THE ZWEIG LETTER

www.thezweigletter.com

HR | FINANCE SUPPLEMENTS Pages 9 - 12

March 21, 2011, Issue 903

EDITORIAL

Buying A/E firms in today's market

Mark Zweig offers several observations on the M&A market, including that you really need to know the seller's motivations.

Mark Zweig

There is a lot of interest in buying and selling firms these days. We are even having six seminars/conferences on M&A this year. Our investment banking group at ZweigWhite has never been busier!

Contrary to what some folks think, however, every firm is NOT for sale. There are some firms actively looking for buyers— but they are mostly small firms. Mid-size and larger firms that want to sell are just sitting there waiting for someone to approach them. Most owners are either too scared to actively look for a buyer (someone may find out, after all!) or unwilling to spend a few bucks on it to make it happen. So... nothing happens for them unless someone like us happens to call them.

Other interesting observations I can share:

1) Many buyers start out around 50% of NSR (net service revenue) for a valuation of potential targets, then adjust that up or down depending on the balance sheet, profitability, dependence (or lack of dependence) on one or two major clients, revenue growth trends, strength of second tier management, and more. I have seen values as low as 7% of NSR (yes— that is low!), and as high as a little more than one times revenue.

2) A good third party negotiator can do a lot with terms of the deal, even if the price is pretty well agreed to. There is so much more to it than price— employment agreements for principals, how much of the price is to be paid in cash vs. a note paid over time vs. stock in the going concern, and so much more. The negotiator can also help insulate the buyers from the negotiation process and perhaps avoid damaging the future working relationships of buyer and seller. I find it annoying when either a buyer (or seller) tries to negotiate the deal without us. We're getting paid anyway— and we can help get it done!

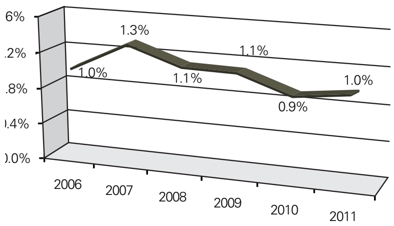
3) If you do work with a third party to help you buy, be sure they have experience in our industry. But also be sure they have some creativity (that may come from working on deals

See MARK ZWEIG, page 2

Don't waste too much time with the sellers before getting them an LOI or term sheet.

TRENDLINES

HR spending up



Firms' total spending on human resource-related expenses relative to their net service revenue has increased slightly, according to the 2011 *Policies, Procedures & Benefits Survey*. HR expenses include such items as staff labor, employee training, and recruitment costs. This year, median total HR spending as a percentage of net service revenue went up .01% to reach 1%. While only a slight increase, it stems a gradual drop from a high of 1.3% in 2007 to 1.1% in 2008 and 2009, and then to a low of 0.9% last year.

— Margot Suydam, Survey Manager

FIRM INDEX

INSIDE

MARK ZWEIG, from page 1

OUTSIDE the A/E business), along with the spirit it takes to get one of these deals done. By "spirit," I mean some guts, some moxie— so you don't get run over by the parties you are buying from. And look for a firm to help you, not a one-man band. You need someone who can not only develop prospects and help you negotiate, but also help with due diligence, integration planning, and appraisal, among other things. A single source is just going to be more efficient and improve communications throughout the process.

4) Most critical if you are buying— really (deeply) understand the motivations of the sellers. Do they want to get out— all or just one or more than one? Are they warring with each other? Do they want to stay in? Are they looking for liquidity or really thinking about what is best for their company and their employees? Do what it takes to understand their motivations and it will make your job structuring an offer that gets accepted that much easier.

5) Use the one-page LOI (letter of intent) or a one-page term sheet to find out if your sellers are realistic about what kind of deal they can get from you. Don't waste too much time with the sellers before getting them an LOI or term sheet.

Like most things in life, the more firms you buy (or attempt to buy), the better you will get at it. Practice makes perfect (or closer to perfect).

MARK ZWEIG is the founder and CEO of ZweigWhite. Contact him with questions or comments at *mzweig@zweigwhite.com*.

CORRECTIONS

An article that first appeared Feb. 28 in *The Zweig Letter* titled "Ensuring performance of 'green' a concern," incorrectly described ConsensusDOCS. The ConsensusDOCS coalition, a group of 33 leading construction associations, publishes the documents.

An article published Feb. 21 in *The Zweig Letter* titled "Professional Development Options Abound," provided incorrect firm information for HELIX, an 83-person environmental consulting firm that includes a landscape construction subsidiary.

A/E BUSINESS NEWS

ENGINEERING GREEN CODE EVOLVING: In a move to do for infrastructure what the LEED rating system has done for buildings, the American Council of Engineering Companies, the American Public Works Association, and the American Society of Civil Engineers have joined forces to form the Institute for Sustainable Infrastructure is continuing efforts to develop an infrastructure sustainability rating system, according to a report in *CE News*, a ZweigWhite publication.

"The new ISI rating system is designed to meet the need for a common language defining sustainable infrastructure," said Tim Psomas, former chairman of the board of **Psomas** and new ISI chairman.

The new rating system will also provide designers, contractors, and suppliers with a single comprehensive system to help bring innovative sustainable solutions to the market.

With a focus on civil infrastructure, ISI's vision is threefold:

To create incentives and balancing of project features to improve sustainable performance; to foster a methodology for infrastructure owners, operators, designers, builders, and suppliers to rate the sustainability of a project at any point in its lifecycle; to provide sustainability products and services that will transform the way public works and infrastructure are conceived, designed, built, operated, and maintained.

E-MAIL GATE: The troubles at **RMJM** (Edinburgh, Scotland), a 1,200-person international architecture practice, continue to mount.

After a tumultuous period during which many senior staff members departed and a lawsuit from the employees of **Hillier Architecture**, the U.S. firm that RMJM acquired in 2007, new accusations are surfacing about salary non-payment.

According to *Architect* magazine, Catherine Siu, a Hong Kong-based principal at international architecture giant RMJM, fired off an angry e-mail to the firm's top leadership complaining of unpaid salaries and inept management.

Then, an architect in RMJM's Princeton, New Jersey, office, resigned from the firm in early March, e-mailing CEO Peter Morrison and other leaders of the firm's U.S. practice to say that their business decisions have had "a severe negative impact on the families of your [firm's] employees," according to the *Architect* report.

