

Findings from the high profit firms study



Mark Zweig

Some of the differences that set these successful firms apart are staggering, Mark Zweig writes.

Our 2012-2013 “High Profit Firm Survey of A/E/P and Environmental Firms” has just been completed and I think it has some really interesting data that I want to share (and comment on, of course!) with our readers.

Profit is crucial to your survival. Not only is it necessary for a strong company that can hire and retain good people, it’s also necessary to weather economic downturns. But it is also essential to maintain your bank lines of credit, effect an ownership transition and keep the owners interested in the business (all essential!). Making a profit is a good thing. Making a high profit is even better. And yes, as tough as this business is some firms seem to really knock the cover off the ball, even today.

So what do we consider “high profit firms,” you may ask. For the purposes of this study, high profit firms made an average of 24.5 percent profit on net service revenue, contrasted with the industry norm of 8.9 percent. That translates to a net pre-tax, pre-bonus profit of nearly \$26K per employee. Net service revenue per total staff for high profit firms was \$154.3K, compared with \$125.7K for other firms. I like this number. It’s simple and everyone understands it.

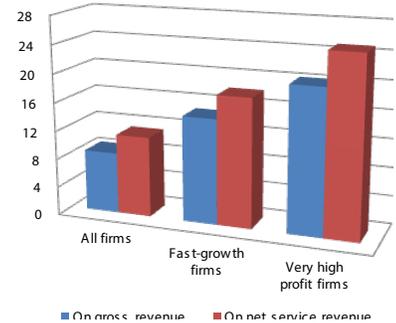
Overhead rates for high profit firms were 162.2 percent versus 174.3 percent for others, consistent with higher chargeability rates for high profit firms (65.6 versus 57.3 percent). Professional and technical staff to admin staff ratios are 6.7 to 1 in high profit firms; 5 to 1 in all

See MARK ZWEIG, page 2

Profit is crucial to your survival. Not only is it necessary for a strong company that can hire and retain good people, it’s also necessary to weather economic downturns.

TRENDLINES

Growth and profit



While the A/E industry still feels the effects of the recent economic downturn, there is a segment that continues to show a higher EBITDA margin. By definition, fast-growth and very high profit firms have higher earnings than the industry overall and so it is no surprise that these segments report EBITDA margins on gross and net service revenue higher than the overall firm sample. The 2012-13 “Successful Firm Survey” finds that fast-growth firms reported a median EBITDA margin on gross revenue of 14.8, and 18.1 on net service revenue. Meanwhile, very high profit firms reported a median EBITDA margin on gross revenue of 20.3, and 25.0 on net service revenue.

– Margot Suydam, Survey Manager

FIRM INDEX

Affinis Corp.....	3
Buckland & Taylor Ltd.	5
Bury+Partners.....	9
CJMW Architecture.....	11
Comprehensive Environmental Inc.....	12
Foresite Group, Inc.	3
Michaels Energy.....	3
Reztark Design Studio.....	11
Shea Carr Jewell.....	5
Wilson & Company, Inc.....	9

INSIDE

- SURVEY: Successful firms simply put in more effort. Page 5
- PM PERSPECTIVES: When marketing and PM collide. Page 7
- HR: Job filtering software – Pros and cons. Page 9
- FINANCE: Investing in software – Is it worth it? Page 11

What’s your discipline(s)?

Page 3

MARK ZWEIG, from page 1

other firms. Too many admin people has long been a problem with this industry – I have been saying it for years. We make our people lazy with too much support.

Because they are profitable, high profit firms give back a lot. Median bonus costs are more than \$16K per employee versus only \$3,949 in typical firms. Wow – that's four times as much. Target billing rates are 3.25 times raw labor versus three times raw labor in other firms.

High profit firms are more likely to get attorneys to review every contract – 17 percent of them do it versus only 9 percent of other firms. They also always have a principal-in-charge assigned to every project, whereas 76 percent of other firms do this. No surprise here. Principals HAVE to be involved in projects – it cannot all be delegated away to people who don't care as much. Sixty seven percent of high profit firms always have a budget before opening a job – 41 percent of other firms do. Seems like a simple "must" to me.

Here's a stat I really like. One hundred percent of the time high profit firms send out periodic project progress reports to their clients. Only 68 percent of other firms do this. Again, we have been preaching for years that this is one of the simplest and most effective things you can do to improve PM, cash flow, and client retention, yet some firms still wait for their clients to demand it before doing it. High profit firms are also more likely to solicit client feedback through an ongoing process. They do it 67 percent of the time, whereas other firms only do it 51 percent of the time.

There's a lot more in this study. I barely scratched the surface here but am now out of space. Eleven chapters worth of good information. Every firm should have one as they embark on their budgeting and business planning for 2013. We'd be glad to sell you one. Give us a call. We're here to help make you more successful!

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

A/E BUSINESS NEWS

BIM MAKES INROADS: At a national meeting Oct. 11 of the BIMForum in Tacoma, Wash., McGraw-Hill Construction presented highlights of its new research showing the rapid advance of building information modeling (BIM) usage by architects, engineers, contractors and owners in North America. Comparing results from its similar research in 2007 and 2009, McGraw-Hill Construction finds:

- The percentage of companies using BIM jumped from 17 percent in 2007, to 49 percent in 2009, to 71 percent in 2012
- For the first time ever, more contractors (74 percent) are using BIM than architects (70 percent);
- All users report increased business benefits from BIM, including better profits, more accurate documentation, less rework, reduced project duration, fewer claims and the ability to offer new services
- Almost 40 percent of BIM users are heavily committed to it, doing over 60 percent of their work in BIM. This group has surged by 44 percent since 2009

As a sign of its increasing acceptance and maturity, almost half (49 percent) of BIM users have five or more years experience using it.

"This unique multi-year trend data demonstrates clearly that BIM is taking hold in the design and construction industry because it has proven business value," said Stephen Jones, senior director at McGraw-Hill Construction and lead author of the research.

"This research confirms the wide acceptance and commitment to BIM, even during one of the most challenging times for the AEC industry," said Phil Bernstein, vice president, strategic industry relations at Autodesk. "The results confirm what we are hearing from our customers on the positive impact BIM-based process change is having on the design, construction and operations of their projects."

