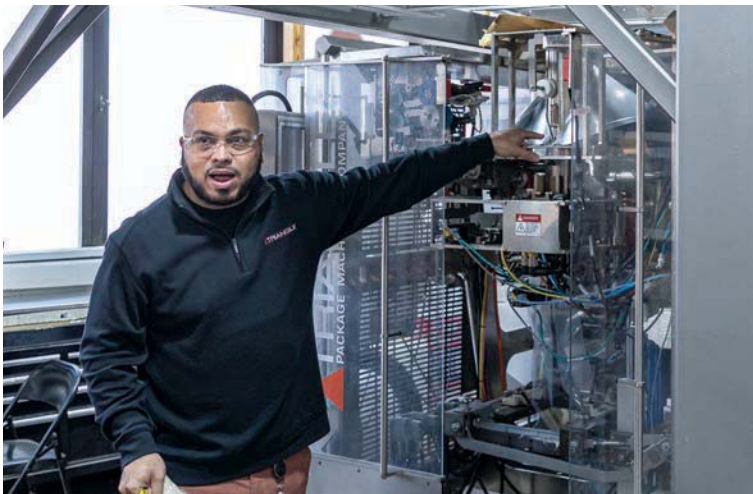
"When implementation began on Triangle's X series VFFS series bagger, it noticed an issue with the sealing jaws," adds Niki Lococo, OEM account manager, Rockwell Automation. The thermal model behavior varied between the Kinetix 5500 and the Kinetix 6000. "Current would build up, and the jaws would close on themselves."

"We established a plan to improve the 5500 design to operate as well as the 6000 system did," Lococo continues. "We developed, tested and implemented the jaw-torque-control Add-On Instruction (AOI)."

Constructive Changeovers

All Triangle packaging machines are built to do changeovers as quickly as possible — an attractive feature for food manufacturers. "Most machines will take hours for a changeover, but changeovers of our machines can be done within minutes, and all changeovers can be performed without tools," explains Luis Torres, director of product line management at Triangle.

A major breakfast cereal manufacturer wanted a machine with auto-changeovers, which Triangle offers on its cartoners. Because of labor issues, the cereal maker requested everything be as simple as possible. Letting the logic in the machines do the changeover



Luis Torres, director of product line management at Triangle Package Machinery, demonstrates its vertical-form-fill-seal machines to attendees touring its Chicago plant during the 2022 Automation Fair® event.

allows the operator to press just a few buttons to continue production, according to Triangle.

To help its customers address labor challenges and other industry issues, Triangle's strategy is more focused around R&D. The company has a goal to focus on areas where its machines can meet needs broadly across its portfolio.

Future Focus

Another area where Triangle is focused to address labor issues is the human-machine interface (HMI). "Everyone is trying to simplify their HMI so new people can come in and know what to do. People are used to an iPhone. They want things more visual," says Torres.

Even before the pandemic, it was getting difficult to find operators but "post-COVID, that just fell off the cliff," adds John Cooke, Triangle's sales director. "The turn toward autonomous machines is gaining momentum."

Additionally, the use of IO-Link has allowed Triangle to pull devices out of the cabinet to minimize cabinet space, noted Russ Sharpe, Triangle's control system application engineering

manager. On-Machine™ offerings like this as well as additional technologies are gaining ground industry-wide as customers look to increase operational flexibility.

Triangle says the company also is working on adding new machines that focus on particular applications. This includes a compact sanitary bagger for fresh produce and zipper tape machines for fresh poultry. ●



TRIANGLE PACKAGE MACHINERY Based in Chicago, Triangle Package Machinery is a Rockwell Automation Gold Level OEM Partner. The company specializes in packaging automation products for the food industry, including vertical form fill seal baggers, combination weighers and bag-in-box systems.

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A wide-angle photograph of the Chicago skyline at sunset. The sky is a mix of blue and orange, with the city lights beginning to glow. The water in the foreground reflects the buildings and the sky. The Willis Tower is prominent on the right side of the skyline.

ARTICLE BY

Amanda Joshi

MANAGING EDITOR

2022 Automation Fair Event Draws Record Crowd

The top annual automation industry event showcased IT/OT best practices, new products and innovations for OEMs and manufacturers.

● **A**fter a quiet two years, a record-setting 15,000+ tech-savvy professionals, industrial automation experts and leaders excitedly gathered Nov. 16-17 in Chicago at McCormick Place West for the annual Automation Fair® event hosted by Rockwell Automation.

The immersive two-day event featured engaging presentations, interactive training and learning, industry-centric discussions, and the popular Expo highlighting the latest innovations from Rockwell Automation and companies in its PartnerNetwork™ ecosystem.

