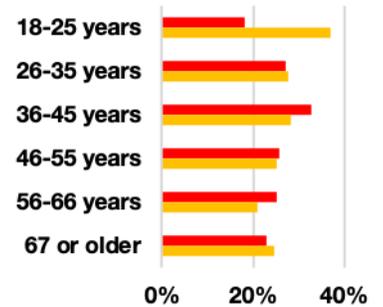


## TRENDLINES

### Challenges of working remotely



In Zweig Group’s Best Firms To Work For survey, thousands of workers in the AEC industry were asked about life working from home. In particular, they were asked what their biggest challenge was when working from home between five options. The top two challenges were **work/life balance** at 27 percent and **distractions** at 26 percent. When breaking it down by age, we see that the 36 to 45 year old age range had the largest issues with work/life balance while the youngest age range had the most issues with distractions.

[Participate in a survey and save 50 percent on the final or pre-publication price of any Zweig Group research publication.](#)

## FIRM INDEX

Garver .....	4
JQ Engineering .....	10
KPW Structural Engineers.....	4
Linbeck .....	12
Salas O'Brien .....	4
Skiles Group.....	12
Ulteig.....	6
Ware Malcomb .....	10

## MORE ARTICLES

- MARK ZWEIG: How you may be demotivating people Page 3
- Dependable: Doug Jaeger Page 6
- MITCHELL SHOPE: Unconscious bias Page 9
- KEYAN ZANDY & JOE DONARUMO: Why Lean? Page 11

## Hiring in 2020

In this year of upheaval and change, the most important component of any successful firm remains the same.



**Christina  
Zweig  
Niehues**

2020 has sure been a year of upheaval and change. Like much of the world, the AEC industry has been turned upside down with massive workplace changes, project cancellations, travel restrictions, and other new challenges presented by COVID-19. One thing hasn’t changed – the need for qualified people – the most important component of any successful firm. For the past few years, recruitment and retention has been the number one issue facing firm leaders in the AEC industry – today, it’s second only to concerns about the economy (*Zweig Group COVID-19 Survey*). At the start of 2020, median staff growth hit 3.6 percent, the highest rate in three years (*2020 Financial Performance Survey*).

From June 2019 to June 2020, Zweig Group surveyed 103 different firms on their policies, procedures, and benefits. We took this research and combined it with 110 unique organization responses to Zweig Group’s 2020 Best Firms To Work For Program, a process that includes assessment of both corporate policies and metrics as well as employee responses to a survey on experiences, to compile the *2020 Policies, Procedures & Benefits Report of AEC Firms*.

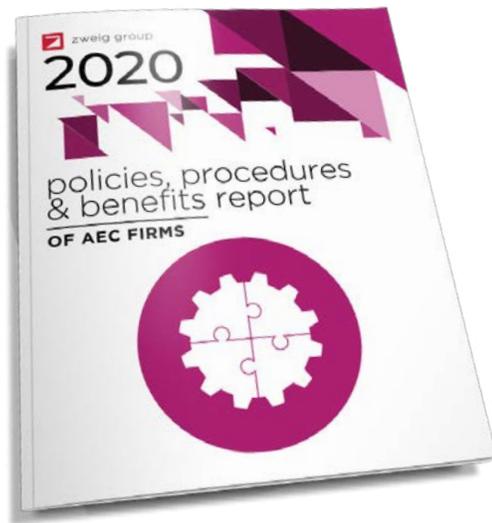
With workplace, hiring, and retention on the forefront, human resources expenses have climbed for AEC firms. This survey found total HR spending has climbed over the past 10 years, going from a median of 0.9 percent of NSR in 2010 to 1.7 percent this past year. The likelihood of a firm having at least one full-time person devoted to HR was commensurate with firm size, with 76 percent of firms surveyed reporting at least one full-time person dedicated to human resources. Less than 20 percent of firms with fewer than 25 employees, and just over half of firms with 25 to 49 employees, reported an HR department. For firms without HR departments, many firms rely on their president/CEO or head of finance/admin to handle HR type job duties. Hiring and recruitment often relies heavily on marketing departments.

Recruiting isn’t an easy or cheap task. Last year, firms spent an average of \$9,454 on each new hire, even for those who rely heavily on word of mouth (44 percent of respondents report this as their greatest source of new hires). The next most popular method to recruit was listed by only 15 percent of respondents – internet advertising, followed by college recruitment. While I don’t think word of mouth (or email/text/phone call) is going to lose its power anytime soon, I do think we’ll see internet advertising grow in importance very quickly this year.

When asked to rank what factors contribute most to being able to hire successfully, firms most heavily weighted a “good work

See CHRISTINA ZWEIG NIEHUES, page 2

## NEW FROM ZWEIG GROUP



**2020 POLICIES, PROCEDURES & BENEFITS SURVEY REPORT** Zweig Group surveyed AEC industry firms on their workplace policies, benefits, HR staff composition, HR operating expenses, and other important workplace issues and challenges. Data was collected from firms of every size, type, and region of the country.

