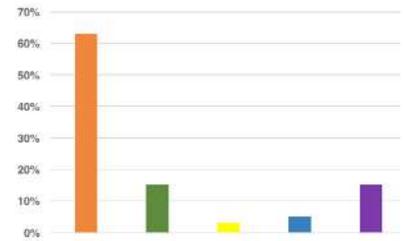


TRENDLINES

Bad hires



The majority of firms (85 percent) surveyed in Zweig Group's 2016 *Recruitment & Retention Survey* have made at least one "bad hire" in the past three years. Two-thirds (63 percent) of respondents said they'd made a bad hire that turned out to be short-term **1-3 times** in that period. Another 15 percent said bad hires had happened **4-6 times**, 3 percent said **7-10 times**, 5 percent said **10 or more times**, and 15 percent said it had **never** happened in the past three years. Percentages do not equal 100 due to rounding. — *Vivian Cummings, research analyst assistant*

Looking for Inspiration?

While success and security are good things, they can also zap your energy, so find something new.

"Any of these will conceivably help you become re-energized personally and that is going to help you be more vital to your firm."



Mark Zweig

EDITORIAL

Chances are, if you're reading this, things have gone pretty well for you. The company is doing well and you're making a great living. You've probably got a nice house and decent vehicles – maybe you even have super cool vehicles! Your kids go to good schools or are already through school and into college or beyond. You aren't worried about paying for their college. You may even have been on a nice vacation in the last 12 months and have another one planned. In short, you're living pretty darn well.

That said, you may be unmotivated at work because it's all going so smoothly. You're bored with your choice of local restaurants, agitated by the upcoming elections, and feeling that your vote or opinions are futile in the scheme of things. As a result, you are uninspired. So here are my suggestions to get you back into inspired mode:

- 1) Start another small business with your spouse or one of your kids.** It may get you re-enthused about business and what you'll learn can be applied to your primary business to make it more successful.
- 2) Teach.** Whether at the college level or in some other capacity, teaching keeps you fresh and keeps you learning. Young people have an energy and sense of possibility that hasn't been beaten out of them yet. This is infectious and will help you.
- 3) Go on a trip with a friend.** Do something you haven't done in a long time. Motorcycle ride

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MORE COLUMNS

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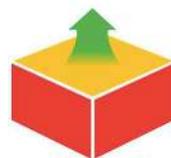
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Research and development

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BUSINESS NEWS

THE NEW HOME COMPANY WINS MASTER-PLANNED COMMUNITY OF THE YEAR AT BUILDING INDUSTRY'S PREMIER AWARDS SHOW Last month at The Nationals, the building industry's premier awards show, the **New Home Company** received one of the most prestigious honors of the program in winning Master-Planned Community of the Year for the Cannery in Davis, California.

Presented by the National Association of Home Builders Sales and Marketing Council, The Nationals recognize the most outstanding work in residential real estate planning, architecture, interior design, sales and marketing. The event was hosted during the 2016 International Builders' Show in Las Vegas.

The New Home Company celebrated the highly anticipated grand opening of the Cannery in August of 2015, welcoming thousands of interested homebuyers to California's first farm-to-table new home community. The Cannery is an innovative mixed-used community with plans for 547 residences and featuring a seven-acre urban farm on the site of a former tomato cannery. The community features a land plan that is the first of its scale in Davis in more than 20 years. It also includes retail shops, recreation center, the Cannery Amphitheatre, the Farm House Welcome Center, and miles of trails. As part of the working farm, the Barn will serve as an agri-classroom for students and beginning farmers.

The New Home Company shared the Master-Planned Community of the Year award with its marketing, design, and development partners on the Cannery. These include Paolucci Salling

& Martin Communication Arts, **Jeffrey Demure + Associates**, **Robert Hidey Architects**, **SWA Group**, **Meridian Interiors**, **Focus 360**, **Woodley Architectural Group**, **LCRA Architects**, **Outdoor Dimensions**, **CDC Designs**, **Siegfried Engineering**, **CalAtlantic Homes**, and more.

"To be recognized by our peers with a Community of the Year award on our industry's national stage is very special," said Joan Marcus-Colvin, the New Home Company's senior vice president of sales, marketing, and design. "These honors reinforce our passion for great architecture, design and planning and we could not be more proud of our entire team and talented partners."

The New Homes Company and its consultants also received the following awards at The Nationals:

- Best Logo Design, The Cannery (Paolucci Salling & Martin)
- Best Print Campaign, Series of Two or More Ads for Corporate "Reflections" Ad (Paolucci Salling & Martin)
- Best Clubhouse, The Cannery (Robert Hidey Architects and Meridian Interiors)
- Best Signage for a Community, The Cannery (Outdoor Dimensions)
- Best Architectural Design of a Single-Family Detached Home Priced over \$1.5 Million, Fiano in Newport Beach, California - Plan 1 (Robert Hidey Architects)

MARK ZWEIG, from page 1

through the Rockies? Tour the historic Route 66 in a 1970 Chevelle SS 454 with cowl induction?

