

Office Location: Fremont



Manex serves Northern California's small- to medium-sized manufacturers.  
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**THE  
 MANUFACTURING  
 EXTENSION  
 PARTNERSHIP  
 IN CALIFORNIA**

Manufacturing Extension Partnership (MEP) is a nationwide system of services and support for smaller manufacturers to become more globally competitive. At the heart of the system is a network of affiliated, locally-based manufacturing extension centers. Each center, like Manex, is a partnership, typically involving federal, state, and local governments; industry; educational institutions; and other sources of expertise, information and funding support.

**COMPANY CLIPS**

**Siemens Transportation Systems Uses Lean To Get Green**

Siemens Transportation Systems (STS) is an affiliate of the global technology and engineering company Siemens AG. Based in Sacramento, California, Siemens Transportation Systems' Vehicle Division is a manufacturer of both light and heavy rail transportation systems. STS employs more than 350 people at its Sacramento facility. The company has been working with the Corporation for Manufacturing Excellence (Manex) on a regular basis to implement "World Class Manufacturing" techniques. All senior managers attended Manex's hands-on lean manufacturing seminar to understand the value of these techniques. In addition, a value stream mapping exercise (a tool for creating a material and information flow map) indicated that material control showed great potential for improving the company's productivity. STS asked Manex to facilitate a kaizen event to improve control of hazardous substances by reducing the cost of use and disposal and to ensure compliance with hazardous waste disposal requirements. The weeklong kaizen process analyzes each production step, identifies value-added and wasteful activities, and then makes changes that improve productivity.

STS assembled an internal team to participate in the kaizen project. The team, as well as other employees, participated in a half-day seminar on the basics of lean manufacturing. With background from the seminar and Manex's expert guidance, the team identified its goal, considered options, and determined what would be required to make the changes. By the middle of the third day, the team took action and began implementing changes. The overhaul began with the removal of every single chemical from the plant floor. Then the team classified materials; checked expiration dates; established a "pharmacy" of materials to order, track, dispense, and deliver adhesives, caulk, and solvents to employees when needed; and restocked lockers. This dramatic removal was integral to the success of the program.

At the end of the fifth day, the team reported a reduction of waste removal costs by 90 percent per shipped rail car, a reduction of 25 percent in pounds of waste and 28 percent in gallons of waste, and a reduction in the variety of materials classified as hazardous by

*Continued*

**STATE STATS**

DATA\* COVERS JANUARY TO DECEMBER 2001

- Number of projects completed with firms  
**138**
- Number of firms served  
**296**
- Number of firms served for the first time  
**157**
- Federal cost share for current operating year  
**\$1,577,000**
- State/other cost share for current operating year  
**\$3,154,000**

*\*Data as reported from center*

DATA\*\* COVERS JANUARY TO DECEMBER 2001

- Increased sales & retained sales  
**\$67,893,000**
- Client capital investment  
**\$11,073,116**
- Total cost savings  
**\$14,098,110**
- Jobs (created & retained)  
**338**

*\*\*Source: Independent client impact survey*

**For additional information,  
 contact Dede McMahon 301-975-5020**



55 percent. STS finally eliminated all out-of-date materials from the facility and donated \$45,000 in building materials to Habitat for Humanity. These reductions yielded an overall increase in productivity, much to the delight of STS. In addition, the team created a longer-term action item list and agreed to completion deadlines. As a result, STS is now positioning itself to be reclassified by the Environmental Protection Agency (EPA) as a small quantity generator instead of a large quantity generator of hazardous waste materials.

### **Production Technologies Uses Lean Practices To Reduce Costs By 25%**

Production Technologies, founded in 1991, provides contract manufacturing services to original equipment manufacturers in the analytical instrumentation, medical device, and computer industries. Twenty employees staff its Tracy facility. Production Technologies' president, Carl Banks, made great strides building a viable company over the past decade. The company established ISO 9000 certification. Employees received appropriate training for their job requirements. The company became a first-tier supplier to a major electronics company, and new opportunities to expand were in sight. Then, a key client presented Mr. Banks with a unique challenge: reduce unit cost by 25 percent within one year.

To meet this challenge, Mr. Banks realized that the company would have to improve efficiencies, reduce overtime, and reevaluate the main production line's disproportionate use of plant floor space. Mr. Banks had heard about lean enterprise from a colleague who experienced dramatic results in a relatively short timeframe working with the Corporation for Manufacturing Excellence (Manex). Inspired, he called Manex for an informal assessment of his operation.

Manex conducted the evaluation and recommended a five-day cellular/flow kaizen event that would train individuals from both manufacturing and administration. The cellular/flow process links manual and machine operations into the most efficient combination of resources, creating balance and flexibility. Manex's training services department helped Production Technologies apply for funding support from the California Employment Training Panel (ETP) to expedite the project. Once funding for the project was secured, Manex coached Production Technologies' manufacturing team members to help foster clear communications and to orient them to the new, more productive work model.

By day three of the training, the company had already experienced dramatic changes. By improving the floor layout, which reduced process area floor space by 38 percent, Production Technologies minimized parts movement, reduced machine set-up time by 88 percent, and increased improved its cycle time by 97 percent. Manex helped the company reduce its work-in-process by 94 percent, and now the new cell (production line) utilizes 62 percent of its original space, opening up opportunities to add new cells. Now that the company has increased its throughput (pieces produced per day) by 33 percent, new cells can be added quickly as business expands with a minimum of capital investment. Production Technologies was able to meet client expectations to reduce unit costs by 25 percent in only four weeks—a fraction of the time expected by the customer.