



Success Stories from the Field

Medico Industries

DoD Contractor Forges Ahead With Strategic Approach to Lean

Client Profile:

Medico Industries, Inc. has delivered over 16 million projectile metal parts to the Department of Defense and over 3 million metal parts to the automotive industry over the past 50 years. As a cost effective manufacturer of projective and warhead metal parts, Medico is a supplier of the hollow shell 60mm and 81 mm high explosive, smoke and practice metal parts. In addition to machining facilities, Medico has presses (mechanical and hydraulic) ranging from 235 ton to 2,000 tons capable of manufacturing hot and cold extrusions. The operations that they perform are backward extruding, cold coining, wiping and nosing. Medico has demonstrated that they have the experience, resources, technology, expertise and commitment necessary to manufacture hollow shell metal parts as heavy as 40 lbs and 6" in diameter from various types of material while maintaining quality and cost effectiveness.

Situation:

The Department of Defense needed to increase the supply of projectiles to the War Fighter. The Government began a Lean 6 Sigma approach to improve the supply chain. More facilities were established to complete the assembly, which required Medico Industries to increase their output while maintaining their perfect quality performance. NEPIRC met with the Government team and Medico Industries to establish a program for ramping up the production, performance metrics to measure the progress, and communication with the other companies involved with the supply chain initiative. The first step was to establish an overall transformational goal, "To meet an increased demand for projectile bodies while maintaining superior quality to meet every customer requirement and deliver the products complete, perfect quality, and on time."

Solution:

NEPIRC met with the Medico Industries team and established a "Strategic Plan for Growth". The Strategic Plan included Medico Industries' Core Values/Beliefs, Target Markets, One Year Plan, Five Year Plan, and Key Performance Measures. We felt this step was critical for setting the direction of Medico's team with NEPIRC's assistance. The Medico Industries team agreed that a Lean Business approach would lead the transformation for growth by first establishing measures to guarantee the effectiveness of the manufacturing system and then Value Stream analysis for improving the efficiency of the system. NEPIRC was selected to facilitate this effort while steering the team through the Value Stream Analysis. The team was prepared to invest in innovative technological approaches for improving their overall performance. The Medico team's first task was to fully understand the Customer Needs over the next 12 months. The Department of Defense supplied the requirements for the ramp up to supply the other facilities which would be starting up over the next 12 months. This included the inventory build required for each of these facilities to achieve First Piece Approval. NEPIRC trained the Medico team in using Value Stream Analysis. We identified seven different Value Streams within the facility, and prioritized our first Value Stream Analysis to the customer needs. Over the course of the next seven months a Current State Value Stream, Future State Value Stream, and an Implementation Action Plan was created for each of the seven Value Streams. This allowed the Medico team to work on all for the seven Value Streams simultaneously. Monthly meetings were conducted, including the government representatives to evaluate the progress and re-direct our efforts based on the customer's real-time requirements. As the improvements were being established, NEPIRC began acting as a Strategic Advisor to keep the activities on course, NEPIRC assisted in updating the Value Streams to the "New" Current State and establishing the New Future State and Action Plans.

Results:

The result was a dramatic reduction in lead time, a significant increase in capacity, an improved in-process quality result, an increase in production, and total customer satisfaction. As an additional benefit a Management Operations System was created for monitoring the production performance of each work cell. The MOS became the new Production Control system for identifying performance deficiencies on an hourly basis. The system is also used for redirecting labor assignments to address any processing inefficiencies. The team is not considering implementing a TPM system for controlling the Overall Equipment Effectiveness. As a result of this assistance from NEPIRC, the company now will increase throughout to meet contractual requirements. The anticipated project impact resulting from this project will be customer satisfaction, job growth, additional sales, productivity improvement, perfect quality, and future process capability, by identifying the corporate strategy and eliminating process waste. Additional investments were made in the



Plane, the equipment, and most importantly in workforce skills. The overall result has been the establishment of a company which continues to improve as it proceeds through its growth transformation.

- Created a Strategic Plan for Growth, one year and five years
- Established Performance Metrics to link work cell measures to corporate goals
- Established and implemented actions for Seven Value Stream Future State maps
- Increased sales by over 50%
- Increased jobs by approximately 25%
- Realized labor and material savings through process improvements and work force training
- Created a Production Control System utilizing networked computer system
- Avoided plant expansion by utilizing cellular equipment layouts

Testimonial:

"The primary goal of our company has always been focused on high quality and timely delivery of product to our customer. The NEPIRC team took our key people off of the manufacturing shop floor and instructed them on how to view our processes on paper. Skepticism soon waned as we began to identify solutions from the value stream maps more clearly than on the actual shop floor. With the aid of NEPIRC, we increased production, reduced inefficiencies, maintained quality standards and learned that paper tools are as important as wrenches in meeting our customer's goals." - Cataldo Medico, Manufacturing Division President