2024

PRESENT AND FUTURE OF WORK IN ENGINEERING AND ARCHITECTURE

An in-depth study of the state of the AEC industry and talent market — and what it takes to attract top talent and drive growth.

- WOMEN IN AEC
- FLEXIBLE WORK
- ROLE OF AI
- 2025 ROADMAP

ActionsProve

EMI
ENGINEERING MANAGEMENT INSTITUTE

After years of talent market volatility — including historically high levels of turnover and a profound reshaping of workplace norms — the new reality for the AEC industry is coming into view.

A survey of over 600 engineers and architects in North America captures attitudes about careers, work hours, stress, and technology — among many other factors. By comparing views by generation, professional background, and seniority, we shine the light on troubling friction points and take inventory of the difficult decisions facing firm leaders.

WHAT'S INSIDE:

- Why so many AEC professionals are interested in independent careers.

- How leaders can do a better job engaging early-career professionals.

- What conditions women say they need to thrive in the AEC industry.

- Why "flexibility" should be the new workplace mantra for 2024.

- How AI will change the industry today and in the future.

- Plus: Advice for employers to attract and retain top AEC talent.

STATE OF (ORGANIZATIONAL) PAIN

After nearly five years of disruption, we have greater clarity about the future of careers and work in engineering and architecture. Keeping turnover in check will be among the most challenging issues facing industry leaders this year.

Despite slowing turnover rates in other professional industries — US business turnover dropped 24.7% between 2022 and 2023[1] — our research shows turnover rates are not yet falling in the AEC industry.

Just 22% of AEC industry professionals say turnover dropped in 2023 compared to 2022. And larger firms (i.e., those with at least 1,000 employees) were more than twice as likely as firms with fewer than 250 employees to say turnover rose in 2023.

The high rates of turnover at larger firms are surprising, in part because our research shows that employees of larger firms have higher levels of engagement and better development opportunities compared to employees working in smaller firms.

No longer a vestige of the pandemic years, high turnover is likely the new reality for AEC firms. Knowing that, employers need to focus on the specific factors that drive attraction and retention inside their firms to keep turnover rates below industry norms.

Even more, traditional employee engagement programs may no longer be sufficient to retain talent. Our research shows that organizations must create employment conditions that drive employees to "opt-in." This includes shifting where and when employees work, as well as how they are evaluated and rewarded.

What's behind the turnover?

When asked if they would consider leaving their current firm, more than half of the professionals we surveyed say yes — a figure that bumps *even higher* upon closer inspection.

Initially, 43% said they would *not* consider leaving their current employer. But when presented with the potential for improvements like higher pay, better quality of life, or advancement opportunities, the share of people willing to leave their current employer jumps to 92%. These findings have not materially changed since we began surveying engineers and architects in 2021.

In other words, the lion's share of employees working in AEC are willing to join a new employer for the right mix of work benefits and experiences. And given how competitive the talent market is right now, your talent competitors are likely offering benefits and experiences to attract *your* high-value talent as you read this.

The challenge for employers is figuring out the right mix of workplace benefits and conditions to reduce turnover — while acknowledging that higher turnover is likely a new reality, particularly for younger, less-experienced employees.

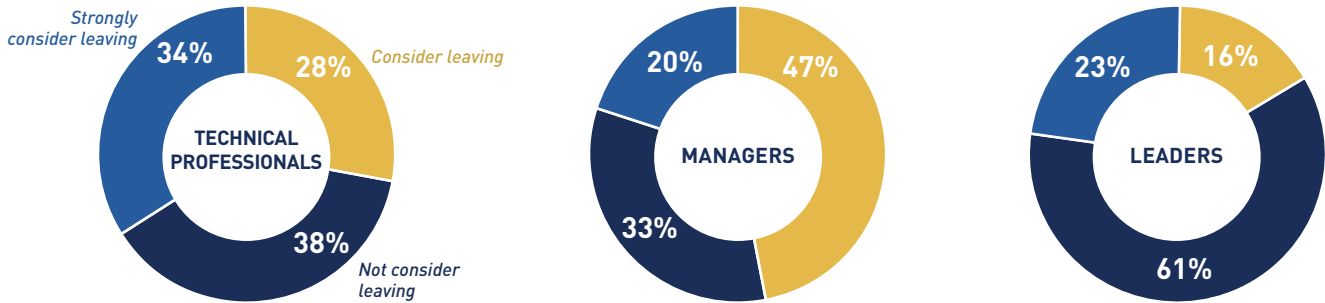*Figure 1* **LARGER COMPANIES MORE LIKELY TO REPORT INCREASED TURNOVER**
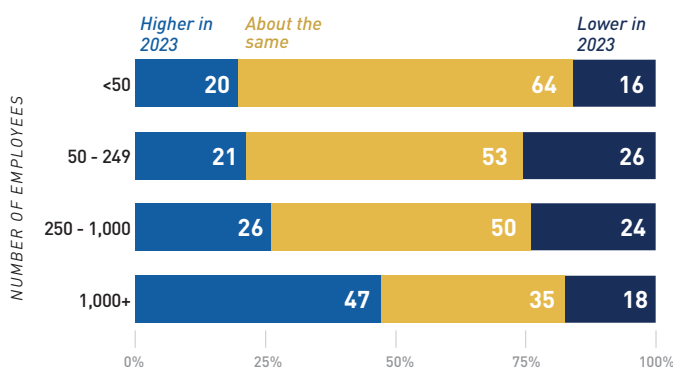
Q: Was employee turnover at your company higher or lower in 2023 compared to 2022?

