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FROM THE EDITOR | Kathy Wells

This month, we're focusing on the lifeblood of your operation: your people. Human resources is one area of business that can either compromise or propel your success. Opening this month's cover series on page 26, "Keeping HR Competitive" explores human resources (HR) and the finding the HR solution that works best for your business. Also featured on the cover, Bill Texeira, president of Texeira Contracting Inc., and Sue Texeira, office manager, offer a look at the route they took to overcome their company's HR challenges. Next, on page 28, "Your People Are the Secret to a Higher Profit Margin" discusses how to use burdened labor costing to improve workforce management. Our next article, on page 30, "Skilled Talent Reporting for Duty," explores veteran hiring programs and the expertise they can offer your business. Wrapping up our cover series on page 32, "3 Methods to Finding More Skilled Labor" offers advice for thinking big in a tight labor market. We hope the articles in this series provide solutions to your HR dilemmas and give your company a renewed focus on the importance of its people. Looking for more answers to your HR questions? Visit the "Online Exclusive" tab on constructionbusinessowner.com to find bonus content from even more of the expert contributors you have come to count on in our print edition.



CBO Editor Kathy Wells and Account Executive Van Imbragulio pose for a picture with the team from CMiC, providers of construction software solutions for project management, financials and collaboration. At CFMA's Annual Conference & Exhibition, CMiC raised $3,500 for Call of Duty Endowment, which helps veterans transition to civilian careers after their military service by supporting groups that prepare them for the job market.

Last month, the *CBO* team joined 1,356 financial management professionals in Phoenix, Arizona, at CFMA's Annual Conference & Exhibition. The conference provided attendees the opportunity to network with peers and discover new tools and innovative solutions. This year's conference included educational sessions following course tracks in accounting and finance, benefits and human resources heavy/highway, leadership and mangement, risk mangement and surety, sub-specialty and technology. To get more information about the conference, check out *CBO's* post-conference coverage on page 22.

As part of our ongoing, educational webinar series, *CBO* has partnered with Procore to present "The Future of Project Management," a free webinar that will take place August 10 at 1 p.m. EST. Presented by Ryan Igo, the webinar will share information about the next generation of construction software. Attendees will find out how to identify the needs of field teams and find a solution that meets those needs. Your team can work smarter with software that is built with them in mind, helping you get rid of frustrating processes and introduce your team to new levels of productivity. To learn more and register to attend, visit constructionbusinessowner.com/webinars.

Visit our website to get your hands on the industry's latest news, articles and exclusive content only available on constructionbusinessowner.com. As always, keep up with the *CBO* team by following us on Twitter @CBOMagazine, @KathyWellsCBO and @EManningCBO.

Take good care,

Kathy Wells

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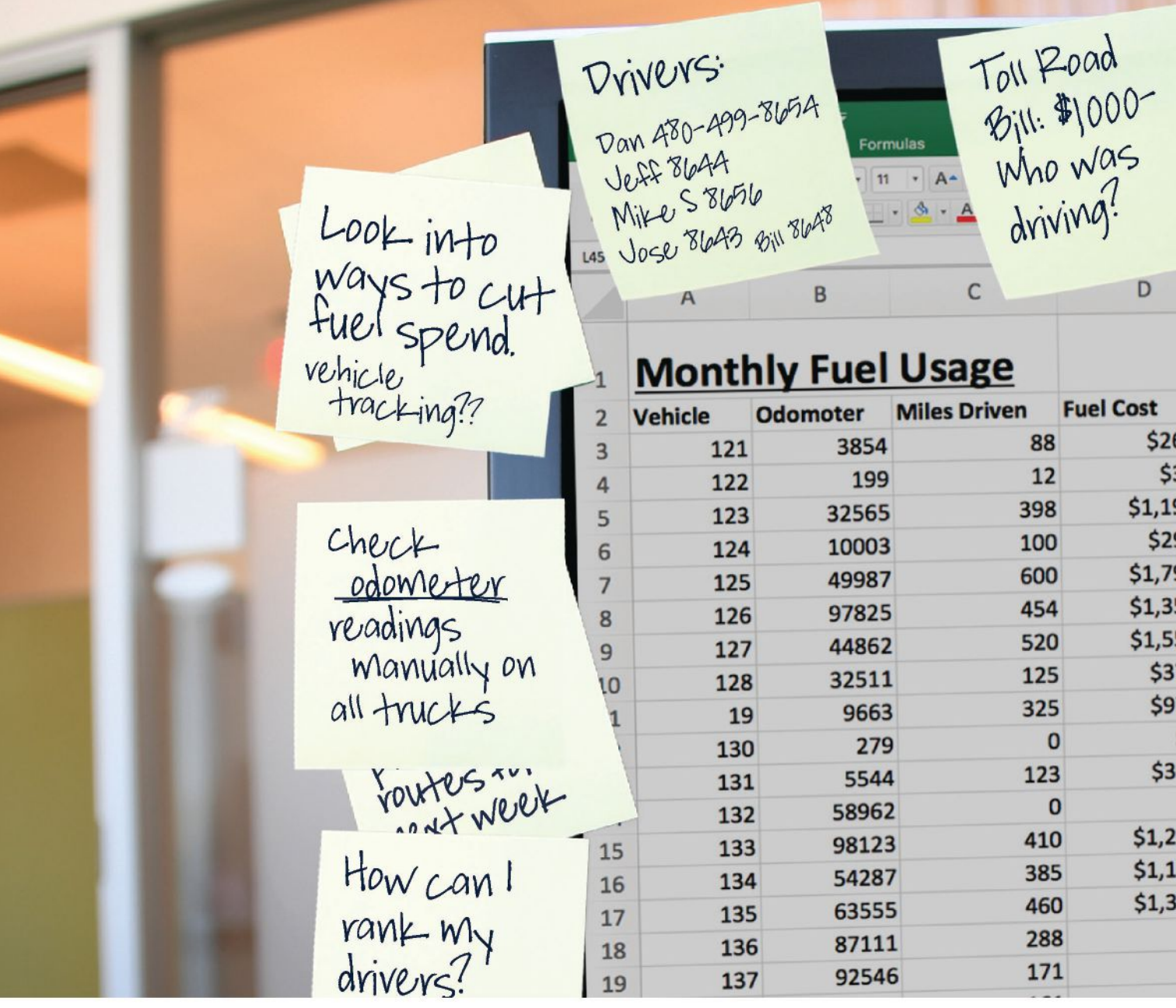
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COVER SERIES

HR & COMPLIANCE

26 Keeping HR Competitive
How Texeira Contracting Inc. overcomes staffing challenges

28 Your People Are the Secret to a Higher Profit Margin
Using burdened labor costing to improve workforce management

30 Skilled Talent Reporting for Duty
Exploring veteran hiring programs & the expertise they can offer your business

32 3 Methods to Finding More Skilled Labor
Discover how your company can think big in a tight labor market



Bill and Sue Texeira, Texeira Contracting Inc.

IN EVERY ISSUE

2 From the Editor

6 Online Exclusive

8 Industry Insight

9 Ask the Experts

44 Product Focus

48 Industry Stats

DEPARTMENTS

In the Office

10 Biz Builder
By George Hedley
5 ways to evaluate your day-to-day responsibilities & improve your company

12 Project Playbook
By Gregg M. Schoppman
How to develop a practical, lessons-learned library

14 Training & Education
Credentials your employees need

16 Business Strategy
10 professionals every CEO should enlist

20 Software Solutions
Why selecting the right tools can increase your company's success rates

22 Post-Conference Coverage
CFMA Annual Conference & Exhibition

24 SPECIAL SECTION
American Construction
Projects that are changing the perception of the American construction industry

In the Field

34 Equipment Matters
6 tips to create a jobsite that can handle any safety issue thrown its way

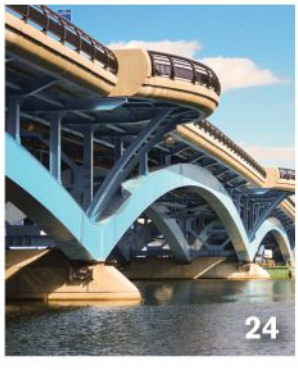
36 Power & Sustainability
5 considerations for purchasing concrete cutting machines

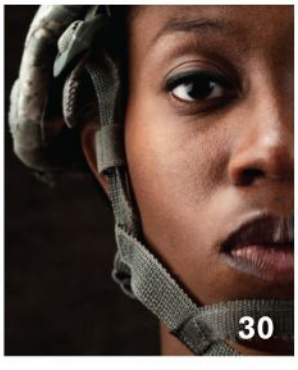
38 Fleet Management
A primer on fuel & service trailers

40 Tech Support
Why technical support solutions play an important part in your company's success

42 Spotlight: Cybersecurity
Why 61 percent of businesses were hit by ransomware in 2016









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Key Trends to Watch in 2017

Insight into Trump, tech & M&A this year

Learning the Business

How one supply industry leader characterizes the importance of safety, education & humility



Why Projects Fail & How to Reverse Course

Part 1 of 2 in a series on common reasons for your projects' failure

Before starting government work, establish mentor relationships with other contractors who have experience with prevailing wage jobs & connect with other construction professionals who can provide insight & guidance.

FRED ODE CEO/CHAIRMAN, FOUNDATION SOFTWARE

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DID YOU KNOW?

The current iteration of President Trump's infrastructure plan pledges to spend $200 billion over the next 10 years, through tax breaks that incentivize private business, on United States infrastructure improvements.

NPR, June 2017

The Future of Project Management

August 10, 2017 | 1 p.m. EST

CONSTRUCTION BUSINESS OWNER WEBINAR

It can be frustrating

to work with an antiquated management system that doesn't understand your specific workflows and needs. But many companies employ software programs that are so engrained into its processes that managers may not realize it's hurting productivity, efficiency and, ultimately, profits. So, how do you know if it's time to say goodbye to your old solution?

Join our free webinar, "*The Future of Project Management*," to learn about the next generation of construction software. Find out how to identify the needs of your field team and find a solution that meets those needs. Your team can work smarter with software that's built with them in mind, helping you say goodbye to frustrating processes and hello to productivity.



RYAN IGO
Construction Technology Manager
CF Evans Construction

Ryan Igo is the construction technology manager at CF Evans Construction, where he has been responsible for the implementation, training and management of all construction-related technology. Igo is a graduate of Clemson University's construction science and management program and has held roles as assistant superintendent and assistant project manager prior to his transition to construction technology.

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IEDA Names New President

The Independent Equipment Dealers Association (IEDA) announced its incoming president Kevin Fox, with Dewitt Equipment Co, in Barrie, Ontario, and new board members Luke Brenner, with Heavy Equipment Co. in Austin, Texas; Kenneth Tysinger, with May Heavy Equipment in Lexington, North Carolina; and Chris Lohman, with South Mountain Tractor in Tempe, Arizona; as well as Treasurer Kristin Waldie, BBA with CapStone Accounting in Minesing, Ontario. IEDA's new president and board members were announced during the association's annual meeting and vendor expo in Orlando, Florida. Visit iedagroup.com.

Orion Group Holdings Inc. Acquires Tony Bagliore Concrete Inc.

Orion Group Holdings Inc. announced the acquisition of Tony Bagliore Concrete Inc. (TBC) for $6 million in cash. Founded in 2010, TBC is a full-service concrete contractor that provides turnkey services covering all phases of commercial concrete construction in Central Texas. In addition to the upfront purchase price, the sellers have an opportunity to earn an additional $2 million over a 3-year period based on achievement of certain financial targets. TBC currently operates in the Austin, Texas, metropolitan area with a 2016 revenue of approximately $32 million and full year 2016 EBITDA of approximately $2.5 million. Visit oriongroupholdingsinc.com.

Brokerslink Expands Global Construction Practice

Brokerslink announced the launch of its expanded global construction practice with the appointments of Brian Schofield and Edouard Marron as practice co-leaders. They take up these roles with immediate effect. The new global construction practice will provide risk management, technical, construction industry knowledge and marketing resources to all Brokerslink firms. This will further develop the offering to clients around the world and will create increased synergy between Brokerslink's construction insurance and reinsurance sectors. Together Schofield and Marron bring over 65 years of experience in construction insurance broking. Visit brokerslink.com.

Barr Roofing President Elected Chairman of the Board of the NRCA

Jim Barr, president of Barr Roofing Co., located in Abilene, Texas, has been elected the next chairman of the board of the National Roofing Contractors Association (NRCA). Barr will serve for the 2017-2018 fiscal year. He was elected during NRCA's 130th Annual Convention. Barr previously served as NRCA's chairman of the board-elect from 2016-2017 and NRCA vice chairman from 2012-2014 and 2015-2016. He also was a member of NRCA's board of directors from 2009-2012 and 2014-2015. Barr previously served as a vice chairman liaison to the Alliance Board of Trustees and the Affiliate Relations, Community Relations and Disaster Relief, Contractor Management, Membership Marketing, Roof Integrated Solar Energy, Young Contractors and NRCA Retirement Program committees. Visit ncra.net.

AEM Elects New Director

The Association of Equipment Manufacturers (AEM) has elected Brad Boehler, president of Skyjack Inc., to the AEM CE Sector Board to fill an unexpired term. AEM officers and directors work on behalf of all member companies, giving their time and talent to provide strategic direction and guidance for association action in areas including public policy, market data and exhibitions, as well as technical, safety and regulatory issues and education/training. Boehler joined Skyjack in 2003 and has progressively held strategic positions, including the previous titles of vice president of engineering and vice president of sales and marketing. Visit aem.org.

Takeuchi Hires Regional Parts Coordinators

Takeuchi-US has hired one and promoted two team members to the position of regional parts coordinators. Mario Reese and Mary Towsey were both promoted, while Dustin Reed is a new hire. After working in the Takeuchi warehouse, Reese was promoted to northwest regional parts coordinator. He has several years of warehouse experience and inventory management skills that fit the requirements needed to support the dealers. With over 15 years of customer service experience, Towsey was promoted to the position of southeast regional parts coordinator. She has worked in the Takeuchi parts department for nearly a year. Reed comes to Takeuchi after working for an equipment dealer over the past 2 years. In his previous position as parts and sales representative/warehouse manager, he oversaw equipment inventory and parts. Visit takeuchi-us.com.

NUCA Announces Chairwoman for 2017-2018

Kara Habrock, vice president and general manager of L.G. Roloff Construction, a utility construction company based in Omaha, Nebraska, was recently installed as the National Utility Contractors Association's (NUCA) 2017-18 chairwoman. She was first elected to the NUCA Board and served as chair of NUCA's Government Affairs Committee for 5 years prior to becoming NUCA's newest chairwoman. She has been equally active at the state level. Habrock was a founding member of NUCA of Nebraska, established in 2009, served as the chapter's first president and remains an active member today. Visit nuca.com.

