

Solution Series: Manufacturing

PREDICTIVE QUALITY MANAGEMENT

Your problem: Production quality is acceptable Six Sigma performance levels but the cost of obtaining those results is too high. Automation and robotics control towers supplied by the vendors depict equipment operating as "green" and within tolerances but production quality-related issues still continue to cause rework and scrap.

Software AG solution: Apply the same data used to feed those "green" control towers to more stringent condition and predictive algorithms. With Software AG's predictive quality management solution, you can predict quality defects before they occur. In-line prediction occurs continuously and provides enough notification to intervene and ensure quality.

Problem details

In manufacturing today, product quality must be nothing short of perfect. Anything less and warranty claims can be uncontrollable, reputations tarnished and safety compromised. To protect against imperfections, stringent quality checks are needed at every production zone, and anything less than acceptable gets reworked. This safeguards product quality but at a high price. Production efficiency is not fully optimized, which can lead to higher assembly costs and lower production yields.

The right set of predictive quality capabilities can address these concerns by ensuring quality issues are found before they occur, thereby ensuring both perfect product quality and production efficiency. That is why you need Software AG's predictive quality management solution.

Software AG's solution turns a costly operational expense into a source of competitive advantage for all discrete manufacturers. The solution brings the ability to leverage data from automation systems, robots, NC machines, PLCs and SCADAs in combination with real-time condition monitoring and dynamic prediction technologies.

Our solution solves today's industry quality challenges as well as those that will become apparent in the future. Built on Software AG's Digital Business Platform, the solution features webMethods Integration, webMethods Business Process Management and Apama Streaming Analytics.

What's the Software AG difference?

A predictive quality management solution, designed to improve product quality while maximizing production efficiency for manufacturers and suppliers, can:

- Increase production quality at every production zone monitored
- Improve operating margins and increase yield due to decreased rework
- Provide insights into additional production quality improvements through continuous analysis of sensor data

Software AG's solution

Messaging and integration via webMethods Integration

- Seamlessly couple IoT and machine sensor data via low-latency messaging backbone for scalable, fast and reliable transport
- Deliver potentially large quantities of data at sub-second speeds, which is key to downstream activities
- Rely on an enterprise-grade service bus for connectivity, messaging, transformation and security of machine data for advanced real-time analytics

Scalable, flexible streaming analytics via Apama

- Correlate data from multiple sources for fast, effective decision making
- Enrich streaming data with a deep understanding of historical and predicted equipment availability and effectiveness to pinpoint when it's time to intervene prior to a quality issue arising
- Monitor and correlate sensor data in real time—up to 32 million events per second

- Identify unplanned equipment degradation, performance and usage for large fleets of deployed equipment
- Leverage prediction engine to notify operators about quality issues via alerts and real-time dashboards, even initiate maintenance calls automatically
- Automatically manage alerts based upon criteria such as time, ensuring that exception managers can reprioritize alerts as they become more or less critical

Manage exceptions via webMethods Business Process Management

- Send automatic adjustments to smart machines, schedule technician deployments, and more so that you can respond rapidly to exceptions and product quality opportunities
- Dynamically manage exceptions, interact with technicians in real time and deliver contextual content to everyone in the service chain
- Bind predictive quality management to the rest of the enterprise, enabling other enterprise maintenance resources to mobilize with unprecedented speed

Critical aspects of a predictive quality management solution

Reliably deliver large quantities of IoT and machine data to analyze downstream activities Ability to act upon information automatically, in real time, across multiple sources Dynamically manage exceptions and identify product quality opportunities

ABOUT SOFTWARE AG

The digital transformation is changing enterprise IT landscapes from inflexible application silos to modern software platform-driven IT architectures which deliver the openness, speed and agility needed to enable the digital real-time enterprise. Software AG offers the first end-to-end Digital Business Platform, based on open standards, with integration, process management, in-memory data, adaptive application development, real-time analytics and enterprise architecture management as core building blocks. The modular platform allows users to develop the next generation of application systems to build their digital future, today. With over 45 years of customer-centric innovation, Software AG is ranked as a leader in many innovative and digital technology categories. Learn more at www.SoftwareAG.com.



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