The 2020 edition includes updated data on response to COVID-19 including project, projection, budget, and policy changes.

The results of this study will help you benchmark your AEC firm in all areas related to benefits and compensation. The *2020 Policies, Procedures & Benefits Survey Report of AEC Firms* provides you with industry statistics on policies and procedures, so you can support your policy decisions with hard data.

Use the *2020 Policies, Procedures & Benefits Survey Report* to:

- Ensure your firm's benefits and policies are competitive with industry norms, to help you recruit and retain employees
  - Identify HR operating expenses that you can — or can't — afford to cut
  - Benchmark your firm's medical, dental, and life insurance packages
  - Support your firm's paid-time-off and other policies with hard data on industry norms
- Find out if firms are projecting benefits increases and make sure your budget aligns with the industry
  - Get data on HR directors' typical backgrounds, education, roles, and compensation

The key to growing your firm and reaching your strategic goals often rests with the quality of your employees, and the quality of your firm's policies, procedures, and benefits is critical to hiring and retaining a top-notch workforce. The data presented in the *2020 Policies, Procedures & Benefits Survey Report* is broken down by firm type, size, region, and other important factors, so you can make accurate comparisons between your firm and others.

[Click here to learn more.](#)

CHRISTINA ZWEIG NIEHUES, from page 1

environment" (4.7/5) followed by interesting projects/unique work (4.2/5). Difficulties in the hiring process are most often due to external factors – firms still state a "lack of qualified candidates" as the top impediment to successful hiring. The hiring environment remains competitive, with firms giving an average of just eight days for a candidate to accept or reject an employment offer.

Even with COVID-19, perhaps even more so, there's still a talent shortage and a need to move quickly when engaging with a person in the hiring process. AEC firms that are recruiting successfully know it's necessary to put their best foot forward, because most people don't expect to negotiate much at this point. Along with the need to move quickly, there is also the need to streamline processes – do you really need two phone interviews, a Skype interview, and in-person panel interview before making a decision?

With more of the AEC industry workforce working from home, turnover rates are only expected to increase over the next year – for both positive and negative reasons. Communication breakdowns, increased stress and pressure, and less streamlined processes are adding to the frustrations of many people in the industry, while the ability to work from anywhere is opening up a new world of non-location specific job opportunities. As a firm owner or leader, it's very important to pay attention to both of these factors and ensure your workplace (virtual or not) is set up in a way to retain and value key employees. For those who are hiring, geography may be less important for certain job roles and nimble firms may be able to expand workplace flexibility in a way to attract new candidates.

For more information check out Zweig Group's [2020 Policies, Procedures & Benefits Report](#) and the new [Q3 update of Zweig Group's COVID-19 Survey](#). ▀

CHRISTINA ZWEIG NIEHUES is Zweig Group's director of research and e-commerce. She can be reached at [czweig@zweiggroup.com](mailto:czweig@zweiggroup.com).

### THE ZWEIG LETTER

1200 North College Ave.  
Fayetteville, AR 72703

Chad Clinehens | Publisher  
[cclinehens@zweiggroup.com](mailto:cclinehens@zweiggroup.com)

Sara Parkman | Senior Editor & Designer  
[sparkman@zweiggroup.com](mailto:sparkman@zweiggroup.com)

Christina Zweig | Contributing Editor  
[czweig@zweiggroup.com](mailto:czweig@zweiggroup.com)

Liisa Andreassen | Correspondent  
[landreassen@zweiggroup.com](mailto:landreassen@zweiggroup.com)

Tel: 800-466-6275

Fax: 800-842-1560

Email: [info@zweiggroup.com](mailto:info@zweiggroup.com)

Online: [thezweigletter.com](http://thezweigletter.com)

Twitter: [twitter.com/zweigletter](https://twitter.com/zweigletter)

Facebook: [facebook.com/thezweigletter](https://facebook.com/thezweigletter)

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

Issued weekly (48 issues/year) \$250 for one-year print subscription; free electronic subscription at [thezweigletter.com/subscribe](http://thezweigletter.com/subscribe)

© Copyright 2020, Zweig Group. All rights reserved.



## How you may be demotivating people

When people are demotivated they become negative and cynical, and can pollute the attitudes of their co-workers. And if they're really demotivated, they may quit.



Mark  
Zweig

**T**hese are difficult times we live in. It's especially challenging for those trying to run businesses where many – if not all of the employees – are working remotely.

When people don't see their manager very often, if at all, and the external environment is in turmoil in terms of the economic and political climate, it's easier than ever to inadvertently demotivate someone who works for you.

Adding to that is the fact that many people are basically insecure and have fragile egos, and you have a high probability of demotivating someone whom you don't want to demotivate.

You obviously want to avoid doing that. When people are demotivated they become negative and cynical, and can pollute the attitudes of their co-workers. They don't work as hard or care as much. And if they are really demotivated, they may quit.