ActionsProve & EMI | 2024

Figure 2 **TECHNICAL STAFF MORE LIKELY TO DEPART IN THE NEXT 12 MONTHS**

Q: If the right opportunity arose, would you consider leaving your current employer in the next 12 months?

ActionsProve & EMI | 2024

We know one critical variable is career advancement and growth opportunities. In an online poll conducted in February of 2024 by the Engineering Management Institute, nearly half of engineers (48%) point to career growth opportunities as the single most important benefit their company can provide. Yet other important influences exist.

Figure 3 **CAREER ADVANCEMENT IS THE BIGGEST MOTIVATOR TO SWITCH JOBS**

Q: What factors do / would influence you to consider leaving your current employer?
(Question asked of those who are considering leaving.)

ActionsProve & EMI | 2024

Quality of life is an unspoken career goal

Within the constellation of issues pushing employees to consider switching employers, quality of life is nearly as important as more traditional priorities like compensation and career development.

Among those who say they're interested in switching jobs, career advancement is the No. 1 driver. The search for higher compensation is No. 2. (Both are not surprising.)

What's more surprising: Thirty percent of those who say they're considering leaving their current employer seek greater flexibility. And when evaluating a new employer, *higher quality of life* is the No. 1 priority.

This is a thorny issue for engineering and architecture firms. The pay-your-dues mentality is still very common, and a generational divide about work-life drives friction in the workplace.

THE DISCONNECT BETWEEN LEADERS AND OTHER EMPLOYEES REMAINS A MAJOR DESTABILIZING FORCE.

Those with 20-plus years of experience are significantly more engaged at work, less likely to be searching for another job, and less likely to pursue independent careers. These highly engaged "traditionalists" are in leadership roles — making the decisions about issues like workplace flexibility and work hours. Given their high levels of engagement and satisfaction, leaders are often unmotivated to change the status quo. This disconnect between leaders and others remains a major destabilizing force, something we identified and reported on in our 2023 research.

Full-time freelancing is now a real — and appealing — career option

When firms compete to hold onto top talent, they're not only competing against rival firms looking to poach their best people. They're also contending with the lure of contract work (i.e., independent, freelance work).

More than half (52%) say they're actively pursuing or highly interested in a full-time, independent career — and those rates jump higher for early career professionals.

For example, 68% of those with five to nine years of experience are interested in freelance careers — a stunningly high ratio. This desire for independence has been building for years. When we asked this question in 2021, just 18% told us they were actively pursuing or highly interested in a full-time, independent career — meaning there's been a nearly threefold increase in three years.

Part of the attraction of independent careers may be the fact that ownership opportunities for young professionals are dwindling, largely due to mergers and acquisitions in the industry.

"Given both of these trends — an increasing interest in independent careers and diminishing opportunities for young professionals to gain ownership stakes — firms need to take a hard look at how to keep employees engaged and rooted," explains Peter C. Atherton, P.E., president and founder of ActionsProve. "Highly talent-competitive organizations are taking 'employee-at-will' much more seriously while also expanding their talent ecosystems."

Fifty percent of those surveyed work for companies that hire independent contractors/freelancers in engineering

Figure 4 **WORKING INDEPENDENTLY VIEWED AS A VIABLE CAREER PATH**
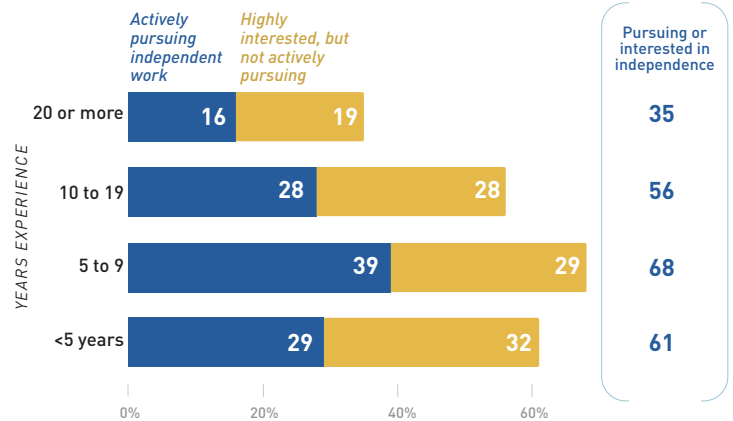
Q: Are you interested in pursuing full-time freelance or independent contract work in the engineering/ architecture industry?