Sustainability, resiliency and productivity were buzzwords echoed throughout the 2022 event, highlighting how the latest automation technologies and digitalization can help organizations



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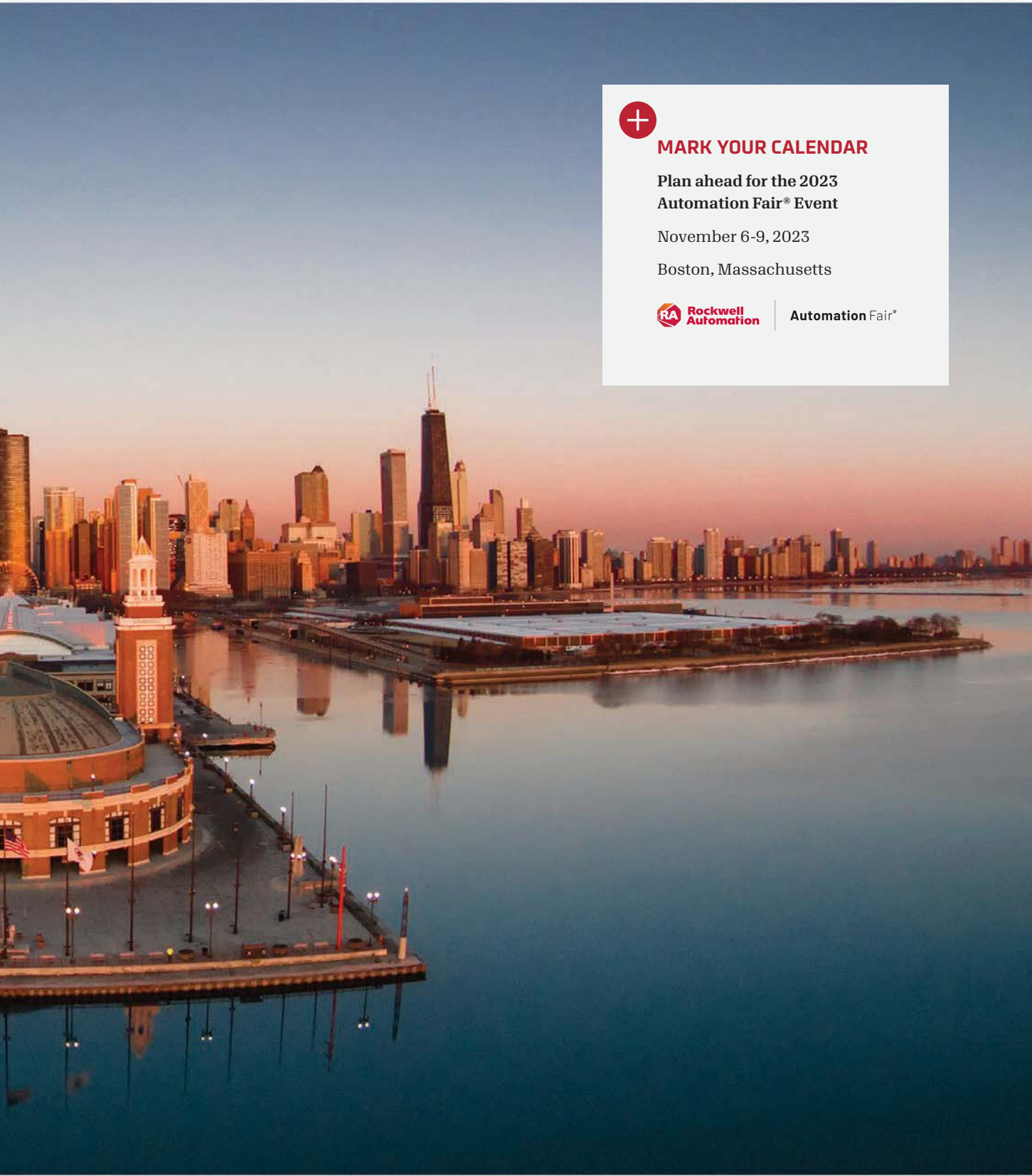
**Plan ahead for the 2023
Automation Fair® Event**

November 6-9, 2023

Boston, Massachusetts



Automation Fair®





On November 15, Blake Moret, chairman and CEO, Rockwell Automation, kicked off this year's Automation Fair® event with a Perspectives keynote presentation.

become more nimble, more robust and more energy efficient while meeting industry and customer demands.

