

State of the Industry: Needs and Preferences of Electrical Contractors

Pumping up profits in an era of constant change and challenges

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Table of Contents

- 2** Introduction
- 4** BUSINESS — What's Holding You Back?
- 10** EDUCATION — Putting the Edge in Knowledge
- 15** TECHNOLOGY — Get Smart! – On the Mobile Move
- 24** Methodology & Respondent Profile

Introduction

In a perfect world, electrical contractors always finish all their jobs on time and within budget. They never wrangle with change orders, skilled labor shortages or product delivery delays. The sun is always shining; projects stay on schedule, and electrical contractors turn a significant profit on every job. Of course, real-world electrical contractors face their share of obstacles on nearly every construction project. Most consider the “perfect” job a myth. Change is constant on today’s fast-moving construction projects, and companies must be prepared for anything and everything that comes their way.

Picture a small electrical contractor, which has just been awarded a contract to power and illuminate an office building. The estimator prepares a low-ball bid without considering potential project delays, weather issues and change orders. After winning the job, materials are delivered late or not at all, a severe storm closes the work site down for several days, and the owner requests several changes that significantly impact the electricians’ workload and schedule.



To keep on track, the company is forced to ramp up its field workforce. The contractor, however, is not alone in its search. Case in point: 70% of contractors are having a hard time finding skilled labor amid the growing construction demand, per a recent Associated General Contractors of America survey.

Meanwhile, the owner expects the contractor to get the job done on time and within budget and absorb or share cost overruns. If

the company fails to meet its deadline or goes way over budget, it can negatively impact profitability and hinder its ability to secure repeat business.

Throughout the electrical contracting industry, companies face a plethora of pain points—from change orders to material delivery delays. As such, contractors must be able to overcome obstacles to stay in business and not be left behind. To be able to compete in today's electrical contracting industry, companies often invest in technology and training, according to the 2018 State of the Industry Report sponsored by Electrical Construction & Maintenance (EC&M) magazine and ABB.

The following report analyzes the trends in three distinct areas: 1) business, 2) education and 3) technology. A total of 745 readers of EC&M magazine including installers, executive managers, engineers, project managers, facilities managers and purchasing employees shared their views on everything from mobile device usage to training preferences. This snapshot creates a picture of what today's electrical contractors are looking for to grow their businesses and succeed in the marketplace.



BUSINESS — What's Holding You Back?

In today's electrical contracting industry, companies are seeking ways to grow their businesses. Unfortunately, many companies face roadblocks along the way.

For the 2018 State of the Industry survey, respondents were asked to select their top two factors impacting business growth from the following options (**Fig. 1**):

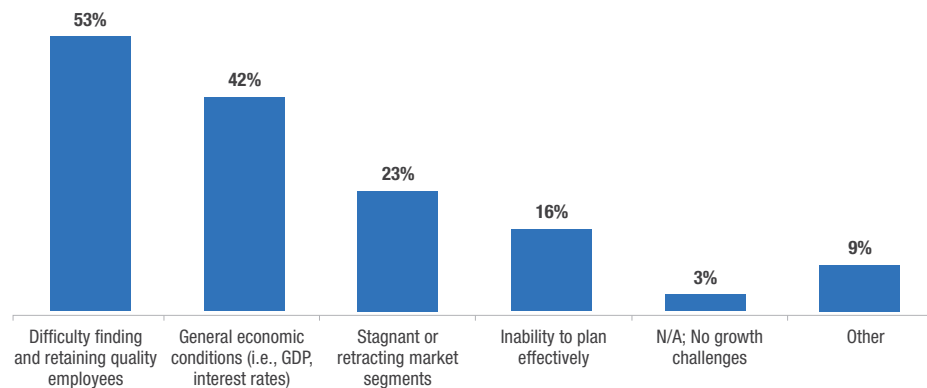
- difficulty finding and retaining quality employees
- general economic conditions
- stagnant or retracting market segments
- inability to plan effectively
- no growth challenges

Finding and retaining quality workers topped the list. More than half of the respondents—which varied from companies with 10 or less employees up to contractors employing 1,000 or more—voiced concerns about the skilled labor shortage.



Figure 1: Factors Negatively Impacting Business Growth

Which two factors are having the most negative impact on the growth of your business? *Base: All respondents; up to two answers permitted (n=745).*





The results, however, varied by company size (**Fig. 2**). About 65% of the respondents working for mid-sized companies employing between 50 to 499 considered employee recruitment and retention as their number one challenge. Also, those aged between 45 and 54 years old also marked this choice as their top obstacle impacting business growth.

Meanwhile, the smaller companies considered general economic conditions, such as the GDP and interest rates, more of a pressing issue. Also, those aged 65 years and older considered the economy as a significant issue constraining expansion.

Coming in third place was stagnant or retracting market segments, which 26% of the enterprise respondents reported as a significant problem, compared to 23% for both the small and mid-sized companies.

While every electrical contracting company strives to earn high margins, stay on track and meet deadlines, challenges sometimes derail or slow down the path to profitability. A wide range of respondents—working for companies with 100 employees or less all the way up to electrical contractors employing 1,000 or more—named change orders as the top factor impacting on-time and within-budget job completion (**Fig. 3**).

Figure 2: Factors Negatively Impacting Business Growth by Company Size

Which two factors are having the most negative impact on the growth of your business? (Select up to two.) *Base: Small company respondents (n=460); Mid-size company respondents (n=156); Enterprise company respondents (n=120).*

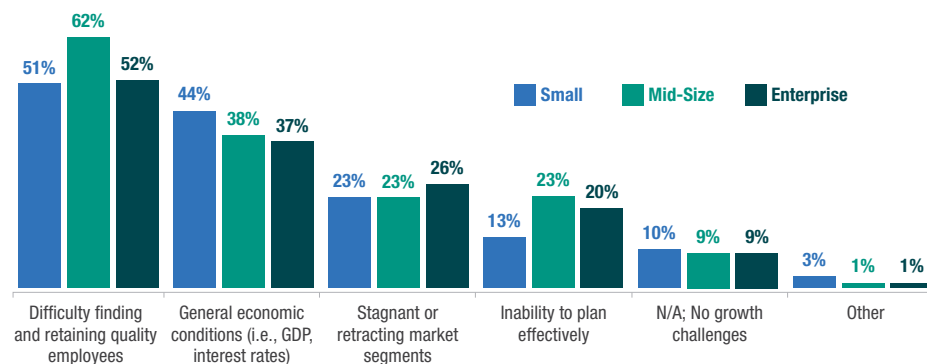
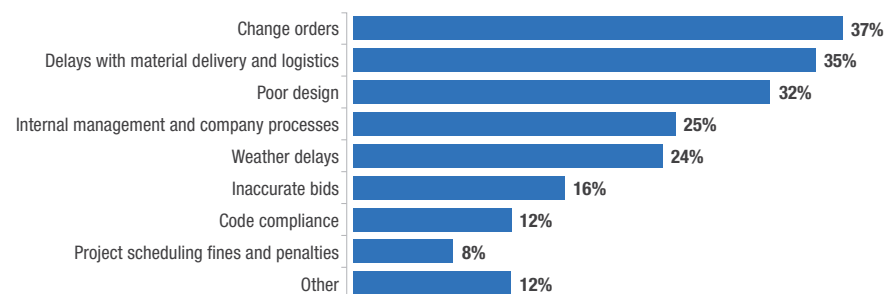


Figure 3: Factors Impacting On-Time and Within-Budget Job Completion

Which are the most common factors having the greatest impact on your company's ability to get a job done on time and within budget? (Select up to three.)