Here are some common ways managers of A/E firms demoralize and demotivate their people:

1) **Setting up a phone call with a client to attempt to sell them some work without including the**

**person in the firm they first talked to or met with.** This happens frequently and it almost always upsets the person who made the introduction and confuses the client.

2) **Giving public credit to someone for bringing in a new client or selling a job, but forgetting to mention the person the relationship started with.** This is always upsetting, and understandably so – the double-edged sword of giving credit. Anyone left out could easily be demotivated.

3) **Giving public praise to someone for doing something that other people whom you aren't mentioning regularly do.** Again, this is the dark side of "providing praise publicly," something that is almost universally hailed as good management practice.

4) **Not including someone in a meeting that they think they should be at.** We often see this with

See MARK ZWEIG, page 4



## BUSINESS NEWS

**Laura Nick of Garver Named to the Arkansas Business 40 Under 40 List** Over much of the last decade, **Garver's** growth has been reflected in both size and programs devoted to evolving its growing list of employees and their impact on their communities. Central in that progress has been Corporate Communications Leader Laura Nick, who was recently named to the *Arkansas Business 40 Under 40* list.

Nick is joined on the magazine's 26th annual list by other business and community leaders representing a variety of industries.

"For more than a century, Garver has strived to provide exemplary service to our clients, and that wouldn't be possible without our strong internal teams," said Garver CEO Dan Williams. "Laura's efforts in building a talented team has helped advance Garver's position in a competitive industry, and we congratulate her on this well-deserved recognition."

Hired in 2011 as Garver's first corporate recruiter, Nick now leads Garver's in-house communications team tasked with spearheading all branding and internal communication efforts. She has also played a role in expanding and advancing Garver's internal initiatives, such as GarverGives, its employee-driving corporate-giving arm, and Garver Connect, an internal employee resource group created to recruit, retain, and develop Garver's women. Since 2015, GarverGives has supported 217 organizations, contributed more than \$450,000, and volunteered more than 1,200 hours. Garver has also appeared on Zweig Group's annual Best Firms To Work For list in each of the last five years.

This year, Nick has led Garver's centennial

celebration events at all 28 offices and the Garver Chain Reaction Challenge, which allowed Garver to promote STEM learning and encourage the next generation of engineers by donating STEM kits and funds to 100 schools across its footprint.

Founded in 1919, Garver is an employee-owned multi-disciplined engineering, planning, architectural, and environmental services firm with nearly 800 employees across the United States.

**KPW Structural Engineers Joins Salas O'Brien** Salas O'Brien announced that Oakland, California-based **KPW Structural Engineers** has joined the company, creating a combined firm of 35 offices with more than 850 team members, 200 registered professionals and clients including the most significant companies, institutions and government agencies in the United States.

KPW represents a significant expansion of Salas O'Brien's structural engineering services. The team's focus on markets including education, data centers, corporate, science and technology, and healthcare complements Salas O'Brien's similar markets and will enable the combined firm to offer even more coordinated services in-house to clients across the country.

As the next step in Salas O'Brien's "local everywhere, with national resources" growth strategy, KPW will continue to be managed by its current leaders and will adopt the Salas O'Brien name after a transition period. The transaction closed on June 30, 2020, and news of the merger was shared just after the close with the KPW and Salas O'Brien teams.

"This merger comes at an ideal moment for both KPW and Salas O'Brien," said Darin Anderson, Salas O'Brien chairman and CEO. "With our past experience working as project partners, we knew that our teams had the chemistry to make this a perfect match. We have also been looking for opportunities to expand our structural services, and I'm thrilled that we can now do that with the outstanding talent of the KPW team."

KPW joins Salas O'Brien as part of an ambitious plan to create the best engineering, facility planning, and commissioning firm in the world – known for the highest-quality work and an outstanding reputation with its clients and team members.

"Merging with Salas O'Brien is so clearly the right move for our team, our engineers, and clients," said John Westphal, co-founder and KPW principal.

Jim Passaglia added that "as we collaborate with Salas O'Brien's team across the country, our team will have unprecedented opportunity to grow and serve more clients than ever. Likewise, both our clients and Salas O'Brien's can now get even more services from a single, coordinated point of contact. We can't wait to see what the future holds."

Salas O'Brien is a facility planning, design, construction management, and commissioning firm with offices across the United States. Salas O'Brien uses its experience at the intersection of energy, infrastructure, and sustainability to help high-profile clients meet their critical needs.

MARK ZWEIG, from page 3

clients as they try to determine who should be at their strategic planning meetings. Cutting someone out of the meeting who has always been there or who has a lot to offer demotivates them.

- 5) **Not including someone on an email that they should be included on.** In some cases, this is accidental because email "groups" aren't updated. In other cases, it is deliberate and a real "gut punch" to those omitted.

"When people don't see their manager very often, if at all, and the external environment is in turmoil in terms of the economic and political climate, it's easier than ever to inadvertently demotivate someone who works for you."