PlanGrid Announces 3 New Hires

PlanGrid announced three executive appointments to support significant growth across all parts of the business and expand the company's international footprint. David Cain joins as chief marketing officer (CMO), Patrick Copeland joins as vice president of research and development and Viral Kadakia joins as vice president of product. As CMO, Cain oversees the global marketing organization and is responsible for driving market leadership, global awareness, product marketing, demand generation and field marketing. He most recently served as Marketo's group vice president of global marketing and operations. Copeland leads PlanGrid's engineering, product and design efforts. Kadakia will own, iterate and execute the company's product strategy and roadmap. Visit plangrid.com.

Minnich Manufacturing Hires Western Region Sales Manager

Minnich Manufacturing is pleased to announce the hire of Mike Rabideau as Western region sales manager. Rabideau joins Minnich after 16 years at Wyco, where he most recently served as Western region sales manager. At Minnich, he will be responsible for sales and service across 12 states. After starting his career as an assembler of vibration products in 2001, Rabideau transitioned into service technician roles before becoming a product specialist. Visit minnich-mfg.com.

NEED MORE NEWS?
constructionbusinessowner.com/news

To submit a question, email Managing Editor Elizabeth Manning at emanning@cahabamedia.com.

The Future of Public Sector Work

How have President Trump's policy changes to date affected United States infrastructure?



DIANA S. PARKS
Partner
Doresy & Whitney LLP



BOB MURRAY
Chief Economist
Dodge Data & Analytics

"President Trump has recently honed in on the insurmountable issue with federal participation in U.S. P3 projects. For many years, the administrations of this country have acknowledged that we need a more efficient system for the environmental process in order to bring our country's infrastructure back to order, but, to date, the measures put in place (under prior administrations) have not made an impact, due largely to the typically narrow focus of such initiatives to a select number of projects. President Trump has committed to rehabilitate the federal environmental process for all projects and sectors. The bench of experienced staff President Trump selected to lead our nation's infrastructure policy and economic initiatives is a resounding signal that we are going to see improvements in the near future. I'm optimistic about the coming year for our industry.

"As shown by the construction start statistics compiled by Dodge Data & Analytics, the volume of public works construction starts has essentially plateaued from 2014 through the present year, holding at a level of about $125 billion per year. In 2016, highway and bridge construction starts retreated 11 percent, following a 13-percent jump in 2015 that reflected the start of such projects as the $2.3 billion Interstate 4 upgrade in the Orlando, Florida, area. Environmental public works, also settled back last year with a 5-percent decline. One recent bright spot has been miscellaneous public works. The pattern that emerged in 2016 has held up so far during the initial months of 2017. Highway and bridge construction starts have slipped further, although passage of fiscal 2017 federal appropriations in early May could help raise activity, since it brings federal funding up to levels called for by the FAST Act. Environmental public works have also receded so far this year. The growth in early 2017 has been shown by pipeline work, including the start of such projects as the $4.2 billion Rover natural gas pipeline and the $2.5 billion Mariner East 2 Pipeline that will transport propane and other natural gas liquids. Another pipeline project that may start soon is the upper Midwest portion of the Keystone XL Pipeline. In January, President Trump signed an executive memo that makes it easier for TransCanada to construct the Keystone XL pipeline. He also signed an executive order to speed up environmental reviews for "high priority infrastructure projects," which may prove to be a plus for infrastructure projects in 2017. Still to come are the specifics for the $1 trillion infrastructure program. The 2018 budget proposal calls for $200 million in federal money over 10 years to spur additional funding from nonfederal sources, with $5 billion in funding designated for 2018. In May, the Trump administration released a document citing several main principles for the program, including to encourage more funding from states and localities, and to draw increasingly on private sources.

Put Your Personal Priority Plan into Action

5 ways to evaluate your day-to-day responsibilities & improve your company



George Hedley, CSP, CPBC, is a professional construction BIZCOACH and industry speaker. He helps contractors grow and profit, build management teams and get their businesses to work for them. He is the best-selling author of "Get Your Construction Business To Always Make A Profit!," available on amazon.com. Email gh@hardhatpresentations.com to sign up for his free e-newsletter, start a BIZCOACH program, attend a 2-day BIZ-BUILDER Boot Camp or get a discount at hardhatbizschool.com online university for contractors. Visit hardhatpresentations.com for more information.

ASK GEORGE

To submit a question for George Hedley, email Managing Editor Elizabeth Manning at emanning@cahabamedia.com.

As construction companies grow from $5 million to $10 million or more in annual sales, the owner's role grows along with the increasing number of employees, projects, bids, contracts, customers and problems to solve. As a business coach, company owners typically call on me to help when they have grown past their ability to effectively manage the challenges alone.

The overloaded owner is often at a point where he/she has too many responsibilities, tasks and roles to keep the company working like a well-oiled machine. In fact, business owners often get out of control by trying to do too much themselves. To make matters worse, most employees think the owner is their boss. Additionally, most customers, subcontractors and suppliers want to have direct access to the owner to discuss important matters, contracts, pricing or other issues.

The owner is still pricing most of the estimates, scheduling crews and making sure jobs stay on budget. Often, I see a company that has grown by 50 percent, and the overhead, management team and number of field supervisors has remained the same. This causes even more stress to be placed on the owner because everything cannot be completed as it should.

When companies grow faster than their staff, structure, systems and ability, the next common result can be finances spiraling out of control. The owner is not aware of job costs and doesn't know whether the company is making any money. He/she runs in circles and works twice as hard for less money. The challenges of business ownership continue to mount.

There is so much to handle when you are a growing contractor. The more you do, the further behind you can be. You probably feel as though you only have enough time to fix field problems and put out the fires that constantly flare up. You end up making all the decisions for everyone and trying to complete all the important tasks yourself. And you still won't delegate important responsibilities to your team.

When your company was smaller, it was easy to act as the ring leader, schedule crews, supervise workers, order materials, meet with inspectors and work with customers. Unfortunately, that is no longer the case. Customers demand more meetings, more services, more paperwork and more of your time. What should you do to take charge of you company and get it to become efficient, effective and profitable as it grows?

1. GET OUT OF YOUR COMFORT ZONE

People know what they should do to achieve the results they want, but tend to do what they like to do instead. The profits your business achieves are the No. 1 indicator of your effectiveness and how you spend your time and your ability to



build a profitable company. Your priorities determine the importance you are giving to schedules, safety, quality workmanship, finances, operational systems, motivating employees, sales and your leadership.

2. DECIDE WHAT YOU SHOULD DO

- What job description or role will bring the highest return?
- What are you best at or want to do going forward?
- What do you want to stop doing or no longer enjoy?
- What roles, accountabilities, responsibilities and tasks should you focus on as your priority?

3. KNOW WHEN YOU ARE THE BEST PERSON FOR THE JOB

- Manage company leadership and executive team to ensure they are accountable for meeting company and project goals.
- Meet with customers. Convince them to hire your company.
- Be accountable for business development, customer relationships, marketing and sales.
- Based on the company size, you can also manage the "price work" role by supervising the estimator and reviewing cost estimates, but not being the estimator.
- Provide overall financial leadership and oversee the accounting manager and finance department.
- Provide leadership, motivation, vision, wisdom, coaching and troubleshooting.
- Make managers more accountable and responsible to achieve results.
- Be involved with the hiring and retention process.

> Most companies stop growing when the business owner reaches the maximum level of what he/she can handle.

4. KNOW WHEN YOU ARE NOT THE BEST PERSON FOR THE JOB

- Don't manage or run construction operations from start to finish.
- Don't try to manage all aspects of the project, including scheduling, ordering, coordinating, negotiating subcontracts, invoicing, dealing with project issues, handling customer or getting involved with subcontractors or supplier.
- Don't supervise the field and crews at all times, including scheduling, ordering materials, managing equipment, logistics, reviewing, firing, pay raises or dealing with personnel issues.

5. MAKE A DECISION

After exploring the factors outlined above, remember that bottom-line results are the No. 1 indicator of your abilities as the leader of your company. That includes your ability to delegate and let go.

As your company grows, you will reach your personal limits and realize you can't handle much more work than you already have underway.

Your calendar is full, your days are packed and you are working 12 or more hours a day, 7 days a week. You are unable to keep up with all the tasks, orders, contracts, inspections, meetings, demands, employee questions and paperwork. You have reached the maximum level of what you can control.

Most companies stop growing when the business owner reaches his/her maximum level of what he/she can handle. Obviously, you can't do more work yourself. Free yourself from the day-to-day supervisory activities that bog you down and hold your company back.

Now is the time to make some decisions to solve your personal priority problem. Decide what roles and responsibilities you should focus on exclusively. Decide what activities and assignments you need to stop doing.

Decide what new positions you need to create to allow your company to grow, profit and reach your goals. And, most of all, decide what people you can hire or promote now to move your company to the next level. **CBO**

The History Lesson

How to develop a practical, lessons-learned library



Gregg M. Schoppman is a consultant with FMI, management consultants and investment bankers for the construction industry. Schoppman specializes in the areas of productivity and project management. He also leads FMI's project management consulting practice. Prior to joining FMI, Schoppman served as a senior project manager for a general contracting firm in central Florida. He has completed complex construction projects in the medical, pharmaceutical, office, heavy civil, industrial, manufacturing and multi-family markets. He holds a bachelor's degree and master's degree in civil engineering, as well as a master's of business administration. Schoppman has expertise in numerous contract delivery methods, as well as knowledge of many geographical markets. For more information, visit fminet.com, or contact Schoppman by email at gschoppman@fminet.com.

Perhaps history doesn't have to have such a melancholy twist. What if a firm repeated a behavior over and over, and made its replication a best practice? More often than not, firms complete a project, collect the final payment and archive the results for the obligatory 7 years in some musty banker's box, never to be opened again. Memories of that project become local lore, and are usually only shared at happy hours.

Today, some firms are finally beginning to recognize the importance of the data gathered from these projects in support of their strategic plans. Productivity rates, historical unit costs and customer feedback have become mission critical data points for the best-in-class organizations. However, this quantifiable data is only one piece of the puzzle. Firms must capture the techniques, concepts and examples of "building genius." The military calls this process an after action review (AAR), and uses these lessons to develop tactics and strategies. How often do firms attempt to bury and forget past projects, as if they are simply turning over the hourglass?

The construction industry is built on the ingenuity of great minds in the field. The problem is capturing this information in a manner that distills normal operating procedures from truly innovative concepts. The first vehicle to consider is the post-job review. Normally relegated to conducting the autopsies of "disaster projects," best-in-class firms use this exercise to stimulate discussion around both challenging aspects of a project and techniques that should be replicated. As a starting point, post-job reviews should avoid the blame game and focus on introspective components of each player's performance.

For instance, consider the following technique. Your project manager says, "Here are three things I would repeat in future projects:

1. The site lent itself to a balanced cut and fill. Originally, the firm was going to import 20,000 cubic yards of a material from a site 4 miles away. Through the preconstruction process, it re-engineered the site to allow for no import, saving the firm money.
2. The concrete tilt panels were exceptionally tall. The firm used a specific technique to bring the natural camber of the panels to the inside of the wall, eliminating exterior bows.
3. The firm used a new roofing membrane that was previously untested. While the jury is still out, the firm feels the installation was smooth and saved 2 weeks on the schedule."

Your project manager says, "Here are three things I would do differently in future projects:

1. Safety was a huge concern and the team should have been more diligent in the inspection, particularly during the



Post-job reviews should avoid the blame game & focus on introspective components of each player's performance.

water line tie-in phase.

2. The punch list was not smooth. The team should have conducted a close-out meeting with at least the painter and drywall contractor present during the final 4 weeks.
3. The schedule should have been updated more frequently. The superintendent and the project manager let it slip at about 60 percent of the project's completion."

Similarly, the other key players—estimators, superintendents, key foremen—should chime in with their feedback. Ultimately, this data is then summarized in one document. One thought is to develop a list of the top 10 takeaways, which should be good and bad news. The list eliminates redundancy. Some important considerations that should also be considered in a post-job review:

- *Customer-isms*—For companies that work with repeat clients, it would be prudent to capture their takeaways. For instance, the following would be important considerations:
  - Design preferences (not listed on plans or specifications)
  - Communication preferences (email, phone calls, in-person meetings)
  - Logistical concerns (work schedules, deliveries concerns, site utilizations)
- *Trade contractor performance*—Rather than lament about subpar performance, measure each partner on objective criteria, such as workmanship, their ability to meet deadlines, paperwork and safety.
- *Format*—No one likes long narratives. Leverage technology. Digital photography and video is now ubiquitous. Make it mandatory to supplement each list item with at least one picture or video.

Standardizing the format and rules is essential. Without a standard, the lessons learned is a cacophony of noise and jumbled thoughts.

The lessons-learned library is essentially the repository in which these ideas are stored. The problem that firms must overcome is encouraging everyone to use it regularly. The first consideration that firms must consider is the filing structure. Do not store by job number.

While this seems like normal behavior, no one remembers job numbers. Rather, consider organizing jobs by mechanical contractor, typical customer base or geography. The following is an example of file storage nomenclature for a library.

- Tampa
  - o Healthcare
    - ▪ HVAC Lessons
      - JOB 123 – Tampa General Hospital (Top 10 List)
    - ▪ Piping Lessons
    - ▪ Plumbing Lessons
  - o Commercial

While this sounds simplistic, the system needs to be inviting. The second consideration is the lynchpin: what will drive traffic to the library? There is no shortage of considerations for encouraging use of this incredible resource. Training and developing in-house experts is an outstanding way to drive accountability and help spread the load. No library was written by one author. Ask key players within the firm to accept ownership of this task.

Firms continue to wrestle with talent gaps within their organizational ranks. Additionally, these same firms see some of their most seasoned practitioners exit the business. Is the collective knowledge that resides in those brains going to simply wither away in retirement, or is this one opportunity to extract years of history lessons? Superior firms not only have a library, but they also now have a robust media center to make themselves smarter. **CBO**

Credentials Your Employees Need

How to encourage your staff to maintain training & manage certifications

BY CHRIS LENNON

Any job in engineering, construction or manufacturing is sure to keep you on your toes, both physically and mentally. With some of the most stringent compliance standards out there, companies must be diligent in keeping up. As a manager, this requires a joint effort from both you and your employees. While it is the responsibility of each employee to complete training, managers should play a role in encouraging their team to pursue certifications. So, how can you best encourage your employees to stay up to date and manage certifications on your team?



REDUCE THE SKILLS GAP

You wouldn't intentionally hire someone who didn't meet all the requirements for a position. In the world of engineering, construction and manufacturing, though, the skills, tools and processes for one position can change so quickly that it is hard for some employees to keep up. Skills gaps occur when a person doesn't have the knowledge or skill to complete some of the required tasks of his/her position. The negative effects of skill gaps on companies appear in two key ways: managers are forced to hire outside consultants to perform that specialized task, or there is the risk of employees becoming resentful when they don't have the skills necessary to do their entire job. Encouraging employees to keep their certifications up to date is a great way to prevent skill gaps. Try not to look at certification training as just one more assignment for your team. Instead, think of it as an excellent opportunity to foster a team of well-trained, empowered employees. Create prize-based incentives that are rewarded if your entire team completes a specific certification training.