RESOURCES

SUCCESSFUL FIRM SURVEY: How do the most successful A/E/P environmental consulting firms do business? What are they doing that you're not? Find out with the 2010-2011 *Successful Firm Survey of Architecture, Engineering & Environmental Consulting Firms.* This publication will tell you everything you need to know about how firms just like yours are growing and turning a profit.

The *Successful Firm Survey* is a compilation of all the major management topics covered in 10 of ZweigWhite's survey reports conducted throughout 2010. In addition to compiling survey data from other reports, we also broke data down by the overall sample compared to the fastest-growing firms and the most-profitable firms. Whether you're a firm president, CEO, vice president, principal, or division or department director or manager, you're going to want to see these survey results!

Among other things, the 2010-2011 *Successful Firm Survey* will help you: Find out how the most successful firms operate in every area of firm management— from project management to ownership to compensation; and make sure your firm is aiming for higher than the industry averages when setting goals for growth in 2011 and beyond.

For more information or to buy a copy, call 800-466-6275 or log on to *www.zweigwhite.com/zw-983.aspx.*

THE ZWEIG LETTER

The voice of reason for A/E/P, and environmental consulting firms.

320 Rollston Avenue, Suite 102
Fayetteville, AR 72701

Mark Zweig | Publisher
mzweig@zweigwhite.com

João Ferreira | Managing Editor
jferreira@zweigwhite.com

Julie Kyle | Editor
jkyle@zweigwhite.com

Tel: 800-466-6275
Fax: 508-653-6522
E-mail: *info@zweigwhite.com*
Online: *www.thezweigletter.com*
Twitter: *twitter.com/zweigwhite*
Blog: *zweigwhite.blogspot.com*

Published continuously since 1992 by ZweigWhite, Fayetteville, Arkansas, USA. ISSN 1068-1310.

Issued weekly (48 issues/yr.). $475 for one-year membership, $775 for two-year membership.

Article reprints: For high-quality reprints, including Eprints and NXTprints, please contact The YGS Group at 717-399-1900, ext. 139, or e-mail TheZweigLetter@TheYGSGroup.com.

TOP PLAYER

Building a culture of success

C.K. Satyapriya is a risk-taker who has helped CTL Engineering attain its Hot Firm status.

C.K. Satyapriya, president of **CTL Engineering,** *The Zweig Letter's* No. 118 Hot Firm in 2010, believes one's upbringing has a lot to do with success. In the case of Satyapriya, family culture of attainment and risk-taking shaped his business acumen.

C.K. Satyapriya, President, CTL Engineering.

Satyapriya has led CTL, an employee-owned, 270-person consulting, engineering, testing, inspection, and analytical laboratory services firm with headquarters in Columbus, Ohio, through a growth spurt after the addition of multiple offices in three states (nine offices), several acquisitions, and services diversification.

In this interview, Satyapriya talks about his success and also explains how reading inspires him and engineers need to start standing their ground.

***The Zweig Letter:* What does it mean to be a Hot Firm?**

C.K. Satyapriya: As I understand it, a "Hot Firm" is one that has grown in both total invoicing and number of employees in a particular year. CTL Engineering became a majority ESOP company in 1999 with a leveraged buyout of my previous partner. Since we paid the ESOP early, we have acquired entities and diversified the services provided. In addition, a significant effort has been expended to retain employees as well as clients. A combination of all these actions has helped CTL grow relatively rapidly, particularly during 2007 through 2010.

***TZL:* Do you remember your first paid job? What did you learn then that still influences the way you work today?**

CKS: Yes. I worked for my father, C.V. Keshavamurthy, as a field supervisor and also did odd structural design work for the construction firm he had (Mysore Construction Company). I learned that one needs to lead by example and that one needs to continuously learn. I also learned that there needs to be a balance in life to having a fulfilling career.

***TZL:* What is it in your DNA that drives you to success? Is it audacity and risk-taking; a can-do attitude and a relentless pursuit of perfection; something else more abstract?**

CKS: In my opinion it is hereditary. My father was an independent businessman and by watching him I learned that one can control one's destiny. I think entrepreneurs are risk-takers with a can-do attitude. In many cases, this is something one learns by the environment created by family and/or people that you associate with. In my case, I have always felt that I can achieve anything when I try hard enough.

***TZL:* In today's difficult business climate, what does it take to succeed? Is the spectrum of failure a motivator?**

CKS: The spectrum of failure is not a motivator but a boundary condition that needs to be planned for. Planning and keeping your eyes and ears open to receive information that may affect your business is very important. The book *Who moved my Cheese* helped me be a better planner.

***TZL:* Where do you see this industry in 10 or 20 years? What trends are influencing it? What about your company?**

CKS: The engineering and architectural industry in the U.S. is unfortunately becoming more commoditized and we consultants are to blame for it. For many years we have all been playing "Name the tune with X number of notes."

Hopefully that trend will change to select consultants based on qualifications. The other trend is the limited availability of good engineers and technicians. In addition, there is an increase in the number of lawsuits being brought by third parties, and in many cases they are frivolous. However, the consultant has to expend time and money to defend, with no recourse to recoup the costs. This also makes the engineers be conservative and tends to muzzle innovation.

***TZL:* Do hold someone as a special mentor? How did this person influence who you are?**

CKS: My mentors are books and other resources that help me improve my management and leadership skills. I like to read and learn from experience and apply this to CTL.

***TZL:* What's are some characteristics you most admire in people and why?**

CKS: I admire an organized person who is willing to act and not be tentative. I also like to see a person being logical with data to support their decisions. Finally, I want a person to take responsibility for their actions without pointing fingers at others.

***TZL:* Describe the most challenging thing you have ever done/the biggest challenge you have taken on outside of work?**

CKS: My biggest challenge was to bring up our three children to be successful in their own way. I need to confess the leader in this endeavor was my wife Indira Satyapriya, and I followed. We are the proud parents of three, in my opinion, very successful children.

***TZL:* What question would you ask of another Hot Firm leader?**

CKS: What are the important ingredients that make your firm progress or tick?

***TZL:* What lesson learned would you pass along to a recent college graduate embarking on a career in the A/E/P and environmental consulting fields?**

CKS: To a recent graduate, I would say be patient and persistent. Things will come in good time, provided you are diligent. In addition you need to enjoy what you are doing. A person that is happy will achieve the goals set.

