Deltek

CLARITY

ARCHITECTURE & ENGINEERING INDUSTRY STUDY

37th Annual Comprehensive Report

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ACEC
American Council of Engineering Companies

Association of Consulting Engineering Companies | Canada
Association des Firmes d'Ingénieurs-Conseils | Canada

SMPS
Society for Marketing Professional Services

CLARITY

Architecture & Engineering Industry Study

37TH ANNUAL COMPREHENSIVE REPORT • 2016

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INTRODUCTION

The architecture and engineering (A&E) industry has settled into a new normal. Roughly seven years after the recession, the business landscape is marked by sustained growth and has shed the wild peaks and valleys of past years. This new normal, however, does not translate into stagnation. As you will see in this 37th edition of the Deltek Clarity Architecture and Engineering Industry Study, the longest-running study of its kind, the new normal is an indicator that firms need to be even more diligent in how they approach critical components of their business, namely talent management, business development and project management.

This year's study revealed that, in addition to the historically relevant functions of business development, project management and financial management, talent management is a critical issue for A&E firms. The workforce is transitioning. Retirement is imminent for some senior leaders and there is an influx of younger workers into the industry who work differently and expect different things than the older work force. This dynamic is leading to increased talent velocity that is impacting every aspect of the A&E business. Outdated and non-existent HR technologies and processes are not helping matters. Long de-prioritized in favor of other more urgent investments, HR tends to run on paper, spreadsheets or multiple disconnected systems.

To be competitive in the war for talent, companies should approach talent like they approach projects—with metrics, monitoring, streamlined processes and modern technologies that enable them to optimize the pursuit and retention of top workers. These trends are so critical to the financial success of A&E firms that this year's report features a new section – Talent Management – focused solely on these issues.

Beyond talent, today's new normal calls for increased attention to business development and project management practices. Firms are encouraged to put a microscope to how they assess opportunities, making sure they pursue only the projects they have the best chance of winning. Project management, where there was a drop in the percent of projects coming in on/under budget, is also calling for improved processes. This year's study reveals a need for more financially savvy project managers and the establishment of successful PM processes that can be replicated across teams and across offices. Bottom line: firms must be persistent in their pursuit of perfection when it comes to delivering projects successfully again and again.

As you open the pages of this 37th Annual Clarity A&E study, all firms should view the absence of performance peaks and valleys as an opportunity. It is an opportunity to streamline processes in talent management, in marketing, in project management and business development. It is an opportunity to streamline effective resource utilization. It is an opportunity to identify what project managers are doing well, codify it, and replicate it across the entire firm. In short, the new normal is an opportunity for firms to take a deep breath and retrench within the systems and processes that will lead to success in the next decade. We hope the data and insights contained within these pages will help you as you strive for these improvements.

ABOUT THIS STUDY

Firm Type

We use the term Architecture & Engineering (A&E) to refer to all Architecture, Engineering, and allied design firms included in the study. We also break out two broad segments for comparison:

- Engineering (E) or Engineering/Architecture (E/A) firms are either pure consulting engineering firms or engineering dominant firms that also provide architectural services. E/A firms are also known in the industry as "big E, little A" firms. In this edition, 62% of participants are Engineering or E/A firms.
- Architecture (A) or Architecture/Engineering (A/E) firms are either pure architectural design firms or architecture dominant firms that also provide engineering services. A/E firms (not to be confused with A&E, which refers to all design firms) are also known in the industry as "big A, little E" firms. In this edition, 27.2% are Architecture or A/E firms.
- Other refers to the many firms in the industry that don't fit into the traditional definitions of A or E. This year, 10.8% of participants are other types of design or consulting firms, including landscape architecture, interior design, and environmental consulting.

Firm Size

When looking at the size of the participating firms, 43.5% are small firms (1–50 employees), 42.3% are mid-sized firms (51–250 employees) and 14.2% are large firms (251+ employees).

High Performers

As in past Clarity A&E studies, we broke out a group of High Performers for additional analysis. We started with firms that have a Net Labor Multiplier of 3.0 or higher and an Operating Profit rate of 15% or higher (pre-tax, pre-bonus on net revenues). High Performers constitute 25% of all participants. Throughout this report, we contrast High Performers with "All Other Firms," which consists of all participants except High Performers, and which should not be confused with "All Participants."

Study Notes

When we refer to "average" in this report, we use the median value, which is the middle of the data set—half the firms are higher and half are lower. Top Quarter and Bottom Quarter refer to the top and bottom quartiles—25% of firms were equal to or higher than the top value, 25% were equal to or lower than the bottom value, and 50% fall between the two.

Per employee ratios for Income Statement items are calculated using the average number of employees during the year, while per employee ratios for Balance Sheet items are calculated using the number of employees at the end of the year.

Data Profile

At the end of the report are comprehensive tables, including all the financial metrics from the study, broken down by firm size, type, and performance.

EXECUTIVE SUMMARY

At the end of a baseball game, the only thing that counts is the run total. However, managing a baseball team requires a deep study of a countless number of secondary and tertiary statistics.

While the tally that matters most is the bottom line, A&E firms still need to pay close attention to other business fundamentals such as project management, business development and talent management. Improving performance in these areas will likely lead directly to improved financial results. Looking across the responses to 100+ questions in this 37th Deltek Clarity A&E Industry Study, here is a snapshot of what those four high-impact areas of A&E look like today:

Companies project a decline in position over the next 18 months

INCREASING COMPETITION, DECREASING RELATIONSHIP-BUILDING TIME

Firms remain challenged by growing competition in the marketplace and lack of time to nurture client relationships – the #1 source of opportunity in their pipelines. A slight decline in Win Rate to 45% may be reflecting these concerns. As these realities set in, firms are ratcheting back their expectations for the future. Many companies project a decline in their position in 12 different markets over the next 18 months. Formal, documented, proven processes can help to bolster the business development function. In a step in the right direction, 68% of firms said they employ a formal go/no go process to determine whether to pursue a project, up eight percent over last year.

There was a 5% drop in the number of projects being reported as on or under budget

DIP IN CORE PROJECT MANAGEMENT METRICS

Project Management is the heartbeat of a successful A&E firm, so it is discouraging to note the downward trend in the number of projects being reported as on or under budget. One of the contributing factors seems to be inexperienced project managers, a leading challenge facing the PM function. Other challenges include competing priorities and poorly executed project management procedures. Firms are seeking to address inexperience and PM procedures through improved training and establishment of best practices. Other key PM metrics remained steady: project status visibility confidence, overall confidence in the accuracy of project status reporting and PM maturity all remained within a few points of last year's results but still have significant room for improvement.

The availability of good candidates is the top acquisition challenge

THE WAR FOR TALENT IS HEATING UP

Talent management is a challenge for A&E firms from end to end on the talent spectrum. At the front end, the availability of good candidates in the marketplace is today's top acquisition challenge. Firms are having trouble identifying good candidates, engaging with them and attracting them. Talent acquisition is also by far the most expensive business process firms support with 7 in 10 companies ranking it in their top three. Part of the problem here may be outdated technology to support acquisition and ongoing management of people. For 52% of firms, it has been at least four years since they upgraded their HRIS system. And, many firms today are still manually managing the hire to retire process. On the back end of the talent spectrum, 68% of firms have no formal succession plan (or the plan applies to only a few people) to replace departing senior leaders who are on the verge of retirement or who choose to the leave the organization. As a result, succession & career development planning came in as a top talent challenge.

Increasing profitability was the top challenge, and average net revenue per employee climbed this year

FINANCIAL METRICS CONTINUE TO STABILIZE

Most of the financial performance figures at A&E firms held steady year over year, pointing to an overall stabilization in firms' financial performance. Operating profit on net revenue, total payroll multiplier, net labor multiplier, utilization rate and other key metrics were essentially flat. And firms' top three challenges were the same as in previous years, with Increasing Profitability noted as the top challenge. While those figures and challenges held level, average net revenue per employee climbed for the fifth year in a row, reaching nearly $140k. There was also an increase in total employee cost, which rose in all categories to an average $91k from $88k last year. While issues like turnover and succession planning normally sit squarely in the HR field, firms indicated they are seeing challenges in these areas impacting both top-line revenue performance and bottom-line results.

SECTION ONE

FINANCIAL STATEMENTS

One word to describe this year's financial performance at A&E firms is "steady." With a few exceptions, almost all the financial metrics remained flat—or nearly so—compared to last year.

7.4%

increase

in average net revenue per employee, up to $139.3k; continues a five-year upward trend

73

days

Average collection period, down 2 days from 75 in 2015

$7.6k

net fixed assets

On average per employee, a rise from $6.9k last year

Some bright spots from this year's report: average net revenue per employee continued its five-year climb, reaching nearly $140K, and average collection period dropped to 73 days from 75 days last year. These numbers are moving in the right direction but, like many other metrics, still have a way to go to reach their pre-recession marks.

Top challenges facing financial leaders remained nearly the same this year. However, we provided a response box to capture write-in comments, and that is where the surprise occurred. Many companies are reported issues such as high turnover, staffing quality, succession planning and other issues that stereotypically fall under the HR umbrella are having a direct and significant impact on financial performance. Firm owners and senior leadership are encouraged to deepen their realization that winning the war for talent can be a real contributor to fixing top financial challenges such as profitability and revenue growth.

Key Data Points from the Survey

- Operating profit on net revenue averaged 12.4%, essentially flat over last year's 11.8%.
- The total payroll multiplier (1.79) and net labor multiplier (2.96) were both flat year over year.
- Utilization rate remained level at 60.9%.
- Average net revenue per employee rose to $139.3k, a 7.4% increase over last year, continuing a five-year upward trend.
- Total employee cost rose in all categories—high performers vs. all others, small/medium/large, and A vs. E—to an average $91K from $88K last year.
- Average collection period trimmed 2 days to 73 days.
- Net fixed assets per employee rose, on average, to $7.6K from $6.9K.
- The top financial challenges facing A&E leaders over the next 2-3 years were the same as in previous years with only some slight shuffling of order. Increasing profitability came in at number one, followed by organic topline growth and cash flow.

Operating Profit on Net Revenue

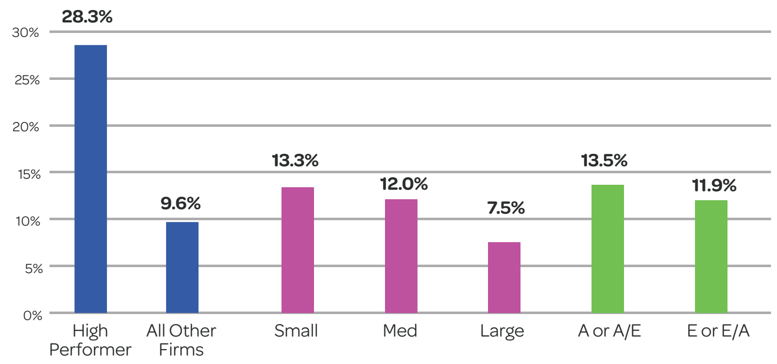
12.8% +1.0

Calculated by dividing pre-tax, pre-distribution profit by net revenues (total revenue minus consultants and other direct expenses).

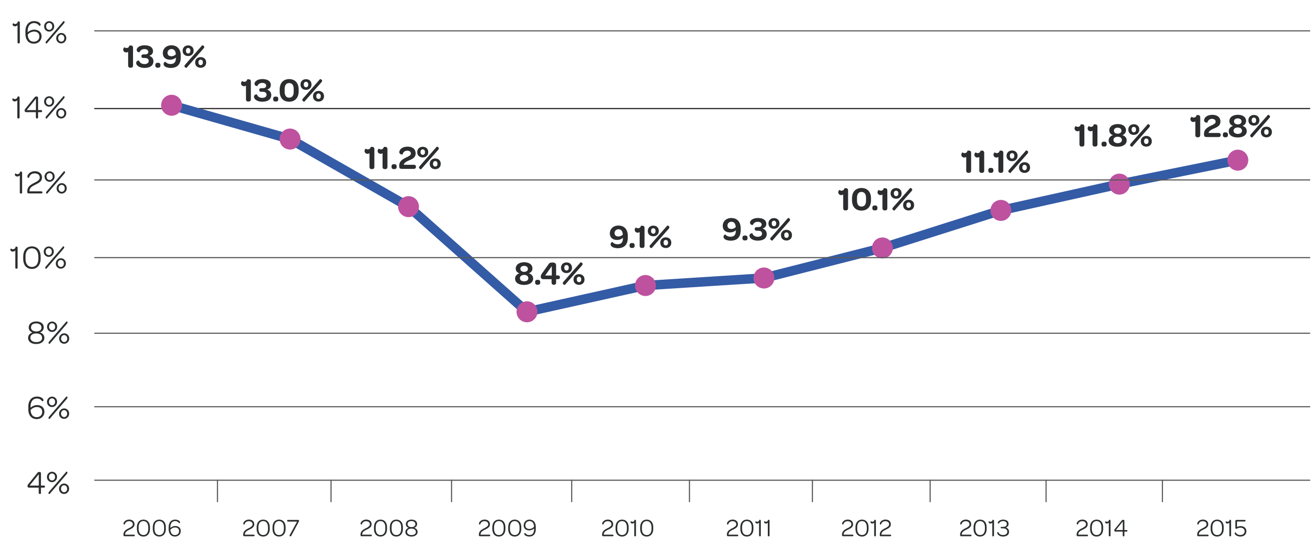
We continue to see a gradual increase in operating profit on net revenue, a key measurement of an A&E firm's financial health. However, the average firm is still not back to the 2006 pre-recession highs of 13.9%. The top quarter of respondents made the biggest gains, coming in just over 8% higher than last year. This suggests there is a subset of firms that are making changes that are having a bigger impact sooner.

	2015	2014	2013
Top Quarter	27.4%	18.7%	17.8%
Average	12.8%	11.8%	11.1%
Bottom Quarter	7.2%	6.2%	5.2%

HOW FIRMS COMPARE



TEN YEAR TREND



Utilization Rate

60.9% +0.9

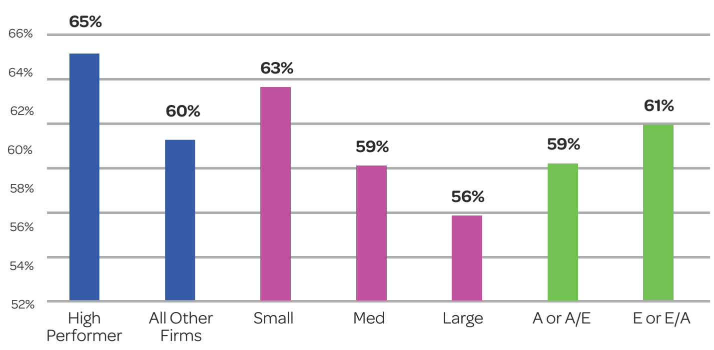
Calculated by dividing the cost of labor charged to projects by the total labor cost of the firm.

Total staff labor charged to billable projects has been moving alternately up and down within a 1-point range each year since 2012. This year, the figure is near flat at 60.9%. The labor marketplace has been active over the past year. When new employees are hired at any level, firms have to onboard them, train them and give them time to become productive, all of which impacts utilization. If hiring and job mobility stabilizes, utilization is likely to trend upward again.

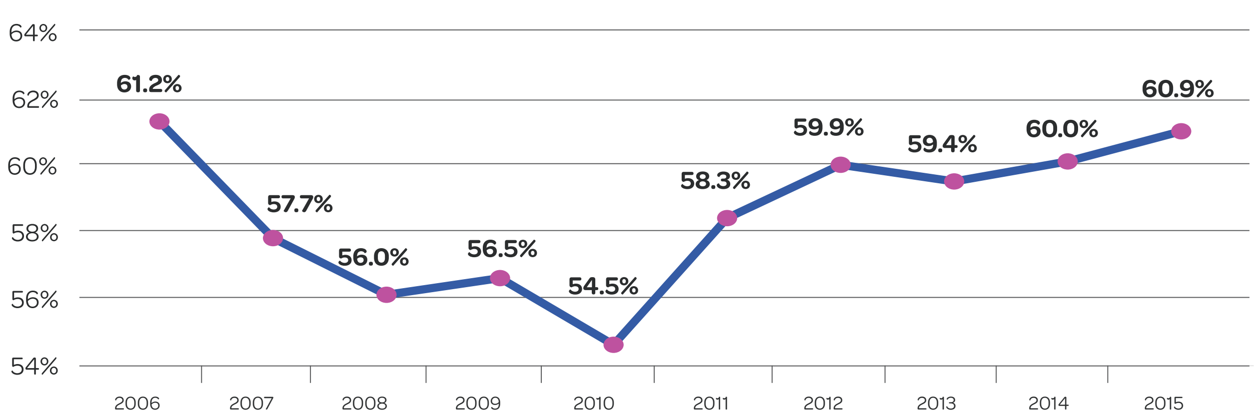
Another explanation for these utilization results could be that firms have brought on more administrative/non-billable personnel to handle marketing, finance and other functions not directly billable to projects. During the recession, staffs were trimmed and billable personnel were asked to wear many hats—including administrative, marketing and others—to save on costs. Firms may now be hiring to relieve some of that pressure and those non-billable costs may be a factor in this year's lower utilization rate. As with previous years, we note that high performers' improved financial results are not directly tied to a higher overall utilization.

	2015	2014	2013
Top Quarter	68.26%	65.40%	65.00%
Average	60.98%	60.00%	59.40%
Bottom Quarter	55.41%	55.80%	54.90%

HOW FIRMS COMPARE



TEN YEAR TREND



Net Labor Multiplier

2.96 -0.01

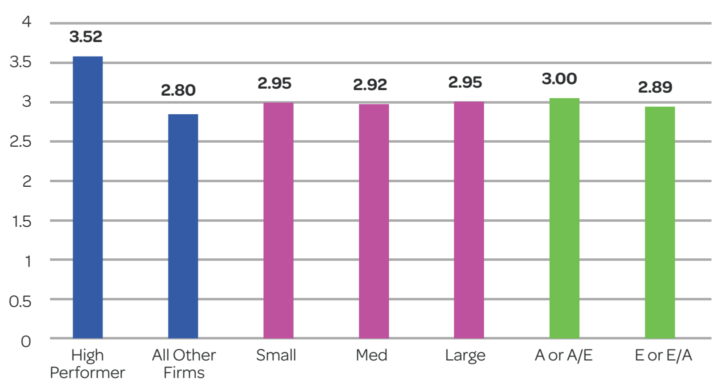
Calculated by dividing net revenue by direct labor, the cost of labor charged to projects.

When it comes to the net labor multiplier, a measure of the actual mark-up on labor costs, small changes make a big difference. Ultimately net labor multiplier is a measure of how well your firm delivers on project financial performance. It's worth noting the small drop in the bottom quarter, the smaller rise in the top quarter and the bump in High Performers from 3.34 last year to 3.52 this year.

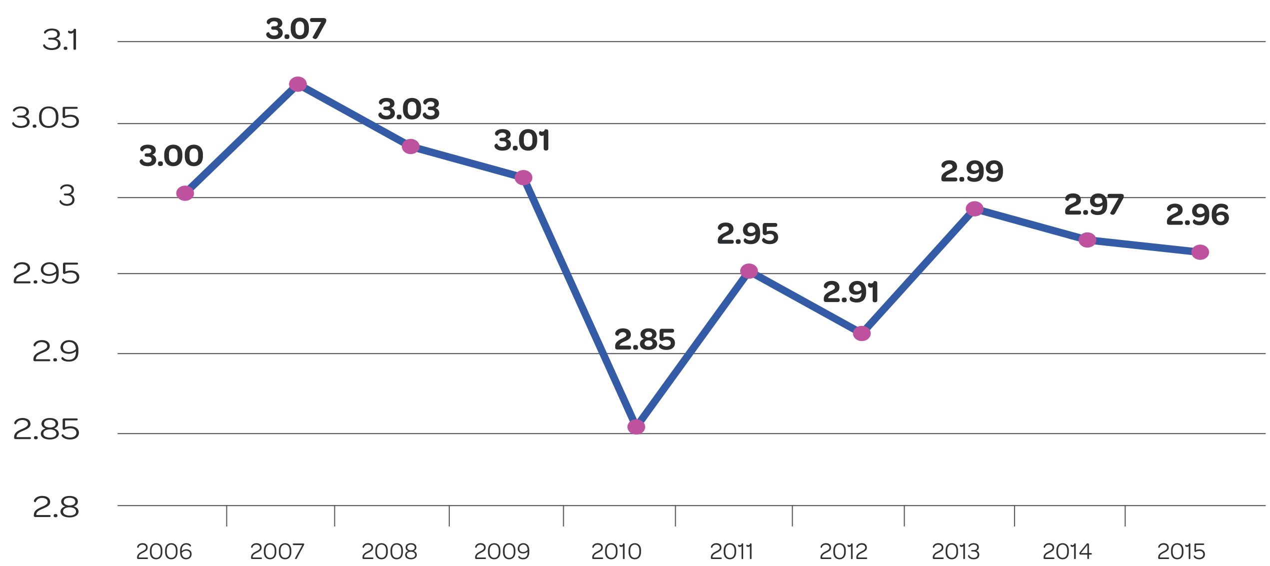
Generally, an improvement in project management rigor or an increase in fee contribute to an increase in Net Labor Multiplier so the uptick with High Performers may be a reflection of these differences. Some of the improved results may also be the result of increased visibility. When you can see where lost time is going, you can pinpoint and close those gaps. Specialized software and project and financial management best practices in these areas help firms attain greater visibility.