Base: All respondents; up to three answers permitted (n=745).





Oftentimes, on a job, the scope of work can suddenly change, impacting electrical contractors' plans for timely completion. For example, an owner may decide to add in an extra operating room during the construction of a hospital building, which, in turn, demands more work from not only the electrical contractor, but also other trades on a project. When anything changes—no matter how small—it can snowball and impact all of the field workers, from the electricians to the plumbers. This problem can be exacerbated when electricians must wait on other trades to complete their portion of the project, causing further delays.

While electrical contractors often allow some time within their schedules to accommodate change orders, it's not always possible to predict every change that will come their way. To please the owner, they need to find a way to get more work done in a tighter time frame. To accomplish this feat, they may need to ramp up their field workforce or organize shift work so the electricians can work around the clock – but that can drive higher overall costs.

At the same time, however, a high amount of change orders can be a mixed blessing on a construction project. Some electrical contractors can profit from these changes, but only if the revisions are requested by the general contractor (GC) or owner and are no fault of the contractor.

When anything changes—no matter how small—it can snowball and impact all of the field workers, from the electricians to the plumbers. This problem can be exacerbated when electricians must wait on other trades to complete their portion of the project, causing further delays.

Secondly, an electrical contractor must have enough wiggle room in its schedule to quickly accommodate the changes on the project, and it must have the labor, materials and resources to satisfy the demands of the change orders without slowing down the schedule.

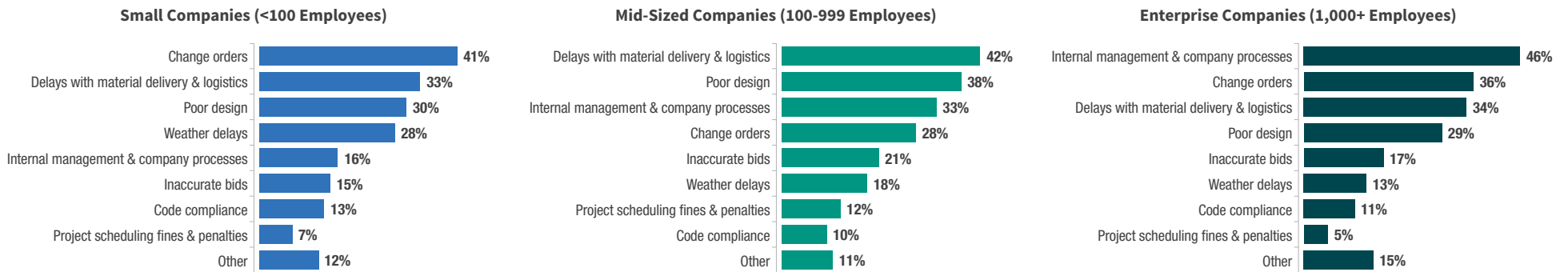
Another top factor hindering project completion related to delays with material delivery and logistics. Obviously, without the proper materials on site, electricians can't get their work done on time. To circumvent this problem, electrical contractors often have well-stocked warehouses and material trailers and established relationships with electrical distributors and manufacturers, which can frequently deliver any product needed in a pinch.



Figure 4: Factors Impacting On-Time and Within-Budget Job Completion by Company Size

Which are the most common factors having the greatest impact on your company's ability to get a job done on time and within budget? (Select up to three.)

Base: Small company respondents (n=460); Mid-size company respondents (n=156); Enterprise company respondents (n=120); up to three answers permitted.



Following closely behind the problem of material delays, poor design also ranked in the top three factors slowing down a project. The quality of electrical contractors' installations depends on the quality of the designs, and if the electricians discover an error in a set of drawings out in the field, it can lead to a significant slowdown. Even worse, if electricians install infrastructure based upon wrong or incomplete drawings, the entire quality of the job can become compromised.

Other factors impacting successful project completion were internal management and company processes and weather delays. If an electrical contractor doesn't have streamlined procedures, strategies for continuous communication and an organized workflow, it can push a project off track.

In addition, electrical contractors have no control over the weather, and oftentimes, they may not be able to work in a particular location due to severe weather events such as hurricanes or ice storms.

As with other business challenges, the factors impacting project completion varied by company size (**Fig. 4**). All companies however, listed material delivery and logistics one of the top three factors impacting a project budget and schedule. The small companies considered change orders to be more of an issue, while the enterprise companies named internal management and company processes as the top factor hindering success of a job.



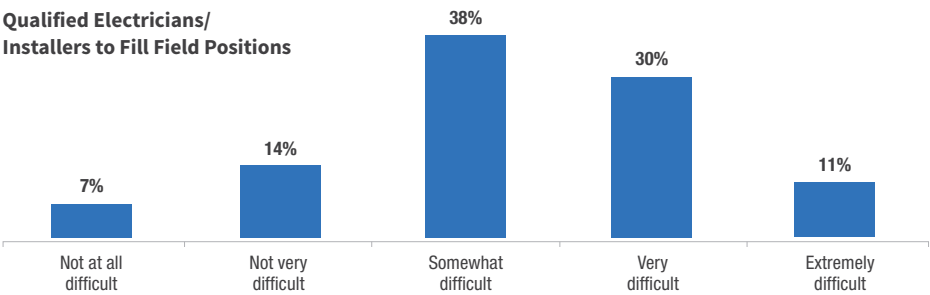
Along with these factors, finding quality professionals is also a top challenge for electrical contractors regardless of company size (Fig. 5). The respondents reported that it was just as difficult to find qualified electricians/installers as managers to fill leadership positions.

During the economic downturn, many construction workers left the workforce, never to return. As such, the entire construction industry has suffered from a skilled labor shortage, worsened by the retirement of the Baby Boomers. As veteran electricians leave the industry, there aren't always young electrical apprentices ready and waiting to fill their work boots.

