Rockwell Automation

Harnessing the power of smart machines

How OEMs can lead the way with next-level innovation

BEGIN

A new world of possibilities is **coming into focus**

New realities in skills shortages, data demands, mass customization and sustainability practices have changed the industrial landscape.

This new state of the industry requires machine and equipment builders (OEMs) to bring forth solutions that boost productivity, enhance flexibility and support greener operations - all while enabling their customers to maximize the value of their production data.

To meet these emerging challenges, a wave of disruptive machines are being developed. But the transformation isn't just about delivering equipment to customers - it's also happening from within. Smart machine technologies are enabling OEMs to rethink their design processes, accelerate time to market and drive end-to-end innovation. With these new technologies as a foundation, OEMs have the opportunity to align with their customer's future needs, differentiate themselves in the market and open the door to new revenue streams.

How does smart machine technology enable OEMs to gain a competitive edge?

Meeting today's dynamic demands are giving rise to a new generation of machines - ones that are more efficient, easier to operate, and data-enabled by design. OEMs that embrace smart machine technologies are not only standing out in the market but also delivering greater value to their customers.

While the starting point depends on your unique goals and challenges, we've identified four key areas where our smart machine solutions can help you unlock new possibilities and accelerate business growth:

- Speed up design cycles and virtually commission systems with digital design software
- Extend intelligence across your electrical panels to enable faster builds and smarter operation
- Drive down machine cost, enable flexibility and speed installation and start up using decentralized design
- Put flexible data management at the core of your designs to unlock the full potential of data and build future-ready machines and equipment

In order to achieve this, you need a solid technology foundation to underpin your machines and equipment.

Rockwell Automation Integrated Architecture® is where to turn.

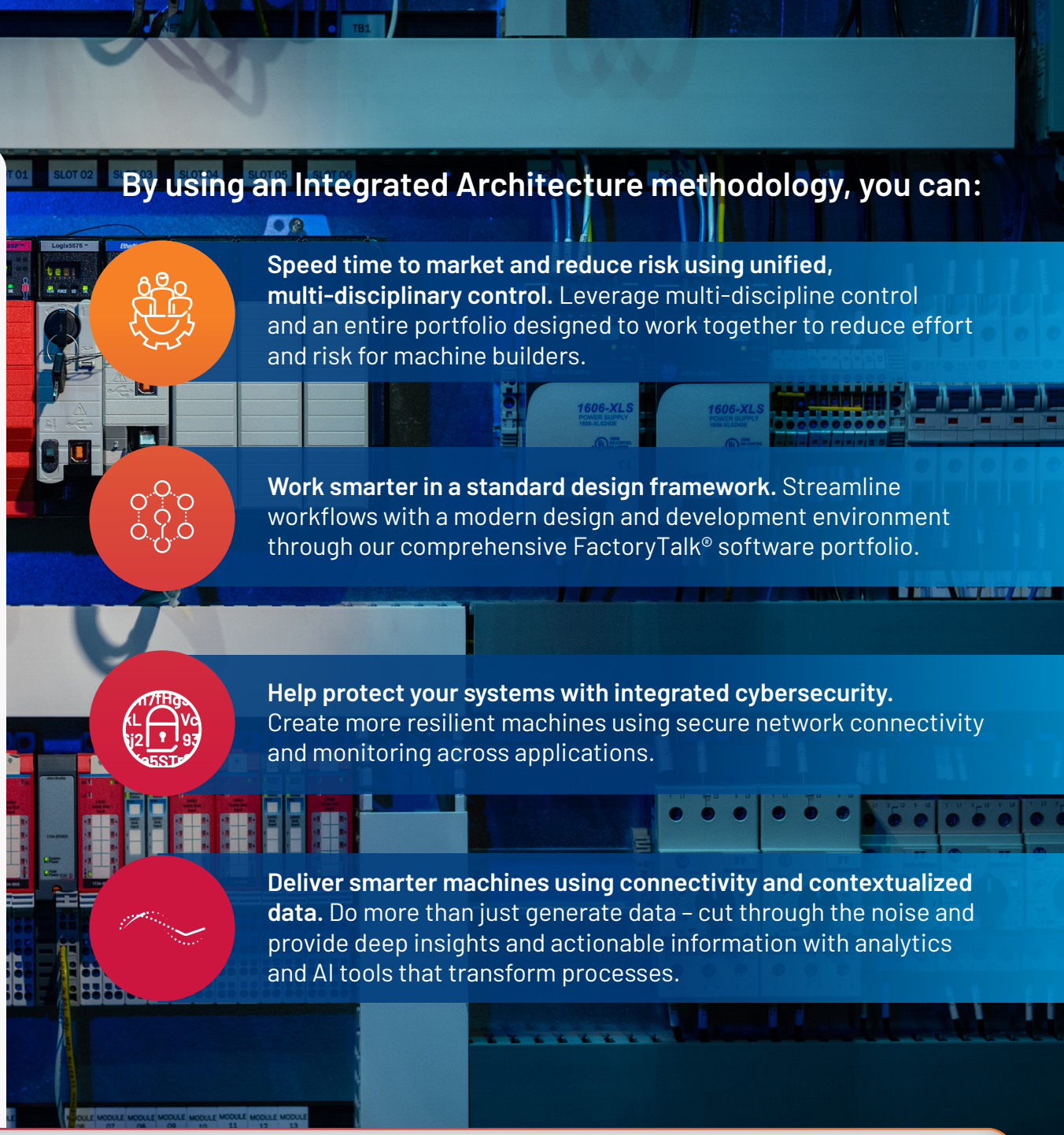
Read on to learn more.