The full results of this research will appear in the Business Value of BIM in North America SmartMarket Report, part of the continuing McGraw-Hill Construction SmartMarket Report series and released to the general public at the end of November 2012 at http://construction.com/market_research/default.asp.

USGBC GIVES OUT AWARDS: The U.S. Green Building Council has announced

the recipients of its 2012 Leadership Awards, recognizing outstanding individuals who embody the vision, leadership and commitment to the evolution of green buildings and communities as a vehicle to enhance our quality of life. The awards will be presented at the Leadership Luncheon on Thursday, Nov. 15 during USGBC's Greenbuild International Conference and Expo held in San Francisco, Calif.

"The green building industry didn't grow in to a global movement by chance. We got here because of the hard work and innovation of sustainability pioneers and visionaries," said Rick Fedrizzi, president, CEO and founding chair, USGBC. "We are thrilled to recognize many of those individuals in this year's awards."

2012 Leadership Awards recipients:

- Leadership in the NGO Sector: Tom Darden, executive director, Make It Right Foundation
- Leadership in Advocacy: Tom Lent, policy director, Healthy Building Network; Bill Walsh, founder, Healthy Building Network
- Leadership in the Residential Sector: Steve Saunders, CEO, Texas Energy Solutions
- Global Community Leadership Award: Nancy Cantor, chancellor and president, Syracuse University; Joanie Mahoney, Onondaga County executive; Stephanie A. Miner, mayor of Syracuse
- President's Award: M. Arthur Gensler Jr., founder, Gensler; Donald Simon, attorney, Wendel, Rosen, Black & Dean, LLP



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PRACTICE

What's your discipline(s)?

Whether to serve multiple markets or be a niche operator depends on many factors, including the market's demands.

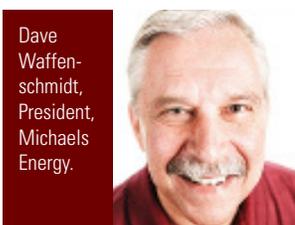
By LIISA SULLIVAN
Correspondent

"We have chosen a multidisciplinary approach because it motivates and excites us. It has helped us to better serve our clients' needs."

Being multidiscipline may help distribute performance between many buckets. Each bucket can help replenish the other when needed to attain balance. But, as niche firm owners will tell you, being multidiscipline can also remove focus and affect client perceptions.

So, which one to run with? It depends.

DIVERSITY BENEFITS. Dave Waffenschmidt, president of **Michaels Energy** (LaCrosse, WI), a 47-person energy efficiency consulting firm (formerly Michaels Engineering), says that Michaels has historically been multidiscipline and multi-market, meaning it has provided different services to different client groups.



Dave Waffenschmidt, President, Michaels Energy.

While Michaels' core services have always been centered on energy efficiency, the firm has

provided many other services over the course of its 29 years in business. These services include: MEP design, asbestos management, leaky underground storage tank remediation and indoor air quality services – and that's only a partial list.

However, the company has recently refocused to become more of a niche op-

erator and is now returning to its roots to better focus its efforts on core service offerings.

"And, that's why we have changed our name to 'Michaels Energy' – to reflect that renewed focus," Waffenschmidt says.

The benefits of diversity can be significant, nevertheless, especially if you serve niche markets, or if any of your markets are dependent on government regulations or the health of a specific economic sector, Waffenschmidt says.

"As I look back over our history, there are many times when our diversity allowed us to remain successful while parts of our business were going through a transition," he says.



W. Brant Aden, Founding Principal and CEO, Foresite Group, Inc.

W. Brant Aden, founding principal and CEO of **Foresite Group, Inc.** (Norcross, GA), a 60-person multi-disciplined consulting firm specializing in civil engineering, landscape architecture, structural engineering, telecommunications, and transportation, explains the firm's obviously diverse opera-

tion.

"We have chosen a multidisciplinary approach because it motivates and excites us," Aden says. "It has helped us to better serve our clients' needs. In this slow-to-recover-economy, it is better for a firm to be open-minded, adapt to its environment, and to re-strategize on a regular basis."

When Foresite Group was founded in 2003, the firm already offered multiple disciplines to its clients, and continued to expand its services.

"We have continued to add disciplines to make our clients' job easier," Aden says. "This works for us in our environment and under our circumstances.

But, this may not be the best approach for others."

DIVERSITY DRAWBACKS. Now, remember to keep in mind that what works for one firm does not necessarily work for another.

"I've seen both multidisciplinary and niche firms work extraordinarily well in our industry," Aden says. "More importantly, there are clients out there that strongly prefer one over the other."

As there is usually a flip side to all things, Waffenschmidt explains that there are some clear downsides to being multidiscipline and multi-market.

"It can dilute your focus," he says. "Even developing a mission statement that encompasses all you do can be difficult. You end up dealing with an ongoing identity crisis, because in many ways you are multiple entities doing business under the same banner."



Richard Worrel, President, Affinis Corp.

SMALLER FIRM; SINGLE FOCUS. Richard Worrel, president of **Affinis Corp.** (Overland Park, KS), a 24-person single-discipline civil engineering firm that focuses on transportation planning and design services, makes the case for niche services.

"Since we are a small firm, we stay focused on a single discipline so that we can provide our clients with a reliable service to make their lives easier," Worrel says.

He adds that as a single discipline firm, it can build a reputation for being the "go-to" firm as masters in this one area.

"Personally, my thoughts on multidiscipline firms are that they are 'A Jack of all trades, but masters of none,'" he says.

Since 1947, Affinis has stayed its course over time. It has not wavered from its initial focus and likely never will, Worrel says. ▀▄

FEEDBACK

Managing a successful office

One reader reacts to Guest Speaker article, while another reacts to Mark Zweig's editorial on people management essentials.

In her guest column, "Project manager to business manager," in **THE ZWEIG LETTER**, June 11, 2012, June Jewell lists the essential steps to help develop your project managers into world-class business managers. Travis Black, division manager at the **Apex Companies, LLC** (Rockville, MD), a 350-person national water resources and environmental services consulting and engineering firm, wrote:

"This article sums up my approach for a successful office, keeping projects profitable as well as the necessary skills to be successful as an individual."