MARKETING

Professionals and clients tire of 'greenwash'

ROI-related decision-making takes hold as consumers demand data-driven-results, not obtuse claims.

By JULIE KYLE
Editor

If you're sick and tired of hearing the G-word being thrown around, you're not alone. A study from Sustainable Rhythm showed that both green building professionals and the clients they serve are fed up with all the greenwash.

Sustainable Rhythm, a green building market research firm, conducted the *Opening the Door to Green Building* study by engaging over 550 building industry professionals to examine the green building market transformation. This analysis explores issues of the overall market, the perception of the financial investment, the role of certifications, and how the benefits of green building are being communicated.

Key findings include:

- Participants overwhelmingly identified energy efficiency and cost reduction as the best-communicated and the most impactful drivers to pursue green building;
- Participants expressed a great deal of fatigue with "green" buzzwords in marketing communications;
- Over 60% of participants feel that the benefits of green building are not being communicated well;
- Participants identified professional associations, specs, and web resources as the most effective channels to receive information on green building;
- Only 30% or less in each region feel that they understand current certifications and rating systems.

The results of this study suggest that being green for the sake of being green is just not enough anymore, and marketing that delivers more style than substance is starting to trend out, says Pamela Cargill, principal with Chaolysti, a marketing and operations consulting firm for green businesses.

DEMANDING PROOF. Consumers are now demanding case studies, life cycle and ROI analysis, and other measurable metrics to make purchasing decisions about green building products, Cargill says.

"A similar transformation happened in the solar industry at the dawn of financing products and power-purchase agreements; both tools offered a significant ROI over expensive, direct ownership," she says.

"A big problem with communicating the benefits of being green is that there is no universally trusted voice, brand, or *trustmark* that has created and passed down a definition of 'green.' Likewise, the terms 'sustainable' or 'appropriate technology' have created more questions than answers and also trended out of use. Even the 'low carbon' and 'carbon free' rage has died back," Cargill says.

As more buzzwords have entered the lexicon, consumer weariness has increased, she says. "How do you measure benefits like greenness and sustainability? How do you equate carbon savings into a metric that makes impact?"

With the intent of addressing the problem, the Federal Trade Commission has proposed some revisions to its Green Guides, a series of guidelines created to help companies avoid making misleading environmental claims in their marketing and packaging.

The changes include new guidance on the use of product certifications and seals of approval, as well as claims about the use of renewable energy, renewable materials, and carbon offsets.

The revised Green Guides advise marketers not to make blanket or general claims that a product is "environmentally friendly" or "eco-friendly," and cautions them not to use unqualified certifications or seals of approval.

To further confuse matters, a 2009 preliminary study conducted by the National Research Council Canada of LEED-certified buildings concluded that the LEED rating attained by a building rarely correlated with its energy savings.

"On average, LEED buildings used 18-39% less energy per floor area than their conventional counterparts. However, 28-35% of LEED buildings used more energy than their conventional counterparts," the study found. "Further, the measured energy performance of LEED buildings had little correlation with certification level of the building, or the number of energy credits achieved by the building at design time. Therefore, at a societal level, green buildings can contribute substantial energy savings, but further work needs to be done to define green building rating schemes to ensure more consistent success at the individual building level."

A follow-up study is clearly required comparing the results of this study to the results of buildings under the new LEED v3 system, Cargill says. "But this question of whether or not LEED buildings save energy puts a host of certifications in the limelight. Are FSC-certified lumber and paper creating more bio-diverse forest habitats? Are carbon offset projects really mitigating the effects of pollution?," she says.

"Green building is still a relatively new concept, and while there are so many resources available at our fingertips, there's still an enormous need for green building research," says Ashley Katz, communications manager for the USGBC.

In 2008, the USGBC created a grant program after its Research Committee's findings that showed that research and development fall alarmingly short of what is needed to meet the challenges of a building sector that has a significant impact on people and the environment, Katz says. The grant has helped spur a significant amount of research covering a variety of topics including K-12 school research relating to occupant impacts, she says.

"In order for the green building market to communicate the benefits of green, it needs to stop worrying about green and start talking about results: money saved, investments recouped, increased employee productivity, improved quality of life, maintenance on building lowered, hassles reduced," Cargill says. "What consumers need and crave is clarity, transparency, and value that is quantifiable and easy to understand."

STRATEGY

The battle of the disciplines

In the single vs. multi argument, the cards stack up against single.

By JOÃO FERREIRA
Managing Editor

You're an architect, so you open an architecture firm. You're a civil engineer, so you open an engineering firm. Right?

The concept of a single-discipline studio is a romantic one— you're doing what you love. However, business often demands more.

Competition is fierce, and maybe a single discipline isn't such a good idea anymore if growing a business is your goal.

The leaders at **KSA Engineers** (Longview, TX), a 161-person consulting, management, engineering, planning, surveying, and construction services firm, learned this early on.

"KSA Engineers began as a single discipline firm, so our roots run deep in civil engineering," says President Joncie Young. "But over the years we have added additional disciplines."

Now, why?

"For us, the multiple discipline approach provides for a larger market of potential customers and also provides more potential for cross-selling between the various disciplines," Young says. "We have found this to be tied closely to our steady growth rates over the years."

Single vs. multi, however, isn't an easy or clear-cut argument.

"If you're an architect and you're putting together a team of consultants, you can get some convenience and possibly accountability by hiring a multi-disciplined firm that has most, if not all, of the required disciplines," says Mark Skellenger, vice president, **KS Associates** (Elyria, OH), a 40-person civil engineering and surveying firm. "Conversely, if you engage a team of single-disciplined consultants, you'll be able to select and engage the best-in-class vendor for each discipline."

For the record, KS Associates tries to play it both ways (more on that follows).

THE CASE FOR MULTIDISCIPLINE. Eric Anderson, CEO of **Art Anderson Associates** (Bremerton, WA), a 50-person multi-discipline engineering services firm, argues for innovation, and to him, that means multidiscipline.

"The realm of the practiced A/E will be solving design approaches where there are no immediate precedents," he says. "A well practiced team of multi-discipline professionals may reach ability together to take the nonlinear steps of innovation that would be inconceivable for a set of single-practice experts, gathered together as a team for *only* their twentieth time. Innovation is a victim of premature analysis, which is a big source of single-practitioners' recognition!