ActionsProve & EMI | 2024

or architecture positions, and another 27% say their organizations are considering doing so. Nearly half use contractors to fill short-term project needs, 36% use them to access experts who prefer independent careers, and 35% use them to source hard-to-hire skills.

"When firms build their talent management infrastructure, they need to consider how part-time and freelance professionals fit into their talent ecosystem," says Atherton. "Organizations that limit themselves to attracting and hiring only traditional full-time employees will miss out on a significant source of highly experienced, qualified talent."

65% SAY OWNERSHIP OPPORTUNITIES FOR INDIVIDUAL ENGINEERS/ ARCHITECTS ARE DECREASING DUE TO M&A ACTIVITY

THE CURIOUS CASE OF AEC

AEC professionals tell us they're stressed and burned out, but they also say they're willing to work long hours and "pay dues" in order to advance their careers. Will AEC evolve to design its own better working conditions — and even be a model for others?

The AEC industry has remarkably high levels of burnout/ stress (see graphic at right). And rates of burnout, stress, and compromised health are all significantly higher for mid-career professionals, the people sandwiched between inexperienced new hires and firm leaders.

Despite all this, there's a strong culture of overwork in the industry. More than two in three professionals say long work hours are an expected part of being an engineer or architect — and they are willing to work long hours and pay dues as a prerequisite for career advancement.

"Firms that do not address this tension between stress and overwork will face talent shortages and turnover at rates higher than their peers, which in turn leads to more stress and overwork," explains Anthony Fasano, P.E., president of the Engineering Management Institute. "Ultimately, this is a business-sustainability issue. Over time, pervasive stress and overwork will affect other areas of the business, including team dynamics and client satisfaction."

Using new performance metrics to change culture

Taken together, the twin findings about stress and paying dues reveal an industry at an inflection point. Many firms, when evaluating individual employee performance, still emphasize hours worked. That's understandable: Hours are easy to quantify and thus become a proxy for high performance. But our research shows AEC employees would prefer to be evaluated based on their output or work quality — both of which are much more difficult to quantify.

More than half (55%) of AEC employees say they want to be measured solely on output (i.e., results). Yet far fewer say their employers do this. Thirty-eight percent say their employers evaluate employee performance based on output.

A QUALITY-OF-LIFE CRISIS

The majority of engineers and architects are highly stressed
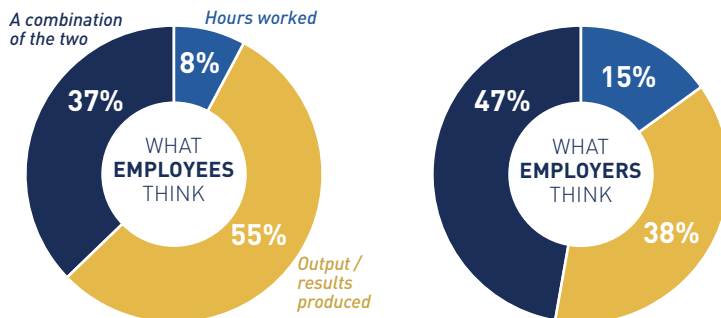
- **69%** experience burnout

- **63%** say stress is affecting their health

- **56%** say stress affects family/ friend relationships

Yet most say they'll work long hours to get ahead

- **72%** say long hours are expected

- **70%** will work long hours to "pay dues"

Figure 5 **MOST EMPLOYEES WANT TO BE EVALUATED BASED ON 'OUTPUT' NOT 'HOURS'**

A combination of the two
Hours worked

37% 8%

WHAT **EMPLOYEES** THINK

55%
Output / results produced

15%

47%

WHAT **EMPLOYERS** THINK

38%

Employer Q: Should engineers/ architects be evaluated based on the hours they work, or the output/ results they produce?

Employee Q: Does your employer value hours worked or output/ results produced?

ActionsProve & EMI | 2024

This issue is particularly important now as more and more professionals work remotely — making it harder for employers to know the actual hours worked and evaluate employees that way.

Anthony Fasano from the Engineering Management Institute says industry professionals want greater flexibility about the when, where, and how of work — and the best way to deliver this is to embrace an outcomes-based approach.

Fasano explains, "When we measure people based on the number of hours they sit at their desks, it's not good for employee engagement, and it's not a good measure of productivity and quality. When organizations pivot to emphasize results and outcomes, a manager can directly measure the value an employee delivers to the organization."

The Engineering Management Institute works with AEC firms to design project management training and development programs. As part of the engagement, companies must define two to three KPIs (key performance indicators) that all project managers can be measured against. "When you pivot from *hours* to *outcomes*, firms improve transparency, accountability, and performance," says Fasano.