ENCOURAGE EDUCATION

As a manager, it is easy for you to see the benefit to having your employees' certifications up to date. Some of your employees may struggle to see the big picture, though, and view training as an extra burden. An education campaign serves to ensure your employees see the value in upgrading their certifications. Compliance and certifications should be discussed as early as the recruitment and onboarding periods. You should be transparent in your expectations that employees take responsibility for updating or seeking out their own certifications. Clearly define the amount of time your company will provide employees for training. Providing a dedicated amount of time for learning creates a positive culture where employees recognize their skills are valued and know that the company prioritizes the time they need to update their certifications. You can also encourage employees to pursue further certification by promoting training courses to them. Share

information about the types of certifications available. This helps employees better plot their career development and plan a future within the company. Consider suggesting certifications that fit into the strategic goals and skill gaps present in your business. Recommend a list of preferred certifications to team members.

TIME TRAINING CAREFULLY

Training shouldn't only happen when necessary for regulatory or licensing purposes. Supervisors and managers should regularly meet with their staff, to discuss the skills each employee needs to better perform the job. If there is a shortfall in skills, create a training plan so the employee can further his/her learning and increase contribution to the company. Skills training can take the form of staff mentorship, rotating work assignments and college courses. Look for industry resources, too. If you are still finding it difficult to encourage staff members to get certified, try incentivizing skills training. Reimbursement for courses and training should be clearly stated, as should the conditions for that certification.

UNDERSTAND THE VALUE OF A LEARNING MANAGEMENT SYSTEM

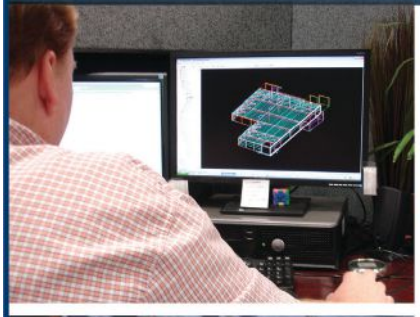
If your company is unsure of where to start when it comes to certifications and training, consider a learning management system (LMS). An effective LMS helps workplaces ensure their employees are compliant with the latest standards, and it serves as a centralized place to store training reminders and other on-the-job training opportunities. It is also a system where employers can upload their own training or select any of the safety, regulation and compliance course libraries that come built into a platform. The LMS model is proven to work. A LMS allows employees to work at their own pace to complete training. That pace is often 50 percent faster than trainer-led sessions. It costs approximately half as much as in-person presentations, too. Not only that, but training that is both online and interactive is more likely to stick in a person's memory. Employees sitting through a training presentation may absorb just 10 percent of the information; whereas learning done through various interactive methods can increase retention rates to as high as 90 percent. Once your employees are on track with updating their certifications in a timely manner, an LMS also helps make compliance reporting easier. **CBO**

Chris Lennon is vice president of product management at BirdDogHR. He is responsible for ensuring the BirdDogHR Talent Management System meets the needs and exceeds the expectations of its customers. He brings over 18 years of experience to BirdDogHR. Visit birddoghr.com.



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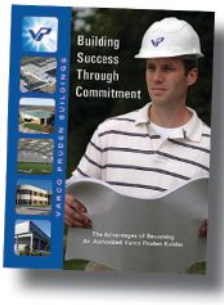


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Building Your All-Star Advisory Team

10 professionals every CEO should enlist to ensure success

BY HOWARD LEWINTER

Let's consider that you operate the best construction business in the city, the geographical region or the country. You have no employee problems, no sales problems, projects never miss deadlines, projects are completed under budget and the company cash flow requires daily trips to the bank.

Even though you may have reached the height of success within your industry, it's not about how much money you make. It is how much money you legally and ethically keep. To keep the money you have worked so hard to earn, it is essential to surround yourself with a team of experts. The following are 10 experts and professionals that you will want on your team to ensure business success.



1. *Business attorney*—Most people don't hire an attorney until they have some type of trouble or problem. Then they start looking for someone who can represent them. Business owners need to work with an attorney who specializes in business and understands the construction industry. You shouldn't be working with a divorce attorney, a real estate attorney or a generalist, but an attorney who truly understands how business works and can advise you properly on a wide range of business subjects. If you are using your attorney properly, you should seek his/her counsel on business matters, contracts, employee relations and any other legal issues before they impact the business in a negative way. The attorney's job is to advise you in making the right business decisions that will prevent you from having legal problems. The attorney should be there to support you for those unfortunate situations in which you need to be defended. The right business attorney will help you avoid potential legal situations from becoming something more than they need to be.
2. *Certified public accountant (CPA)*—This should not only be someone who completes your annual tax returns, but also someone who is going to use the tax law to legally and ethically take every deduction possible so you can pay the least amount of income tax possible. The CPA should be there to advise you with your business operations, explain your profit and loss statements and give you general advice that will help you prosper long term. You need a CPA who stays current with the tax laws, and who knows what deductions you can and cannot take to minimize your taxes.
3. *Certified financial planner*—Ask yourself: What am I going to do with

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the money I will earn from my business? A certified financial planner or advisor can keep you from making bad investments and assist you in realistically attaining the financial lifestyle you want. Keep in mind that people may refer to themselves as financial advisors or planners, and want to sell you stocks, insurance policies or other types of investments. Find a true financial planner who is certified with the right credentials.

4. *Business insurance agent*—You may see advertisements on television about how you can save money by buying insurance online. When leading a construction company, though, it is best to have an in-person business insurance agent. As a business owner, you need an industry professional who can guide you in buying the right insurance for your business with the right amount of coverage. Insurance is something you never want to use, but you won't know if you and your company are protected unless you have an unfortunate event. Make certain you are adequately covered by using a licensed insurance professional who understands your company's specific needs.
5. *Banker*—As many industries are going through changes and disruptions as to how the business is transacted, banking is no exception. Banking is not as personal as it was in the past. Still, you want to find a bank that will give you an opportunity to know who your banker is and work with one that wants to know about you as a business person and contributor to the community. As a business owner, you want to build a strong relationship with the banker, so if you need a business loan, you already have credibility. You may want to consider opening a line of credit for your business when you don't need it. You don't have to use the line of credit, but it will be there when you need to borrow money. You will already be approved, and it will be just a matter of transferring money from the line of credit to your business checking account.
6. *Business consultant or advisor*—A true business consultant is an objective visionary who can guide you, keep you grounded, prevent you from making business mistakes and keep you focused. He can also act as a sounding board when necessary. This is someone who can take all his/her business experience to help you with strategy about your business plans, issues and goals. This is how you will get the most out of your business. A business consultant can advise you in nearly every aspect of your business except legal, accounting, insurance, banking or financial planning. The right business consultant can be key to your personal success.

There are several other business experts you may want on your team in order to operate your construction company in the most efficient way. The following team members will help you manage a more profitable and efficient organization.

7. *Recruiter*—If you are a large enough company, consider hiring an in-house recruiter. This person will help find, hire and retain employees based on your company's specific needs. The other option is to utilize the services of a recruiting firm specializing in the construction industry. This will give your company a competitive edge in today's marketplace. The right recruiting partner can take away some of your stress in the constant search for good employees, from entry to management levels. You are in the people business, regardless of your construction specialty. Without the right people, there is no business.
8. *Payroll service professional*—Many business leaders find it useful to engage a professional payroll service. It takes the worry out of processing payroll, making the proper deductions and filing appropriate tax return information related to company payroll. It's quick, easy, affordable and it reduces accounting errors. If you don't opt to use a payroll service, consider payroll software built specifically for the construction industry.
9. *Information technology*—You cannot run your business without computers and high-tech communication. Clients demand quick turnaround when answers are needed to make decisions and for your company to keep projects moving forward. That is why you need an expert to maintain and update your computers and communication systems. Also, having the proper construction software helps you operate your business, understand costs and run a more profitable, streamlined business.
10. *Marketing*—Professional marketing people can help your company stand out in today's mobile, connected world. Whether it is on social media, a responsive website, business cards or brochures, it takes more than word of mouth to grow a successful business.

Finally, remember you are an expert, too. As a business owner, continue being an expert by taking care of yourself both during and outside of the business day. Be active in trade associations. Allow time each day to think through your business vision and strategy. Doing so will keep your business successful in the long term. **CBO**

Howard Lewinter is a business strategist and advisor to CEOs, presidents and business owners throughout the United States. Businesspeople seek Lewinter's advice to solve problems regarding everything from daily decisions to opportunities for more success, more profit and less stress. Visit talkbusinesswithhoward.com.



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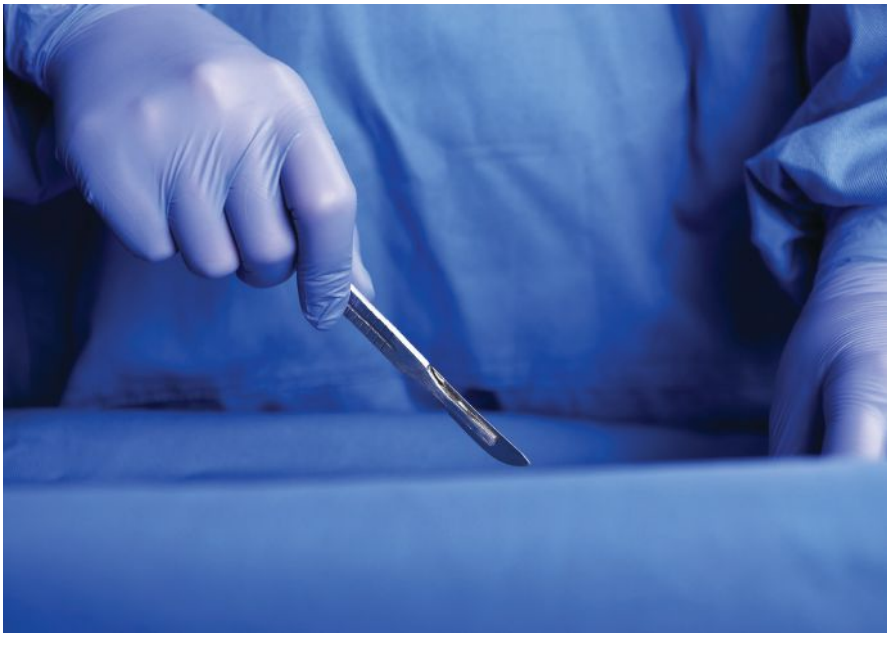
BY JASON KEEN

Would a person trust a doctor who uses a machete for surgeries, rather than a scalpel? How about if that doctor does not use laser technology that has improved surgery success rates from 80 percent to 95 percent?

In either case, a person would likely not use the doctor who follows these practices. Also, this doctor would not likely be in business long, due to lack of patients. Selecting the right software for a construction company is like selecting the right tool for a job. But how can a company be sure they have picked the best tool for the business need?

Before diving into how to select systems, consider the value of the systems. Every technology system does one or more of the following tasks: capture data, process data and/or present information. The right system and business processes create a competitive advantage for any one company. Systems that move data, reduce errors and provide valuable feedback to the firm drive business change.

However, the best systems will fail if proper business processes and buy-in of the system do not exist up front. Making sure the company is ready to improve processes in cohesion with a new system ensures that the information derived from the system will drive decisions. So, how do you select the right system?



The first step is to identify your company's needs. The best way to identify needs is to have a well-rounded perspective of the company's current climate. The best way to gain this perspective is to form a cross-functional council. The council exists to provide feedback on system priorities. Two things are achieved by gaining a companywide perspective. First, system buy-in is higher because each business unit has a say in the IT systems. Second, the business is focusing on the most valuable systems because of the cross-organizational perspective.

After forming the IT council, the next step is to identify business needs. The needs set priority on which systems to implement first. Use the IT council to form a project implementation team. As a first step, have this team create a decision criteria matrix. The matrix should cover key items, such as cost, capabilities and technology infrastructure. Use other companies and trade shows to identify potential systems. Send out a request for proposal (RFP) with the system requirements determined by the criteria matrix. Additionally, make sure to set a return-by date on the RFP.

Making sure the company is ready to improve processes in cohesion with a new system ensures that the information derived from the system will drive decisions.

Once submissions are received, take the initial proposals and list each system on the matrix. Determine which systems meet the most criteria. Take the top 3 to 5 systems and do basic demos to make sure the proposals align with the system's capabilities.

After looking at the demos, narrow down the selection to no more than three vendors and request an in-depth demo. Have the vendors perform the process in the way the company will use the system with real-time data. Let the project team and the IT council take part in these demos. At the end of the demo process, one system will likely separate itself as the best system. The final step of the process, besides purchasing the system, is to evaluate the current business process. This evaluation determines what changes are needed.

The above process will most often yield the best system that fit the company's needs. As a company works through the system needs list, purchases new systems and implements them, information will begin to flow more efficiently through the business. This improved information flow will provide rapid feedback to the business and allow your company to look ahead. Putting the right systems in place drives positive change and creates a competitive advantage for your company. CBO

Jason Keen CPA, CCIFP is CIO/corporate controller for Superior Construction Company, a heavy civil bridge builder in Jacksonville, Florida. Keen has a background in reporting, analysis, data visualization and system implementation, and has been in the construction industry for over 10 years. Contact him at keen@superiorconstruction.com or 904-292-4240. Visit superiorconstruction.com.

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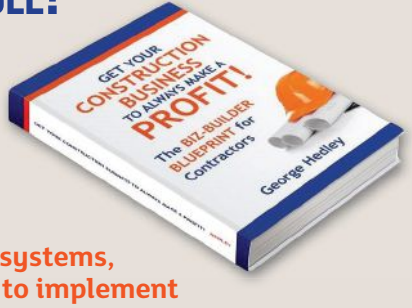
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The Foundation for Success

2017 CFMA conference promotes education & addresses the economic unknown

BY KATHY WELLS

The Construction Financial Management Association (CFMA) is dedicated to serving the educational needs of construction financial professionals. Membership in CFMA is represented by all types of general contractors, specialty trades and construction managers, with a large number of professionals in the accounting, insurance, surety, software, legal and banking industries. Established in 1981, CFMA now has more than 7,800 members in 95 chapters throughout the United States and Canada.

This year, CFMA held its Annual Conference & Exhibition at the JW Marriott Phoenix Desert Ridge Resort & Spa in Phoenix, Arizona, June 3-7, 2017. According to CFMA, this is the conference's sixth straight year of record-breaking attendance. With this year's 1,356 total attendees, conference attendance has increased more than 50 percent over the last 6 years.

This year's conference theme was "The Foundation for Success," which was represented throughout sessions covering peer mentoring, training of incoming generations and properly educating employees.