"Few projects require much innovation, but when they do, assembling a team of experts is not the way to achieve it," he says.

Baisch Engineering Inc. (Kaukauna, WI), a 100-person process/mechanical, civil structural and architectural, electrical, instrumentation and process control, and project administration firm is multidiscipline for very practical reasons.

Kurt Kloehn, President, Baisch Engineering Inc.

"Our firm's tradition is to provide full-service integration engineering for process-related industries," says Kurt Kloehn, president. "This is an advantage to our clients in that we can provide all the services required for their capital expansion project and do complete project engineering in-house.

"This approach provides to the client efficient coordination of design disciplines and resources in a fully integrated delivery system for engineering," he says.

THE CASE FOR SINGLE PRACTICE. **Terra Tectonics design group** (Tampa, FL), a three-person landscape architecture firm, remains single discipline, and President Jonathan Toner likes it

See DISCIPLINES, page 6

THE MULTIDISCIPLINE BENEFIT LIST

RATIO Architects, Inc. (Indianapolis, IN), a 90-person design and planning firm, has been a multi-disciplinary firm since its inception in 1982. From providing architectural design, interior design, and historic preservation services, the firm has added landscape architectural design, then urban planning, followed by urban design, and most recently graphic design services.

President and Founding Principal William Browne says the benefits are numerous:

- "From a business perspective, having now participated in four recessions, it has given our firm the nimbleness to respond to the opportunities of the market, providing for added stability during unstable times," he says.
- "From a design perspective, our best projects are often those where our clients engage us for multiple disciplines, allowing the design to have greater continuity and integrity," Browne says.
- Culturally, this diversity provides for a rich studio environment, creating a collaborative dialogue among professionals.
- As clients often pursue their projects with multiple firms, the potential to collaborate expands, providing for greater opportunity to participate in projects.
- With the majority of the firm's work being in urban and campus environments, matching multiple skills with the requirements of complex projects that often occur in these contexts creates greater client value and project success.
- "With the range of disciplines available, we often begin a client relationship with one of the disciplines and can extend our services to include other disciplines as the project scope and scale increases," Browne says.

"We strongly believe that a multi-disciplinary firm can create a long lasting and fulfilling relationship with our clients."

A/E BUSINESS NEWS

CONSTRUCTION TO RECOVER: The U.S. construction industry will return to growth ahead of other developed countries next year, thanks to demand for more housing according to a new 10-year forecast from Global Construction Perspectives and Oxford Economics.

The *Global Construction 2020* report predicts that today's global construction market is worth an estimated $7.5 trillion, representing 13.4% of global GDP. But by 2020, construction will be a $12.7 trillion global market, an overall growth of 70% in the next decade.

In the U.S., the construction market is now worth over $1.3 trillion and will increase to just over $2.1 trillion by 2020.

"We predict that the United States will quickly rebound from the construction trough it has endured over the past two years," Mike Betts of Global Construction Perspectives said in a press release.

The 10-year forecast indicates that emerging markets will rapidly overtake the construction output of their developed neighbors, with China replacing the U.S. in the number one spot and becoming the world's largest market as early as 2018, with a 19.1% share worth almost $2.4 trillion by 2020.

In the U.S., residential construction will grow by a staggering 60% between 2009 and 2014, according to the forecast, despite worries over mortgage finance following the sub-prime crisis.

In Canada, the civil engineering sector has seen the strongest growth in recent years and already makes up 40% of the country's construction output. However, the sector is expected to slow over the next five years as the economic slowdown bites and will only hit lower levels of growth from 2014.

The report predicts that by 2020 Nigeria, Vietnam, and Turkey will be among those experiencing highest growth levels, alongside booming markets like India and China. The U.S. will trail in comparison with a lower growth rate from 2014 to 2020. The top 10 is composed entirely of emerging markets.

The infrastructure construction market in emerging markets will grow by a staggering 128% over the next decade to 2020, compared with just 18% over the same period in developed countries.

The largest construction market globally is residential accounting for 40% of the total global construction market by 2020 when it will be worth $5.1 trillion.

DISCIPLINES, from page 5

that way, despite the downsides.

"The reason I remain a single discipline is: I'm not having to be influenced by another profession (namely civil engineering) to make design decisions," he says.

Instead, Terra Tectonics often partners with firms offering complimentary disciplines.

Jonathan Toner, President, Terra Techtonics design group.

"It keeps my options open," Toner says.

However, Toner is the first to admit that this strategy has downsides. One is the lack of joint marketing abilities. Instead of having the marketing staff afforded by a larger, broader organization, Toner says he's forced to "wear all the hats."

Perhaps the biggest problem with single discipline is the ability to do most of the work in-house.

"If I was working for a very large civil firm that also had planning, it would be a simple feed of work from the other in-house disciplines to my landscape architecture department," Toner says.

Neverthless, Toner still likes the freedom single discipline affords him.

"As a single-discipline firm, I can work on high-end residential, FDOT highway projects and public schools, college campus projects, streetscapes etc.," he says. "If I'm with a civil, I would tend to do only the project work type the civil is doing, such as public streets or commercial work."

SINGLE-MULTI-DISCIPLINE? Skellenger of KS Associates says the firm considers itself single-discipline, but sells services both ways.

"Even though we can be considered single-discipline, we are organized around one discipline (survey) and three market sectors (land development, municipal engineering, and transportation engineering)," he says. "Oftentimes architects or developers are seeking a civil survey firm for site design and permitting needs. We present ourselves as multi-disciplined to them. We have a group of people committed to the practice of site design and all its nuances. If the project warrants, we have a separate group of people that can analyze traffic impacts and design roadway improvements when needed. So, in that sense, we are multi-disciplined."

The firm also partners with other firms to expand its abilities when needed, he says.

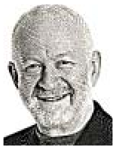
Ultimately, Skellenger is a believer that single-discipline works well in most cases.

"Every established firm has a 'sweet spot' of work they are best suited for and you should capitalize on their strengths," Skellenger says. "You should pick the most appropriate (best in class) team members suitable to the project at hand. Also, there's no internal 'politics' of having to use your in-house guy when your client would be better served by another vendor."

FROM THE CHAIRMAN

Welcome to the global marketplace

BIM and IPD, and the processes they engender, are changing the entire structure of the architecture and engineering professions.



