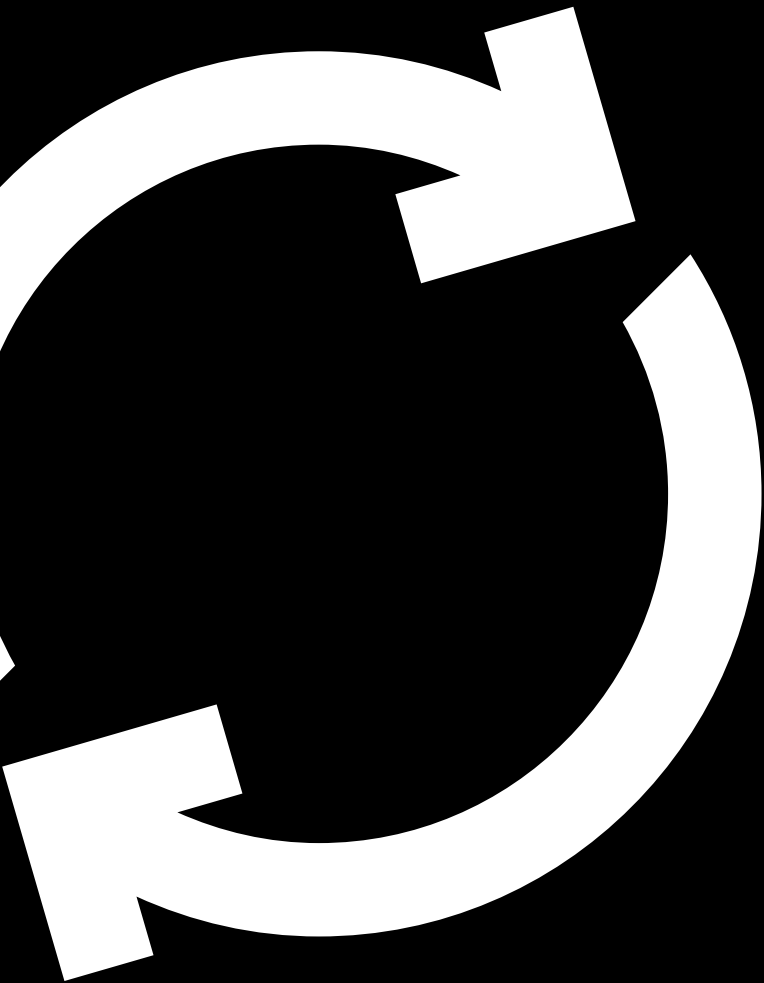# PLEX MES AUTOMATION AND ORCHESTRATION

Automate and Orchestrate Plex MES information flow and processes to drive efficiency

Rockwell Automation | PLEX

Take greater **control** of your plant floor.

Plex MES Automation and Orchestration allows for greater levels of automation and control over your plant floor operations. If you are reading this brochure, you probably fall into one of the two following categories:

You've chosen Plex MES for your plant...
and now you want to add some additional levels of control to your production operations. Adding data and process automation will turbo-charge your operations, compounding the competitive edge you've created!

You are considering an MES solution...
and want to understand the opportunities for boosting the capability of your selection. Look no further! Plex MES Automation and Orchestration works on top of Plex MES to automate repetitive, error-prone, and time-consuming manual processes. You can't get this kind of flexibility with other MES solutions.

PLEX

PLEX MES

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MES AUTOMATION & ORCHESTRATION

PLANT EDGE

Plex Production Monitoring Application
View real-time OEE metrics
Generate process-specific visualizations
Increase process speed and accuracy

Automate workcenter setup
Automate fast and complex processes
Synchronize plant floor activity
Gather machine status updates

Real-time measurements
Monitor and capture operational data
Auto-fill checksheets
Reduce human data input errors

