

# CASE STUDY

Delivering Shop floor Productivity

Doubling Of Productivity By Smartly  
Layering Digital Technology Over Lean  
and Performance Management  
Philosophies

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250 + Employees

# Lean + Digital

## Dramatic Improvement of Line Productivity using Closed-Loop Performance Management

This case study details the journey of a proud and well-established employee-owned company that serves the medical, defense, safety, and security markets. Founded in 1953 with two facilities in Connecticut and Colorado, the company takes pride in the expertise it brings in materials, manufacturing, and standards to deliver superior end-to-end capabilities with thermoplastic products.

The plant referred to in this case study is in Connecticut and serves the US market. Products made in this plant include injection molded parts as well as custom operations on plastic components. This location is very modern and is proud of its people and technology assets.

While the overall company's financial performance was good and its business growth was strong in new customers and its flagship customers, the plant in question struggled to meet customer demands, especially its high runners with standard lead times. This scenario caused the plant leadership to resort to additional shifts including weekends to make up for the lower productivity of these lines. This situation pressured the margins of these high-runner product lines and caused significant fatigue in the workforce as this situation had played out for several years!

Through this long period of weekend work and late shifts, the plant leadership executed several kaizens and productivity improvement initiatives including line balancing, SMED, etc. While these improvement projects delivered an incremental gain, they did not yield the labor productivity increase the plant was seeking. However, they consistently noticed that their productivity spiked when the plant leadership was present on the floor driving hourly execution! It was this knowledge that made them seek out a partner that could help them drive and sustain performance every hour!

### Industry:

Premium office furniture manufacturer of workplace cubical systems

### Employees:

250+

### Key Results

- 100% Increase in Line Productivity
- Eliminated weekend and late night shifts
- Introduced Fact Based Performance Management
- Saving of \$142K

# Our Solution Map

Our solution approach centered around the following steps:

## Baselining & Smart Target Setting

A thorough analysis of all the standards and targets was carried out for the first pilot line using data from the past year. The pilot line included three stations: The Lens Attachment Station, The Screen Printer, The Dryer, and an Inspection station. The analysis focused on the variance of the performance and the accuracy of the targets themselves of the line in consideration. Based on the customers' recommendations, we picked the quarter with the highest productivity average as our baseline. Using this baseline data, we worked with the leadership to convince them that the new target be higher by 80%.

The first and most important driver to getting the improvements required was for the department and line leaders to understand the rationale and the benefits of the hour-by-hour execution approach. In this context, we conducted individual coaching sessions with the Head of Manufacturing and his staff down to the "Shift Champions" who were responsible for adopting the "Win The Hour" concept and the tool.

## Coach & Adopt



## Deploy Technology

The Performance Management System included a vision system with AI trained cameras that captured the images from the line and converted them into digital event data such as Part Made, Defect Noticed, etc. This data was integrated into the Performance Management Tool called Winh which then provided a live visualization of the performance of the line on an hourly basis. To provide closed-loop capability, the software can implement escalation strategies that can when performance thresholds are breached. This solution was deployed in "dry run" mode which essentially validated the new targets that were set. Following the dry run cycle, the targets were then made official by the plant management.

As part of our final stage, we observed the performance of the target line for 3 months to record the overall variance of the performance across shifts and assembly crews. The validation process was also a "closed loop" in the sense that line performance data was automatically captured and compared against baseline targets as the shift progressed. This performance was then discussed every week with the management. It was after this 3-month validation period that the management officially recognized that their performance for this lone has been more than doubled. We are now in the process of extending the WnH concept to other lines in the CT factory and beyond

## Validate & Certify



# The Results

## Labor Productivity:

91%

Technology  
Driven

23%

Line  
Balancing &  
Crewing

\$142K

Savings  
Realization

\$210K

Savings  
Realization with  
layout changes

## Partner



### Eric Mathews Your Manufacturing Excellence Partner

Discover the power of manufacturing excellence with Eric Mathews, a renowned leader in "Win the Hour in Manufacturing." Eric specializes in addressing the unique challenges of high-volume manufacturing.

#### What Eric Offers

Eric's distinct approach focuses on sustainable productivity improvements and enhanced workforce engagement, all backed by a guaranteed minimum 4:1 Return on Investment.

#### Sustainable Success

Beyond project completion, Eric provides ongoing leadership coaching to ensure your lasting legacy of success.

#### Why Eric Mathews

With a wealth of experience, Eric equips you to lead your manufacturing business with unwavering confidence, securing a prosperous future. Elevate your manufacturing operations with Eric Mathews by your side.

## IN CONCLUSION

Through these efforts, the client was able to attain a \$4.8M savings rate through installing a robust methodology of managing projects, increasing sales dollars by establishing sales activity goals, and installing tools to help managers and supervisors plan and execute work through their people.

Through these changes, the client reduced total backlog hours by 55% and revenue \$ per ticket worked increased by 15%. Customer Call Time reduced by 57% while Call Center customer satisfaction improved by 12%.

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