- 6) **Asking someone for their input and then disregarding it.** This happens frequently with mentors and mentees, and it is very demotivational to the mentor. They wonder why they should even bother providing their advice or input.

- 7) **Chewing out someone publicly via email for a mistake they made or something they did wrong.** A huge no-no, and generally accepted as bad management practice. Yet some people have short fuses and no filter, and are prone to periodically doing this and demotivating their people.
- 8) **Telling the employees how much in total you gave out in bonuses, but excluding or shorting someone (in their view) on their bonus.** It's good to share your successes and point out your generosity but you'd have to be really naive if you think people don't do the math of figuring out how many people got something and what their pro-rata share "should" be (in their minds).
- 9) **Ignoring someone completely.** Situations like this are where I always say, "HR problems, if ignored long enough, will eventually go away." What I mean is the people you ignore will eventually quit.
- 10) **Showing blatant favoritism.** You can't play favorites – either for real or perceived. All managers have to be cognizant of how anyone they promote may cause resentment and demotivation in those not being promoted.

I could go on here but am out of time and space! ▀

MARK ZWEIG is Zweig Group's chairman and founder. Contact him at [mzweig@zweiggroup.com](mailto:mzweig@zweiggroup.com).



# Leadership is Everything

How to Successfully Lead Your Team and Firm Through Crisis and Change

## LEADERSHIP DEVELOPMENT PROGRAM

### A four-part Leadership Development Webinar and Discussion Series.

There are four key elements needed for success today: Projects, Profits, People, and Purpose. This program is designed to focus on a number of the most important “People” aspects that are increasingly critical to our success both individually and organizationally.

**Goal:** Especially during this time of significant crisis and great change, provide essential tools and insights to current and aspiring leaders and managers to improve our individual and collective success, growth, and resiliency.

**Format:** four-part live and online webinar and discussion series; each with a 60-minute presentation followed immediately by 30 to 60 minutes of group discussion and Q&A.

**Continuing Education:** This webinar series is worth 6 PDH/LU/CEU.

#### Taught By:



Peter C. Atherton  
ActionProve - President & Founder



Chad Clinehens  
Zweig Group - President & CEO

“ Yes, it exceed my expectations in that it had a greater focus on the role of people and emotional connections to our shared purpose and one another than simply on tactics.”

- PAST ATTENDEE

Price: ~~\$399~~ \$299



[LEARN MORE](#)

USE CODE **LEADERSHIP25** AT CHECKOUT

*Zweig Group is an approved provider by the AIA & SHRM*

## PROFILE



## Dependable: Doug Jaeger

President and CEO Ulteig (Fargo, ND), an employee-owned engineering consulting firm with locations in North Dakota, South Dakota, Minnesota, Colorado, Montana, and Iowa.

By LIISA ANDREASSEN  
Correspondent

**U**lteig, founded in 1944, delivers comprehensive engineering/design, program management, technical services and field services across the Lifeline Sectors® of power, renewables, transportation, and water. Ulteig leverages its expertise throughout the country with a wide range of public and private clients. Jaeger is responsible for driving a strategic vision forward and for promoting company growth.

“We are a 100 percent employee-owned company and that means that I, and the rest of Ulteig leadership, have a responsibility to be as transparent as possible about finances, strategies, and results,” Jaeger says. “We survey our workforce often, and I’m proud to say that our transparency always gets high marks.”

### A CONVERSATION WITH DOUG JAEGER.

**The Zweig Letter: I see that Ulteig recently acquired Pacific Power Engineers. Tell me a little about that. What was the impetus? How did the acquisition go?**

**Challenges? What were some of the most important criteria for acquisition? Culture? Services?**

**Doug Jaeger:** Our goal was to advance the steps of our accelerated growth plan; M&A was just one tool to leverage. Pacific Power Engineers is a well-established and renowned power systems engineering firm in Sacramento, California. With the acquisition of PPE, we addressed three of our key strategies in one place:

- 1) We added expertise in services we didn’t have.
- 2) We added capacity to our current service offerings, and
- 3) We expanded our geographic reach and service area.

A top priority was finding an organization with a strong cultural fit too. As we evaluated PPE, it became clear that our two companies’ core values and cultural beliefs were exceptionally compatible. The transition has gone smoothly, and I’m convinced it’s because of a well-executed integration plan and our shared commitment to client service and talented employees.

**TZL: How has COVID-19 impacted your firm's policy on telecommuting/working remotely?**

**DJ:** Fortunately, through investments in technology and an already-established flexible work environment, we seamlessly made the transition for the large majority of the company to work from home.

One of the specific steps we've taken to support employees is to provide a level of flexibility by establishing new time codes for when normal working hours may be affected by the coronavirus. For example, if employees need to take time to help their loved ones or care for children who are home from school, they can use the new codes on their timesheets instead of taking vacation hours.