Lineside labeling
Speed up labeling process
Automate piece serialized labels
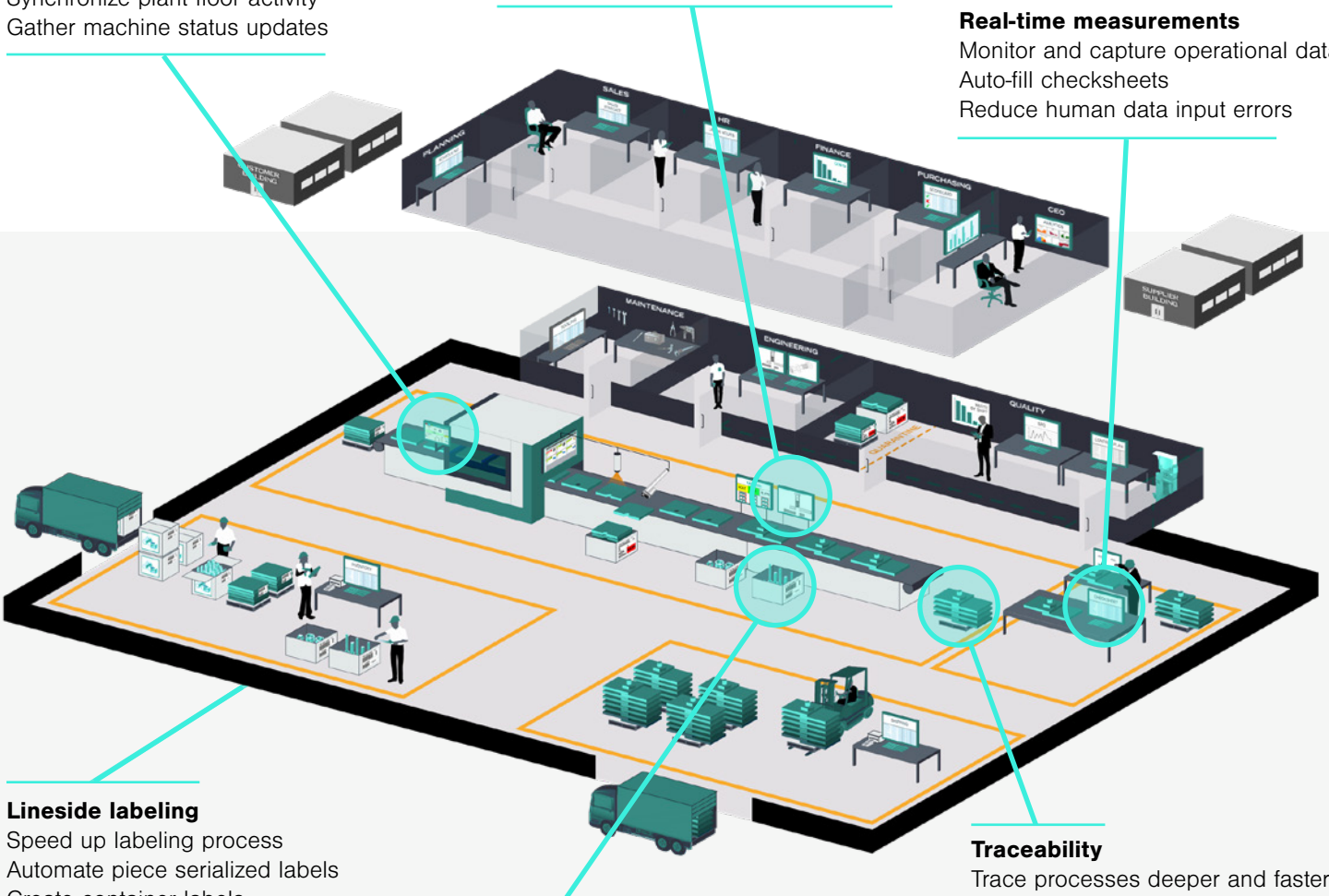Create container labels

Scrap Management
Capture real-time scrap rates quickly
Locate and fix high scrap operations
Generate accurate scrap cost analysis

Traceability
Trace processes deeper and faster
Track inventory by individual parts
Pinpoint quality issues quickly

Extensibility
Plex MES Automation and Orchestration solves process challenges specific to your plant. Unlock new
capabilities with low-code application building on top of the core out-of-the-box functionality.

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You have symptoms.
We have solutions.

Does this sound familiar?

You're always interested in continuous innovation and adding higher levels of automation to your operations. Complex processes make it difficult to keep track of all your data and make rapid decisions in the moment. Manual collection of data can reduce efficiency and accuracy, costing you money and increasing downtime. Training plant floor employees on complex processes is time consuming and slows production. It's impossible to scale your business and keep up with growing demand if you can't streamline workflow, automate operations, and enforce process control.

Manual Efforts Drain Your Resources

Manual collection of data can consume valuable operator time or require additional quality engineering time leading to increased costs and reduced focus on more important tasks.

