Companies cannot predict the future, so inherent flexibility is critical

Capgemini’s automotive predictive quality management solution turns a costly operational expense into a source of competitive advantage for both original equipment manufacturers and automotive industry suppliers.

Business needs

Manufacturing in the automotive industry means product quality is nothing short of perfect. Anything less than this and warranty claims can be uncontrollable, reputations are tarnished and safety may be compromised.

To ensure this, stringent quality checks are completed in every production zone, and anything less than acceptable gets reworked. This safeguards vehicle quality, but this quality can come 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, on the other hand, can address these concerns by ensuring quality issues are found before they occur, thereby ensuring both perfect product quality and production efficiency.

Benefits

Capgemini and Software AG work together to help you improve product quality while maximizing production efficiency. Building on Software AG’s Digital Business Platform, Capgemini’s predictive quality management solution can:

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

Capgemini brings its deep automotive industry expertise to the task of developing a predictive quality management solution. Software AG 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.

Features

The deep industry expertise of Capgemini ensures that the solution is built on actual industry data, supported by key learnings from a multitude of engagements. This guarantees a predictive quality management solution that will solve today’s industry quality challenges as well as those that will become apparent in the future. This expertise is combined with Software AG’s Digital Business Platform, featuring webMethods Integration, webMethods Business Process Management and Apama Streaming Analytics.

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
- Universal Messaging provides 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

Partner overview

With more than 180,000 people in over 40 countries, Capgemini is one of the world’s foremost providers of consulting, technology and outsourcing services. The Group reported 2015 global revenues of EUR 11.9 billion. Together with its clients, Capgemini creates and delivers business, technology and digital solutions that fit their needs, enabling them to achieve innovation and competitiveness. A deeply multicultural organization, Capgemini has developed its own way of working, the Collaborative Business Experience™, and draws on Rightshore®, its worldwide delivery model.