June –

I just wanted to send a quick email and compliment your article published in the June 11th (issue 963) issue of **THE ZWEIG LETTER**. I can honestly say this is the first article I've read that hits the nail right on the head. I work for Apex Companies (environmental consulting and construction company) and manage the local office in Rockville, Md. I've been with the company for 14 years and held many different positions (environmental specialist, project manager, program manager, office manager) over that time. Through the years I've heard many different philosophies when it comes to managing projects and clients. This article sums up my approach for a successful office, keeping projects profitable as well as the necessary skills to be successful as an individual. Although these steps and procedures aren't always easy, it's often the best result in the long term.

Again, enjoyed the article – thanks for publishing.

Sincerely –

Travis Black

FIND PEOPLE WITH PASSION

In this editorial "People management essentials," in **THE ZWEIG LETTER**, June 23, 2012, Mark Zweig offers four tips on how to be good to your staff. Kevin Honomichl, president of **BHC Rhodes** (Overland Park, KS), an engineering and surveying services firm, wrote:

Mark:

Great article!

I completely agree with aligning people with their passion. If you don't, it's just going to be a long day for everybody. We need to recruit accordingly. Your editorial has a lot of good to great in it. Doing what you are truly passionate about as part of the hedgehog concept. You shouldn't have to motivate people, because the right people in the right seats are self motivated.

Good work!!

Thank you,
Kevin Honomichl

Mark Zweig responds,

Thank you for writing in, Kevin, and have a great day!

Mark

MARKETING IN TODAY'S WORLD: Spend the day with the industry's leading management expert, Mark Zweig, for an in-depth discussion of how marketing needs to adapt to deliver results now. Find out what your firm needs to be doing to stand out from the crowd, and how everyone in your firm can be actively involved in the process.

The next event is scheduled for Nov. 15 in Orlando, Fla. For more information or to register, call 800-466-6275 or log on to www.zweigwhite.com/seminars/mktsem/index.aspx.

RESOURCES

ENVIRONMENTAL CONSULTING SALARY SURVEY: The 2012 "Financial Performance Survey of Environmental Consulting Firms" contains more than 30 different major financial performance statistics so you can find out exactly where your firm stands among your peers.

These statistics are just the beginning of this comprehensive report – go beyond the revenue and profit data to chargeability, revenue factor, overhead rates, average collection period, backlog, staff turnover, and more to see which areas your firm could improve. Data on operating expenses, personnel costs, finance and accounting staff, growth and profit projections, and more are also included. In addition to financial performance and spending statistics, the survey also shows data on top financial managers and finance and accounting staff percentages. Does your firm have the staff resources it needs to stay on top of all financial and administration issues? Find out! This survey will show you the typical breakdown of F&A staff for a firm of your size. The survey also shows you historical revenue and profit data and growth predictions for the next three, five, and 10 years. If you're a president, CEO, principal, or financial manager, you won't want to miss out on this data when it comes to developing your firm's strategic business plan.

For more information or to buy a copy, call 800-466-6275 or log on to www.zweigwhite.com/zw-1155-2012.aspx.

FAST GROWTH FIRM SURVEY: How do the most successful architecture, engineering, planning, and environmental consulting firms do business? What are they doing that you're not? Find out with the 2012-2013 "Fast Growth Firm Survey of Architecture, Engineering, Planning & Environmental Consulting Firms." This new publication will tell you everything you need to know about how firms just like yours are growing.

The "Fast Growth Firm Survey" is a compilation of all the major management topics covered in ten of ZweigWhite's survey reports conducted throughout 2012. In addition to compiling survey data from other reports, we also broke data down by the overall sample compared to the fastest-growing 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!

For more information or to buy a copy, call 800-466-6275 or log on to www.zweigwhite.com/zw-1164.aspx.

SURVEY

Successful firms simply put in more effort

New survey shows that they respond to crises quickly, invest in staff and spend on marketing and BD.

By CHRISTINA ZWEIG
Contributing editor

Attitudes toward staff training, marketing and business development are just a few of the characteristics that set apart the most successful firms from their brethren, ZweigWhite's 2012-2013 "Successful Firm Survey of Architecture, Engineering, Planning & Environmental Consulting Firms" has found.

Not surprisingly, successful firms also distinguish themselves by responding properly to challenges and crises (whether internally or externally caused), the survey found. This shows that those firms that have taken the time and put forth the effort to properly prepare for rough situations are constantly among those with fast-growth or very high profits.

Job training and education, especially after a promotion, is just one way successful firms help managers cope with challenges. Successful firms are much more likely to provide training. Half of all fast-growth firms report providing mandatory project management training and the remaining half provide voluntary training. A quarter of firms in the larger sample of all A/E/P and environmental firms do not provide any project management training at all, the survey found.

MARKETING AND BD FOCUS. Buckland & Taylor Ltd. (North Vancouver, BC), a 144-person structural engineering firm and first timer in **THE ZWEIG LETTER** Hot Firm List in 2012, has recently achieved strong organic growth and more than doubled its annual gross revenue. Behind the recent success was a strong plan backed by preparation and reinforced by providing training. Steven Hunt, president CEO, says, "In 2009, I retained a Chicago-based business development consultant to train staff in customer relationship management and new market strategies. He also helped to recruit a new director of BD and marketing to lead a major increase in BD efforts."



Steven Hunt,
President and
CEO, Buckland &
Taylor Ltd.

A focus on business development and marketing is common to most successful firms. Fast-growth firms and very high profit firms are more likely to have full-time dedicated marketing staff, at 88 and 89 percent, respectively, compared with 82 percent of all firms reporting having this dedicated staff, the survey found. Fifty six percent of fast-growth firms reported having a paid business development representative, compared to 41 percent of the larger sample.

When Hot Firm CEO Perry Shea, **Shea Carr Jewell** (Olympia, WA), a civil engineering firm, was asked what actions he



Perry Shea, CEO,
Shea Carr Jewell.

took in 2008 to keep his firm growing in the face of a crashing economy, he says he didn't cut his way to success. Instead, he took a more proactive approach.

