

## How do product defects affect your bottom line?

Your organization goes to great lengths to prevent defective product from reaching customers. But even with protocols in place, defects still slip through. Worse, your vision systems sometimes create false positives: seeing a defect where there isn't one.

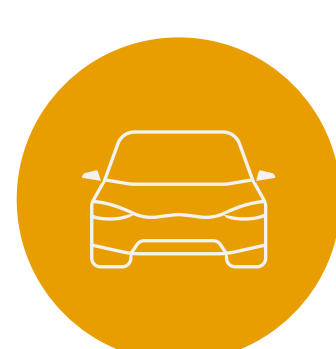
Quality assurance in manufacturing is time consuming and expensive, but critical

Poor-quality product accounts for **an average of 10-15%** of a manufacturer's total operating costs\*



### Artificial intelligence powers superior defect detection

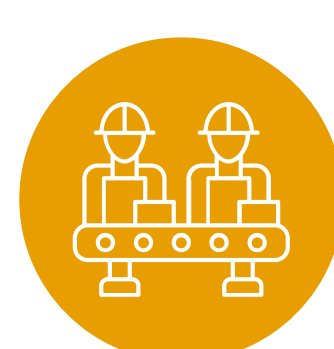
Mariner's Spyglass Visual Inspection provides the high level of accuracy you need, enabling you to improve product quality while significantly reducing costs. It does this by doing what traditional vision systems can't—it identifies complex variations in product features and separates real defects from false positives.



Automobile



Production line / Conveyor



Worker inspecting product

## How Spyglass Visual Inspection drives product excellence and reduces cost

Mariner's Spyglass Visual Inspection uses IoT, Machine vision, AI technology, and industrial cameras to intelligently identify product defects at any stage of the manufacturing process, easily and without additional programming. This enables operators to remediate defects before additional energy and costs are poured into an item that would later be rejected. The solution is adaptive and allows operators to tune and refine how defects are identified so accuracy never stops improving.

### The journey starts here

Leverage your existing cameras, keep your investment low  
-OR-  
Connect with Mariner to find a camera system that fits your budget and needs



### Model training

Train the system to identify and classify defects specific to your use case



### Real-time detection

Detect product defects with AI, image recognition, and machine learning

Simple to complex defects can be identified at high speed in large volume with high accuracy