Onboarding and Employee Retention Is Hard

It's not easy to retain employees and training new ones can be costly and time-consuming. Reducing the complexity of tasks through automation and context-specific screens can reduce training, improve retention, and preserve quality.

Complex Solutions Require Heavy Coding

You need robust workflow, quality, and process solutions to address plant needs or OEM requirements, but existing solutions lack flexibility. Heavy coding experience is often required to adapt your processes to your specific needs.

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We've got you covered.

With Plex MES Automation and Orchestration, connect your Plex MES system to the plant edge to control information flow and processes adding efficiency, saving cost, and eliminating manual errors. Unleash operators from tedious data entry while improving accuracy and enabling them to focus more on producing products and less on complex, manual processes.

Extend your capabilities

We'd all like to have an infinite number of people who are infinitely fast at entering data, but that is not realistic. Plex MES Automation and Orchestration works with Plex MES to simulate an infinite workforce, automating data capture and entry in real-time and feeding the digital system of record. Additionally, Plex MES Automation and Orchestration adds helpful visualizations to better understand your processes at the most granular level.

How does it work?

Plex MES Automation & Orchestration interacts with your plant floor machines and systems using PTC Kepware software or other plant floor drivers and protocols to provide real-time, actionable information. Automated data entry improves accuracy and enables your operators to focus on what matters. Connecting to the plant edge allows for effective control of information flow and processes for added efficiency, cost savings, and manual error reduction.

Automate data capture

Manually inputting data is tedious, time consuming, can lead to human error, and—in some cases—is not possible at all. Plex MES Automation and Orchestration removes the risks associated with manual data management. Let's say you need to weigh raw material before it goes into production. Plex MES Automation and Orchestration can take weigh scale data from your production line and automatically populate checksheets without ever having to input the data by hand. If you need to record torques and angles of bolts, you can set up your tools to capture the data and Plex MES Automation and Orchestration can manage that data effectively based on requirements. As you can imagine, this is much faster and more accurate than assigning an employee to that station for the sole purpose of inputting data.

Toolkit to enhance your Plex MES

Plex MES Automation and Orchestration can solve unique problems that are specific to your plant using low-code—drag and drop—application building on top of the core out-of-the-box functionality to create complex process flows and unlock new possibilities.

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Plex MES Automation & Orchestration Production Enhancements

AUTOMATE

Production Automation
Turn machines into Plex users by automating decisions and workflow based on machine data.

Quality Automation
Automate quality data capture at the machine level for validating against and enforcing planned quality measurements in Plex.

Data Accuracy and Timeliness
Get precise, accurate, and timely information automatically delivered to your system of record - Plex MES. Normalize and manage data across disparate equipment and systems across the plant floor.

Resource Efficiency
Focus operators on value-add activities; reduce training and onboarding; offset worker shortage, skill-set, and language challenges.

ORCHESTRATE

Streamline Production Workflow
Add speed and accuracy to processes like lineside labeling and packouts.

Orchestrate Complex Processes
Drive control of unique and/or complex processes to remove human error and manual oversight.
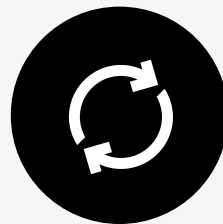
Process Enforcement
Provide connectivity and bi-directional communication with Plex to ensure process enforcement and coordination.

Visualization and Alerts
Generate clear, context-specific overviews and visualizations. Alert team members and departments of plant floor issues through email and text notifications.

CONNECT to the plant edge to control information flow and processes.

AUTOMATE human tasks to increase speed and reduce error.

ANALYZE machine data to automate decisions and workflow.

TRACK production and quality data capture at the machine level for data accuracy and rapid decision-making.

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Plex MES Automation & Orchestration Capabilities

PRODUCTION

- Piece counting
- Serialized scanning
- Standardized quantity and serialized containers
- Multi-out recording
- Weigh scale integration

AUTOMATION

- Production recording
- Machine state tracking
- Lineside labeling
- Workcenter setup
- Quality checksheet integration

VALIDATION

- Product attributes
- Tool verification
- Machine setup
- Process verification

QUALITY

- Scrap quantity, type, and reason
- Test and measurement results
- Traceability
  - Source material
  - Piece serialization
  - Serialized piece consumption
  - WIP

VISUALIZATION

- Workcenter, line, or area
- OEE and performance
- Customizable operator interface
- Visual alerts and notifications

EXTENSIBILITY

- Full SCADA system
- No-code development environment
- Custom logic and visualization
- Open architecture

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Start Your Automation Journey Here

With Plex MES Automation and Orchestration, you can take Plex MES to the next level. Up and running in days, Plex MES Automation and Orchestration boasts easy-to-use dashboard visualizations and a library of pre-built templates to enable a deeper layer of automation in your plant. We can deliver functionality that makes a near immediate impact on your plant.