IT/OT automation professionals experienced technology demonstrations; engaged in hands-on labs, training sessions, industry-focused forums and keynote presentations; and networked with leading professionals in the field.

The fair featured more than 100 interactive exhibits in the Expo, 90 technical sessions and hands-on labs centered around the newest industrial automation solutions and best practices, plus a dozen industry-focused forums — all designed to help take manufacturing and process automation to a whole new level.

With so much to see and do, never fear missing out — Rockwell Automation has made it easier to catch up on what you might have missed at the fair. Attendees can visit the Rockwell Automation virtual experience at <https://rok.auto/AF22-OnDemand> to watch keynote presentations or check out the industry, technology and services expo tours.

In addition to covering industry solutions, and technology and services, the virtual experience also includes enlightening sessions on security and networking, digital engineering and design, smart manufacturing, and operations management.

In the meantime, let's look at some other highlights from the event.

Key Notes from Perspectives

Prior to the show, on Nov. 15., members of the press and other industrial automation professionals sat down at Perspectives, a thought leadership event, to learn more about the changing face of manufacturing in a post Covid-19 world.

Presentations from Rockwell Automation, Microsoft, McKinsey & Company, Accenture and other key industry professionals gave insight into the next steps manufacturers should take on their digital transformation journeys.

In his compelling keynote, Blake Moret, CEO and chairman of Rockwell Automation, shared how the company and many others are leveraging technology to tackle sustainability, workforce, and supply chain challenges in ways that fit the unique needs of their business.

"We're connecting the imaginations of people with the potential of technology, to expand human possibility and keep it focused on real business results, and that's the 'why' that drives me and drives our company," explained Moret.

He reflected on the lessons the COVID-19 pandemic has taught us, and about just how resourceful we can be when we have to — those organizations that had already embarked on their digitalization journeys were much better prepared when everyone but the line workers were sent home. Remote access became essential overnight. "We really went through 20 years of evolution in two," he said.

He further added, transformation journeys start with asking why are we doing this? "For Rockwell Automation our why is to simplify complexity. Simplification — meeting customers where they are — is going to be so important going forward in advancing automation. The technology is going to be complex, but we can simplify

how humans interact with the system," he shared.

In addition to highlighting several success stories of manufacturers who quickly adapted and used automation and digital trends to address growing pains amid the pandemic, he also underscored five components of industry-focused ingenuity that will drive the future of manufacturing:

1. **Optimizing productivity.**
2. **Empowering workers.**
3. **Managing cybersecurity and safety risks.**
4. **Applying sustainability and energy conservation efforts.**
5. **Focusing on IT and digital transformations to accelerate growth.**

For more insights from Perspectives, watch on demand at <https://rok.auto/perspectives>.

Process Solutions Stand Out

In conjunction with Automation Fair®, the popular Process Solutions User Group (PSUG) meeting took place prior to the show on Nov. 14. This two-day immersive experience for process industry professionals is designed to help improve processes and create new revenue streams.

More than 750 visitors from 15 countries and 20 process industries attended 14 customer sessions, 30 technical sessions and eight hands-on labs at PSUG. The sessions highlighted challenges facing operators, engineers and managers in all industries and showcased real results using the process solutions available from Rockwell Automation.

For example, Jim Winter, global process business director at Rockwell Automation pointed out that the COVID-19, digitalization and sustainability trends spun off a host of other challenges for end users and their partners, such as supply-chain bottlenecks and resulting

productivity issues, or increased network connections that produce more cybersecurity vulnerabilities.

One of the main remedies Rockwell Automation prescribes for many of these challenges has been its PlantPAX® distributed control system (DCS), which made several big strides over the past two years. It gained a peak controller as part of its recent PlantPAX 5.0 release, while PlantPAX 5.1 launched this past summer featured FactoryTalk emulation software for the peak controller.

Now the newest version, PlantPAX 5.2, includes the fully redundant FLEXHA 5000™ I/O platform. It has all discrete and digital inputs and outputs on one card, which will let users terminate wires and program them electronically, saving huge amounts of time on configuration, startups and spares management.

In addition, Winter reported Rockwell Automation is working on combining hardware, software and services for better outcomes in industries and applications, such as energy management, mining, brewing, batch analytics, burner management and single-use technologies. "These solutions help users get to market faster and work together better," added Winter.

In addition to learning about the latest Rockwell Automation solutions to combat industry challenges, several sessions showcased how these technological advances were helping customers with their own unique operational hurdles.

For example, a combination of camera-guided autonomous robots and the PlantPAX DCS and PowerFlex® 755 drives helped streamline milking processes at Millenkamp Cattle; Life sciences firm E Tech Group detailed how various Rockwell Automation technologies helped to automate a complex pilot plant for meat cultivation and achieve greater flexibility.