**TZL: How much time do you spend working "in the business" rather than "on the business?"**

**DJ:** Prior to the COVID crisis, the lion's share of my focus had been on the business, to develop and implement our accelerated growth strategy and to engage in research and dialogue/knowledge gain around market dynamics and trends. That said, I also spent a significant amount of time working on leadership development and growth as well as client engagement.

The pandemic shifted some of my emphasis to working more in the business on crisis management and business continuity priorities. Fortunately, the organization is prepared to weather the storm from a position of strength, but it still means my focus must shift to ensure we are appropriately adapting to the new landscape.

**TZL: What role does your family play in your career? Are work and family separate, or is there overlap?**

**DJ:** On the whole, I'm a big believer in balancing work and life, and my family is a major contributor to that balance. My oldest son graduated from college with a degree in civil and environmental engineering and is now working in Los Angeles as a transportation planning engineer for major mass transit projects. I'd like to think my career had some positive influence on that.

**TZL: What type of leader do you consider yourself to be?**

**DJ:** I have described my leadership style as visionary, influencing, trusting, and outcome-based. I've been told by my team members that I am consistently a

transparent and dependable leader who can be counted on to tell it like it is (even if the feedback hurts) and to take the right road forward (even if it's the difficult one).

I'm a growth guy. I like to invest my time and energy in growing people and growing organizations. My proudest accomplishment as a leader at Ulteig has been to see the entire organization rise to a level of growth that was beyond expectations.

**TZL: What, if anything, are you doing to protect your firm from a potential economic slowdown in the future?**

**DJ:** Ulteig takes a very disciplined approach to creating and following our strategic plan. Having said that, we also do routine contingency planning, which of course these days has taken on more urgency. During the pandemic, we've taken a three-pronged focus:

- **Employees:** Because we made an investment several years ago in an IT architecture, the move to 100 percent at-home workforce went smoothly, and service to our clients has continued seamlessly.
- **Clients:** We have doubled-down on communication with our clients and leveraged technology in creative new ways to help respond to challenges they are facing.
- **Enterprise:** The leadership team is leveraging our contingency plans to navigate through the developing economic conditions and ensure business continuity.

"I've been told by my team members that I am consistently a transparent and dependable leader who can be counted on to tell it like it is (even if the feedback hurts) and to take the right road forward (even if it's the difficult one)."

**TZL: Ulteig is consistently the recipient of top workplace awards in the various locations where it operates – what are some of the factors that influence this recognition? What makes the culture at Ulteig so compelling?**

**DJ:** The fact that we've made our culture an important element of our operations is a big reason for Ulteig's outstanding retention rate, which was more than 90

See DEPENDABLE, page 8



**HEADQUARTERS:** Fargo, ND

**NUMBER OF EMPLOYEES:** 600+

**YEAR FOUNDED:** 1944

**NUMBER OF OFFICE LOCATIONS:**

12

**SERVICES:** 3D modeling,

advanced energy lab,

aviation planning and design,

civil site development,

construction management,

energy planning, electrical

studies, GIS, land surveying,

NERC compliance, project

management, solar,

system integration and

SCADA, transportation

planning and design, water

and wastewater, CAISO

services, collection systems,

distribution engineering and

design, energy storage,

environmental planning and

services, grid modernization,

municipal planning and

engineering, operations and

maintenance, right-of-way

acquisition, substation design,

transmission engineering and

design, water resources and

wind

DEPENDABLE, from page 7

percent in 2019. We are a 100 percent employee-owned (ESOP) company and that means that I, and the rest of Ulteig leadership, have a responsibility to be as transparent as possible about finances, strategies, and results. We survey our workforce often, and I'm proud to say that our transparency always gets high marks.

Flexibility has been identified by employees as one of the most valuable benefits of working at Ulteig. We encourage employees to work with their managers to create schedules that will meet the needs of our clients and each of our employees' unique circumstances.

We also have a highly active company-wide culture committee, staffed by volunteers from all our locations. They focus on building a positive work environment and employee engagement through fun internal activities and community involvement.

**TZL: It is often said that people leave managers, not companies. What are you doing to ensure that your line leadership are great people managers?**

**DJ:** Our managers care about their employees and invest in them. Leadership development is a vital component to our future success – we equip our managers with the tools they need to keep their teams engaged and productive. We are developing a customized Manager Development Program that will launch this year to ensure each manager has the training and opportunity to be a successful leader at Ulteig.

We are providing deeper employee engagement data and feedback to managers, to help them focus their efforts on the areas that will have the biggest impact. We're also strengthening employee development with a more comprehensive "roadmap" to ensure employees have the resources they need to grow within Ulteig. The roadmap includes promoting "career aspirations conversations" between employees and their managers to help them build more effective career development plans.

**TZL: What novel approaches are you bringing to recruitment, and how are your brand and differentiators performing in the talent wars?**

**DJ:** An important differentiator for us in the market is our strong internship program that allows aspiring engineers to do real project work, something not all companies provide. We also fund scholarships at several engineering schools. Many interns and scholarship recipients join Ulteig as employees after finishing school.

