

Optimizing quality with AI-powered technology



What are the challenges?

Quality matters. Manufacturers know that poor quality affects both the top and bottom line. They know that with social media and intense news coverage the brand impact from undetected quality issues can be devastating. Manufacturers also know that the cost of scrap and rework of defective products can eat into Overall Equipment Effectiveness (OEE) measures and lead to costly plant inefficiency.

Yet traditional manual methods of quality inspection can be problematic. They are expensive, time consuming, error prone, and occasionally dangerous.

Smart manufacturers are looking for a better way.

How IBM IoT can help?

IBM Maximo Production Quality Insights (PQI) solutions enable manufacturers to transform their approach to quality. Using AI-powered visual and acoustic analytics, IBM can help manufacturers intelligently identify defects based on images or sounds. IBM uses specialized deep learning neural network technology to review and analyze parts, components and products, and help match anomaly patterns to libraries of known images or audio defects.

With this solution, we are uniquely able to combine AI and flexible edge deployment capabilities as a fully managed service. It is purpose-built with factory-ready features available out of the box.

Outcomes

IBM Maximo Production Quality Insights (PQI) solutions deliver reliable results with low escape rates to reduce the dependency on specialized labor and improve throughput of quality processes.

Learn more about the IBM Maximo PQI solutions:

IBM Maximo PQI – Acoustic Insights: ibm.co/acousticinsights

IBM Maximo PQI – Visual Insights: ibm.co/visualinsights

IBM Maximo PQI – Prescriptive Quality: ibm.co/quality

Based on early testing by global corporations producing electronics, automotive, and industrial products, these organizations are experiencing improved inspection time and fewer incidents of manufacturing defects. This includes:

- Improving accuracy of inspections while reducing costs
- Eliminating knowledge silos and shortening inspection training
- Identifying quality problems earlier
- Better identifying and resolving drivers of poor quality

Benefits include:



AI-powered approach

Machine learning enables the model to be trained on a small number of images or acoustic files and improve over time.



Fast deployment

Fast deployment. Fully packaged managed service solution for fast, low risk, deployment.



Deployment flexibility

Training and deployment can be done on premises or in the cloud depending on the client's discretion. Since the classifier is distributed to the edge, this solution can identify defects in milliseconds with unlimited scalability.



Purpose-built for industry

Factory-ready features out of the box like defect review with sampling, trending, alerts, and integration with other factory notification systems.