In another highly engaging session, machine-building company, Triangle Package Machinery, invited attendees to

tour its manufacturing plant in Chicago. For more on this story, see page 22.

Partners Showcase Innovation

Members of the Rockwell Automation PartnerNetwork program helped visitors learn more about many connectivity and industrial automation technology innovations. Some of those can be found in the "Product Focus" section on page 40 of this issue. In addition, here are a few technologies highlighted at the show.

Technology Product Partner Grace Technologies showcased its new Check-Volt that allows users to test for absence of voltage and provides voltage presence LED indication; all without opening enclosure doors. This permanent electrical safety device (PESD) allows absence-of-voltage testing to be performed safely by qualified electricians using their trusted voltmeters.

Users report Lockout/Tagout (LOTO) procedure time reductions of 35-40 minutes. This touch-safe, compact PESD features voltmeter-compatible



Technology Partner Grace Technologies displayed its new CheckVolt at the show.



Technology Partner Festo is one of the first third-party suppliers to support FactoryTalk® Edge Gateway from Rockwell Automation.

test points and redundant LED voltage presence indication rated up to 1,000VAC/VDC. The ChekVolt is quickly installed through a single 30-mm knockout and includes four lead wires potted in the construction, making LOTO in even the harshest environments safer, smarter and more productive.

Technology Partner Festo introduced new innovations for Rockwell Automation programmable logic controllers (PLCs) that seamlessly acquire data from Festo pneumatic valves and actuators. These solutions help OEMs, system integrators, and end users reduce costs, shorten time to market, and improve operational performance.

FactoryTalk® Edge Gateway (FTEG) from Rockwell Automation connects OT to IT. FTEG tools scan the EtherNet/IP™ network to discover devices. With the Festo CPX-FB36 bus node now recognized by FTEG, basic diagnostic information

from smart pneumatic devices such as Festo valve terminals and energy saving pneumatic devices are easily accessible.

With its connection to FTEG, Festo is one of the first third-party suppliers to support FTEG and to seamlessly bring digitized pneumatic information under the Rockwell Automation IIoT umbrella.


Rockwell Automation also displayed plenty of new innovations, one of which was the new FlexHA 5000 I/O platform designed for process applications and is capable of full five nines redundancy right out of the box. But perhaps more importantly, the FlexHA platform includes fully software configurable I/O.

The platform's fully software-configurable I/O allows users, EPCs and system integrators to know the approximate total number of I/O needed and not the exact specifics required. This means they can decouple the hardware and software design processes when engineering a



Our Pitch: PID Tuning Made Easy

Control Station's LOOP-Pro™ software is in a league by itself. It's easy to use and the only loop tuning software delivering all critical capabilities. Check out our score card and see for yourself.

Feature		Competition
Intuitive 6-step controller tuning method	✓	✗
Tune with live or historical process data	✓	✓
No need to start/end tests in steady state	✓	✗
Accurately model in open- and closed-loop	✓	?
Tune highly variable and long Dead-Time loops	✓	✗
Simulate loop performance and stability	✓	?
Generate logs and reports automatically	✓	?

If you need your plant's PID control loops to run at peak performance, then you need the process optimization software that covers all of the bases—LOOP-Pro. Contact us for a demo. You'll soon be hitting all your control targets out of the park.



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project — ordering the hardware earlier, while the final software development work is done. This speeds automation system design yielding faster time to value.

Lessons from Industry Leaders

The industry forums provided visitors with a chance to hear how other companies in their respective industries are addressing pain points and using digital technologies to increase productivity and improve efficiency.

Representatives from various organizations not only shared their automation technology experiences and applications but also provided insight and trends driving their digital transformations (DX).

At the Food and Beverage Industry Forum, panelists shared their concerns and solutions for attracting and retaining personnel. Brian Marsh, senior director, digital manufacturing, at Nestle;

Andrea Zaman, COO at Pearson Packaging Systems; and Joe Francel, director, business programs, manufacturing service line at Microsoft contributed while Mike Chaney, a former executive at P&G, moderated the panel.

"Workforce is one of our biggest challenges," said Nestle's Marsh. "There's just not a large labor pool out there

to fill our needs. It's important to be able to create a new environment. Manufacturing isn't sexy, so how do you create an environment that attracts them and keeps them? Nobody wants to sit around in training and read from binders. We want to get them on the floor and let them start doing something valuable for the company. It's all about



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the people and the technology going at the right speed."