	2015	2014	2013
Top Quarter	3.32	3.31	3.27
Average	2.96	2.97	2.99
Bottom Quarter	2.65	2.73	2.73

HOW FIRMS COMPARE



TEN YEAR TREND



Total Payroll Multiplier

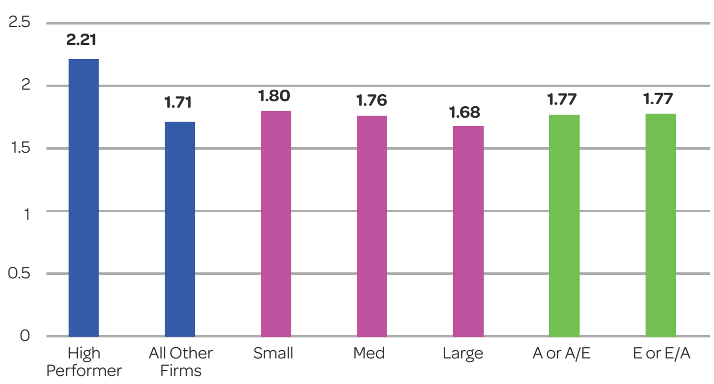
1.79 +0.02

Calculated by dividing net revenues total labor or utilization rate times net labor multiplier.

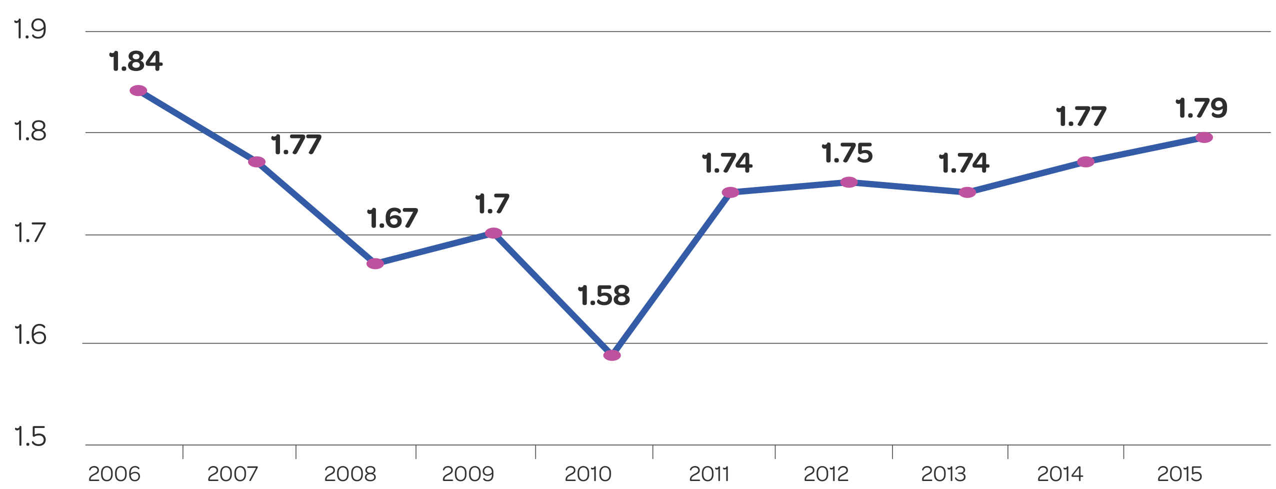
While utilization figures can often hide a number of stories, the total payroll multiplier is a consistently reliable indicator of how efficiently a firm converts labor to revenue. This number answers the question: What does it cost to keep someone employed? Results were flat year over year and have remained that way since 2011. Part of this flatness could stem from companies' reluctance to invest in employees through training and other means. If this is true, it could expose companies to higher turnover as employees may be lured by more enticing cultures elsewhere. The industry may be due for a climb in the future as firms streamline onboarding, convert new hires to revenues more quickly, and see their more expensive senior employees retire. In the pre-recession high, the total payroll multiplier hit 1.84 overall, so there is plenty of room for this number to keep climbing. But, with the total cost per employee gradually rising, significant changes in Total Payroll Multiplier may be a longer way off.

	2015	2014	2013
Top Quarter	2.03	1.93	1.94
Average	1.79	1.77	1.74
Bottom Quarter	1.63	1.63	1.61

HOW FIRMS COMPARE



TEN YEAR TREND



Overhead Rate

155.2% -4.8

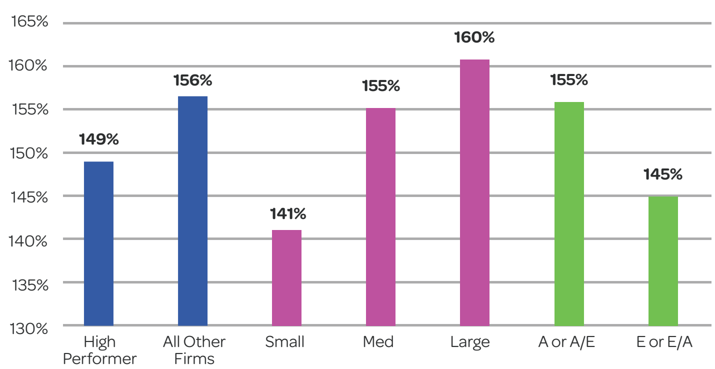
Calculated by dividing total overhead (before distributions) by total direct labor expense.

The general rule regarding overhead rate is that lower is better. That's why, at face value, the drop in overhead to 155% this year (down from a 2011 high of 173%) can be seen as a positive trend. However, one prevailing theme in the industry is the war for talent. To battle effectively in that war, firms need to make sure their pay is competitive, their benefits are in line with the marketplace and that employees aren't overworked. All of these dynamics put upward pressure on overhead rate.

To attract the talent needed to be competitive, the savvy firm will look at overhead rate in within the context of attracting and retaining top performers. This downward trend is particularly interesting in the context of rising per employee payroll and related costs, and consistent utilization trends, as it indicates that firms are continuing to cut costs in other areas.

	2015	2014	2013
Top Quarter	187.0%	184.7%	183.5%
Average	155.2%	160.0%	161.1%
Bottom Quarter	121.1%	134.0%	135.2%

HOW FIRMS COMPARE



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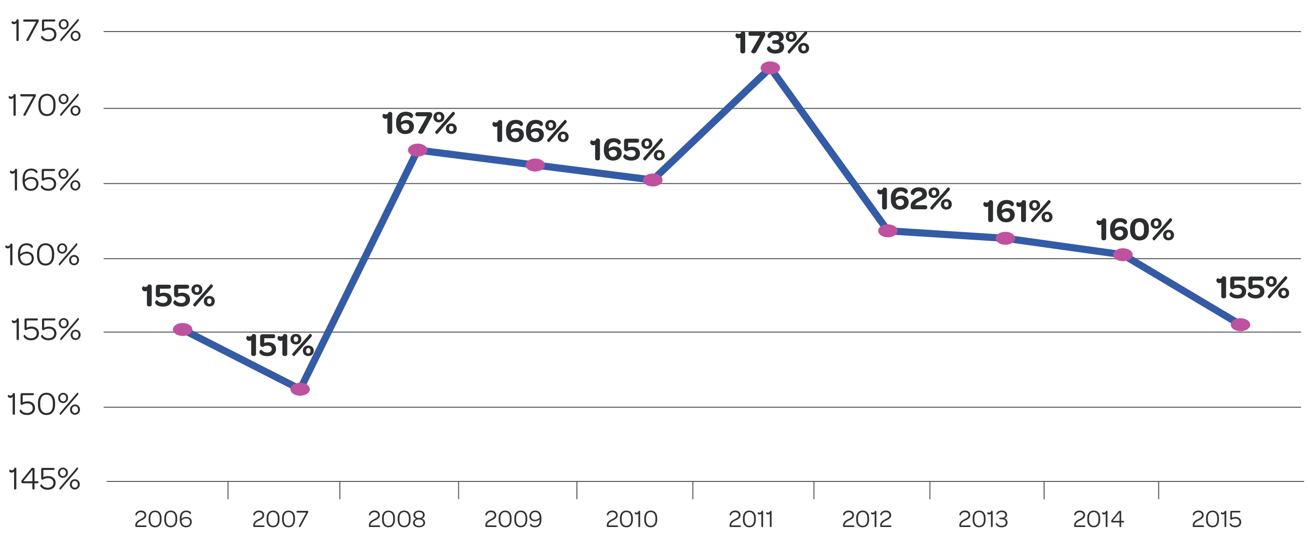


Net Revenue Per Employee

$139,042 +9,353%

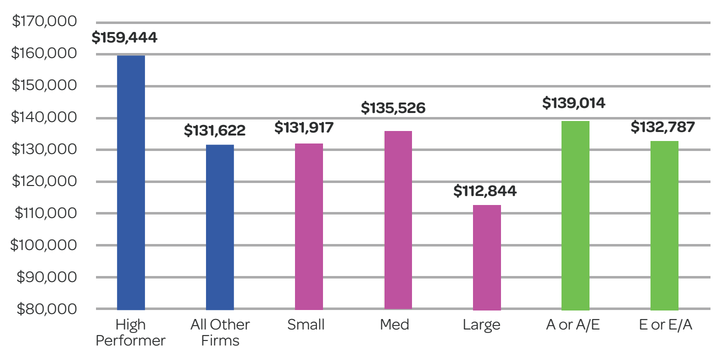
Calculated by dividing net revenues by average total staff during the year, including principals.

Net revenue per employee has been climbing steadily for the past five years. Now averaging $139.3K, it jumped 7.4% over last year's figure—a bigger gain than in past years. Looking at the 10-year trend, it appears the industry may be hitting a peak so this number is not expected to rise much more in the coming years.

The overall increase in net revenue per employee this year was driven by sharp increases at small and medium-sized companies. Since utilization is down and not driving these numbers, the results must be due to an increase in rates or production efficiencies. Large companies saw a drop in net revenue per employee from $142.8K last year to $112.8K this year. One explanation for this, in addition to the lowered utilization rates, may be large firms' activity in struggling global markets.

	2015	2014	2013
Top Quarter	$156,079	$149,705	$144,027
Average	$139,042	$129,689	$127,098
Bottom Quarter	$117,841	$113,692	$111,130

HOW FIRMS COMPARE



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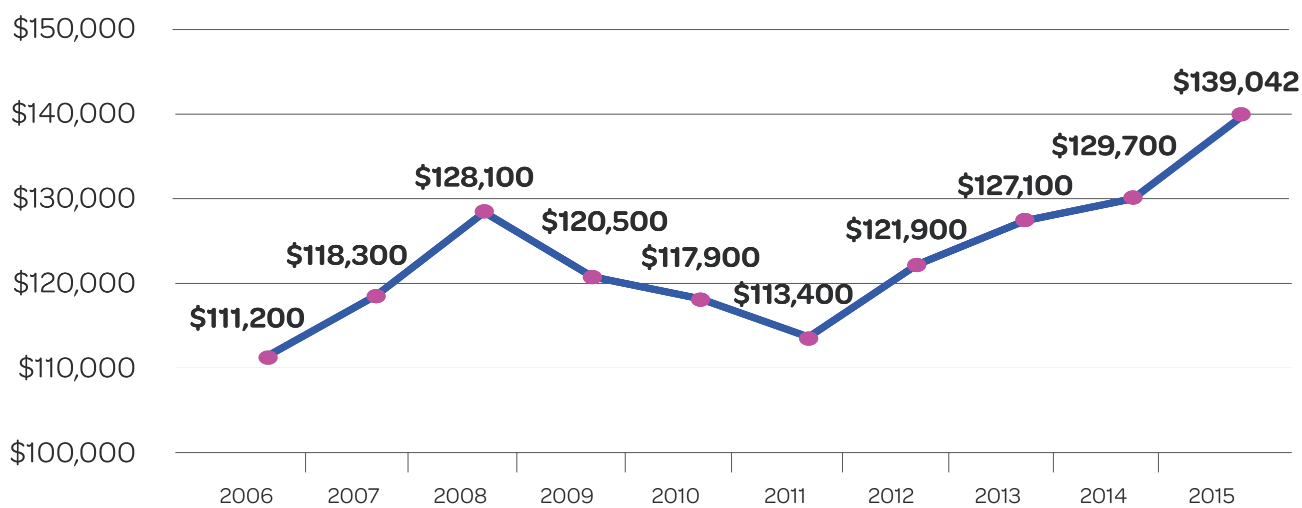


Total Employee Cost

$92,255 +$3,254

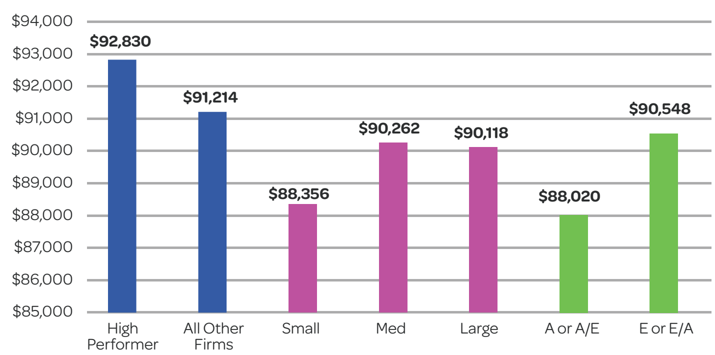
The sum of Total Labor and Other Labor-Related Expenses (taxes, insurance, etc.) divided by the average number of employees during the year. Excludes bonuses.

Total employee costs rose across the board, as they have over the past few years. Rising health care and benefit costs are always a concern here. Part of the recent rise may also be attributed to firms investing more in employee packages and incentives to attract and retain the talent necessary to remain competitive. This dynamic may contribute to a continued rise over the next months and years. Some relief may be felt as more experienced, higher cost employees retire from the business.

Of particular interest is the employer's cost of health care, which rose 4.5% from the previous year, while wage growth was at 1.3%. Reported company 401(k) contributions were up a shocking 32.5% year over year. This is further indication, when factoring in the reduction in overhead rate that other costs, beyond employee-related costs, are being reduced.

	2015	2014	2013
Top Quarter	$101,846	$98,345	$101,817
Average	$91,255	$88,001	$85,760
Bottom Quarter	$82,237	$78,781	$73,515

HOW FIRMS COMPARE



Average Collection Period

73 -2

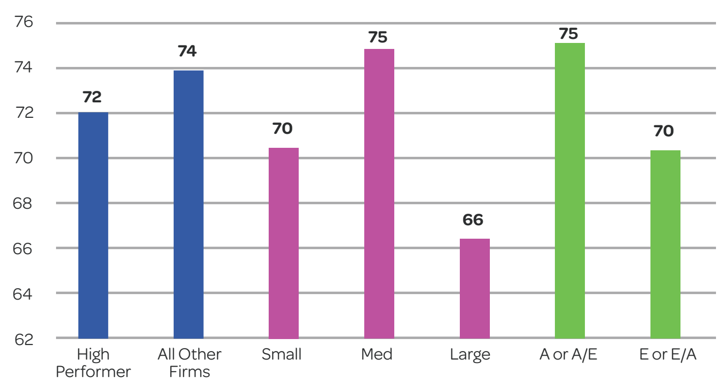
The Average Collection Period is calculated by dividing Accounts Receivable by annual Total Revenue, times 365.

A bright spot in this year's report is that the average collection period dropped on average to 73 days – a two-day decrease from last year. While moving in the right direction, the number is still high. That's 73 days during which firms are essentially giving free loans to clients. A few years ago, the number was in the mid-60s, so there are still things that can be done to reduce this period.

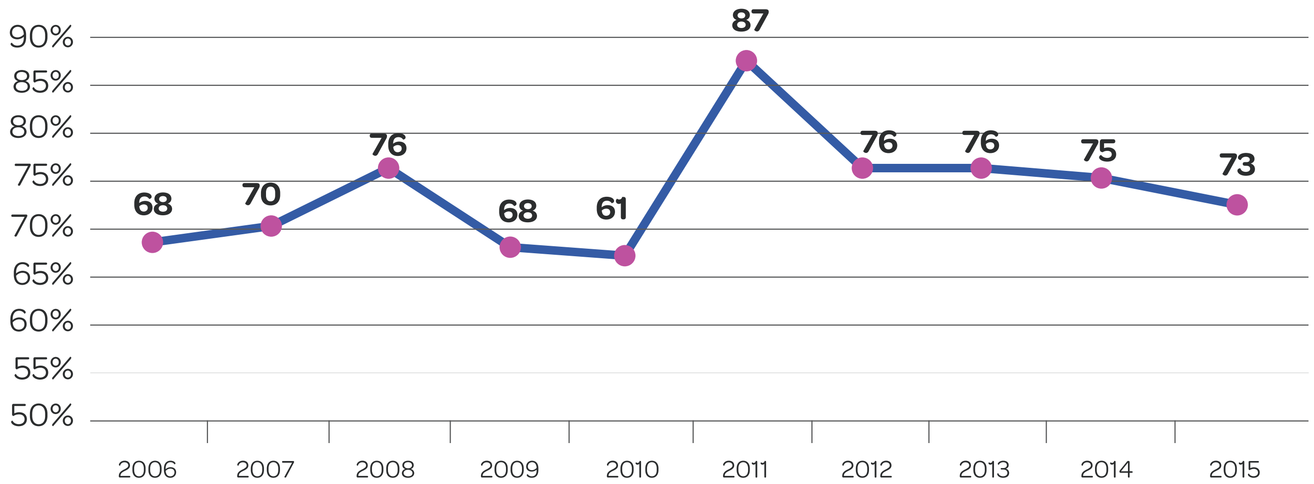
Certainly part of the collection period is beyond the firm's control. However, in many cases, firms simply do not have a true picture of what is going on. Internal delays are frequently the lion's share of the problem: invoice quality and alignment with contracts are the most likely culprit, followed by inconsistency in invoice formatting. Visibility and best practices in this area will help firms monitor and improve these numbers.

	2015	2014	2013
Top Quarter	97	98	100
Average	73	75	76
Bottom Quarter	55	58	58

HOW FIRMS COMPARE



TEN YEAR TREND



Net Fixed Assets Per Employee

$7,555 +633

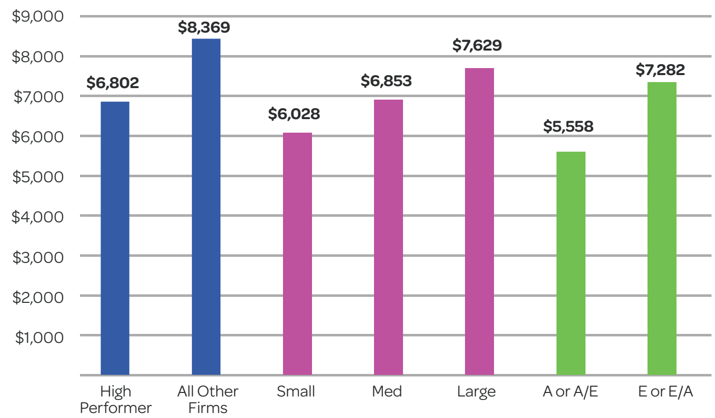
Net Fixed Assets per Employee is Fixed Assets less Goodwill and Depreciation, divided by the current number of employees.

As we are seeing elsewhere in this year's Clarity findings, the average year-over-year figure for net fixed assets per employee is fairly steady. However, it is marked by a flip-flop of results between High Performers and All Others. Last year, High Performers came in at $8.1k and All Others were at $6.4k; this year, High Performers were $6.8k while All Others rose to $8.3k.

When we break out the numbers by small, medium and large firms as well as by Architectural and Engineering, there was an increase across the board in this metric. These results suggest firms are investing again in technology, equipment and other resources to help their teams be more effective and efficient.

	2015	2014	2013
Top Quarter	$11,664	$10,930	$8,692
Average	$7,555	$6,922	$7,911
Bottom Quarter	$3,991	$3,531	$5,904

HOW FIRMS COMPARE



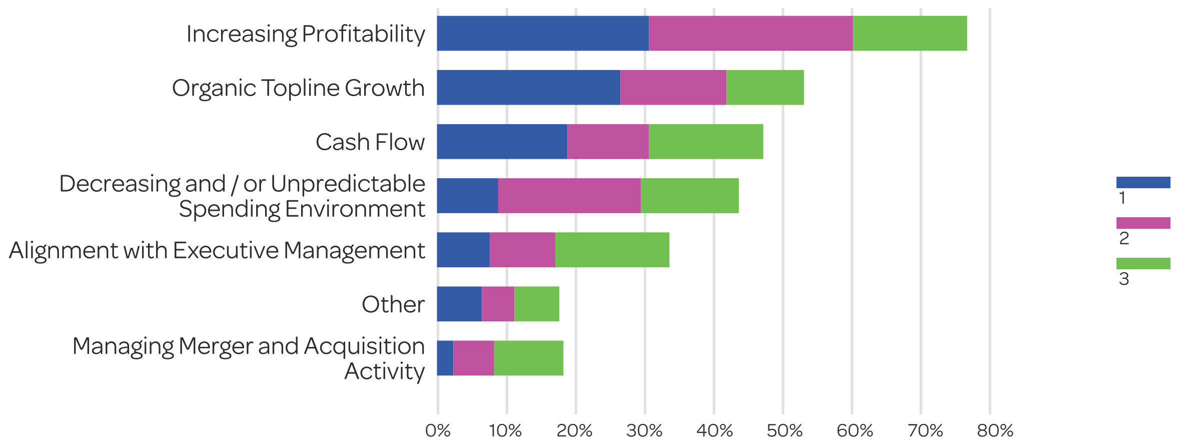
Top Challenges Facing Financial Leaders

While the top three challenges have shuffled in order compared to last year, the top spots have remained consistent. A&E financial leaders continue to focus on increasing profitability, organic topline growth and cash flow. Three of the most common paths to increasing profitability are discussed elsewhere in this study: improving business development focus, improving project management discipline and protecting yourself in the war for talent. Organic topline growth and cash flow swapped spots this year, which wasn't a surprise.

