

Life Is On

Schneider
Electric

Elevating performance

Schneider Electric process
control and safety solutions

schneider-electric.com/processautomation



Sustaining excellence

Building value in today's ever-changing industrial world requires forging new connections among people, processes, and technologies. Schneider Electric's process automation solutions help you make those connections — so you can drive your operations to higher and higher value. Proven Schneider Electric™ technology and expertise enable your success.

- Process automation systems and solutions that have been tested in the world's largest and most demanding oil, gas, chemicals, power, food, beverage, water treatment, life sciences, and mining operations
- Automation talent that understands the intricacies of your operations
- Decades of experience in translating technology features into production value
- A global partner network of automation system integrators, distributors, and process OEMs
- An unrivaled portfolio of technology and services that is helping define the future of integrated process and power management

And with annual revenues of \$27 billion and growing — plus our ranking among the world's most respected industrial automation and energy management providers — rest assured that we will deliver on our promises.

With connected systems and solutions from Schneider Electric, your people and assets will be safer and more secure. Your operations will be more reliable. Your business will run more efficiently. And your teams and processes will be better prepared for whatever tomorrow brings. With Schneider Electric, Life Is On™.

60%

Schneider Electric enables more than 60 percent of global LNG production

90%

9 out of 10 of the world's largest mines use Schneider Electric technology

80%

Schneider Electric helps manage 80 percent of the world's largest pipelines



Automation for a new age

As the global industrial landscape continues its transformation, companies all over the world are looking for innovative ways to respond to emerging economic and business realities.

New and different market dynamics are forcing industrial organizations to take advantage of budding technology trends and ever-more-sophisticated solutions quickly and affordably. Traditional methodology will help, but resolving today's critical challenges requires applying process automation systems and assets in new ways. That's the pathway to becoming and remaining a sustainable, profitable enterprise — and it all starts with new levels of connectivity.

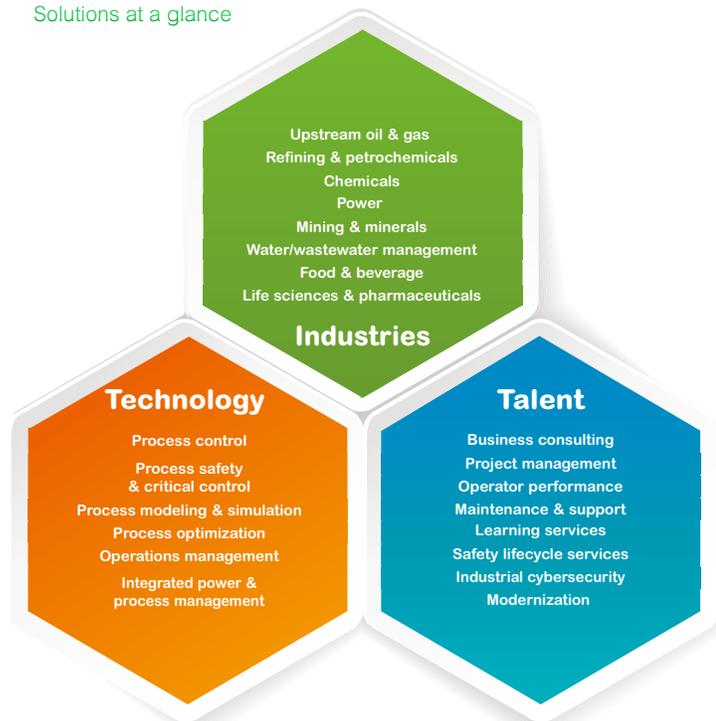
The emergence of the Industrial Internet of Things (IIoT) is pushing information technology (IT) and operating technology (OT) closer and closer together. We are already helping our customers around the globe take advantage of this fundamental shift. Our experience with the OT that controls the world's most important processes, coupled with our ability to connect it with IT, enables our customers to simplify their operations and make better decisions every day. We leverage and apply the power of this new connectivity, including trends like big data, virtualization, mobility, and social media to increase your safety, reliability, efficiency, and — especially — profitability.

We are already applying such developments, improving project delivery schedules by as much as 35 percent through our FLEX offering, which decouples software from hardware and enables real-time collaboration.

By optimizing your automation and control systems and by applying advanced analytics, systems management, predictive maintenance, and managed services, we generate actionable information to help you make the most effective operational and business decisions — and realize new levels of value.

Schneider Electric Process Automation

Solutions at a glance



“The IIoT strengthens our capabilities so we are better able to help customers extend the life of their assets, enhance decision making, and create a smart-enterprise control system that drives improved financial performance for the business.”