"We developed a growth strategy and implementation plan to mitigate the economic issues, including strategic acquisitions," he says. "We increased our marketing and business development activities and costs, rather than reducing the non-billable staff."

Buckland & Taylor's success resulted from a careful business development strategy culminating in an ambitious action plan to grow the company's North American presence.

"The short term plan was all about making relatively rapid investments in people and systems to prepare us for a period of sustained growth over the longer term," Hunt says.

In 2010, the firm prepared a growth strategy for the longer term (through 2015). "The plan is built around four

cornerstones: Engage, Earn, Evolve, and Expand. This plan established an aggressive growth target for Buckland & Taylor to arrive at the sustainable size we believe necessary to take advantage of improving market opportunities for engineering of major bridges," Hunt says.

Buckland & Taylor's growth and expansion in the last year has created a multitude of new opportunities.

"With this expansion, we have successfully increased our BD and marketing efforts to build a record backlog," Hunt says. "We had to start a geographic expansion to improve our access to the U.S. market and fast growing parts of Canada. The geographic expansion was meant to not only increase accessible market, but also to access talented bridge engineers who would not be willing to relocate to our head office."

THERE'S A COST. The survey shows that this success does sometimes come at a cost. When asked if they worked on weekends or holidays, 67 percent of fast-growth and 54 percent of very high profit firm leaders replied "frequently," while this same response was given by 46 percent of all design firm leaders.

Still, it's no surprise that when A/E/P and environmental firm leaders were asked if their firm or a good mutual fund was a better investment over the past five years, fast-growth and very high profit firms overwhelmingly chose their firm as a better investment (92 and 90 percent compared with 74 percent of the overall sample). ▀▲

Firm culture: Old or new school?



Stephen
Lucy

BEST PRACTICES

Managing with technology requires a balanced strategy.

We are inundated daily with advertisements about new technology advances and how they will make our life easier and our work more productive. How are we supposed to sort through the deluge of information and determine exactly what is the best fit for us and our company, or even if the technology will produce the touted results? Is technology the panacea to solve the myriad of issues facing the A/E/P industry? And how do we balance the needs of the techno-savvy new generation with our more weathered firm leaders?

As one of those more weathered leaders, I began my career when the “old school” was losing its luster and the “new school” was gaining traction. Comparing and contrasting the best of both schools means encouraging generational discussions inside the firm. It also means that senior partners may have to become more flexible to learn how technology can improve their practices without undermining decades-old relationships with loyal clients.

FIRST, GET A PHYSICAL. A physical check-up of your firm’s technology assets should be conducted by an outside IT vendor if you do not have an in-house IT team. We may think we understand the IT business but once you engage these professionals it becomes embarrassingly obvious that most of us don’t.

You should evaluate specific technology platforms that align with both your needs and the needs of your clients. The goal is to become as flexible and forward-thinking as possible in matching technology to our clients’ needs.

SECOND, AGREE TO COLLABORATE INTERNALLY.

We are a company with young and older engineers. The benefit of both differs. Our youngest engineers are very comfortable using software applications to expedite their work. Our oldest engineers understand how projects succeed or fail from years of experience in the field.

Consequently, we engage our youngest engineers to vet new technologies and processes and to explain what is available and functional for our older engineering team members. The result is a greater willingness by and enthusiasm from our staff to collaborate as they understand the strengths and weaknesses of each group better.

THIRD, EMBRACE RELATIONSHIP-BUILDING.

One of my favorite commercials is the family where the children are absorbed with technology and mock their parents because they only have a few Facebook friends. The commercial then cuts to an outdoor adventure scene where the parents have met up with friends to go hiking, biking and kayaking. They are having fun immersed in the real world with friends.

For most of us, being immersed in the real world and making connections face-to-face is the most fun you can have in business. Building relationships with clients and peers is part of developing a sound foundation to any enterprise so we try to teach this “old school” strategy through cross-generational mentoring.

Although we use various technologies to support our project management, human resources and business development functions, we recognize that doing business effectively requires the human element, too.

FOURTH, EXERCISE PATIENCE, QUALITY AND CONTROL.

The downside of going high tech exclusively? Making mistakes. One thing we know for certain – technology provides the potential to make more errors more quickly. As easy and as casual as email has become, how many typos have you made by not proofing your email and how many times have you forwarded an email with a conversation thread that wasn’t meant for all parties to read?

Technology can be a double-edged sword. By the time something loops back you are already at the tail end of the interpretation stream. Everyone will look at these messages differently. Furthermore, clients can send them in 15 seconds and often expect a response 15 seconds later. Avoid falling into this speed trap

The best practitioners today understand the benefits of high tech and human touch and how they merge together. Technology is a tool – just like being able to stand up and talk extemporaneously to a crowd of people.

See STEPHEN LUCY, page 8

When marketing and PM collide



Christine Brack

PM PERSPECTIVES

How much of your project delivery borders on seller's remorse?

We all know how critical marketing activities are to promoting the firm's capabilities and how the carefully chosen words support the image we want conveyed to the marketplace through the appropriate channels and materials.

I've read lots of marketing copy (both good and bad) on websites, brochures, proposals, business cards and coffee cups. I've heard dozens of pitches (both painful and eloquent) in interviews and conversations about how and why one firm is different, or perhaps better, than the competition.

It goes without saying that marketing and business development provide the opportunity for a firm to prove their claims via design and project management. It also goes without saying that project nuances produce a very different reality than the rosy picture the marketing material is attempting to showcase. So what happens when those two worlds collide?

■ **Client oriented branding.** To say that a firm is "client oriented" is somewhat silly to begin with because if you're not client oriented, what other orientation is there? Many firms do make this statement or some other variation meant to imply that the firm goes the extra mile on any occasion. That sounds great to any potential buyer but how does that translate mid-project when the budget is analyzed? Suddenly, going the extra mile means spending extra hours that eat up the fee. When you're client oriented, it's fairly uncomfortable asking to be paid for your zealous efforts. Nickeling and diming your client contradicts that marketing message in an expensive way.