We added a new response choice this year—managing M&A activity. In spite of the fact that it showed up at the very bottom of the list of challenges, it will be interesting to watch this one over the next few years, given that there is still significant mergers and acquisition activity across the industry.

When participants chose "other," they are asked to write in an expanded response. An overwhelming majority of write-in answers were about people; from retaining people to finding the right talent for open positions and, in many cases, establishing plans to replace top-level leaders. It is interesting to note that talent management and succession planning are having a significant impact on the financial leaders of A&E firms.

TOP FINANCIAL CHALLENGES

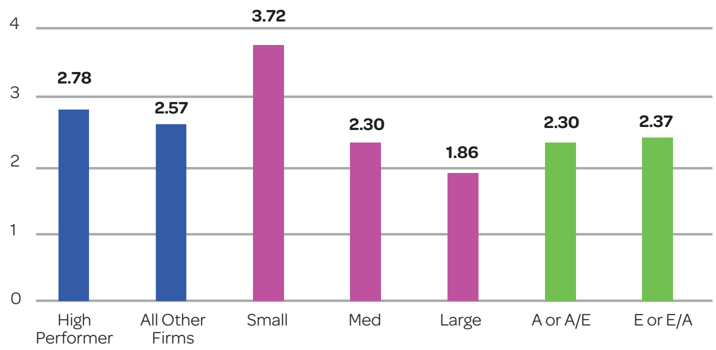


Current Ratio

2.71 +0.27

The Current Ratio is calculated by dividing Current Assets (cash and near cash assets) by Current Liabilities (those due in one year or less).

	2015
Top Quarter	4.88
Average	2.71
Bottom Quarter	1.77

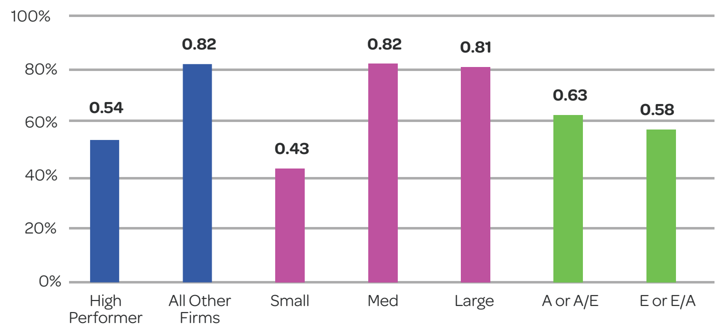


Debt to Equity Ratio

0.75 -0.07

Calculated by dividing Total Liabilities by Stockholders' Equity.

	2015
Top Quarter	1.69
Average	0.75
Bottom Quarter	0.35

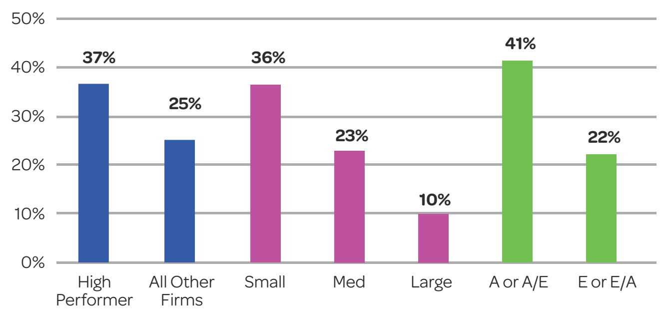


Return on Equity

28.8 +9.2

Return on Equity is calculated by dividing Pre-Tax Income (Operating Profit less bonuses, interest, and other income or expenses) by Stockholders' Equity, times 100.

	2015
Top Quarter	51.7
Average	28.8
Bottom Quarter	11.1



FINANCIAL STATEMENTS

CLARITY OUTLOOK

Financially, firms held on for another strong year with a bump up in operating profit and net revenue per employee. With the financial ship steady, senior firm leaders are likely to expand their attention over the next months and years to the key contributors to financial success. Responses and commentary surrounding this year's study suggest that financial leaders will be asking for more from other areas of the business, including project management and human resources, to make continued improvements to the bottom line.

SECTION TWO

BUSINESS DEVELOPMENT

In an industry where competition is fierce and relationships drive revenue, business development effectiveness has never been more important.

68%

of firms

are using a formal go/no go process

7 in 10

firms

reported that client relationships are their number 1 source of opportunity

45%

win rate

decreased by 3% from previous year

The next few years will be particularly important. As longtime partners retire and hand the reins to younger employees, it may be time to take a hard look at business development processes and seek out opportunities to execute more efficiently and with greater impact.

This year's Clarity findings highlight several challenges. Increased competition remains a leading problem, as does finding the time to nurture client relationships. The latter is a problem firms need to solve as client relationships remain far and away the top source of opportunities in the A&E pipeline. Lacking time to nurture key relationships, firms will find themselves struggling to compete against an increasingly competitive field. Win rates dipped slightly as firms wrestle with these new realities. And, perhaps reflecting a dose of pessimism in light of these trends, many firms are projecting a decline in their market position across 12 different markets over the next 18 months.

On the upside, there is budding recognition that embracing documented and automated processes can help. For instance, more firms are employing a formal go/no go process to determine whether to pursue a project. It's not a panacea for all business development problems, but it's a step in the right direction, which should lead to a boost in win rates down the road. If firms focus on developing more formal BD processes, leveraging technology solutions and dedicating staff to the business development function, it can only lead to more opportunities for success.

Key Data Points from the Survey

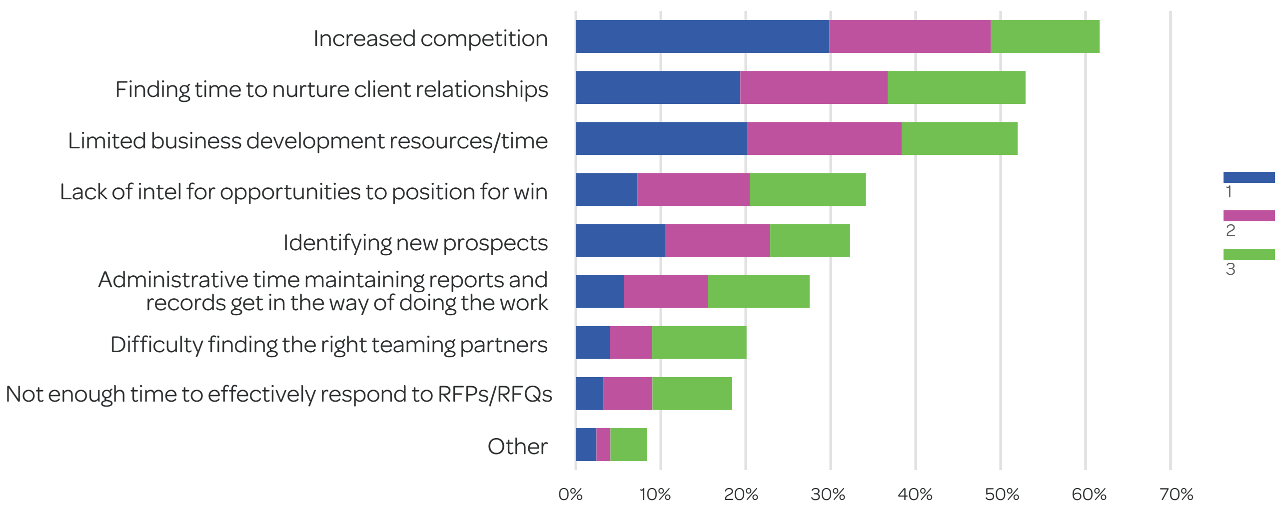
- Increased competition came in as the top business development challenge with 6 in 10 firms selecting it as one of their top three challenges and 29% citing it as the number one challenge. Finding time to nurture client relationships came in second, followed by limited business development resources/time.
- High Performers say strategic networking is their top initiative to address today's business development challenges versus all other respondents who reported in aggregate that focusing on earlier identification of opportunities was their top initiative.
- How are firms filling their pipelines? More than 7 in 10 reported that client relationships are their number one source of opportunity in the pipeline and nearly everyone put this source in their top three.
- In nearly every A&E firm, the executive team is responsible for business development, followed closely by project managers, who share that responsibility in 9 out of 10 companies.
- Win Rate dipped slightly to 45% from 48% last year.
- 68% of A&E firms are using a formal go/no go process to determine whether to pursue a potential project, up from 60% last year.
- Overall, the top three clients generated 32% of net revenue for firms last year.
- Many more firms than last year are projecting a decline in their market position over the next 18 months across 12 different markets.

Top Business Development Challenges

The A&E business continues to be competitive. While last year more than half of survey respondents chose increased competition among their top three business development challenges, this year the numbers have notably increased. Increased competition was cited as in the top three by 60% and almost 3 in 10 selected it as their number one. Increased competition is most certainly a contributor to the reported dip in win rates this year.

Limited business development resources / time took a 10% jump this year. Part of the reason for the stronger showing this year ties back to trends in HR. Business development has historically fallen to the senior people in a firm—the owners and the partners who have spent decades building relationships and bringing in clients. With these partners getting ready to retire, the responsibility is falling to project managers on top of their regular jobs. When you pile on the added tasks of nurturing client relationships and identifying new prospects (numbers 3 and 4 on the challenge list), there just aren't enough hours in the day to do all those functions well.

TOP BUSINESS DEVELOPMENT CHALLENGES



Top Three Business Development Initiatives

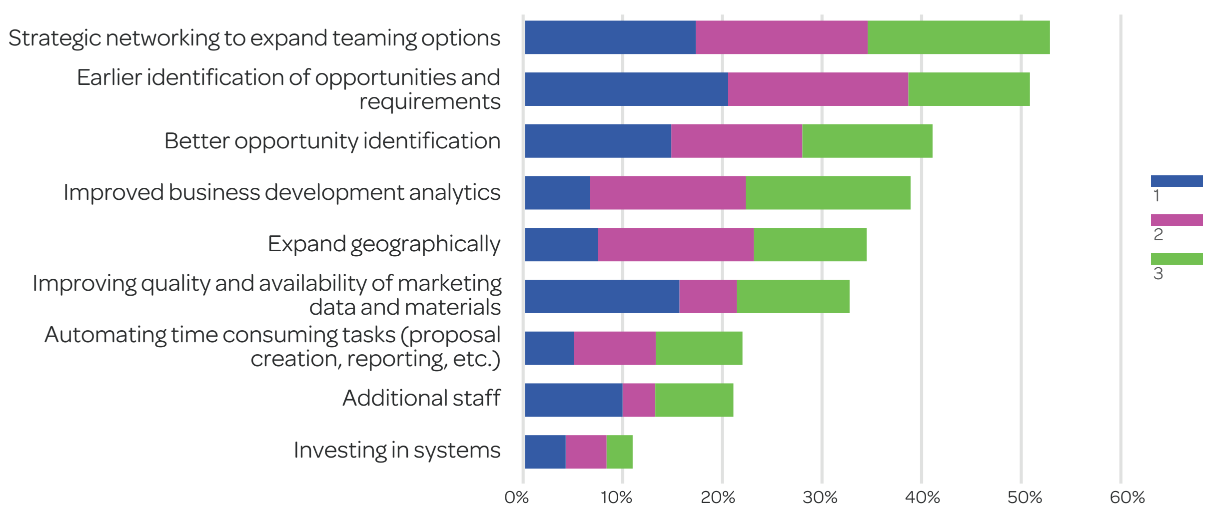
Survey responses for top initiatives correspond well with the top challenges, suggesting that firms are not only aware of their challenges, but are developing plans to address them. In particular, the leading initiatives for the coming two to three years speak directly to increased competition in the marketplace.

Responses highlighted several specific results worth noting. While the same initiatives occupied the top three slots, their priority shuffled around quite a bit. Last year, earlier identification of opportunities and requirements took the top spot. While it still garnered the most number one selections, it was replaced at the top this year by strategic networking to expand teaming options.

Another notable result was improved business development analytics. Last year, this response lingered near the very bottom, and this year it jumped to the fourth spot. Finally, improving quality and availability of marketing data and materials jumped about 10 points in survey takers first selections. Though the total responses earns it fifth place, it received the second-highest number of number one responses.

While high performers' challenges fell roughly in line with everyone else's, the high performers prioritized strategic networking as the top initiative while the rest of the respondents in aggregate are focusing most on earlier identification of opportunities. This is a key differentiator that is worth noting, especially if strategic networking is not on your list of top three initiatives. Another differentiator—large firms pointed to investing in systems as important more than twice as often as their smaller- and medium-sized counterparts. It will be interesting to see if this large firm system upgrade gets more traction over the next months and years.

TOP BUSINESS DEVELOPMENT INITIATIVES



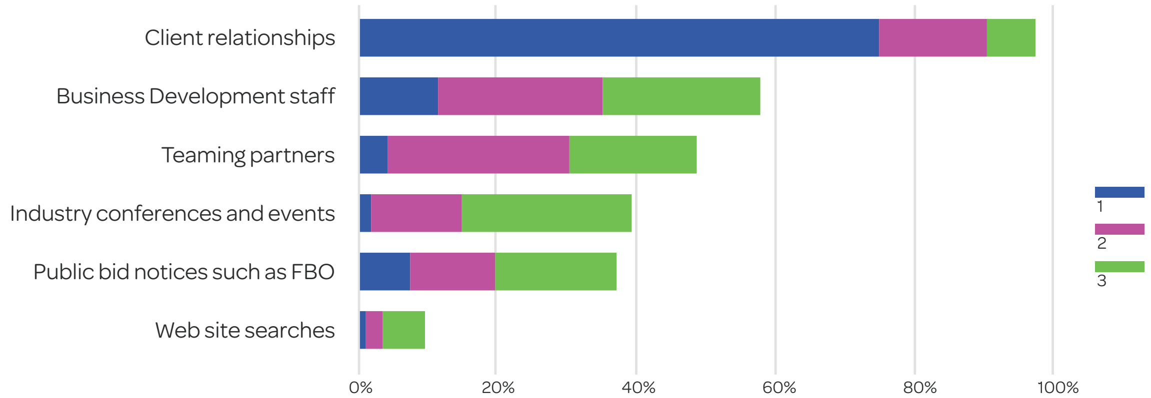
Top Sources of Opportunities

In a new question this year, firms revealed their top sources for new opportunities in the pipeline. Not surprising, client relationships were far and away the top source. More than 7 in 10 participants chose this as their top source and nearly every participant had it in their top three. This result raises some important questions. If firms rely so heavily on client relationships, do business development initiatives and investments support that? Are firms too reliant on client relationships, especially when a large slice of revenue comes from so few clients?

Business development staff (2nd overall) and teaming partners (3rd overall) received roughly half the number of responses as client relationships. While repeat business with existing clients will continue to be a strong source of opportunities, firms need to ensure they are looking for other ways to fill the pipeline, especially with the growing competition.

Large firms and high performers as a group were both significantly more bullish on leveraging teaming partners to uncover opportunities. While this approach requires investment in systems and processes to actually work with partners, clearly these groups are seeing the value.

TOP SOURCES OF OPPORTUNITIES TO PIPELINE

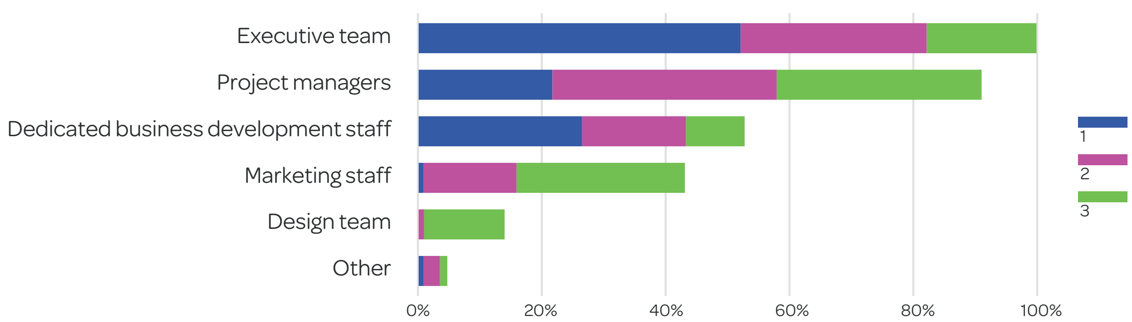


Responsibility for Business Development

The distribution of responsibility for business development shifted a bit more than expected this year. While the executive team and project managers took the same two top spots as last year, the overall percentages increased considerably. An overwhelming 99% of firms selected the executive team, up from 85% last year. And the project manager responsibility increased by just over 20% to 90%. Dedicated business development staff and marketing staff also saw growth this year, though not by quite as much. The message here: everyone's numbers climbed because everyone is assuming responsibility for business development. As retirement rates accelerate for Baby Boomer-era partners who have historically bore the lion's share of the BD burden, the responsibility is now spreading throughout the organization.

When the results are broken out by firm type, it is clear that the seller-doer model is alive and well in engineering firms and waning a bit in architectural firms. This underscores the need for engineering firm particularly to have the right resources, with the right skills, for the seller-doer approach to generate the business they need.

RESPONSIBILITY FOR BUSINESS DEVELOPMENT



Win Rate

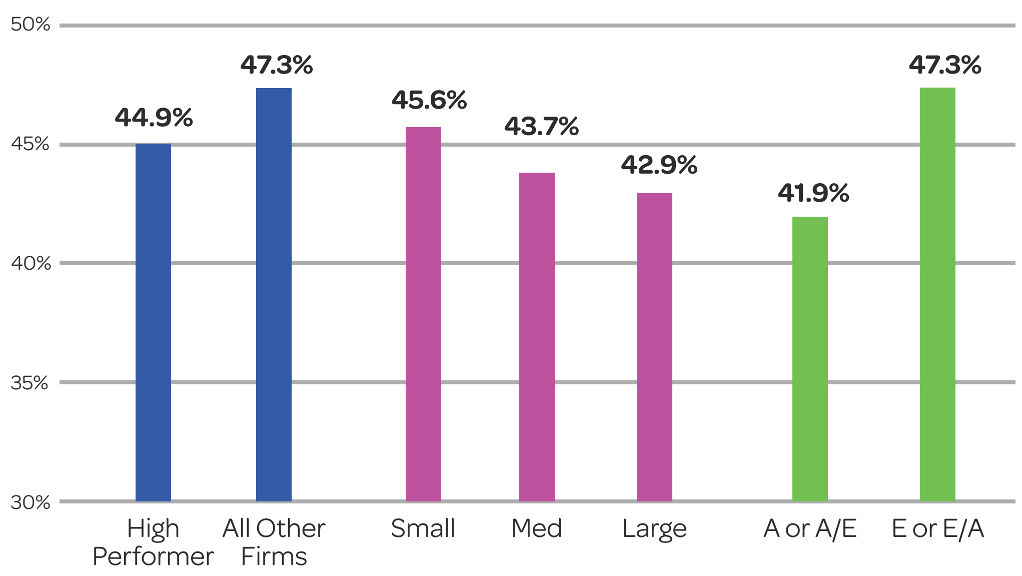
45% -3

Calculated by Proposals Awarded divided by Proposals Submitted.

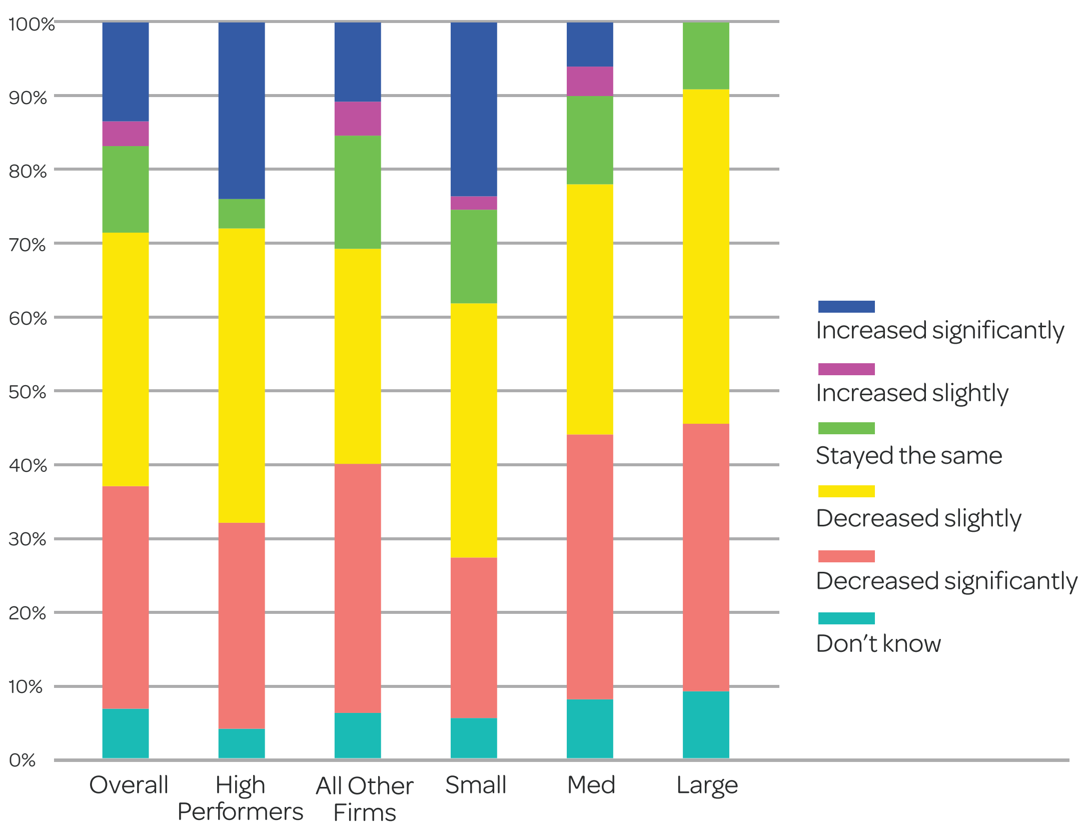
Last year's report established the baseline for win rate (48%). Overall, there was a slight decline to 45%, which is consistent with other reported dyna mics, particularly increased competition. These indicators will be tracked closely to see if firms start to follow a more selective approach of proposing on projects that align with their strengths, and funneling resources towards improving their chances of winning.