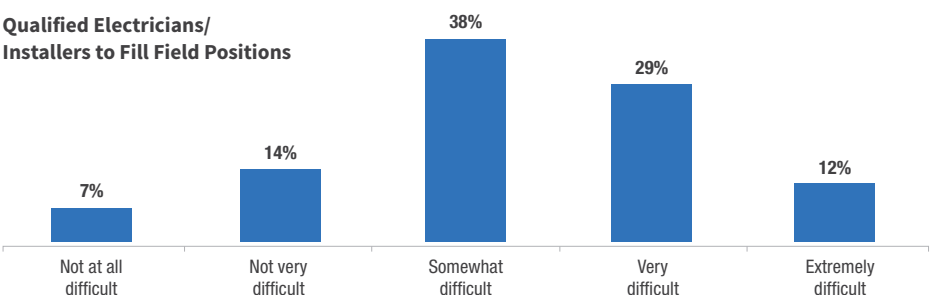
In today's tech-focused world, many young Americans are choosing career paths other than construction. Many electrical contractors, however, are doing their part to educate high school students about the opportunities outside of a four-year college education and office job. By entering an electrical apprenticeship program, students can often earn money, land a job upon program completion and completely avoid racking up any debt.

Figure 5: Difficulty of Finding Qualified Professionals

How difficult is it for your company to find...? Qualified and skilled electricians/installers to work in the field. *Base: All respondents (n=745).*



How difficult is it for your company to find...? Qualified managers to fill open leadership positions. *Base: All respondents (n=745).*





According to the survey, **70%** of the respondents named competitive wages and compensation as the leading way to keep quality workers on their teams.

Even when electrical contractors bring new apprentices on board, however, they must find ways to retain them and grow them into leaders. According to the survey, 70% of the respondents named competitive wages and compensation as the leading way to keep quality workers on their teams (**Fig. 6**). Secondly, 45% considered non-wage salary compensation, such as a company truck, paid time off, health care or retirement plan, as a top factor. Finally, a positive company culture rounded out the top three factors.

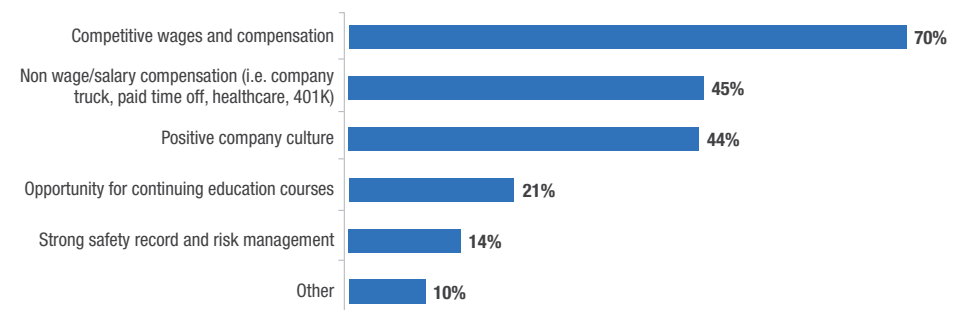
In today's competitive market, electricians and managers are not looking for just a company where they can earn a paycheck. Instead, they want to be part of a team where they can grow and learn through continuing education opportunities and work for a company that makes an investment in their future.



Figure 6: Key Factors Impacting Employee Retention

Which factors have the greatest impact on employee retention? (Select up to three.)

Base: All respondents; up to three answers permitted (n=745).





EDUCATION — Putting the Edge in Knowledge



With technology and work practices changing at a breakneck speed, electrical contractors must keep their workforce up-to-date and ready to handle changes that come their way.

With waves of experienced electricians hanging up their tool belts, it's become more important than ever before for electrical contractors to recruit the next generation of electrical leaders. Through partnering with vocational training programs, high schools, colleges and universities, contractors are discovering new talent to fill their open job positions. Companies are offering internships to students and actively engaging in Science, Technology, Engineering and Math (STEM) programs in their communities. Through these efforts, they are increasing the awareness of the need for more electrical professionals—from labor in the field to management in the office.

Bringing new employees on board can be a costly investment in terms of training, and as such, contractors are focusing on retaining their top employees. For example, they are offering continuing training programs to help them refine their skills, offering competitive pay and giving them the opportunity to grow and move forward in their careers.

Each year, electrical professionals must often earn a certain number of continuing education units, and electrical contractors and their



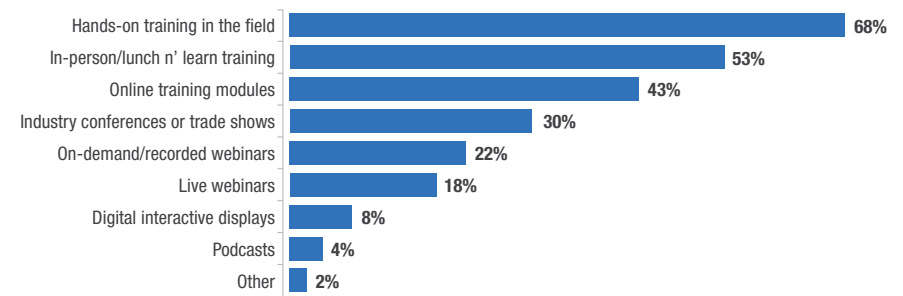
suppliers are offering these training opportunities through online and in-person courses. Also, field employees must maintain their skills through continuous training, and contractors are organizing hands-on workshops in the field. Through this focus on training, electrical contractors can help retain their employees, which is crucial in the age of skilled labor shortage.

As many electricians are trained with a combination of classroom and hands-on training during their apprenticeship programs, this preference appeared to continue during their careers. Sixty-eight percent of the respondents prefer hands-on training in the field, followed by 53% for in-person and lunch-and-learn training sessions (**Fig. 7**).

To train their employees on new tools, technology or equipment, contractors often bring in distributors or manufacturers to demonstrate new products. In addition, they also invite senior managers to train younger electrical apprentices on new work methods in the field. While field professionals can learn certain concepts on a computer, many prefer to have their hands on a tool or piece of equipment in a training setting before using it out in the field.

Figure 7: Training Format Preferences

How do you prefer to be trained on new technology and work practices? (Select up to three.) *Base: All respondents; up to three answers permitted (n=745).*



Online training, however, ranked in the top three for training format preferences, with 43% marking it as their top choice. Perhaps surprisingly, the age of the respondents had no impact on the training format preferences. Around 40% of the youngest and oldest respondents both preferred online modules. One advantage of online training is that it can be done during a time that suits the employee, which is often not the case with in-person workshops and sessions.



If the respondents were to participate in self-directed training, the majority (40%) preferred to do so during their work hours rather than evenings or weekends (**Fig. 8**). Secondly, the respondents voiced a preference for on-demand training, which they can do anytime day or night. With field workers, out in the field and away from the office, the flexibility afforded by this option is a lucrative benefit.

This is especially true for workers for small companies. Because they may be wearing multiple hats, they may have a difficult time devoting part of their work day to training. As such, they prefer to participate in the training during the weekday after work hours or complete on-demand training (**Fig. 9**). The enterprise company respondents, however, prefer to complete their training during their work day between 8 a.m. and 5 p.m., often because they may have more of a specialized, rather than a broad-based role.

