Rockwell Automation

FUEL EFFICIENCIES WITH **SMART AND INTEGRATED PRODUCTION**

Key Technologies to Drive Production for Tier 1 and Drivetrain Manufacturers.

SOME THINGS HOLD TRUE FOR ALL AUTOMOTIVE SUPPLIERS

Tight profit margins mean you're constantly looking for ways to lower total costs, squeeze more efficiencies out of your processes and get the most from your workforce.

You're also under pressure to get your offerings to market as fast as possible to help established automakers and startup electric-vehicle (EV) makers stay ahead of the competition.

And at the same time, different categories of automotive suppliers have different business priorities.

Your needs as a supplier are unique and Rockwell Automation can help increase efficiencies in your plants and accelerate your time to market with smart manufacturing technologies and solutions.

Supporting automotive suppliers in every phase

▶ ## BODY AND TRIM SUPPLIERS

PUT PRODUCTION IN TOP GEAR: Solutions that increase efficiencies

You have many of the same goals as the customers you serve – you need to produce high-quality automotive products as efficiently and cost effectively as possible. The challenge: you have only a fraction of the resources that they have. When you work with us, you benefit from our proven, highly integrated control and information solutions and services, and decades of automotive industry experience. We can help you optimize efficiencies and manage risks throughout your operations to help you deliver components at a rapid speed.

▶ ## SEATING AND INTERIOR SUPPLIERS

IMPROVE PRODUCTION MANAGEMENT: Optimize labor-intensive applications

Your success depends on your ability to manage highly labor-intensive production applications to get high-quality components out the door as quickly as possible. Rockwell Automation can help you improve production management with smart manufacturing solutions that are proven in automotive production. Our services and solutions can help you manage inventory and product flow in plants, which can reduce your work in process and lead to fewer bottlenecks.

▶ ## EV DRIVETRAIN SUPPLIERS

GROW YOUR MARKET SHARE: Meet EV demands with smart solutions

As you help established automakers and new EV companies create the all-electric fleets of the future, you need to give them powertrain manufacturing solutions that are smart, flexible and scalable. This will allow them to adjust production to keep up with demand and help make sure they're positioned for future technology advancements. Our smart machine solutions can help you create smart, flexible drivetrain machines. What's more, our digital engineering capabilities can help you get these machines to market faster and with differentiated value that set them apart from the competition.

BODY AND TRIM SUPPLIERS

PUT PRODUCTION IN TOP GEAR

Solutions that increase efficiencies can accelerate your speed to market and benefit the bottom line. Our end-to-end production solutions help simplify work and speed-up operations, so you can meet your business goals even as you contend with challenges like skills shortages.

GAIN BETTER BUSINESS INSIGHTS

Accelerate operations and keep up with customer needs with smart technologies that can help uncover productivity-improvement opportunities and drive better decision-making.

ENABLE SPEED AND AGILITY

Improve production flexibility with integrated intelligent conveyance and robotics technologies that move components through your plants at higher speeds with faster changeover.

EMPOWER YOUR WORKFORCE

Stay productive even amid skills shortages with services and solutions that address your top business needs and reduce burdens on staff.

MANAGE RISK

Better manage risks with safety and security solutions that can help you better manage worker safety, product quality and equipment obsolescence – all while improving productivity.

SIMPLIFY INTEGRATION

Optimize operations and reduce complexity with control and information solutions that can help you simplify integration.

DRIVING YOUR RESULTS WITH PROVEN TECHNOLOGY

GAIN BETTER BUSINESS INSIGHTS

Scalable MES software can automate data collection and drive decision-making in your operations to help manage complexity. It can also help make sure that materials are available for planned production sequences to keep lines moving. And enforceable instructions can help make sure workers build products to spec.

Scalable analytics software can turn your raw production into actionable insights that help operators make better decisions, helping you drive improvements in key areas like OEE, quality and throughput.