High Performers had a slightly lower Win Rate (45%) than All Others (47%). While High Performers came out on top in financial performance, this doesn't mean they are best-in-breed in every area of the business. One potential reason high performers reported a lower win rate is that they may not be closely monitoring this metric. When asked how win rates changed in the past two years, 1 in 4 High Performers—more than any other group—didn't know. This suggests many of them are not tracking it and using it as a KPI.

WIN RATE BY SIZE



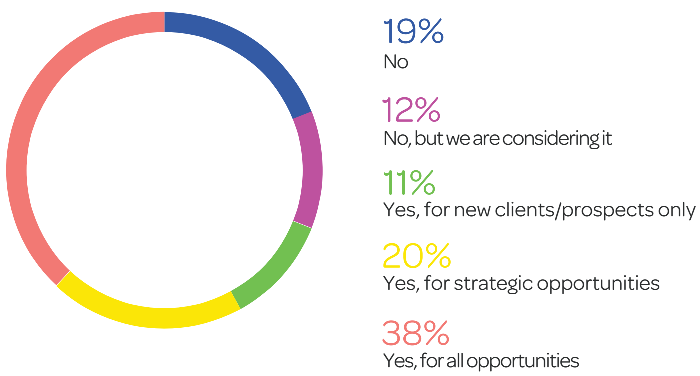
WIN RATE CHANGE



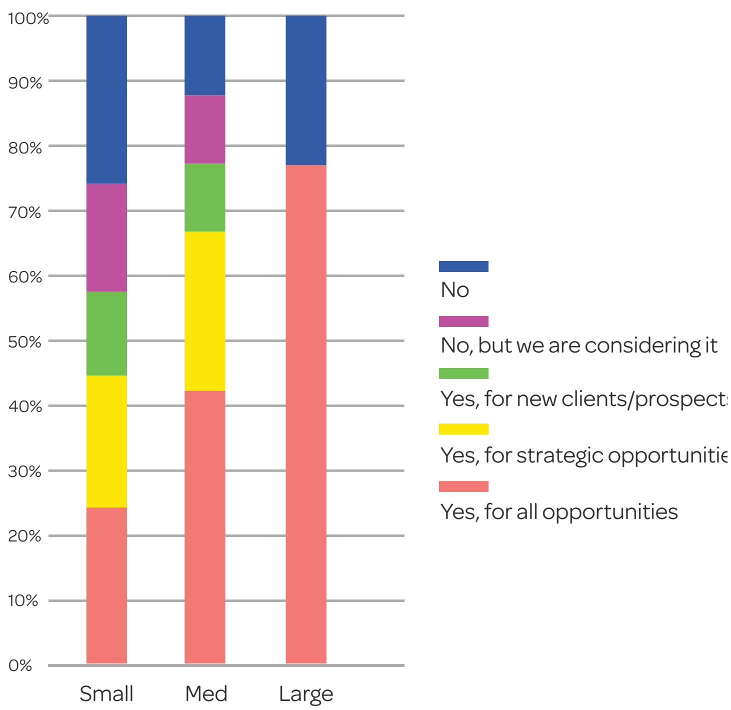
Formal Go/No Go Process

Many more firms are employing a formal go/no go process to help them determine whether to pursue a potential project. Last year, 40% of participants reported they do not use a go/no go process for any opportunities. This year, just 30% checked that box. In addition, more firms said they are using this process for all opportunities rather than just some of them. This is good news for business development performance.

A go/no go process helps cull out less desirable opportunities so that proposals are ultimately submitted only for projects that meet certain profitability levels and higher probability of winning. With more firms employing a formal go/no go process for determining whether to pursue a project, there is hope for a corresponding increase in win rate down the road.

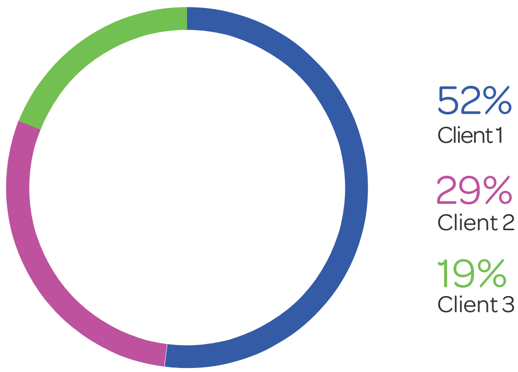


FORMAL GO/NO GO PROCESS

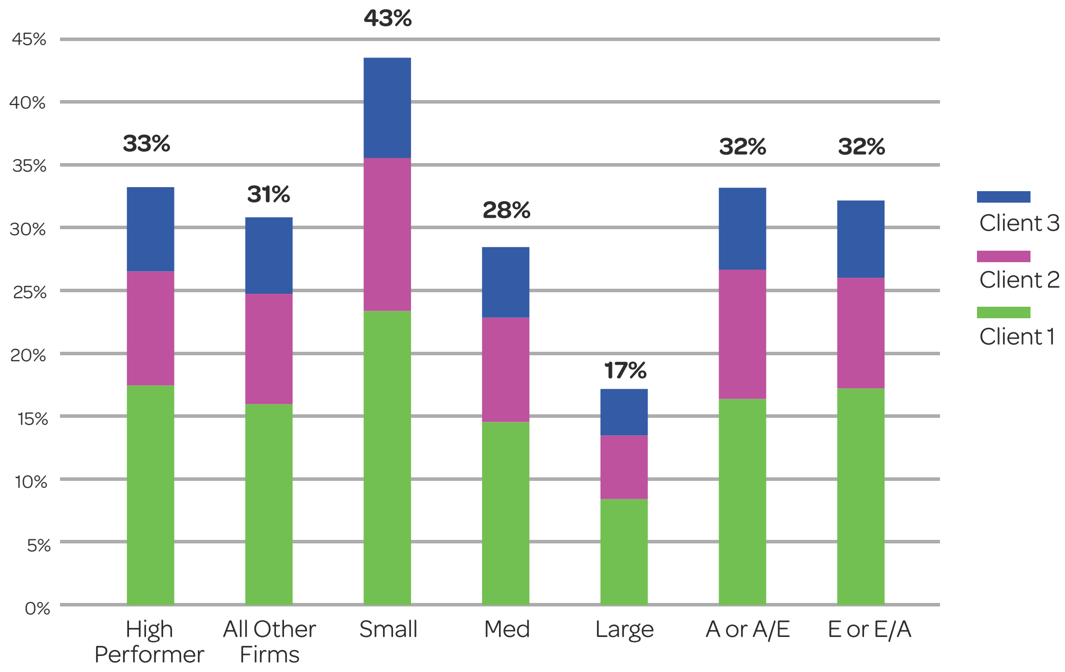


Revenue from Top Three Clients

The percentage of revenue generated by a firm's top clients is a key indicator of revenue stability. The higher the percentage, the greater the exposure to a single client leaving and putting a serious dent in the firm's revenue. In a positive move, these numbers declined across the board as firms diversified their revenue base and became less dependent on just a few clients. The one exception is at small firms where the top three clients generated 43% of revenue—and the top clients contributed nearly one quarter of net revenue. Small firms will want to watch this closely to prevent costly surprises down the road.



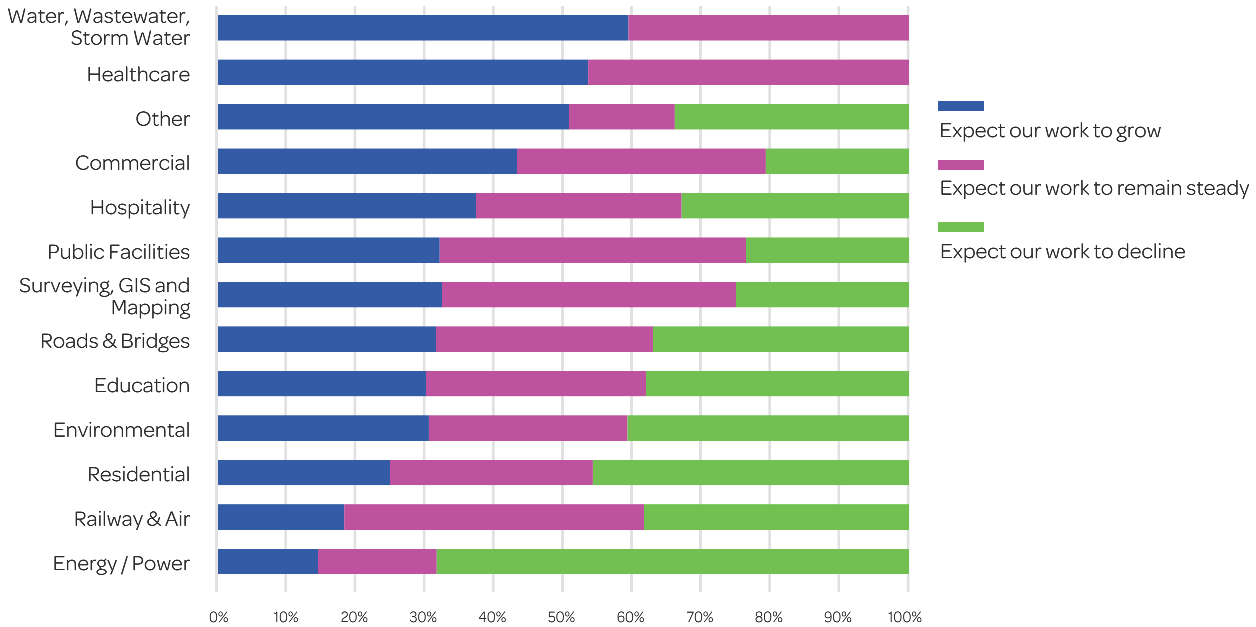
REVENUE FROM TOP THREE CLIENTS



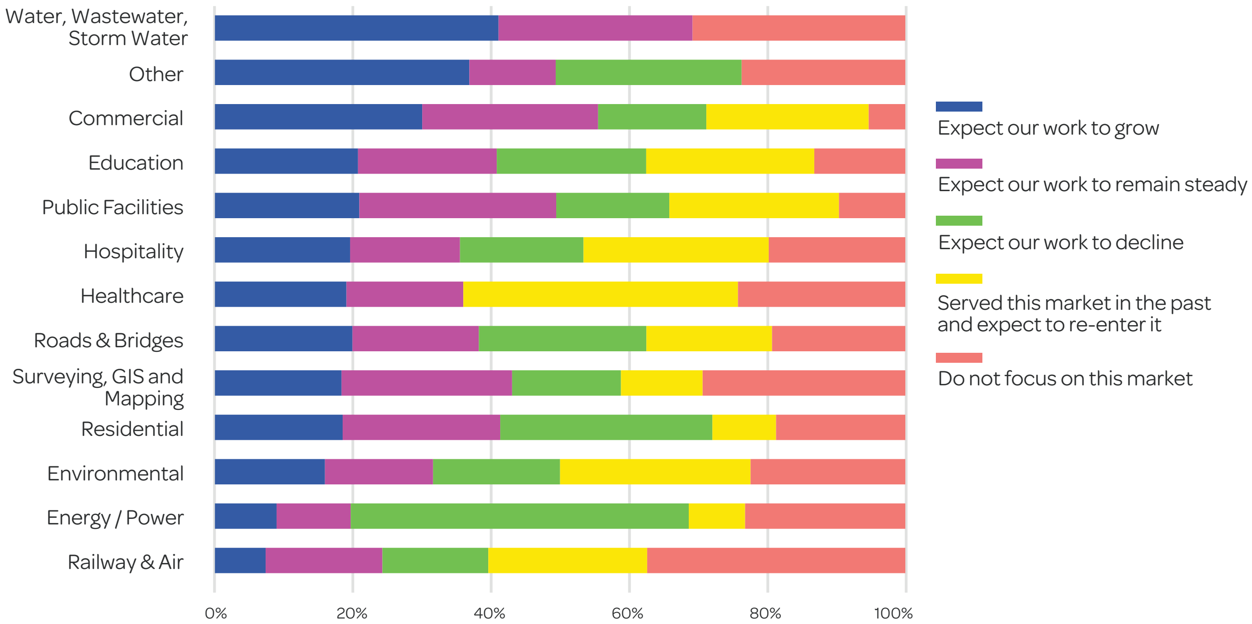
Market Position

A&E firms are more tempered in their outlook of how they will be positioned across 12 different markets in the next 18 months. Last year, an overwhelming majority of participants expected their work to remain steady or grow in the markets in which they are active. This year, the story is not as positive as many firms expect their work to decline in multiple markets. Only healthcare and water, wastewater, storm water have over half of respondents indicating their markets will grow. Whether these results portend a downturn in the market, or simply reflect a pessimism born from lower win rates and increased competition, this is a key metric firms to follow.

POSITION IN MARKET OVER NEXT 18 MONTHS



POSITION IN MARKET OVER NEXT 18 MONTHS - ALL CATEGORIES



BUSINESS DEVELOPMENT

CLARITY OUTLOOK

Win rates are suffering as A&E firms struggle with increased competition and strained business development resources. Faced with a retiring force of senior partners, project managers are often being asked to nurture client relationships and satisfy clients along with the robust list of other responsibilities sitting on their shoulders. To combat this, over time we expect to see firms investing in more formal systems and processes for generating leads, and executing on the BD process.

SECTION THREE

PROJECT MANAGEMENT

"Raise the bar" was the project management mantra from last year's study. The findings revealed significant opportunities for firms to make investments and tweaks to systems and practices to improve project performance.

70%

of projects

are on or under budget, a drop from last year's average of 75%

53%

of firms

say confidence in the accuracy of project status reporting is high or very high, up from last year

7%

of firms

have very mature project management, down 6% from last year

This year, the bar is indeed going up slightly. However, there is still room for improvement.

One of the most significant areas for improvement is projects on or under budget. This number dropped 5% this year to 70%. This metric is one to follow closely, as it effects not only project metrics but also firm profitability and client satisfaction.

Although inexperienced PMs and poorly executed procedures remain challenging, A&E companies are working to overcome them by investing in internal training and developing internal best practices. Two of the top three initiatives firms are pursuing over the next 2-3 years fall into these categories. As PMs become more adept at running all aspects of a project, the number of projects on or under budget should increase, client satisfaction should improve and firms should see increased profitability.

On a positive note, firms seem to make significant improvements in collaboration and communication. These were identified as a top challenge last year, but this year they topped the list of what firms do well relative to their project management processes. Many of the listed improvements are in the 'leading indicator' areas. Understandably, the 'lagging indicators' did not see the same boost this year. As improved training and communication gets traction, there should be an uptick in the lagging indicators such as project status visibility, confidence in accuracy of project status reports, PM discipline maturity and on/under budget projects.

Project Management Highlights

- Project status visibility was relatively unchanged from last year with 44% of A&E firms claiming very high or high confidence, 41% of firms saying they have moderate confidence and 15% of firms indicated low or very low confidence that the right people in their organization have visibility into project status.
- Firms reported that 70% of their projects are currently on or under budget. This is a 5% drop from last year's average. This could indicate that project delivery has suffered or that firms are taking a deeper look into this particular area of their business and increasing visibility to highlight potential challenges.
- Overall confidence in the accuracy of project status reporting rose slightly. Of the survey respondents, 53% said their confidence was high or very high, a slight increase from 52% last year. Moderate confidence levels rose to 42%, up from 40%.
- Survey participants reported a decline in project management maturity. Just 7% of firms said their PM discipline was very mature—down 6% from 2015—while 49% of firms claimed it was mature, a 7% drop. Nearly all of the decline fell into the somewhat mature category, which climbed 12% to 38%.
- Just over half of firms share PM best practices and 65% provide access to PM training resources for self-study. Just under half provide formal internal PM training and a PM mentor program. Firms are clearly not holding back in providing resources; the bigger question may be whether PMs are given the time and cultural reinforcement to leverage them.
- The top three project management challenges facing A&E firms today are: Competing Priorities (63%), Inexperienced Project Managers (52%) and Insufficient or Poorly-Executed Project Management Procedures (43%).
- The top three project management KPIs tracked by firms include profitability (95%), multipliers (84%) and average collection period (78%).
- Collaboration and communication jumped from third place in 2015 to the top of the list of what firms do well relative to project management processes. Last year's top answer, Qualified Project Managers, slid to the #2 position.

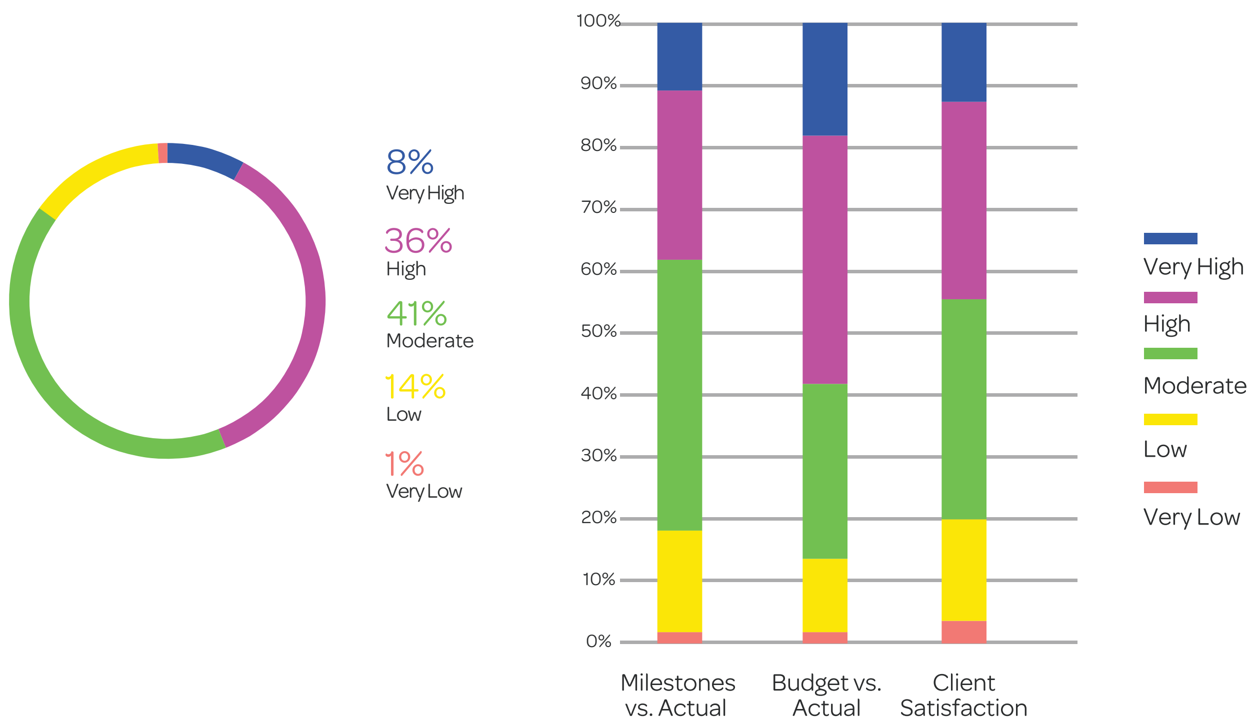
Confidence in Project Status Visibility

Firms were asked to rate their level of confidence that the right people in their organization have visibility into three key metrics related to project status: milestones vs. actual, budget vs. actual, and client satisfaction.

Overall, there was very little change from last year. The highest confidence came in the area of Budget vs. Actual with nearly 60% of firms indicating high or very high visibility here. This is good news as project managers eat, sleep and breathe budget, so they have to get this right. It could also be a reflection of today's PMs being more financially-minded than in the past.

One question raised by the results is in the area of client satisfaction. Many firms do not have a formal process to capture satisfaction, yet 45% of respondents selected high or very high confidence in visibility into this key metric.