Integrated Architecture

The technology foundation for harnessing the data your customers need.

Your customers are looking for machines that provide next-level performance and deliver more value through seamless integration into their plant operations. By using our Integrated Architecture approach, you can simplify your path to smarter, better-connected machines and equipment using a unified control and information system that serves as a central control platform, a standard design framework and an environment that brings together smart devices, intelligent communications, visualization tools and cybersecurity.

No matter the type of machine or piece of equipment you design, you can use a centralized, multi-disciplinary control solution that simplifies your designs and delivers data that enables advanced analytics, AI features and more.



By using an Integrated Architecture methodology, you can:

Speed time to market and reduce risk using unified, multi-disciplinary control. Leverage multi-discipline control and an entire portfolio designed to work together to reduce effort and risk for machine builders.

Work smarter in a standard design framework. Streamline workflows with a modern design and development environment through our comprehensive FactoryTalk® software portfolio.

Help protect your systems with integrated cybersecurity. Create more resilient machines using secure network connectivity and monitoring across applications.

Deliver smarter machines using connectivity and contextualized data. Do more than just generate data – cut through the noise and provide deep insights and actionable information with analytics and AI tools that transform processes.

Deliver smarter equipment with a data foundation that adapts to what's next

There is a vast amount of data available in the machines and equipment that you supply. But, the vast volume of unstructured data can make extracting actionable insights prohibitively difficult and time-consuming. What if there was a way to cut through the noise and access the untapped potential in this information? With our DataReady™ solutions you can overcome this challenge by organizing data into predefined or custom information models. This empowers users with the data insights they need today, while structuring it so that it is flexible to changing requirements.

How can you achieve more using DataReady solutions?

Unlock the value of data trapped in machines and equipment

- **Deliver organized and contextualized equipment data** even when requirements change using pre-defined or custom information models
- **Enable productivity gains** using information from the control level that is organized, contextualized and ready to deliver value
- **Expand your solution value** by seamlessly sharing data with nearly any external application

Deliver new data insights with existing engineering expertise

- **Design equipment with data at the center** without the need for specialized data scientist skills, thanks to Smart Objects data contextualization
- **Accelerate time to market** using lifecycle-managed content libraries that enable data insights without the need for custom coding
- **Better visualize data using FactoryTalk® Optix™** to help boost quality and improve productivity with an intuitive display of actionable information

Differentiate your offering with more data-driven, intuitive equipment

- **Support more efficient operations** with insights into key machine events, such as prioritized maintenance alerts, OEE values and WAGES utility measurements
- **Enable operators** to manage sophisticated equipment without extensive training
- **Optimize equipment remotely** for faster, more flexible troubleshooting

Simplify your path to more valuable machine designs

Manufacturers are demanding that their machines do more, but it can be difficult or impossible to address an expanding list of requirements with rigid designs. Our On-Machine™ solutions make it possible to simplify your machines, while enabling them to become more flexible and modular than ever. Using this breakthrough technology. you can unlock creative and unique equipment solutions by reducing or eliminating centralized enclosures and designing machines that are easier to diagnose and repair.