### Classify

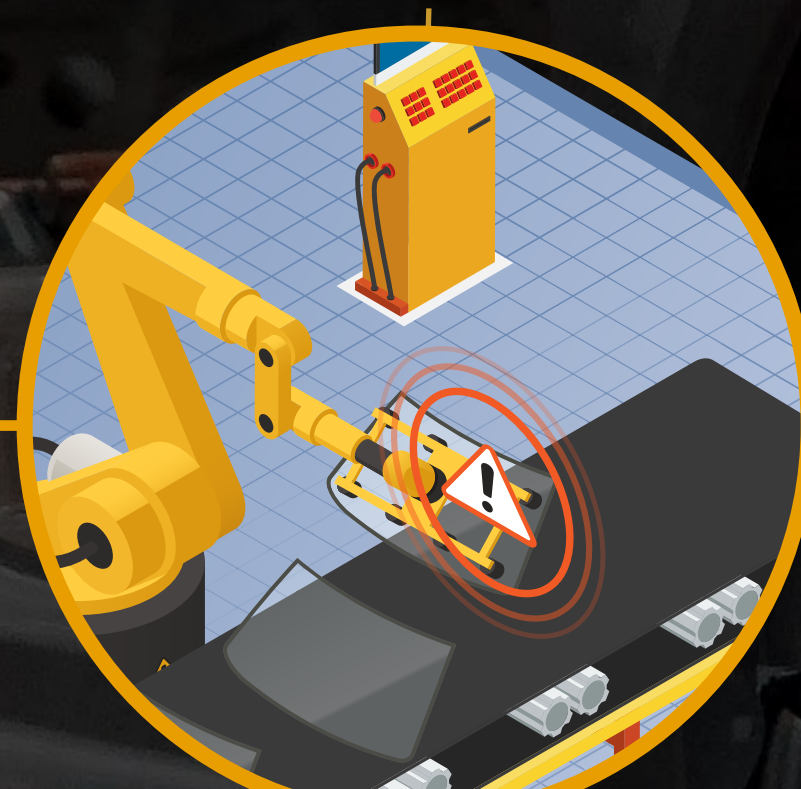
Classify hundreds of defect types

Identify and characterize the conditions under which they may arise



### Remove defective components

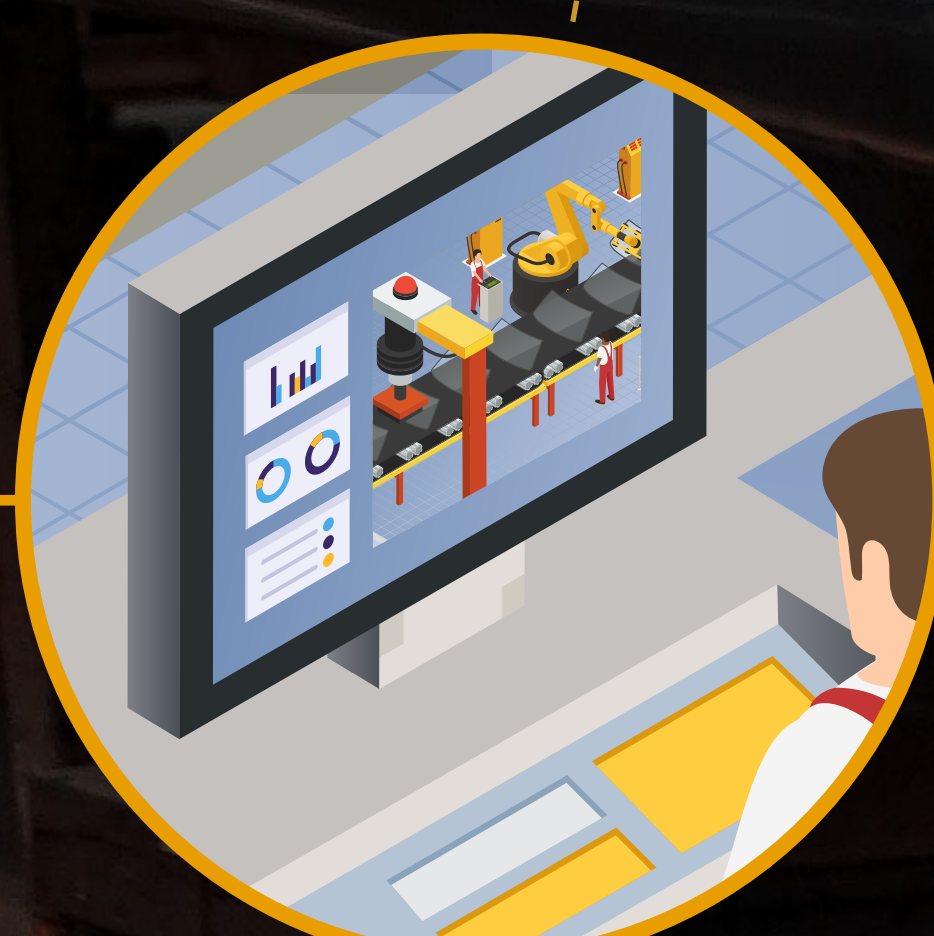
Identification of defects triggers automated removal of component from production line before more value is added to defective component



### Monitoring & root-cause analysis

Use historical data to identify and understand conditions that are causing defects in the first place

Alert operators and inspectors when the volume or type of defect is outside of permissible limits



## Now you can intelligently identify, classify, and prevent product defects

#### Immediate impact

Accelerate time-to-value with easy implementation and ramp-up



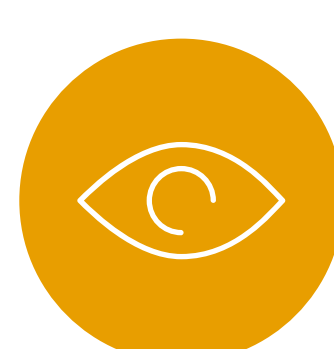
#### Open, flexible & adaptive

Leverage existing infrastructure, customize for your needs, and keep improving accuracy



#### Increased situational awareness

Enable greater visibility with a bird's-eye view of product quality across multiple lines or facilities



### Built by Mariner, powered by Azure

As a 20-year Microsoft Gold Data Analytics Partner and 2020 IoT Partner of the Year, Mariner develops solutions that help drive operational efficiency, visibility, and cost-reduction for manufacturers: excessive cost and access to infrastructure. Leveraging the power, flexibility, and security of Azure, Mariner provides robust, innovative solutions that help manufacturers stand apart.

### Optimize your production line now

Learn more: <https://mariner-usa.com/solutions/spyglass-visual-inspection/>

Connect with the Mariner sales team: [info@mariner-usa.com](mailto:info@mariner-usa.com)