ENABLE SPEED AND AGILITY

iTRAK® and QuickStick® motion-control systems can help you create flexible lines and quickly react to market demands. The systems use software-configured move profiles for fast and easy changeovers. And their precision control and intelligent motion can help you optimize speed, improve efficiency and reduce bottlenecks.

EMPOWER YOUR WORKFORCE

Training operators in a virtual environment can help them more confidently do their jobs. Simulated scenarios can help operators become familiar with not only ideal operations but also events like faults. Operators can also make mistakes and learn from them in virtual training without any real-world impact. And you can require that they show competency before completing training.

Augmented reality (AR) can transform how people work and make them more efficient. For example, if a technician gets an alert that a machine's production rate is down, they can look at a digital twin of the machine in an AR environment to review its diagnostics and troubleshoot the issue. Digital work instructions in an AR environment can also provide step-by-step guidance for repairs.

Digital Twin supports more than just your workforce

Simulation software helped one customer identify bottlenecks in a final-finish system design that would have reduced capacity by 25%. The system was re-engineered, and the company ultimately saved an estimated $4 million by preserving equipment efficiencies.

DRIVING YOUR RESULTS WITH PROVEN TECHNOLOGY

MANAGE RISK

We offer integrated safety, where standard and safety controls are combined onto a single controller, software and network, allows you to take advantage of safety functions that can reduce downtime. Help protect your operations through solutions with built-in security and control products with CIP Security that can help secure the devices themselves and the data they transmit.

We also offer services that can help you implement robust cybersecurity across your operations. We can conduct a security assessment to help you understand your installed based and its associated risks. And our Threat Detection Services can help you monitor, detect and respond to threats to your production operations.

SIMPLIFY INTEGRATION

Our systems use one common control platform, one EtherNet/IP network and one design environment. Our software applications are also designed to easily integrate and scale. This makes it easier for you to access data and create meaningful insights for production staff. And it helps you more easily integrate smart devices and machines into your facilities.

SEATING AND INTERIORS SUPPLIERS

IMPROVE PRODUCTION MANAGEMENT

Optimize labor-intensive applications by using smart and flexible technologies that can help you increase efficiencies and address challenges like rework and workforce shortages.

GAIN NEW VIEWS INTO PRODUCTION

Improve performance in the areas that matter most to you like inventory management, quality and OEE with modern MES that schedules and orchestrates production.

MANAGE RISK

Optimize quality and rework efficiency by connecting your operations and empowering operators with real-time performance data and digital work instructions, while managing cybersecurity risks and improving worker safety.

EASE AND IMPROVE PRODUCT TESTING

Make end-of-line testing more efficient and cost-effective with collaborative robot solutions that can increase speed, precision and consistency in testing.

ENABLE SPEED AND AGILITY

Operate faster and more flexibly with integrated intelligent conveyance and robotics technologies that move components through your plants at higher speeds and reduce changeover times.

EMPOWER YOUR WORKFORCE

Stay productive even amid skills shortages with services and solutions that address your top business needs and reduce burdens on staff.

DRIVING YOUR RESULTS WITH PROVEN TECHNOLOGY

GAIN NEW VIEWS INTO PRODUCTION

Select a modern MES system that's right for you to help optimize production management and reduce work in process. The scalable MES brings an order into production, orchestrates the manufacturing process and tracks the order as it moves through the system, continuously monitoring KPIs and report back up to the ERP level. Coordinate all material-management activities and provide real-time inventory visibility and synchronize material flow in parallel with production to help make sure you have continued material availability for each run.

MANAGE RISK

By connecting stations in the assembly process to a common network though FactoryTalk® InnovationSuite platform, you can access real-time data and machine learning to better manage issues before they occur. Operators can use digitized work instructions and real-time performance data in an augmented reality experience to improve first-time pass rates and rework efficiency.

Strengthen your cybersecurity by understanding your installed base, its associated risks and standards, and regulations you must comply with. We can help you monitor, detect and respond to threats to your production operations through our Threat Detection Services. And our safety services can help you achieve compliance, reduce risk and optimize production while our design services support the development and confirmation of comprehensive safety systems.