Figure 8: General Timing Preferences for Self-Directed Training

When do you prefer to participate in self-directed training activities (e.g., webinars, online training modules)? *Base: All respondents (n=745).*

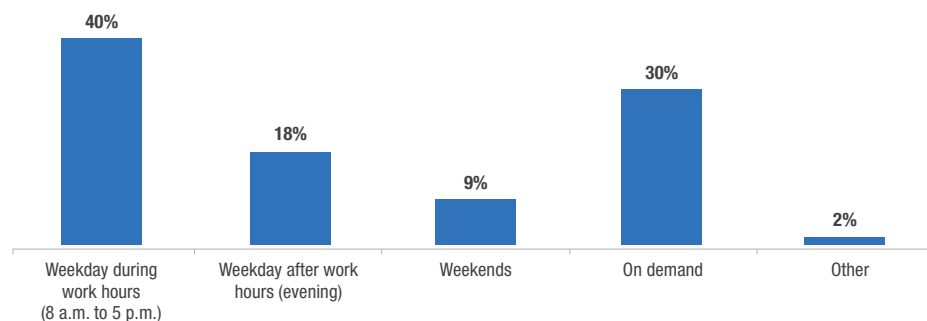
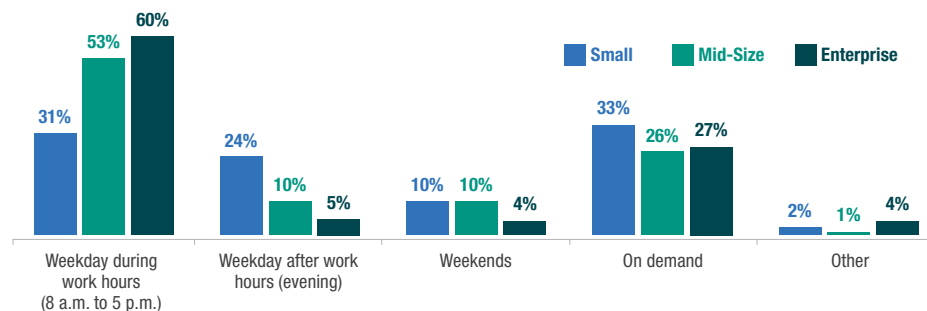


Figure 9: General Timing Preferences for Self-Directed Training by Company Size

When do you prefer to participate in self-directed training activities (e.g., webinars, online training modules)? *Base: Small company respondents (n=460); Mid-size company respondents (n=156); Enterprise company respondents (n=120).*





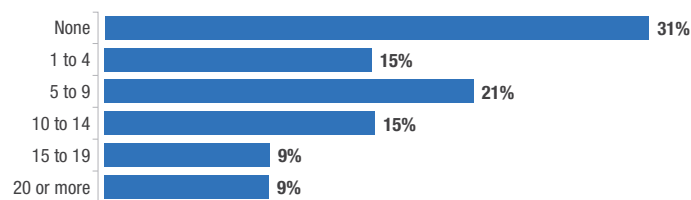
Regardless of company size, most respondents (69%) reported that they needed to earn an average of 10 continuing education credits (CEUs) annually (**Fig. 10**). Also, more than half noted a preference for training offering CEU credits, likely because these courses have more inherent perceived value.

Figure 10: CEU Credit Expectations & Training Offering CEUs

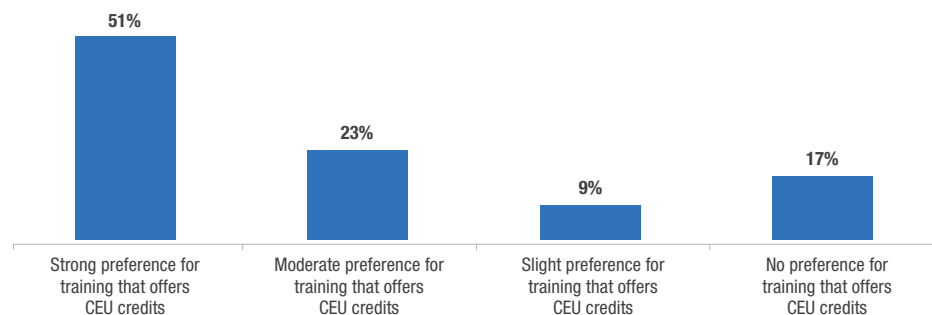
How many continuing education credits (CEUs) are you expected to earn each year?

Base: All respondents (n=745).

Qualified Electricians/Installers to Fill Field Positions



Preference for Training Offering CEU Credits



Along with earning CEUs, electrical contractor employees must also keep up on changes in codes and standards, particularly the National Electrical Code (NEC). Most respondents (63%) learn about the changes in the Code through self-study and education, while 51% enroll in Code Change seminars. Also, nearly half—46%—read about changes in the Code in online and print trade publications (**Fig. 11**).

Figure 11: Sources for Keeping up with Codes & Standards Changes

How do you keep up with codes and standards changes? (Select up to three.)

Base: All respondents; up to three answers permitted (n=745).

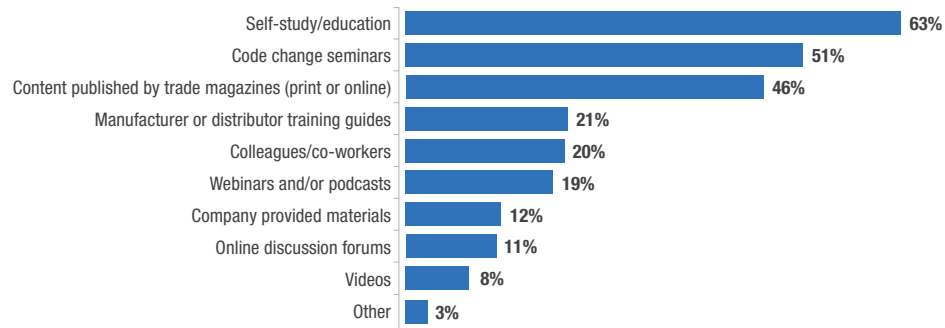




Figure 12: Sources for Keeping up with Codes & Standards Changes by Respondent Age

How do you keep up with codes and standards changes? (Select up to three.) *Base: All respondents; up to three answers permitted (n=745).*



In terms of age, all three age groups preferred self-study and education to other training methods (**Fig. 12**). The respondents aged 65 years and older showed a stronger preference for Code change seminars and content published by trade magazines, while the younger respondents were more likely to turn to their colleagues and co-workers for help with codes and standards changes.

Each time the National Fire Protection Association (NFPA) publishes a new version of the NEC, all industry professionals must familiarize themselves with these changes. Oftentimes, a small Code rule change

can have a big impact on a field workforce, so it's important for electrical contractors to stay ahead of these changes.

For example, every three years, NFPA 70E, *Standard for Electrical Safety in the Workplace*, is modified, which requires changes in electricians' safety-related work practices and procedures. For example, the 2018 standard requires qualified professionals to perform a Job Safety Analysis before beginning work, and states that electrical contractors must include a section on accident investigation within their electrical safety programs.