Thanks to Ulteig's strong culture and highly-engaged workforce, our employee-owners are enthusiastic advocates for our company. In 2019, almost 40 percent of our new hires were referred by current employees. The number of applicants for open positions keeps growing each year, as does the size of our workforce, which grew by 40 percent in 2019.

Ulteig's brand is synonymous with its Lifeline Sectors® of power, renewables, transportation, and water. Since we support these vital components of infrastructure, we've been classified as part of the essential critical



Ulteig volunteers at the Ronald McDonald House.

infrastructure workforce that Americans depend on during the pandemic response. This puts us in a unique position during this challenging time – we can offer meaningful, purposeful work, which can be particularly attractive to top talent in a difficult labor market.

**TZL: Diversity and inclusion are lacking. What steps are you taking to address the issue?**

**DJ:** We've partnered with diverse professional organizations and student groups for years, but we recognize that there's more to be done. Ulteig is strengthening its D&I strategy by diving deeper into understanding current barriers, setting and executing our D&I priorities, and engaging all employees and leaders in our efforts. In 2020, Ulteig is launching a new initiative called "cultural mindsets" to stimulate employee-driven solutions toward a more innovative, inclusive, and authentic culture.

**TZL: You've spent the last 25 years in leadership roles in and around the energy and technical service sectors. What are some of the most significant changes you've seen in these sectors?**

**DJ:** In the electric power sector, the movement toward zero-carbon and the significant engagement of renewable energy has been transformational. At the same time, in the broader technical service sectors (including transportation and water), we've seen major investments in automation and data management for system planning, operations, and design.

**TZL: A firm's longevity is valuable. What are you doing to encourage your staff to stick around?**

**DJ:** We're in the middle of a three-year strategic plan that maps out the specific steps we're taking to grow the business (paying particular attention to our current economic climate). 2019 was our 75th year of operation and it was our best year in terms of financial performance and growth. This is what employees want to see as they consider their long-term commitment to the organization. I'd like to think we've got some pretty compelling reasons for employees to stick around! ▀



## Unconscious bias

Educating yourself about these biases as well as potential strategies for mitigation can help you avoid prejudice in your decision-making.



**Mitchell Shope**

If there's one thing the AEC industry relies on consistently, it's the quintessential "gut feel." Whether in terms of building design, hiring, marketing, or risk management, many firms rely on what feels right and seems like the best course of action. If you are making decisions based on your gut feel, you're inviting unconscious bias to plague nearly every decision you make.

Bias is simply a prejudice or judgment made unfairly in favor of one path of thinking compared to another. Biases may be held by individuals, teams, or entire firms, and these biases typically fall into two categories, conscious (explicit) bias and unconscious (implicit) bias. While some of the most socially prevalent and emphasized biases regard ethnicity or race, biases can exist toward virtually any social characteristic including education level, age, weight, and many others.

While it is impossible to truly eliminate biases from your perspective as they are continually formed by your lifelong experiences, there are several strategies to mitigating their influence on your decision-making. Below are several of the most common biases prevalent in the AEC industry accompanied by strategies for mitigation.

■ **Confirmation bias.** The tendency for people to recall information that supports their own prior beliefs or thoughts on a subject.

Effects: While a great majority of AEC professionals are logic- and evidence-driven decision-makers, confirmation bias severely skews and distorts this idealistic methodology simply because one piece of unbiased evidence will be interpreted differently by two individuals with varying backgrounds. While you may think your opinions are rational and impartial, your experiences will undoubtedly steer you to interpret evidence to reaffirm your initial perspective.

Mitigation: The two main strategies for resisting confirmation bias are to avoid formulating

See MITCHELL SHOPE, page 10



## ON THE MOVE

### WARE MALCOMB ANNOUNCES PROMOTION OF ALICIA ZARO TO DIRECTOR IN LOS ANGELES OFFICE

Ware Malcomb, an award-winning international design firm, announced Alicia Zaro has been promoted to director, interior architecture and design in the firm's Los Angeles office. In this role, Zaro is responsible for the growth and management of the interior architecture and design studio and oversees all interiors projects for the Los Angeles office.

Zaro joined Ware Malcomb in 2014 and was promoted to studio manager in 2018. Zaro brings extensive interior architecture and design expertise to the Ware Malcomb team, contributing strong design influence, team leadership, and devotion to client services. Zaro has worked on a variety of interiors projects including creative office, renovation, education, retail, hospitality, public, financial

and entertainment. Over the last few years, her role has grown to include business development, managing the studio and project oversight.

"Alicia has built a great team and a large network of loyal clients and industry partners," said Radwan Madani, principal of Ware Malcomb's Los Angeles office. "Her excellent design talent, combined with her strong leadership abilities have been instrumental in expanding our Los Angeles interiors practice and delivering amazing designs for our clients, including many creative end-user spaces. We look forward to her continued success and leadership of our interior design practice in the Los Angeles market."

