IBM Maximo Visual Inspection

Rapidly unleash the power of computer vision for inspection automation

Highlights

Perform a visual inspection of the line or asset using commercial, off-the-shelf devices such as iPads and iPhones.

Scale easily to view multiple points 24/7 as well as globally view all plants and geographies.

Identify potential quality and performance issues in real time and configure to notify key stakeholders immediately.

Integrate with maintenance and quality workflows for a fast and prescriptive response.

Enable a positive feedback loop that improves model accuracy.

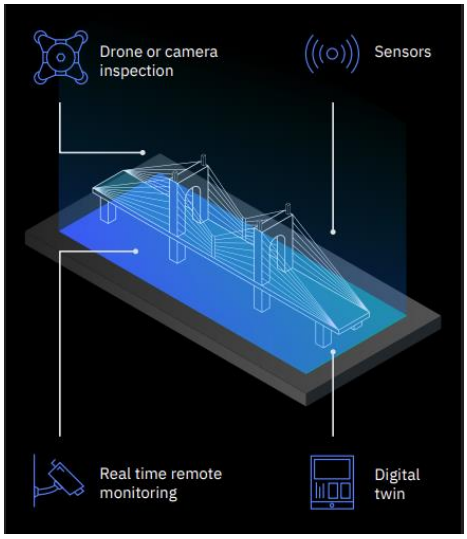
Visibility adds to operational resiliency

Investments that drive faster, better decisions to reduce risk and optimize resources are critical to business operations. Leaders have been increasingly deploying AI and IoT technologies within their operating environments to monitor their assets and the outputs of production.

To that end, operations is looking for easy-to-deploy computer vision solutions that can scale with their needs. As AI technologies evolve to accurately identify issues and take action, it enables you to easily add intelligent “eyes” to your operations. It also allows reliability and quality teams to use standard edge and mobile devices to quickly identify defects in production outputs as well as remotely monitor assets for potential disruptions. Having a solution that learns about your operations and equipment creates a big advantage for teams pressured to produce increasingly higher-quality outputs with confidence.

Introducing IBM Maximo Visual Inspection

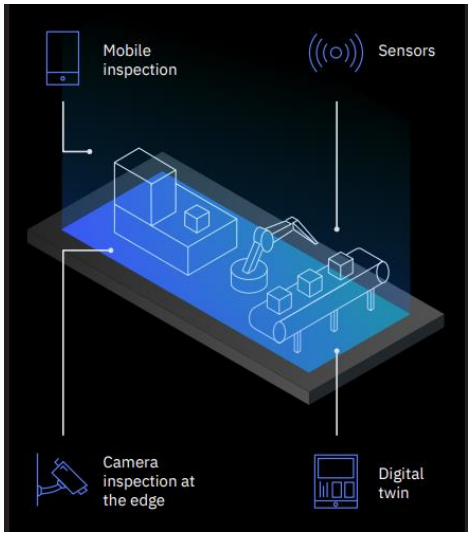
IBM Maximo Visual Inspection puts the power of AI computer vision into the hands of subject matter experts. Building highly accurate customized AI models is remarkably easy and incredibly fast. Enable AI at the edge using existing cameras or commercial, off-the-shelf iOS devices to get immediate, actionable notifications of any emerging issue.



This intuitive solution can be deployed on any asset or process, is simple to operate, scales globally, and is engineered to continuously improve model accuracy.

IBM Maximo Visual Inspection simplifies the process of gathering and labeling data by supporting both the traditional process of labeling, training, and deployment, as well as a new technique called visual prompting. Visual prompting is an innovative approach that combines prompt-tuning with deployment, enabling quick and effortless labeling and fine-tuning of models using simple visual inputs, such as "touching." This makes training new AI models and deploying them at the edge a seamless and efficient process.

IBM Maximo Visual Inspection Mobile is an iOS app that works seamlessly with IBM Maximo Visual Inspection, empowering operations to leverage the high-resolution integrated imaging capabilities inherent in iOS products. Configurable business rules can be applied to the results to determine whether subsequent action or alerting is required. Supervisors use an integrated reporting dashboard in the app to gain further insight.



For businesses that want to leverage existing or specialty cameras, IBM **Maximo Visual Inspection Edge** provides the solution for seamless integration. This containerized service runs on a local server within a facility or manufacturing plant and provides automated inference execution of models developed with IBM Maximo Visual Inspection.

IBM Maximo Visual Inspection can also play a role in asset inspection and maintenance. Maintenance workers using IBM Maximo Mobile can take a picture of an asset as part of their job plan. That image can be inferenced against an IBM Maximo Visual Inspection model. The results become part of the final inspection form, and the asset record.