"A strong foundation is the key to successful construction, and the same applies to our members' professional education. We strive to be our members' educational foundation," said CFMA President and CEO Stuart Binstock.



This year, the conference offered three general sessions showcasing industry influencers including CFMA Economic Advisor Anirban Basu, FocusWise Founder and CEO Curt Steinhorst and International Speakers Hall of Fame Inductee Mike Rayburn. There were also 50 breakout sessions led by industry experts, with an opportunity to earn up to 34.5 continuing professional education (CPE) credits, a sold-out exhibition hall and many networking events. Conference scheduling was made easy through the use of a conference app, which incorporated a Q&A polling feature, Twitter feed and details about each session and presenter. One CFMA attendee and presenter, Dan Owens, has attended the conference since the mid 1990s. Owens is a member of CFMA's Greater Cincinnati Chapter and focuses on construction at VonLehman, a CPA and advisory firm, where he is a shareholder and CPA. In helping to grow the firm's construction niche, Owens said that the CFMA conference has been his primary source of construction CPEs and networking.

Owens presented two sessions this year, focusing on cash management and advanced cash forecasting, and led a small-firm roundtable discussion. He also

attended sessions by other presenters, in which he gained "important takeaways that made the conference worthwhile."

Consistently throughout the conference, attendees and presenters both openly discussed the political and economic uncertainty facing businesses as the country adjusts to changes made by the Trump administration. According to Binstock, "As CFOs and controllers, [our members] are concerned about what the future holds. Given the political and economic uncertainty in the country today, as well as the extreme labor shortage across all occupations in the construction industry, they are closely watching the current situation." CFMA Economic Advisor Anirban Basu presented an economic update, in which he addressed the global economy, which remains weak. With concerns including tax cuts, national debt, the pending insolvencies of Medicare and Social Security, Basu shared his outlook for a sturdy 2017, a shaky 2018, and a potentially far different economy altogether in 2019.

In keeping with the conference theme, CFMA released its "Revenue Recognition Implementation Guide," a resource for successful implementation of revised Financial Accounting Standards Board (FASB) standards, offering best practices on developing an implementation task force, identifying a timeline for implementation and the impact of the regulations on existing internal accounting systems, tax planning and more. "With the release, we are looking to further broadcast how software vendors are integrating these changes to the FASB standard and facilitate end results that ensure our members are successful in their implementations of the revised standard," said Binstock.

Other major topics of discussion included the push for software collaboration, cyber protection and continued suicide prevention awareness.

CFMA's Construction Industry Alliance for Suicide Prevention now encompasses more than 40 members across the construction industry, some of which provided suicide prevention and mental health resources at the conference. CFMA's efforts to promote awareness of mental health and suicide prevention have gained a lot of ground due in large part to the diligence of Cal Beyer and Sally Spencer-Thomas. Beyer, who is the director of risk management at Lakeside Industries Inc., presented three sessions this year, focusing on integrating suicide prevention into workplace culture, employee recruiting, retention and training and reputational risk. "I'm very impressed with the organization's focus on the health of their members and all construction professionals, as evidenced by their effort to promote and encourage suicide prevention in the industry," said James Benham, CEO of JBKnowledge, provider of technology solutions for construction and insurance.

Benham presented two sessions on managing technology and risk, and also hosted the conference's first-ever, live podcast in participation with the ConTechTrio, a podcast that covers construction technology, research and innovation.

"[At the conference] networking is always key, but James Benham and his knowledge always keeps our company on its toes," said attendee Rick Wagner. Wagner is the CFO of general mechanical contractor Quackenbush Co., where he is responsible for all things finance, risk, legal, human resources (HR) and information technology (IT). "Each conference, I concentrate on one primary and one secondary focus. This year was HR and IT." Wagner is a 12-year member of the Niagara Frontier Chapter of CFMA, where he also serves on the board of directors. This was his sixth CFMA conference.

The 2018 conference will be held June 23-27 at the Fontainebleau Hotel Miami Beach in Miami, Florida. Visit cfma.org to register and get more information. **CBO**

Kathy Wells is the editor of Construction Business Owner magazine.



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Building the United States

Projects changing the perception of the American construction industry

BY RICK ZETTLER

It's said that beauty is in the eye of the beholder. When it comes to the construction industry's positive impact on the lives of Americans, Mike Rydin, founder and CEO of HCSS, a construction industry software company, sees undeniable beauty. "Infrastructure is how we move, and [it is] essential to the growth of our nation," said Rydin. "The construction industry makes it possible for communities to have drinking water, constructs cell towers to improve communication and builds the roads, rails and airports that move people and goods from point A to B."

Most of the public's viewpoint of the construction industry is shaped by delays: orange barrels on the interstate, restricted travel lanes over a bridge or a detour due to reconstruction. Rydin sees this as a perception problem, and the construction industry has not done itself justice by underselling its importance. The drive to change the public's perception is at the heart of the I Build America (IBA) campaign, formally started by Rydin in 2016. IBA's mission is to generate the pride and respect the construction industry deserves. IBA has three objectives:

1. Build pride in the work that contractors complete
2. Educate the public to recognize the value that the men and women in construction bring to modern life
3. Serve as a recruitment tool for the next generation of workers



"Millennials want [to do] something with meaning, and what could be more meaningful than building America's infrastructure?" said Rydin. This philosophy is shared by many in the industry, and IBA has formed a sizeable movement with more than 100 founding members, including manufacturers, such as Trimble and Caterpillar, and contractors, such as Granite and C. W. Matthews. The organization is also working with various Associated General Contractor (AGC) chapters. IBA has developed educational programs and presentations targeting young children and high school students, telling the story of the industry's value to the country.

IMPACT IN MASSACHUSETTS

Promoting the stories of how construction projects improve American's lives is one of the organization's most effective ways of speaking to the general public. To uncover these stories and recognize contractors at the same time, IBA started its inaugural Impact Awards in 2016, and received over 100 project submissions.

The Kenneth F. Burns Memorial Bridge design-build replacement project in Worcester, Massachusetts, completed by The Middlesex Corporation (TMC) of Littleton, Massachusetts, took top prize in

IBA's 2016 Impact Award contest. The complex, $105 million, high-profile project called for the replacement of a concrete, open-spandrel, arch bridge built in 1916.

The existing bridge remained open throughout construction to reduce impact on the vehicles crossing Lake Quinsigamond between Worcester and the town of Shrewsbury. "The existing bridge had an estimated lifespan of 5 years left when we began the 3.5-year replacement project," said Evan McCormick, senior project manager for TMC, so there was a sense of urgency to meet the 39-month contract's August 29, 2015, deadline.

Because Lake Quinsigamond is used for competitive rowing and recreational boating, the project had to accommodate water traffic throughout the construction period, as well as vehicular and pedestrian traffic. With it being such a high-profile location, the Massachusetts Department of Transportation (DOT) and TMC welcomed input from the community and incorporated some of the community's design suggestions in the structure.

The two new, 870-foot-long bridges, one for eastbound traffic and another for westbound traffic, featured an open spandrel, steel-tied deck arch design that closely mirrored the aesthetic appearance of the existing bridge, which was important to the community. Bridge construction required 4,000 tons of structural steel, 10,000 cubic yards of concrete and 19,000 tons of asphalt. TMC's workers also excavated 25,000 cubic yards of material.

Wide shoulders were added to both bridges, especially critical with westbound traffic to allow vehicles to move over for ambulance traffic in transit to UMass Memorial Medical Center. The westbound traffic bridge also added a travel lane, easing congestion and improving safety. With bicycle lanes added to the bridges, cyclists no longer had to choose between navigating through pedestrian traffic on sidewalks or braving the narrow shoulder of the previous bridge. Reducing the number of bridge piers to five increased the maximum span distance from 112 to 228 feet, and a rise in the maximum overhead clearance from 18.5 to 23.5 feet offered unimpeded access to the entire lake for a larger class of sailboats. New colored, programmable lighting illuminates the bridges' undersides, highlighting the structural arches to make a bold statement.





SKIP SPANN

A Marietta, Georgia, contractor, C.W. Matthews, was recently called on to complete the Skip Spann Connector in Cobb County, Georgia. Dan Garcia, president of C.W. Matthews, credits a longstanding working relationship with the Georgia DOT with winning this particular project.

The need was great for a new connector spanning Interstate 75 near Kennesaw State University (KSU), the second largest advanced educational institution in Georgia. Student housing had migrated eastward from the university's main campus across I-75, increasing the amount of vehicles, cyclists and pedestrians using the busy I-75 and Chastain Road interchange.

The $17.8 million project, which included building a new bridge spanning I-75, was well received by the public. KSU held a contest for students to submit bridge design ideas. The winning idea included a metal structure to mimic the Kennesaw Mountains, visible in the distance when traveling along I-75 and a part of the KSU logo. Building the new structure required 55,000 cubic yards of grading, 4,000 linear feet of storm drainage, 17,000 feet of curb, 20,000 tons of crusher run aggregate, 14,000 tons of asphalt, 4,000 cubic yards of concrete and 400,000 pounds of reinforcing steel. The 108-foot-wide deck accommodates five traffic lanes and two, 11.4-foot sidewalks to safely allow pedestrians and cyclists to cross. The new structure improved the safety for students crossing I-75 and delivered an expected 19-percent traffic reduction at the congested Chastain Road interchange. The Skip Spann Connector won the American Society of Highway Engineers' 2017 National Project of the Year Award in the $20 million and under category.

The Kenneth F. Burns Memorial Bridge also received multiple awards, and both projects are the types of stories Rydin says the industry needs to leverage to positively change the public's perception. "We need to move the needle to where the construction industry is no longer an afterthought for employment, but rather an industry where a person can build a lucrative career," said Rydin. "People can still start out on the ground floor and work their way up to being CEO in this industry." CBO

Rick Zettler is president of Z-COMM and a writer, photographer and public relations and marketing consultant specializing in the construction, material handling, mining and road building industries.





KEEPING YOUR COMPANY'S HR COMPETITIVE

How Texeira Contracting Inc. overcomes staffing challenges

BY DAVID PEASALL

This year has already proven to be one of dramatic change for businesses in all industries. In fact, the stakes may be as high as they have ever been for human resources (HR) compliance. To take a step in the right direction, read the regulatory "cheat sheet" below to help you improve your company's HR practices in six areas of HR compliance.

With those in mind, read the story of one successful contractor detailing their company's efforts to make HR practices and HR compliance a little easier and a lot more cost effective. Let's start with the regulatory scene:

1. *The Affordable Care Act (ACA)*—For years, critics have said that the ACA is unsustainable and has significantly increased costs for employers. Others claim the ACA is also bad for consumers because of increasing premiums in the marketplace. Regardless of where you stand on the issue and the many disagreements to date in Congress, the following a few elements that are most likely to be part of final legislation.
   - A push for Health Savings Accounts (HSAs)
   - Insurance for those with pre-existing medical conditions
   - Tax credits for those who purchase insurance if they don't have access through an employer or a government program
   - Continued coverage for dependents to age 26
2. *E-Verify*—This internet-based system allows businesses to determine the eligibility of employees to work in the United States. It is now used by more than 600,000 employers across the nation, but it could soon be a requirement for all employers. Currently, it is voluntary, although some states require either E-Verify or a program like it to be used in the hiring process. Congress has tried to mandate E-Verify several times in the past, but has never been able to make it stick. Currently, E-Verify is used when hiring certain federal government contractors and subcontractors.
3. *Six weeks of paid maternity leave*—This may soon be an option for new mothers. There is a similar program already in place in California. The temporary benefit through the Unemployment Insurance system would cost about $300 per week. Current proposals do not appear to include new fathers and would not extend

It may be worthwhile to examine some degree of HR outsourcing to reduce compliance concerns, control costs & put the focus back on growing your business.

to other forms of leave covered by the Family and Medical Leave Act (FMLA).

4. *The Overtime Exemption Rule*— This is not likely to survive during the Trump Administration. These regulations would have meant that certain nonexempt employees making less than $47,476 per year ($913 per week) would be entitled to overtime.
5. *OSHA workplace safety changes*—A new OSHA rule prohibits employers from using drug testing, or the threat of drug testing, as a form of adverse action against employees who report work-related injuries or illnesses. Now, all employees whose conduct could have contributed to the incident would be tested, not just the injured worker. A new Reporting and Safety Incentive regulation prohibits any company policy that disciplines employees for failure to immediately report injuries or illnesses. Instead, employers must give their employees a reasonable amount of time, such as the end of the shift or 8 hours, to report such incidents. OSHA now prohibits safety incentive programs that deter the reporting of injuries.
6. *National Labor Relations Board (NLRB) changes*—There are currently two vacant positions, and the terms of two other board members come to an end in 2017. It is expected that the NLRB will shift from a Democratic to a Republican majority at that time. The new board is likely to provide relief from the "quickie" election rule that sped up the time frame in which union representation elections are conducted. The board may also abandon efforts to make it easier to declare corporate franchising employers as joint employers with their individual franchisees. As joint employers, franchising corporations are co-liable for legal violations.

What does all of this mean to you? How are you going to keep track of the changing HR climate as it affects construction business owners? And what about the many daily HR issues that don't necessarily reflect regulatory concerns? The following are some insights from Bill and Sue Texeira, owners of Texeira Contracting Inc. (texeirainc.com), a Florida-based, commercial construction company that manages projects across the country.

Texeira recently began to expand nationally, using a business model that relied on a core, centralized staff and a traveling general superintendent. The firm hires local project superintendents, and subcontracts 90 percent of its work to local businesses. With its national expansion, Texeira found itself enmeshed in concerns related to payroll, reporting and workers' compensation issues that varied from state to state. A major issue was the company's inability to find affordable workers' comp coverage in some states. In addition, its home office staffing was not sufficient to handle the differing payroll and reporting regulations in multiple states.

"We knew that a growing company [like] ours couldn't afford to staff up to manage HR, health benefits, payroll and workers' compensation in-house; or to identify and follow the state rules for many of these functions in multiple states," said Bill Texeira. "An insurance agent we know suggested outsourcing HR functions, based on his experience with other clients, and we chose to outsource to a full-service professional employer organization (PEO) that could handle all these tasks in a one-stop-shop, cost-effective way." Some results the company has seen from this decision include:

- Savings in time and money due to becoming part of a large workers' compensation purchasing pool
- A reduced need for increased administrative hiring for HR functions
- Improved ability to attract talent by offering enhanced employee benefits
- HR guidance in such areas as unemployment benefits
- Ability to focus on growth, rather than HR regulations and practices
- Reduction in concern about HR compliance

Every construction company has its unique challenges. However, nearly every construction business owner is faced on an almost daily basis with HR regulations and the expense of managing an HR program. You didn't get into the construction business to be an HR specialist. It may be worthwhile to examine some degree of HR outsourcing to reduce compliance concerns, control costs and put the focus back on growing your business. **CBO**

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YOUR PEOPLE ARE THE SECRET TO A HIGHER PROFIT MARGIN

Using burdened labor costing to improve workforce management

BY KELCEY THOMPSON

One of the greatest challenges business owners face in the current economy is finding and hiring quality employees. When the construction markets crashed in 2008, many workers in the skilled trades left to pursue employment in an industry with a more stable outlook. When the construction market started gaining ground, most workers did not return with it.