CONFIDENCE IN PROJECT STATUS VISIBILITY



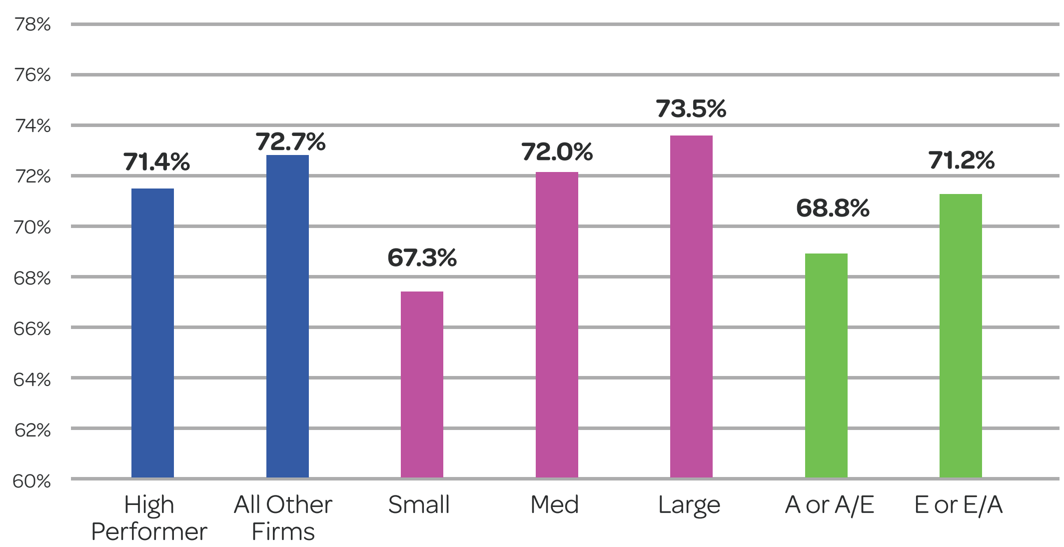
Projects On or Under Budget

70% -5

This year's survey saw a drop of 5% in the average percentage of current projects that are being reported as on or under budget compared to 75% last year. The drop was fairly even across the board with small and large firms alike reporting a similar dip.

These results may not be a direct result of project going over budget, but could indicate greater visibility and reporting accuracy. Some of the year-over-year slide may be a result of teams digging a little deeper into this area and that last year's figures erred on the side of optimistic. Still, whether this is the case or there has truly been a decline in firms' ability to adhere to budget, it is clear that this is an area that warrants attention.

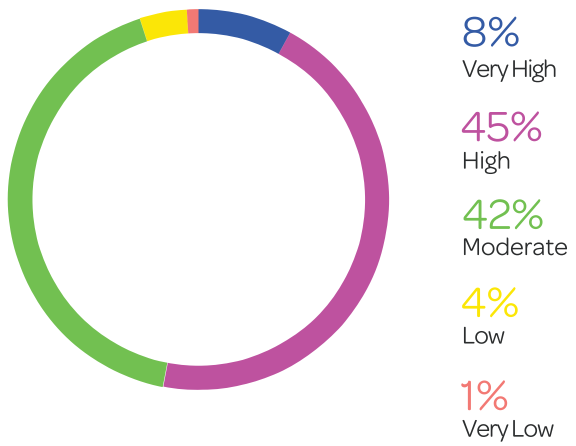
PERCENT OF PROJECTS ON OR UNDER BUDGET



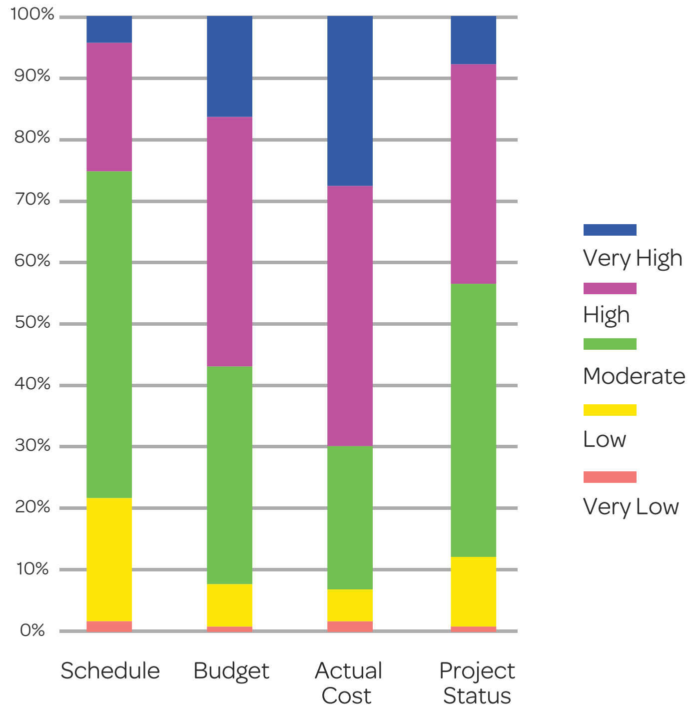
Project Reporting Accuracy

Compared to last year, are A&E firms more or less confident in the accuracy of reporting of key metrics related to project status? Answer: It depends. While the numbers overall are similar to last year's, firms report greater confidence in their actual cost reporting with 7 in 10 selecting high or very high confidence in these numbers. The increase in some of the project reporting confidence may correlate to the drop in the on or under budget project metric. Firms appear to be getting a better handle on capturing, tracking and reporting true project budgets and costs in real time.

A&E firms have the least confidence in their schedule and project status reporting accuracy. Schedule reporting came in particularly low with 22% of respondents indicating low or very low confidence in this area. Firms know this is a problem and are working to fix it. There is a strong uptick in demand for project management training classes in the past two years—a testament to the appetite of companies to improve in these areas. There is also increased interest in formalized tools and systems for resource management and scheduling, bringing together the physical and financial sides of the project, enabling better visibility and management of all the interrelated aspects of a project.

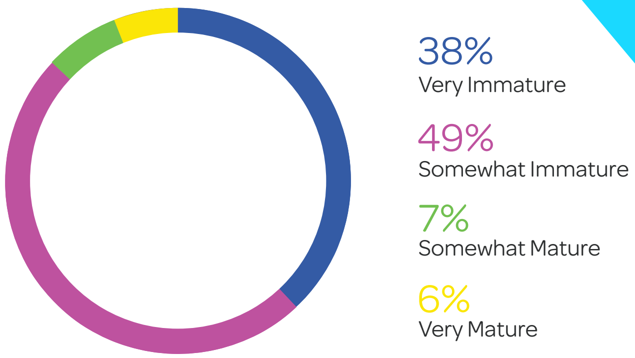


PROJECT REPORTING ACCURACY



Maturity of Project Management Discipline

When asked to rate the maturity of their project management discipline, A&E firms were more tempered in their assessments this year compared to last year. We saw a 6 percent drop in very mature and a 7% drop in mature ratings. Most of that drop-off fell into the somewhat immature category, which saw a 12 percent year-over-year increase to 38%. This drop could be a function of increased inspection of operations and higher expectations of PM performance. It also could reflect increased standardization. Last year, respondents gave a more subjective grade; this year, with clearer definitions of each of the categories, the "drop" in maturity may actually be a right-sizing of these buckets.



Project Management Key Performance Indicators

In a new question this year, A&E firms identified what Key Performance Indicators (KPIs) they currently track. Not surprisingly, profitability came in at the top with nearly all firms (95%) saying they keep an eye on this core metric. Following profitability were multipliers (84%) and average collection period (78%).

Notably, just 40% of companies track client satisfaction or project evaluations. Not surprisingly though, there is a strong correlation between those that do track it, and the 45% of participants who said they have high or very high confidence in their visibility into client satisfaction. Surprisingly, on-time delivery (22%) and schedule variance (16%) are not tracked by many firms, but can significantly impact firm profitability. These results show there is little accountability in these areas, which may be contributing to lower-than-ideal results elsewhere in the PM function, including confidence in reporting accuracy.

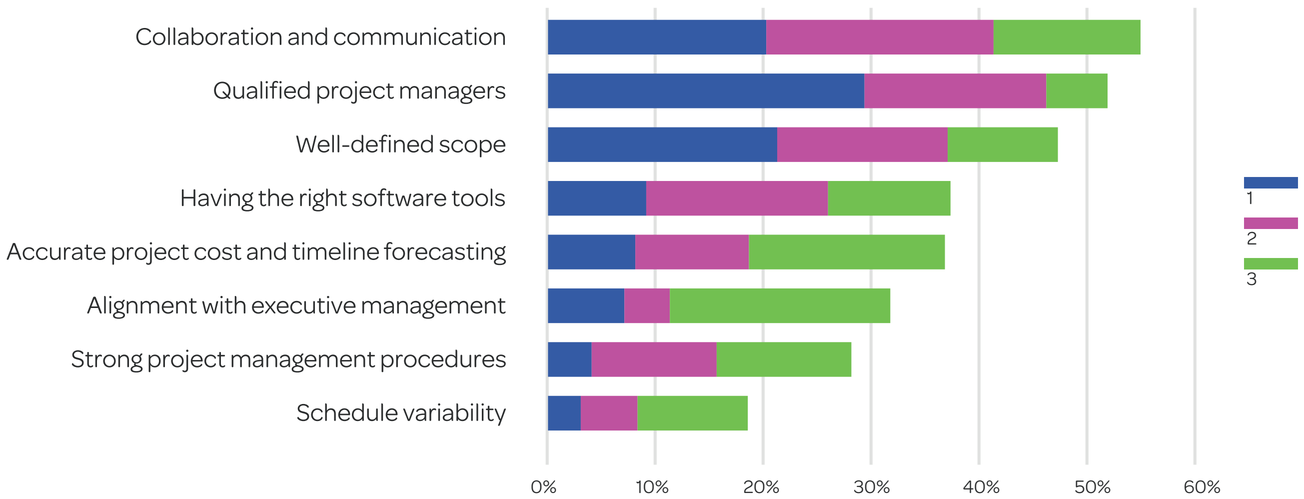
PROJECT MANAGEMENT KPIS TRACKED

What Firms Do Well in Project Management

For this question last year, firms could select as many responses as they wanted. To focus in a bit more, this year firms selected just their top three answers. With this minor shift in approach, last year's top answer, qualified project managers, slid into the #2 position with just over half of participants selecting it as a strength, compared to 51% last year.

Collaboration and communication jumped to the top of the list with 54% of respondents putting it in their top three, up from 39% last year. Well-defined scope also moved up, rising to third place with 46% of participants selecting it, compared to just 35% and a fifth-place showing last year. For firms focusing on ways to improve performance of their projects, effective scoping can be a critical component. On the other end of the spectrum, firms reported schedule variability at the bottom of what they do well, and in another question noted they do not often track schedule variability. As the PM function matures within firms, this is an area they will want to bolster.

WHAT FIRMS DO WELL IN PROJECT MANAGEMENT

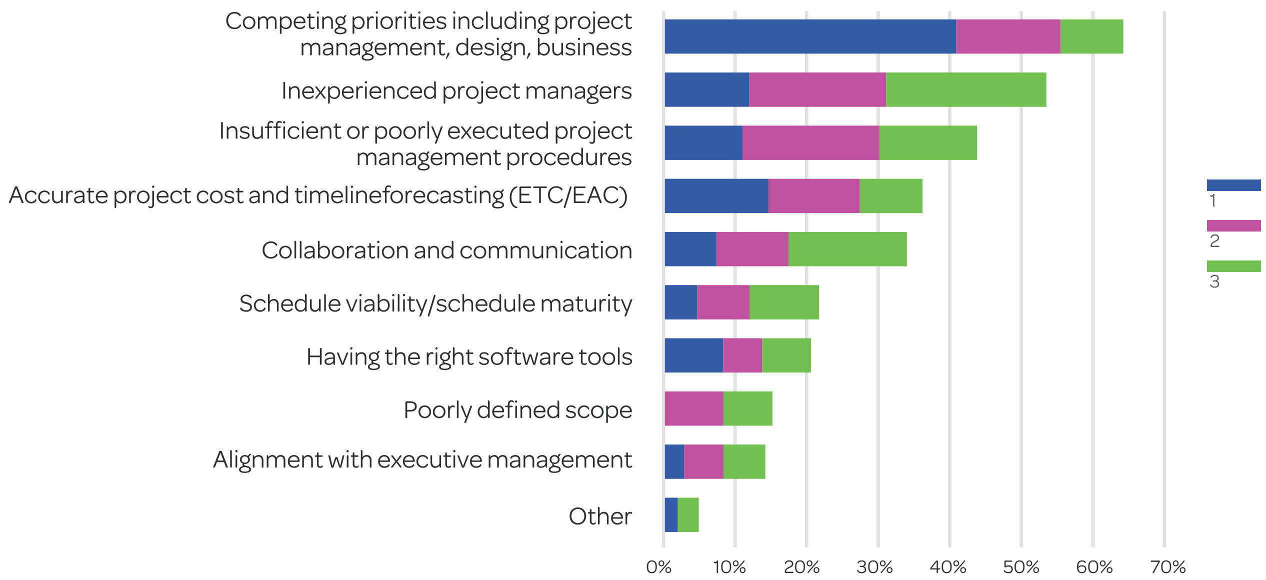


Top Project Management Challenges

Based on participant survey, a new choice was added to the list this year - competing priorities, which soared to the top of the list with more than 6 in 10 participants putting it in their top 3 and 40% selecting it as #1. Last year's top response, accurate project cost and timeline forecasting, dropped to 4th this year.

The correlation between top project management challenges and what firms do well in their PM processes is worth noting. Clearly, collaboration and communication have been an area of focus in the past 12 months as it rose to top on the "what we do well" list and dropped down the "top challenges" list to 5th place from 2nd place last year. Respondents were also given the option to identify other challenges not on the list and a number of firms listed staffing-related issues such as staff shortages and senior leadership not letting go and allowing PMs to lead.

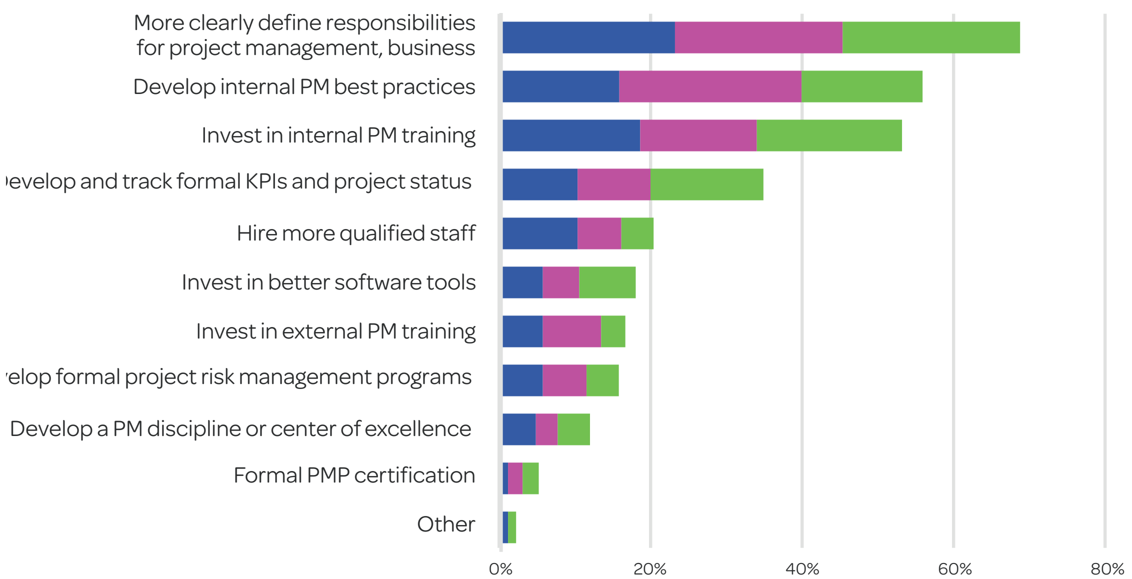
TOP PROJECT MANAGEMENT CHALLENGES



Top Project Management Initiatives

When asked what initiatives firms plan to pursue to address their top PM challenges, answers aligned consistently with the top challenges. For instance, the top initiative in the next 2-3 years is to more clearly define responsibilities for project management, business development and design—an answer which directly addresses the top challenge. The #2 and #3 initiatives—developing internal PM best practices and investing in internal PM training—speak directly to concerns about inexperienced project managers. It is encouraging to see that firms are clear on what they need to pay attention to and have plans to address the problems.

TOP PROJECT MANAGEMENT INITIATIVES



PROJECT MANAGEMENT

CLARITY OUTLOOK

The project management function, along with the skills of project managers, appears to be getting the attention it deserves as the heartbeat of A&E firms. PM-related training is on the upswing as firms invest in internal training programs as well as seek outside help to improve the skill set of project managers. Already, firms have seen gains in the area of communication and collaboration. When financial management, planning and other PM skills improve, there should be corresponding improvements to the bottom line.

While PM discipline maturity and project on/under budget figures appear to have dropped, it may be less of an actual drop and more of a statement that firms are getting a handle on the reality of these areas. And that's the first step to making improvements.

SECTION FOUR

TALENT MANAGEMENT

In his timeless book "Good to Great", Jim Collins and his team analyzed 1,435 companies and identified 28 that outperformed the market considerably over 40 years. Their research revealed the defining characteristics of those that outperformed the market. The very first concept they highlighted was "Who" before "What."

1 in 10

workers

fall into the Baby Boomer and Millennial categories; GenX and GenY make up the vast majority of A/E employees

59%

of firms

have the same number of open positions as last year

70%

of firms

rank talent acquisition as one of their top three most expensive HR processes

Explained further, if you get the right people on the bus in the right seats, you are infinitely more capable of achieving a higher level of performance.

A/E firms understand the importance of people to their success. The best people are a competitive differentiation. And, as the war for talent continues to heat up, there is a new section in this year's report – Talent Management – to better equip firms to improve their performance. The findings were very interesting. The survey confirms there is a talent crisis and A/E firms are trying to stay ahead of it. The struggle to find, attract and retain great employees came out loud and clear. Baby Boomers are retiring in droves and few companies have a succession plan in place to address the gaps they are leaving behind. HR information systems are outdated, injecting cost and inefficiency into an already stressed function. And the coming influx of Millennials means that what worked in the past from a talent perspective may no longer work going forward.

A/E firms need to take a hard look at how to engage their top employees and how their practices and systems can best support the lifeblood of their firms—their people. Tracking these and other HR-related metrics going forward is crucial to help firms stay ahead of trends and win the war for talent. The game has changed. Finding and retaining talent is more important than ever.

Key Data Points from the Survey

- GenX and GenY make up the vast majority of A/E employees today with only about 1 in 10 workers falling into the Baby Boomer and Millennial categories.
- At the time of the survey, 59% of firms said they had the same number of open positions as they did a year earlier, while 1 in 4 firms reported more open positions and 16% reported fewer open positions. Large firms had the most unfilled jobs with more than 30% reporting a greater number of open spots than last year. This correlates with other data showing large firms are losing employees faster than their small and mid-sized counterparts, highlighting the need for better processes to engage and recruit employees.

- Firms overwhelmingly pointed to Talent Acquisition as the most expensive HR process. Nearly 7 in 10 companies ranked it in their top three. Annual Performance Reviews came in second, with Open Enrollment for Benefits and Developing Learning Programs for Employees tying for third. A major reason for the high cost of these processes seems to be lack of a unified solution around talent management and systems integration. The majority of firms acknowledged that integrated systems would be highly valuable, but 69% of respondents said none of their current HRIS applications were integrated with their ERP system and 17% weren't sure.
- For 66% of A/E firms, it has been four years or more since they significantly added to, replaced or upgraded their HRIS. This could be a hangover from recession-era thinking, but with the economy improving and the war for talent heating up, this tide may change.
- More than 90% of A/E firms do not have a Learning Management System (LMS). This suggests they are either neglecting training, outsourcing it, or delivering manually. This is concerning because experts believe there is a clear link between training provision, staff engagement and retention levels. It also points to potentially ineffective, inconsistent or labor intensive tracking.
- Just 19% of companies surveyed said they have a skills repository that helps them source and acquire talent for projects, which can impact effective resource management and utilization.
- When asked to identify their top challenges in managing HR, performance management and succession & career development planning came in neck-and-neck for the top spot. When asked about the challenges in acquiring talent, the runaway top response was availability of good candidates in the marketplace.
- 68% of firms have no formal succession plan or the plan applies only to a select few people leaving organizations at risk when baby boomers retire or a key member of the firm leaves unexpectedly.

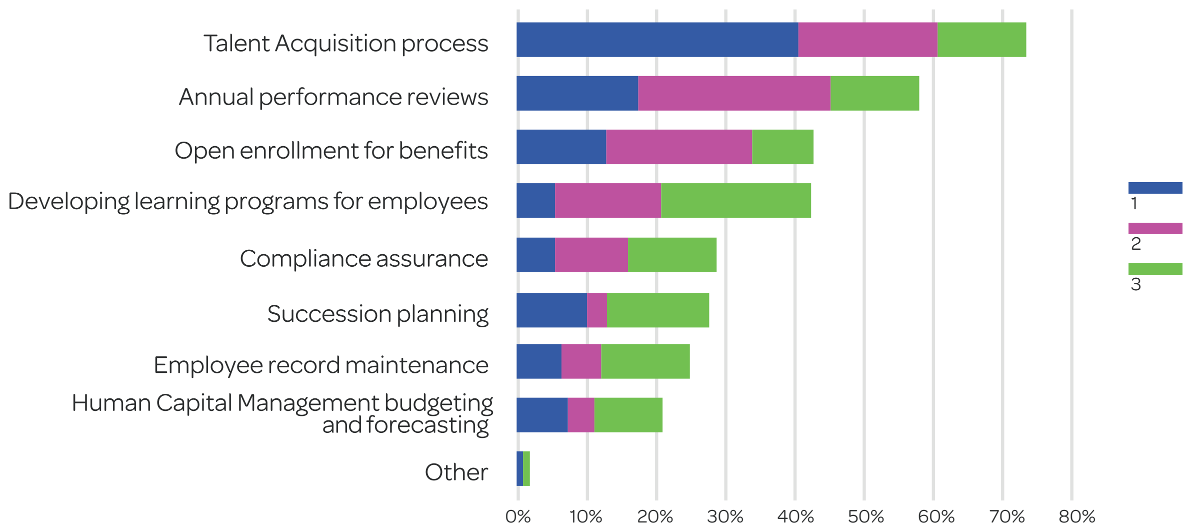
Most Expensive Business Processes (Time and Cost)

The talent acquisition process is not cheap. Respondents sent this message loud and clear through ranking their top three most expensive business processes. Nearly 7 in 10 selected talent acquisition among their top three and 38% ranked it as #1—far more than any other #1 choice.