DRIVING YOUR RESULTS WITH PROVEN TECHNOLOGY

EASE AND IMPROVE PRODUCT TESTING

Automate end-of-line testing to reduce time and labor costs in your process, allowing you to focus manual testing where you need it most. Collaborative robots in testing help increase speed and precision, achieve low failure rates and deliver more consistent results across your facilities.

Our solution has configuration capabilities that are independent of the actual test application, helping to keep a line running even if there are parameter changes. From our configuration tool, you can test changes offline and then implement them on your test sequence. And if the changes aren't working as expected, you can return to the original configuration.

ENABLE SPEED AND AGILITY

Our iTRAK® and QuickStick® motion-control systems can help you create flexible lines and quickly react to market demands. The systems use software-configured move profiles for fast and easy changeovers. And their precision control and intelligent motion can help you optimize speed and efficiency and reduce bottlenecks.

EMPOWER YOUR WORKFORCE

Address challenges like skills gaps and worker shortages. We can work with you to create holistic workforce development programs that are right for your business. Or we can provide remote monitoring support services to monitor your most critical assets around the clock.

Training operators in a virtual environment can help them more confidently do their jobs. Simulated scenarios can help operators become familiar with not only ideal operations but also events like faults. Operators can also make mistakes and learn from them in virtual training without any real-world impact. And you can require that they show competency before completing training.

EV DRIVETRAIN SUPPLIERS

GROW YOUR MARKET SHARE

Meet EV demands with smart solutions that can help you create intelligent, flexible and scalable EV drivetrain machines, with digital engineering capabilities that can help you get your machines to market faster.

GET AHEAD OF DESIGN CHALLENGES

Address customer design challenges with digital tools that improve collaboration during the design process and allow you to test and prove designs in the virtual world before you do work in the physical world.

SPEED PRODUCTION

Meet compressed timelines when you use digital engineering capabilities to accelerate design, prototyping and commissioning activities.

ENABLE AGILE PRODUCTION

Meet the needs of an evolving industry and unlock higher throughput potential with flexible production technologies.
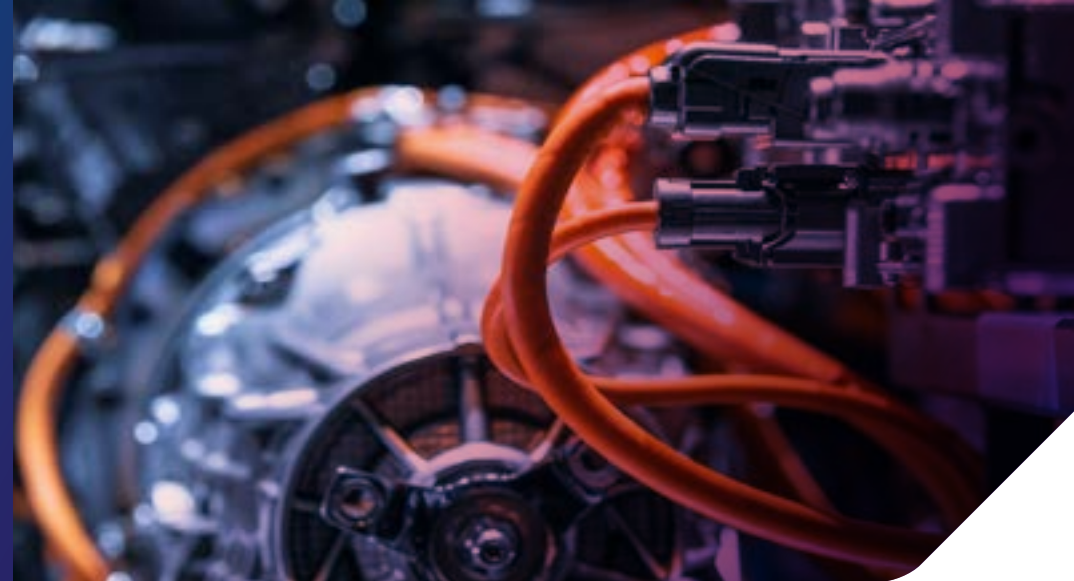
DIFFERENTIATE THROUGH ANALYTICS

Give EV automakers access to useful insights that can help them drive optimization by building data-visibility capabilities into your machines.