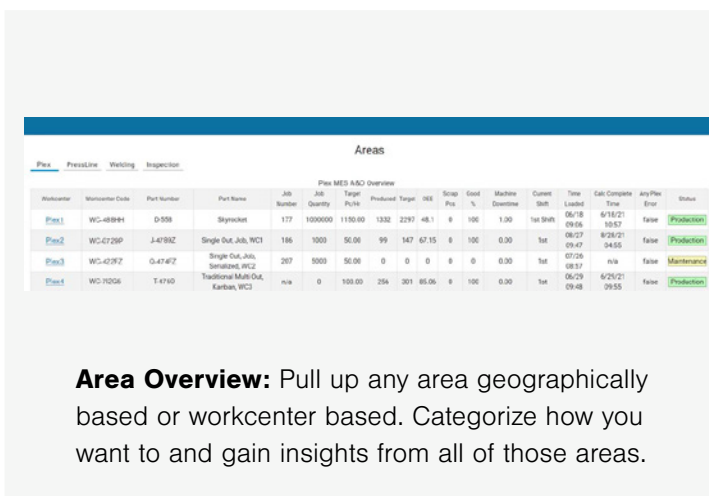**Here are some things that can be accomplished with MES Automation and Orchestration:**

• Record production in Plex MES
• Scrap Recording
• Lineside labeling
• Job/Workcenter setup
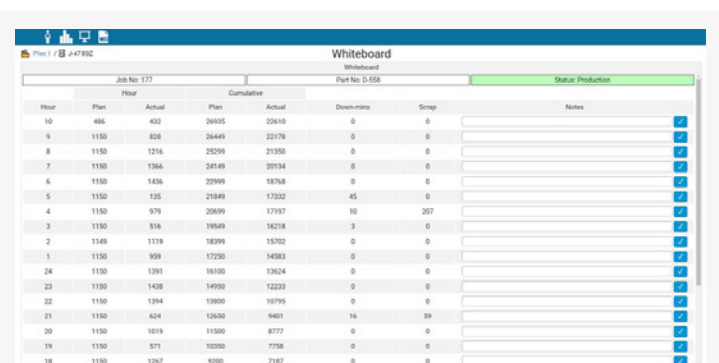• Digital whiteboard
• Performance KPI Visualization

Operators Interface: Enables operators to see information about the job and adjust as needed throughout the day. Visual dashboard for changing counts, recording production and scrap, and printing labels.

Real-time OEE Scoreboard: A supervisory view of critical metrics, KPIs, and visualizations shown throughout configurable time periods. Gives a pulse of how a plant is running through the day or shift, showing things like OEE and Six Big Losses.

Area Overview: Pull up any area geographically based or workcenter based. Categorize how you want to and gain insights from all of those areas.