- 4) **Machu Picchu?** Float trip on the Buffalo River? Do something you don't normally do with someone you don't normally do it with.
- 5) **Join a new group.** Whether it's the Sierra Club or the Girl Scouts or Habitat for Humanity – try something different and start getting into it. It may be inspirational for you to do something that has what you consider to be a worthwhile cause.
- 6) **Pick up a new hobby.** Model trains. Skeet shooting. Needlepoint. Pot throwing. Archery. Collecting egg beaters (yes, I had a client who was a very successful A/E firm CEO who actually did this). Oil painting (my sister-in-law picked this up in her 60s and has been able to sell her art at surprisingly high prices).
- 7) **Pick up a new sport.** Do something physical. Distance running. Yoga. Mountain biking. Spelunking. Diving. Doing something like this may be what it takes to get you more centered and back to your old inspired self.
- 8) **Read some books.** Great works of literature may be inspirational. Or true stories of those who have overcome obstacles to be successful at doing something. Get your mind out of the newspaper and Yahoo.com and Facebook and instead fill it with something useful.

The point is this – there are a lot things you can do if you need inspiration. Any of these will conceivably help you become re-energized personally and that is going to help you be more vital to your firm. Better get to it now – time's wasting! ▀

MARK ZWEIG is Zweig Group's founder and CEO. Contact him at mzweig@zweiggroup.com.

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Insurance and risk in M&A transactions

The checklist is long, but with meticulous attention to detail, a firm can avoid unpleasant surprises after closing the deal.



Dan
Knise

GUEST
SPEAKER

Merger and acquisition activity among A/E firms continues to heat up. When planning to buy, sell, or merge with another firm, you need to understand and evaluate various risk and insurance issues that can affect the success or terms of the transaction.

Two of the most important steps are to:

- Start early and make sure that risk management and insurance issues are being addressed throughout the process
- Gather all the necessary information to allow a complete understanding of the issues and opportunities

With regard to gathering information, we usually suggest asking the entity being acquired to provide the following:

- Summary of insurance policies carried for each of the last three years (often called a schedule of insurance)
- Copies of all current insurance policies
- Insurer loss runs or claims history for at least the last three years
- Details of any open claims or circumstances that might give rise to a claim
- Summary of risk management policies and procedures

Be sure the information provided includes not only professional liability policies, but also all property/casualty and management liability insurance policies.

CLAIMS INFORMATION CAN PROVIDE VALUABLE CLUES. Claim information, in particular, can be a critical indica-

tor of future problems or management issues that you will want to factor into your acquisition terms and conditions. For larger firms, you'll want to go back further than three years and obtain loss runs for five or even 10 years. The focus should be on any open professional liability, general and auto liability, property and other claims. Review all large claims and flag any circumstances that could turn into claims.

“Start early and make sure that risk management and insurance issues are being addressed throughout the process.”

The claims-made nature of professional liability insurance policies heightens the need to understand any potential circumstances and the to-be-acquired firm's risk management practices. Under a claims-made insurance policy, even errors that occurred years ago are paid by the insurance policy in effect at the time the claim is filed. Making this even more of an issue is that unlike general liability policies, PLI policies have an overall aggregate limit, which includes all claims expenses (including defense costs).

See DAN KNISE, page 4



ON THE MOVE

ISG DES MOINES ADDS DESIGN PROFESSIONALS TO TEAM Since opening its doors in 2014, the ISG Des Moines office has rapidly expanded to accommodate growth and project additions in the metro market. ISG announced the recent hire of two design professionals: structural engineer **Brad Penar**, PE and architect **David Hofmann**. Penar joins the structural engineering group and Hofmann will lead ISG's healthcare market efforts within the architecture group.

Penar's experience encompasses a range of facilities including schools, parking structures,

manufacturing plants, pedestrian bridges, and more. With a passion for innovation, Penar looks for unique tools that can enhance client projects, utilizing 3-D scanning and outside-the-box approaches to find a truly unique solution.

Penar is a member of several professional organizations including the ASCE, SEI, SEAIA, AISC, and the ACI, as well as local volunteer organizations.

Hofmann has served as a project architect with more than 20 years of experience in all

phases of design from master planning and programming through construction documentation and administration. He has expertise in healthcare as well as commercial, retail, and institutional design. Hofmann is known for his work as a project architect overseeing all aspects of project development.

Hofmann is a member of the AIA and the NCARB. His community involvement includes serving as a past president of the Rotary Club of greater Des Moines and is presently a member of the Greater Des Moines Leadership Institute's Community Leadership Program.

DAN KNISE, from page 3

EXTENDED REPORTING PERIODS CAN ASSIST. One solution often utilized is for the selling firm to purchase an extended reporting period, or "tail" coverage, as an extension to its last claims-made policy. Most ERPs extend for one, two, or three years. While the insurance limit usually remains the same, it applies for the entire ERP period versus a single year when a PLI policy is typically renewed. This restricts the monies available to pay claims and could increase the risk of uncovered claims.

To help determine an appropriate duration for tail coverage, some firms check the statutes of limitation and statutes of repose in states where they have current or completed projects. Statutes of limitation define the maximum timeframe after an event or accident that legal proceedings may be initiated. They vary by jurisdiction and may, under certain circumstances, be extended.

Statutes of repose specify the maximum time after completing an act, such as completion of a construction project, that legal proceedings can be initiated. Some state statutes provide more than 10 years of liability.

"When planning to buy, sell, or merge with another firm, you need to understand and evaluate various risk and insurance issues that can affect the success or terms of the transaction."

Unfortunately, most ERPs will not extend for such longer periods and buyers and sellers will have to evaluate other options including whether or not the seller's liabilities can be rolled into the buyer's PLI policy.