CREATE NEW SERVICE MODELS

Improve support and create new opportunities for business growth when you use remote connectivity and collaboration tools to help customers monitor their operations and troubleshoot problems remotely.

DRIVING YOUR RESULTS WITH PROVEN TECHNOLOGY

GET AHEAD OF DESIGN CHALLENGES:

Engineers can use our integrated design environment to work collaboratively across time zones, creating code simultaneously while comparing and merging changes, to design faster. Simulation software allows you to apply physics to your machine's 3D-CAD model, see how it runs and observe how people interact it. You can even demonstrate and prove your machine for a customer in a virtual reality (VR) environment – all before you've ordered a single part.

Our global OEM technical consultants and advisors are here to help you. With an extensive automotive experience, support and know-how, globally, we've successfully designed, installed and commissioned more than 4,000 automotive manufacturing projects.
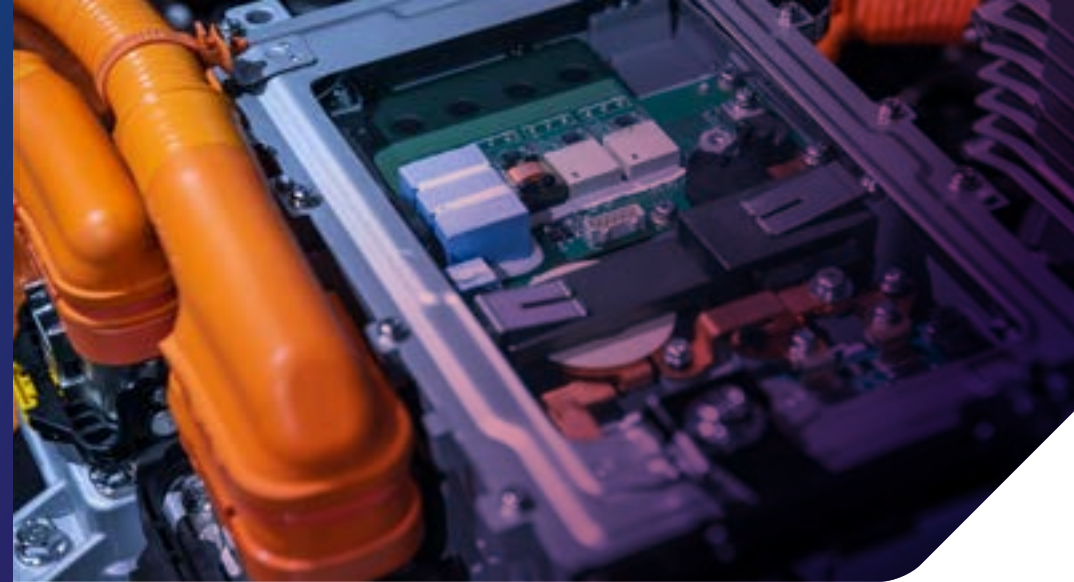
SPEED PRODUCTION:

Digital twin software allows you to build, test and prove machine designs in the digital world before you do work in the physical world. Design changes don't involve ordering parts and building prototypes – they happen with a few clicks. With virtual commissioning, you can synchronize a machine's model to its controller to validate and debug the machine before it's commissioned. This can help keep a customer's launch on track – or even accelerate it. A machine's digital twin can also be used for virtual operator training, bringing operators up to speed before machines are bolted on the floor.

ENABLE AGILE PRODUCTION:

Our iTRAK® and QuickStick® motion-control systems can help you create flexible lines and quickly react to market demands. The systems use software-configured move profiles for fast and easy changeovers. And their precision control and intelligent motion can help you optimize speed and efficiency and reduce bottlenecks.