Zaro is a graduate of the highly selective NAIOF So Cal Young Professionals Group,

an industry-leading professional development and leadership program. A Certified Interior Designer, Zaro holds a bachelor's degree in interior architectural design from the University of California, Davis. She is also an active committee member for CoreNet Global, Southern California.

Established in 1972, Ware Malcomb is an international design firm providing planning, architecture, interior design, branding, civil engineering and building measurement services to commercial real estate and corporate clients. With office locations throughout the U.S., Canada, and Mexico, the firm specializes in the design of commercial office, corporate, industrial, science and technology, healthcare, retail, auto, public/ educational facilities and renovation projects.

MITCHELL SHOPE, from page 9

conclusions and to consistently attempt to prove yourself wrong. When gathering and assessing a data set or problem, seek out facts and underlying circumstances instead of trying to generate hypotheses from incomplete information. By pivoting your position and seeking data that proves your initial guess wrong, you can flip confirmation bias on itself and become more objective.

"Bias is simply a prejudice or judgment made unfairly in favor of one path of thinking compared to another. Biases may be held by individuals, teams, or entire firms, and these biases typically fall into two categories, conscious (explicit) bias and unconscious (implicit) bias."

■ **Affinity bias.** The inclination for people to connect more strongly with others who share similar backgrounds or experiences.

Effects: This bias manifests itself most frequently in the hiring process as individuals are much more likely to prefer candidates with whom they resonate, regardless of the candidate's unbiased merit. A recent study by Harvard Business School shows that minority job applicants that "whiten" their resume by deleting any references or allusions to their race have more than double the number of callbacks compared to the same "unwhitened" resumes. These results shed a disturbing light on our hiring practices throughout the United States: there is a strong and deep bias against minorities. It is up to each individual executive to course correct and identify this issue at its root – hiring.

Mitigation: Because affinity bias runs far beyond the hiring process and influences closely held emotions like trust, friendship, and vulnerability, it is one of the most difficult biases to alleviate. The first and easiest recommendation is to take the time to establish common ground. First impressions are made swiftly and brashly, so suppressing initial impressions and searching for commonalities reduces tension

and creates comfort. In the more specific sense of hiring, staffing a panel with a range of backgrounds to conduct interviews as well as being specific as to what characteristics constitute a "cultural fit" for your company help balance the effects of affinity bias.

■ **Attribution bias.** Attribution bias encompasses a wide array of misjudgments when people try to find reasons for their own or for others' actions or behaviors. Our thoughts or opinions about behavior are rarely unbiased and are not representative of reality.

Effects: One of the most common manifestations of attribution bias is called "Fundamental Attribution Error," which is the tendency for individuals to over-emphasize personality-based explanations for negative behaviors observed in others while simultaneously over-emphasizing these explanations for positive behavior in themselves. In other words, when we are successful, we perceive it as a result of our own intelligence or moral character, while when others are successful, we perceive it as a result of the circumstances surrounding them that put them in that position (and often our own contributions to these circumstances).

Mitigation: The best mitigation against FAE is simply to acknowledge that it exists and ask yourself if you may be falling prey to it. Raising your emotional intelligence will also greatly influence your ability to identify and combat FAE as well as any other cognitive biases. Particularly important elements of emotional intelligence are self-awareness, self-regulation, and empathy. Empathy breaks down the assumptions that accompany FAE and will allow you to see your coworkers and employees as complete individuals instead of a set of predisposed experiences.

Other common biases are the contrast effect, halo effect, and conformity bias. Each of these biases influence every thought and judgment that occur in our minds. Educating yourself about these biases as well as potential strategies for mitigation can help you avoid prejudice in your decision-making and better develop a truly rational, impartial, and unbiased perspective. ▀

MITCHELL SHOPE is a senior project engineer with JQ Engineering in Dallas, Texas. He holds a Master of Engineering degree from MIT in structural engineering and an MBA from the University of Texas. Contact him at [mshope@jqeng.com](mailto:mshope@jqeng.com).



## Why Lean?

Lean methodologies can truly move the needle in an industry beleaguered by workforce shortages and increasingly pressed for our most valuable commodity – time.



Keyan  
Zandy



Joe  
Donarumo

If the headline of this article sparks the thought, “Great, *another* article about ‘Lean,’” you may be wondering why you should keep reading. After all, if you’ve been working at your firm for years, have never missed a CO date on your projects, and have earned your firm a pot full of cash, you may not think that “going Lean” is relevant to you. But let me assure you, Lean methodologies are not just a sales and marketing buzzword, but can truly move the needle in an industry beleaguered by workforce shortages and increasingly pressed for our most valuable commodity – time.

Let’s start with a deep dive into the design community, and what our design teams are up against.