■ **Fast-track and agile branding.** In other words, your firm meets challenging deadlines. Firms brag about this amply because, admittedly, it is a strong selling point to a client who wants the project done quickly. How often, though, does the industry lament that timelines are becoming shorter and shorter? How many of you have been puzzled that clients suddenly got the weird notion that projects can and should be designed in a fraction of the time it used to take? I recently sat in a mock interview where the principals emphasized this fast-track ability. Later in the day when we were discussing their project management issues, they acknowledged that the external forces of the industry (such as clients with nearly-impossible-to-meet deadlines) were making it more and more difficult to provide the design and quality they practiced in "the old days."

■ **Innovative solutions branding.** In order to avoid falling into the commoditization trap, many firms claim to offer solutions (or claim to) that are not off the shelf or similar to what's available down the street. I am not questioning the validity of whether or not these solutions are really more innovative than the next; the true issue is that innovation generally comes with a higher price tag. Designing and engineering a solution that is different than the industry standard simply requires more time – especially more expensive, senior people. "We're perceived as a more expensive firm," is a complaint I hear from firms that plaster "innovative" all over their marketing material while they lose out to others on price.

■ **Trusted advisor branding.** It is true that some clients need more guidance than others when planning and executing their projects. That's where you come in as the expert. It is also true, however, that while you have the distinct honor of leading the process ethically and protectively, you also bear the burden of what that costs in terms of time – more meetings, more phone calls, more of everything. Again, when looking at project reporting and actual hours versus planned, this is where the marketing promise gobbles up the project revenues.

The marketing message is certainly critical and firms spend a lot of time finessing those words so they have the influence to sell. What is often forgotten is that clients purchase those words and then happily expect them to be delivered. We live every day under the pressure of providing what we've promised – often to the detriment of our own sanity, profitability, and professional ability. ▽▲

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To say that a firm is "client oriented" is somewhat silly to begin with because if you're not client oriented, what other orientation is there?

NEWS

Fiscal impasse could cost industry \$2 billion

AIA identifies almost 50 federal budget accounts targeted by 'sequestration.'

The design and construction industry, still reeling from the real estate crash, could face another \$2 billion in lost work if Congress and the White House fail to reach agreement on a federal budget in time to avoid massive mandatory federal spending cuts on Jan. 2, an American Institute of Architects analysis warns.

Using a report issued last month by the Office of Management and Budget, the AIA analysis identifies 48 separate budget accounts targeted for spending cuts that directly fund the design, construction and rehabilitation of buildings and other vertical infrastructure, including the iconic Capitol dome that is the symbol of American democracy throughout the world.

The Budget Control Act of 2011 requires some \$1.2 trillion in spending cuts absent an agreement by Congress and the

White House to reduce the federal deficit by other means. As of August 2012, numerous agencies across all three branches of government accounted for a seasonally adjusted annual rate of federal construction put in place of \$25.2 billion, according to the U.S. Census Bureau.

In July, a study by the George Mason University Center for Regional Analysis found that the total employment impact of budget cuts on federal personnel in architecture and engineering occupations at 61,483. However, this number does not include the job losses incurred by government contractors or construction workers, which could possibly boost that number significantly higher.

The AIA analysis uses a 2007 Center for Regional Analysis study to further pin point job losses in the sector. According to that study, every \$1 billion spent on design and construction yields 28,500 full-time jobs. Under that formula, as many as 66,500 full-time positions could be lost in a sector that accounts for roughly 11 percent of the nation's economy. ▲▲

STEPHEN LUCY, from page 6

because a poorly crafted message can be not only an embarrassment but also a business deal killer.

We task our young engineers to slow down, exercise patience and use their brainpower. Every time there is a new design task for our young engineers, we require them to do it by hand and then use the computer to compare their results. This is a formal part of their training, which they only get through on-the-job-training. Since software is free at most campuses, it is far easier for students to make the wrong assumptions and, because they are so technology-dependent, they never realize the error.

FIFTH, ADAPT TO BECOME MORE ADEPT. What is the downstream and upstream impact of your "old school versus new school" decision-making?

Everyone needs to find their comfort level in deploying technology and utilizing the applications that help support business growth. More importantly, given the younger generations coming into the business, older partners shouldn't barricade others from integrating advanced business tools.

It is also important to integrate and standardize technology throughout a firm. From PCs to servers, tablets to smartphones, and software to web applications, office and field standardization and integration help streamline business and can generate operating efficiencies.

We believe that adapting business tools that make us more proficient has been and will continue to be critical to our success over the long-term.

OF COURSE, THERE'S NO TECHNOLOGY THAT IS MORE POWERFUL THAN THE HUMAN MIND. How do you scale a practice based on the human side and high tech side? You have to tailor your positions where people are stronger in project management and project design but now have to be stronger in the use of technology. In terms of business development, you may employ a person who can use CRM but also needs the people skills to get the work and sustain relationships. Technology then supports that client's project needs.

Technology makes your practice relevant, but the reality is that the A/E/P industry is still people-driven. Everyone wants to work with their friends. Nobody wants to work with someone they don't like. To be successful, you team up with people you like; you socialize with people you like; and, if you are unable to establish a good connection with a prospect, you typically move on. Life's too short.

The best practitioners today understand the benefits of high tech and human touch and how they merge together. Technology is a tool – just like being able to stand up and talk extemporaneously to a crowd of people.

When I consider the volume of work that we produce today compared to when we first started our practice, our productivity gains have been most directly tied to our technology improvements. Our loyal business relationships, however, have been the result of doing quality work and insisting on that human connection with our clients. ▲▲

STEPHEN LUCY is managing principal at **JQ** in Dallas, TX. Contact him at slucy@jqeng.com.

TECH

Job filtering software – Pros and cons

While many HR managers remain skeptical, software is a useful first aid as the job market is flooded with job seekers.

By LIISA SULLIVAN
Correspondent

Unemployment remains high in many states around the country. As a result, some employers may be getting deluged with applications. So, how do potential employers quickly determine who is suitable and who is not? One solution may be to consider automated selection. There are many new types of software that can help HR departments to scan résumés and identify and rank promising candidates.