These results were not surprising considering that about 90% of the firms claim inefficient talent management processes. This is one area of A/E businesses that remains highly manual. When firms do employ talent acquisition technology, it is often not integrated with other systems. This means that when HR needs information such as where a candidate is situated in the hiring process, they can't get to it without a lot of paper shuffling. Another issue revealed: for 52% of firms, it has been at least four years since they upgraded their HRIS system, which means more than half of A/E companies are running HR processes on systems that may lack efficiency. This does not impress savvy potential employees.

Technology is not entirely to blame, however. Senior execs are typically involved in Talent Acquisition as well as in the second-ranked process, Annual Performance Reviews. While senior exec involvement in these areas is crucial, the hours can quickly add up.

MOST EXPENSIVE BUSINESS PROCESSES TO SUPPORT

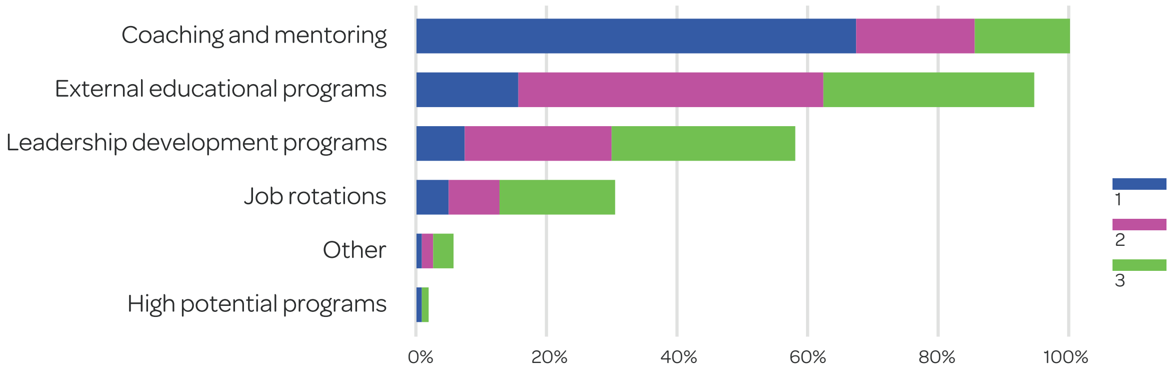


Top Three Tools Used to Develop Talent

By far, the most popular tool used by A/E firms to develop talent is coaching and mentoring. This finding raises some important questions. Have those who are responsible for coaching been trained in how to coach and mentor? When senior leaders are positioned as mentors, is there a succession plan in place for when they retire? Are the right people tapped as coaches and mentors? Is there a system to track coaching interactions and talent development? If your firm relies heavily on coaching and mentoring for development, it is critical to take a detailed look at these kinds of questions to ensure your program is effective, efficient and formalized.

People stay with a company when they feel challenged, engaged and have ample opportunity for development. Yet 90% of firms indicated they have no Learning Management System (LMS) and no formal career development path for their employees. At a time when it is extremely challenging to find and retain great employees, talent development is an area of the business that is ripe with opportunity for improvement.

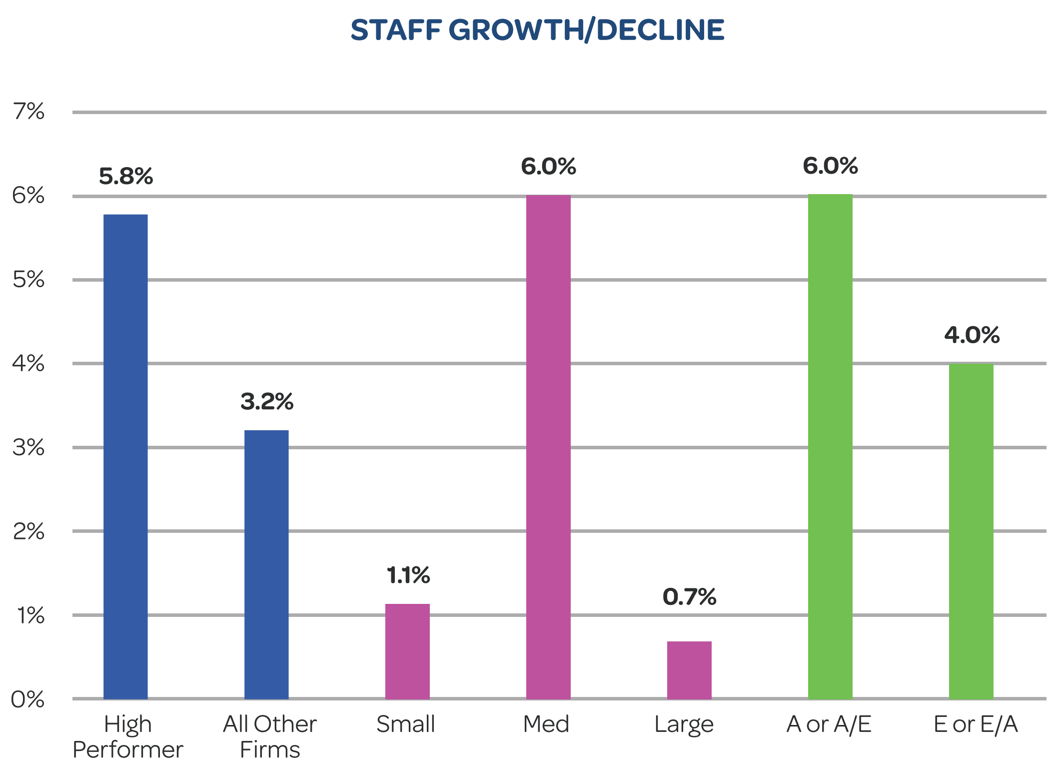
TOP THREE TOOLS USED TO DEVELOP TALENT



Staff Growth or Decline

3.5% -1.2%

Firms are still reporting staff growth across the board, it is just more tempered than in the past. Last year, there was a big push among high performers and large firms to add staff. Now, these organizations have leveled off and the other firms are catching up. Medium-sized firms and Architectural firms led the pack in staff growth, both adding 6% headcount. Some of the decrease in year-over-year growth for large firms could be due to these organizations not focusing as much on growth because they are still trying to fill current vacant seats.

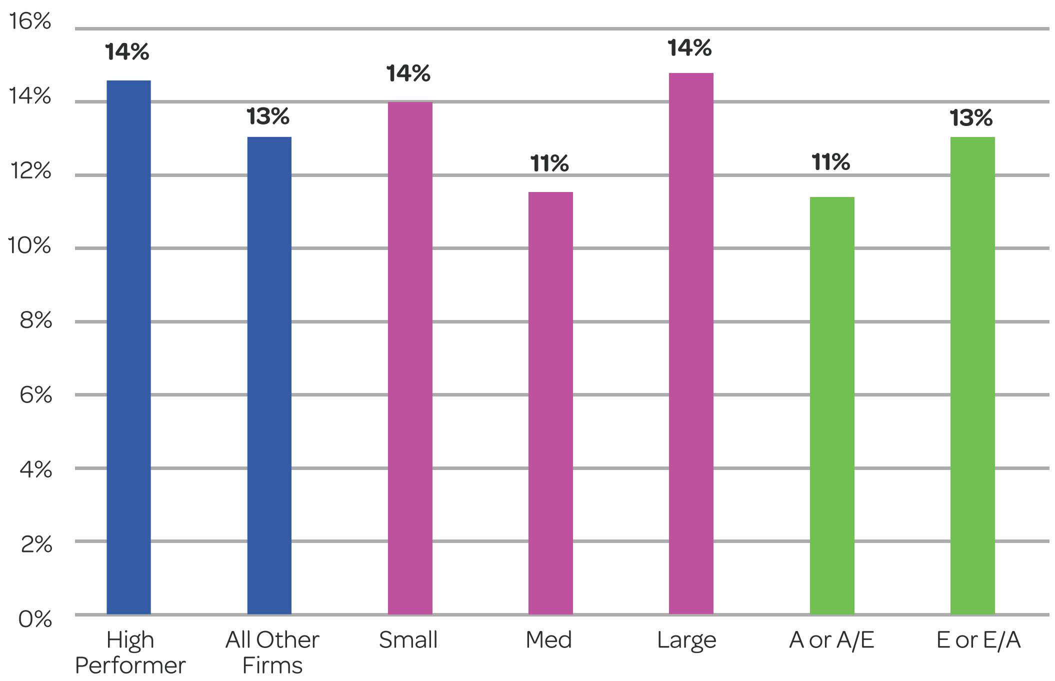


Employee Turnover

13.3% **+1.9**

Turnover refers to the rate at which firms are losing employees, either voluntarily or involuntarily. At 13.3%, the number stayed steady on average, with an increase among firms in the top quarter and a decrease at firms in the bottom quarter. The fact that this number has not come down overall is not surprising. As the market strengthens, workers have opportunities they didn't have when the job market was tight. If they don't like their salaries, their roles/responsibilities or are being forced to wear too many hats, they can seek other opportunities more easily. Departing Baby Boomers are also likely contributing to this number, but are definitely not the whole story. These trends suggest that current turnover is being driven primarily by voluntary departures.

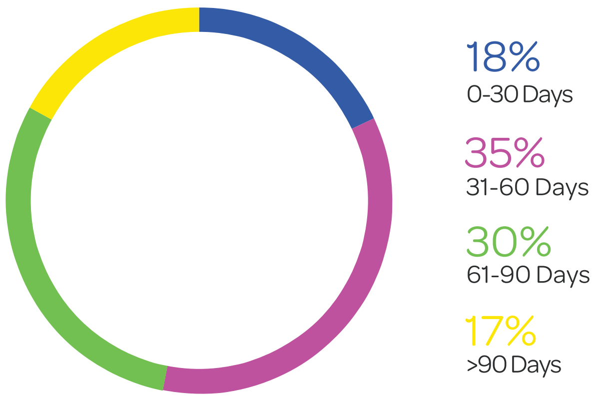
EMPLOYEE TURNOVER



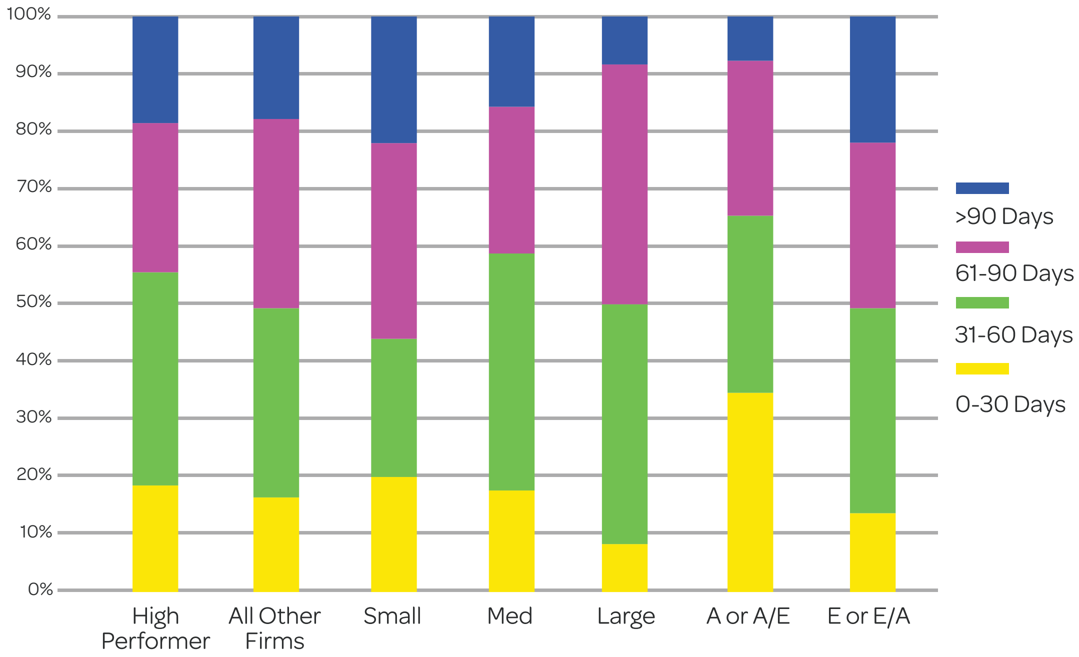
Average Time to Fill Position

In this first year of collecting data about open positions, it is not surprising to see that it takes smaller firms the longest to fill open positions. These companies may not be as well-known or have the same robust recruiting processes as some larger players. Small firms also tend to lack the dedicated resources to focus on finding candidates to fill an open position; instead, the task becomes a busy employee's side job.

While the numbers themselves may not be surprising, the key is understanding your process for filling positions and the challenges you face. How long does it take to fill an open spot at your firm? Do you know where the bottlenecks are in the process? Do you know where good candidates tend to fall out of the hiring process? Do you know where there are opportunities to make your process more efficient? These are all questions to consider as you look at your firm's ability to compete for valuable new talent.



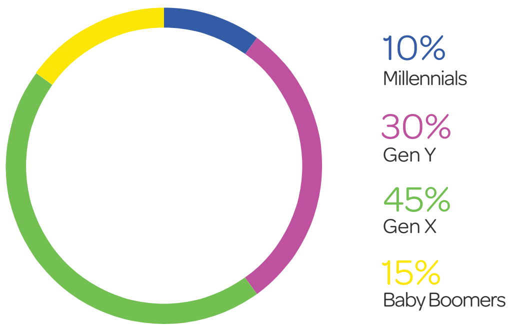
AVERAGE TIME TO FILL POSITION



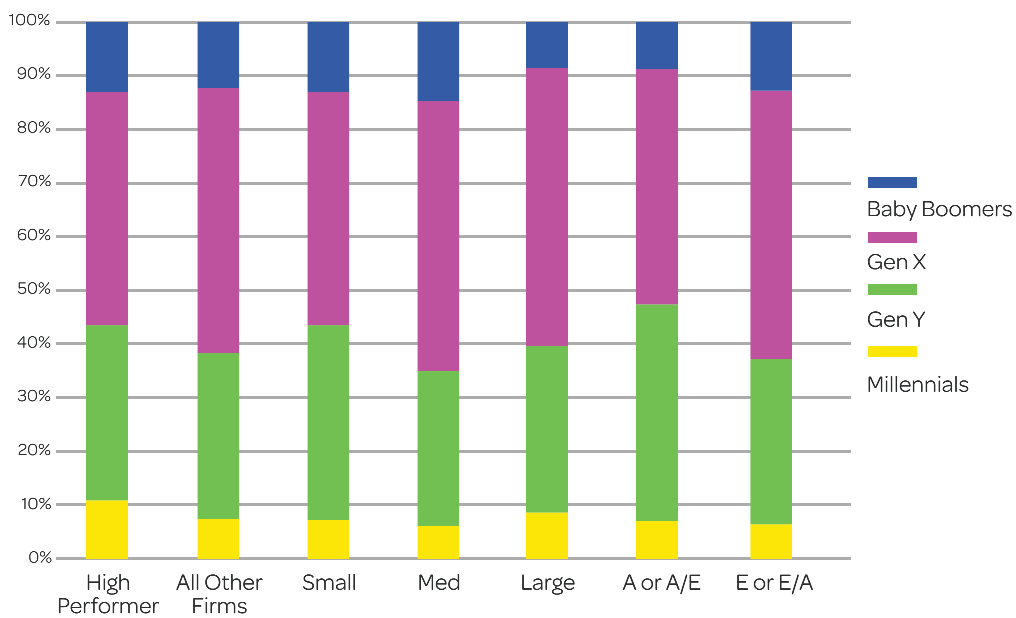
Workplace Composition by Generation

The percentage of generations employed by A/E firms creates a bell curve with the bulk of workers coming from Generations X and Y and just over 1 in 10 each from the Baby Boomer and Millennial generations. It is particularly interesting to see the shrinking number of Baby Boomers. Just 15% of workers in A/E firms today are considered Baby Boomers, born during the post-WWII baby boom between 1946 and 1964. This year, these workers will be between 52 and 70 years old. Their waning numbers underlines the need for good succession planning, especially since this segment likely represents the majority of the senior team. Yet, survey results found an overwhelming 68% of firms have no formal succession plan or the plan applies to just a select few people.

As Baby Boomers retire, GenXers are poised to take over firms and shoulder the responsibility for growing Millennial and GenY workers. This latter responsibility is especially noteworthy. The high cost of turnover coupled with the difficulty of finding good employees to fill open positions means retention is more critical than ever. Millennials stereotypically do not have the same loyalty to a firm and long-term employment mindset that Baby Boomers and even GenXers have. Millennials generally don't hesitate to change jobs as better opportunities arise. This means GenXers must strive to overcome generational barriers to understand what's important to their GenY and Millennial employees.



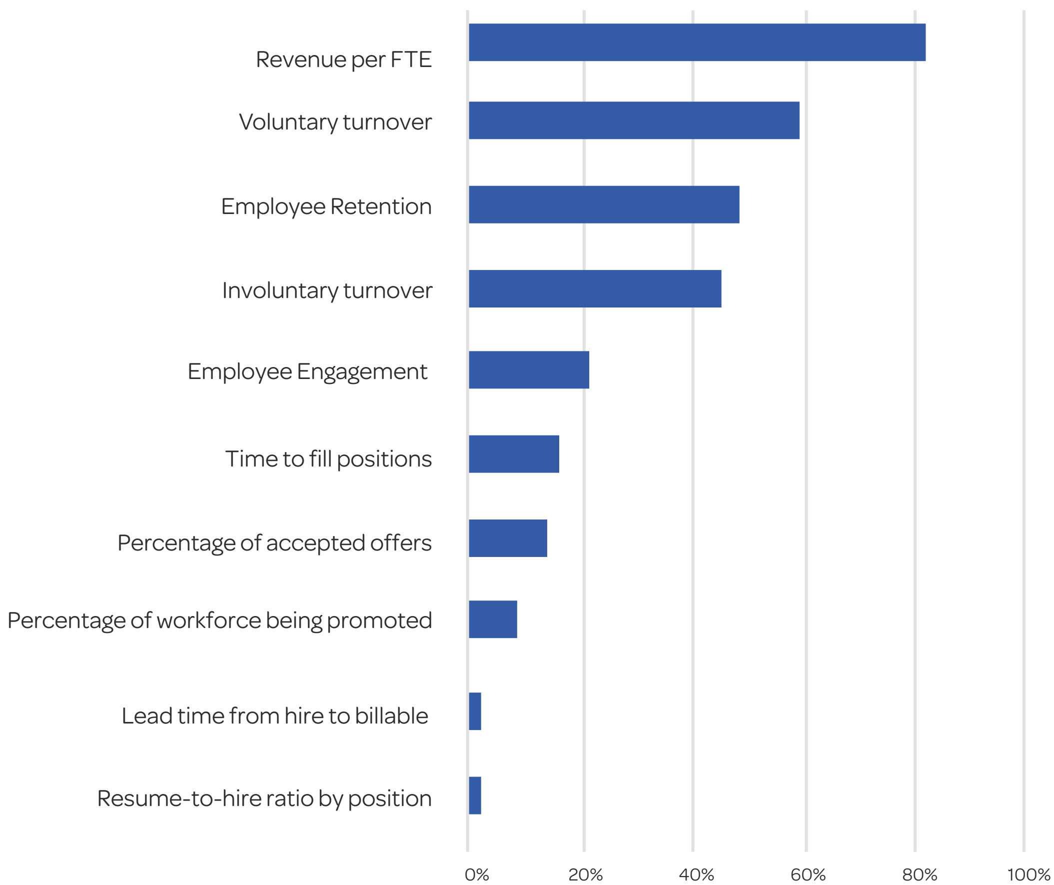
GENERATIONAL COMPOSITION



Current Talent Management KPIs Tracked

The real story here is the KPIs that firms said they were not tracking. On the whole, A/E firms are not tracking any of the early hiring metrics such as acquisition time, hiring-to-billable time, first-time accepted offers and so on. These are key in today's hiring environment. For instance, if a firm takes too long to conduct its hiring process, make offers and fill positions, the top talent is being snapped up by more aggressive competition. In light of the fact that firms pointed to talent acquisition as the most expensive process to manage, it appears that this area of the business is suffering from a lack of formal oversight. Similarly, employee engagement appears lower in the list. Engagement and retention are inextricably linked: if your employees aren't engaged, they won't stay and the not-so-virtuous cycle of having to acquire new talent will continue.