TECHNOLOGY — Get Smart! — On the Mobile Move

To stay successful, electrical contractors must keep up-to-date on changes in Codes and local and national standards. In addition, they must invest in the latest technology to compete in the marketplace. Rather than depending upon file cabinets of paper documents, more and more electrical contractors are digitizing their work flow and going paperless by leveraging the latest business management tools.

As part of this strategy, contractors are training their workforce to effectively use new tools and technology in both the office and in the field. In the office, project managers and engineers are learning new project management and estimating software to perform their jobs more efficiently, while the electricians are rolling out new tools in the field to save time and labor hours. Electricians are swapping manual hand tools, which can inflict ergonomic injuries over time, with the latest battery-powered drills, crimpers and cutters.

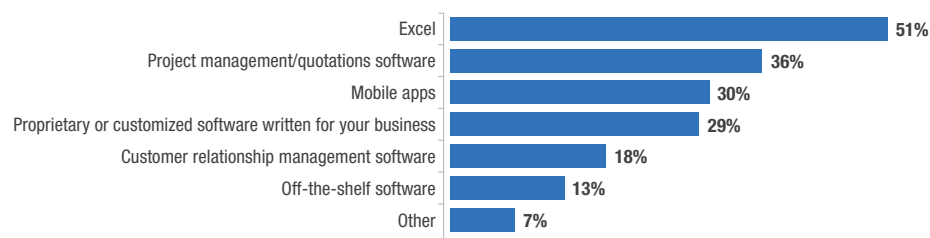
In addition, electricians are no longer paging through paper documents or reading paper maps in the field. Instead, they can obtain work orders, track the progress of a project and get directions to a job site right from their smart phone, tablet or laptop. Long gone are the days of

brick-sized phones and walkie talkies. Today, field workers can stay in constant communication with new and improved mobile technology, which improves safety in the field.

More than half of the respondents use Excel in their day-to-day jobs, followed by project management/quotations software and mobile apps (**Fig. 13**). In the past, only the office employees had access to a computer and a phone, but today, nearly all field workers are equipped with a mobile phone and a tablet or laptop in their work trucks.

Figure 13: Business Management Tools Leveraged

What business management tools is your company leveraging to keep operations and processes running smoothly? (Select all that apply.) *Base: All respondents; multiple answers permitted (n=745).*



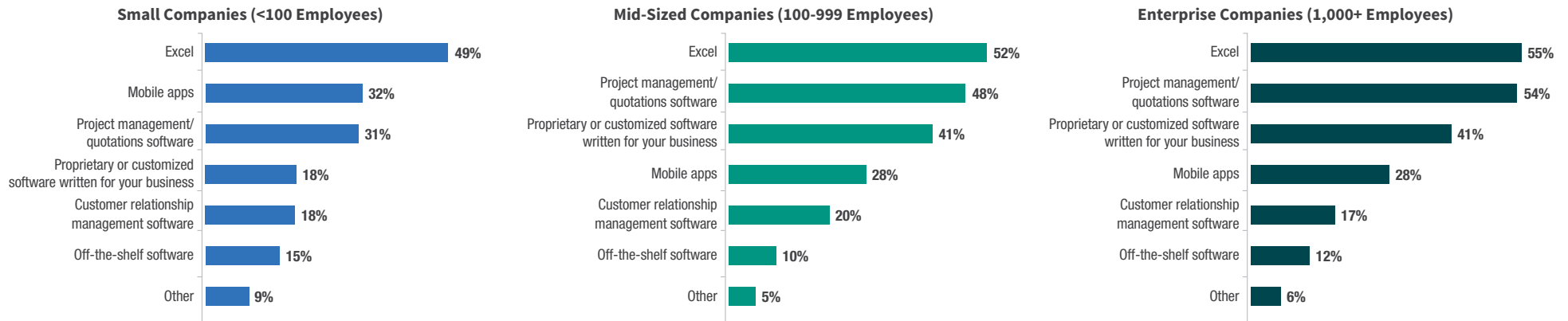


With the power of mobile technology in their pockets, electricians can view work orders, share photos with their design team in the office and look up pertinent information. No longer dependent upon a dispatcher to relay all of the information on a project, instead, they can work more efficiently through mobile technologies.

As far as business management tools, the usage differed by company size. For example, the enterprise companies were more likely to use Excel and proprietary or customized software than the smaller companies, which relied more upon mobile apps and project management/quotations software (**Fig. 14**).

Figure 14: Business Management Tools Leveraged by Company Size

What business management tools is your company leveraging to keep operations and processes running smoothly? (Select all that apply.) *Base: Small company respondents (n=460); Mid-size company respondents (n=156); Enterprise company respondents (n=120); multiple answers permitted (n=745).*

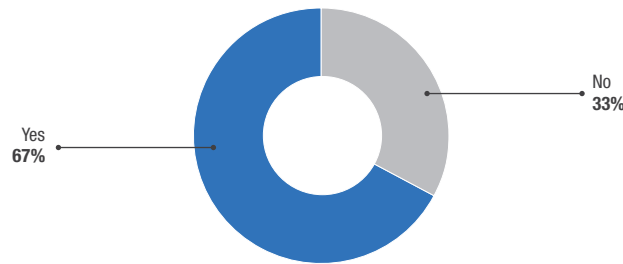




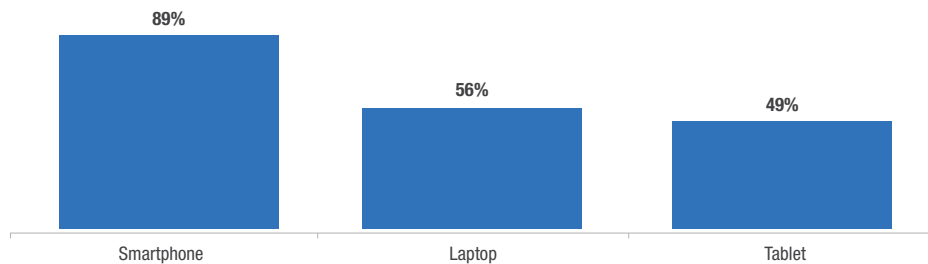
Regardless of what tools they access on their mobile devices, a large percentage of the total respondents reported that they do routinely use mobile devices on the job. In fact, 67% of the respondents use mobile devices, and of the three types—smart phones, laptops and tablets—smart phones ranked as the most popular with 89% of the vote. Laptops came in second, followed by tablets (**Fig. 15**).