HOW CAN AUTOMATED SELECTION HELP? The hiring process usually involves a great deal of information collection and analysis. This is an area where firms may benefit from a systematic and automated approach.

Automated selection software helps companies to do online pre-screening; it helps to sift out applicants that fail to meet their minimum ability thresholds. Of course, candidates should be reassessed in person if they reach the later stages of the selection process.

For example, the AutoHire System is recruiting software that offers a broad range of functionality that includes providing multiple user-customizable career centers, job requisition creation and processing, approval and distribution to various job boards and staffing agencies, online résumé collection management and screening and tracking candidates throughout the hiring process.

The résumé management feature stores all candidate information and is easily accessible from a single set of tabular-organized screens. Résumés are associated to jobs applied for and can be

matched to other job opportunities as hiring managers desire.

The job and résumé search feature is powerful, but flexible. The search features provide “Basic” and “Advanced” functionality screens with “view all,” job category, geographic location, days old, keyword name and various other filter options. Search parameters can be auto-populated by job opportunities to find suitable résumé matches.

Candidate tracking uses customizable candidate statuses to manage candidates throughout the hiring process from résumé or employment application, to interview, to rejection or hire. Ranking scores help to focus attention on the best candidates.

Recruiting software systems such as AutoHire allow users to customize the process in a multitude of ways and, through its built-in question system, to obtain useful information that might otherwise be missed. HR managers are freed from some of the traditionally time-consuming tasks that can get in the way of assessing the hiring process as a whole, let alone its contribution to broader organizational goals.



Rachel Seitzer,
HR Manager,
Bury+Partners.

Rachel Seitzer, HR manager at **Bury+Partners** (Austin, TX), a 250-person engineering consulting and design firm, currently uses Cyber Recruiter from Visibility Software to manage its job postings and applications.

“The current volume of applications we receive is not such that it necessitates using software to filter résumés,” Seitzer says.

However, Bury+Partners does find that this software is helpful for other needs.

“Our HR staff can quickly screen, at-a-glance, for the key skills and experience that a software might filter and

at the same time review other criteria that may impact the decision process,” Seitzer says. “If we were to receive a much greater volume of applications daily, a program could be useful for paring it down to a number that is manageable for a person to review.”



Jeannie Tatro,
Recruitment
Coordinator,
Wilson &
Company, Inc.

Jeannie Tatro, recruitment coordinator at **Wilson & Company, Inc.** (Albuquerque, NM), an engineering and architecture firm, says that her firm does use an applicant-tracking system to filter résumés.

“While we do not use keywords to create parameters because we find that applicants sometimes use different words than we do and we don’t want to eliminate anyone who is qualified, we create knockout questions,” she says.

Knockout questions are essentially designed to automatically reject applicants who do not meet minimum qualifications. For instance, they ask questions such as, “Do you have a bachelor of science in engineering” or, “Are you willing to accept part-time work?”

Tatro highly recommends an applicant-tracking system for certain purposes. She finds this software helps to keep her organized. She constantly has candidates call to find out the status of their application and she simply types in their name and the software lets her know all activity for this individual, such as whether they may not have qualified for the position, whether the application is pending the hiring managers’ review, or perhaps whether they want to interview this candidate. All of this information is tracked.

“The system also keeps reports handy so I know how long different jobs have been posted and how many hits I am

See SOFTWARE, page 10

ON THE MOVE

MERRICK & COMPANY PROMOTES: **Ralph Christie**, chair and CEO of **Merrick & Company** (Aurora, CO), an engineering, architecture, design-build, surveying, and geospatial solutions firm, announced that **Sandy Turnbull** has been named a vice president. Turnbull has been with Merrick nearly two years and oversees operations at Merrick's Charlotte, N.C., office. As vice president, she will serve as Merrick's national leader for land development planning and design. She will be responsible for integrating the practices of planning and engineering for specific land development projects, leading community-based design workshops, and helping develop "green" solutions for sustainable development practices.

Prior to Merrick, Turnbull was president of **Turnbull Metzler Design**, a Charlotte engineering and landscape architecture firm. She contributes more than 30 years in consulting for private sector clients and public agencies covering all aspects of land development planning and design. Her "hands-on" approach, along with her expertise in fully integrating the art of planning with the science of engineering earns her a strong reputation as a thought-leader in her industry.

PSI HIRES AND PROMOTES: **Vincent Franceschi**, has joined **PSI** (Oakbrook Terrace, IL), a 2,000-person engineering and testing firm, as an executive vice president overseeing PSI's offices in the western region states. He has an exceptional record of success leading engineering services, environmental consulting, and analytical laboratory services companies. His core market sector experience has been strongly related to the electric power, nuclear, oil and gas (pipeline), DOE, and local municipal waste/landfill agencies. Before joining PSI, he was a key player in leading Exponent, Evans Analytical Group, ENV America, EMCON, and ABB Impell.

Additionally, **Steve Howell** accepted the position of vice president overseeing all of PSI's Denver operations. He comes to PSI with 30-plus years of successful business development and industry experience.

John Gordon has been appointed principal-in-charge of PSI's Geotechnical Service Line. In this position, Gordon will invest half of his time to strategic development and growth of PSI's geotechnical services company-wide and his other time will continue to be dedicated to his chief engineer responsibilities.

APEX HIRES: **Apex Companies, LLC** (Rockville, MD), a national energy, water resources and environmental consulting and engineering firm, has named **Thomas Bristol** as program manager, based out of the company's new Columbia, S.C. office.

An environmental scientist with more than 12 years of consulting and project management experience, Bristol's primary focus will be

supporting Apex's national clients, expanding services and identifying new opportunities to strengthen the company's presence in the Southeast region.

"Thom has a strong history of work in environmental permitting and compliance for stormwater, wetlands and water resources. That, coupled with his expertise in linear construction projects, will make him an invaluable addition," said Robert Brackett, senior vice president and COO of Apex. "By opening up an office in South Carolina, Apex is able to provide even more private and public sector clients with our comprehensive, hands-on services."