Ed Friedrichs

There is no "right" or "wrong" about where work gets done today. Work and ideas flow freely across the planet. The marketplace will buy from the source that provides the right service or product at the right price, no matter where it comes from. Consumers will only choose to pay more for benefits that are important to them and are becoming increasingly blind to the geographic source.

American A/E firms have been outsourcing production work to India, China, and the Philippines for several years and the entities that they work with— whether they are service bureaus, partner firms or wholly owned foreign subsidiaries— are thought of and used primarily as low cost, back-office production staff. The work has been by and large an electronic extension of a U.S. team delivering service in the U.S. or elsewhere. As in the software industry, it's been a quest for cheaper labor with comparable skills; and the skill levels today are at a pretty high standard in those three countries. This is still a small percentage of overall work produced by U.S. firms, though. Managing the client and contractor relationship work takes place close to the client and the construction site.

As people in these three countries become increasingly skilled and knowledgeable about American design standards, technology, and practices, and as design talent evolves "at home," we will see the emergence of Chinese, Indian and Philippine-based firms that can design as well as produce. What's lacking? Only the skill, talent, and ability to provide a physical presence close to the project. We're seeing Chinese firms with a full array of skills starting to do work in China (or India, or elsewhere in Asia) and I suspect we'll see the same soon in India and eventually, the Philippines and elsewhere in Asia. They won't need the Western brand and "Good Housekeeping Seal" for much longer.

So, what's next? Do these entities start to reverse the relationship, start to compete head-to-head with U.S. firms on our own turf, hiring American firms to represent them at the project locale? Do they acquire a small U.S. practice to do so? Or, do they simply set up their own wholly owned foreign subsidiary to round out their client management and service delivery capability? It's coming and, I believe, this direction is going to evolve rapidly. Why not? There are lots of bright, highly energized and entrepreneurial folks there.

I believe that over time, projects of significant scale will move toward global or most efficient/cost effective sourcing of work and talent, just like the software industries. While this is an interesting trend to consider, the more fascinating one is: How much conventional "production" work will be done in the future with the advent of BIM (Building Information Modeling) and IPD (Integrated Project Delivery)? These shifts in project information assembly and process are leading to more collaboration between the parties to construction (which are also becoming, if not yet global, certainly national). I think the nature of the entire AEC industry is at the beginning of a quantum shift in how work will be done. So the concern about whether Asian competitors, and any cost advantage to a firm outsourcing production work to Asia, might become irrelevant as the entire process of doing our work evolves.

Architects' and engineers' roles are being recast as participants in a collaborative design/construct team through the migration of the construction process to BIM, a single, integrated project model co-created by the architect, engineers, the contractor, subcontractors, and suppliers. IPD eliminates discrete formal document issue packages (except, perhaps, to the building department, although online plan check or a move toward more self-certification due to constrained public budgets— they'll collect the fee but won't do the work), revising or obviating the documentation and delivery process described in AIA documents.

This will force architects to redefine what their role is in the design and construction process. Where can they offer the highest value to their client, the contractor and all other parties to the construction process? How will an architect make the case for his or her relevance as part of the team? Will the architect be merely another vendor to the contractor, contributing design ideas only?

Or will the architect be the leader and integrator, taking the client and project through the definition process from project inception to feasibility, defining how the project can enhance the client's enterprise performance goals? Will the architect lead the engineering team to integrate architectural and engineering systems to find highest value in initial construction and on-going operating costs? Will the architect lead the project through the public approval processes, both discretionary and codified? Will the architect lead the project through commissioning and occupancy over time to assure that the value to the client is optimized?

So, am I worried about a firm undercutting their competition's fees by farming out construction documents to a Chinese, Indian or Philippine-based service bureau? I think not. In fact, I suspect that construction documents as we know them won't be necessary in the very near future. What use are they today? Buildings are built from shop drawings and submittals already. On large, complex projects, contractors are building from elaborate 4-D sequencing documents that they prepare, not the architect's construction set. The approved plan

See FRIEDRICHS, page 8

GUEST SPEAKER

'Dating' your next partner

Just like real dating, you need to be confident, get personal and show enthusiasm.

Leo MacLeod

Anyone who chooses to endure online dating is painfully aware of the big question running underneath all the inane pleasantries and canned biographies: "Can I see a future with this person?"

It's not dissimilar to the first meeting between an owner and an architect, an architect and a design consultant or a general contractor and a subcontractor. Each party is sizing up the other to see if they can visualize themselves working together on a project. If that painful first business date is looming, keep these four "deal-breakers" in mind:

Be confident. People don't want to hire someone they'll have to babysit. They want partners who can take charge and get work done. In an interview, that means being assertive, selective and confident of one's abilities and fee. Don't appear wishy-washy or apologetic or grateful of whatever crumbs can be gleaned.

In this economy it's difficult to be choosy, but in the interview, exude an attitude revealing that everything will be OK if this is not a good fit. Be clear and up-front about what the relationship needs.

The right partners will respect the effort, and the others will be weeded out.

Provide a preview. Everyone sounds good on a first date, but what are they really like?

In the architecture, engineering and construction industries, owners and partners need proof that people know the craft. What they're really looking for is a preview of project performance.

Everyone is evaluating for quality, schedule, and budget. How can one specifically illustrate firm strengths? You can gauge the interest of an audience before deciding on a degree of specificity, but the most powerful selling is when an interviewee is telling a story or stepping through a process that has a specific benefit to the interviewer.

Get personal. Those initial e-mails before the first date are like the RFQ before the selection interview. They provide enough information to take it to the next level, but it's the dynamic, human interaction that makes it or breaks it. When preparing for a business interview, whether formal or for coffee, lighten up and relax. Owners or partners may be impressed by résumés, but people hire people. Reveal the firm's personality, values and what really matters to it. Everyone's "how I got into this business" story is interesting because it's relatable.

We also like to hear stories that show how we are human, make mistakes, or learn valuable lessons. Gain trust by dropping the guard and revealing something personal. And remember: It's a dialogue, not a presentation.

Like on a date, show interest in the other party. Ask questions and then listen. If an interviewer starts talking, don't interrupt. The person is engaged, and that should be the primary goal.

Show enthusiasm. No one wants to feel like just another date or interview. People want to know you actually want to be there and have given some thought as to why you're excited about a possible working relationship.