Figure 15: Use of Mobile Devices in the Field

Do [you; your field employees] routinely use mobile devices to complete [your; their] jobs? *Base: All respondents (n=745).*



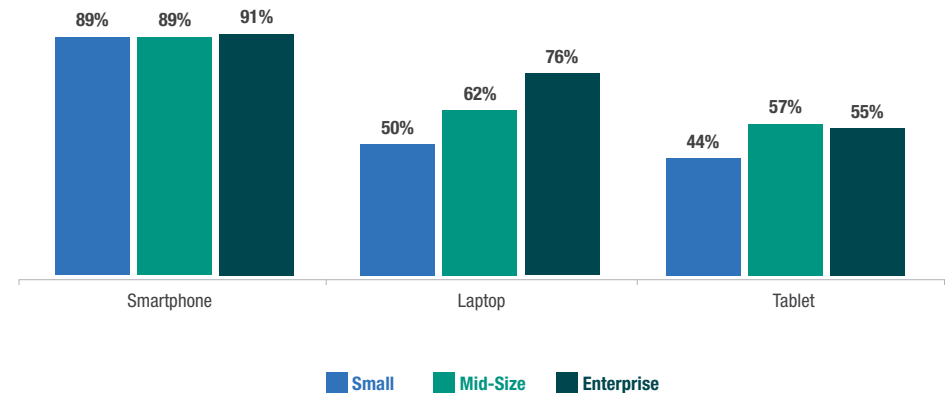
What type(s) of mobile devices do [you; your field employees] use to complete [your; their] jobs? (Select all that apply.) *Base: Respondents reporting use of mobile devices by field employees; multiple answers permitted (n=500).*



At many electrical contractors, field managers often mount ruggedized laptops in their work trucks so they can file reports and complete documentation straight from the field. For example, 76% of the enterprise respondents stated that their employees use laptops (**Fig. 16**). The mid-sized companies, however, showed a stronger preference for tablets than the other sized companies.

Figure 16: General Timing Preferences for Self-Directed Training by Company Size

What type(s) of mobile devices do [you; your field employees] use to complete [your; their] jobs? (Select all that apply.) *Base: Respondents reporting use of mobile devices by field employees; Small company respondents (n=302); Mid-size company respondents (n=123); Enterprise company respondents (n=74); multiple answers permitted.*





In addition, the smart phone has become part of an electrician's tool box. Case in point: 91% of the enterprise respondents and 89% of the small and mid-sized respondents reported that their field employees use smart phones in the field.

Overall, nearly three-quarters of the respondents said that at least 50% of their field employees use mobile devices on the job (**Fig. 17**). For 32% of the respondents, all of their field employees use some type of mobile device including a smart phone, tablet or laptop.

Figure 17: Percentage of Field Employees Using Mobile Devices on the Job

Approximately what percentage of your company's field employees use mobile devices on the job? *Base: Respondents reporting use of mobile devices by field employees (n=500).*

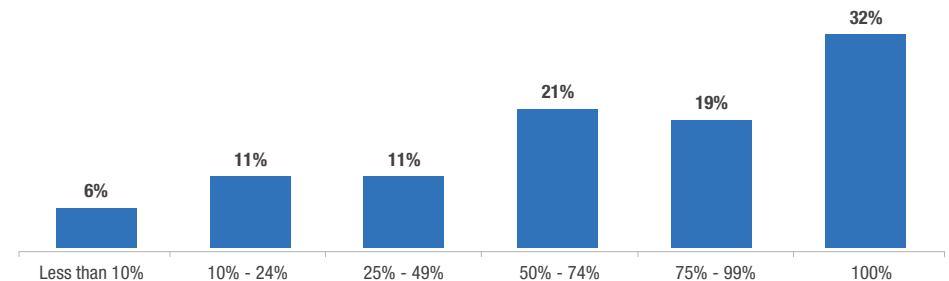
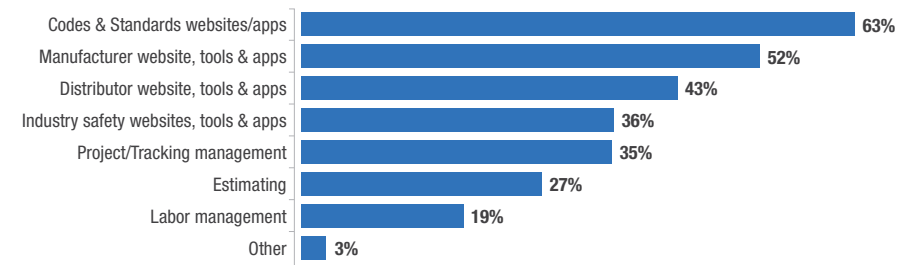


Figure 18: Digital Tools Used Regularly by Field Employees

What types of digital tools do [you; your field employees] use regularly? (Select all that apply.) *Base: Respondents reporting use of mobile devices by field employees; multiple answers permitted (n=500).*





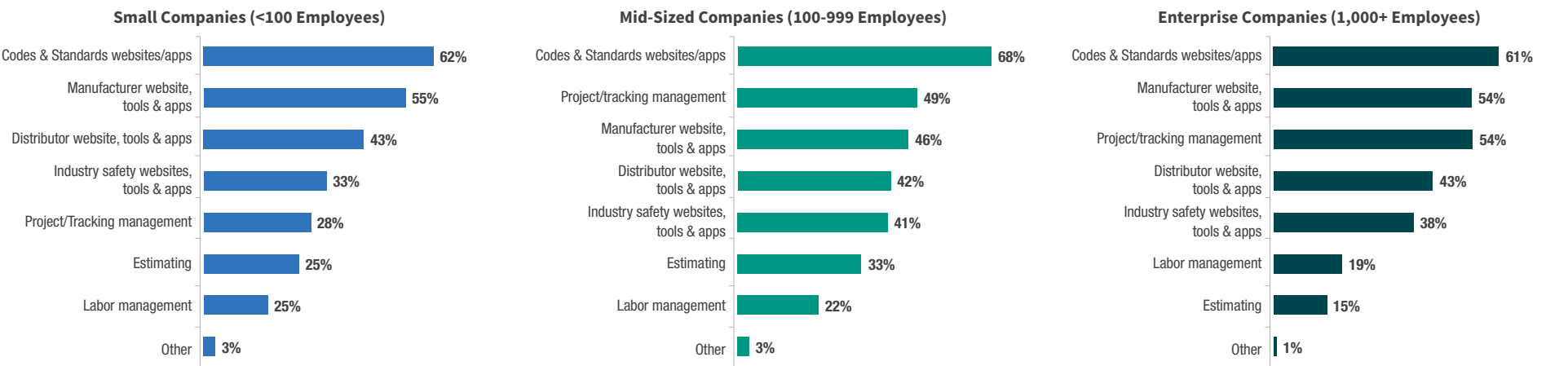
With this mobile technology, electrical contracting professionals have a world of information at their fingertips. For example, 63% of the respondents access codes and standards websites and apps on their mobile devices (Fig. 18). All three of the different sizes of companies look up this information using mobile technology (Fig. 19).

For their second choice, the small and enterprise companies are more likely to access information from manufacturers' websites, tools and apps on their devices. In terms of digital tool usage, mid-sized contractors show more of a preference for project management/tracking software.