TALENT MANAGEMENT KPIS TRACKED



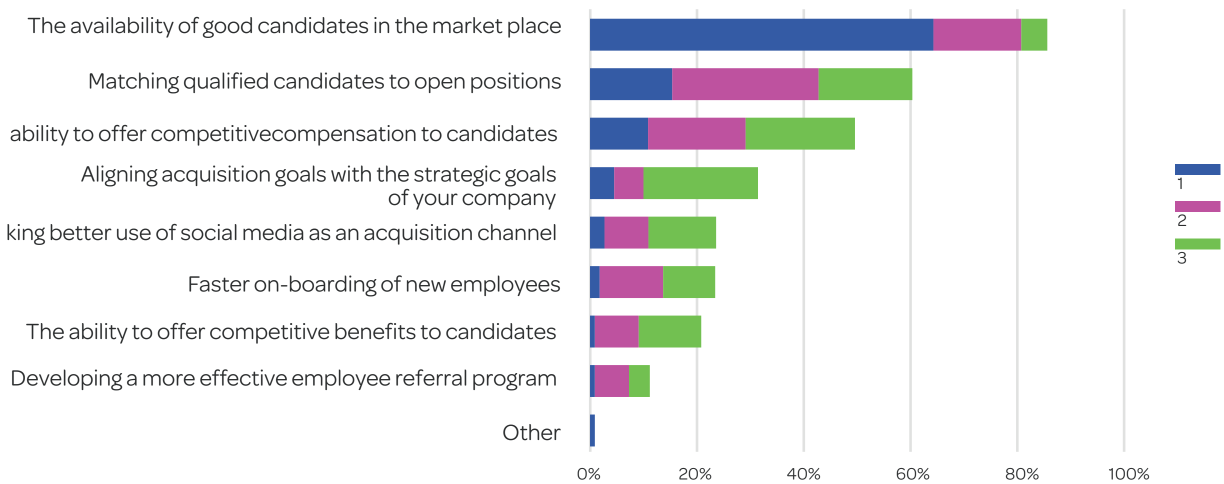
Top Three Challenges in Acquiring Talent

The Availability of Good Candidates ran away with the top spot here with more than 8 in 10 respondents selecting it as one of their top three issues. Part of what may be driving this challenge is a mismatch in expectations. A/E firms are often looking for candidates that can hit the ground running, but as many firms know, new graduates require additional training and onboarding to get up and running. And Millennial candidates may have expectations around learning and development, work/life balance and retirement benefits that don't match up with what firms are offering. For instance, firms lamented their ability to offer competitive compensation as being a major challenge.

There is a widespread assumption that everyone wants higher pay, but Millennials tend to place a higher value on quality of life and other benefits beyond pay.

Overcoming these challenges comes back in large part to automation. Firms need a system for identifying good candidates, following them through the hiring process, matching them to roles in the company and keeping them in the pipeline if they are a good candidate even if there is not an immediate opportunity for them. That way when a job opens, there is a system in place to identify a great match. If the candidate is not engaged in their current job, it may be possible to lure them away.

TOP THREE CHALLENGES IN ACQUIRING TALENT

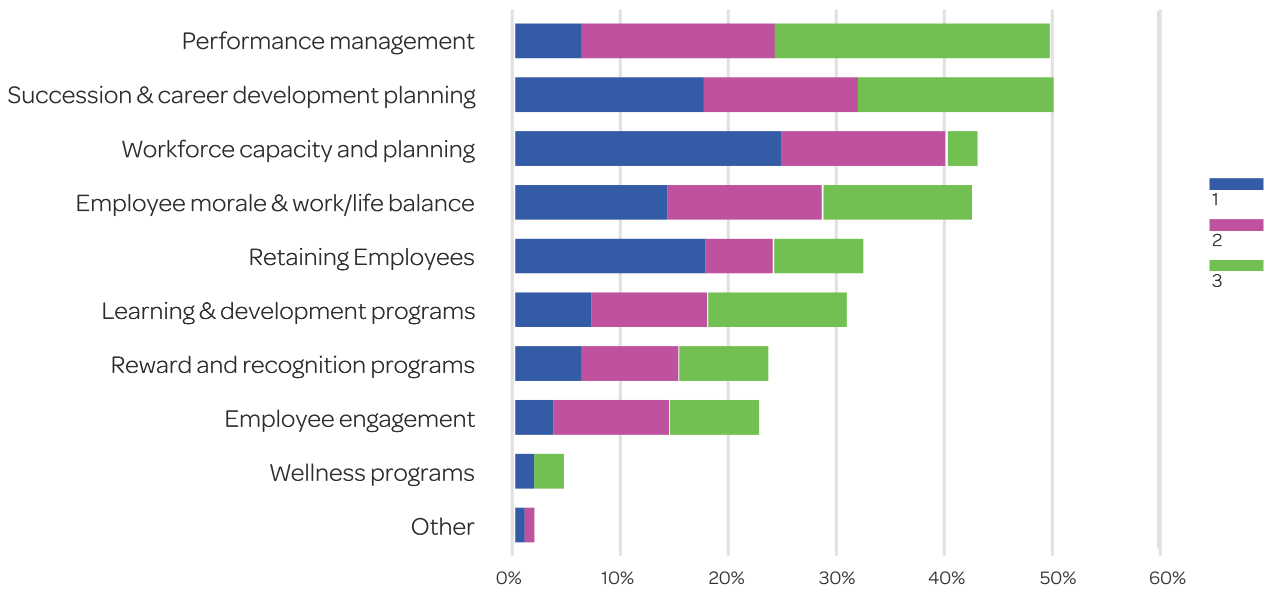


Challenges Managing Talent

In light of the finding that firms are losing Baby Boomers and gaining Millennials, it is no surprise to see that succession planning & career development rises near the top of the HR challenges. That, coupled with performance management, comprise the blocking and tackling of today's modern HR organization.

One interesting note was retaining employees, though fairly low overall, came in with the third highest number of number one responses. This suggests that where it is a concern, it is a major concern. What's interesting about that result is that while retaining employees made a strong showing, employee engagement came in near the bottom. This disparity suggests that companies are not focused on the importance of engagement in driving improvements of many key talent-related metrics.

CHALLENGES MANAGING TALENT

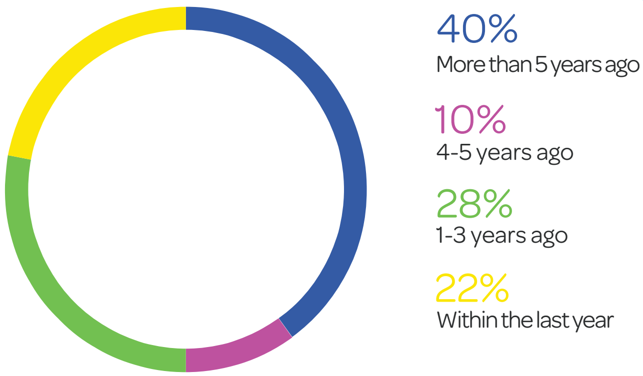


Last HRIS Upgrade

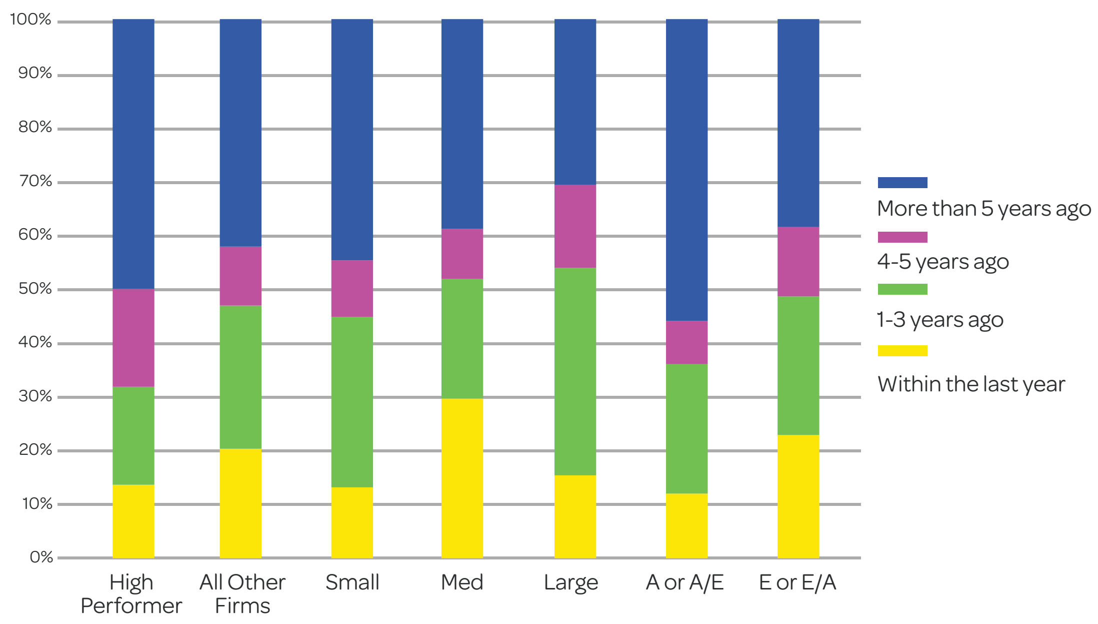
When it comes to keeping HRIS systems up-to-date, AE firms have some opportunity for improvement. For 66% of AE firms, it has been four years or more since they significantly added to, replaced, or upgraded their HRIS systems.

Understandably, companies were not eager to invest in this area during the downturn when many were forced to lay off employees. Now that firms are having to attract, hire and manage more workers, it is time to take another look at this critical system. Outdated systems can impede the HR function and keep organizations from reaping the many benefits of a modern, integrated and unified HRIS.

Benefits of a modern system include streamlining the recruiting process for both external candidates and internal managers, automating the performance review process, giving employees self-service options when it comes to viewing and changing personal data, payroll information, benefit options and automated succession and career planning.

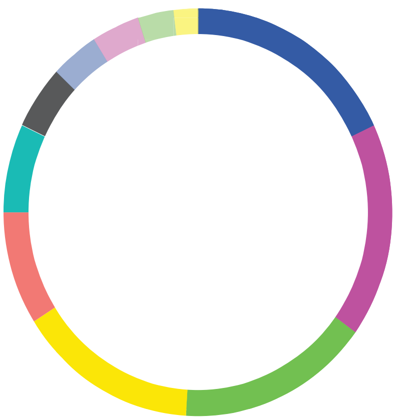


LAST HRIS UPGRADE



Professional Development Opportunities

As firms compete for talent, career development opportunities are critical. Studies show it's not just the salary employees receive, but is the entire employee experience that keeps people in your firm and attracts new people. This year's survey shows many different development opportunities being offered to employees not just in high performing firms or large firms, but across the board. As your firm evaluates the programs it should offer, there's a wide variety of options to address different generations wants and needs. Millennials often look for the opportunity to volunteer for community projects. Growing up with an eye on impacting their communities, offering volunteer opportunities through your firm or time off for employees to volunteer is often an option millennials look for when evaluating potential job opportunities. Gen X employees comprise most of the workforce in AE firms today. These are the future leaders and the group that will benefit most from the leadership programs and succession programs. Again, these career development opportunities are why employees stay, so while firms are growing future leaders they are also improving engagement and giving them reasons to stay. The survey shows all types of firms are investing in a wide range of career development opportunities for employees, which help with talent acquisition, talent retention and succession planning.



18%
Conference attendance

17%
Professional licenses

16%
Professional certifications

15%
Continuing education reimbursement

9%
Ability to participate as volunteer for community projects

7%
Formal learning programs

5%
Executive experiential leadership programs

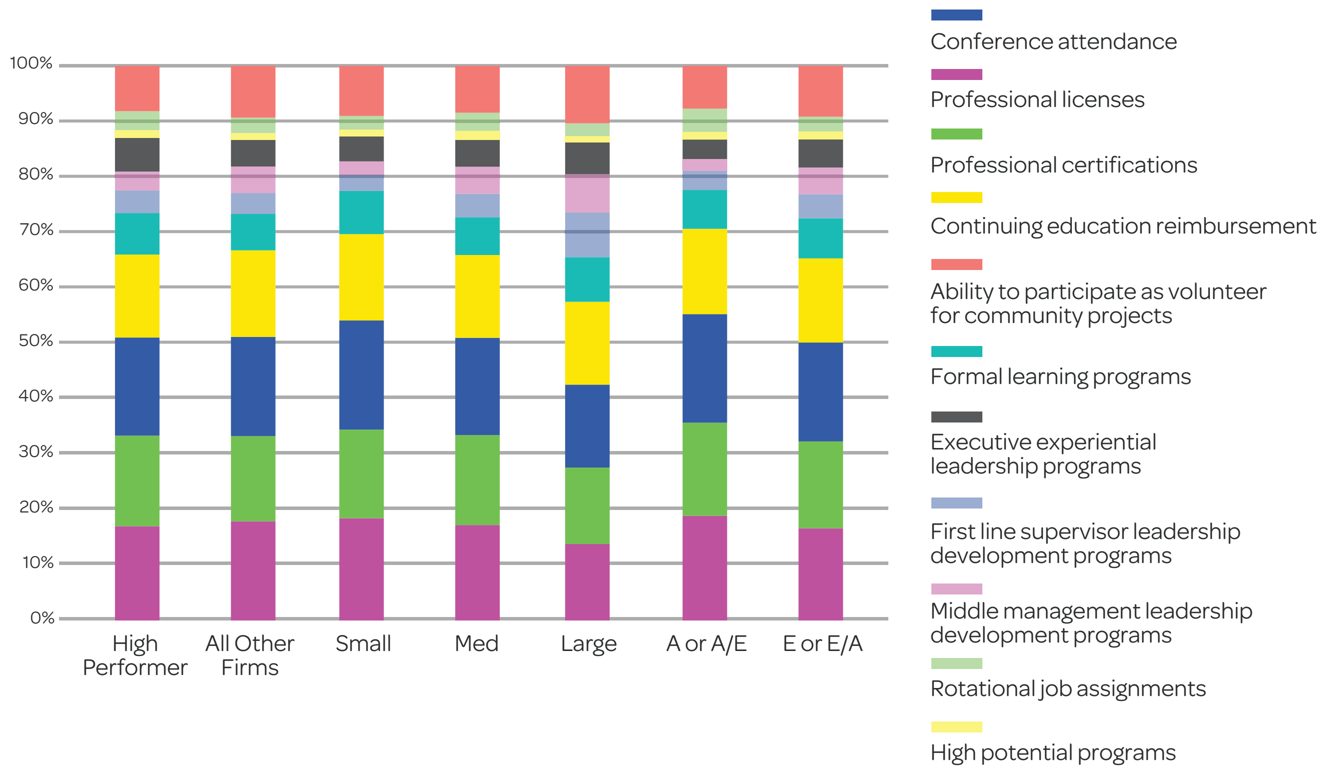
4%
First line supervisor leadership development programs

4%
Middle management leadership development programs

3%
Rotational job assignments

2%
High potential programs

PROFESSIONAL DEVELOPMENT OPPORTUNITIES

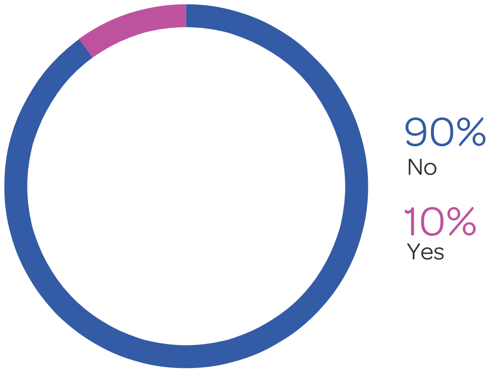


Learning Management System

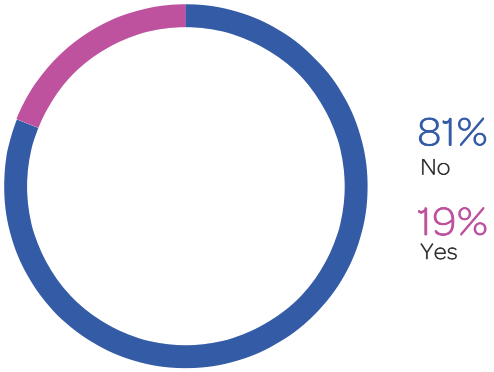
Participants overwhelmingly responded no to the question of does your firm have a learning management system. While industry wide there is acknowledgement that organizations need to track employee certifications and provide continued learning opportunities for employees to enhance career development, not many firms have an automated solution to do this. A talent learning program is an important and essential part of any talent management strategy that's intended to help firms retain top talent and increase employee engagement. Learning programs ultimately help firms support clients. It can also play a role in talent acquisition because having a reputation for developing talent from within is something you can market as a differentiator. As you are evaluating what tools and technology are needed to support the development of talent, on-the-job training is one of the most commonly used and effective practices. With a learning management system, firms can assign training, offer virtual training courses, and track training and certifications, which can have a big impact on the acquisition and retention of talent in your firm.

Related to this, many firms do not have a place to track the skills of their workers. How valuable would it be for your firm to be able to quickly see what employees have security clearance, how many years of experience an employee has, what type of project experience an employee has, or if they can use BIM? Tracking these skills is an efficient way to know what players you have on the team, what players you may need, and what training is needed employee development. Some organizations have a place to track skills, but the majority of firms are flying blind.