A report published by the National Association of Home Builders (NAHB) shows increasing labor shortages over the last 5 years. Paul Emrath, an economist for NAHB, said, "The share of builders reporting either some or a serious shortage has skyrocketed from a low of 21 percent in 2012 to 46 percent in 2014, 52 percent in 2015 and to 56 percent in 2016."

Most likely, this comes as no surprise to most of you. In the areas showing the greatest growth, companies are struggling to find and hire good tradespeople. This causes employers to pay more to find and retain better workers, which, in turn, drives up construction costs and cuts into profits. How should the industry deal with this? We need to become diligent in labor productivity, efficiency and allocation. This is not something that was a priority in the past. So where do you start?

Understanding your total burdened labor costing (BLC) is a must. Calculating the hourly cost and responsibility for each direct labor employee creates a useful management tool to allow for better labor allocation on jobs. A great place to start is understanding the cost differences for direct labor employees as a comparison between them and your subcontractors in regard to hourly rates. Ask yourself who costs you more per hour. In some cases, you may be surprised. Then there is the question, "Am I having my top craftsmen doing tasks because they are on the job; instead of assigning that task to a lesser paid individual and moving the higher paid employee to a task that pays more?"

For example, Employee A has a burdened labor rate (BLC) of $110 an hour. Employee B has a BLC of $61. Employee A has the skillset to deliver more productivity per hour than Employee B. Employee B is a good, steady employee and does rough-ins well, with some guidance. Who do you have chasing materials or cleaning up? You want them to be as efficient as they can be.

Calculating the hourly cost and responsibility for each direct labor employee creates a useful management tool to allow for better labor allocation on jobs.

In fact, it may be worth your time to hire a $35 (BLC) employee to feed both of the other employees materials, or to move them off the project as soon as possible in order to save on job costs.

Let's put that into dollars and cents. At $110 an hour (BLC), Employee A will cost the company $4,400 for 40 hours. At $61 per hour, Employee B will cost $2,440. That's a difference of $1,960 a week; and when multiplied by 4 weeks, it equals $7,840.

If that doesn't seem like much, look at how many employees you have. Take a look at your last six bid jobs and the costs, and ask yourself whether it was the profit margin you wanted it to be. Could you have been more efficient with your labor costs?

Many of you will say that while you could be more efficient with labor, it takes too much time. Additionally, how does this have anything to do with hiring and retaining employees? What about setting cost benchmarks for each employee based on their BLC and productivity? What if you could increase the profitability on a job by 15 to 20 percent, and share some of that profit as a bonus to the direct labor employees? This gives you the opportunity to reward them for profitability, instead of just doing what you hired them to do. You could also tie it to every employee on the jobsite.

If you are a subcontractor, how often are you asked by the general contractor to step up or make exceptions? By knowing your BLC, you can better understand what that will cost you and have all of the information necessary to make the right call. Currently, you make a gut decision based on rough numbers, and hope that you can make payroll at the end. But you need to know, right down to the penny!

Anyone in the skilled trades is familiar with loaded labor (hourly wages + taxes + benefits). Burdened labor costing goes a bit further and applies responsibility for indirect labor (those employees in support positions to your direct labor), a percentage of your overhead costs and vehicle or equipment costs (if applicable). By assigning portions of overhead and indirect labor costs, you create a true responsibility for the portion of revenue generation that you have hired the employee to provide. Now, you can compare true cost responsibilities to revenue generation to develop profitability benchmarks based on performance, instead of task completion.

Other reasons for having an accurate BLC rate is for hiring and training. Having a correct rate will allow you to create "what if" scenarios for cost evaluations, such as developing onboarding and training budgets and creating competitive wage packages with realistic revenue numbers.

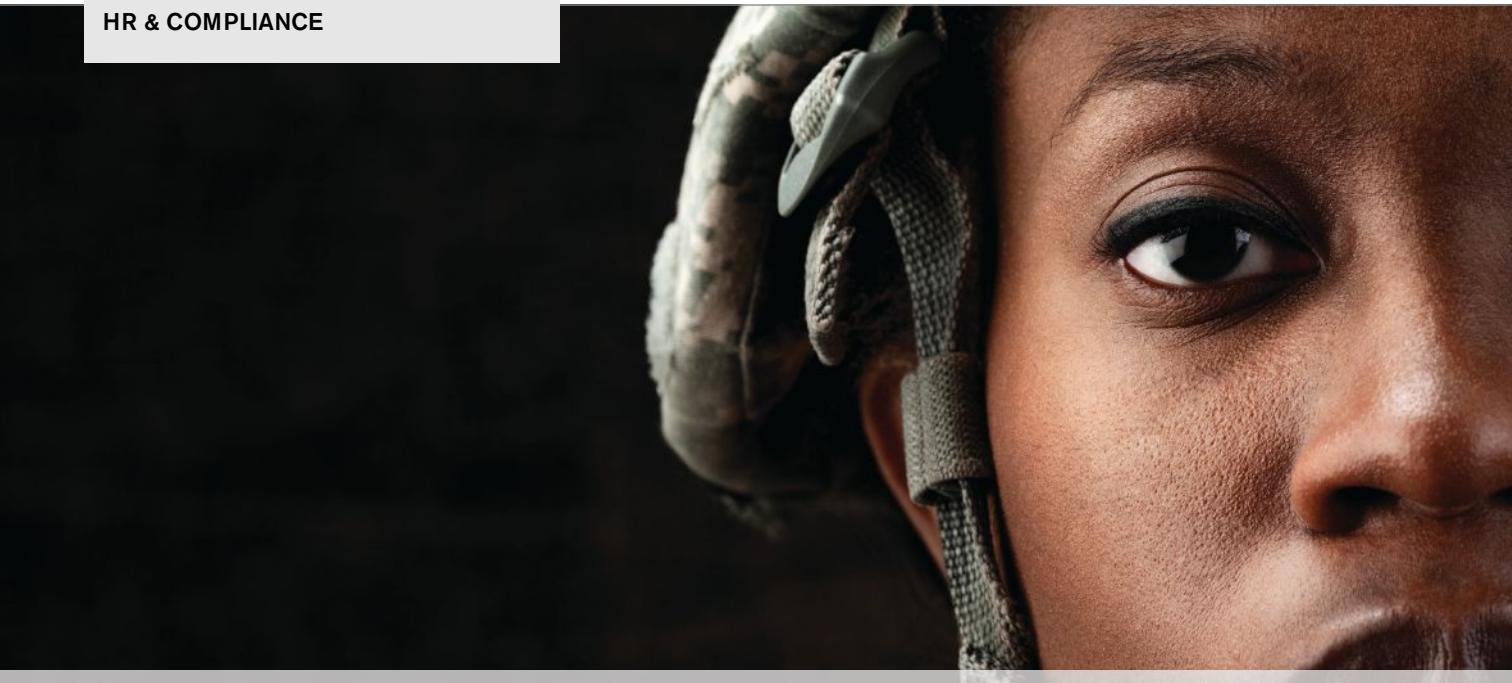


While all this seems like a good idea and is certainly worth considering, you may still be asking why you should waste time to do this. Think of accurate job costing or proposals. You can create targeted labor efficiencies with results that can be tracked on a daily basis.

Finally, note that you do not have to create an excel spreadsheet yourself or have your CPA complete this task. Your time is better spent applying the results. There are several software programs available that can give you the reports you need quickly and accurately. You should also consider updating your numbers on a regular basis to ensure up to date metrics. CBO

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SKILLED TALENT
REPORTING FOR DUTY

Exploring veteran hiring programs & the expertise they can offer your business

BY MIKE STARICH

Almost every United States city is witnessing growth in construction—both in commercial and residential building, as well as roads, bridges and other structures. With the U.S. Bureau of Labor Statistics projecting the industry to increase from its current 6.9 million jobs to 7.2 million jobs by 2024—meeting the demand for quality talent is paramount for construction companies.

Companies looking to hire find that it goes beyond just filling the gap of supply and demand. The leadership, teams and specialized skills that an organization chooses to execute on projects will have a direct impact on its bottom line. To help ensure the right talent is in place, more construction companies find that adding veterans to their workforce is not just a good idea, but also good for business.

BENEFITS OF MILITARY HIRING

The military has thousands of enlisted individuals, officers and command staff that make for an ideal fit for the construction industry. In fact, many have experience on military construction teams helping to build or repair buildings, airfields, bridges and other structures. Veterans without direct military construction experience can also be exceptional candidates for construction positions in the civilian workforce. They already have the sought-after leadership qualities based on their ability to meet deadlines, supervise teams and work in extreme conditions.

Strong work ethic and dedication are just a few of the characteristics that veterans bring back to the civilian lifestyle. They are disciplined team players, organized and dependable, which are all talents that make it advantageous for construction companies to hire them for anything from leading and overseeing a project to being part of a team that helps design, build or repair construction jobs.

The Armed Forces see more than 200,000 U.S. service members return to civilian life each year. As of April 2017, the veteran unemployment rate continues to remain below the national average at 3.7 percent. This is in part due to government programs and initiatives that have focused on hiring veterans over the years, including Hiring our Heroes and Veterans Opportunity to Work (VOW).

Many businesses in the private sector are also taking a leading role

hiring veterans. Related Companies, a company headquartered in New York City with extensive industry experience in development and construction, has created a veteran hiring initiative that focuses on employing men and women coming out of the Armed Forces.

In discussing the benefits of hiring veterans, Related Companies Senior Vice President Frank J. Monterisi, Jr. said that veterans "are very valuable to our company and the overall construction industry. The men and women who come out of serving our country have dedication, a strong work ethic and are exceptional problem solvers—which are great attributes to have when working on construction projects."

As a former Marine, Monterisi helps spearhead the veteran hiring program for Related. He said, "Construction projects are all about teams and working together. Veterans have great teamwork and can manage through demanding environments with efficient real-time, problem-solving skills. We are happy to bring them on, and will continue to keep this hiring initiative as a key priority for our organization."

While there are other programs similar to what Related Companies has in place, not all businesses understand how to optimize their veteran hiring programs to effectively hire this skilled workforce.

BUILDING A VETERAN HIRING PROGRAM

From insights into the background and experience of military talent to the development of veteran outreach campaigns, there are options for construction companies interested in creating or improving their veteran hiring programs. There is no perfect approach to hiring veterans, and traditional recruiting methods often fall short in reaching the right military talent.

Understanding the uniqueness of a veteran's job search situation and having programs in place to support him/her in the continuing transition into the civilian world go a long way in helping establish high-quality military candidate pipelines and filling positions faster. It is increasingly important for organizations to build a program, seek out advice and understand best practices within the industry. Key steps in helping build a program include:

- *Develop a plan with goals*—Understand the backgrounds of the veterans that best fit with your open positions, how many candidates you are looking to hire and the ultimate, desired outcome. This can help define your program. Establish goals that align with your overall business strategy, and make sure you have buy-in from the top executives within the organization.
- *Skills translation*—Frontline hiring managers often lack an understanding of a veteran's unique job search situation. To have a successful veteran hiring program, skills translation is critical. Unless veterans are applying for defense contracting and construction jobs, they must translate their military skills into civilian terms. Hiring managers do not always understand military terminology on resumes. If possible, assign someone from inside your company that has a military background as the leader or champion of the program to help hiring managers translate skill sets.
- *Best fit*—The best fits come from the junior officer or more senior, noncommissioned officer ranks, who also have a sincere desire and interest in the construction fields. They may have picked up their interest while growing up or from their experiences in the military. When that interest is combined with real leadership experience in demanding environments, an employer can hire some truly outstanding talent.
- *Onboard and transition appropriately*—Military personnel are accustomed to having a highly structured environment with chain of command and expectations of structure and protocol. If you can, reach out to veteran candidates before they make the transition into your business and start cultivating a healthy change to this new environment. This includes talking through expectations and the organizational structure. This, in turn, will result in a positive effect, higher retention rates and happier employees.
- *Culture component*—The companies that have the best records for retaining veterans also share certain cultural similarities with the military. The most important of these are camaraderie and teamwork, characteristics ingrained in the military culture. Many veterans are more successful at organizations that can help encourage this type of culture. If you have veterans on your team already, consider building a mentorship program to help positively impact this culture and teamwork.
- *Development*—Continuing education and training is a benefit that most veterans desire. In fact, advanced training is a key component for the military. This makes continued educational and training programs a critical factor in civilian work—particularly with mid-level and upper-level candidates. Many veterans are looking for an opportunity that will allow them to continue with their education while working. The most successful programs often are tied to "Leadership Development Programs (LDPs). LDPs can be very effective for retention and satisfaction amongst veterans.
- *Market your program correctly*—Employment branding is not always an area of focus for construction businesses. However, when it comes to military veterans, there are numerous organizations competing for them, so it is important to position your construction company as an attractive employer of choice. Seek outside assistance with this if you need it, in order to effectively reach and connect with military personnel.

While it is nice to hire veterans out of a sense of duty, the case is strong that the right veteran can have a powerful impact on your business. If you can build a solid program based on the previous points, you are well on your way to strengthening your company. CBO

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3 METHODS TO FINDING MORE SKILLED LABOR

Discover how your company can think big in a tight labor market

BY ED GRUSS

Growth in construction over the past 5 years was capped off by a record-setting 2016, which saw United States spending reach nearly $1.2 trillion—a 4.5-percent increase over 2015, according to a report by JLL Research. The outlook for 2017 is even more bullish, according to Wells Fargo's Construction Industry Forecast 2017, "with significant talk in all areas of the need for increased infrastructure spending. The industry made progress in 2016 with the passage of the long-term highway funding bill and the momentum felt by executives, so 2017 could prove to be the year in which all participants in the industry prosper." However, for many companies, the ongoing labor shortage in skilled trades could be an obstacle.

1. UNDERSTAND THE DEMAND

Nearly 70 percent of construction firms report they are having a hard time filling the hourly craft positions that represent the bulk of the construction workforce, according to a 2016 survey by the Associated General Contractors of America. Firms in certain geographic areas, such as the Midwest (77 percent) and the South (74 percent), report having even more difficulty. An article in The Cornerstone, a construction publication for workforce development professionals, notes that the staffing shortage is intensifying as other industries compete for the same limited pool of craft professionals, and urges the industry to invest in workforce development and become an industry of choice. Whether that will happen via additional apprenticeships, vocational schools and training programs is unknown, and it won't happen overnight. To take advantage of the opportunity for your company to expand, you need to overcome the labor hurdle in the short-term.

