



The Power of T² – Training and (Applied) Technology

The Los Angeles Chapter November 2013 Meeting

Presentation by

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While preparing to write an article on the loss in recent years of manufacturing jobs in the United States, I read comment after comment, report after report about the “skills gap” facing industry today. According to a 2012 Deloitte study, “there were approximately 600,000 unskilled manufacturing jobs in the U.S. simply because employers cannot find people with the skills they need.”

So it was with keen interest that I attended November’s LA Chapter Aerospace and Defense Forum meeting to hear Joe Klocko’s presentation. Over his 35 year career, Joe has held executive level positions with privately-held and Fortune 200 A&D companies such as Tactair Fluid Controls in Syracuse, NY, HR Textron, Inc. in Santa Clarita, CA in addition to a 21 year stint with Allied Signal (now Honeywell).

Today, Joe is the Director of the Center for Applied Competitive Technologies (CACT) hosted by College of the Canyons in Santa Clarita, CA. In this position, Joe also serves as the Regional Director, Advanced Manufacturing for the California Community College’s Economic and Workforce Development program.

CACT is what some describe as an “untapped resource”, the “best kept secret” for helping to overcome the gap in skilled labor. The CACT that Joe leads is but one of eight California-based Centers, where those wishing to improve their skills or embark on a completely new career path can learn to become accomplished machinists with the necessary skills . . . both technically and behaviorally . . . to find employment opportunities and become successful employees.

More so, CACT's services are available to students and employers for little or no cost. Employers can send employees to CACT to upgrade their skills, and can take advantage of a job matching service to find qualified prospects. And consulting and other training are available. Some 15 years ago, the California Community College system undertook an initiative to create an economic development program that would help California manufacturers remain globally competitive. The CACT was born from that effort. It's indeed a much needed service.

Providing testimony to its value, we learned from Joe that a World Bank study of 1500 companies experienced a 24% return on their training investment and that providing an extra 10 hours of training per year per employee was correlated with an increase in productivity of 0.6% (source: EPSI, Inc.).

During his presentation entitled "The Power of T² – Training and Applied Technology" (Joe emphasized the word "applied", wanting to distinguish between the application versus simply the sake of possessing technology knowledge) Joe shared some rather mind numbing statistics. Imagine -high school districts without a wood shop program or manufacturing related to take. That's life in right here in Southern California and, I suspect, in many other high school districts around the state and the country.

Would it surprise you to learn that nationally only 30% of 25 year olds have a bachelor degree? I was. I was also surprised to learn that those who attend the classes at Joe's Center are not these new bloods, these 25 year olds, but rather skew toward the more mature 40-somethings looking for a new career. Thank goodness they have a resource like CACT to help them achieve these mid-life transitions.

China. When mentioning "global competitiveness" it's hard not to immediately turn to the impact China has had on American industry. For that same article I referenced in the opening paragraph above, I learned that U.S. multinational corporations, the big brand-name companies that employ a fifth of all American workers, increased employment overseas by 2.4 million. It was believed at the time that producing offshore . . . China, Asia . . . was less expensive than manufacturing in the States.

As Joe shared, the worm may be turning. Reshoring may be catching on in a meaningful way. A study done by the Boston Consulting Group concludes that labor costs for manufacturing in China and the U.S. will converge around 2015. China's cost advantage versus the most competitive manufacturing regions in the U.S. will fall to just 10-15% by that time without factoring in other costs such as transportation, duties, inventory, etc. Based on a total cost of ownership model, U.S. factories will soon have an advantage. Companies can turn to the CACT program to find the trained machinists necessary to remain globally competitive.

If you were asked to name a hot topic in manufacturing technology today, what comes to mind? How about 3-D printing/ additive manufacturing? While the CACT program doesn't train its students in this discipline, CACT is spreading the word about 3-Ds present, and long term, value to manufacturing.

While passing around samples of 3-D produced items, Joe gave us a feel for the progress 3-D is making in A&D. Would it surprise you to learn that 50 parts on today's F-18 are created using 3-D printing? These are not flight critical items . . . cold air handling area of the aircraft and not load bearing . . . but nonetheless active components of these airplanes.

Joe also talked about 3-D's impact on the A&D supply chain. Today, spare parts must be carried in physical inventory to be ready at a moment's notice. In the future, these spare parts will be printed on demand on a printer at the site of need. The cost will not be the physical product sitting on a shelf waiting to be used but rather a royalty fee paid to the manufacturer of the part. It'll be a whole new world of supply chain.

When desk top computers were first introduced, they were prohibitively expensive and therefore only available to a select few. Over time the capacity increased and the cost plummeted. That's the same path being projected for 3-D printing. It's still cost prohibitive for most. But prices are coming down. Joe predicts that much more of what is traditionally produced today will, within 10 years, be printed using 3-D technology.

The CACT is a resource that needs to be more commonly known and utilized. It's a wonderful resource that offers its services economically or in many cases for free because of grants and other financial support they receive. Employers who wish to send their employees for training can often do so for nothing more than a \$250 materials fee. All CACT requires is that the employees while in training at CACT continue to be paid their regular wages.

In their fiscal year ending June 30th, 2013, CACT and the College of the Canyons Employee Training Institute (ETI) had trained 688 individuals from 55 companies. But there's more to their services. The Santa Clarita WorkSource Center provides free recruiting services for lower end positions generating approximately 150 matches per month. And their Small Business Development Center (SBDC) provides consulting and short-term training services to small businesses. They aren't a one-shop-pony.

Joe needs help to spread the word. If you have the need within your own company and/ or are working with California manufacturers who could benefit from CACT's services, Joe's a phone call (661-362-3111) or e-mail (joe.klocko@canyons.edu) away. Or, if the College of the Canyons is a far away resource, seek out your nearest center at www.doingwhatmatters.cccco.edu.



Lee Schwartz, former CEO and President of manufacturing and distribution companies, is principal of the Schwartz Profitability Group (SPG) that, for over 12 years, has uncorked the operational bottlenecks of manufacturing and distribution companies, boosting their bottom line results. Lee's clients range from smaller family run companies to Fortune 500 firms, including those in aerospace and defense. His work helps clients find solutions related to

process improvement, supply chain management, inventory control, workflow design, and operational performance. Results consistently include cost reduction, improved efficiencies and increased profitability.

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