Do your homework. Learn about their last few projects, look for connections with your people, and strive to make them feel special.

Show up on time or even early. Come prepared with business cards and materials. Know the agenda and discuss team roles. Dress professionally and be aware of image.

Honesty has its place, but be careful about appearing negative, critical of others, or demanding. Remember that you're being sized up as a potential partner. They will be looking for someone who has a positive, can-do attitude, and not someone who would give them grief.

Granted, you won't know if it's a good fit until you meet. But if you sense a connection and mutual interest to work together, take the next bold step and ask for the second meeting.

It can be difficult to track communication and whether a partnership is a good fit. Recruit a colleague to join you. Friends are great resources for understanding relationships.

LEO MACLEOD is a strategic marketing and new business consultant, who lives in Portland, Oregon. Contact him at *leo@mainspringmarketing.com*.

Article originally published in *Daily Journal of Commerce*.

Each party is sizing up the other to see if they can visualize themselves working together on a project.

FRIEDRICHS, from page 7

check prints are on the job site to satisfy the building inspector, not to build from.

I have no preconceptions about whether architects will own contractors, contractors will own architects or whether we'll have a long period of settling in through partnerships, joint ventures and alliances.

I do know that that we're going to have to do a lot of thinking and leading in the definition of how we as architects and engineers add value to the process, or we're going to end up as another subcontractor to the GC.

EDWARD FRIEDRICHS, FAIA, FIIDA, is ZweigWhite Group's chairman and the former CEO and president of Gensler. Contact him at *efriedrichs@zweigwhite.com*

WORKPLACE

Racial diversity lacking in industry

The ability to communicate across cultures can be of great benefit for firms.

By JULIE KYLE
Editor

Editor's note: This is the first article in a series addressing the topic of diversity in A/E/P and environmental consulting firms.

It is no secret that the A/E industry is not very diverse; more than half of respondents for this issue's *By The Numbers* survey described their firm as "not very diverse, with less than one third of employees being minorities."

Although affirmative action policy measures intended to ensure against racial discrimination have forced firms to be more inclusive, the relationship between firm performance and a diverse staff may be more important than firm leaders realize, says Stephen Hinton, managing director of Hinton Human Capital, who has recruited for the A/E/P and environmental consulting industry for more than 13 years.

There seems to be a fair amount of ambiguity surrounding the topic among leaders, who are mostly mature, white men, Hinton says.

"It's a sore subject that many managers don't like to talk about, because it makes them uncomfortable," he says.

"It's not a plot. It's not a situation where there is insidious, systemic racism or exclusion; it's a situation with more than one force at work," Hinton says.

Hinton says he has seen first-hand the forces at work that influence the lack of diversity in the industry.

Among them is a management-by-numbers mentality that doesn't balance well with the management of people, Hinton says. "If firms can't build relationships across cultures, they have a problem," Hinton says.

DIVERSE POPULATION. Minority populations with diverse cultural backgrounds are growing by leaps and bounds in the U.S., and "it may not be enough just to be able to communicate in English anymore," Hinton says.

BACHELOR'S DEGREES IN ARCHITECTURE AND RELATED SERVICES IN 2010

- White (7,215)
- Black (486)
- Hispanic (1,017)
- Asian/Pacific Islander (922)
- American Indian/Alaska Native (65)
- Non-resident alien (414)

Source: U.S. Department of Education. National Center for Education Statistics.

A diverse firm culture will help satisfy clients who want to work with a company that employs people who represent the communities they serve, says Stephen Lucy, managing principal for the Dallas office of **Jaster-Quintanilla**, a minority-owned, 190-person civil and structural engineering firm headquartered in Austin, Texas.

"We have also been able to attract and retain a higher quality staff that is diverse based on gender, race and ethnicity. This not only results in a more satisfied staff, but also a staff that is more productive and can relate more strongly to our clients who also have diverse staffs," Lucy says.

NOT ENOUGH INTEREST IN STEM FIELDS. A/E firms suffer from an unhealthy supply of minority candidates who seek degrees in science, technology, engineering, and mathematics fields, experts agree.

Many recent federal and state legislative efforts are aimed at improving STEM education, mainly in mathematics, natural sciences, engineering, and technologies, according to the National Governors Association. Data from the U.S. Department of Education's National Center for Educational Statistics, compiled in 2010, indicates bachelor's degree completion rates for A/E-related studies were higher among white and Asian students than for students who describe themselves as black, Hispanic, or "other."

White students are the minority at Woodbury University, a private school with campuses in Burbank and San Diego, CA.

The private school has had an accredited architecture program in place since 1994. But Woodbury, along with many other minority-rich schools, is not very well known.

LA Weekly recently referred to Woodbury as the "best architectural school you've never heard of."

Nestled in the San Fernando Valley of working-class immigrants, Woodbury's student population of 600 students is comprised mostly of minorities: 37% Hispanic, 14% Armenian, 17% Asian, and the other 32% are listed as "other," according to a report this month in *Architect* magazine.

The school's population may be reflective of what may soon become a trend at colleges and universities across the country.

Projections by the Pew Research Institute indicates that by 2015, the number of high school students of Hispanic descent will have risen by about 50% in just 10 years, and Asian students, by 24%.

Historically black colleges and universities offer a quality education for students seeking A/E degrees, Hinton says, and this talent pool is largely untapped by the A/E community.

Texas A&M University is a popular recruiting haven for engineering firms across the country.

Yet many don't know that Prairie View A&M University, an ABET-accredited HBCU, "offers the same education, with the same instructors," Hinton says.

Many firms overlook them, Hinton says, which is unfortunate, because recruiters can find some "top-notch candidates there."

BY THE NUMBERS

Minorities hard to find

Survey reveals lack of diversity and difficulty finding minorities to hire.

By JULIE KYLE
Editor

A/E and environmental firms do not seem to be very diverse, findings of the latest *By The Numbers* survey reveal.

According to the online survey, more than half of respondents (58%) say their firm is not very diverse, with less than one-third of employees being minorities. Twenty-five percent responded that their firm was somewhat diverse, with about one-third of employees being minorities. Only 8.3% of participants described their firm as "very diverse," with over half of employees being minorities."

