



Rockwell
Automation

PLEX

ENSURING FOOD SAFETY IN MODERN MANUFACTURING

**FROM RISK
MANAGEMENT
TO RECALL
READINESS**

THE FUTURE OF SMART MANUFACTURING IS NOW.

In today's complex and fast-paced food and beverage industry, food safety is both a regulatory obligation and a consumer expectation. From complex global supply chains to evolving regulations and rising consumer expectations, manufacturers face mounting pressure to protect both public health and their brand reputation. Food safety failures can be catastrophic—not only do they pose serious health risks to consumers, but they also trigger costly recalls, loss of certifications, and lasting brand damage. A single contamination incident can result in financial losses, extensive product waste, and irreparable trust erosion with consumers and partners.

These challenges underscore the importance of robust food safety solutions that not only comply with regulations but also proactively prevent issues.

YOU HAVE SYMPTOMS WE HAVE SOLUTIONS.

You already have some form of quality management in place, but does it really do much to help your business grow? Custom-made approaches to quality management and home-grown systems are insufficient to meet the complexities of today's manufacturing environment.

With increasing product complexity on one hand and continuous efforts to reduce cost on the other, the challenges to maintain food safety and quality continue to grow.

UNMANAGEABLE DOCUMENT CONTROL

Paper-driven document management quickly leads to outdated information and loss of control. This results in high costs of compliance, but can also lead to the loss of certifications or worse, loss of customers.

POORLY INTEGRATED QUALITY

It's near impossible to gain the visibility needed to measure and ensure quality using disconnected systems and processes. This means the risk of recalls rises, customer risk increases, and costs can soar.

INABILITY TO IDENTIFY ROOT- CAUSE OF PROBLEMS

Product recalls are on the rise, yet many manufacturers still struggle to store and track the data necessary to rapidly react to recalls and protect their reputation.

INABILITY TO KEEP UP WITH CHANGING REGULATIONS

It seems that every few weeks there are new regulations and guidelines. It can be next to impossible to implement the changes in an analog environment before you have another risk on your hands.

LACK OF TRACEABILITY

The complexity of tracking ingredients through multiple stages of production and distribution makes maintaining accurate records and data integrity crucial yet challenging. This difficulty is compounded by the sheer volume of transactions and the involvement of numerous suppliers.

Plex by Rockwell Automation offers digital solutions that connect your people, systems, machines, and supply chains for better results. Ensuring consistent food safety and quality demands a dual approach: proactively preventing

hazards and effectively resolving issues. Plex Quality Management system (QMS) and Manufacturing Execution System (MES) support both, offering integrated, real-time tools to help manufacturers meet these critical goals.

PREDICTABLE. REPEATABLE. ACTIONABLE.

Quality is the foundation of every manufacturer's business. Plex QMS is specifically designed to maintain high standards of food safety throughout the manufacturing process. Plex QMS drives and maintains quality by providing real-time data capture to ensure repeatability, predictability, and streamlined compliance management. This is when quality stops being just a process and becomes a competitive edge to win new business.



CONNECT

Quality documentation and standards available in real time across the enterprise.



AUTOMATE

Quality processes and checksheet data automated and updated in real time.



ANALYZE

Quality performance available through digital control plans and document control.



TRACK

Quality measured in-line with clear reporting and data access for simple audit tracking.


PLEX QUALITY MANAGEMENT CAPABILITIES

RISK MANAGEMENT

- Hazard Analysis & Critical Control Points (HACCP) uses a detailed hazard analysis tool that identifies and evaluates process and product hazards in compliance with ISO 22000 and FSSC 22000.
- Allergen identification occurs during part setup and is customizable to the allergens that are experienced by the products in your facility.

DATA MANAGEMENT

- Digital Checksheets are used to collect product and process data – as well as hazard monitoring data – and can be used to create complete data traceability.
- Document Control keeps documentation current and ensures the content used to manage a process has the required revision.
- Exception Reporting manages one-off occurrences, preventing them from advancing through the process and reaching the customer.
- Gage Tracking manages your gages to be accurate and reliable, providing comfort and confidence with the collected data.



WE DON'T HAVE TO TELL YOU THAT PLEX WORKS. YOUR RESULTS WILL.

COMPLIANCE MANAGEMENT

- Auditing provides detailed and structured evidence to keep your facility compliant with the required quality standards.
- Custom audits ensure critical items are reviewed and the results are documented, with traceability to auditor, date, and time.
- Workflows route important information for approval to the right people in the organization.
- Food Safety Monitoring Act (FSMA Section 204 (d)) requires an organization to track items that appear on the Food Traceability List.
- Problem control is designed to effectively correct and process non-conformances, prioritizing root cause identification and implementing preventive measures.

SUPPLIER MANAGEMENT

- Supplier Auditing provides customized audit content, allowing organizations to document and score their supplier's activities for future supplier evaluations.
- Supplier Product Approval allows an organization to share the approval criteria for ingredients that suppliers will send for your product.

MANAGE COSTS FOR A HEALTHIER BOTTOM LINE

By taking a predictive approach to quality management, our customers reduce costs, scrap, and risk. This helps open up opportunities to scale the business and gain a competitive edge

WITH PLEX, YOU'LL GET FASTER TIME TO VALUE

Plex QMS was designed to be implemented quickly and easily. Our customers can go from idea to production in a matter of hours and easily add capabilities over time. Projects that may take weeks with other software providers go live and begin delivering value in days with Plex.

CONSISTENTLY DELIVER ON CUSTOMER COMMITMENTS

Losing just one customer can impact profitability. Plex QMS customers readily retain their current customers as loyal purchasers by delivering quality products on time—every time.