"Ten years ago, when I started working with customers," recalled Zaman, "the number one thing we heard was the workforce. There was turnover. We needed to design equipment that was easy for operators to use. The issue is still workforce, but it's different. Now

the equipment needs to be easier to use so your employees go home every day feeling accomplished. That's where technology can take us. As we look forward, we look through the eyes of our customers."

Employees want to contribute something valuable, assured Chaney. "They want to know they're making a

difference," he emphasized. "Let them know they're cared for and they're valuable parts of the organization. Make sure everyone knows they're valued."

Workers need to know they're part of a team, agreed Marsh. "The work cell is just part of the whole entity," he said. "What's going on upstream and downstream?"

Once workers are indoctrinated, trained and aware of their roles in the overall business outcome, retaining them can be difficult. But retaining what they know is within closer reach than it's ever been. "How do you capture the tribal knowledge?" asked Francel. "How do you force more interaction with the workforce and give them more tasks of value vs. mindless labor? Let automation do the mindless tasks, so employees can do more meaningful tasks."

Other topics discussed include the impact of digitalization on their



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Enjoy the Automation Fair® experience even more by viewing the on-demand sessions, featuring thought leadership presentations from Perspectives, a curated selection of Product and Technology sessions, and virtual tours from the Expo. Feel free to share this extended event opportunity with your colleagues! <https://rok.auto/AF22-OnDemand>



WATCH THESE VIDEOS FROM AUTOMATION FAIR

Join *The Journal's* Executive Editor Theresa Houck as she takes you through the aisles of the Expo to learn more about some of the top technologies showcased at the 2022 Automation Fair® event. See highlights of some of the most innovative technologies helping advance automation and digitalization. Visit our YouTube channel at <https://bit.ly/3jHFQNP> to see demonstrations from these 12 companies in the Rockwell Automation PartnerNetwork™ ecosystem:

- Advanced Micro Controls Inc. (AMCI)
- Control Station, Inc.
- EPLAN Software & Service
- Fluke Corp.
- Hammond Power Solutions
- HMS Networks
- LinMot USA, Inc.
- n-Vent HOFFMAN
- Spectrum Controls Inc.
- Stratus Technologies
- TCI, LLC
- WIN-911

organizations, simplifying operational complexities, and cybersecurity challenges.

To read more about their efforts, visit <https://bit.ly/3vCybTQ>.

Industry Challenges

The Water/Wastewater Industry Forum and its panelists discussed the combined challenges of digitalization, cybersecurity and sustainability facing their industry. The forum's panelists shared details of their current projects and operations helping tackle these issues.

"We're presently doing a \$215-million plant expansion to expand our capacity from 21 million gallons per day (mgd) to 30.1 mgd because the city has grown so much, so we need to do more digital data capture to find more leaks and act on other issues," shared Jason Wirtz, controls technician in the public works department in Sioux Falls, South Dakota.

"We spent \$136,000 per year on supervisory control and data acquisition (SCADA) system software licensing and hardware over the last three years, and we expect that budget to increase

by \$20,000 per year over the next three years," he added.

On a similar expansion path, Mark McKinney, director of cyber and physical security at Chicago-based engineering consultant Tetra Tech, reported it's developing a cybersecurity program for the drinking and wastewater systems relied on by one of the top 10 metropolitan municipalities.

"We started by assessing their controls environment that has about 300 HMI screens and sought to stabilize their processes by adopting standard procedures and technologies, which could also help with their skills shortage due to retirements," said McKinney. "Next, we'll further standardize with a technical refresh of their master plant and modernize by refraining from using end-of-life equipment."

The challenges aren't just facing the United States; Fritz van Rooij, operational technology manager at Israel-based IDE Technologies, reported it's facing similar difficulties and opportunities with clients worldwide.

"We're constantly innovating to optimize system integration, introduce autopilot functions and increase the flexibility and efficiency at our plants," says van Rooij.

Jeff Krawczyk, vice president of sales and business development at system integrator Commerce Controls (CCI) of Novi, Michigan, reported that digitalization, cybersecurity and sustainability efforts are even altering how projects are conducted by end users, systems integrators, contractors and suppliers.

"Over the past three to five years, we're moving from the usual design/build process to a progressive design/build process, in which all parties including OT are involved much earlier, and we all work more alongside each other," he shared.

For more insights, visit <https://bit.ly/3Gxxkcb>. ●

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How to Access Data for Optimal Controller Tuning

PID controller tuning software can use “live-historical” data without complexity and security concerns involved with accessing data from a control network.





