



Geo-Strata

March/April 2013

## Geo-Education

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# DECONSTRUCTING SINGLE-SPECIALTY SILOS

By Kurt Fraese, L.G.

**F**or most of my career as a geologist, I have practiced in the area of environmental assessment and remediation of hazardous substances. In 2007, I became CEO of GeoEngineers, Inc., an employee-owned firm that originated as a geotechnical engineering practice and has grown to embrace a broad definition of what constitutes a geoprofessional. As a result, we have acted to reduce the boundaries that often form around single-specialty silos and to nurture collaboration between diverse technical disciplines. Deconstructing these boundaries has led us to places, markets, clients, and solutions that we never thought possible when we began our journey. Companies that focus on building bridges between technical specialties and reducing barriers to collaboration can capitalize on the opportunities that lie ahead. Competitive advantages await those willing to break down old barriers and expand their self-definition.

## A Look Back at Silo Evolution

The practice of geotechnical engineering constitutes the core service for a high percentage of geoprofessional firms. For a large part of the past century, geotechnical engineers ruled the roost in the geoprofession, and for good reason. Geotechnical engineers were the key ingredient that allowed society to build great things that were connected to the ground. The clients of geotechnical engineering firms also sought the services of engineering geologists, hydrogeologists, and geologists as the logical extension of the geotechnical practice. Some firms embraced the connective tissue of the prefix “geo” and sought to integrate these services early on. Other firms kept these practices separated from each other to varying degrees, creating barriers to collaboration.

In the 1970s, the geoprofession was perfectly positioned to take advantage of the market opportunities that environmental regulations created. Many project sites with a history of commercial and industrial use contained newly defined hazardous substances. Being on site with the geotechnical tools to explore the subsurface provided many firms the chance to expand into

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an environmental practice, and clients found it convenient to have this range of services under one umbrella. If silos hadn’t already formed around geotechnical engineers and other scientists, the emergence of environmental practice—a distinctly different market heavily dominated by geologists—promoted silo construction. Few firms avoided these barriers during this expansion of the geoprofessions.

As other market opportunities have emerged, some geoprofessional firms have further expanded their service offerings to include a wider variety of engineering and scientific components, including construction materials engineering and testing, hydrology, ecology, wetlands science, toxicology, oceanography, atmospheric science, and archaeology. Add geographic information systems and other applied computer-based technologies to the mix, and geoprofessional organizations can either feel threatened by the proliferation of new service elements or in awe of the potential of these elements. How many questioned whether the first wave of environmental opportunity was for them?

## A New Model Emerges

Today, our clients’ business problems are increasingly connected to multifaceted aspects of the earth, particularly when considered through the lenses of sustainable development and our crumbling infrastructure. Geo-professional firms that view themselves as business consultants that help reduce risk where the natural environment and human needs intersect are in a better position to create value and differentiate themselves in a crowded market. By seeing beyond traditional practice boundaries, these forward-thinking firms can help solve new



and increasingly complex problems. As our self-definition broadens, so do our opportunities.

The connected and collaborative world with few boundaries described in Thomas L. Friedman's great book, *The World Is Flat, A Brief History of the Twenty-First Century*, has emerged as a dominant consideration for businesses today. Climbing out of our single-specialty silos and embracing creative multidisciplinary solutions is an effective way to avoid being marginalized and falling into commodity traps in this environment. Firms that have embraced this view proactively encourage and reward employees for achieving collaboration and leveraging connections between technical specialties. They are more flexible, adaptive and attractive to early-career geoprofessionals who value teamwork over competition. These are critical attributes in the more uncertain world that is our new normal.

### Where to Begin?

It's fair to say that you can find evidence of technical silos in all our organizations. Many scientists and engineers are most comfortable, and derive benefit from, working in groups of colleagues with similar expertise. However, it is common for leaders within our organizations to say that they desire more collaboration and connection between technical groups. Many are frustrated by how difficult that is to achieve. It takes a cultural shift—the hardest change of all. So where to begin?

**Step 1: Start with a strong balance sheet.** If you are struggling financially, you likely have bigger issues to tackle that may create barriers to effective change.

**Step 2: Adopt a single profit center approach.** The more you compartmentalize performance metrics, particularly by

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**The open floor plan office invites cross-disciplinary collaboration.**  
(Photo courtesy of Ron Wurzer)

technical discipline, the harder it may be for groups to share. Keep in mind that not all silos that are created in organizations are technical. The most prominent silos often are between office locations. If you encourage teamwork between technical disciplines and office locations, it becomes very difficult to fairly proportion credit for profit realized. Establishing personalized performance metrics and individual annual goals, independent of location and technical discipline, are reasonable alternatives. It also helps to practice decision-making that demonstrates a single-profit-center philosophy. It is not enough to say you operate as a single profit center; your staff must believe that such a philosophy truly drives decision-making and financial compensation.

**Step 3: Make multidisciplinary pursuits strategic.** Celebrate and reward success. Look at various combinations of services and how to bundle them for a particular market. Select strategic initiatives for combined-service teams to pursue and practice working together. Set goals, track progress, learn and teach from experiences. Make adjustments. Highlight successes through communications, spontaneous celebrations, awards, and bonuses. At our annual shareholders meetings, we offer a half-day of technical presentations highlighting our top project achievements. A panel judges the entries and gives an award for the project of the year. Multidisciplinary collaboration and value creation on the project are strongly weighted criteria of the selection.

