ASSEMBLY AUTOMATION AND INSPECTION

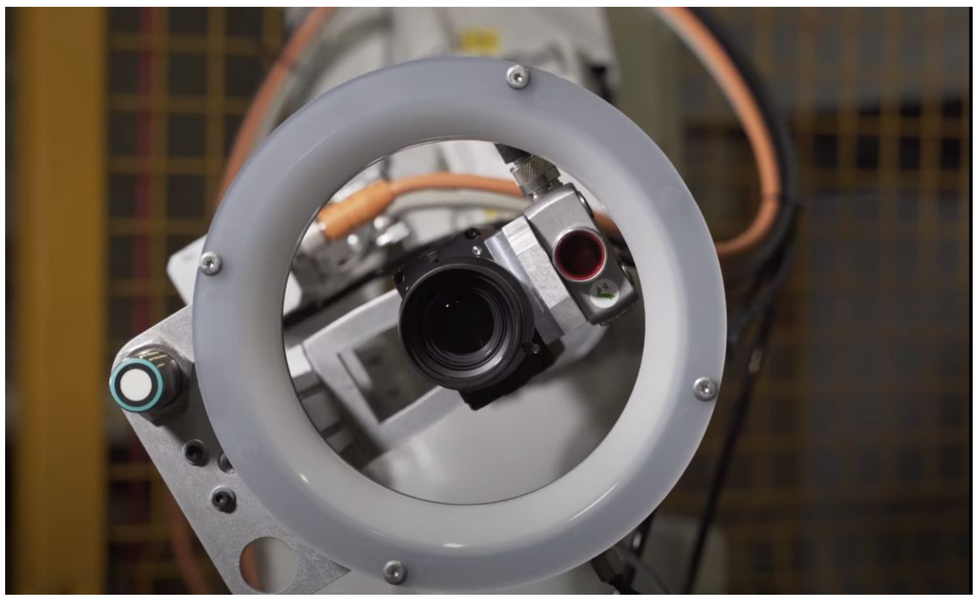
ABOUT RELIMETRICS

At Relimetrics, we are changing the paradigm of inflexible, hard to use & reconfigure quality automation (QA) systems with flexible, easy to use & configure QA.

Relimetrics enables manufacturers to digitize quality assurance and manufacturing processes with guaranteed detection accuracy and shop floor availability.

OUR CUSTOMER

Lockheed Martin is working together with **Relimetrics** to automate aircraft manufacturing and assembly processes with **Relimetrics'** AI-based machine vision enabled robotics technology. **Relimetrics** is improving manufacturing efficiency by making work-object identification and inspections easier, smarter and unprecedentedly more accurate.



Watch Video

CHALLENGE

Lockheed Martin seeks to improve the efficiency of their aircraft assembly process by leveraging advancements in robotics, machine vision and AI.

Currently, the assembly process is done manually by placing components into the jig, laying out pilot holes, hand drilling, deburring, skin trimming, sealing, countersinking, and installing fasteners.

This labor-intensive process is time consuming and prone to human error. What is more, the quality inspections are carried out by operators, which, due to fatigue, is inefficient and inaccurate.

Lowering the need for human intervention, both in drilling operations and visual inspections, has the potential of increasing the efficiency and accuracy of the assembly process significantly.

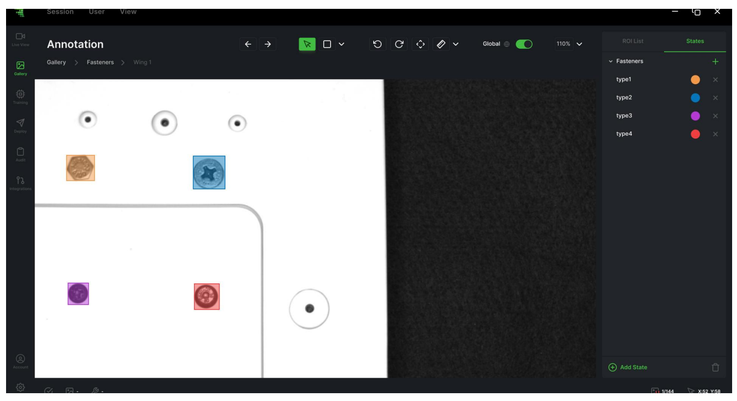
SOLUTION

Relimetrics delivers autonomous technology for assembly automation and quality assurance inspections, driving better business outcomes.

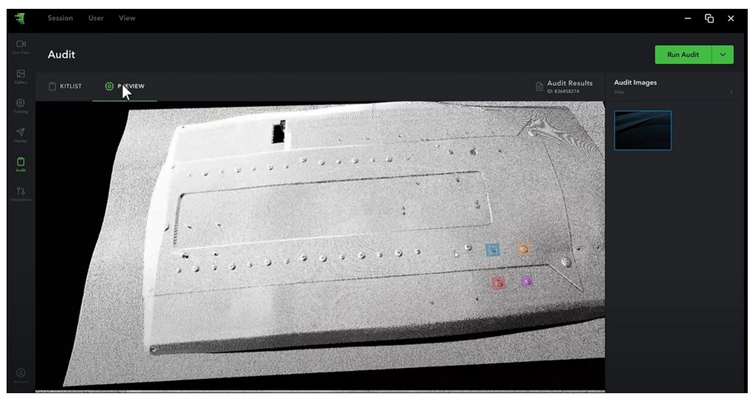
Relimetrics' robotic integrated technology collects images and 3D point cloud data of the aircraft structure, identifies and locates the features using AI-based machine vision and allows the user to train AI models without writing a single line of code.

Relimetrics HMI shows the acquired 3D point cloud data and the predictions of the AI-based detection model.

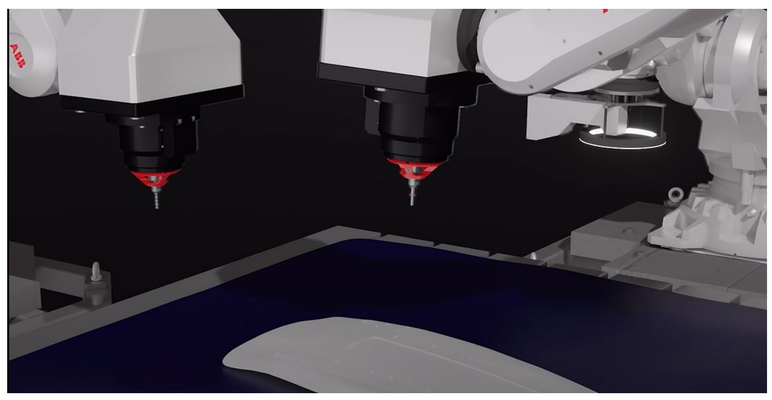
Relimetrics solution digitizes work object identification, enabling customers to utilize this information to drive manufacturing tasks (e.g. drilling, riveting) autonomously.



Train



Audit



Assemble

TESTIMONIAL

Hunter Markussen

Application Engineer - Manufacturing Technology

"Relimetrics is working with Lockheed Martin Aeronautics to develop AI-based machine vision enabled robotics for automating aircraft manufacturing and assembly processes. This innovation in automatic work-object identification allows the system to manage greater degrees of complexity than what is capable with traditional machine vision. Like Lockheed Martin's other investments in advanced production technologies, the goal is speeding production and improving aircraft quality."