OTHER CLAIMS-MADE POLICIES NEED ATTENTION TOO. Speaking of claims-made policies, it is important to keep in mind that there may be other claims-made policies beyond PLI that require tail coverage. These include directors and officers liability, employment practices liability, fiduciary liability, and employee benefits liability (under the commercial general liability policy).

During a merger or acquisition, EPLI coverage can be critical; eliminating staffing redundancies may require

terminating employees, which can lead to employment-related claims. Be sure to understand your policy's coverage, tail and claim reporting provisions and requirements.

CHECK WORKERS' COMPENSATION. Sellers with elevated accident or injury rates can have profoundly negative effects on an acquiring firm's business. Workers' compensation insurers use a rating system based on an employer's loss history to set that entity's insurance premiums.

Significantly, the rating, known as an experience modifier, is among criteria project owners and managers use to evaluate design and construction firms working or bidding on their projects. A poor rating can disqualify a firm from a bid or retaining a client. So, be sure to assess whether and how the seller's workers' compensation loss experience might affect your business.

KEY CONSIDERATIONS IN OTHER COVERAGES. With regard to commercial general liability and other related property/casualty insurance policies, it's common to add the acquired firm to the acquirer's CGL and other policies as an "additional named insured." In a merger, the combined entity should have both predecessor companies as named insureds in its CGL policy to address any current occurrences arising out of the combined operations.

For property and other insurance policies, be sure to have a process in place to identify coverages carried by each firm, ensure continuity of needed coverage, and cancel redundant policies.

INSURANCE AND PRICING. In pricing M&A transactions, many buyers employ a two-year earn-out or escrow fund to address contingencies arising post-closing. This fund should also contemplate insurance-related costs, such as those for audits related to workers' compensation, general liability, and automobile liability policies, as well as for deductibles and self-insured retentions, which can be \$25,000 to \$500,000 or more per claim under some policies.

Successful mergers and acquisitions require careful due diligence, which should include risk and insurance issues. Be sure to reach out to your insurance broker and tap their experience and expertise with merger-related insurance and risk management issues. ▀

DAN KNISE is president and CEO of Ames & Gough. Contact him at dknise@amesgough.com.

PROFILE



Innovation and collaboration share link

Breakthrough solutions to complex problems can be found through focused efforts, and looking outside the firm for ideas.

By LIISA ANDREASSEN
Correspondent



Langdon
Morris,
CEO,
Innovation
Labs LLC

In today's business environment, the link between innovation and collaboration is becoming more apparent, and for a healthy bottom line, more important. Perhaps no one understands this more than Langdon Morris, CEO of **Innovation Labs LLC** (Walnut Creek, CA), who spoke at last year's Hot Firm and A/E Industry Awards conference hosted by Zweig Group.

"Working together in carefully designed and managed workshops, people can solve complex problems and create breakthrough solutions in a fraction of the time."

Morris, an author and scholar whose client list includes NASA and the American Heart Association, is recognized as one of the world's leading thinkers and consultants on innovation. His groundbreaking work has been adopted by corporations and universities across the world as they seek to

improve their processes and the results they achieve. His recent publications, *Agile Innovation*, *The Innovation Master Plan*, and *Permanent Innovation*, are recognized as three of the leading innovation books issued in the last five years.

"Working together in carefully designed and managed workshops, people can solve complex problems and create breakthrough solutions in a fraction of the time," Morris says.

TIPS FOR INNOVATION IMPLEMENTATION. Here is a sampling of suggestions from Morris on how to help your organization plan creatively, productively, and how to make innovation a reality:

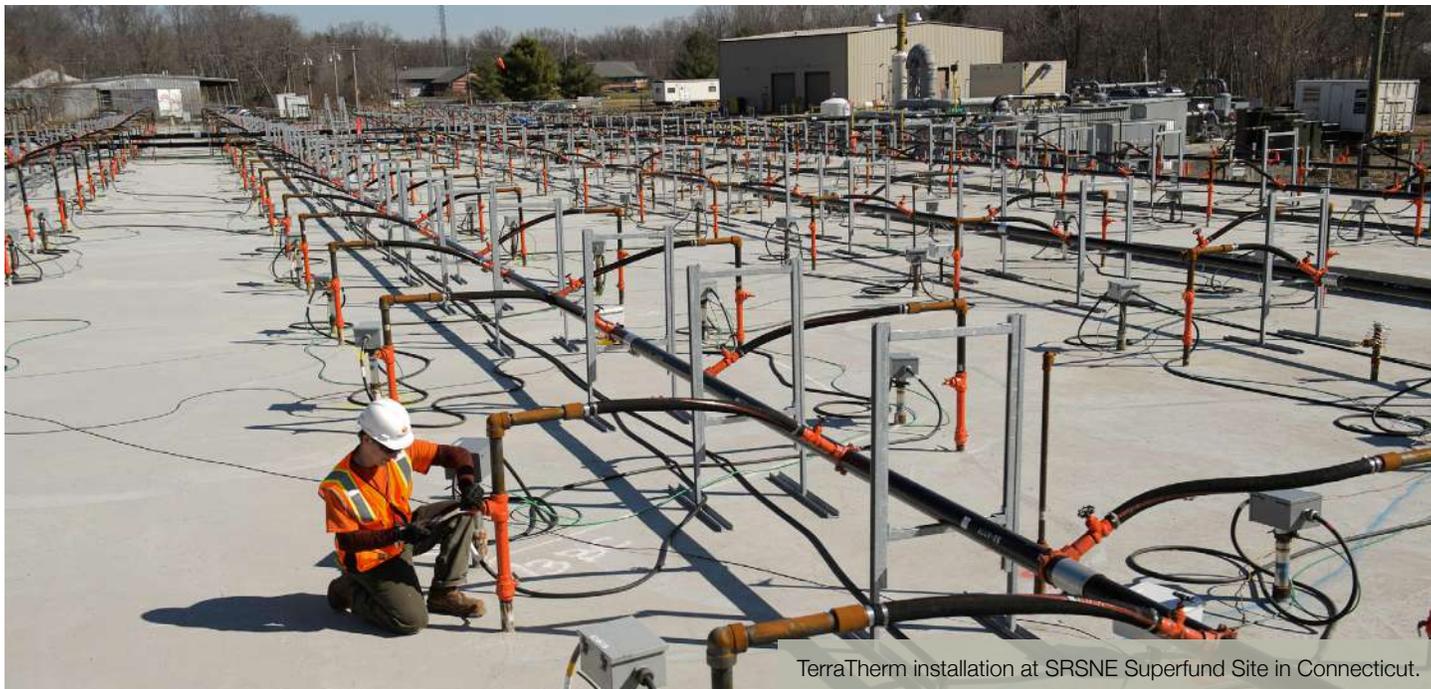
- **Study.** Innovation is a big topic. Read, re-read and then get inspired to make your own list of innovation initiatives. Start working on them.
- **Evaluate and compare.** What have your innovations looked like over the past five years? Detail them and then compare to your competitors. Where have they done better? Where have you done better?
- **Conduct a detailed audit of your own firm's innovation methodology.** Assemble a diverse team and conduct an audit as a workshop. Solicit ideas for

See INNOVATION, page 8



SP@TLIGHT ON: Res

PROFILE



TerraTherm installation at SRSNE Superfund Site in Connecticut.

Research and development

Soil remediation firm – founded on science, patents, and education – joins forces with a larger company in order to increase market share.

By RICHARD MASSEY
Managing Editor



John M.
Bierschen,
Co-founder
and President,
TerraTherm

Superfunds. Brownfields. Industrial waste from a bygone era. The ugly stuff that doesn't go away, like hydrocarbons, creosote, chlorinated solvents, and pesticides.

While hazardous contamination is the bane of governments, corporations, and individual landowners, not everyone is frightened by it. Indeed, for **TerraTherm** (Gardner, MA), No. 14 on Zweig Group's 2015 Hot Firm List, and a worldwide leader in thermal soil remediation, it's just the opposite. The nastier the better.

The engineering firm was recently acquired for an undisclosed amount by **Cascade Drilling, L.P.**, a subsidiary of Cascade Environmental Holdings, LLC. With the windfall secured, its original angel investors, MassVentures and Bison Capital, paid off, and with a new safety certification expected to improve its market share, TerraTherm is poised to clean up the world.

Business beckons in Australia, Brazil, and China, and here in the United States and across the Pacific in Vietnam, the firm is currently engaged in the Herculean cleanups of military spillage dating back to World War II, and, more recently, the Cold War.

"We carried on the tradition of authoring technical solutions to these problems in the ground. We were founded on an R&D mentality. We commercialized the inventions for Shell. Our company worked out all the bugs so that it could be mainstreamed."

While TerraTherm is considered an industry leader in soil remediation, Cascade has a considerable footprint in terms of marketing, sales, and sheer



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TerraTherm's Tier-One technology treating chlorinated solvents at a site in southern California.

workforce. That, says John M. Bierschenk, the firm's co-founder and president, should be a difference maker as TerraTherm competes for contracts cleaning up its share of the estimated 300,000 hazardous sites still remaining in the U.S. alone.

"It will generate more opportunities for our company that we didn't even know about," Bierschenk says. "Before Cascade, we had one sales person."

TerraTherm was founded in 2000 as a startup in need of cash, which came in the form of a \$2.2-million joint investment by MassVentures, a venture capital firm formed by the Commonwealth of Massachusetts, and Bison Capital, a mid-market venture firm. Meanwhile, petroleum giant Shell Oil Co., through a subsidiary, had developed a technology, known as in situ thermal desorption, back in the late 1980s and early 1990s to enhance oil recovery from otherwise depleted fields.

In 1999-2000, however, Shell exited the oil recovery industry and donated the technology to the University of Texas. From there, Bierschenk and his partner, Ralph Baker, obtained the exclusive license to commercialize the technology within the United States. Within two years of forming the company, they secured the license to commercialize the technology worldwide.

"That's how we got into the business," Bierschenk says.

In its simplest form, ISTD uses its patented electrical heater elements to heat the ground until the contaminants are

vaporized and are removed through vapor extraction wells. TerraTherm also utilizes steam enhanced extraction and electrical resistance heating at contaminated waste sites. TerraTherm is the only company of its kind that can advise, build and operate all three of the industry's most mainstream in situ thermal remediation technologies.

To date, TerraTherm has remediated 50 sites worldwide. Current work includes the removal of Agent Orange from 95,000 cubic yards at the airport in Danang, Vietnam.

While TerraTherm's method now represents the industry's gold standard, the original technology developed by Shell was far from perfect. Over the years, TerraTherm has tinkered with the approach, accruing an impressive list of additional patents in the process.