2. CAST A WIDER NET

Even in major metropolitan markets, it can be difficult to find the volume of workers with the right skill sets you need to complete large, high-revenue projects. Flexibility points toward a scalable workforce. Even if the talent does exist, it might not exist in the same location as the work that needs to be completed. Broadening the geographic range of your talent search, with the option of bringing in out-of-town workers to get your local work completed, makes it easier to find the

best candidates to choose from. Before you say no, know that other companies are already doing it. A CareerBuilder search for full-time traveling construction jobs in April returned more than 2,500 listings placed by a variety of builders and other companies. So ask yourself—can you build travel into your pricing? Using local labor is always the first choice, but what if the alternative is missing a project timeline or budget? It could be worth it from a return-on-investment (ROI) standpoint, especially for high-demand skill sets. A recruiting firm that has a deep pipeline of candidates and a national network of local offices can help ensure that you have access to the broadest range of locations, candidates and skill sets.

Once you have gone outside your market to pursue the best talent resources, you have also opened the door to expanding the geographic nature of the projects your business can profitably pursue. Put another way, when the accessibility of talent is less of an issue, you are free to compete for work in a variety of other markets and position yourself for future work.

3. PURSUE FLEXIBLE OPTIONS

Although you may specifically be looking for highly experienced talent, consider whether you can be flexible with the composition of your team's staffing. Can you build a team that incorporates fewer journeymen and more apprentices or helpers? In addition to addressing your current staffing need, you'll be providing crucial experience to build your own team of future experts.

You may not have the time to personally handle the process of sourcing, interviewing and hiring a work team of diverse expertise and skill sets to complete the projects you are working on currently. Consider using external resources that find not only individual candidates, but also have experience in assembling teams of all configurations.

Tackling the talent shortage is all about creative solutions. Seeking nonlocal talent and being flexible with the composition of your workforce can allow you to secure and fulfill new business, as well as widening your company footprint and helping you compete for business in new regions. The opportunity is there now, so make sure your company is ready to take full advantage. CBO

Ed Gruss is Aerotek's director of divisional operations, leading the E&E division, which provides both the management and craft labor talent needed to support construction projects from concept to completion, including engineering, design, construction, restoration and disposal. Contact Gruss at egruss@aerotek.com or 410-657-3228. Visit aerotek.com.



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Establish a Safety Mindset

6 tips to create a jobsite that can handle any problem thrown its way

BY AARON KLEINGARTNER

It is imperative to make safety a priority. As an equipment owner, it is up to you to communicate proper safety tips to promote a safer work environment, as well as reduce the risk of accidents that could result in injuries. Follow these tips to create a jobsite that is ready to handle any potential issues thrown its way, without ever missing a beat.



1. INVEST IN TRAINING & EDUCATIONAL RESOURCES

Perhaps the most important aspect of workplace safety is to ensure all equipment operators have adequate training. Whether it's classroom training or hands-on training, all operators need proper education and a general understanding of basic operating procedures for a machine's controls, gauges, signals, indicators and monitor displays. Review the manufacturer's operation and maintenance manual. The manual serves as a primary guide for proper heavy equipment operation and maintenance, and it is provided upon delivery from your local dealership. The manuals can be kept in the machine's cab for quick reference. An electronic copy may be available to access on a smartphone or tablet.

Prior to operation, make sure operators review safety and instructional decals. Some manufacturers strategically place decals on the interior and exterior of heavy equipment to alert operators about potential hazards, the consequences of injury and instructions on how to avoid a hazard. Replace decals that become worn, damaged or missing.

The Association of Equipment Manufacturers (AEM) safety manuals, available in print and digital formats, also serve as complementary references on proper operating practices. AEM is a trade association that provides global services to companies that manufacture equipment, products and services. In addition to listing general operating procedures, safety manuals also encourage operators to wear protective clothing and personal protection equipment to stay safe on the jobsite. Your local dealership can provide hands-on equipment training. Service technicians have the product knowledge and experience to help troubleshoot and maintain a machine. They understand and can articulate recent technology updates; and they can show you how to get the best performance from your machine.

2. EXPLAIN SAFETY GUIDELINES

To keep your operators safe on a jobsite, make sure they understand universal safety guidelines, such as wearing protective clothing and personal safety devices. Always check with the local jobsite

requirements to make sure your team complies with PPE standards. Standards may vary by location and jobsite situations. Always use a seatbelt and use the grab handles and steps that are provided for a three-point contact when entering and exiting the machine. Wear tight-fitting clothing that cannot get caught on working components or on the machine.

3. COMMUNICATE EQUIPMENT SAFETY FEATURES

Heavy equipment can be highly technical, especially with the evolution of smarter technologies, so it is crucial that your operators understand advanced equipment technologies. For instance, auto idle automatically reduces engine rpm when machine functions are not used for a predetermined amount of time. Auto shutdown, which helps reduce unnecessary noise by shutting down the machine's engine after a set period of inactivity, is another feature available on some models. With both technologies, less noise allows for better jobsite communication between operators and other workers.

Efficient and safe operation may include using rearview or sideview cameras, travel alarms/backup alarms, work lights and mirrors and a horn, depending on the attachments used, jobsite conditions or applicable jobsite rules. According to the United States Department of Labor, one of the leading causes of construction work deaths was being struck by an object. You can improve your visibility with cameras and reduce the risk of workers getting hurt or even killed on a jobsite.

Make sure you and your operators understand multifunctional display panels before operating. Display panels show critical machine data, such as speed, engine rpm, transmission gear, machine warnings, coolant temperature and transmission oil temperature. Some manufacturers offer display panels that provide machine parameters while showing the rearview or sideview camera image.

4. ASSESS JOBSITE CONDITIONS

Jobsites can be filled with potential dangers. Before your operators start work, all underground utilities should be identified and clearly marked. Use a service, such as 811, to have someone identify underground utility lines. Operators should ensure there are no bystanders and use barrier tape, traffic cones or gates to keep other individuals and equipment out of the work area.

5. MAINTAIN THE MACHINE

Promoting a safety mindset also means performing routine equipment maintenance. Before working, operators should take a few minutes to walk around their machine to look for potential problems:

- Check for broken, missing or damaged parts; make necessary repairs
- Check for damaged or missing safety or instructional decals
- Check tires for cuts, tearing or overinflation
- Check wheels for damaged rims and missing or loose wheel nuts or bolts
- Review tracks for broken or damaged pins, bushings or other track parts
- Replace worn or damaged tires or tracks
- Check the fluid levels
- Look for evidence of leaks, have them repaired and fill fluid to proper level
- Remove any flammable debris from the engine compartment and battery box, around exhaust components, under the machine and around rotating parts
- Inspect lights, cab glass, side mirror and rearview camera for damage
- Clean and inspect all walking surfaces, steps and grab handles
- Ensure that the rollover protective structure (ROPS) and falling object protective structure (FOPS) are in good condition

Equipment operators should be authorized to complete routine maintenance, and they should possess the necessary tools to complete the job correctly. Some



maintenance items may need to be completed by an authorized equipment dealership. Typical maintenance procedures, which are provided in the operation and maintenance manual, can be performed without any specific technical training.

6. CHOOSE THE RIGHT ATTACHMENT

Lastly, an important safety measure that can be overlooked is using the correct attachment for the task. Work closely with your dealership to determine the right attachment for the machine to best fit the application. Knowing the machine's specifications before pairing it with an attachment can help reduce operator hazards and increase jobsite productivity.

Your operators should be able to see the attachment working at ground level from a normal seated position in the cab. Being able to comfortably see the attachment out front, with good up-front and peripheral sight of the tires or tracks, and having an unobstructed view of the machine's rear are critical to proper machine operation.

Minimizing risk of injury is an equipment owner's job. That is why you should explain manufacturer's tools and instructions to your operators to ensure safe and proper operation on active jobsites. **CBO**

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How To Save Time & Money with Quality Cut-Off

5 considerations for investing in concrete cutting machines

BY THOMAS TECHOW

Concrete projects are present at most construction jobsites, and there is an obvious need for high quality products to do work more efficiently. But how should professionals go about choosing a new concrete cutting machine? When purchasing a concrete cutting product, there are several factors to consider to ensure a quality investment. There are five features all construction professionals should think about when investing in a new, handheld, concrete cut-off machine.



1. LIGHTWEIGHT

Thanks to new and ever-changing technology, cut-off machines come in smaller packages than ever before, but they still pack a powerful punch. Well-engineered, lightweight designs provide professionals with the power to get jobs done while helping to increase maneuverability. Lightweight products also reduce operator fatigue, which results in less downtime and less time spent on the job overall. Industry professionals want equipment that is easy to carry as they move around to different construction sites. Fortunately, manufacturers have met and continue to improve the market demand.

2. POWER & EASE OF USE

When searching for options, it is important to seek products that are ergonomically comfortable, but don't hold back on power. Luckily, the current trend is toward these types of equipment featuring simple operation and excellent maneuverability. For example, battery-powered products make it easy for users to obtain superior cutting performance and control. And while battery-powered products continue to gain popularity in the market, contractors still need the power and the cut-depth options that are available in gasoline-powered, handheld cut-off machines. Manufacturers have seen an increased interest in electronically controlled fuel injection systems, which provide for easier starting and a higher power-to-weight ratio.

3. DUST CONTROL

Construction regulations remain a topic of discussion. This elevated attention has triggered an increased focus on dust control and the inhalation of respirable crystalline silica. One of the most effective dust suppression techniques when cutting concrete is using water to bind the dust before it enters the air. Products with an onboard water connection and control help to suppress dust when wet-cutting

concrete. An optional, pressurized water tank provides water flow when a water hose is not accessible, and carts offer an accessory tank when utilized. Additionally, regulations prevent industry professionals from using gasoline-powered products indoors, due to exhaust gases, and require virtually every concrete cutting job to be done outside. A zero-exhaust emissions concrete tool is a valuable asset to a construction professional's arsenal of equipment.

4. VERSATILITY IN CONCRETE CUTTING CAPABILITY

Professionals should also consider purchasing a product that can make more than one type of cut so they are able to accomplish more on the jobsite. For example, deep cutting, an application used in renovations, is becoming a popular service offered by general contractors in addition to general construction, hardscaping and design-build. In previous years, subcontractors had to be hired for deep cutting tasks, adding to project costs and time. Owning one tool that can meet various cutting needs is ideal for industry professionals. Tools featuring a large maximum cut depth enable general contractors to offer these deep-cutting services themselves, which helps reduce internal costs.

5. TIME & COST SAVINGS

With any equipment purchase, professionals should look for products that help reduce their operating costs and time spent on each job. Battery-powered cut-off machines are a great addition to a fleet of gas-powered equipment because they feature instant start features that make switching between tasks easy. Construction budgets benefit from this timesaving feature as well. With reduced fuel and maintenance costs, and because battery equipment is easier to operate, there is less training required for employees.

Cut-off machines are a necessity on most, if not all, construction jobsites. Determining how to invest in this type of product can be challenging, though. Ensuring the equipment is lightweight, comfortable and delivers well-rounded performance is essential for professionals. Factoring in environmental and health concerns encourages users to invest in products like cut-off machines that not only get the job done, but get it done accurately and under budget. **CBO**

Thomas Techow is a product manager for STIHL Inc. Techow is responsible for industrial products, backpack blowers, handheld blowers and related accessories, as well as coordinating the development of key sales objectives and marketing strategies. Visit stihl.com



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A Primer on Fuel & Service Trailers

How to find the right trailer for your needs & monitor regulations & licensing

BY LUKE VAN WYK

Fuel and service trailers provide several distinct advantages to fleet managers and equipment owners. They cost less to own and maintain than stand-alone fuel and lube trucks. They can be hauled with trucks that most contractors already own. In many cases, they can provide significant capital and operating cost savings to companies who do not already own their own mobile method of bulk fuel or service fluid distribution. So, what trailer is right for each operation? Ultimately, that will depend on access to fuel, location of the shop where regular maintenance will occur and the size, type and fluid capacities of the fleet.



THE RIGHT TRAILER

When we talk about fuel and service trailers, we are essentially talking about two different animals. A fuel trailer is ultimately a trailer dedicated to bulk fuel distribution (typically up to about 1,000 gallons) that allows for other ancillary, add-on components/capacities, such as diesel exhaust fluid, 50 to 100 gallons of other service fluids and a rear utility box capable of holding everything from a simple tool box and greasing kit to a three-in-one welder generator with a retractable work bench.

A service and lube trailer is dedicated to preventive maintenance (PM) work or in-field repair, and is generally capable of holding up to 440 gallons of fluid in up to eight tanks with combinations of 25, 55 and 110 gallons (configurations will vary). This can include tanks for diesel fuel, oil delivery (engine or hydraulic), used oil reclamation, grease delivery, antifreeze, DEF and other fluids based on field maintenance needs. Diesel tanks on these trailers are typically secondary to the needs of the PM work.

Hauling and managing their own bulk fuel source provides contractors with more freedom in terms of fueling schedules and access to fuel. If a contractor controls its own fuel source without having to rely on a wet hose service or having to buy from a local retailer, it gives the contractor a greater ability to keep equipment and jobsites running on schedule. It also provides some significant improvements to the bottom line as it relates to fuel premiums, taxes and more. Some bulk fuel trailers will require placarding, a HAZMAT endorsement and a commercial driver's license (CDL). Others are available that allow the trailer to be towed without a HAZMAT endorsement and, in some cases, without a CDL.

Service and lube trailers are ideal for any decentralized operation that regularly performs PM work in the field, which provides fresh fluid outputs and waste fluid reclaim tanks and a centralized, organized

base of operations. These trailers almost always come outfitted with a combination generator/ air compressor or a three-in-one welder/generator/air compressor.

Additionally, as more and more Tier 4 Final equipment enters the field, these trailers can provide dedicated storage and distribution tooling for diesel exhaust fluid (DEF) that ensures its quality and purity, and ultimately the performance of the selective catalytic reduction (SCR) systems found on many of today's machines over 74 horsepower.

THE CASE FOR ROI

In both cases—as it relates to contractors who currently own a fuel or lube truck—these trailers offer a significantly lower initial purchase cost and a lower total lifetime cost of ownership related to maintenance and upkeep. Other than basic safety checks and filter maintenance, there are no long-term, intensive PM activities required of these trailers. And they can be hauled by trucks that already exist in the fleet and are driven to the jobsite each day. A fuel or service trailer represents one less large-scale fleet asset to maintain and manage compared to a stand-alone, dedicated truck. A fuel trailer provides significant financial advantages to contractors who do not currently own their own bulk fuel storage/ distribution methods.