30%
lower installation costs on average with simplified designs

Up to
90%
reduction in cabling/ terminations by daisy chained connections that provide power and communication

55%
faster builds using QuickConnect technology instead of manual wiring

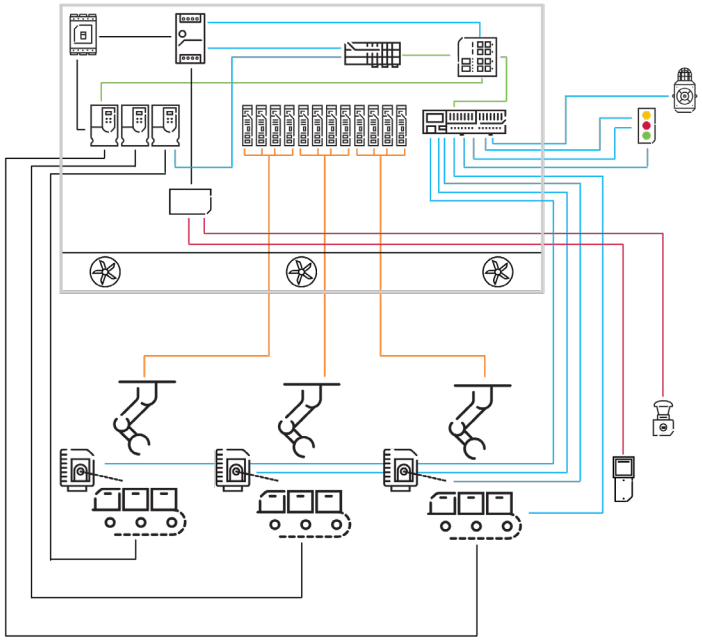
22%
less enclosure space by field mounting control components

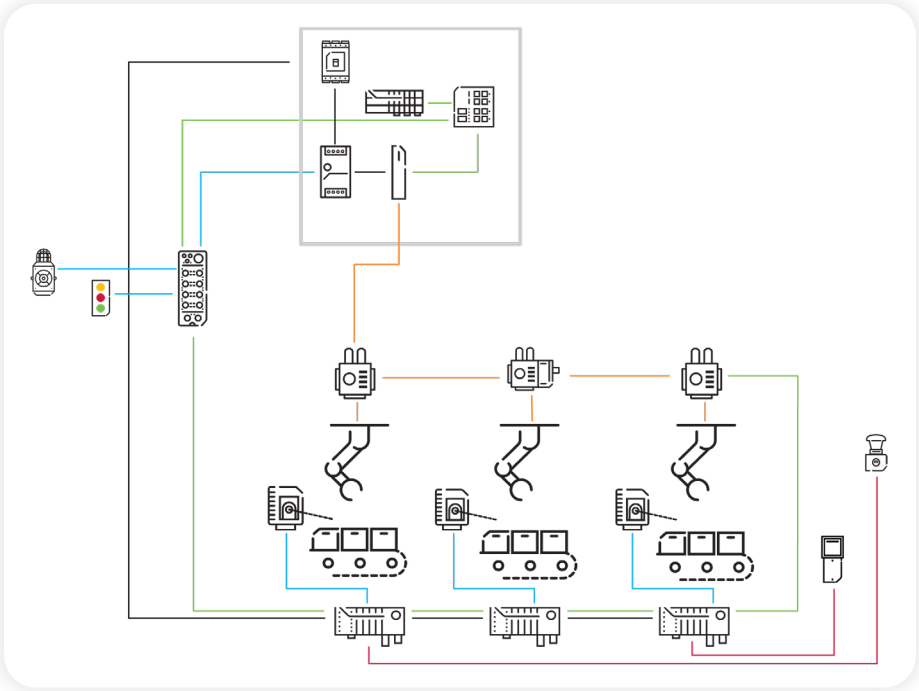
Revolutionize your machines using On-Machine technology

CENTRALIZED DESIGN

IMPROVED →

DECENTRALIZED DESIGN





3-phase motor power | Signal and communications | I/O | Safety | EtherNet/IP

ON-MACHINE PORTFOLIO INCLUDES:

Motor control | Motion control | IO | Power supplies | Safety | Sensing and signaling