"We carried on the tradition of authoring technical solutions to these problems in the ground," Bierschenk says. "We were founded on an R&D mentality. We commercialized the inventions for Shell. Our company worked out all the bugs so that it could be mainstreamed."

To date, TerraTherm has remediated 50 sites worldwide.

See TERRATHERM, page 8

INNOVATION, from page 5

improvements, and have the team prepare three initiatives to address the most important shortcomings.

- **Start asking questions.** Talk to five front-line people each day who you wouldn't normally encounter, and from their point of view learn what's working, what's not working, and where your products or services are falling short.

“Talk to five front-line people each day who you wouldn't normally encounter, and from their point of view learn what's working, what's not working, and where your products or services are falling short.”

- **Develop your organization's idea vault.** Put it to use and invite users to make suggestions to improve the database and its interface so that it is optimally useful.
- **Create an innovation advisory board.** Invite five outsiders who know your industry to give you their candid feedback about your firm and its innovation initiatives.
- **Identify key themes.** What do you think is important to your relationships with your future customers? Engage in detailed dialogue to learn more about customer attitudes, values, beliefs, and motivations.
- **Buy some magazines.** Go to a magazine stand and buy five magazines that you've never looked at before and that are not specifically about your own field. See how many pieces of information you can find that are pertinent to your industry

TERRATHERM, from page 7

Current work includes the removal of Agent Orange from 95,000 cubic yards at the airport in Danang, Vietnam. The company is also removing jet fuel from 410,000 cubic yards at Williams Airforce Base in Mesa, Arizona – the largest remediation project in the world.

On the horizon for TerraTherm is a push into China and Brazil, which, based on GDP, are the second and seventh largest economies in the world, respectively, as ranked by the International Monetary Fund.

A big part of the company's business model is to be a leader in education. Academic journals, peer review, soil studies, an accounting of resources it took to complete a job – TerraTherm took the lead in telling the industry exactly what in situ thermal remediation is and what it does.

“We're educating the highly educated engineers and consultants,” Bierschenk says.

The tack apparently worked, because in 2014, the firm recorded \$32 million in revenue, and a similar figure was expected for 2015.

or your company.

- **Bone up on tech.** Study the 10 most important technological trends that will affect your industry over the next five years, and assess your firm's capability in each area. Prepare a plan to develop competence in any area in which you have shortcomings.
- **Identify weaknesses.** Do an assessment of top management's innovation leadership in your organization, and identify the top three weaknesses. Come up with a plan to overcome them, and implement it.
- **Analyze risk.** Study the risk profiles of the last 10 innovations your industry developed. Determine the degree of risk associated with each one to find out if you're taking too much innovation risk, or too little.
- **Look outside your industry.** Identify a company that you admire that's outside of your industry. Study that company in detail to learn why it's so good, and figure out how to emulate its strengths in your own organization. Have each member of your team look at a different company, and compare your findings.
- **Incorporate into strategy.** Focus your next strategy meeting on innovation, and ask each person attending to propose three new ideas that have never been discussed before in such meetings.
- **Review customer feedback.** Set up or improve your systems to gather customer feedback.
- **Create a space.** Set aside a space at the crossroads of your office as an idea room. Invite everyone to prepare and post ideas, and structure it so that others can give feedback on any idea they find interesting. ▀

The firm got off the ground years ago with an infusion of venture capital. That investment was used to leverage the firm into an award winning, 75-person outfit working with companies like **AECOM, Arcadis, DPRA, and CDM Smith**. But as the firm matured, and as it looked for new lines of business, it became evident the company would have to merge with a larger partner. Thus the deal with Cascade Drilling.

“We looked for it,” Bierschenk said of the acquisition. “We know the market is much bigger than what our model was. We expect to accelerate.”

Together, the two companies have about 850 people in 36 offices nationwide.

