

CTL|Thompson, Inc.

Headquarters: Centennial, Colo.

Number of branches: 7

Total number of employees: 300

Year firm was established: 1971

Total billings for last fiscal year: \$25 million



Engineering recruitment and retention strategies

There has been significant debate on whether there is, or is not, a shortage of civil engineers. A report from the National Science Foundation says that they have “observed a troubling decline in the number of U.S. citizens who are training to become scientists and engineers, whereas the number of jobs

requiring science and engineering (S&E) training continues to grow.” Yet a recent article in The Washington Post by Robert J. Samuelson claims that the S&E crisis may be “phony.”

While you can find statistics that support both sides of this argument, I can tell you from where I’m standing (in a firm which offers geotechnical, materials, structural and geo-environmental services) --- there are not as many civil engineers applying for jobs these days as there were five years ago. And from what I hear from my counterparts in other firms, they are feeling the crunch as well.

Declining degrees

The truth, according to the American Society of Civil Engineers, is bachelor degrees awarded for civil engineering declined significantly from 1998 to 2003 (the last year results for this study are available), dropping 18 percent from 10,478 to 8,595. Why are students not choosing this field as their course of study? Maybe it’s because there has been so much talk of outsourcing engineering jobs overseas to low-cost countries like India and China that students are fearful that there won’t be jobs when they graduate.

Another theory says that students most likely to choose civil engineering as their major turned to information technology in the late 1990s to capitalize on the now busted dotcom boom. With the number of computer engineering bachelor degrees awarded from 1998 to 2003 increasing by 125 percent, statistics support this theory. With scarce jobs in the IT field these days, there is hope that the tide will turn back to engineering as the major of choice for the mathematically inclined.

Additionally, a recent study by Engineering News Record reported that the starting salaries for engineering grads have increased by four percent in 2005. Hopefully, that news will help spur interest in the field.

But, until the time comes when the numbers of engineering graduates are on the rise again, firms must employ aggressive and creative recruitment techniques to fill their numerous job openings. Equally as important as recruiting new employees is retaining and fostering the knowledge base of current employees.

When I first entered the field of engineering, first and foremost I wanted to find a company that would offer me long-term growth. I started with CTL|Thompson back in 1978 and progressed from Project Engineer to President and CEO. But, today’s young people change jobs much more frequently and will most likely not spend their career with a single employer. There is no longer a stigma attached or cause for concern when you’re faced with a candidate who has changed jobs. Employees are not reluctant to switch companies as their needs evolve or personal lives change. Recruitment and retention strategies need to reflect this. Here are some ideas.

Recruitment

In today’s competitive employment market, it’s not possible to simply wait for applicants to come to you. Employers need to give prospective employees an incentive to want to work for their company. Here are some suggestions:

- Offer a signing bonus or a competitive starting salary, or both. Money is a perennial incentive. An entry level engineering position is usually not a recent graduate’s dream job, but with a good starting salary, it can make an unexciting job seem more palatable until that first promotion is forthcoming.

Ron McOmber, P.E., is President/CEO of CTL|Thompson, Inc., a consulting firm specializing in geotechnical, materials, structural and environmental engineering and testing. Over the past 28 years with the firm, he has risen to lead the company, including employee development, strategic planning and overall company performance. He also acts as expert witness for projects involving geotechnical engineering; and conducts oversight and review of soils engineering projects. He may be reached at 303.825.0777 or rmcomber@ctlthompson.com.

Beyond Words

- Create relationships with the students prior to graduation. There are numerous ways for companies to become involved with students through local chapters of engineering related associations. For example, you can attend meetings, make presentations and host information sessions.
- Another great way to build relationships with students is to offer a well structured paid internship program. Students can learn about your company as well as get great hands on experience. Be sure to give the interns substantive work so that their experience is worthwhile and satisfying. The added bonus will be that they will be more likely to look to your firm upon graduation, and are already familiar with your company's practices.
- Offer to pay tuition fees for part-time workers or interns, or reimburse graduates for their tuition.
- Recruit retired or former employees and offer them a flexible schedule. Former female employees, for example, who left careers to care for children might welcome the opportunity to go back to work with a manageable workload. By offering retired employees a flexible work schedule, you get engineers who have the knowledge base and skill set needed with minimal training.
- Set up an employee referral program. It's like hiring hundreds of in-house recruiters.

Retention

Equally as important as recruiting is retaining employees to ensure that there is quality leadership in the next generation. Retention strategies are also a key part of recruitment. Engineering graduates are interested in more than money these days. They want to join a company where they can grow and learn, personally and professionally. Retention strategies include:

- Set up a mentoring program. Provide new employees with a way to benefit from the knowledge and experience of more senior engineers.
- As stated earlier under recruitment strategies, offer flexible work schedules or other work alternatives for employees with special requirements. By understanding the needs of your employees, you can create a culture that fosters loyalty and hard work.
- More and more women and foreign students are entering the engineering workforce. According to the Engineering Workforce Commission, 10 percent of engineering degrees were awarded to women in 1980. By 2001 it had increased to more than 20 percent. Again, create a culture that recognizes and addresses the unique needs of the changing workforce.
- Set up training programs to teach and prepare future leaders in the company.

With all these ideas, you would hope that our firm has had no problems finding good people, and retaining them. Dream on. We're in a battle, and we know it. ■