URBAN HIRES: **Urban Engineers, Inc.** (Philadelphia, PA), a planning, design, and construction services firm, has named **Carl Gandza** senior civil designer/project manager in the firm's Hartford office. He brings nearly 15 years of diverse transportation and traffic project experience to the position.

Throughout his career, Gandza has been responsible for engineering, designing, and managing a wide range of transportation and traffic projects. He has provided design services for state highway and municipal design projects, including traffic studies, preparing contract drawings, specifications, quantity take-offs, and cost estimates. Gandza also has experience providing services as a construction inspector for civil/roadway programs, specializing in traffic control devices, signalization, signing, and markings.

GREENHORNE & O'MARA HIRES: Engineering consulting firm **Greenhorne & O'Mara** (Laurel, MD) continues to expand its transportation team with the addition of **Fawzi Faraj**.

Faraj serves as vice president for the G&O Transportation team. His responsibilities include identifying areas of opportunity for new business, fostering client relationships, coordinating sales and marketing activities, and promoting a global G&O presence.

"Fawzi has gained extensive experience from working in multiple management and executive positions, which have provided him with the knowledge and understanding of operations as well as developing client relations. I have no doubt that he will excel in this position and help G&O to expand its client base in the transportation industry," said Practice Builder Simon Simon.

Faraj has 28 years of industry experience that includes structural engineering, construction inspection, bridge inspection, and numerous landmark environmental projects. During his career, he has served in many management and executive positions, and has been successful in establishing and managing branch office in various geographical areas. Faraj has also served as an expert witness on many committees/subcommittees for governmental agencies.

SOFTWARE, from page 9

getting from particular websites," Tatro says.

DON'T SUBSTITUTE SOFTWARE.

Sherry Hennes, director of human resources at **Moffatt & Nichol** (Long Beach, CA), a global infrastructure advisor, says that this firm is not currently using software to filter job applications.

"People can detect nuances that are not yet available through artificial intelligence," Hennes says.

Tatro agrees that there are many pros

to sifting through résumés as opposed to having computer-generated programs do the work for her. She prefers to sift through them because she finds that she "connects" with certain résumés and cover letters. She also looks at the applicant's qualifications and experience and cross checks them with all the open positions.

"For example, I had a candidate last week apply for a position in a different state, but after looking over his résumé, I found he was best suited for a position locally within another division," she says. "I forwarded his résumé to that hiring manager, who just made a

job offer. If I was using my tracking system to set keyword parameters, he may have been overlooked for the position he was applying for and we would have never contacted this individual."

So, keep in mind that while humans will likely have the final say on hiring a person, as the ranks of the unemployed remains high, it's likely that software filters will increasingly make the first decision on which humans get their first in-person interviews. Such software is not a substitute for the judgment and experience of hiring managers, but it may allow those managers to do their jobs better. ▲▲

TECH

Investing in software – Is it worth it?

Client needs and potential expansion into new markets often justify costs and investment in training.

By LIISA SULLIVAN
Correspondent

Many of today's A/E firms' budgets run pretty trim. So, how do firms justify investing in software? It seems that the ability to stay competitive plays a big role.

ASK QUESTIONS FIRST. **Reztark Design Studio** (Cincinnati, OH), an urban design architectural firm serving the retail, residential and office markets, employs architects, planners, interior designers, graphic designers, and industrial designers. Each group has specific needs and requirements.

"To stay at a high design level we actually look to software (which at times means purchasing hardware as well) to keep our competitive advantage," says Brett Kratzer, principal. "We are also asked by employees to purchase a variety of software – we do not always oblige; we do try to balance the cost to the value."

These are the questions that Reztark asks and reviews when deciding on whether or not to make a new software purchase:

- Who is asking and why? Who meaning which discipline (it tries to balance acquisitions across all disciplines); why meaning, what is the purpose?
- What is the advantage this purchase brings?
- What is the payback? Is it time savings, ability to continue to differentiate our brand from our competitors or something else? Will the firm be more productive, efficient, or creative?
- What is the cost – how soon until the firm is proficient? Sometimes investment in something brings on secondary

expenses. You have the cost of product and cost of learning the program. There is usually a learning curve of utilization before kinks are worked out.

BIM OR BUST. At Reztark, the most recent purchase has been its commitment to be 100 percent Revit (an Autodesk building information modeling product) by the end of the year.

"This is a big commitment of resources – both financially and personnel wise," Kratzer says. "We had a couple of clients who required their projects to be completed in Revit. The beauty of the request forced us into something we had always talked about committing to. We were left with no choice; the decision forced us into the world of BIM."

A small number of projects acted as a training ground for the software and staff quickly learned what areas the program was superior in and what areas it fell short in. So, they gained the knowledge of when it would be utilized on projects and when it wouldn't.

"We took time to vet the process and it cost us time and money at the beginning, but the learning curve provided us with a good understanding of how to best use it in our process," Kratzer says. "With that experience and the knowledge that the benefits far outweighed anything we had used in the past, we bit the bullet and committed."

Revit software (and the computers required to run the software) is not a cheap undertaking. However, with proficiency, Reztark has seen the return in manpower savings, highly-coordinated document sets and happy clients (the ability to walk a client through a project three-dimensionally can be very seductive for the client). Many clients have a difficult time understanding two-dimensional drawings.

THE COST OF DOING BUSINESS. Scott Lahr, principal and member of the board at **CJMW Architecture** (Winston-Salem, NC), says that soft-



Scott Lahr,
Principal, CJMW
Architecture.

ware is a critical part of doing business in the design industry today. It facilitates the design process, the work that supports that process and it is one of the primary communication tools with clients and contractors at this 95-person architecture, engineering, and interior design firm.

"It is the language everyone speaks. So in a sense, the cost justification is that it is a cost of doing business in today's world," Lahr says. "For us, whether we are looking at upgrades or investing in new software, company-wide, the critical question is: Will the purchase help us to better serve our clients in some way? Sometimes the benefit is increased efficiency, but it could also be that the new software gives us a better way to communicate with clients, or a better way to show ourselves to potential clients – or maybe all of the above."