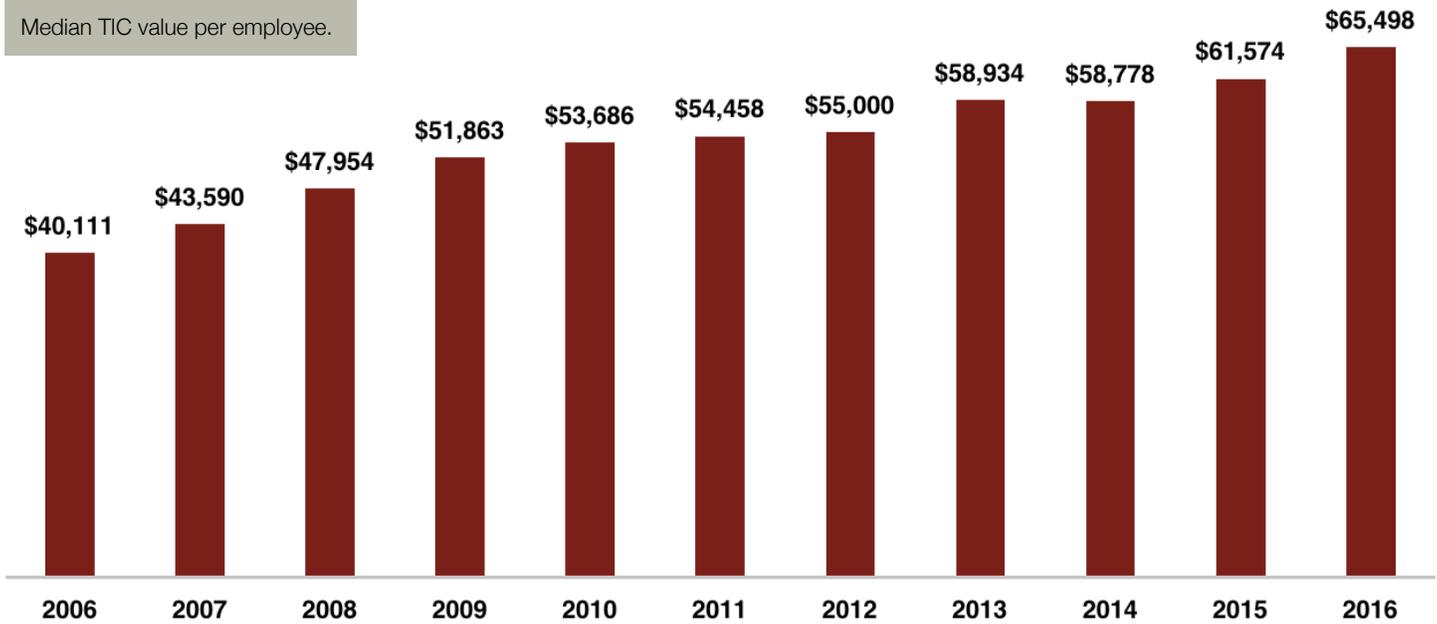
On the horizon for TerraTherm is a push into China and Brazil, which, based on GDP, are the second and seventh largest economies in the world, respectively, as ranked by the International Monetary Fund. China, meanwhile, is the world's largest polluter, and has major problems with soil and water contamination brought on by the country's rapid urbanization over the last 30 years.

In a 2015 interview with the *Environmental Business Journal*, Bierschenk said international work could generate up to \$76 million in revenue.

“I think countries are placing a higher priority on dealing with contaminated sites,” he told the *Journal*. ▀

OPINION

Median TIC value per employee.



What's your firm really worth?

Leaders in the A/E/P and environmental consulting industry need to know their firm's value.



**Andrea
Bennett**

DATA POINTS

Many architecture, engineering, planning, and environmental consulting firm leaders don't have a solid grasp on their firm's value. But, if you're a firm owner, you can't risk not knowing this information, because the firm's value factors into several situations, including:

- Establishing a price for transactions under shareholder or buy/sell agreements
- Establishing a price for a merger, acquisition, or sale
- Developing a plan for ownership transition and/or management buy-outs
- Establishing share prices for employee stock ownership plans
- Determining the fair-market value for gift and estate tax issues
- Preparing for an initial public offering
- Supporting litigation efforts, such as partnership dissolutions, disputes, and marital divorce
- Other corporate purposes, such as division spin-offs or divestitures

Enter Zweig Group's 2016 *Valuation Survey of A/E/P & Environmental Consulting Firms*. Though not a substitute for a formal valuation or a consultation with a business appraiser, the *Valuation Survey* is a must-have resource for any firm owner interested in determining the worth of his/her company.

"The median TIC value per employee for firms overall has steadily increased since 2006 to an all-time high of \$65,498 in 2016."

The *Valuation Survey* is broken down into three parts: Business Valuation Considerations, 2016 Survey Results, and Case Studies. That's right, in addition to presenting readers with the overall survey data – broken down by firm type, size, region, growth rate, and more – Zweig Group provides actual valuation information for each of the 141 firms (43 percent of which are multidiscipline engineering firms) that have participated in the survey since 2013. That's real-world information on real-world firms that you can't access anywhere else.

Zweig Group also provides the actual formulas that survey respondents' firms use – if they opt against employing an external appraiser – in

See ANDREA BENNETT, page 10



ON THE MOVE

WESTWOOD ANNOUNCES NEW SHAREHOLDERS

Westwood Professional Services Inc., an award-winning, multi-disciplined surveying and engineering firm providing services for national commercial and residential development, wind and solar energy, electric transmission, and oil and gas pipeline development is proud to announce the advancement of three associates to shareholding positions. Westwood's new shareholders include:

Richard Hovas, PE – Hovas is the residential market leader, a professional civil engineer, and senior project manager in Westwood's Dallas-Fort Worth office. Hovas was the president of Tipton Engineering before it was acquired by Westwood. His 35 years of professional engineering, project management, entrepreneurial and executive leadership experience has earned him great respect from his clients. Hovas contribution can be seen in his work on hundreds of complex residential projects and subdivisions throughout the Metroplex. Hovas has greatly contributed to the growth of Westwood's residential business throughout North Texas.

Kevin Larabee – Larabee is Westwood's vice president of human resources. He joined Westwood in 2012 and has helped to nearly double

the size of Westwood's business through effective recruiting, staffing, and employee development. Larabee supports Westwood's long-term vision and business objectives with a focus on identifying, nurturing, and retaining key talent. His strategic direction and positive employee engagement has helped the firm win multiple awards for top workplaces in 2015.

Mallory Lindgren – Lindgren has played a significant role in the growth of Westwood's wind and solar energy business. In her role as director of strategy for the markets, she is diligent in supporting industry organizations, conducting market analyses, and monitoring policies. Lindgren's focus on client satisfaction, combined with her expertise and knowledge of the business, has made her a leading project manager on Westwood's national power generation team.