To be clear, it's far from an easy transition. There's a tremendous amount of generational friction related to work styles and hours. Organizations must ensure that output is measured effectively or face pushback from older generations who worked long hours to pay dues under the old regime. As one survey taker shares, "Older engineers want younger ones to work the same long hours they did early in their careers. The problem is the world has changed. The path to partnership isn't there anymore. And there's a limit to how much time I'm willing to spend at work, away from my family."

HOURS OR OUTPUT?

Using OKRs (objectives and key results) can help organizations transition from an hours-based method of employee performance evaluations to a more output-based approach.

OKRs align individual, team, and business goals. For example, an engineering team's OKRs could include measures of time to bidding (or time to construction), quality, and/or accuracy. The OKR framework gives managers and leaders a consistent approach to setting goals, measuring individual productivity, and ensuring accountability. Used effectively, OKRs can help employees feel more connected to the company's purpose and mission.

IDEAL WORK WEEK:
38.1 hours /week

AVERAGE WORK WEEK:
45.2 hours /week

WOMEN IN AEC

AEC firms are making efforts to hire more women and keep them engaged — but the research shows many organizations are missing the mark.

Women feel greater levels of stress and less support

The majority of women (65%) say workplace stress affects how they interact with family and friends. And despite higher levels of stress, just 38% say they frequently feel supported by their manager (compared to 46% of men).

Women value flexibility ... yet few experience it at work

Forty percent of women say flexibility (e.g., setting their own hours or work location) is extremely important — compared to 25% of men. And 73% say it's extremely or very important. Yet just 31% of women say they frequently have control over their schedule.

Women feel out of sync with workplace culture

Women are much less likely to say they're willing to pay their dues in the industry. Fifty-eight percent of women say they're willing to work long hours to pay dues compared to 73% of men.
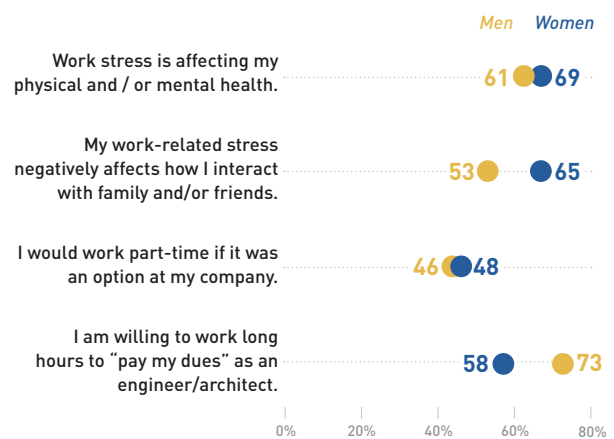
Perhaps not surprisingly, fewer women feel engaged at work and aligned with their employers' missions. Fifty-seven percent say they are aligned with their organization's mission, vision, and values compared to 71% of men. And just one-third (33%) of women describe themselves as "highly engaged at work" compared to 46% of men.

Women say the career ladder doesn't reach them

Only 20% of women say they 'strongly agree' that they see a path for career advancement at their company (to be fair, the share of men who see such a path is only 7 percentage points higher). Women are also less likely to feel their careers are supported at work. About two-thirds (67%) of women agree with this statement, "My company does a good job supporting employees' career development," compared to 84% of men.

And women are significantly more likely than men to say they want to develop their leadership skills. Eighty-three percent say leadership training would be valuable compared to 62% of men.

Figure 6 **WOMEN MORE AFFECTED BY STRESS, LESS WILLING TO WORK LONG HOURS**

Men   Women

Work stress is affecting my physical and / or mental health. — 61 / 69

My work-related stress negatively affects how I interact with family and/or friends. — 53 / 65

I would work part-time if it was an option at my company. — 46 / 48

I am willing to work long hours to "pay my dues" as an engineer/architect. — 58 / 73

0%   20%   40%   60%   80%

Q: Shows percent of respondents who chose "agree" or "strongly agree" with each statement.

ActionsProve & EMI | 2024

> " *The research clearly shows that many organizations don't have the right conditions in place to help women be successful and thrive. Employers can invest lots of money in attracting women to work, but if they don't change their internal culture, these employee relationships will be short-lived — and that's a deep disservice to our workforce, organizations, and profession overall.* "
>
> **— PETER C. ATHERTON, P.E., PRESIDENT AND FOUNDER OF ACTIONSPROVE**

'FLEXIBILITY' IS THE NEW WORKPLACE CATCHPHRASE

Industry leaders continue to wrestle with whether to allow employees to work remotely. Offering *flexibility* — control over the when and where of work — may be *even more* important.

What if retaining talent requires not just competitive compensation (the traditional Big Issue for all professionals) but also more choice and control over work location, hours, assignments, and training?

One aspect of flexibility is the option to work virtually/ remotely. Just 16% of survey respondents say they never work virtually. (The study found that on average, professionals in the AEC industry work virtually 13.4 hours per week.)