ARTICLE BY

Dennis Nash

PRESIDENT & CEO, CONTROL STATION, INC.

The PID controller has been a fixture in manufacturing for decades. From the simple to the complex, the PID remains the primary resource used to regulate industrial production processes. Just as the methods and the tools used to automate production have evolved over the years, so too has the data used in loop tuning and process optimization.

In the past, production and engineering staff performed manual tuning, using analog data to visually estimate the values that would provide the basis for calculations of Gain, Dead-Time, and Time Constant. Manual tuning is still performed today, and although the available data is better, most outcomes are only marginally improved.

Then PID tuning software facilitated a more methodical approach for assessing process data, generating models and calculating parameters. While these early tuning products were limited to uploading and analyzing files, they eventually gained the ability to communicate directly with controllers and access live data.

Today, a challenge for many practitioners is the data itself. In the past, the issue was partially linked to low-resolution historical data, but now, there are growing concerns about cybersecurity and permitting access to a facility's live data. Fortunately, tuning software now can access high-resolution data that doesn't put plant security at risk.



EDITOR'S NOTE This article is adapted from the white paper, "Successfully Optimizing Regulatory Controllers Without Risking Data Security."

Download the full paper at <https://bit.ly/tj0123cswp> to get information about the pitfalls of historical data and some challenges of using live data. Learn how to use "live-historical" data captured via FactoryTalk® Linx and delivered via the FactoryTalk Live Data interface, and get step-by-step instructions on how to tune PIDs using live-historical data.



It's now possible for production and engineering staff to access process data from the business network prior to compression and archiving.

Key Points About Live Data

Live data is ideal for modeling and tuning because of its high resolution, but accessing it can present hurdles and create vulnerabilities.

Standard industrial communication protocols such as Open Platform Communications (OPC) allow users to access high-speed, high-resolution data.

Live OPC data typically can be accessed using the Rockwell Automation FactoryTalk® Linx gateway's OPC server interface. With access to a facility's raw data, it's easier to assess a process' dynamic behavior and calculate an accurate model. Using OPC, process engineers can routinely access data sampled at sub-second speeds.

To tune PID loops using live data, it's necessary to have data collectors "on" the network. This is more difficult than some might want to acknowledge in part due to the isolated nature of most communications networks and the steady uptick in cyberthreats. A typical production facility may have only a couple workstations connected to the control network. Most IT professionals have an unfavorable view of any third-party software, let alone controller tuning software.

Though PID tuning is a central part of any process optimization initiative, it isn't essential to day-to-day operations. This view holds true despite the need for high-speed, high-resolution data when tuning. The same applies to monitoring and analytics tools. While all of these belong on a facility's business network, archived data is substandard for use by most applications.

A High-Resolution Approach

It's now possible for production and engineering staff to access process data from the business network prior to compression and archiving, addressing the needs for both high-resolution data and network security.

A new approach can access live data directly from FactoryTalk® Historian SE on a pre-compression and post-exception basis. I'll refer to it as "live-historical" data. Using the Asset Framework SDK, this form of data can be captured via FactoryTalk Linx and delivered via the FactoryTalk Live Data (FTLD) interface

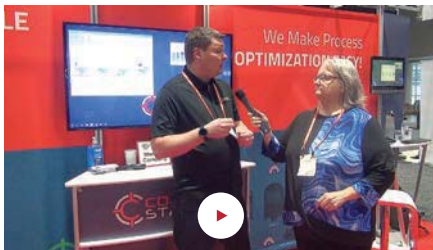


VIDEO

PID Tuning Software Uses State-Based Analytics

In this video, Theresa Houck, Executive Editor of *The Journal From Rockwell Automation and Our PartnerNetwork* magazine, interviews Bob Rice from Control Station as he demonstrates the company's PlantESP™ loop performance monitoring software's state-based analytics, which matches analytics to conditions in which plants operate to help users identify where changes occur and facilitate better root-cause analysis.

Watch the video from the 2022 Automation Fair® event at <http://bit.ly/3gVYUqK>.



before it's subjected to standard compression protocols that reduce the data's resolution.

The same data that's sampled at 1-second or even sub-second speeds by process sensors now can be used to model a process' dynamics. Since the point of access is within the confines of a facility's business network, it conforms with security protocols and significantly reduces IT-related cybersecurity risks.

FactoryTalk Linx and the FTLD interface serve as the centerpiece for this new live-historical data option. Using the interface, IT staff can specify scan classes and set speeds at which process data can be requested from each PID controller. Point exceptions can be applied to reduce the amount of data that the interface transfers to the FactoryTalk Historian SE archive.