T.Y. LIN INTERNATIONAL HIRES THOMAS R. PERRY, P.E., AS DIRECTOR OF BUSINESS DEVELOPMENT

T.Y. Lin International, a globally recognized full-service infrastructure consulting firm, announces that **Thomas R. Perry, P.E.**, has joined the firm as director of business development – Mid Atlantic. Based in the firm's Alexandria, Virginia office, Perry comes to TYLI with more than 20 years of experience in the

infrastructure industry in all phases of development, from planning to project delivery, client and pursuit management, structural and civil engineering, project management, and program management. His broad range of expertise includes work in the bridges, highways and streets, rail and transit, facilities, and telecommunications market sectors. In his new role, Perry reports to Robert Radley, P.E., TYLI senior vice president and East region director. "T.Y. Lin International has targeted the Mid Atlantic states for aggressive growth. The addition of Thomas is a key component of that growth plan," said Radley. "His skill sets and local relationships will be instrumental in diversifying our service offerings beyond the Surface Transportation projects upon which our firm has built its brand in the Mid Atlantic. Under Thomas' business development leadership, T.Y. Lin International will become a full-service firm in the Mid Atlantic, adding lines of business such as transit and rail, aviation, and facilities. Similar to surface transportation, we will offer design, program management, and CM/CI expertise in all of our expanded service areas."

ANDREA BENNETT, from page 9

addition to its own Z-values, which measure total invested capital and equity values.

Among the statistics that readers will find most interesting are comparisons of the TIC value per employee. Because A/E/P and environmental consulting firms sell staffers' time, it is generally accepted that people are firms' most valuable assets. Just as some firms generate more revenue per employee than others, some are more valuable than others in proportion to their staff sizes.

The median TIC value per employee for firms overall has steadily increased since 2006 to an all-time high of \$65,498 in 2016. But the *Valuation Survey* goes even farther, breaking this statistic – and all of the statistics it presents – out by firms' types; staff sizes; years founded; headquarters' region; growth rates; reasons for valuation; who conducted the valuation, when, and by what means; net service revenue, profit, EBITDA, and backlog projections; and minority versus controlling interests.

“Does your firm fit any – or all – of these categories? If so, chances are its total invested capital per employee is pretty high.”

For example, the 2016 *Valuation Survey* shows the highest average TIC values per employee for:

- Single-discipline engineering firms

- Firms with less than 25 employees
- Firms founded in the past 16 years
- Firms based in the South Central United States
- Firms with moderate growth rates
- Firms that performed the valuation for the purposes of a sale/merger
- Firms that employed a consultant or accountant to perform the valuation, which was conducted via an appraisal in 2014
- Firms that project flat net service revenues; profits; and expenses before interest, taxes, depreciation, and amortization for the next fiscal year
- Firms that project a growing backlog in the next fiscal year
- Firms with a controlling interest

Does your firm fit any – or all – of these categories? If so, chances are its total invested capital per employee is pretty high. But, you can't know for sure until you conduct a valuation, or at least apply the formulas in the *Valuation Survey* to your firm to obtain a general idea.

If you have any questions about the 2016 *Valuation Survey* or any of Zweig Group's research publications, visit zweiggroup.com/surveys.php or email me at abennett@zweiggroup.com. If you want to learn more about firm valuation, contact Tracey Eaves, Zweig Group's valuation consultant, at teaves@zweiggroup.com. ■

ANDREA BENNETT is Zweig Group's research and publications manager. Contact her at abennett@zweiggroup.com.

Determining the listing price

If you are thinking about selling your A/E/P or environmental consulting firm, a front-end valuation is essential before heading to market.



Jamie
Claire
Kiser

M&A INSIGHTS

When we begin working with an M&A client on the selling side, one of the very first questions we're asked is, "What are we worth?" I can answer the question. It might not be the answer that my new client likes, but I can answer it accurately every time. What are you worth? You're worth what the market will bear.

While the prospective sellers out there are rolling their eyes, hear me out. There are hundreds, if not thousands, of factors that determine what your firm is worth. It is not as simple as putting a "for sale" sign in the front of your office and starting a bidding war. In addition, it's not just determining what your firm is worth – it's also determining what the buyer is buying – something that we truly cannot know until we start reviewing offers.

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The firms that are fully prepared for an external ownership transition usually start the process a few years before they engage a consultant and are ready to be sold. These companies have often had a formal valuation done to establish a baseline, and they have spent a few years engaging in activities that were identified with a higher appraised value. They've spent time doing things that have driven the value of their firm upward. Once you have a rough idea of a value – determined by an expert business appraiser with experience in our industry – and you've worked to increase the value proactively, it's time to approach buyers that we think will have a strategic reason to be interested in your firm.

Strategic buyers are ones that believe that the products and services your firm offers can be synergistically integrated into their existing lines of business to create incremental long-term value to their own firm. Once we know who the strategic buyer is, and what lines of business they offer, we can make adjustments to the seller's financial statements to show "the future" and more accurately reflect the value of the acquisition to the buyer.

Knowing your own financial statements and understanding the drivers of value are two ways that someone considering an external ownership transition can help garner a higher purchase price. As an example, take a seller that is an architecture firm, and the prospective buyer is an A/E firm. The seller would have to sub out engineering work, and net service revenue is reduced for engineering fees billed on projects. The amount that will no longer have to be subcontracted out can be added back to the seller's net service revenue.