Maximo Visual Inspection (MVI) Mobile and Edge

- Inspect and monitor anywhere – from the factory to the field
- Leverage existing or specialized cameras
- Get real-time results
- Sophisticated management dashboard
- Configurable messaging settings for alerts
- Switchable methods of use (models, auto-capture/handheld)
- Support for optical character recognition (OCR)

Automated intelligence to detect and correct errors as well as defects 24/7

Mission-critical assets in the factory and the field face challenging operating environments, often leading to issues that were not identified during normal inspection and preventive maintenance cycles. Imagine adding a level of intelligent oversight that can look for errors 24/7 in the operations or output of an asset. Intelligence that drives automation of existing manual processes. This is what IBM Maximo Visual Inspection delivers. The power of AI to detect errors and defects, with alerts to operators to take action, avoiding disruptions that could take down operations.

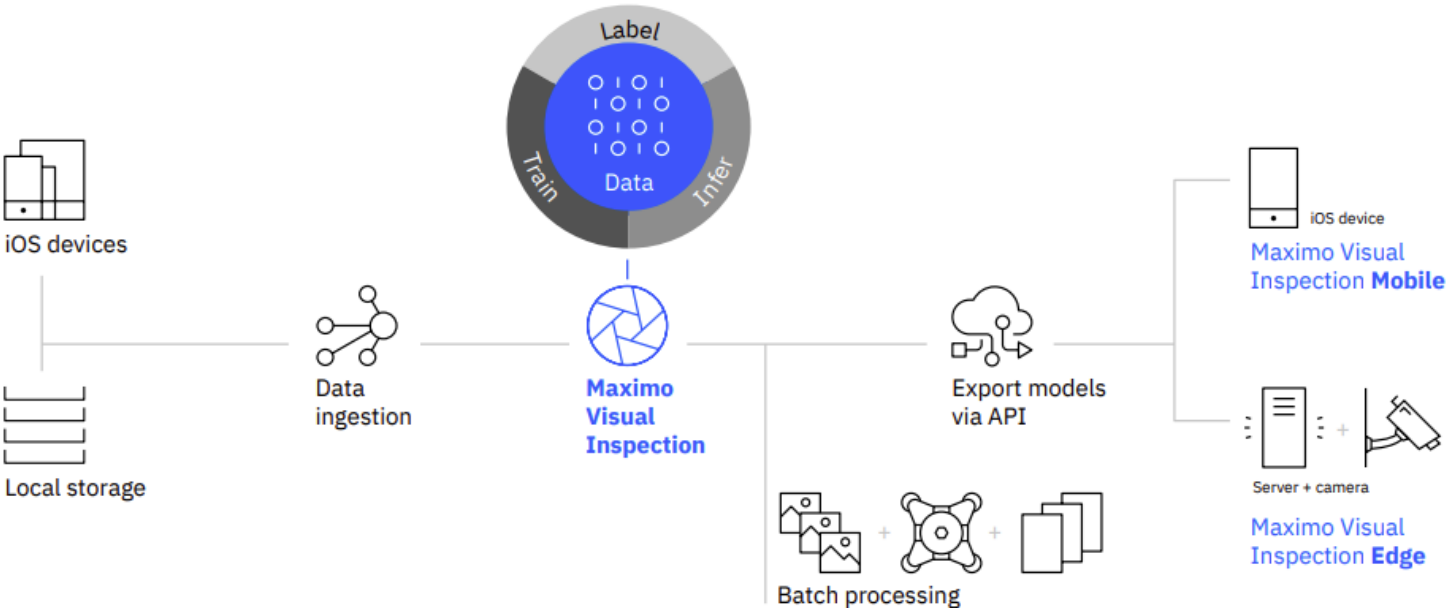
The added value of integration with your asset management system and strategy allows for operations to use a broad set of capabilities to help make better decisions on resources and equipment. This allows teams to better support operations goals of moving to more effective condition and predictive maintenance- based strategies with the aid of the IBM Maximo Application Suite.

Dramatically improve production quality and speed

A major American auto manufacturer wanted to detect production issues at the point of installation so they could be immediately corrected, increasing the quality of its product. IBM Maximo Visual Inspection prevented 32 vehicle mis- builds in the first 30 days. This “detect and correct” solution, with self-learning machine algorithms, eliminated the need for a data scientist. As a result, the manufacturer can now respond to new processes or production requirements in hours rather than weeks or months.

The manufacturer has since scaled the solution across many production-inspection points, greatly reducing rework and improving overall product quality.

Accelerate time to value: Fast, easy and highly accurate computer vision solution



Benefits of integrating IBM Maximo Visual Inspection into your operations

Fast:
- Simplify the process of gathering and labeling data, training new AI models, and deploying those models at the edge
- Automate data labeling for deep-learning models, reducing time-consuming manual process

Easy:
- Use point-and-click AI models that offer a variety of supported model types
- Customize for your operations approach with automated training
- Deploy models on premises, in the cloud, and on edge devices (MVI Edge and MVI Mobile)

Accurate:
- Generate more data and drive higher accuracy with built-in data augmentation technology
- Build custom models defined for specific use cases
- Leverage built-in hyperparameter optimization and confusion matrix

Extensible:
- Integrate inspection with your monitoring, management and maintenance strategy
- Enjoy enterprise-scale tools, training and technology at your fingertips

Book a live demo with an IBM expert to find out how IBM Maximo Visual Inspection can help you optimize your operating environment.

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