- It eliminates the fuel premiums charged by the wet hose services that visit jobsites and top off each machine. These premiums vary from region to region, but can exceed $1 per gallon. In general, buying in bulk nets more fuel for less.
- Depending on access to off-road diesel, contractors may resort to using on-road diesel from retail outlets. The use of on-road diesel includes numerous state and federal taxes that—if not tracked and segregated explicitly—are very hard for contractors to recoup.
- A bulk fuel source is much more efficient than having a runner hauling 100 gallons of diesel at a time in the bed of a pickup truck. It is not an efficient use of employee time, represents unnecessary miles and wear on the truck, and leads to downtime if that single runner fuels numerous machines.
- In some cases, these trailers may not require a HAZMAT endorsement or a CDL, and can be hauled by most employees. Properly endorsed/ licensed drivers can be hard to find and often cost a premium compared to general labor.



These trailers can ultimately also become profit centers for the contractor when compared to how they currently manage fuel. For instance, considering current financing offers, a contractor who burns 300 gallons of diesel each week and pays a $.25 premium per gallon can essentially get a 460-gallon fuel trailer for free. If that contractor burns more than 300 gallons per week, that trailer is instantly paying the contractor back above and beyond the cost of the trailer. A service and lube trailer provides several cost benefits beyond eliminating the need for a stand-alone lube truck.

- Bringing the materials needed for PM to the field ensures that PM is performed on time and that equipment is running as intended.
- All fluids are stored and distributed in purpose-built structures that ensure fluid quality and purity.
- It simplifies waste fluid removal and disposal, which saves time and ensures proper handling.

EXPANDED CAPABILITIES

These trailers are often available with options that help aid in efficient fueling and field maintenance.

- *Lights*—Fueling and PM is often most convenient when the equipment isn't running, and that can often be at night or in the morning before the crew gets there and it is still dark.
- *Hydraulic jack*—Further simplify hooking and unhooking the trailer.
- *Utility box*—Whether housing a generator/air compressor or just serving as a space to store extra tools, contactors appreciate having the extra work area.
- *Greasing kits*—Arguably the most important daily maintenance item on any piece of equipment is greasing. These trailers offer a variety of options for simplifying this task.
- *Solar panel*—Recharge and run the battery on the trailer and other systems on the trailer with the power of the sun.
- *Toolboxes*—Organize the hand tools required to perform the work.
- *Welder/generator/air compressor/ generator*—Many service trucks or pickup trucks on a jobsite may have these tools, but these trailers offer configurations custom fit for these tools that further allow contractors to centralize everything in one trailer. CBO

Luke Van Wyk is the general manager of Thunder Creek Equipment, an Iowa-based manufacturer dedicated to bringing new and innovative solutions for handling fuels, fluids and maintenance in the field. Visit thundercreek.com.

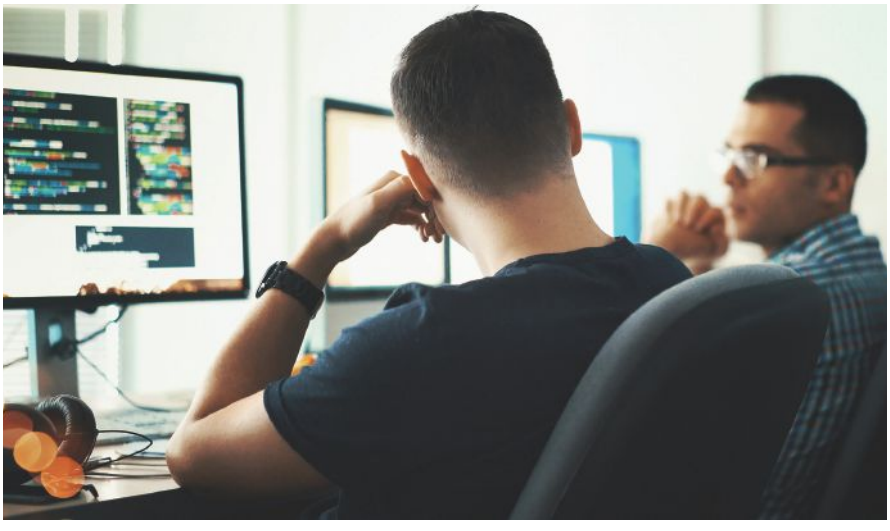
Best Supporting Role

Why technical support solutions play an important part in your success

BY ERIC REED

The construction industry has historically been a slow adopter of new technologies. However, labor shortages, stiffer competition and more cost-effective and accessible systems have stimulated greater innovation in this sector.

In the last decade, cloud computing and mobile devices have emerged to become everyday technologies that dramatically disrupt how we work. Yet while the latest innovations are meant to make our lives easier, they can also result in feelings of anxiety and confusion. If a person has relied on manual systems or processes for years, it can be unnerving to move to a new system, no matter how much time or money it saves long term. Additionally, when the technology is intrinsic to the business and will be used daily, it is important that everyone has adequate training and assistance regarding how to use the system.



TECHNICAL SUPPORT

When virtually every software imaginable is available in the cloud as a subscription-based offering, this shift has also increased the volume and the way of asking for technical support. Whether it is a mobile device, software or electronic hardware, technical support services aim to deliver adequate training, customization or troubleshooting, so that anyone can use the technology more effectively. Luckily, there are more options than ever available for tech support and customer service.

PHONE CALLS

The telephone is arguably the least efficient medium for tech support. It ties up two people, and often results in an escalation, call back and phone tag. The other pitfall of phone calls is the "tech-support rage" that is well known in the cable or phone industries. It can seem like an endless, tech-support loop; listening to on hold music, talking to automated systems and being transferred to multiple call agents, with no end in sight.

Fortunately, for those who still prefer to pick up the phone, this option is improving. In addition to further training for agents to handle more complicated inquiries, applications like Lucy Phone and Fast Customer will wait on hold for you and call you when an actual person picks up. There is no need to ever listen to hold music again.

EMAILS

Research firm the Radicati Group estimated the number of emails sent per day to be around 269 billion, which means that 2.4 million emails are sent every second. While many people want to veer away from email overload, it's still one of the simplest and most common ways of communication in the workplace. One of the benefits to using email is that there is a digital trail

of all correspondence, which ensures that there is a record of the issue from start to finish. On the supplier's side, emails ensure a helpdesk ticket is opened so that the tech support team can track the problem and monitor how long it took until closure.

INSTANT MESSAGING & CHATBOTS

More technology companies these days are using instant messaging (IM) or chat options to communicate with customers. IM can provide quick answers to questions when the answer is difficult to find online. Because these messages tend to be briefer than voice queries or emails, it is also possible for service agents to handle multiple messages simultaneously, and may even rely on having scripted answers available for frequently asked questions in order to more swiftly resolve an issue.

Recently, there has been an explosion in chatbots (otherwise known as virtual agents or virtual assistants), which are computer programs that can simulate conversation with a person online. These chatbots can handle basic requests, and companies are creating a long list of common questions so these bots can respond to customers immediately. For more complicated requirements, companies are also setting up alert systems within the chatbot so a customer support person can take over, providing a seamless, satisfactory experience for the customer.

SOCIAL MEDIA & ONLINE COMMUNITIES

Most businesses that provide a product or service these days will have a social media presence, especially on Twitter, LinkedIn and Facebook. For some people, sending a tweet or message is the preferred option, particularly when escalating a concern, as it has potential to be seen by a much wider audience.

In some instances, there are forums available online where people can pose a question and have customers or industry experts provide recommendations or solutions. These can be either hosted by the company itself as a customer portal or as a group on a third-party website. For example, LinkedIn has a vast number of groups on various topics, organized by job roles and industries. Meanwhile, Quora is a general, question-and-answer site with a community of users who cover virtually every topic imaginable.

ANALYTICS & ARTIFICIAL INTELLIGENCE

Today, technology companies are increasingly relying on analytics built into their systems to evaluate customer support processes. Details, such as the number of queries, types of queries, response times and customer satisfaction rates, are all being scrutinized so that these businesses can constantly improve.

Some companies are using tools that can guide a person through what they need to do. WalkMe is a commonly used innovation that "layers" on top of any system, and serves like an online GPS so that a person doesn't need to learn how to use the technology.

Rather, the technology learns about the individual's behavior, job function and technical familiarity, so that he/she can accurately and efficiently use the system.

MORE THAN SUPPORT

As innovations available to the construction industry become more sophisticated, so, too, do the multichannel options for technical support and customer service. The best channels are those that can not only effectively answer specific questions, but can also continue to improve the speed and efficacy of resolving those inquiries.

While no product or service is perfect, there will always be a need for tech support for businesses. Ultimately, however, the best gauge of tech support success is the experience every employee has when using the system. **CBO**

Eric Reed is the vice president of business development at Timesheet Mobile, a GPS-enabled time tracking and scheduling company that helps businesses manage their mobile workforce. Timesheet Mobile's solutions are used by thousands of employees and mobile workers worldwide, in industries as diverse as construction, transportation, healthcare and many others. Visit timesheetmobile.com.





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The Ransomware Scourge

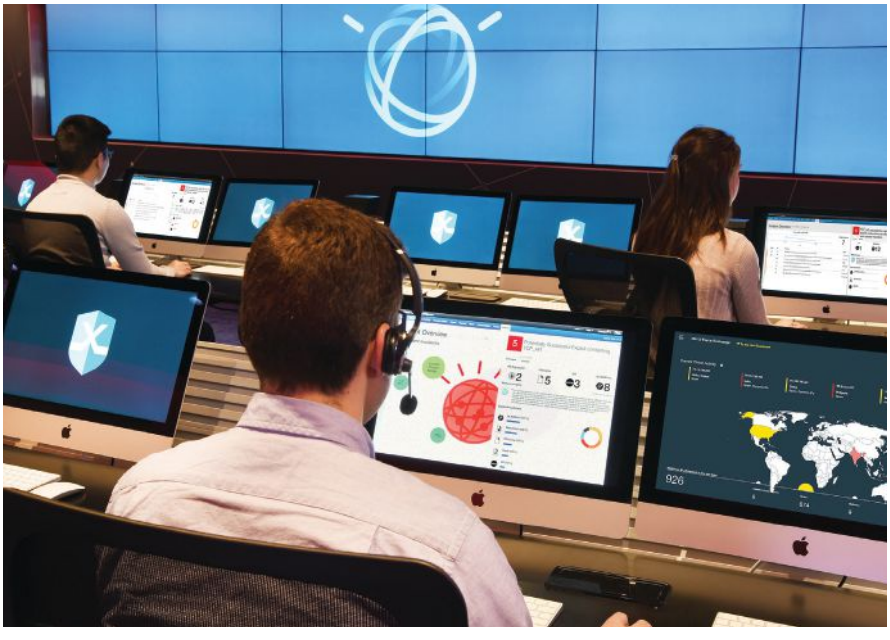
Learn why 61 percent of businesses were hit in 2016

BY JOE DYSART

While ransomware has long been an epidemic, the latest figures are chilling: 61 percent of business surveyed last year said they had been hit by ransomware, according to a CyberEdge Group study (cyber-edge.com/cdr/).

"Security is always an arms race," said Patrick Traynor, who is an associate professor in computing at the University of Florida and specializes in anti-hacker software.

Construction businesses that have been devastated know too well how it unfolds. You wake up one morning to find a message on your computer screen announcing that your computer has been hacked. If you want your encrypted files back, the message informs you that you will need to pay the hacker for the privilege.



"The findings of CyberEdge's latest Cyberthreat Defense Report are consistent with what we are seeing in the industry," said Mike Rothman, president of Securosis. "There are more attacks, more sophisticated malware and more complexity ahead relative to skyrocketing cloud usage."

This difficulty is compounded by the global security skills shortage and the ongoing inability for most employees to not click on links that will compromise their devices. Perhaps the most sobering revelation was the breadth of organizations surveyed in the study. All told, CyberEdge researchers surveyed 1,100 security decision-makers representing 19 industries in 15 countries. Each respondent employed at least 500 employees.

Moreover, CyberEdge is not the only research firm documenting a major spike in ransomware victims. Information Security Media Group and Trend Micro came out with their own 2016 study (databreachtoday.com/whitepapers/2016-ransomware-response-study-w-2983), which found 53 percent of United States firms surveyed reported they were hit with ransomware. Nineteen percent of organizations said they are hit with ransomware attacks more than 50 times each month.

"Ransomware became one the highest profile challenges facing cybersecurity professionals in 2016," said Tom Field, vice president of editorial at Information Security Media Group (ISMG). "Based on our research, we feel that nothing indicates a slowing down of this problem. In fact, we may have only scratched the surface. With organizations reporting that their own employees are their greatest threat exposure, I expect a drastic increase in training, awareness and vigilance across all

organizations in 2017." Not surprisingly, the greatest consequence of ransomware was significant business disruption, according to ISMG. Fifty-nine percent of victims said their businesses had been disrupted by the attacks. And 28 percent said their reputations had been damaged. The two studies were echoed by a third study released by SonicWall (sonicwall.com/whitepaper/2017-sonicwall-annual-threat-report8121810/), which found that 638 million businesses were hit by ransomware in 2016, up from 3.8 million attacks in 2015.

A key factor behind the spike was the proliferation of "ransomware-as-a-service," according to Bill Conner, CEO of SonicWall. The term refers to ransomware-to-go software packages, which are easy to buy on the web. They make it simple for criminals with even extremely limited technical knowledge to become hackers.

Also contributing to ransomware's rise has been the growing reliance on the internet of things, or devices businesses have connected to the internet, such as surveillance cameras, phone systems, security systems, smart terminals and smart vehicles. Turns out, the computer software on all those devices is by-and-large unsecured.

So what is a construction business to do? With a majority of organizations already victimized, it is imperative to marshal your cyber defenses. Below are some best practices recommended by information technology security experts.

- *Enlist your employees in the fight*—Fully educating your employees about the hacker threat is your first line of defense against ransomware. Indeed, 60 percent of respondents in the ISMB study saw susceptibility of employees as the primary entryway that hackers use to break into business computer systems. Essentially, new employees need to be given a crash course on the common ploys hackers use to infiltrate company systems via the ransomware links that they send in emails or with the seemingly innocent requests they make for IDs and passwords over the phone. Moreover, current employees need to be monitored by firms like Knowbe4.com, which will test your staff with common hacker ruses regularly, and send you a report on which employees are falling for the hacker tricks.
- *Create a system image of your computer that features no data*—While it is all the rage these days to create continuously updated system images of computers, complete with data, it is better to also create a separate system image featuring no data. If you create a system image featuring no data, before you ever link the computer to the internet, you will know that particular system image is completely free of ransomware, malware and other viruses. Once that computer is connected to the internet and you begin generating data on the machine, there is always a chance ransomware gets downloaded onto it and is simply lying in wait for a time to strike. If that strike happens, you will be able to reformat the PC with the system image you have that features no data, just your operating system and applications.
- *Backup, backup and backup*—Now, more than ever, IT security experts are strongly recommending construction businesses to create three backups of their data. The idea is to have your data continuously backed up to a data storage unit premises, and then have a second copy of that backup go to the cloud. The third backup, often referred to as "cold" storage, should be made daily to a storage device that is never connected to the internet. In practice, that means disconnecting your computer or network from the internet once a day and backing up all newly generated data from that day onto the cold storage device, disconnecting that updated storage device from your computer system and then reconnecting your computer system.
- *Use military-grade wiping software if you have been hit*—If you've been hit by ransomware or some other virus, you can use military-grade wiping software from firms like WipeDrive Small Business to wipe your hard drive clean of the malware. It's the same kind of software used by the U.S. Department of Defense to restore infected hard drives, and it gives you advanced options, including network wiping, remote wiping and advanced reporting.
- *Consider taking a hammer to your hard drive if you've been hit*—Given that ransomware is a never-ending battle, hackers are well aware of what tools businesses are using to thwart their software, and they are working diligently to neutralize those protections. So if you have been hit by ransomware and you know it only impacts one computer, it may be easier to simply remove the hard drive and replace it with a brand new hard drive. The move is much safer than trying to remove ransomware from a hard drive, which could take hours for your IT person to accomplish. Even then, your IT person will never know for sure if the ransomware has been completely removed from your computer.
- *Look to artificial intelligence for help*—Supercomputers, like IBM's Watson, are being trained to leverage artificial intelligence in the fight against ransomware. "Combining the abilities of man and machine intelligence will be critical to the next stage in the fight against advanced cybercrime," said Denis Kennelly, a vice president of development and technology at IBM. **CBO**

Joe Dysart is an internet speaker and business consultant based in New York City. Contact him at joe@joedysart.com or 646-233-4089. Visit joedysart.com.