Unlock value through modern panel desgin

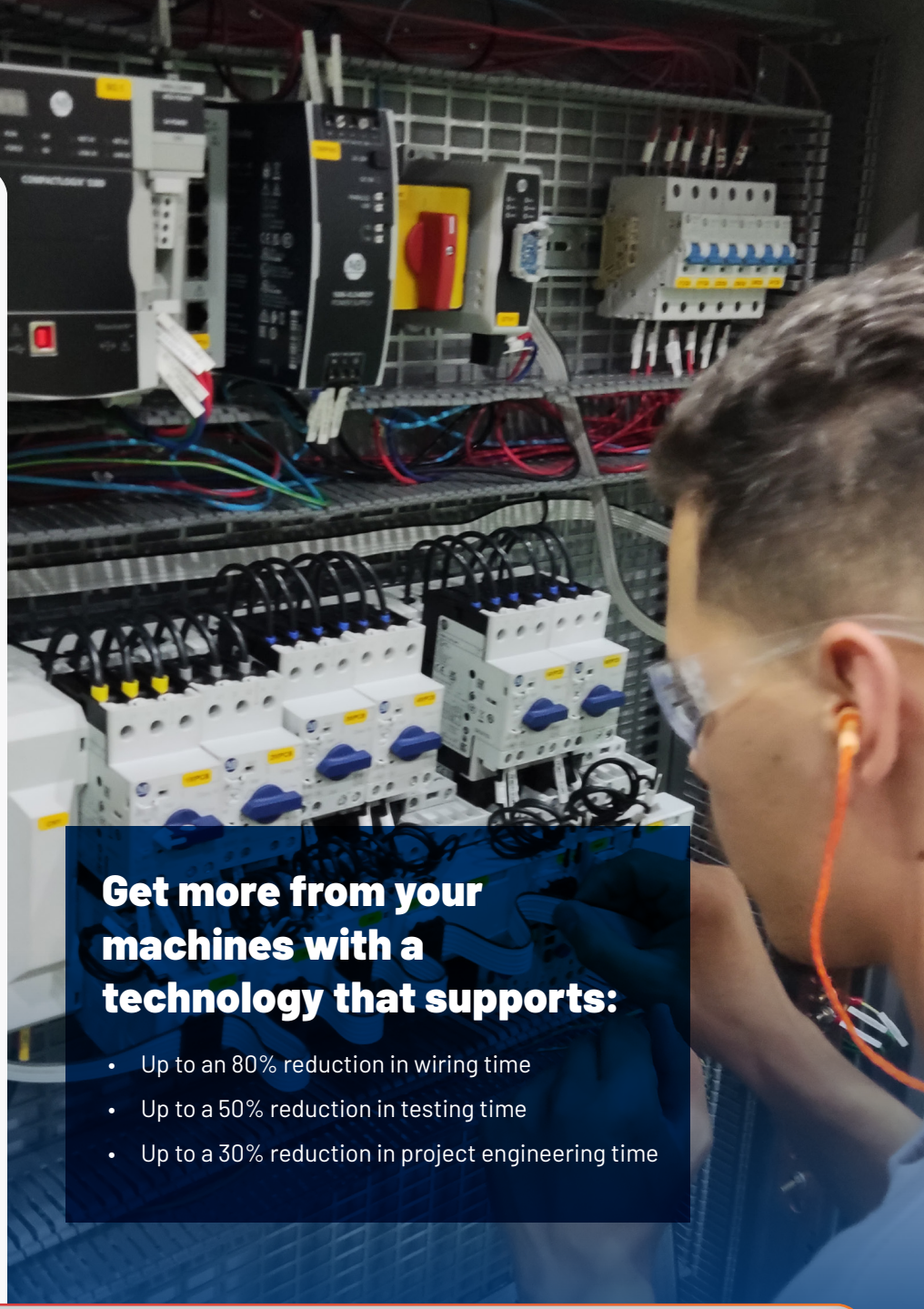
An optimized control panel is an important part of helping your customers achieve compliance, remove barriers to productivity and improve overall equipment effectiveness (OEE). It is also critical for delivering reliable machines that best make use of valuable floor space.

Using our panel optimization solutions, you can bring new levels of intelligence and innovation into your designs. With compact profiles, more reliable connections and seamless access to real-time data, these technologies can help you accelerate time to market, reduce risk and increase the profitability of your offering.