As such, point compression serves to lessen the amount and cost of data that's ultimately stored in the archive. This approach makes high-quality data available to controller tuning tools and to a facility's other process monitoring and analytical tools.

Live-historical data provides a new way to use software technologies, like our LOOP-PRO™ TUNER, without the added complexity and security concerns involved with accessing data from a facility's control network. Like Non-Steady State (NSS) Modeling, live-historical data makes it easier for continuous plant-wide process optimization and to access information needed to calculate accurate models and tune PID control loops. ●

Q CONTROL STATION, INC. Based in Manchester, Connecticut, Control Station offers the LOOP-PRO TUNER software that simplifies tuning of PID controllers, and PlantESP™ for monitoring plant-wide performance of control loops.



WHITE PAPER

Successfully Optimizing Regulatory Controllers Without Risking Data Security



Visit <https://bit.ly/tj0123cswp> to download the full white paper, "Successfully Optimizing Regulatory Controllers Without Risking Data Security," from Control Station. Get information about the pitfalls of historical data and some challenges of using live data. Learn how to use "live-historical" data captured via FactoryTalk® Linx and delivered via the FactoryTalk Live Data interface, and get step-by-step instructions on how to tune PIDs using live-historical data.

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Cloud-Based Monitoring

Netilion Water Network Insights (NWNi) from Rockwell Automation Strategic Alliance Partner **Endress+Hauser** is designed to provide reliable, around-the-clock monitoring of flow, pressure, temperature, level, water quality and other measurements.



This software service connects all water supply systems, allowing service providers and water associations to manage multiple control and data sources through a single interface. These sources include field devices, industrial controllers, data transfer components, data recording and archiving devices, analysis and forecasting tools, and others.

NWNi provides access to all measurement data gathered in a water network and transmitted to the cloud, whether its users access the system from a control-room computer or remotely via laptop, tablet or smartphone. The web-based interface provides complete system monitoring. When limit values are exceeded, or in the event of failure, it delivers alarms to users via e-mail, SMS or push notifications.

On-Machine Drives

The **Allen-Bradley® Armor™ PowerFlex® AC variable-frequency drives** from Rockwell Automation are designed to provide quicker installation, simple commissioning and predictive maintenance. As



an on-machine solution for industrial motor control, the drives move controls and hardware out of a cabinet and onto the machine, closer to the application. This can help simplify machine designs and minimize costs and time to deploy.

Designed for harsh environments, the smart drives include an embedded EtherNet/IP™ dual-port switch, providing fast collection of real-time data. The drives also monitor component life, allowing users to predict and schedule component replacements to help avoid costly unplanned downtime.

PRODUCT SPOTLIGHT

NETWORK MAPPING SYSTEM

Strategic Alliance Partner **Panduit Corp.**'s RapidID software-enabled network mapping system for smart, scalable and efficient connectivity solutions is designed to reduce the time and cost of patch cord documentation by up to 50%.

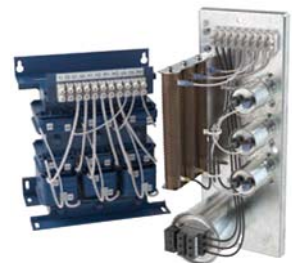


By using pre-labeled Panduit patch cords and the RapidID Bluetooth-enabled handheld scanner, network engineers can quickly, easily and more accurately place and trace cables. The system automates the labor-intensive and error-prone cable documentation process to reduce the risk of a network outage.

The system is an alternative to traditional manual approaches and is suited for building a new telecom room, locating installed cabling or replacing a network switch.

Electronically Commutated Motor Filter

Technology Partner **MTE Corp.** introduces its Matrix Air EC Motor Filter designed to mitigate harmonics produced by electronically commutated motors (ECMs). The filter suits HVAC-R and data center cooling applications and other ECM installations such as conveyance systems and variable refrigeration flow equipment.

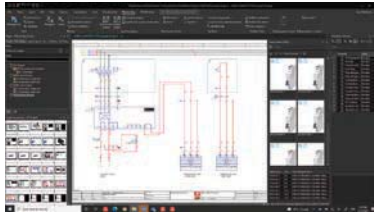


ECMs combine the benefits of DC electric motors with integrated drives, but because they emulate VFDs, they can produce damaging harmonics that degrade and “pollute” lineside power quality. This can cause nuisance tripping, equipment overheating and problems with electrical utilities.

The filter resolves these harmonic issues to provide greater stability across fan speed ranges, allowing ECMs to operate at full speed and higher efficiency.