At CJMW, it's about balancing economics. They can't run out and buy every new slick program that becomes available – it just wouldn't make good business sense to do so. That's why the firm has an in-house group that looks at and evaluates upgrades and new software and makes recommendations.

"In a sense, it's like buying a new smartphone. You have to ask yourself, 'Is the new one better than what I have now?'" Lahr says.

A recent investment at CJMW was also the implementation of BIM software across the company and all its disciplines (architecture, MEP engineering, and interior design).

"One thing that we've found is that as graphic software becomes more powerful, it often requires more powerful systems, meaning software decisions often have cost implications that in-

See INVESTMENT, page 12

TRANSACTIONS

GEOSYNTEC ACQUIRES: Geosyntec Consultants (Atlanta, GA), a 900-person consulting and engineering services firm, announced it has acquired **EnviroGroup Limited** (Denver, CO), an environmental science and engineering consulting firm.

The firm operates as **EnviroGroup, a Geosyntec Company** as of Oct. 1. EnviroGroup's team includes 21 practitioners and support staff specializing in vapor intrusion evaluation and mitigation, environmental forensics and litigation support, environmental management systems, and regulatory compliance management.

"This is an exciting opportunity for both our companies and our practitioners," said Rudy Bonaparte, president and CEO of Geosyntec. "With the addition of the great group of people who have made EnviroGroup successful, Geosyntec gains resources that strengthen our core practices and bring expertise in the management of environmental issues of special concern to clients across the Rocky Mountains and the Front Range.

"While our two companies complement each other in a number of key practice areas, this merger is especially exciting as it will allow us to combine our two nationally and internationally recognized vapor intrusion practices, to provide our clients with unparalleled expertise and experience to address their facilities or sites impacted by the presence and movement of volatile chemicals in groundwater and soil," Bonaparte said.

Through this acquisition, EnviroGroup practitioners will be able to expand their service offerings by tapping into the practice expertise and institutional knowledge of more than 1,000 Geosyntec engineers, scientists, and project support staff working across the United States and in Canada, the United Kingdom, Ireland, Australia, and Malaysia.

"We knew we wanted to grow the scope of our services and found Geosyntec's entrepreneurial spirit and dedication to client service to be an excellent pairing with our own approach to solving our clients' environmental and infrastructure challenges," said EnviroGroup founder David Folkes, a geological and civil engineer.

Folkes will become a principal within the Geosyntec companies as part of the merger, as will Margaret "Poppy" Staub, a geologist who will also serve as the branch manager for EnviroGroup operations in the Denver region. Joining the firm as an associate is Bence Close, a geohydrologist and civil engineer based near Denver. Susan Welt, joins the firm as a senior environmental engineer based in Albany.

NAME CHANGE: KSA Engineers, Inc. (Longview, TX), a 170-person consulting, management, engineering, planning, surveying, and construction services firm, announced that its subsidiary corporation, **Alliance, Inc.** of Shreveport, La., has been renamed **KSA Alliance, Inc.**, marking a new and positive direction for the engineering and architecture firm. KSA President Joncie Young said that the new name and logo are representative of the firm's expanded capabilities in the areas of architecture and engineering.

Alliance, Inc. was founded over 25 years ago and was purchased by KSA Engineers, Inc. on March 1, 2012. Founder and former principal owner William Bailey worked with the firm during the ownership transition and recently resigned from his position.

Bob Fisher, who worked for Alliance, Inc. for 19 years, has agreed to return to KSA Alliance, Inc. and will serve as the division manager with broad responsibility for the management of the office. "We believe that Bob is the perfect choice to implement our vision for the future of KSA Alliance and we are very glad that he has agreed to return as the manager of the office," Young said.

KSA Alliance has a long history of service to governmental clients, as well as industries and private businesses across Louisiana, Arkansas, and Texas. Prior to the acquisition, KSA and Alliance enjoyed a good working relationship and have cooperated in the design of several street, environmental, and airport projects over the past 20 years.

Young believes the future of KSA Alliance is strong because of the combination of the new energy and the wealth of architectural and engineering experience the firm has built in the past 25 years. Some of the major projects designed by the firm through the years include the South End Zone of Independence Stadium, the Benton Courthouse Addition and Renovation, the Space Center Addition to Sci-Port, improvements to the T.L. Amiss Water Treatment Plant in Shreveport, a five mile portion of I-49 North, the I-49 Southern Loop Interchange, and airport improvements such as runways, taxiways, aprons, terminal buildings, and hangars throughout the Region.

"It is our intention to continue to invest and grow our business in Louisiana," he said. "In addition, as a subsidiary of KSA Engineers, Inc., a professional services company with 170 employees in nine offices, our KSA Alliance, Inc. architects and engineers now have the opportunity to work in a much larger regional geographical area."

INVESTMENT, from page 11

clude new or better hardware," Lahr says. "We found this was certainly the case as we implemented BIM on a wide-spread basis."

SOFTWARE HELPS TO EXPAND REACH. Richard Cote, principal at **Comprehensive Environmental Inc.** (Merrimack, NH), reports that the company makes software purchases and upgrades on a regular basis to stay current, to provide staff with top-notch technology and to maintain CEI as an industry leader.

Major software investments are generally prompted by potential work from a current client, a solid lead on future work and/or opportunity to expand



Richard Cote,
Principal,
Comprehensive
Environmental,
Inc.

into a new service area. CEI looks at a number of things prior to making the investment, such as staff training time, program versatility, existing client need, required hardware, purchase price and the cost of maintenance and upgrades.

One of CEI's most recent major software investments was the purchase of MicroStation with InRoads Suite.

of MicroStation with InRoads Suite was an investment worth making. With multiple trained staff, we are currently using it on several transportation projects while integrating our storm water expertise," Cote says. "Since our initial purchase, we've used it on several projects. More importantly, it has helped us to win new projects, added to our value and versatility as a small business subcontractor, has steadily moved us into the transportation sector and has created a new avenue for business for the firm."

So, would these firms do it again? The answer is unanimously, "Yes!" Investing in new software has definitely proven its worth – internally and externally. ▀▀