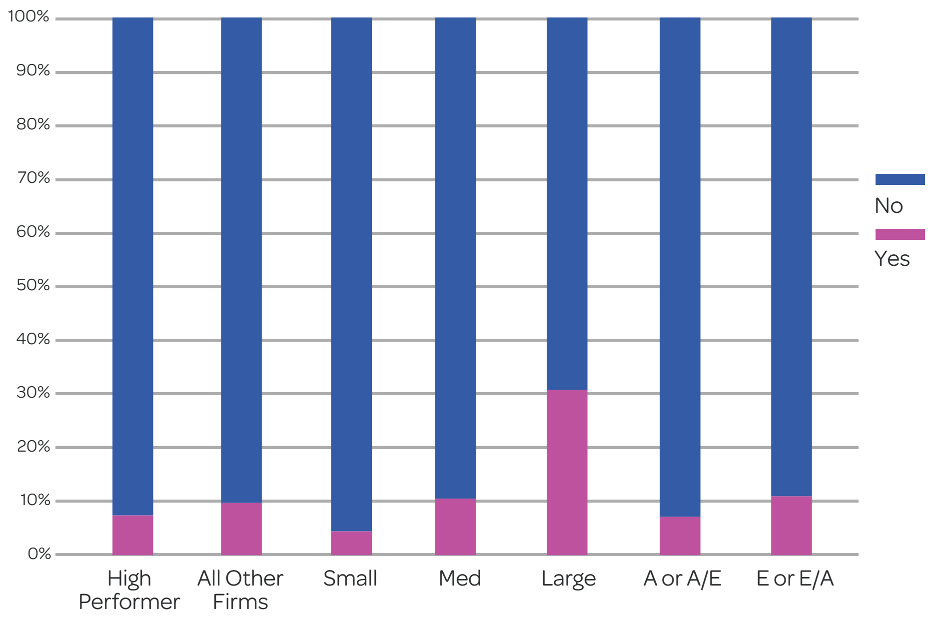
LMS POSSESSION - OVERALL



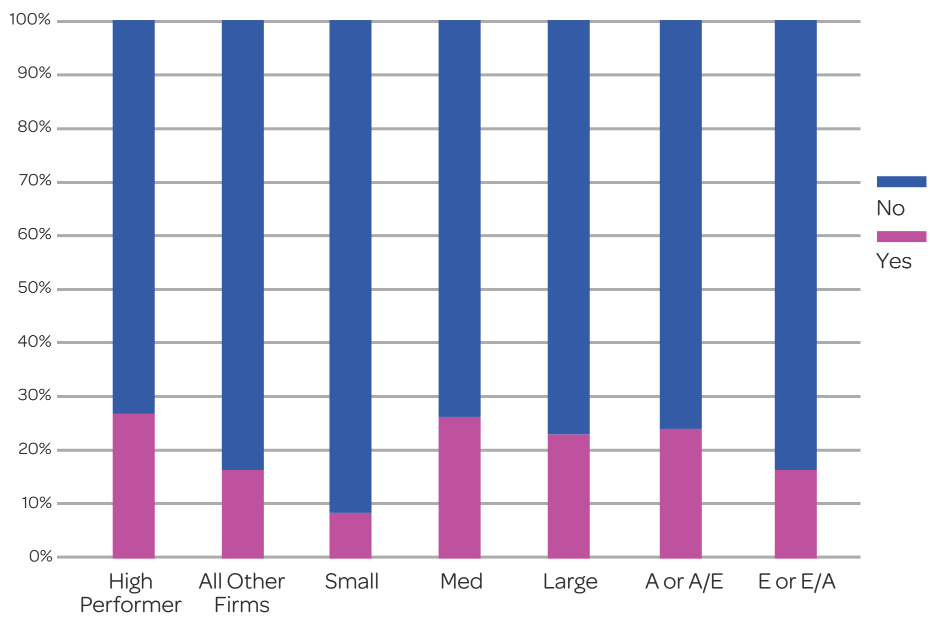
SKILLS REPOSITORY - OVERALL



LMS POSSESSION



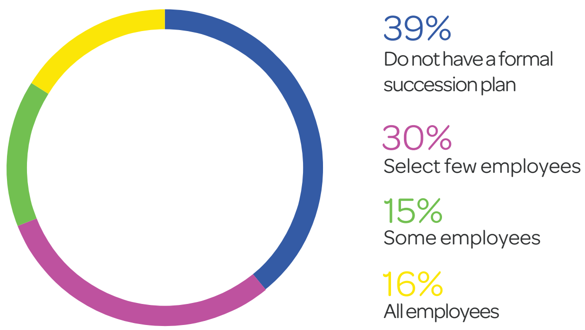
SKILLS REPOSITORY



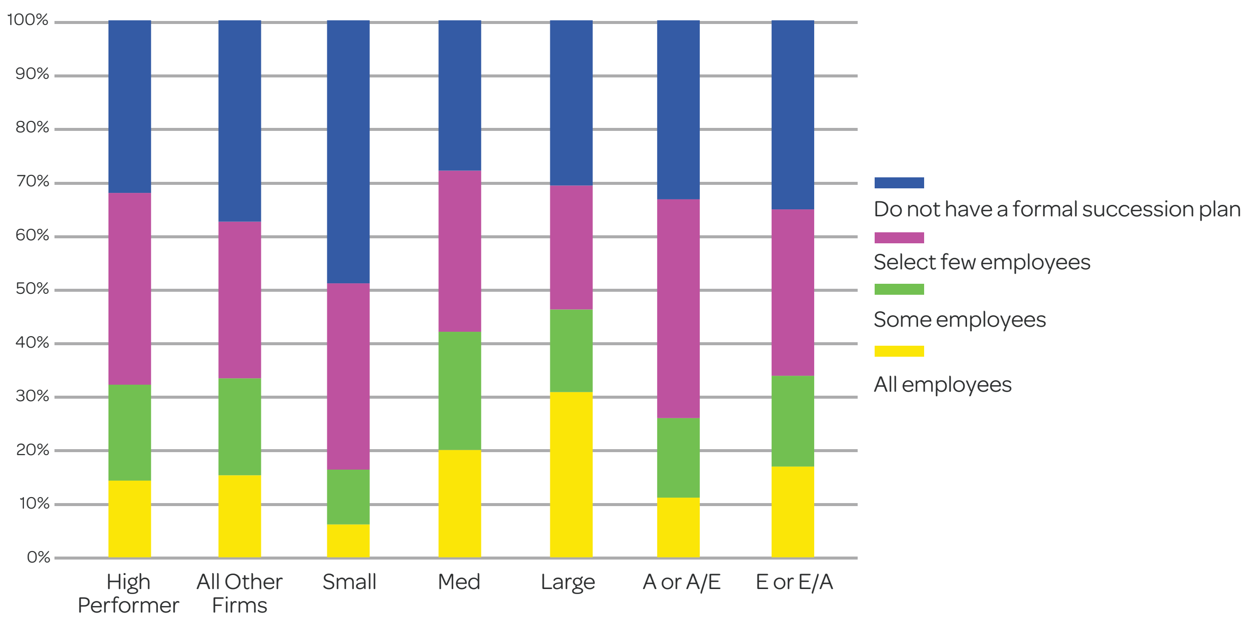
Succession Planning and Career Planning

As important as succession planning is for firms, there seems to be a lack of focus on this across the board. More than two thirds of firms have no formal succession plan or the plans they do have only apply to a select few employees. This leaves organizations at risk, especially when baby boomers retire or a key member of the firm leaves unexpectedly. A well thought out succession plan is an important part of how the firm weathers changes in talent and is an important part of an effective talent management strategy. A carefully designed strategy of career and succession planning will help organizations identify and develop talent from within before the need becomes critical. This allows firms to groom existing talent to move up to key positions, enhance employee engagement by creating career paths for your most valuable workers and build supporting development plans designed to fill gaps and promote employee growth.

It's a win-win situation. You will be developing employees, increasing employee retention and planning for future needs of the organization. Being truly proactive about career and succession planning is the secret to identifying key performers and future leaders.



SUCCESSION PLANNING AND CAREER PLANNING



TALENT MANAGEMENT

CLARITY OUTLOOK

In this section, a few things became clear. First, the war for talent is in full swing. Filling positions, and managing the expensive process of talent acquisition were held up as top challenges. And yet, firms indicated that they are not tracking metrics associated with hiring new employees, and keeping them engaged. And what firms are doing, they are doing on aging systems. As we continue to follow the HR trends among A/E firms, we expect to see firms address the gap between the top challenges and the investment and attention made to overcome them.

APPENDIX

STATISTICS AT A GLANCE

Due to how medians are calculated, numbers may not always add to 100%.

KEY PERFORMANCE INDICATORS

	All Participants	High Performers	All Other Firms
Net Revenue Per Employee	$139,042	$159,444	$131,328
Total Revenue Per Employee	$170,233	$200,745	$159,332
Operating Profit on Net Revenue	12.8%	28.3%	9.6%
Operating Profit on Total Revenue	9.7%	26.3%	8.5%
Utilization Rate	61%	65%	60%
Net Labor Multiplier	3.0	3.5	2.8
Total Payroll Multiplier	1.8	2.2	1.7
Overhead Rate	155%	149%	156%
Staff Growth	3.5%	5.8%	3.3%
Employee Turnover	13.4%	14.3%	12.8%
Total Employee Cost	$91,255	$92,830	$90,914
Net Fixed Assets Per Employee	$7,555	$6,802	$8,334

BALANCE SHEET RATIOS

	All Participants	High Performers	All Other Firms
Work in Process	$7,641	$9,558	$6,751
Total Assets per Employee	$69,876	$78,673	$66,550
Total Liabilities per Employee	$28,184	$30,061	$28,184
Total Equity per Employee	$35,932	$46,506	$30,913
Return on Assets	12.7%	27.7%	11.0%
Return on Equity	28.8%	36.6%	25.1%
Backlog - Beginning of Year per Employee	$96,624	$93,332	$98,030
Backlog - End of Year per Employee	$105,848	$114,751	$103,215
Current Ratio	2.71	2.78	2.57
Debt to Equity Ratio	0.75	0.54	0.82
Average Collection Period (Median)	72.7	72.1	73.7

Small 1-50	Medium 51-250	Large 251+	Architecture or A/E	Engineering or E/A
$131,917	$135,526	$111,721	$139,014	$132,436
$177,091	$167,545	$159,027	$203,922	$162,397
13.3%	12.0%	7.5%	13.5%	11.9%
10.3%	9.1%	5.3%	9.4%	9.5%
63%	59%	56%	59%	61%
2.9	2.9	2.9	3.0	2.9
1.8	1.8	1.6	1.8	1.8
141%	155%	158%	155%	144%
0.0%	3.5%	0.0%	3.5%	1.3%
13.5%	9.3%	12.5%	8.7%	11.0%
$88,356	$90,262	$88,720	$88,020	$90,262
$6,028	$6,853	$7,540	$5,558	$7,121

Small 1-50	Medium 51-250	Large 251+	Architecture or A/E	Engineering or E/A
$6,171	$9,186	$10,138	$10,412	$6,751
$64,778	$78,673	$67,625	$71,097	$71,033
$18,078	$33,035	$30,122	$27,656	$28,691
$35,574	$36,098	$38,449	$37,196	$35,704
21.4%	10.5%	5.3%	18.5%	12.1%
36.4%	22.9%	10.0%	41.3%	22.2%
$78,884	$104,465	$98,721	$122,604	$88,908
$93,997	$113,282	$133,333	$118,029	$99,023
3.72	2.30	1.86	2.30	2.37
0.43	0.82	0.81	0.63	0.58
70.4	74.7	63.6	75.0	70.1

INCOME STATEMENT DETAIL (PER EMPLOYEE)

	All Participants	High Performers	All Other Firms
TOTAL REVENUE			
Total Revenue per Employee	$170,233	$200,745	$159,332
DIRECT EXPENSES			
Consultants per Employee	$19,213	$25,368	$17,049
Bad Debt per Employee	$626	$911	$623
All Other Direct Expenses per Employee	$746	$958	$649
Total Direct Expenses per Employee	$1,368	$910	$1,913
NET REVENUE			
Net Revenue per Employee	$139,042	$159,444	$131,328
DIRECT LABOR			
Direct Labor per Employee	$45,479	$45,687	$45,591
GROSS PROFIT			
Gross Profit per Employee	$94,956	$115,159	$84,552
INDIRECT LABOR			
Vacation, Holiday, Sick & Personal per Employee	$7,671	$7,111	$8,154
Marketing per Employee	$4,617	$3,173	$5,048
All Other Indirect Labor per Employee	$17,266	$18,321	$17,218
Total Indirect Labor per Employee	$30,774	$31,338	$31,107
LABOR-RELATED EXPENSES			
Statutory Taxes per Employee	$5,898	$6,197	$5,894
Workers' Comp per Employee	$286	$220	$318
Group Health, Life, Etc. per Employee	$5,932	$5,537	$5,970
401(k) Match, Pension Plan, Etc. per Employee	$2,726	$3,354	$2,458
All Other Labor-Related Expenses per Employee	$533	$556	$492
Total Other Labor-Related Expenses per Employee	$15,356	$15,832	$15,407
OTHER STAFF EXPENSES			
Professional Licenses, Registrations, Dues per Employee	$872	$923	$853
MARKETING EXPENSES (NON-LABOR)			
Marketing Expenses (marketing and business development expenses including materials, conference expenses, travel, etc.)	$1,590	$1,191	$1,623
All Other Marketing Expenses per Employee	$1,171	$1,533	$1,149
Total Marketing Expenses per Employee	$1,621	$1,318	$1,623

Small 1-50	Medium 51-250	Large 251+	Architecture or A/E	Engineering or E/A
$177,091	$167,545	$159,027	$203,922	$162,397
$19,213	$22,770	$16,036	$46,761	$14,138
$932	$499	$160	$809	$498
$1,306	$277	$7,979	$741	$1,232
$1,333	$1,472	$820	$910	$1,368
$131,917	$135,526	$111,721	$139,014	$132,436
$47,146	$44,623	$42,163	$45,166	$46,870
$96,522	$93,808	$91,892	$98,534	$92,539
$7,316	$7,641	$9,653	$7,572	$8,030
$4,614	$4,832	$4,788	$5,581	$4,241
$17,098	$17,040	$19,696	$17,098	$17,218
$27,846	$31,317	$33,642	$31,441	$28,618
$5,894	$5,919	$5,835	$5,793	$5,952
$286	$288	$213	$278	$287
$5,936	$5,735	$5,664	$4,573	$6,151
$2,535	$2,597	$3,629	$2,156	$2,782
$533	$392	$1,151	$296	$739
$15,407	$15,238	$16,410	$14,113	$16,410
$789	$858	$1,240	$790	$951
$1,625	$1,340	$1,641	$2,177	$1,444
$1,444	$810	$1,178	$1,937	$1,092
$1,681	$1,341	$1,641	$2,772	$1,472

INCOME STATEMENT DETAIL (PER EMPLOYEE)

	All Participants	High Performers	All Other Firms
CORPORATE EXPENSES			
Professional Liability Insurance	$1,577	$1,658	$1,431
Other Business Taxes	$269	$310	$269
All Other Corporate Expenses	$1,660	$1,958	$1,688
Total Corporate Expenses Per Employee	$3,456	$3,463	$3,475
TOTAL OVERHEAD			
Total Overhead Expenses per Employee	$18,427	$19,035	$18,295
OPERATING PROFIT			
Operating Profit (Loss) per Employee	$16,709	$36,562	$11,965
INTEREST, BONUS, OTHER			
Interest-Net per Employee	$161	$130	$217
Bonuses per Employee	$5,768	$18,942	$3,607
Other (Income) or Expense	$25	$457	$10
PRE-TAX INCOME (LOSS)			
Pre-Tax Income (Loss) per Employee	$12,189	$21,837	$8,732
TAXES			
Taxes per Employee	$525	$790	$520
NET PROFIT			
Net Profit (Loss) per Employee	$10,283	$21,856	$8,282

Small 1-50	Medium 51-250	Large 251+	Architecture or A/E	Engineering or E/A
$1,758	$1,299	$1,253	$1,678	$1,622
$227	$387	$223	$177	$287
$1,476	$1,847	$1,426	$1,766	$1,397
$3,823	$3,454	$3,282	$3,905	$3,433
$18,427	$18,415	$18,857	$18,981	$18,635
$19,815	$17,219	$10,400	$23,551	$17,077
$197	$146	$228	$222	$159
$4,964	$6,645	$5,561	$3,607	$6,594
$61	-$52	-$153	$20	-$10
$15,326	$9,517	$4,577	$17,331	$9,457
$707	$791	$281	$354	$492
$15,326	$9,113	$4,533	$17,331	$8,882

BALANCE SHEET DETAIL (PER EMPLOYEE)

	All Participants	High Performers	All Other Firms
ASSETS			
CURRENT ASSETS			
Cash per Employee	$5,996	$11,119	$5,148
Accounts Receivable per Employee	$36,015	$36,672	$36,069
Work-In-Process per Employee	$7,641	$9,558	$6,751
Prepaid Expenses per Employee	$2,223	$2,274	$2,239
Other Current Assets per Employee	$467	$513	$471
Total Current Assets per Employee	$52,928	$65,775	$48,795
FIXED ASSETS			
Fixed Assets (except Goodwill)	$30,468	$24,872	$32,551
Depreciation per Employee	-$19,078	-$18,025	-$22,029
Goodwill (net of amortization) per Employee	$2,657	$2,060	$3,172
Total Fixed Assets per Employee	$9,444	$7,540	$9,931
OTHER LONG-TERM ASSETS			
Other Long-Term Assets per Employee	$1,987	$2,758	$1,918
Total Other Long-Term Assets per Employee	$2,014	$3,007	$1,437
Other Assets per Employee	$585	$247	$843
TOTAL ASSETS			
Total Assets per Employee	$69,876	$78,673	$66,550
LIABILITIES & STOCKHOLDERS' EQUITY			
ACCOUNTS PAYABLE			
Accounts Payable - Consultants per Employee	$4,576	$6,144	$3,941
Accounts Payable - Vendors per Employee	$1,480	$1,331	$1,626
Total Accounts Payable per Employee	$5,777	$7,015	$4,520
ACCRUED EMPLOYEE EXPENSE			
Accrued Employee Salaries per Employee	$2,458	$1,832	$2,497
Accrued Employee Vacation, Sick, Etc. per Employee	$3,035	$3,025	$3,054
Other Accrued Employee Expense per Employee	$559	$1,558	$534
Total Accrued Employee Expenses per Employee	$5,129	$4,344	$5,504

Small 1-50	Medium 51-250	Large 251+	Architecture or A/E	Engineering or E/A
$6,389	$5,317	$5,114	$7,754	$5,317
$36,272	$37,076	$31,994	$36,193	$36,015
$6,171	$9,186	$10,138	$10,412	$6,751
$2,167	$2,308	$2,239	$2,112	$2,223
$465	$279	$922	$817	$459
$48,663	$56,701	$48,560	$58,564	$52,144
$25,044	$34,168	$32,534	$27,569	$31,771
-$17,536	-$22,926	-$24,135	-$18,295	-$21,754
$5,965	$2,448	$3,172	$8,583	$2,657
$7,505	$10,999	$10,890	$7,505	$9,931
$4,131	$1,849	$1,328	$1,493	$2,016
$397	$3,372	$2,448	$1,381	$2,502
$843	$766	$537	$0	$973
$64,778	$78,673	$67,625	$71,097	$71,033
$3,773	$5,100	$5,408	$8,450	$3,143
$2,481	$1,424	$1,564	$2,116	$1,480
$4,716	$6,011	$4,056	$10,298	$3,917
$1,875	$2,577	$970	$1,971	$2,535
$2,222	$3,092	$4,534	$2,733	$3,181
$559	$507	$1,185	$1,557	$534
$3,667	$6,333	$8,937	$4,253	$5,739

BALANCE SHEET DETAIL (PER EMPLOYEE) CONTINUED

	All Participants	High Performers	All Other Firms
OTHER CURRENT LIABILITIES			
Line-of-Credit and Short-Term Notes Outstanding per Employee	$4,870	$6,253	$4,830
Current Taxes per Employee	$458	$565	$365
Other Current Liabilities per Employee	$2,871	$2,988	$2,871
Total Other Current Liabilities per Employee	$7,524	$6,253	$7,644
TOTAL CURRENT LIABILITIES			
Total Current Liabilities per	$19,870	$22,138	$19,035
LONG-TERM LIABILITIES			
Long-Term Debt per Employee	$5,672	$2,379	$6,957
Deferred Taxes per Employee	$5,189	$3,772	$5,189
Other Long-Term Liabilities per Employee	$2,451	$2,286	$5,660
TOTAL LIABILITIES			
Total Liabilities per Employee	$28,184	$30,061	$28,184
STOCKHOLDERS' EQUITY			
Stock & Additional Paid-In Capital per Employee	$3,891	$4,327	$3,747
Distribution / Dividends – Current Year Only per Employee	-$6,818	-$8,818	-$6,110
Principal's Equity – Long-Term Notes per Employee	-$151	$14,535	-$151
Previous Years Retained Earnings per Employee	$25,249	$30,901	$23,219
Current Net Profit (Loss) per Employee	$9,363	$17,146	$7,660
Other per Employee	-$1,171	$1,039	-$4,114
Total Stockholders' Equity per Employee	$35,932	$46,506	$30,913
Total Liabilities & Stockholders' Equity per Employee	$68,564	$78,673	$64,846

Small 1-50	Medium 51-250	Large 251+	Architecture or A/E	Engineering or E/A
$5,555	$3,411	$6,751	$6,287	$4,851
$280	$937	$284	$48	$712
$696	$3,661	$5,084	$6,971	$2,907
$5,743	$7,977	$6,638	$10,462	$7,608
$15,001	$21,933	$23,008	$22,010	$19,700
$5,508	$5,836	$5,170	$6,768	$5,508
$868	$6,354	$2,837	$5,903	$5,222
$4,484	$5,660	$2,277	$2,295	$2,451
$18,078	$33,035	$30,122	$27,656	$28,691
$2,588	$3,891	$9,094	$438	$4,921
-$8,335	-$1,684	-$7,464	-$5,375	-$6,845
-$6,991	$553	-$23,060	$6,866	-$1,526
$25,059	$24,477	$30,310	$23,878	$25,499
$11,665	$8,957	$4,533	$13,596	$8,640
-$31,193	-$599	-$5,555	$51	-$520
$35,574	$36,098	$38,449	$37,196	$35,704
$62,143	$71,097	$67,625	$68,832	$68,418

REVENUE BREAKDOWN

	All Participants	High Performers	All Other Firms
Revenue by Client Type - Public	40%	33%	40%
Revenue by Client Type - Private	60%	67%	60%
Revenue by Contract Type - Hourly	30%	25%	35%
Revenue by Contract Type - Fixed Fee	60%	65%	60%
Revenue by Contract Type - Other	0%	0%	0%

BUSINESS DEVELOPMENT METRICS

	All Participants	High Performers	All Other Firms
Win Rate	42.9%	34.0%	26.1%
What percentage of your firm's net revenue is contributed by your firm's top three clients? Client 1	17%	17%	16%
What percentage of your firm's net revenue is contributed by your firm's top three clients? Client 2	9%	9%	9%
What percentage of your firm's net revenue is contributed by your firm's top three clients? Client 3	6%	7%	6%
What percentage of your firm's net revenue is contributed by your firm's top three clients? Combined	32%	33%	31%

PROJECT MANGEMENT METRICS

	All Participants	High Performers	All Other Firms
What percentage of your organization's current projects are being reported as on or under budget? (Median)	70%	71%	73%

Small 1-50	Medium 51-250	Large 251+	Architecture or A/E	Engineering or E/A
31%	40%	40%	23%	40%
69%	60%	60%	78%	60%
25%	30%	50%	15%	40%
70%	60%	38%	83%	50%
0%	0%	0%	0%	0%

Small 1-50	Medium 51-250	Large 251+	Architecture or A/E	Engineering or E/A
18.3%	22.5%	27.4%	20.0%	24.1%
23%	14%	8%	16%	17%
12%	8%	5%	10%	9%
8%	6%	4%	6%	6%
43%	28%	17%	33%	32%

Small 1-50	Medium 51-250	Large 251+	Architecture or A/E	Engineering or E/A
67%	72%	73%	69%	71%

TALENT MANAGEMENT METRICS

	All Participants	High Performers	All Other Firms
Staff Growth/Decline	4%	6%	3%
Employee Turnover	13%	14%	13%
Voluntary Turnover	9%	12%	8%
Involuntary Turnover	3%	2%	3%
Average time to Fill Position	45	45	60
FTE BREAKDOWN BY CATEGORY			
Technical and Professional	48.5	36	49.5
Financial / Accounting	2	0	0
Marketing and BD	2	0	0
Technology / IT	3	1	2
Administrative or Clerical	1	1	1
Other Executive Staff Members	3	2	3
Other Employee	2	2	2

Small 1-50	Medium 51-250	Large 251+	Architecture or A/E	Engineering or E/A
0%	4%	0%	4%	1%
14%	9%	13%	9%	11%
8%	8%	9%	7%	7%
0%	3%	3%	2%	2%
75	45	45	45	75
18	84.75	280	31.5	56
0	1.5	10	0	1
0	1	4	0	0
0	3	8	0.5	1
0	2	6	0	1
1	4	8	1.75	3
1	3	10	2	2