Engineering Design Platform

Rockwell Automation Technology Partner **EPLAN Software and Services LLC** introduces the Eplan Platform 2023 designed to increase time savings and performance. The latest features help streamline and accelerate project planning with new cloud-based device management and multistandard support for schematic macros.



Users can get results quickly, especially when working on international projects, with the integrated Eplan eStock, a simplified device data-management system for maintaining and accessing data via the cloud. This makes collaboration even easier and reduces coordination times and media disruptions.

The new 3D graphics core, an optimized cable editor and the new Insert Center also improve performance and transparency for engineering.

PRODUCT SPOTLIGHT

MOUNTING SYSTEM PLATFORM

The **CrossBoard® system** from Rockwell Automation is designed to provide flexibility in motor control and protection devices, and keeps panels clean, organized and compact. The out-of-the-box system comes as a complete base unit — a bus structure with IP20 touch-safe plastic housing. Components simply snap onto the CrossBoard without tools, meaning the connection is automatic.



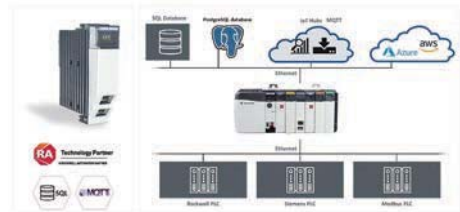
Components can be easily removed and snapped back onto another section of the CrossBoard. For safety reasons, the lock mechanism must be released with a screwdriver to prevent accidental removal of any components. The fast, easy and safe exchange of modules reduces time and saves cost when adding extensions and updates.

Module Supports PostgreSQL Database Connectivity

Rockwell Automation Technology Partner **Softing Inc.** has extended its tManager to deliver streamlined connectivity between Rockwell Automation Logix controllers and PostgreSQL databases. This allows easy, secure and robust production monitoring, recipe downloading, high-speed sorting and industrial analytics at scale.

tManager is a ControlLogix™- or CompactLogix™- compatible module that inserts into the chassis and supports bidirectional data movement between the controller and databases or cloud, with no server, coding or protocol translation required.

PostgreSQL is one of many database types used by IT departments at industrial facilities to manage large quantities of production data.



Updated Inclinometers

Technology Partner **POSITAL-FRABA Inc.** has updated its TILTIX inclinometers with new three-axis MEMS accelerometers, enhanced firmware and a new housing concept. These changes allow the company to streamline manufacturing processes and reduce delivery times while maintaining full environmental protection.

The new versions are compatible with older models, with identical mounting footprint and support for CANopen® and analog communications interfaces, while offering improved accuracy and better signal-to-noise ratios.

The inclinometers are used in motion control and safety assurance systems to measure a device's orientation with respect to the earth's gravitational field. An enhanced programming function lets users to set the measurement range of each device through simple configuration updates.



PRODUCT SPOTLIGHT

MICRO CONTROLLERS AND DESIGN SOFTWARE

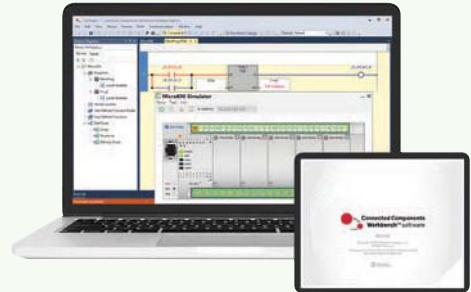
Machine builders can design and program stand-alone machines more efficiently with the new **Allen-Bradley® Micro850® and Micro870™ 2080-LxOE controllers** using the latest **Connected Components Workbench™ software** release from Rockwell Automation.

The controllers are designed to ease project implementation with the new DNP3 protocol, a set of open standard communication protocols used in SCADA and remote monitoring systems for precise data reporting. The controllers also have expanded DF1 support, two-way simultaneous and two-way alternate communications, to help improve CIP Serial communications through full- and half-duplex and radio modem modes.

These connectivity capabilities address more application requirements, specifically in the water wastewater industry. The extended protocol support is designed to minimize conversion risk for MicroLogix™ to Micro800™ control system modernization. Users can boost productivity with the improved controller execution and I/O response performance, which speed up the design process for faster project development.

New capabilities in Connected Components Workbench software v. 20.01 help advance design efficiency. The software is designed to simplify development of stand-alone machines. Users can save development time through faster data transfer rates with upload and download performance improvement by 23% and 40%, respectively.

The software's expanded DNP3 and DF1™ support, including half-duplex and radio modem modes, helps ease configuration and help improve system security through a new password set/verify and user project encryption/decryption in the plug-in memory module.



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