Figure 19: Digital Tools Used Regularly by Field Employees by Company Size

What types of digital tools do [you; your field employees] use regularly? (Select all that apply.) *Base: Respondents reporting use of mobile devices by field employees; Small company respondents (n=302); Mid-size company respondents (n=123); Enterprise company respondents (n=74); multiple answers permitted..*





While new apps are created and offered every day, 86% of the total respondents indicated more apps must be developed to serve the needs of the industry (**Fig. 20**). For example, one respondent would like to see the creation of a complete system offering estimating, invoicing, employee management, and job site records including before-and-after pictures.

To stay up to date on NEC changes, the respondents also voiced a preference for new apps focused on Code compliance including a quick search, interactive features, and checklists. In addition, the electrical professionals also mentioned the need for estimating and project management apps. One respondent wants to estimate job times and automatically schedule them to the allotted hours per day, while another is looking for a highly customizable job log that can record everything from mileage to parts installed.

Using the apps currently available in the market, field employees are more likely to access product specifications and installation instructions with 77% and 76% of the respondents respectively (**Fig. 21**). The users in the field are also likely to access information on codes and standards requirements more than to look up a product's availability, pricing or warranty.

Figure 20: Need for New Mobile App?

Is there a type of mobile app you would find useful, but have not yet seen/has not yet been developed? *Base: Respondents reporting use of mobile devices by field employees (n=500).*

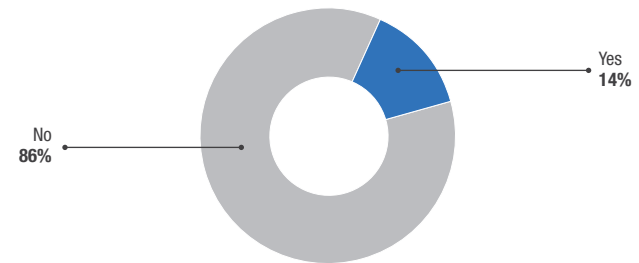
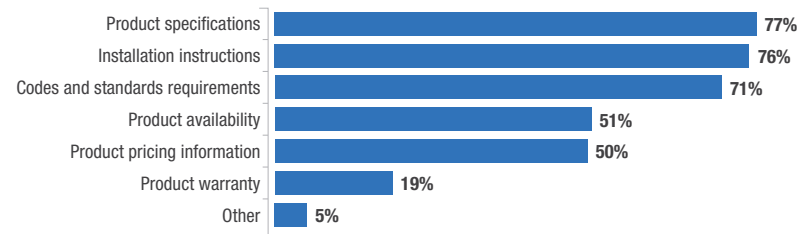


Figure 21: Information Accessed via Mobile Devices by Field Employees

What information are [you; your field employees] accessing via [your; their] mobile devices? (Select all that apply.) *Base: Respondents reporting use of mobile devices by field employees; multiple answers permitted (n=500).*





When field workers encounter a problem in the field related to how to interpret a code or standard, more than half (52%) turn to manufacturer technical support, while 38% turn to a supervisor and 31% rely on a coworker (**Fig. 22**). Those respondents who work for smaller electrical contractors, however, may be less likely to ask their team members for support, and as such, they may turn to other sources for assistance such as a mobile app or distributor (**Fig. 23**).

Figure 22: Sources Leveraged by Field Employees for Resolving Problems Related to Codes & Standards Interpretation

If [you; your field employees] encounter a problem in the field related to codes and/or standards interpretation, what are the top three resources [you; they] turn to for help? (Select up to three.) *Base: Respondents reporting use of mobile devices by field employees; up to three answers permitted (n=500).*

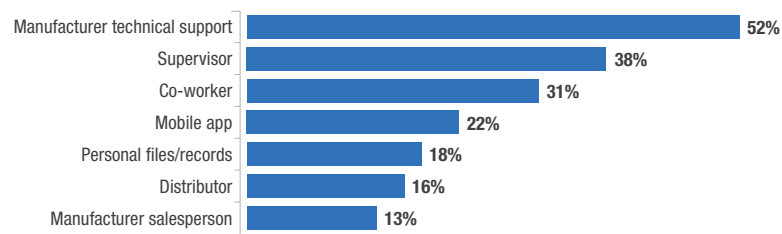
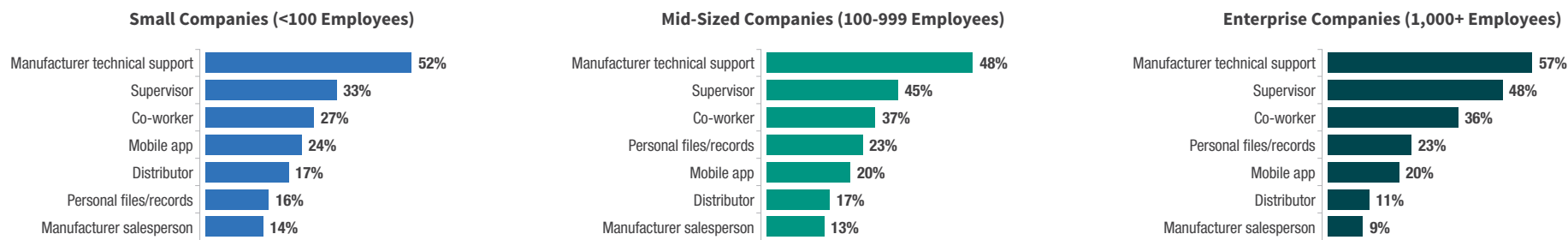


Figure 23: Sources Leveraged by Field Employees for Resolving Problems Related to Codes & Standards Interpretation by Company Size

If [you; your field employees] encounter a problem in the field related to codes and/or standards interpretation, what are the top three resources [you; they] turn to for help? (Select up to three.) *Base: Respondents reporting use of mobile devices by field employees; up to three answers permitted (n=500).*





When it comes to requesting help from manufacturers, respondents prefer to get assistance through a phone call or email exchange, most likely due to the interactive nature of these methods of communication (**Fig. 24**). Both the email and phone options ranked high above other methods of communication, including manufacturer websites, face-to-face meetings, working through a distributor or doing a text exchange.

On mobile devices, electrical professionals can not only connect with manufacturers, but they can also connect with others through social media platforms. Sixty-five percent of the respondents use LinkedIn and YouTube for work-related purposes while 41% use Facebook or an online forum and only 9% use Instagram or Twitter (**Fig. 25**).

Figure 24: Preferred Method of Contact with Manufacturers

What is your preferred method of contact with manufacturers?

Base: All respondents (n=745).

