

CASE STUDY

THINK  
LIKE  
THE  
MACHINE



# MACHINERY MANUFACTURING

## LeanMachine™

OPTIS boosts productivity by up to 155% for plastic and metal manufacturer

A JOINT VENTURE WITH TechSolve



## CASE STUDY – LeanMachine™

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### BACKGROUND TO THE BUSINESS

The company is a leading manufacturer to OEMs in a range of industries – from medical equipment to agricultural, construction, and industrial equipment. Operating in such demanding industries, the company faces exacting competition: quality and competitiveness are key.

### ISSUES FACED

The company needed to reassess equipment capability to meet the exacting quality standards their customers expect. They also needed to reduce costs for the competitive markets. Component quality, in particular, is a critical consideration, since end customers don't accept any less than 100% of their part print requirements.

### SOLUTIONS PROPOSED

The OPTIS **LeanMachine™** program employs proprietary software tools and data driven analytic processes to help companies think like the machine, unlocking value by optimizing cost, improving quality and reducing cycle times for critical process.

Moreover, **LeanMachine™** goes beyond analytics and theory, to take action on these insights. Using advanced in-line probing, dynamometers and tool condition monitoring in OPTIS' machining laboratory, the company even proves solutions before their implementation, removing risk and disruption for customers.

### BENEFITS

- Dramatic improvement in part quality with a 90% reduction in scrap and reworking
- Overall productivity improvements as high as 160%
- Reduced operator interface in the production process
- All of this work was achieved in less than a month

### IMPLEMENTATION

After the molding process, each component required machining of both highly abrasive plastic and metallic materials. The components were machined on an older high volume dial index machine. **LeanMachine™** was used to assess the condition of the equipment and report on its capability to meet the part's specified requirements.

Onsite observations, combined with reported part quality data and an evaluation of the machine's overall condition, lead to a recommendation to rebuild or replace the equipment for the manufacturing process, to meet quality demands.

After reviewing the quality and productivity of the machining process, data from each station's cycle times, machine processes, cutting tools, workholding fixtures, functional inspection tooling and operator interface was used to redesign the dial index machining process. This generated a set of recommendations which would deliver significant improvements to the quality and productivity of the machine.

This analysis gave the company accurate data to build a solid business plan, justifying the investment in the equipment upgrade.

But more than that, the OPTIS experts noticed that there were other issues beyond the machine itself that were affecting quality too. As a result, OPTIS was able to offer and implement a detailed list of solutions this included the change of the drill geometry to achieve better hole location; change of the taps to achieve better cutting and fewer burrs; implementation of work holding improvements to reduce changeover time; and rebalance the operations performed at each station to achieve better throughout.