TECHNOLOGY SPOTLIGHT

EtherNet/IP In-Cabinet Solution

M100 Electronic Motor Starter

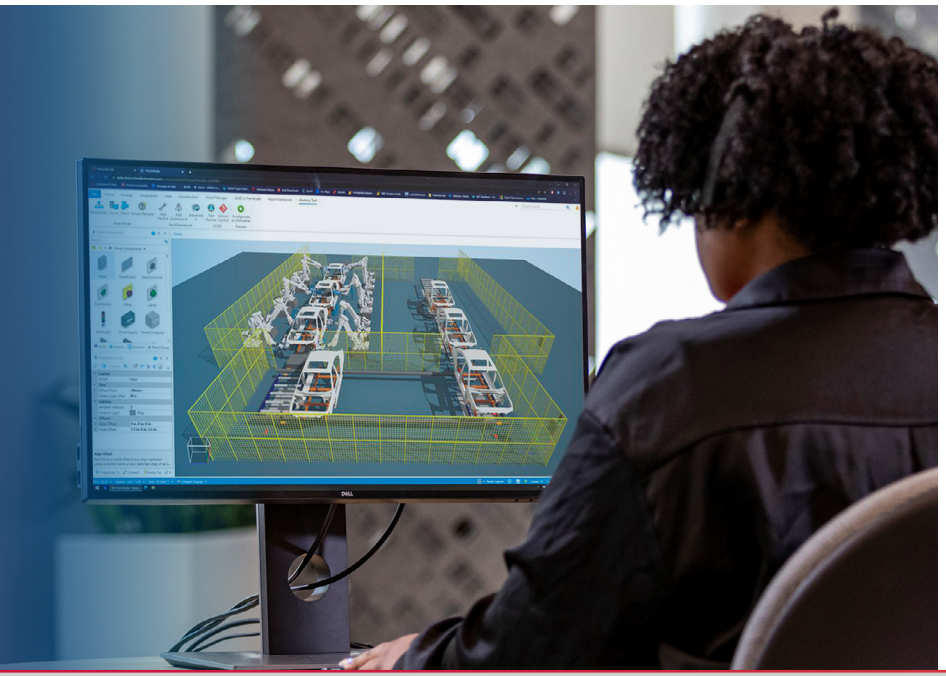


Get more from your machines with a technology that supports:

- Up to an 80% reduction in wiring time
- Up to a 50% reduction in testing time
- Up to a 30% reduction in project engineering time

Bring ideas to reality in a low-risk digital environment

Are you ready to supercharge your design process? With our Emulate3D® digital twin software, you can work faster and smarter in a digital environment and then carry that efficiency through your product lifecycle to add more value every step of the way. This digital platform empowers you to design, test and refine in a consequence-free environment and optimize your solutions before committing to a final design.



Using our Emulate3D digital twin software you can:

- **Provide deeper, more compelling insights** into proposed solutions in the pre-sales/pre-project phase.
- **Establish stakeholder confidence** and maintain it throughout the project using an accurate digital representation of your solution.
- **Speed design cycles** by using virtual commissioning to identify and remedy potential issues earlier.
- **Lower risk** by verifying performance and throughput in a virtual environment before committing to a physical build.
- **Reduce design time and costs** by shifting important controls programming tasks earlier in the project.
- **Maximize efficiency** using functional digital models to identify and solve issues once, and then save the fixes so they are automatically incorporated into your future designs.
- **Provide expert support** remotely in real-time and reduce delays, on-site visits and travel expenses.

Expanding your reach

Meet growing customer needs with additional services

End users are increasingly looking to OEMs like you to help them get more from their operations. This transformation is leading towards fewer interactions that are purely transactional and replacing them with a collaborative approach focused on continuous improvement and shared technological advancements. They are looking for trusted partners to ensure the success of their operations throughout the equipment lifecycle. Now that you've built a foundation using smart machine technology, you're positioned to meet this need and expand your business through additional services.

With smart machine technology at the core of your offerings, you can provide more value to your customers, unlock new service revenue streams and create a competitive edge that differentiates your business in the market.

With end users looking for partners who can not only supply equipment but also help ensure the long-term success of their production, **you can seize this opportunity by providing services backed by the latest advanced technologies.** For example, digital twins can be used to virtually integrate machines and remote access software can deliver faster troubleshooting and better worker training.

Rockwell Automation

Connect with us.

rockwellautomation.com — expanding **human possibility**®

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