For jobs that can be completed remotely, the option for hybrid/ virtual work is now an *expectation* among AEC professionals. Among those who work virtually at least five hours a week, 46% say they would quit their current jobs if virtual working was repealed. The share of people is *even higher* for mid-career professionals. Fifty-six percent of those with 10 to 19 years of experience — likely those with greater family responsibilities — say they would quit if unable to work remotely.

In other words, once virtual working is offered, it really can't be rolled back.
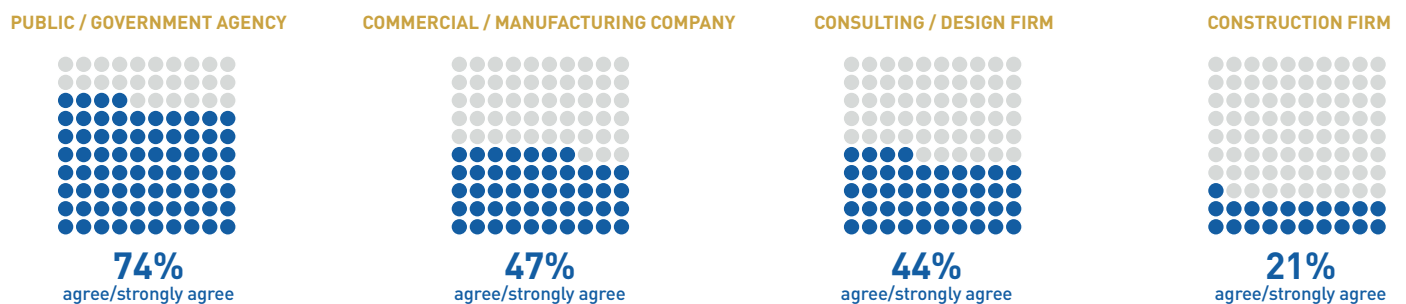
> FOR JOBS THAT CAN BE COMPLETED REMOTELY, THE OPTION FOR HYBRID/VIRTUAL WORK IS NOW AN *EXPECTATION* AMONG AEC PROFESSIONALS.

Flexibility outranks virtual work

The research shows that AEC professionals don't just want the ability to work from home two days a week; they want to exercise their *agency* — the ability to choose the time and place of work and even control how they work. Fully 87% say flexibility is important, and 62% call it very important.

What does "flexibility" mean? The ability to set your own schedule, work remotely, or even work part-time — so long as the team and the work are not negatively impacted. And even more importantly, AEC professionals want the freedom to choose those options without sabotaging their careers.

Figure 7   **"I WOULD NOT WORK FOR MY CURRENT COMPANY IF IT ELIMINATED VIRTUAL/REMOTE WORK."**

PUBLIC / GOVERNMENT AGENCY	COMMERCIAL / MANUFACTURING COMPANY	CONSULTING / DESIGN FIRM	CONSTRUCTION FIRM
74% agree/strongly agree	**47%** agree/strongly agree	**44%** agree/strongly agree	**21%** agree/strongly agree

Q: Shows percent of respondents who chose "agree" or "strongly agree" with this statement.
ActionsProve & EMI | 2024

Figure 8 **FLEXIBILITY IS 'EXTREMELY IMPORTANT' FOR MANY WOMEN**

40%
Women say flexibility is extremely important

25%
Men say flexibility is extremely important
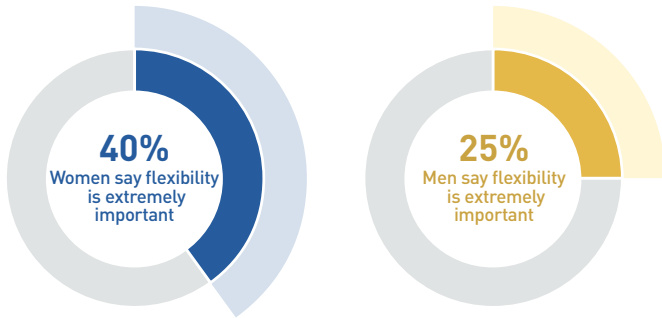
Q: How important is it that your company offers work flexibility, such as the ability to set your own schedule or work outside the office/job site? (Showing the percent of respondents who answered "extremely important.")

ActionsProve & EMI | 2024

> *As industry leaders and employers, we need to design workplaces that top talent will view as worth choosing."*
>
> **— PETER C. ATHERTON, P.E., PRESIDENT AND FOUNDER OF ACTIONSPROVE**

The peril of inflexible workplaces

When employers don't offer flexibility, they run the risk of losing employees to other employers and freelance careers. Remember, one of the primary drivers of independent careers is the ability to control hours and availability.