**Step 4: Develop market intelligence, don't lead with selling services.** Some of the barriers we erect between technical disciplines have their origins in the sales process. Early in my career, I hated doing business development. I suspect I was not alone. The problem was that I was selling the service that my technical expertise supported. "Hello, I'm Kurt, would you

like to buy a soil cleanup?" The only thing worse was trying to sell other services where I lacked expertise.

Firms that adopt a market-oriented approach to business development find that it can go a long way towards building business-development skills in staff, particularly in improving the ability to land multidisciplinary projects. This is because most market-oriented approaches start with listening and learning from clients and the communities they serve. The problems they face surface and almost always involve more than just one technical component. This approach promotes learning and is a much better fit for scientists and engineers, who are quite comfortable with seeking knowledge. What they will discover is that when they see the world through the client's eyes and the complexity of their markets, it is a lot easier to see opportunities to bundle services and find solutions. Market strategies will emerge that necessitate collaboration between technical services.

**Step 5: Make the project manager primary.** Some firms structure their projects with a principal (or similar titles related to contractual authority and quality control) above the project manager in the project hierarchy. This approach can work just fine if the project involves a single technical discipline and location. However, firms with this project structure that are taking on more multidiscipline and/or multi-office work may inadvertently fall into the trap of the client having to assume too much of the project management role. There may be clear internal leadership structure for the individual areas of expertise, but the absence of a single point of contact for the overall project may inadvertently contribute to confusion in client communication.

Climbing out of our single-specialty silos and embracing creative multidisciplinary solutions is an effective way to avoid being marginalized and falling into commodity traps.

Breaking down technical-discipline silos involves strengthening the project manager role within the firm. If you have the “Project Manager” title as part of your promotional track, remove it and use the title only to describe the role for the primary position on a specific project. Encourage and teach staff to view project management skills as independent from specific technical expertise. Train and empower project managers to oversee multiple technical disciplines on projects that involve more senior principals.

**Step 6: Employ the catalyst of project planning.** Cultures that promote inclusion in the project-planning process often have fewer barriers to overcome in breaking down their silos. Start early and include representatives from multiple disciplines in proposal preparation and project kick-off meetings. Contingencies often include the potential need for additional services. Just because the original scope may not include the service, that doesn’t mean that the project won’t benefit from the perspectives of other technical disciplines being represented in an internal kick-off meeting. At the very least, as you encourage staff to take an active interest in what others are doing, they will become more comfortable and effective in working with other disciplines when needed.

**Step 7: Invest in training and technology.** Open up technical-training events to anyone who is interested. Consider cross-training programs to increase understanding of capabilities and interest in skills the firm offers. Use video conferencing and other electronic means to overcome physical separation and draw groups closer together.

**Step 8: Examine your office structure.** How many of your offices are structured with specific technical groups occupying the same area? A powerful tool in promoting cross-discipline work is restructuring the office layout to mix the groups. Many find that an even more powerful step to encourage cross-discipline synergies is to tear down the walls and share more space to promote spontaneous learning, collaboration and open exchanges of information. We did this last year in our Seattle headquarters, and the effect has been remarkably positive in drawing our various practices much closer.

**Step 9: Model the behavior.** Senior leaders must model effective cross-disciplinary behaviors. Nothing will stop an effort to break down silos faster than lack of buy-in at the top.

Integrating multiple services must be seen as an advantage and means of creating value for individuals, the firm, and clients. Those who effectively cross-sell or manage multiple services should be visible and promoted. Share client testimonials regarding the broad capabilities of the firm.

Leaders should act to flatten hierarchies of expertise. Most of us understand that it is important to have depth in each

technical service we offer to provide for backup, flexibility, and transition. Some do not recognize that certain service groups that have not achieved a critical mass may feel that they lack support. These situations often need the most attention from leadership and stand to benefit from efforts to integrate services.

**Step 10: Develop external partnerships.** Corporate cultures that embrace multi-discipline teamwork within their organizations find it easier to find value in teaming with other organizations. By keeping an open mind, being creative, and resisting the urge to say, “We can’t, or don’t, do that,” companies can find outside services that combine with their own in powerful ways and result in exciting project opportunities. Another benefit of develop-

ing external partnerships is that they enable you to be more nimble in customizing combinations of services to meet the specific needs of the project. Assembling and then disassembling various combinations of expertise—without hesitation or disruption—is an art form in itself. Strong external partnerships provide options and are essential to this process.

## Embrace the Journey, Enjoy the Rewards

It is much easier to preach these steps than it is to accomplish them. The cultural change represented by silo deconstruction doesn’t happen overnight and the process is evolutionary, if not revolutionary. Despite some setbacks, for many years our firm has made it a priority to break down barriers between communities of practice in as many ways as we can. I invite you to join us in this endeavor. I am confident that you will find, as we have, that when those barriers are not present:

- you will be viewed by your clients more as a valuable resource and not a bit player;
- you will be invited to the client table earlier and more often;
- your clients will take a broader view of your capabilities;

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Breaking down technical-discipline silos involves strengthening the project manager role within the firm.

- your clients will share a wider range of potentially useful information with you;
- your clients will view you as in their corner, no matter what the problem;
- your staff will realize more career opportunities;
- you will improve your ability to adapt to market forces beyond your control;
- you will enjoy increased professional freedom;
- you will become more vital; and
- you will find each day will be more interesting.

Now is the time for geoprofessionals to broaden their view of what constitutes our services and how those services interact. In doing so, we have an opportunity to elevate how others see us and the value we provide. The disruption of the economy has opened the door for doing things differently.

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