Gary Freburger, President
Process Automation, Schneider Electric



More than 100 years of leadership and innovation

Schneider Electric's Foxboro, Triconex, and Modicon brands largely defined the shape of process automation, and we continue to innovate. We offer all the automation ingredients essential for sustainable operation of a modern processing plant. Here are just some of the flagship products from our broad process control, networking, optimization, operations, and information management portfolio.



Process control

Foxboro Evo process automation system

Evolved from decades of collaboration with the world's leading process manufacturers, the Foxboro Evo™ system elevates the efficiency, productivity, and reliability of every operation it controls. It features proven control technology for nonstop operation, and embedded user guidance for unmatched productivity and safety. Its engineering infrastructure is the automation industry's most open and advanced object-oriented environment for flexible, sustainable operations.

PlantStruxure PES

Our PlantStruxure™ PES process automation system meets the demands of hybrid production facilities, often found in the food and beverage, metals and mining, and water/wastewater industries. It combines the ease and openness of PLCs and SCADA with the integration, single database, and powerful diagnostics of a traditional distributed control system (DCS). Innovative and energy-aware, PlantStruxure PES meets the needs of modern production facilities while delivering on growing energy management requirements.

Modicon PACs

Schneider Electric continues the tradition of excellence started when we introduced the first programmable logic controller (PLC). To provide an economical way to deliver functional control in the gap between the PLC and the DCS, we offer industrial process automation controllers (PACs). Modicon™ PACs feature redundancy functionality, native Ethernet, embedded cybersecurity, and common programming software across all processors.

Telemetry and SCADA systems

Schneider Electric telemetry and SCADA systems monitor and control field operations across a widely dispersed infrastructure. From simple reservoir level measurements and pipeline monitoring to emerging ERP-integrated optimization initiatives, our wired and wireless remote sites offerings help you keep up with regulations, rapid technology changes, and industrial trends.

“We were impressed with the Schneider Electric attitude throughout the project and their ‘change the game’ approach. It is one thing to have a good project plan in place, but another to actually execute and deliver.”

— Senior Project Manager, Bluewater floating production storage and offloading (FPSO) facility, on its recent migration to Schneider Electric control and safety systems

Process safety and critical control

Triconex systems, expertise, and lifecycle services

For protecting your most valuable assets, count on market-leading Triconex™ solutions. Our systems have been running for more than 1 billion hours without failure on demand. Our Tricon™ CX, Tricon, Trident™, and Tri-GP platforms deliver continuous safe operation and maximum availability for emergency shutdown, turbomachinery, fire and gas, burner management, and HIPPS systems. Using one supplier for many applications cuts capital costs and optimizes overall lifecycle costs.

Operations management

Wonderware industrial software applications

If you've been wondering how to make the best use of all the data your production systems generate, wonder no more. Schneider Electric's market-leading Wonderware™ industrial software facilitates the conversion of big data to big advantage. Manufacturing execution systems (MES), batch management, data reporting, data analysis, and enterprise manufacturing intelligence (EMI) are just a few of the many applications we offer.

Simulation, modeling, and optimization

SimSci software

Plan, design, and improve your processes with advanced SimSci™ software. Model your operations with software based on first principles. Train operators in safe, highly realistic 2D and 3D simulations. Optimize operations in real time. Optimize your supply chain with SimSci Spiral planning and scheduling. Schneider Electric has developed advanced applications that are as easy to use as they are powerful. Your operators can rapidly apply high-level computational capabilities to give your process a true competitive edge.

Integrated power and process management

Automation platforms and components

Schneider Electric supplies a comprehensive range of products and services for integrating automation and electrical systems. We are a leading provider of variable speed drives, motor control centers, and low- and medium-voltage electrical switchgear. Our Electrical Houses provide a complete power distribution substation, which is designed, engineered, tested, validated, and delivered to your site.

48

Schneider Electric works with 48 of the top 50 chemical companies

20%

Schneider Electric enables generation of more than 20 percent of the world's power

30%

Schneider Electric helps refine 30 percent of the world's crude oil





Implementation and optimization services

While customers often come to us for our innovative technology, it's the expertise of our people that keeps them coming back. We'll make your life easier, elevate your operation's performance, and help you drive production value to heights you may not have imagined possible.

Business consulting

The more complex and global your business becomes, the more likely a well-honed automation strategy can give you a powerful edge. Our experts will work with you to assess business strategies, resources, and constraints — then draw on our industry knowledge, experience, and best practices to help you find a workable course of action. Our clients typically see a return on investment (ROI) in 6 months, and a continuous return on assets (ROA) after that.

Project management

After fighting to fund your CapEx project, the last thing you want to do is request an additional budget, manage overruns, or explain why the project is delayed. Our Flexible Lean Project Execution (FLEX) program is designed to make sure you avoid this situation. We use the latest in cloud-based collaboration tools, reusable objects, and project templates, refined by use in large-scale projects throughout the world. We are

prepared to be your main automation contractor (MAC) or handle any phase of your automation — including control, safety, instrumentation, and electrical.