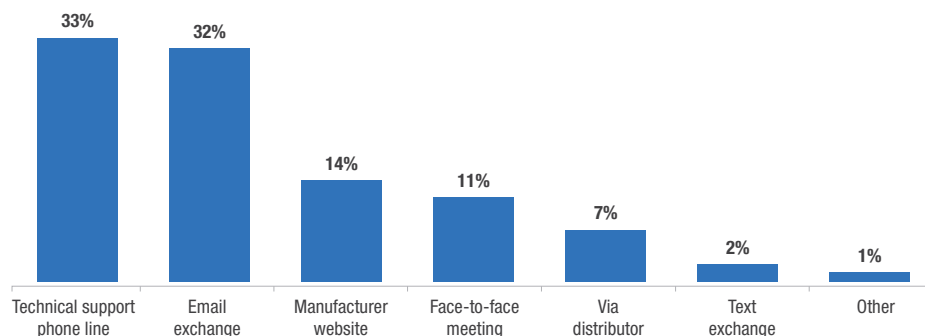
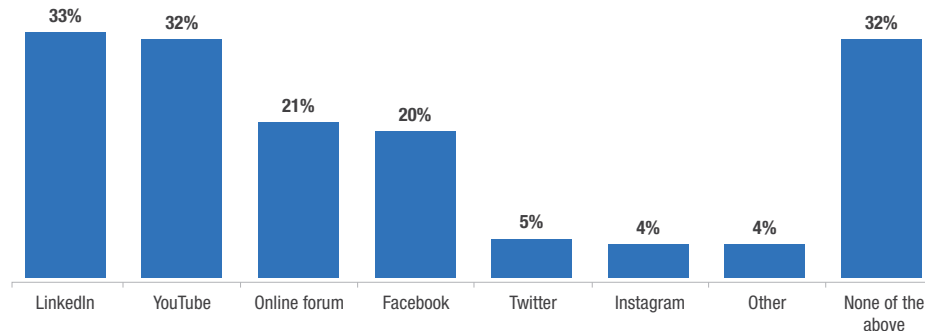


Figure 25: Social Media Platforms Used for Work-Related Purposes

And finally, what social media platforms do you use for work-related purposes?

(Select all that apply.) Base: All respondents (n=745).





The usage of social media platforms differed by company size with the enterprise companies leading the pack in terms of YouTube and LinkedIn usage (**Fig. 26**). Also, nearly one-third of the respondents across all company sizes do not use any social media platforms for work, especially in the 45 to 65-plus age group (**Fig. 27**). As far as differentiators by age, the older respondents tend to visit YouTube, while more of the younger respondents post on Facebook.

Through social media platforms, users can access information, connect with customers and network with other business colleagues. By giving their employees the digital applications and mobile tools to succeed, electrical contractors can help them to expand their knowledge, stay tuned into new technology and support the growth plans of their business.

While electrical contractors certainly face their share of pain points, they are discovering the path to productivity and profitability. By investing in technology, tools, and training, contractors are addressing the ups and downs of the market and are responsive to serving their customers today and in the future.

Figure 26: Social Media Platforms Used for Work-Related Purposes by Company Size

And finally, what social media platforms do you use for work-related purposes? (Select all that apply.) *Base: All respondents; multiple answers permitted (n=745).*

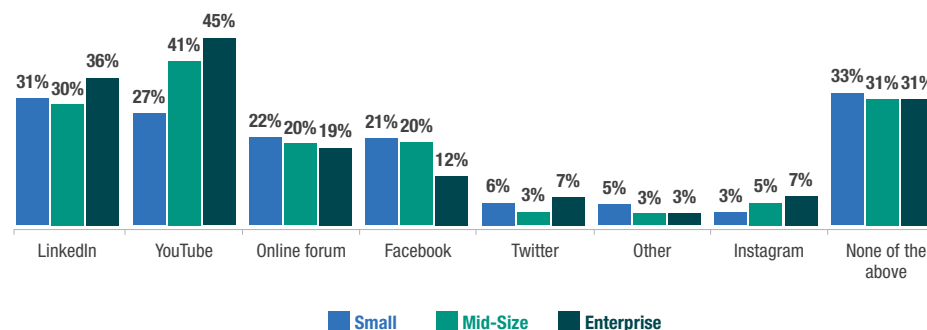
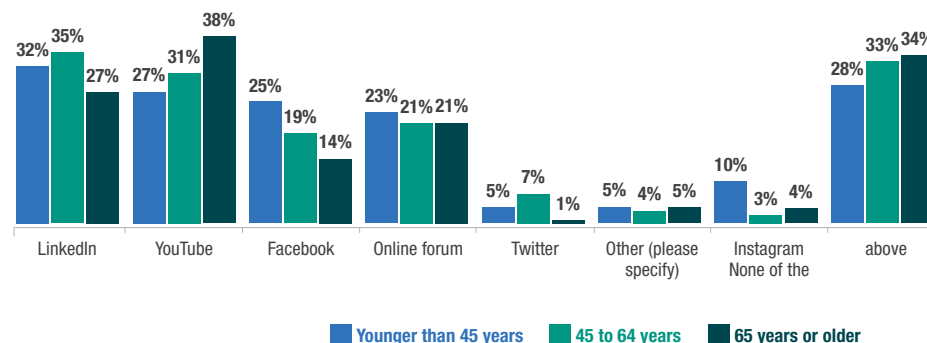


Figure 25: Social Media Platforms Used for Work-Related Purposes by Respondent Age

And finally, what social media platforms do you use for work-related purposes? (Select all that apply.) *Base: All respondents; multiple answers permitted (n=745).*





Methodology & Respondent Profile

OVERVIEW

Methodology, data collection and analysis conducted by Informa Engage and EC&M, on behalf of ABB.

Methodology conforms to accepted marketing research methods, practices and procedures.

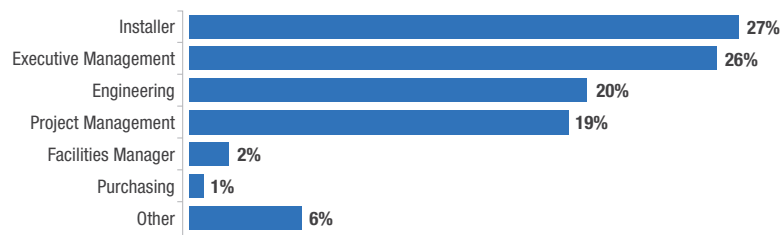
METHODOLOGY

On March 24, 2018, Informa Engage emailed invitations to participate in an online survey to 48,083 subscribers of EC&M.

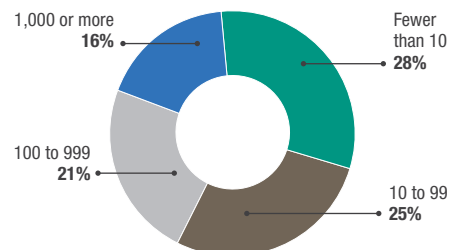
By April 6, 2018, Informa Engage had received 745 completed surveys, for an overall response rate of 1.5%.

Each respondent was afforded the opportunity to enter a drawing for one of four \$100 Amazon gift cards.

PRIMARY JOB FUNCTION



Company Size (Number of Employees)



% of Time Spent in the Field