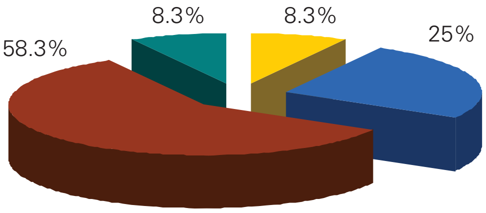
One respondent said, "We try and try to recruit diverse individuals but the fact of the matter is this is a white male dominated industry!"

Another: "We have less than one-third 'official' minorities, but the staff if very diverse with people coming from (i.e., place of birth) more than 20 different countries. Staff is also 50% female."

Stephen Lucy, managing principal for the Dallas office of **Jaster-Quintanilla** (Austin, TX), a 190-person civil and structural engineering firm, is in the minority, with a diverse workforce.

"We actively recruit women and minority staff in all departments of the company and continue to expand the diversity of our staff through these efforts," he said. "We are a minority-owned firm and are committed to providing opportunities for development and advancement for all members of our staff similar to those opportunities that have been provided to our firm."

HOW DIVERSE IS YOUR FIRM?



NOT LOOKING HARD ENOUGH?

Fifty percent of firms indicated that despite their best efforts, not enough minorities apply with their firm. Eight percent said their area of the country is not very diverse, and they hire mostly locally, while 40% responded with "other" reasons why their firm doesn't employ many minorities.

Those reasons include:

"Our hiring managers like to hire from the same sources, same schools, and are reluctant to seek a more diverse candidate pool. HR is trying to move us in the right direction but most of the leadership team doesn't recognize the need. I think we are missing a great opportunity."

"Not enough 'qualified' minorities apply with us."

"Too few minorities are choosing engineering/architecture as a profession, so the candidate pool is limited."

"We are a very small firm with extremely low turnover. All of our diversity has been at the lower levels of the company, and layoffs resulting from the economy over the past two years have weakened our diversity position."

Lucy sumed it up in the following way: "While we have had success in developing and maintaining a diversified staff, we can always do better as a firm and as an industry. If you create an inclusive culture and provide outreach to schools or geographic areas with a diverse population, our experience indicates that you will be sought out as an employer of choice by all groups.

"The AEC industry as a whole needs to do better to connect with our diverse population to create and present a vision of future opportunities within our industry. Without expanded efforts in this area, our industry will continue to have difficulty in attracting the best and brightest to pursue AEC careers and be reflective of our changing demographics," he said.

ON THE MOVE

TRIM PROMOTED: Sam Schwartz Engineering (New York, NY), a 75-person transportation consulting firm, announced the promotion of **Jeff Trim** to executive vice president of transportation services. He previously served as senior VP and general manager of SSE's Tampa office.

In addition to overseeing SSE's Tampa operations, Trim now oversees the finished product for all services SSE provides for clients across the country, ranging from roadway design to traffic operations and transportation planning.

Trim brings over 26 years of experience in both the public and private sectors, including the last two years with SSE. His background as a licensed professional engineer in eight states, a certified professional traffic operations engineer and a fellow in the Institute of Transportation Engineers, provides a nice footprint for SSE to continue to branch out on a global scale. Trim's most recent work includes several roadway and signal design projects for the Florida Department of Transportation District One Traffic Operations Group and an economic development project for the Government of Aruba that will create a new streetcar system in the heart of the country.

Trim's appointment to executive vice president comes shortly after SSE acquired **Metro Transportation Group, Inc**, a transportation consulting firm based out of Chicago.

RETTEW HIRES: RETTEW (Lancaster, PA) a 280-person design firm providing engineering, transportation, environmental consulting, planning, and surveying services, announced Jeffrey Case, as director of transportation services.

As director of transportation services at RETTEW, Case is responsible for overseeing the day-to-day operations of the bridge, highway, traffic, and highway occupancy permitting groups, as well as leading the department's efforts in business development, client relationship management and marketing. His role also involves working with RETTEW's vice president of transportation services to develop the department's strategic plan, ensuring that it aligns with RETTEW's overall goals relating to revenue and continued market growth. Additionally, Case coordinates teams who provide services in structural engineering, highway design, traffic studies, highway occupancy permits, comprehensive plans, storm drainage improvements, construction administration, and public participation.

OUTLOOK

Market to be marked by ups and downs

A recovery in the construction sector should take hold in late 2011, led by the multifamily sector, but a solid turnaround is not expected until 2012.

By JOÃO FERREIRA
Managing Editor

The construction sector's foremost economists agree that a recovery is near, and it won't depend as nearly on the public sector as surviving the recession did.

"Clearly the federal spending is pretty much at the max now and likely to drop back. I see this as the year of change," Ken Simonson, chief economist with the Associated General Contractors of America, said during the "Construction: Time to Spring Forward?" webcast March 3.

Economists say a palpable recovery is not in the cards until later this year and more substantially in 2012. They agree that multifamily housing will likely pull the sector.

"This is should be a good year for multifamily," Simonson said. "I think we'll see a sharp upturn."

James Haughey, director of research and analytics with Reed Construction Data, which co-sponsored the webcast, also predicted a "big pickup" in multifamily construction, namely apartment units.

"The apartment market is booming," he said, pointing to the pickup in hiring and rising payrolls, which result in more mobility and need for rental housing.

While forecasts are sunny for multifamily, the outlook is not as bright for single-family housing, and nonresidential sectors are also expected to remain anemic.

Kermit Baker, chief economist with the American Institute of Architects, another event co-sponsor, said the single-family market remains plagued by oversupply, a problem compounded by continued weak demand for housing.

There are three million excess single-home vacancies in the market currently, Baker said. "That's a lot of inventory that needs to be worked off."

STIMULUS DRYING UP; PUBLIC SUFFERING. Simonson said the mainstay of the industry during the recession has been the federal sector and the American Recovery and Reinvestment Act— the stimulus package.

Programs such as the Defense Base Closure and Realignment and the Hurricane Katrina reconstruction initiatives have kept many firms busy, but such programs have peaked and will drop back later this year, he said.

Things get worse at the state and local levels.

Haughey sees dark clouds gathering over the public sector, with state and local governments under pressure to trim budgets (for example the stalemate in Wisconsin), and similar efforts to reduce spending underway on Capitol Hill.

"A compromise will virtually emerge, but it will emerge with a lot less money" than the Obama administration anticipated, Haughey said.