Peter Atherton explains, "We have smart people in AEC who, research has shown, want more ownership of their careers. At the same time, these professionals have newly established agency and increasing choices. So, we — as leaders and employers — need to design organizations that top talent will view as worth choosing."
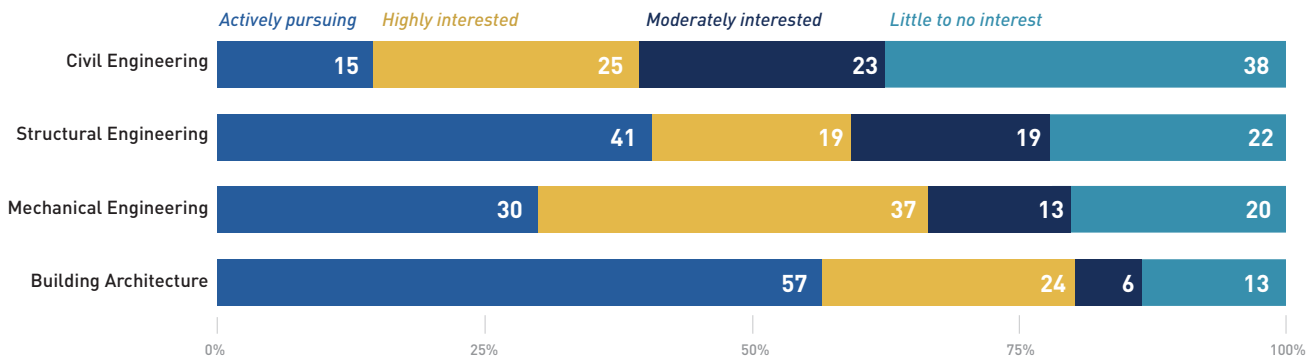
AEC PROFESSIONALS WANT THE FREEDOM TO CHOOSE FLEXIBLE OR REMOTE WORK OPTIONS WITHOUT SABOTAGING THEIR CAREERS.

Figure 9 **INDEPENDENT CAREERS ARE A MAJOR FACTOR IN SOME SUB-SPECIALTIES**

	Actively pursuing	*Highly interested*	*Moderately interested*	*Little to no interest*
Civil Engineering	15	25	23	38
Structural Engineering	41	19	19	22
Mechanical Engineering	30	37	13	20
Building Architecture	57	24	6	13

Q: Are you interested in pursuing full-time freelance or independent contract work in the engineering/ architecture industry in the future?
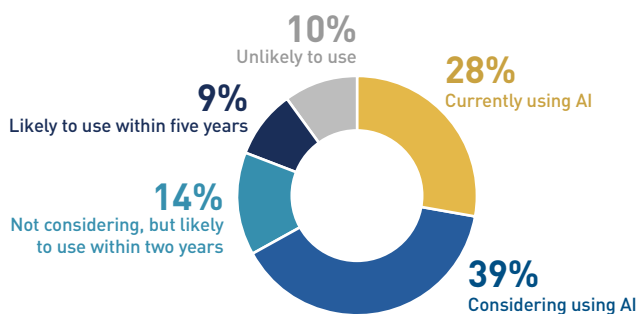
ActionsProve & EMI | 2024

A WAIT-AND-SEE APPROACH TO AI

AI-driven tech will remake the AEC industry, but so far firms are only starting to embrace it. And some professionals worry it will undermine the value of their hard-earned degrees.

AI is poised to be a major disruptive force in the industry — but given concerns about quality and accuracy, as well as a restrained outlook about AI's potential, organizations may need to take a thoughtful approach to implementing it.

Just one in four organizations currently use AI platforms — and inside the smallest firms, that figure drops by half. Professionals we surveyed say AI will have the biggest positive impact on generative design, VR/AR design presentations, and administrative tasks. And, of course, each AEC discipline will apply AI in unique ways. For example, mechanical engineers will lean strongly into energy optimization, while civil engineers and landscape architects will focus on geospatial site and building modeling.

Figure 10 **AI STILL IN EXPLORATORY PHASE**

10% Unlikely to use

9% Likely to use within five years

14% Not considering, but likely to use within two years

28% Currently using AI

39% Considering using AI

Q: Which of these best describes your company's approach to AI?
ActionsProve & EMI | 2024

AEC professionals are largely aware of the risks of using untested technologies, citing inconsistent quality control (50%), untested designs (39%), disputes about data ownership (35%), and a shortage of AI experts in the industry (35%) as the most substantial risks.

> " *The yearslong shortage of professionals in AEC has led to a situation where young people don't get enough hands-on experience with project management — including the technology tools required to manage complex projects — before they are asked to step into management roles. Everyone likes to talk about the shortage of technical skills, but there is also a dire shortage of management and technology skills in our industry."*
>
> **— ANTHONY FASANO, P.E.**
> **PRESIDENT AND FOUNDER OF THE**
> **ENGINEERING MANAGEMENT INSTITUTE**

When asked about their feelings related to AI, firm leaders were significantly more likely to express positive sentiments like "excited," "optimistic," and "curious," while non-managers (i.e., technical professionals) were more likely to express negative feelings like "doubtful," "unimpressed," and "uninterested." It's no surprise then that in a small poll conducted in February 2024, engineers were most likely to believe that firm owners and investors will benefit the most from AI — not employees or clients.