- **Intense pressure for more speed.** Design teams are expected to produce design and construction documents at an alarming pace. The speed to market that owners need does not give our design partners enough time to complete a well-validated set of documents.
- **Lack of talent.** We in the construction management business aren’t the only ones feeling the pains of a lack of quality folks. The design industry is facing a similar lack of qualified talent.

- **Commoditization.** Unfortunately, the procurement of construction management services isn’t the only deliverable that has been commoditized. Design firms are in the same boat, constantly designing against a work plan that doesn’t have enough resources to deliver the desired work product.
- **Technology limitations.** To bridge these gaps, we have become increasingly dependent on technology, resulting in a copy-paste culture that lacks the time, people, or money to produce a well-coordinated set of construction documents of the same caliber delivered 40 years ago.

See KEYAN ZANDY & JOE DONARUMO, page 12



KEYAN ZANDY & JOE DONARUMO, from page 11

**PEOPLE POWER.** Other challenges exist on the human side of construction. For example, when is the last time you saw a master mason, a true craftsman, on your jobsite? They are as scarce as unicorns today.

We've all heard about the lack of highly skilled labor, which has many root causes. One of the biggest has to do with our K-12 education system. I highly respect and appreciate educators' marvelous work in the molding and shaping of our country's next workforce and leaders. However, have we lost sight of the fact that college isn't for everyone?

For the past two and a half decades, the education system's mantra has been "no kid left behind." But, why haven't we shown more students that there are other opportunities to pursue meaningful careers? We need to teach kids that it's OK to work with your hands and get dirty, and it's OK to not have \$75,000 in student loans. Kids need to know that they can have a great quality of life and wear a blue collar proudly.

As for the subcontractor world, I encourage my millennial colleagues to find an older individual in their organization and ask them, "Did trade partners show up better prepared 35 years ago, or today?" I promise you will get chuckles.

In my experience, 75 percent of time that a trade partner shows up for the first time on one of my projects, they have never seen the documents nor put an ounce of forethought into how they are going to plan their work. And it's not their fault.

Our trade partners bear the brunt of the labor shortage epidemic and are constantly balancing how to load projects with workers and keep their companies on the up-and-up. There is no time between jobs to allow for plan review and proper work planning. Half the time, I'm printing out the construction documents for the trade partner because they left one job that morning and came straight to mine in the afternoon.

"Lean methodologies are not just a sales and marketing buzzword, but can truly move the needle in an industry beleaguered by workforce shortages and increasingly pressed for our most valuable commodity – time."

Digging a little deeper into the labor shortage, there's something else fighting against us. For the first time in history, we have five generations in the workforce.

In the 1970s and 1980s, there were formal, predictable hierarchies within most general contracting firms. Presidents or CEOs would be in their late 50s to 60s, executives in their early to late 50s, senior project managers and supers in their 40s and 50s, and project managers and supers in their 30s and 40s.

Now that we have industry gaps and generational workforces, it's not uncommon to have an executive in his

or her mid- to late-30s, with a senior project manager or super in their mid- to late-50s reporting to them. Their communication styles and techniques differ greatly, often resulting in misconception and frustration. And, the general contractor of the 1970s and 1980s didn't have to prioritize communication like we do today – it was probably No. 7 or 8 on their list of things to worry about. And why should they have had to? Their drawings were better, they had an abundance of skilled and general labor, and their trade partners showed up prepared and ready to execute the work plan.

"It's up to us to find a way to work within our current state and do more with less. We must remove the waste and inefficiency that holds us and our projects back. I'm here to tell you that Lean tools and methodologies, leveraged properly in the field, are the first step to take in the right direction."

Today, the battle is won in the communication from the job trailer to the man or woman who is working on the wall. The only true value-add role in the entire construction industry belongs to field craft workers, and whatever our roles may be, we should all support them in every action and decision we make.

**WHY LEAN?** Let's go back to where we started. You've been crushing it at your firm for several years, never missing a CO date, and making your firm a boatload of cash. Why should you care about Lean approaches?

Let me ask you this: When was the last time you worked 40 hours? Fifty hours? Sixty hours? Does it not seem harder and harder each year to push, pull, or drag our construction projects across the certificate of occupancy finish line? Can we at least agree that the current state of the industry described above is accurate, and possibly reflects your current day-to-day experience on the job?

Our industry is broken, folks. It's not getting better anytime soon. It's up to us to find a way to work within our current state and do more with less. We must remove the waste and inefficiency that holds us and our projects back. I'm here to tell you that Lean tools and methodologies, leveraged properly in the field, are the first step to take in the right direction. ▀

KEYAN ZANDY is chief operating officer for Skiles Group, a national general contracting and lean construction management firm.

JOE DONARUMO is senior superintendent for Linbeck, a national building construction firm.

Zandy and Donarumo are the authors of *The Lean Builder: A Builder's Guide to Applying Lean Tools in the Field*. *The Lean Builder* was recently honored with the Shingo Publication Award, which recognizes and promotes writing that has had a significant impact and advances the body of knowledge regarding operational excellence.