DRIVING YOUR RESULTS WITH PROVEN TECHNOLOGY

DIFFERENTIATE THROUGH ANALYTICS

Smart devices provide information that can drive better performance. These devices include sensors that can create a full picture of machine or line status, smart safety devices that can enhance safety compliance and productivity, and edge computing solutions that can help optimize time-sensitive applications. Machine analytics capabilities can give you and your customers a greater competitive advantage by optimizing machine performance to keep up with changing market needs. You can give users the data they need with less effort when you take advantage of innovations like smart objects, which streamline data preparation.

CREATE NEW SERVICE MODELS

Using an IIoT platform and secure remote-access solution, your support team can quickly respond to customer issues as they happen without the time and costs of flying out team members to provide support.

Your team members can even join the customer in an AR environment to see what they see and provide feedback or draw digital annotations to help resolve issues.

With secure remote-machine connectivity, you can access analytics information and collaborate with customers to drive continuous improvements in machine performance based on those insights.

Maximize your operations potential

PRODUCTION you can rely on

Consistency of operations
.....
Inventory optimization
.....
Increased throughput

OPERATIONS that flex with you

Accelerate product introductions
.....
Dynamic production management
.....
Data-driven intelligent processes

EMPOWER your workforce

Enforce best practices
.....
Monitoring workflow execution
.....
Reduce labor and training costs
.....
Leverage remote collaboration

IT AND SECURITY managed

No capital investment
.....
Integrated IT managed and security
.....
Reallocation of resources

PLEX
A ROCKWELL AUTOMATION COMPANY

MES IS THE FOUNDATION OF YOUR DIGITAL TRANSFORMATION

A Manufacturing Execution System (MES) is the pulse of any manufacturing operation. It is the foundational layer that oversees the production process for transforming raw materials into a finished product, ensuring it's done right the first time. This system is fundamental for achieving complete visibility and control over operations on the plant floor. Rockwell Automation's MES is a platform of components that are designed to meet theunique needs of your environment whether that be single-plant, multi-plant or industry-focused.

Functioning as a basic ecosystem, MES is the epicenter for how to plan, execute, and collect contextualized data in a manufacturing environment. Having strong integration capability with ERP systems, automation layers and apps, MES becomes that bridge between specialty functions and the plant floor for increased efficiency and improved decision-making.

Not only do we bring our deep domain expertise from many years working with the auto and tire industry, but 18 of our own manufacturing plants trust our MES solution to drive consistent execution. They serve as a test site for validating performance, perfecting best practices, and as a direct gateway into the product team for feedback and improvements. With a strong delivery infrastructure, we can maximize the value of your MES solution by meeting you where you are. We offer both an out-of-the-box, cloud-native MES to speed time to value and a more personalized configuration, knowing firsthand how it can transform operations for manufacturers needing a more bespoke execution software.

In the pursuit of reaching productivity, quality, compliance and cost-saving objectives, MES ultimately serves as the essential foundation for more efficient day-to-day operations, while also becoming the launch point for digital transformation and future innovation.

96%
MAINTAINED ON-TIME DELIVERY

50%
REDUCED LEAD TIME

38
FEWER DAYS IN INVENTORY

DRIVE OPERATIONS FORWARD

Increase efficiencies in your plants and accelerate your time to market when you work with Rockwell Automation. Stay productive, meet compressed timelines, and make your operations more flexible and responsive using our smart manufacturing technologies and solutions. Address your top safety, security and workforce challenges, and keep your plants laser-focused on meeting business goals, using our extensive support services. And keep up with the needs of the dynamic automotive industry by leveraging the experience and support of a team that has successfully designed, installed and commissioned more than 4,000 automotive projects globally.

Working together with Rockwell Automation

Make more of your Connected Enterprise® by connecting with Rockwell Automation and our partners.

Get answers to your questions on sales, products, services and technical support. **Find out more.**

Access help to design, build and maintain your system solution through the Rockwell Automation® PartnerNetwork™ of leading distributors, system integrators and others. **Find out more.**

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