

## **Continuous Improvement with Lean Manufacturing Keeps Whitney Brothers Competitive**

### **Company Background:**

For a company to be around for 112 years they must be doing something right. What began in 1904 as a manufacturer of wooden wagons and doll house furniture for children, Whitney Brothers grew to become one of the world's leading manufacturers of Early Learning and Institutional Childcare wooden furnishings and accessories for schools, childcare centers, Head Start facilities, churches, libraries, museums, and residential homes.

Safety, quality, innovation and value are what Whitney Brothers prides itself on. All materials are made of solid hardwoods and solid plywood laminates sourced from responsibly managed sustainable forests. Their manufacturing techniques achieve smooth, rounded edges, employ the strongest woodworking joints and are finished by hand. Doors and frames are designed with extra wide spaces in between, and use full length continuous hinges to prevent a child's fingers from getting pinched. They test all knobs, handles, hooks, magnets and moving parts to ensure they are smooth, rounded, and firmly attached to prevent breaking free under rigorous use. Finishes are state-of-the-art, safe, non-toxic, durable and meet the most stringent safety requirements.

Today Whitney Brothers houses 50 employees at their 90,000 square foot manufacturing facility in Keene, New Hampshire where they blend old world craftsmanship with state-of-the-art CNC manufacturing technology. Through their network of educational distributors and dealers their products are sold in North and South America, the UK and Europe.

### **Situation:**

About 16 years ago Mike Jablonski, now President of Whitney Brothers, came on board. "I started as Production Manager then grew to oversee Engineering, Purchasing and IT," said Jablonski. "Pretty much all parts of the business except sales."

As time went on Whitney Brothers began seeing increased competition from imports. In order to remain competitive Mike knew some business activities within the company needed help but was not sure how to correct them. "Systems needed to be put in place such as making sure the factory workers have the right tools, at the right time to perform their jobs," he said. "There were also issues with customer complaints; we didn't have a system to handle them which led to upset customers and office friction. Mike felt operations were being handled reactively. "What was lacking was a sense of teamwork and open communication."

It all came to a head around 2006 while Whitney Brothers was bidding on a million dollar piece of business and the Purchasing Agent visited the factory. After looking at the operations the Purchasing Agent turned to Mike and asked him if he had heard of Lean? Mike said he had not. The Purchasing Agent then said something Mike would never forget, "If you don't go Lean, you'll be out of business in 10 years." The Purchasing Agent sent him a copy of the book "Lean Thinking" by Daniel T. Jones and James P. Womack. "Reading that book is when the light bulb went off," said Jablonski.

## **Solution:**

With stiff competition from imports Whitney Brothers knew they could not raise their prices. So they bet their hopes on implementing Lean in order to stay competitive.

In 2007 Whitney Brothers engaged NH MEP to provide training and coaching in the Principles of Lean Manufacturing, Value Stream Mapping, and Kaizen. "The beauty is that it's all so simple," said Jablonski. Great progress was made in the Lean initiatives that began in 2007. It built a strong foundation but more work was needed.

Then starting in 2015 Whitney Bros would reset the Lean initiative by training and coaching their workforce again. A gap analysis had been completed and compared to that of 2007. The data supported a firm foundation, however many continuous improvement opportunities existed. These areas included standard work, continuous improvement, mistake proofing, pull systems, and balanced production. All of which were taught in the Principles of Lean and reinforced during the training and coaching during the Value Stream Mapping and Kaizen classes.

It was also recommended that a Visual Workplace be established. The principles of Visual Workplace was included in the Kaizen events. Being visual is vital to a Lean environment of which employee engagement and communication are established and built upon. The visual workplace included suggestion boards, the key to Kaizen, and small improvement overtime to achieve the greatest results. Additionally, "gemba" boards would improve communication thereby boosting the employee engagement. These gemba boards provided the latest information on the production of product from the office to the production areas to the customer. Ownership of these visual communication boards is crucial to employee engagement and need to be maintained by their owners and used by all in within Whitney Brothers.

## **Results:**

The NH MEP 2015 Lean reset allowed Whitney Brothers to improve their manufacturing work flow, fostered better communication and teamwork between departments, eliminated waste, cut costs, and helped them to remain competitive without compromising product quality or on-time delivery.

What enabled NH MEP's Lean training to be so effective was it made sure the whole company was involved. "Keeping employees well informed and having them share information is so important," said Jablonski. "Customer Service now has real information to make good decisions. Engineering now has the proper data to move forward. There's accountability across all of the teams."

One way Whitney Brothers improved communications was the use of a suggestion box. Suggestions are read after each Lean meeting and if the ideas are good they are implemented quickly.

Since the Lean reset efficiency is up by more than 10%. Employee morale is back on track and continues to improve. But Mike knows it is a never ending process. "You have to keep up with it. Lean is all about continuous improvement. Especially if we expect to be around for another 112 years."

The following results for Whitney Brothers can be credited to having gone through the NH MEP 2015 Lean Training:

- Eliminated bottle necks saved \$180,000
- Increased workflow allowed increase in sales of \$550,000
- Efficiency increases saved \$10,400
- Reduced customer order delivery time by 35% and helped increase sales
- Reduced inventory levels and saved \$300,000
- Gross profit margin Increased by 16%
- Invested \$200,000 in capital (equipment and software)

**Testimonial:**

“We have conducted many improvement activities over the years but none have had the positive impact as Lean Manufacturing. The key to Lean is empowering employees to find ways to eliminate waste in the business. The NH MEP did a great job training all our employees with basic Lean Principles and then leading us on high level improvement Events. Every event concluded with measurable gains and the tools to sustain them. Sustaining a Lean environment is key to Whitney Brothers future success.”

- Mike Jablonski, President of Whitney Brothers - [www.whitneybros.com](http://www.whitneybros.com)