New & Innovative Products

Selected by the *Construction Business Owner* editors



1



2



3



4



5

1 BLUETOOTH HEADSET

Honeywell announced a new protective headset that allows workers to stay connected while continuing to protect hearing on noisy jobsites. The new Honeywell Howard Leight Sync Wireless protective earmuffs integrate Bluetooth wireless technology, allowing workers to talk on the phone, connect with coworkers, get instructions and perform tasks without sacrificing hearing protection in noisy or dangerously loud environments. The headsets connect wirelessly via Bluetooth to most smartphones and features a boom microphone that enables workers to answer calls and carry on conversations while keeping the phone safely in a pocket. The wireless format eliminates the need for cords or cabling that can pose trip, slip or hand hazards.

honeywell.com

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2 CORDLESS HAMMER DRILL/DRIVER

Hilti has introduced its new cordless hammer drill/driver SF 6H-A22 ATC, which offers improved performance-to-size ratio and is the first cordless drill to incorporate Active Torque Control (ATC) for greater operator control. The ATC on the Hilti SF 6H-A22 ATC senses and reduces potential kickback by shutting off the tool if the housing begins to rotate too quickly. The SF 6H-A22 ATC also takes advantage of Hilti's new 22 V CPC Li-ion Battery technology to deliver more work per charge, improved reliability and better workforce productivity. It can also operate using Hilti 18 V batteries. Hilti's cordless hammer is built using all-metal gearing for high-torque performance in a variety of applications and materials. Its two gear settings deliver a 480 no-load speed in gear 1 and 1,600 rpm no load speed in gear 2. It also has a hammering frequency of 28,800 beats per minute.

hilti.com

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3 SAFETY HANDRAIL

Superior Industries Inc. has released a new conveyor component accessory, the Safety Handrail. Universally mounting to all idler frames, Superior's Safety Handrail helps prevent entanglement in belting. Depending on local MSHA standards, operators can use the Safety Handrail in place of an e-stop cable. The handrail has a diameter of 1¼ inches and is available in 8- or 10-foot lengths. Operators receive assembly hardware included with the part when they order.

superiorindustries.com

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4 PROJECT MANAGEMENT SOFTWARE

InEight has announced the availability of InEight Project Suite. InEight Project Suite provides expandable, integrated solutions that improve operational efficiency, increase project visibility and minimize risks from concept to construction to completion. InEight Project Suite includes configurable modules that instill a disciplined and effective approach to winning work, building work and protecting project resources. The suite integrates with existing software and expands where and when applications are needed.

ineight.com

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5 POWERFUL DEMOLITION MACHINE

Brokk introduces the new Brokk 500, which features 40-percent more demolition power than the Brokk 400, as well as the Brokk SmartPower electrical system, a more powerful breaker, extended reach and serviceability. The machine delivers 1,086 foot per pounds with each blow of the 1,510-pound Atlas Copco SB 702 hydraulic breaker. It adds more length to Brokk's signature three-part arm system, now reaching 24.3 feet vertically and 23 feet horizontally, making it ideal for work where extra reach is important. Still, the Brokk 500 retains most of the compact proportions of the Brokk 400.

brokk.com

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6 SAFETY HARNESS

The **FallTech** Journeyman FLEX Aluminum and Steel harnesses are rated to 425-pound capacity and comply with OSHA Regulations and ANSI Standards. New design elements, including proprietary CamLock torso adjusters, allow quick and secure adjustments with strategically positioned Hip D-rings to optimize work positioning. Available with aluminum or steel hardware, both harnesses offer enhanced padding with air mesh linings for added comfort throughout the day.

falltech.com

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6

7 ELECTRONIC POKERS

Chicago Pneumatic Construction Equipment now offers a new concept in its vibration equipment lineup with the launch of electronic pokers. The quiet, safe and efficient Vektor 12K electronic pokers provide high centrifugal force, making them suitable for use across a wide variety of high-to-low slump concrete applications. All Vektor models feature a high-frequency motor-in-head poker and a built-in frequency converter (60 to 220 hz), which allows them to be plugged directly into a standard 115 V wall socket. The concrete pokers are available in two versions: a standard model equipped with a 16-foot hose for vibrating concrete walls, bridges and beams and a devibrated E-version specifically designed for flooring applications.

cp.com

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7

8 PORTABLE GENERATOR

Generac Power Systems introduced its new XC Professional Series 6500- and 8000-watt portable generators. At the heart of the XC Professional Series is Generac's new 426-cc G-Force engine. This engine utilizes full pressure lubrication, reducing engine component wear for longer life. The engine's full-response air intake and targeted heat dispersal design ensure effective cooling. The XC models feature a heavy-duty, fully wrapped, 12-gauge steel tube X Frame that protects the engine, alternator and fuel tank from damage on unforgiving jobsites. Instead of a lifting eye that is susceptible to slipping, the XC Professional Series units offer a steel lifting pocket that is designed to fit most forklift and telehandler blades. The steel lifting pocket makes it easier to lift and transport the generator on a construction site. Additionally, the impact-resistant fuel tank design features recessed tank edges and a dedicated rocker zone that allows the generator to sway as it is transported without damaging the unit.

generac.com

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8



9



10

9 MIDSIZE RUBBER TRACK CARRIER

Morooka USA has introduced a new midsize rubber track carrier, the MST700VD. The new carrier sports a 93-horsepower, Kubota V3800 Tier 4i engine for plenty of dependable power in tight spaces. It also provides a maximum payload of 9,460 pounds in a package that is less than 15-feet long, making it well-suited to construction-related markets. A rotational reverse seat contributes to operator safety and improved visibility, especially when driving in reverse. The seat comes standard with the MST700VD, as does a canopy that is both ROPS- and FOPS-certified. Rubber tracks offer both excellent traction and the low ground pressure necessary in sensitive terrain. The new MST700VD only exerts a ground pressure of about 3.6 psi (empty).

morookacarriers.co

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10 HEAVY-DUTY PICKUP TRUCK TIRE

Bridgestone Americas Inc. (Bridgestone) announced the company is expanding its Dueler tire line to include an all-new, heavy-duty offering for pickup trucks. Specially engineered for towing and hauling heavy loads, the Bridgestone Dueler H/T 685 tire delivers long-lasting, premium performance across every season. The Bridgestone Dueler H/T 685 is built with heavy-duty steel belts and two-ply polyester construction. The tire features an innovative, new tread-to-road contact footprint that allows it to adapt to the load and promotes even tread wear. The tire's tread pattern also features wide grooves to channel water away from the tire and help resist hydroplaning in wet conditions. The tire is now available in 17 sizes.

bridgestonetire.com

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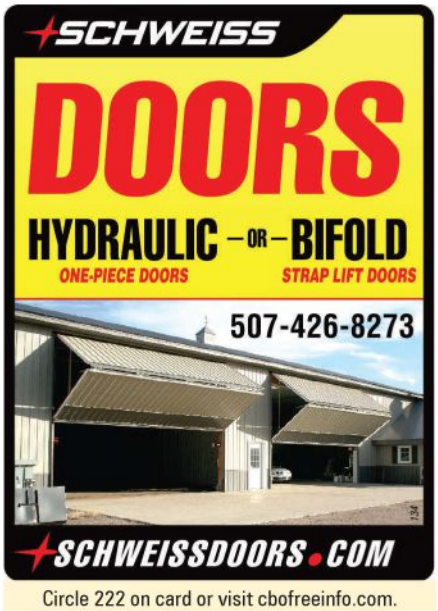
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Advertiser Name	RS#	Page
Accella Tire Fill Systems	215	46
Advantage Funding Corporation	216	46
APWA	201	17
ClearSpan Fabric Structures	217	47
Dee Concrete	202	41
ExakTime	203	IBC
Foundation Software	204	IFC
GPS Insight	205	3
HardHat Presentations	206	21
ICUEE	207	19
JCB	209	BC
John Brown and Sons		37
Keytroller Inc	218	47
Mel Northey Co. Inc.	219	46
National Construction Rentals	210	37
Payroll4Construction.com	211	5
Procore	212	7
RammerRack	220	46
Roof Hugger	221	47
Schweiss Doors	222	47
Sedgwick Law	213	23
Shell Oil / Lubricants	214	1
SkyBitz Local Fleets	223	46
Toolhound	224	46
VP Buildings	200	15

Annual Value of Construction Put in Place

2015/2016/April 2017 Annual Rate Comparison

This chart compares the two previous years' total value of construction put in place to an annual forecast based on April 2017 figures. (Millions of dollars. Totals may not add up perfectly due to rounding.)

	2015	2016*	April 17
Total Private Construction	**827,345**	**909,664**	**911,644**
Residential	433,108	475,167	476,395
Nonresidential	394,237	434,496	435,250
Total Public Construction	**296,153**	**279,277**	**268,689**
Residential	5,909	6,592	5,497
Nonresidential	290,244	272,685	263,192
TOTAL Construction	**1,123,497**	**1,188,941**	**1,180,333**

**Seasonally Adjusted Annual Rates. Source: U.S. Census Bureau*
***2016 numbers revised for annual report*

$1,218,509

APRIL 2017 TOTAL ANNUAL VALUE OF CONSTRUCTION PUT IN PLACE

"Probably even better news for the construction outlook is that **new project work** coming into architecture firms has seen **exceptionally strong growth** so far this year," said AIA Chief Economist Kermit Baker, Hon. AIA, Ph.D.

AIA Architectural Billings Index (ABI)

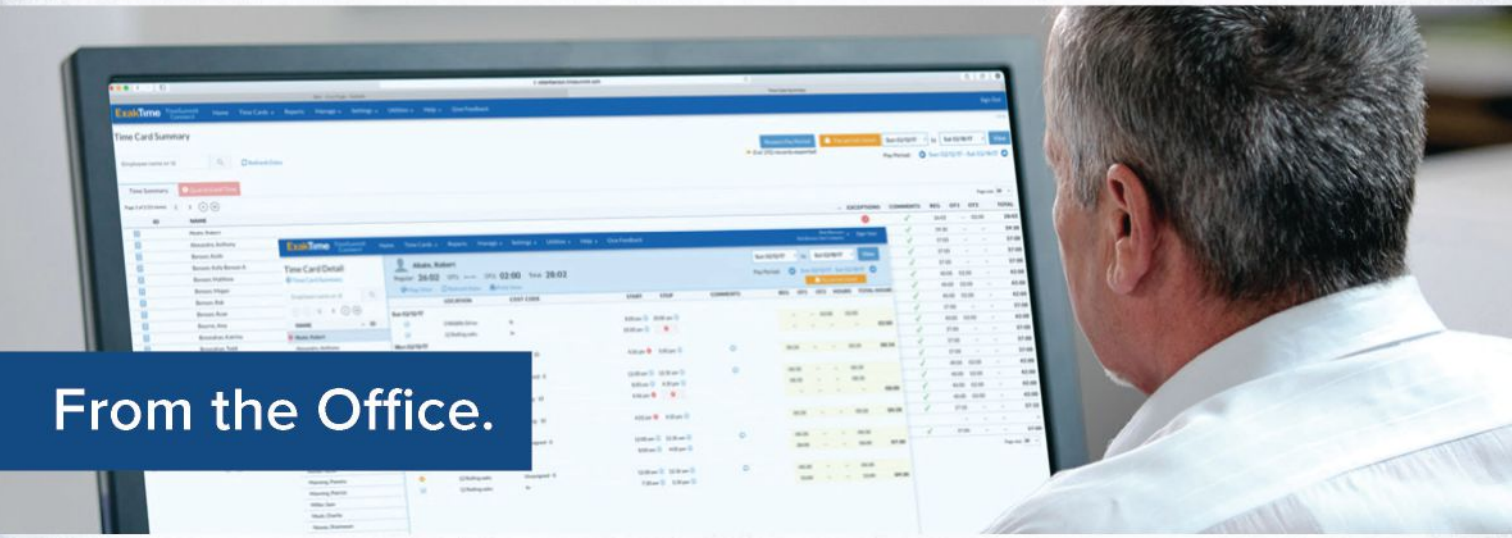
National			*Regional - Billings				*Sectors - Billings			
Month	Billings	Inquiries	Northeast	Midwest	South	West	Multifamily Residential	Commercial/ Industrial	Institutional	Mixed
Nov-16	50.6	59.5	50.8	50.9	51.3	48.6	51.7	50.4	49.5	51.3
Dec-16	55.6	57.6	54.0	54.4	53.8	48.8	50.6	54.3	53.3	51.9
Jan-17	49.5	60.0	53.0	52.4	54.2	48.8	48.1	53.4	54.6	48.1
Feb-17	50.7	61.5	50.0	52.4	50.5	47.5	49.3	48.9	51.8	49.2
Mar-17	54.3	59.8	52.4	54.6	52.6	50.2	54.6	49.8	52.9	53.7
Apr-17	50.9	60.2	50.7	53.3	55.3	50.9	49.9	52.4	54.0	53.4

For more information on the index or to subscribe to the complete historical data going back to 1995 for your internal analysis, **please contact economics@aia.org.** The ABI presents monthly construction billings data, using a base score of 50. A score of more than 50 indicates a growth from the previous month, and a score of less than 50 indicates a contraction from the previous month. A score of 50 indicates no change. Source: The American Institute of Architects (AIA), Architecture Billings Index (ABI).

*Regional and Sectoral indexes are three-month moving averages, due to small sample size. All data is seasonally adjusted.
**Every January the AIA research department updates the seasonal factors used to calculate the ABI, resulting in a revision of recent ABI values.

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