SO, WHAT'S HAPPENING. All three economists agreed that the construction sector will have a very slow recovery, with multifamily housing doing the heavy duty pulling this year. A real recovery for the sector is not expected until 2012.

In the public realm, highway spending is currently at its peak, courtesy of the stimulus package— and \$8 billion is yet to be spent. That's expected to go down by next year, Simonson said. Nevertheless, public transportation projects will carry on strongly into 2012, he said. The sewage and wastewater sector is also expected to do well.

Simonson called for parts of the institutional market, such as hospitals and higher education, to perform well this year. However, pre-K-12 construction is expected to decline as states and local governments continue to deal with cutbacks.

In the nonresidential sector, "the best news has been power construction," Simonson said, adding that nuclear energy projects, as well as spending on coal plants to reduce emissions, will do well. New gas plants and wind farms are also expected.

Along the same lines, Simonson thinks manufacturing is "headed toward quite an upturn." "Some of the projects are huge," he said.

Developer-financed work will likely see a small upturn in warehouse projects. Lodging is also expected to recover some, with revenue per available room already a good indication of an upturn. The office market, plagued by too much space, will continue to suffer, Simonson said.

The bottom line, Simonson said, is that total construction spending should increase for the first time in five years in 2011.

Haughey said construction spending will be marked by ups and downs. While it will not match nonresidential, he expects nonresidential and heavy construction to show gains this year, but real recovery across the board is only expected in 2012.

In nonresidential, Haughey expects the commercial sector to perform better and the institutional worse.

Geographically, he expects the Great Lakes region and the New England region to perform the best.

Overall, Baker said that AIA's semi-annual Consensus Construction Forecast calls for a recovery in late 2011, with a small overall decline of 2% to mark the year. However, construction spending is expected to increase 12% in 2012, according to the consensus forecast.

"The federal spending is pretty much at the max now and likely to drop back. I see this as the year of change."

TRANSACTIONS

SME BUYS: EDP Consultants (Kirtland, OH), is joining internationally experienced **Soil and Materials Engineers, Inc.** (Plymouth, MI), with 11 offices as EDP Geosciences, a division of SME.

SME acquired the assets of EDP Consultants and that consulting team now operates as a division of SME.

"Our firms share a common belief in putting the client first and a passion for solving our clients' challenging problems in the natural and built environment," said Mark Kramer, SME president. "This is a natural fit that adds to our existing offices in Cincinnati and Toledo. We are very fortunate to have such great new partners."

EDP Consultants was formed in 1987 with an ownership transition from the original Triggs and Associates, founded in 1967. EDP Consultants principals joined that firm as early as 1972, and were part of a core team providing comprehensive geotechnical engineering, environmental consulting, laboratory, construction monitoring, and drilling services for new construction, redevelopment, and forensic studies. The newly formed EDP Geosciences will continue to provide those services with the added resources of SME.

All four former principals of EDP Consultants, John Dingeldein; Alan Esser; Anthony Jarem; and Joseph Petraus, continue in their work and services with EDP Geosciences.

SME was formed in 1964 and has grown to more than 200 people who provide innovative, practical and sustainable solutions for the natural and built environment through environmental, geotechnical, and materials consulting and design services from 11 offices in Ohio, Indiana, and Michigan.

In one currently active environmental area alone, brownfield redevelopment, SME has helped secure and manage more than $125 million in federal, state, and local incentives to support more than $1 billion in redevelopment projects in the last 10 years in 26 communities and development regions across the Midwest.

AMEC ACQUIRES BCI: AMEC (London) the 23,000-person international engineering and project management company, has acquired **BCI Engineers and Scientists, Inc.** (Lakeland, FL) a 200-person consulting firm focused on the water and mining sectors.

Established more than 30 years ago, BCI is a diversified environmental, water resources, geotechnical, civil, and forensic engineering firm working predominantly in the water and mining sectors.

"This acquisition is consistent with our Vision 2015 growth strategy in the water and mining sectors, as well as expansion in the Southeast U.S.," said Hisham Mahmoud, president of AMEC's Earth & Environmental business. "BCI's talented professionals, locations, services, and excellent client relationships make the company a good fit for us."

In addition to Florida, BCI has offices in Colorado, Michigan, and Missouri.

BCI has performed exceedingly well, despite the lagging economy, and for the first time in 2010 made *The Zweig Letter* Hot Firm List.

"By joining AMEC, we will add value for our clients and our staff," said BCI President Richard Powers. "As part of a growing and dynamic global organization, we will be able to better serve our clients nationally and internationally, while generating new technical and professional opportunities for our staff."

HDR ACQUIRES: HDR (Omaha, NE), an 8,000-person worldwide provider of planning, environmental, engineering, and architectural services, has acquired corrosion engineering firm **Schiff Associates** (Claremont, CA).

Schiff will now conduct business as HDR|Schiff. Financial terms of the agreement were not disclosed.

"Schiff Associates are experts in corrosion control and conditions assessment, key technical areas that complement HDR's focus on helping our clients manage their facilities," said George Little, president of HDR Engineering Inc. "With much of the nation's water and wastewater infrastructure reaching the end of its useful design life, this technical specialty is becoming more critical. We are very pleased that the Schiff team decided HDR was a good fit for them."

"Joining HDR will provide Schiff Associates with a broader range of services and longer client roster," said Graham Bell, Schiff president and principal engineer. "This is important not only for water and wastewater utilities, but for oil, gas, marine, and rail clients. Everyone on our staff is looking forward to the increased opportunities to both help our clients and grow professionally."

Established in 1959 as M.J. Schiff & Associates, Schiff Associates is one of the oldest corrosion engineering firms in the U.S. It focuses on corrosion engineering and coating-related services to assist architects/engineers and owners in designing, constructing, and operating structures with low maintenance costs and long, trouble-free lives.

GENIVAR INC. ACQUIRES: GENIVAR (Montréal, QB), a 4,400-person engineering consulting firm, has acquired **Decibel Consultants Inc.** (Pointe-Claire, QB), an engineering consulting firm that specializes in architectural acoustics and industrial/environmental noise measurement and control.

This acquisition adds 13 employees to GENIVAR's workforce.

"We are very pleased to add a specialization in acoustics to our range of expertise," said François Perreault, GENIVAR's vice president, Western Québec. "Noise and vibration are important factors in the projects we undertake, whether in the architectural field, at industrial sites, on highway projects, or in our urban environment," he added.