How will AI affect professionals' careers?

Nearly half (45%) say AI will highly impact AEC careers — either by changing how people work or outright replacing jobs — with building architects (61%) and structural engineers (52%) topping the list.

Even so, few (17%) believe AI will materially benefit their quality of life at work by reducing their workload or stress. Many even worry that technology will devalue their expensive degrees. Nearly half of professionals in structural engineering say they worry AI will undermine the value of their degrees, and 33% of civil engineers report the same.

Despite the reservations, engineers and architects are eager to receive more technology training — AI-informed or otherwise — to help them succeed, particularly with project management. In a qualitative survey of engineers, many expressed interest in hands-on practice with project management tools — including practicing as part of a mentoring relationship — as a way to grow into more advanced project management roles.

"The yearslong shortage of professionals in AEC has led to a situation where young people don't get enough hands-on experience with project management — including the technology tools required to manage complex projects — before they are asked to step into management roles," explains Fasano. "Everyone likes to talk about the shortage of technical skills, but there is also a dire shortage of management and technology skills in our industry."

Figure 11 **PERCEIVED RISKS FROM USING AI DIFFERS SIGNIFICANTLY BY ORGANIZATION TYPE**

	Consulting / Design Firm	Public / Government Agency	Construction Firm
Undermining the value of my degree	29	30	22
Vulnerability to cyber attack	33	28	36
Disputes about data ownership	36	23	36
Inconsistent quality control	66	34	42
Using untested designs	48	32	31
Compromised job-site safety	12	19	27
Lower revenues / profits due to commoditization	28	26	29
Slowdowns due to low internet connectivity	7	21	33
High entry costs/stifling competition	22	13	36
Shortage of AI experts in industry	39	30	27

Q:What do you perceive are the risks related to using AI in engineering/ architecture?
ActionsProve & EMI | 2024
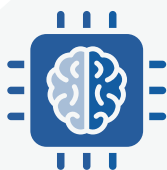
NEARLY HALF (45%) SAY AI WILL HIGHLY IMPACT AEC CAREERS — EITHER BY CHANGING HOW PEOPLE WORK OR OUTRIGHT REPLACING JOBS .

KEY LESSONS FROM THE 2024 RESEARCH

What can AEC firm leaders do to stay ahead of workplace disruption? Here are next steps based on our quantitative and qualitative studies.

Among the most distressing findings from the research is the presence of stressful rifts inside AEC organizations — from different career goals/philosophies between late-career leaders and young professionals to the differing experiences of stress and autonomy between men and women, and possible future use of AI. One might call these a "lack of alignment" or "differences in perspective," but in truth, the issue is deeper and more troubling. These rifts are destabilizing forces within organizations and the industry at large, driving higher levels of turnover, dissatisfaction, and subpar performance.

We believe solutions can't be found in committee or one-off initiatives but must come from renewed and refocused leadership, alongside more new-era informed strategic planning and execution. Signals of success will come from employees who opt-in to high-performing workplaces — whether that is due to redefined performance methodology, new and flexible approaches to work, or other new methodologies to inspire and engage employees.

Among the changes we believe are most important based on our research findings:

1 | Develop leaders and managers as the linchpins of dynamic teams

High-functioning teams don't happen organically and are never the work of one person. Leaders must lead differently and invest in training for managers to help them motivate, manage, and measure talent. Professionals tell us they need help understanding how to inspire and influence individual players and delegate work.

2 | Tap freelance professionals for long-term, sustainable growth

The best way to fill talent gaps at your firm may be a mix of employed and independent professionals — not just for short-term needs but for long-term talent sourcing. Tapping freelance professionals can help make your workforce more agile in the long run and help you source expertise that's hard to find elsewhere.

> " *Dynamic teams have the power to be the essential platform for individual connection and contribution, and the critical substructure for organizational growth and prosperity. This is something I see day in and day out with my highest performing clients."*
>
> **— PETER C. ATHERTON, P.E., PRESIDENT AND FOUNDER OF ACTIONSPROVE**

3 | Design diverse career paths

Our research shows that high-performing talent brands — companies rated higher than average at attracting and retaining professional talent — are significantly more likely to support employees' careers.

Eighty-eight percent at highly competitive talent brands say they have a clear career path as compared to 60% at mid-level and 38% at low-level companies.

This career path must include options for people who are unwilling to pay dues and work over 45 hours per week and those who want to work remotely at least part-time. Traditionally, shorter workweeks and remote work were both career killers — but that type of hefty dues-paying culture no longer works when half of your employees want to pursue these options.

4 | Make quality of life a part of company culture

To reduce turnover, organizations must pay close attention to stress and burnout.