MINIMIZE RISKS TO REPUTATION

With the ability to document quality thoroughly and store this data for several years, Plex QMS customers are always recall-ready and able to protect their reputations.

ERROR PROOF YOUR OPERATIONS WITH END-TO-END TRACEABILITY

Traceability is the backbone of effective food safety. It ensures that every ingredient, process, and product movement can be tracked from origin to consumption. When a contamination or quality issue arises, the ability to instantly trace affected lots and their distribution paths is critical to protecting consumers and minimizing the scope of recalls. Plex MES captures real-time production data at every step of the process, creating unique Lot IDs for raw materials, work-in-progress (WIP), and finished goods. This delivers a single, accurate digital record of product genealogy and lot history. In the event of an issue, manufacturers can quickly isolate and respond, reducing risk, cost, and downtime. Plex MES ensures traceability isn't a manual, reactive process, but a built-in, proactive safeguard for food safety.

PLEX MES CAPABILITIES

LOT CONSUMPTION

- The system records consumption of when and where material lots are used.
- Consumption rules such as First-In, First-Out (FIFO), First-Expired, First-Out (FEFO), and manual allocations are supported.

LOT TRACKING AND MOVEMENT

- Lot attributes, such as material type, batch number, and expiration date, are tracked from creation.
- Movement of Lots is tracked between work centers, storage locations, and equipment.



LOT CREATION

- Unique Lot IDs for raw materials, work in progress (WIP), and finished goods is automatically created.

LOT-BASED REPORTING

- Lot Trace Reports are generated for quality, compliance, and customer support.

LOT ATTRIBUTES AND QUALITY DATA

- Test results, Certificates of Analysis (COAs), and inspection data are associated with specific lots.
- Lot-specific metadata is stored, including temperature exposure, shelf life, and deviations.

LOT GENEALOGY AND TRACEABILITY

- Backward Traceability allows tracing of finished goods back to their source lots and production steps.
- Forward Traceability identifies all products that are used in a specific lot of raw material.

COMPLETE VISIBILITY FROM SOURCE TO SHELF WITH TANK MANAGEMENT

The power of knowing where everything goes protects your customers and your brand. Managing traceability and food safety becomes significantly more complex in production environments where ingredients or products are stored in tanks and silos. Unlike discrete containers, tanks naturally mix multiple source products (lots), making it difficult to accurately trace ingredients. This lack of clarity can create blind spots in recall scenarios, audit trails, and quality investigations. Plex MES takes the guesswork out by providing Tank Management capabilities that automatically track and record every lot that goes into a tank and every product that comes out.



GAIN FAST AND ACCURATE TRACEABILITY OF TANK DATA & TANK LOG TRANSACTIONS

Quickly trace all source materials in any finished product—leading to fast audits, recalls, and streamlined quality checks.

STREAMLINE INVENTORY MOVES, LOADING SOURCE, AND SHIPPING FROM TANKS

Simplify day-to-day operations by allowing teams to move and ship products without manually selecting specific lots.

LEVERAGE END-TO-END AUTOMATION AND ORCHESTRATION SUPPORT

Ensure seamless integration to Plex MES Automation and Orchestration (A&O) to automate data flows to edge.

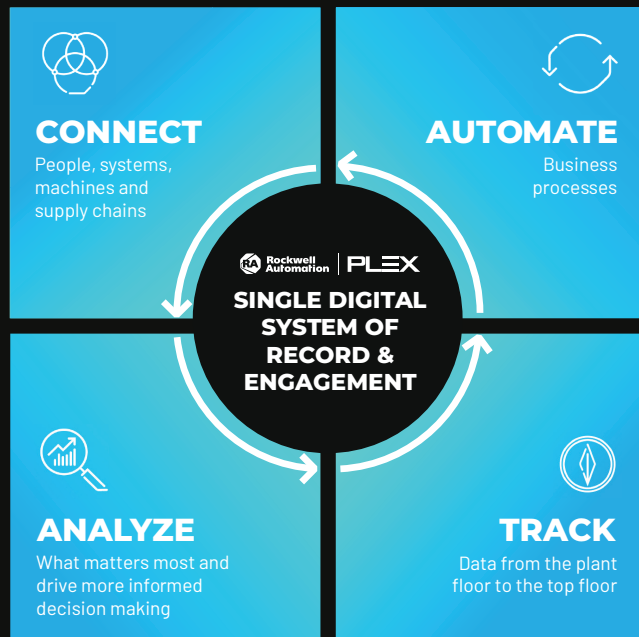
LOG TANK TRANSACTIONS AND SANITIZATIONS

Track what goes in and out of tanks with time-stamped entries to maintain accurate records and reset traceability after cleaning events.

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.



THE PLEX SMART SUPPLY CHAIN PLANNING APPLICATIONS

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.

PRODUCTION MONITORING

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

PLEX SUPPLY CHAIN PLANNING (SCP)

combines data from multiple departments across your business, syncing up demand and supply forecasting to improve inventory accuracy and production management.

MES AUTOMATION & ORCHESTRATION

connects Plex MES to the plant edge to control information flow, processes, and work center setup, adding efficiency, saving costs, and eliminating manual errors.

PLEX QUALITY MANAGEMENT SYSTEM

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

PLEX ENTERPRISE RESOURCE PLANNING (ERP)

is a full-featured, scalable, cloud-based ERP that automates front and back-office processes.

ASSET PERFORMANCE MANAGEMENT

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

PLEX CONNECTED WORKER

provides advanced digital tools, real-time insights, and seamless collaboration to help attract, retain and reskill workers.

