

A.I. + VISION IN MANUFACTURING

Smarter Facilities. Safer Workers. Leaner Operations.

“By combining high-resolution camera feeds with advanced analytics, facilities can automate observation, analyze patterns, and respond to risks or inefficiencies in real time.”*

Manufacturers today must balance production uptime, worker safety, regulatory compliance, and cost efficiency—often with leaner teams and aging infrastructure. Traditional monitoring systems aren’t enough. They’re reactive, fragmented, and offer limited insight.

That’s where AI-powered vision systems come in. By combining high-resolution camera feeds with advanced analytics, facilities can automate observation, analyze patterns, and respond to risks or inefficiencies in real time. Across the factory floor, vision AI is transforming how manufacturers operate, including:

Hazard Detection and Worker Safety

Automatically detect PPE compliance, identify slip or fall incidents, and alert teams to forklift proximity risks.

Example: One manufacturing facility saw an 83% reduction in safety violations and a significant decrease in workers’ compensation costs after implementing an AI-powered vision safety system.¹

Quality Assurance

Use computer vision to detect product defects, mislabels, or assembly errors without slowing down production lines.

Example: An automotive supplier increased their first pass yield by 12% after implementing inline defect detection with camera vision.²

Asset and Process Monitoring

Monitor machine status, queue times, or material flow and flag anomalies before they cause downtime.

Example: A food packaging facility deployed thermal and visual cameras to detect conveyor jams before stoppage, improving uptime by 15%.³

Energy and Environmental Optimization

Analyze heat maps and occupancy data to adjust HVAC, lighting, and cleaning schedules to cut utility costs and improve sustainability.



How Connection Helps

Connection provides end-to-end vision AI solutions built for manufacturing environments.

- **Needs Analysis:** From production lines to loading docks, we can identify opportunities where vision systems will deliver ROI.
- **Solution Architecture:** Our experts design secure, scalable systems using proven platforms like Intel® OpenVINO™, NVIDIA Metropolis, and leading camera vendors.
- **Deployment and Integration:** From hardware install to network configuration, we ensure minimal disruption and maximum performance.
- **Ongoing Support:** We train your team and provide lifecycle support, including system updates and analytics tuning.

Let's Build a Smarter Facility

Connection understands the complexities of manufacturing environments. We've helped factories of all sizes modernize with AI and automation, and we're ready to help you do the same. We don't just deliver devices—we deliver outcomes.



Contact your Account Team for more information or reach out to one of our experts.

Business Solutions

1.800.800.0014

Enterprise Solutions

1.800.369.1047

Public Sector Solutions

1.800.800.0019

www.connection.com/Manufacturing

Footnotes:

*ASQ, 2019, Cost of Quality (COQ)

1 Visionify, 2024, Case Study: How a Global Chemical Manufacturer Transformed Workplace Safety with Visionify's AI Solutions

2 Axis, 2024, Axis cameras support innovative quality inspection in BMW Group vehicle production.

3 Inside AI News, 2023, Improving Product Quality with AI-based Video Analytics: HPE, NVIDIA and Relometrics Automate Quality Control in European Manufacturing Facility