



## **61st Advanced Manufacturing Forum**

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**The Center for the Management of Technological and Organizational Change**

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### **Manufacturing Excellence and Change Management**

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**Schneider Electric**

**Peru, Indiana**

Schneider Electric manufactures industrial electrical panel boards for commercial applications, and it is the largest employer in Peru, Indiana, a manufacturing town that has witnessed the recent closings of five companies. While a few of Schneider's 570 employees are the third and fourth generation to work in this plant, every single employee understands that the livelihoods of many people in Peru now depend on Schneider. This driven workforce, a testament to positive lean thinking and lean principles, is committed to the continuing success of both Schneider Electric and Peru, success sustained by Lean operations and manufacturing excellence.

Schneider Electric's panel boards are big metal boxes that house many breakers; 60% of these panel boards are made-to-order, with the remaining 40% of production going to a warehouse. Contractors call their orders in for specific numbers and types of breakers to be shipped directly to their job sites, be it a grocery store, hospital, department store, or other large venue. Over 1,800 panel boards are manufactured per day in two side-by-side facilities.

When the company started to lose market share in the early 2000s, operations went into crisis mode. Schneider experienced a reduction in salaried workforce, suffered with low morale, and struggled to maintain productivity levels. Schneider, a union facility, had not always enjoyed a cordial relationship with its workforce. The movement to manufacturing excellence began in 2003 with an edict issued by the new vice president of operations, and the subsequent replacement of the manufacturing manager, the plant manager, and the engineering manager - all at the same time. Today, Schneider has a manufacturing process in place that is so robust that any of these top managers could be pulled out and Lean would not miss a beat.

The company culture is now one of change with all employees are on one or more change teams. The company has learned how important communication, education, and training are in order to effect change, and to further ownership and involvement. Engineers, material analysts, and supervisors sit together so that they are working together as a team as ideas and issues come in, to discuss potential barriers to hitting their goals. Schneider has Lean and Six Sigma teams. Ideas from the shop floor are encouraged – no one knows the task better than the person who has done it for 30 years; solving a problem is an important and valuable contribution, but involvement in the process is just as important. Learn to say "we" and "our" instead of "I" and "my".

The Peru facility stumbled in a few places early on in its Lean journey. It was a small group that formed the original team in 2002 – they were the only ones who had the books and the training from a consulting firm.

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The team had a vision, but no real plan for implementation. While management was supportive, they were not educated in Lean. And the shop floor was wary of the unknown. Lean has many terms, acronyms, and tools and the original team encountered resistance not only from the shop floor, but from supervisors and engineers too. Change was not part of the culture. Then the new management team arrived, with a fresh focus on 5S, ownership, involvement, and common goals: a team working together with not always conflicting initiatives. Education, benchmarking and training were tools that helped convince the union that Lean was the future. Placement of hourly associates on all teams let the union know that they and their ideas would be part of the solution.

Standardization and visual management are key elements of Schneider's success. 5S is acknowledged as a discipline, as a behavior to drive Lean, to keep plant areas organized and clean. The entire plant continues to be audited monthly by measurements that show care and commitment. Identifying waste is another component – what do you see? Overcoming the hurdles of eyes blinded by the repetitive nature of a task requires education and training. Schneider employees have reached the point now where their lines will never not have enough parts nor will they have too many. Water spiders deliver parts every day, all day.

Value stream maps – current and future states - can be powerful tools once they have been made meaningful to the organization. Schneider's value stream map boards are located in communication aisles and provide additional opportunities for education and training. If an employee does not understand a process, they ask. Information flows continuously by having the maps posted with Schneider's key metrics (safety, service, quality, productivity). Every associate knows the plant's goal, and their individual target to help meet that goal. \$2M in productivity may not mean very much to a metal worker, but 85 units per hour does. LED boards and dry erase boards keep track of prior and current goals, whether hit or missed, and why. A repetitive miss means a barrier of some sort that needs to be analyzed and solved.

Material replenishment is a hard lesson to learn, to identify what is push and what is pull. Schneider works with a late differentiation model since there is great variation in its mixed model product line.

Results have all been positive – growth in volume with no corresponding growth in work force, tremendous improvement in safety numbers, on-time shipments and labor productivity. As Schneider moves forward, it will focus on Six Sigma and aligning projects to goals and celebrating its wins.