Digital Whiteboard: Used to replace traditional dry-erase board on plant floor.
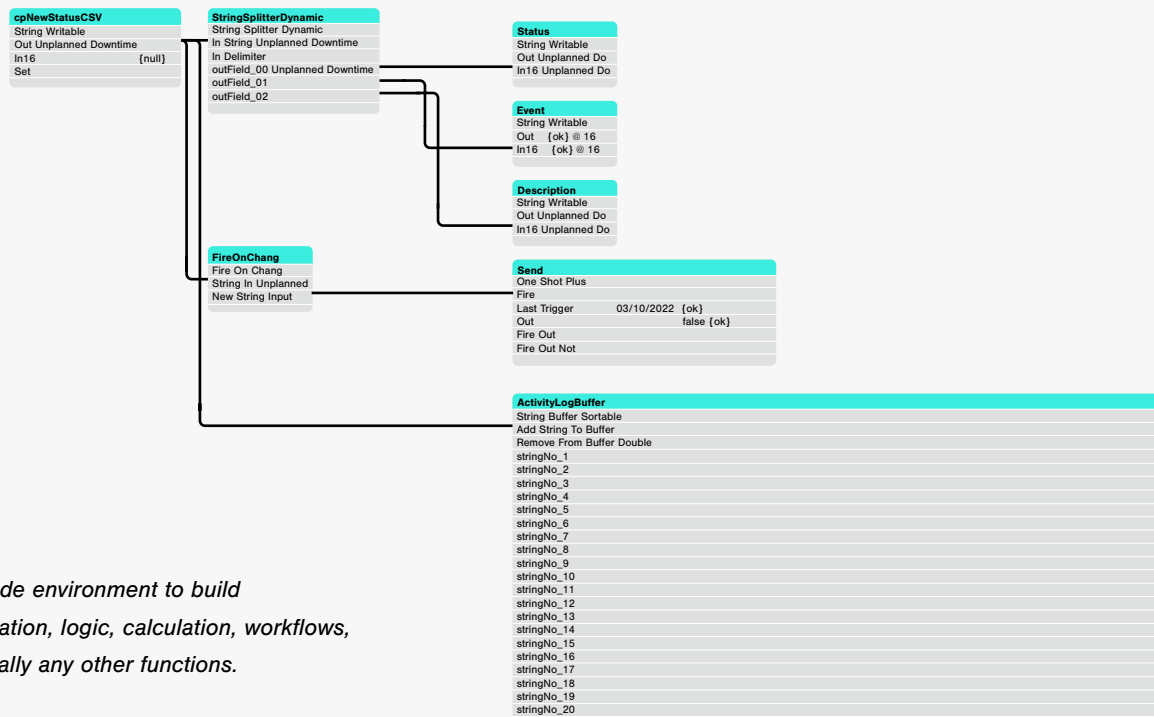
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Go Above and Beyond.

In today's industrial environment, manufacturers are faced with challenges specific to their operation. We know that every manufacturer, plant, and workcenter is different and not all challenges are able to be solved with out-of-the-box functionality that some software systems and applications offer. That's why we offer ultimate extensibility and scalability with a low-code—drag and drop—toolset.

At Plex, we're ready to guide you on your automation journey. You can use this full SCADA system to address your localized needs, OEM requirements, and your unique manufacturing opportunities like:

- Tracking and traceability
- Vision systems
- Validation
- Quality integration
- Augmented reality
- Automatic guided vehicles

If you're looking to do even more, we can help! Call our team and we'll configure our system to meet your needs. With Plex MES Automation and Orchestration the sky is the limit.

Low code environment to build visualization, logic, calculation, workflows, or virtually any other functions.

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Future proof your business with the Plex Smart Manufacturing Platform™

The Plex Smart Manufacturing Platform™ was born on the plant floor and is purpose-built for smarter manufacturing—today and tomorrow.

In a single digital system of record and engagement, Plex makes it possible for manufacturers to reach new levels of visibility, quality, and control throughout their operation.

CONNECT
people, systems, machines, and supply chains

AUTOMATE
business processes

PLEX
Single Digital System of Record & Engagement

ANALYZE
what matters most and drive more informed decision making

TRACK
data from the plant floor to the top floor

PLEX

The Plex Smart Manufacturing Platform™ Applications

With the Plex Smart Manufacturing Platform™ you've got options that range from stand-alone MES to a fully integrated, end-to-end solution that will power your entire enterprise.

Plex Manufacturing Execution Suite (MES) is a comprehensive manufacturing software solution that provides real-time, paperless production management to drive enterprise-wide compliance, quality, and efficiency.

Plex Enterprise Resource Planning (ERP) is a full-featured, scalable, cloud-based ERP that automates front- and back-office processes.

Plex Quality Management System (QMS) is a cloud-based digital quality solution for manufacturers that standardizes and automates quality documentation, processes, and measurements.

Plex DemandCaster Supply Chain Planning (SCP) combines data from multiple departments across your business to sync up demand and supply forecasting to improve inventory accuracy and production management.

Plex Production Monitoring provides seamless connectivity to machines on the plant floor, delivering transparent, real-time operational KPIs and dashboards to drive continuous improvements.

Plex MES Automation & Orchestration connects your Plex MES to the plant edge to control information flow, processes, and workcenter setup adding efficiency, saving costs, and eliminating manual errors.

Plex Asset Performance Management (APM) combines process, operational, and machine-level data through highly visual dashboards to proactively monitor machine and plant health to ensure optimal uptime, throughput, and maintenance needs.

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UNLOCK A NEW LEVEL OF VISIBILITY . . .

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