The same logic applies to many other aspects of the deal. The question of what is being acquired should not be overlooked. Understanding what happens to assets like cash, receivables, fixed assets, and prepaid expenses is important, as well as any liabilities outstanding – these things can add up to major adjustments in book value. Other common adjustments on the income statement side include changes in salaries going forward, changing overhead rates, discretionary expenses like charitable contributions or that big, lavish holiday party you've always thrown, and one-time costs that distort profit.

"What are you worth? You're worth what the market will bear."

Once we understand the value that the seller could add to the buyer – in terms of new clients, cost synergies, revenue streams, lines of business, leadership gaps, and more – we can start to talk numbers and begin to make adjustments. If you are considering selling your firm in the future, obtaining a formal valuation and identifying areas that can be improved internally to increase your value is a great starting point, especially if you have several years to address these issues and clean up your financial statements. I know it's hard to hear as a seller, but we really cannot know what your firm is worth until we start talking to buyers and hearing their vision of the future. ▀

JAMIE CLAIRE KISER is Zweig Group's director of M&A. Contact her at jkiser@zweiggroup.com.



CALENDAR: MARCH 2016

conference/seminar webinar award deadline

3.1-5 **PCI CONVENTION & NATIONAL BRIDGE CONFERENCE**

This conference is co-locating with The Precast Show, creating the largest tradeshow in North America dedicated to precast concrete. More than 35 education sessions focus on key areas such as technical, transportation, research, marketing, business, and productivity.

cost: Member, full conference: \$945; member, daily: \$450; non-member, full conference: \$1,145; non-member, daily: \$500

location: Gaylord Opryland and Resort and Convention Center, Nashville, TN

more info: pci.org/2016convention/

3.7-9 **PUBLIC-PRIVATE PARTNERSHIP CONFERENCE & EXPO**

P3C is one of the largest gatherings of development professionals in the country. With more than 1,000 participating attendees, P3C is the premier conference for collaboration between government officials and private industry considering, developing, and operating public-private partnerships. Influential decision-makers from around the world will gather for three days of in-depth learning, business development, and networking opportunities with a mix of owners and industry professionals across the country.

cost: Private sector: \$1,295; government, university, non-profit: \$595

location: Sheraton Hotel, Dallas

more info: thep3conference.com/



3.9-11 **97TH ANNUAL AGC CONVENTION**

As the premier construction convention each year, the AGC Convention and Technology & Construction Solutions Expo is the ideal opportunity to see everything AGC can do for you and your business. Join us for more than 15 education breakouts, terrific networking events and industry leading speakers, all in a perfect location for business, culture, family and fun ... San Antonio.

cost: \$950

location: Grand Hyatt, San Antonio

more info: meetings.agc.org/convention/

3.15 **BECOMING A BETTER PROJECT MANAGER**

This seminar will provide project managers with a fundamental understanding of the type of personality and characteristics successful project managers have that allow them to flourish in their role. Attendees will also have a better understanding of specific tools they can use to be more effective as project managers in architecture, engineering, planning and environmental consulting firms.

cost: First attendee: \$975; additional attendees: \$825

location: Fayetteville, AR

time: 7:30 a.m. - 4 p.m.

more info: zweiggroupp.com/seminars/better_pm/



3.7-10 **SUSTAINABLE WATER MANAGEMENT CONFERENCE**

Solutions for balancing the benefits of conservation with the costs; managing water resources, sustainable utilities, and infrastructure; urban planning and design; energy efficiency; water conservation; stormwater; and reuse.

cost: Members: \$595; non-members: \$775

location: The Providence Biltmore, Providence, RI

more info: awwa.org/conferences-education/conferences/sustainable-water-management.aspx

3.9-10 **BUILDING AN ENTREPRENEURIAL FIRM**

Taught by someone who is a real-life entrepreneur himself, Mark Zweig, founder of two Inc 500/5000 companies, this seminar is all about teaching firm owners and managers about what they need to do daily if they want to have an entrepreneurial firm. This seminar was specifically designed for the entrepreneurially minded leader in the architecture, engineering, planning, and environmental industries. It was designed to help your firm blow past static, incremental growth and become a benchmark in the industry.

cost: First attendee: \$1,075; additional attendees: \$950

location: Palm Beach, FL

more info: zweiggroupp.com/seminars/baef/

3.14-18 **ASCE WEEK**

ASCE's most popular seminars in one location:

- Increased savings of up to \$900 on two seminars, or up to \$350 on one seminar.
- Up to 36 PDHs in one week to meet your license renewal requirements.
- Great destinations - explore exciting destinations while earning your PDHs.

cost: One seminar, member: \$1,215; non-member: \$1,445; Two seminars, member: \$2,230; non-member: \$2,2690

location: The Wyndham, Lake Buena Vista, FL

more info: asce.org/event/2016/asce-week-10737418176/



3.16 **ADVANCED PROJECT MANAGEMENT**

This seminar that was specifically developed to help higher-level design and technical professionals in architecture, engineering, planning, and environmental firms develop the advanced leadership and management skills to better lead projects and clients. Many architects, engineers, planners, and environmental consultants get little or no training in project management and are drafted into PM roles totally unequipped.

cost: \$695

location: Fayetteville, AR

time: 8:30 a.m. - 4 p.m.

more info: zweiggroupp.com/seminars/advanced_pm/