



**CASE STUDY**

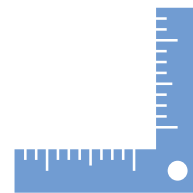
# New Vision CMM Drastically Reduces Measurement Times

*Norwalt's Innovative 2D and 3D Optical Technology Overcomes Manufacturing Bottleneck*

Norwalt was approached by an injection molding company with an enticing challenge: "Can you develop an inspection system that's 5x faster to replace our current coordinate measuring machine (CMM)?" As a leader in turnkey solutions, Norwalt created an inspection system to challenge traditional CMMs with 2D and 3D optical and laser technology.

For decades, CMMs have utilized a three-dimensional Cartesian coordinate system to manually probe selected assembly surfaces and collect data. The process guarantees quality and accuracy, essential for any successful verification system. Unfortunately, it also costs time, and in turn, money because each product and component part requires touch verification from the probe.

As a result, it takes a traditional CMM system an average of one hour to complete an inspection of sixty-four units. In the event of a power outage, each system on the floor must be checked via CMM, meaning that an entire 40-hour workweek could be spent on verification instead of productively. Norwalt got to work on brainstorming a creative solution.



**90%**  
Measurement  
Time  
Reduction



AI Integration  
Significantly  
**Reduced  
Defects**



1 hr Tasks  
Reduced to  
**9 min**  
Boosting ROI



## Norwalt's Solution

Norwalt engineers created a one-of-a-kind vision system utilizing laser measurement, 2D and 3D optics, and deep machine-learning to replace the manual probes and pneumatic system currently used.

Engineers employed a multi-axis servo system to precisely position the vision system over the specific cavity product.

## Norwalt's Result

With innovation and cutting-edge design, Norwalt delivered their client a visual inspection CMM machine capable of performing a one-hour detailed 64-cavity mold inspection in only nine minutes. The team also added portability features and overhauled the graphical interface to render real-time visual data.

Keith Harman, Norwalt's Key Account and Vision Manager, says of their visual-based system:

"The key thing was stabilizing the product and implementing a touch-free measurement system combined with increased speed to process the data. We do all of the XYZ measurements in nine minutes from one complete 64 cavity mold pattern and deliver the real time data to the QC department instantly."



The ROI for the client and end-user justified the investment by the client to replace their legacy technology. The client was so satisfied with Norwalt's Vision System Inspection CMM they immediately requested eight machines and made arrangements with Norwalt to replace the remainder of their existing CMM systems in the coming months.

To learn more about how Norwalt can help you achieve high-speed, high-volume production for your manufacturing facility, [visit norwalt.com](http://norwalt.com) or call **973.927.3200**.

