



From the GBMP Lean Case Study Library (CS No. 42)

Growth in jobs and significant ROI just some of the results from KARL STORZ Endovision's Continuous Improvement Activities

It is the fall of 2007. Your lead-times are long, your past due orders are high and your biggest customer, who also happens to be your parent company, is unhappy with your product quality. What do you do? If you are KARLSTORZ Endovision (KSE) in Charlton, Massachusetts you acknowledge there is a problem, commit to changing by applying the principles of continuous improvement, and three years later you happily find yourselves in a much better place.....

Such was the unpleasant situation faced by the team at KARLSTORZ Endovision (KSE) in the middle of 2007. A developer and manufacturer of flexible endoscopes, KSE's high-technology systems require precision assembly of matched and coordinated optical, mechanical and electronic components in order to satisfy customer requirements for a quality medical device. However, despite significant overtime hours and hallways filled with inventory, in 2007 KSE employees just couldn't seem to keep up and KSE's German parent company, also a key customer, was vocal about their unhappiness with the situation out in Charlton, Massachusetts. Employees were working long and hard, but felt they were shoveling against the tide, and the trends in local metrics seemed to support their position. Something had to give.

Armed with prior experience/success in applying continuous improvement principles and tools at a previous employer, KSE's new General Manager, Bruce Watkins, and his management team assembled the troops and laid out a vision for change that included digging out of the backlog situation, increasing customer product acceptance rates and cutting lead-times. All at the same time..... "What?" thought many employees.

Fast forward to 2010 and the picture and mood in Charlton is very different. What have the employees at KSE achieved?

- ◆ At least a 6 to 1 return on investment from training and improvement activities
- ◆ Increased revenue by 13% and added employees in a down business climate: employee base has grown from 380 employees in 2007 to 418 employees in 2010
- ◆ Reduced lead-times by 96%
- ◆ Improved customer acceptance rate 15 percentage points
- ◆ Reduced backorders from double digit days to about 5 hours
- ◆ Reduced inventory by 24%
- ◆ Been awarded additional production by their parent company for a new product/technology
- ◆ Reduced employee turnover by 59%

Fulfilling this vision required everyone's help and hinged on stepping away from "the way KSE had always done things", according to Director of Continuous Improvement, Richard Thomas. With the help of the Greater Boston Manufacturing Partnership (GBMP) and a workforce training grant from the state of Massachusetts, KSE began the process of giving employees lean skills so they could be full participants in transforming the Charlton plant's operations.

Under the guidance of GBMP trainer/consultant Bruce McGill, all 380 employees received training in continuous improvement basics, 5S (workplace organization) and visual management. Their training was supplemented with targeted shop floor projects ranging from setting up work status flags to regular 5S audits and scoring systems. Additionally, senior management was trained in Policy Deployment to align people and resources with company goals, and several groups received Value Stream Mapping training that prompted follow-on improvement events in order to achieve an end-to-end pull system within key value streams.

Several work areas were combined into flow cells and standardized work was put in place in job functions ranging from product inspection to material handling. Set-ups in an Attleboro sister plant that supplies machined parts to KSE were reduced from 5-6 hours to less than 30 minutes and a pull system was set up between the two plants.

With the help of GBMP's Master Black Belt, Ron Pujalte, three groups went through Six Sigma Green belt training, and also focused their hands-on project work on real-world KSE problems. For example, one green belt project focused on increasing the number of ideas put forth and implemented by employees. By implementing a simple, local, rapid method for identifying and acting on ideas, KSE is now on top of their goal of 1 implemented idea/employee/quarter; they implemented 401 ideas in the last quarter of 2009!

2010 finds KSE employees working smarter, not harder. Work areas are neat, hallways are devoid of inventory and workers are comfortably busy doing real, value-added work. The overall level of employee participation is high and some KSE employees have been called upon to talk about their successes at regional conferences or to travel to Switzerland to teach counterparts in a sister company what they have learned.

"We have increased quality, cut costs, reduced cycle time, dropped lead-times, plus we have significantly increased employee engagement", according to Rachel Delisle, KSE's Sr. Lean Six Sigma Black Belt, "The 'learn/do' method GBMP uses was perfect for us; our consultants were easy to work with and had excellent knowledge. We expect to continue to work with them as a resource for sharing ideas and we are excited to keep moving forward."

Director of Continuous Improvement, Richard Thomas, echoed those thoughts. *"The bench strength of the GBMP consultants is solid and surpasses any other consultants/trainers I have worked with. Our training and project work directly correlated to our business needs and the trainers had an outstanding ability to work with all levels within the organization in order to internalize lean concepts and sustain gains. But we are not done yet; we know there is more we can do plus we hope to extend continuous improvement to our supply base with the help of GBMP. It's all about ensuring the growth for our company and our employees!"*

For more information on KSE please visit www.KARLSTORZ.com
For more information on GBMP please visit www.gbmp.org



100 Morrissey Blvd
Boston MA 02125
617-287-7648