Operator performance

In addition to keeping your assets up and running, our optimization experts will help them run as efficiently as possible. We'll estimate the payback — and make sure it materializes.

Regardless of what industry you're in, count on us to take your operators' performance to the next level.

Maintenance and support

Once your systems are running, we're available to help you make the most of them. We have experts on call 24/7, anywhere in the world. We can also help you implement preventive maintenance procedures so that problems are solved before they happen.

“We now have a supportable system with the capacity we need to proceed with a number of control improvements, which were being held up by the limits of our previous system. Not only was the migration completed with minimal impact on routine plant operation, it has also been possible to retain much of the look and feel of the original system.”

— C&I Engineer & DCS Upgrade Project Manager, Keadby Power Station, Scunthorpe, U.K., on migrating to Schneider Electric control technology

Learning services

Keeping abreast of vendor product changes and technology advances is key. We offer a full curriculum of classroom, online, and on-site training programs — to help you make the most of our systems in the context of your business needs.

Safety lifecycle services

Many of the systems that have been so reliable to date are beginning to age — to the point of presenting potential safety incidents. Likewise, many of the safe processes your workforce has practiced may be retiring with them. We help you stay compliant with current standards such as IEC 61511 and IEC 61508. Services we provide across the lifecycle of your operations range from expert installation through validation of installed systems, and beyond.

Industrial cybersecurity services

Stuxnet was the first widely publicized industrial cybersecurity event, but it won't be the last. Industry today is under constant assault. Schneider Electric has one of the world's largest and most experienced cybersecurity consulting teams to minimize your vulnerability and maximize your resilience.

Modernization services

You are the best judge of whether your assets are obsolete or not. When they are, we'll help estimate what useful life is left, and suggest how to extract maximum value. Instead of replacing aging turbomachinery, for example, maybe all you need is a controls retrofit. Or if you can no longer find spare parts for your DCS, we may be able to upgrade in just a few days, without disturbing legacy wiring and terminations. Our free modernization audit will provide step-by-step guidance in future-proofing your plant.

Process automation in practice

With Schneider Electric capabilities at your service, business and environmental sustainability will no longer be mutually exclusive. With us at your side, you're achieving sustainable business success across the board, and not just with the environment. Business and plant floor systems operate with a better understanding of each other, and with greater sensitivity to safety, security, and environmental constraints.

Here's a sampling of what's possible with Schneider Electric solutions:

Refining and petrochemical

In Jamnagar, India, Reliance — the world's largest petroleum refinery and petrochemical complex — doubled capacity to more than 1.3 million barrels per day. Schneider Electric provided controls, safety systems, refinery off-sites automation solutions, asset management software, alarm management, and process instrumentation.

Midstream oil and gas

Dynegy Midstream Services reduced operating expenses by \$58 million and maintenance costs by \$7 million in its first year of using Schneider Electric's patented approach for getting strategic information to decision makers at all levels of the enterprise.

Chemicals

Arkema, a global producer of high-performance materials, industrial specialties, and coatings, boosted productivity at its Rotterdam plant by 25 percent, augmenting its control and safety systems with a wireless communications and alarm management system.

Power

Puerto Rico Electric Power Authority converted to dual-fuel operations to provide reliable, cleaner energy, safely and more sustainably, while also meeting long-term strategic and regulatory compliance objectives.

Mining

U.K.-based RecyCoal gained accurate and validated information across its entire plant and supply chain by integrating plant and operations management.

Food and beverage

New Zealand's Yashili baby formula production plant integrated recipe management, ERP, and PLC control for six different products.

Water/wastewater

Kværndrup Waterworks of Denmark balanced price and performance in a SCADA system upgrade to a PAC system, which also helped optimize energy usage and IIoT integration.

Life sciences

Sanofi Pasteur, the world's largest dedicated vaccines producer, achieved an estimated 30 percent increase in overall equipment effectiveness (OEE) and improved maintenance operations with the installation of Schneider Electric PLCs.



“The most outstanding benefit has been the data collection process and our ability to trend it, produce reports, and process issues much more quickly.”

— Control Officer, Cairns Water, after using Schneider Electric industrial software solutions

Around the globe, Schneider Electric and its partners apply deep expertise and advanced specialization in both process control and energy management, integrating plant technologies to deliver more value. With locations in more than 60 countries, including a network of more than 800 partners, we are structured to satisfy your needs wherever you are.

Our network of System Integrator Alliance Partners combines expert system integrators, proven solution architectures, best-in-class hardware, and industrial software to help you maximize plant performance.

When you choose products or services from Schneider Electric or one of our alliance partners, you can be confident that your projects will be executed with less risk, higher quality, and local support.

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