Stress levels are significantly lower at highly competitive talent brands. Forty-six percent of those at highly competitive talent brands say work stress is affecting their health compared to 68% at mid-level and 77% at low-level organizations.

Considering that AEC professionals compare themselves to other highly trained, highly paid professionals, they increasingly want at least the same quality-of-life benefits found in those industries.
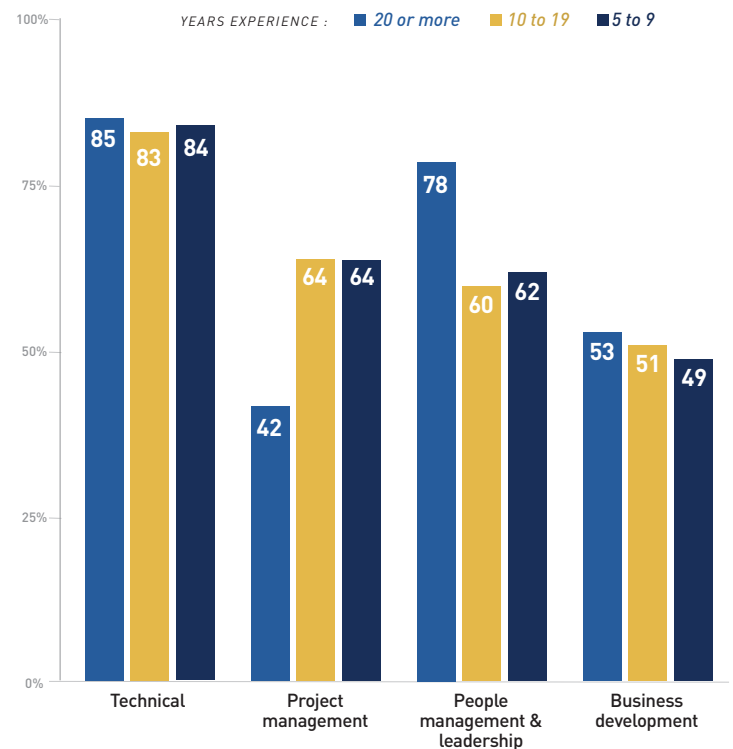
5 | Focus on 'power skills'

Just 19% rate their current organizations' training programs as excellent — a percent that is much too low.

In addition to technical skills, engineers and architects want to develop soft skills in areas like leadership development, team management, public speaking, and time management — all now considered "power skills" for work in a highly technical field.

One survey-taker shares that he believes interpersonal and leadership skills are urgently needed in his field: "My organization needs stronger mentorship programs led by people with the appropriate skill set — for example, better people/interpersonal skills and enhanced social and behavioral competencies. Too often, hiring and technical managers lack these people skills, and I've noticed it negatively affects new and early career employees."

Figure 12 **TECHNICAL TRAINING IS KEY, BUT SO IS PROJECT AND PEOPLE MANAGEMENT**

YEARS EXPERIENCE : ■ *20 or more* ■ *10 to 19* ■ *5 to 9*

	Technical	Project management	People management & leadership	Business development
20 or more	85	42	78	53
10 to 19	83	64	60	51
5 to 9	84	64	62	49

Q. In your current role, which of these types of training would be valuable?
ActionsProve & EMI | 2024

6 | Experiment with AI technologies to understand its potential and develop necessary skills

Knowledge work as we've known it has forever changed. All employees — leaders, managers, and technical professionals — need experience using AI technologies-driven tech now, even before your firm dives headlong into using it. Most advanced AEC technologies — whether design tools, project management, or financial oversight — will include AI within a few years, so the time to build advanced technology skills internally is now. A good place to start is learning to be a better prompt engineer (i.e., learning how to develop clear, effective prompts for AI technologies).

Methodology

This research, sponsored by ActionsProve, LLC, and the Engineering Management Institute, includes survey responses and questionnaire feedback from over 600 individuals. We conducted an in-depth survey of 278 professionals in architecture and engineering from December 2023 to January 2024. We also conducted polling and qualitative research — collecting feedback about learning styles, training needs, and attitudes about careers and technology — from over 400 individuals during 2023 and the first quarter of 2024. Survey design and analysis were managed by an independent research firm, Ravn Research.

GENDER

Male	80%
Female	20%

YEARS OF EXPERIENCE

<5 years	12%
5 – 9	22%
10 – 19	34%
20+	32%

DISCIPLINE

Civil Engineering	35%
Mechanical Engineering	13%
Structural Engineering	12%
Building Architecture	12%
Electrical Engineering	8%
Plumbing Engineering	6%
Instrumentation & Controls Engineering	4%
Landscape Architecture	3%
Land Surveying	2%
Other	5%

PETER C. ATHERTON, P.E.
President and Founder of ActionsProve

ActionsProve serves the AEC industry through new-era-focused strategic planning and advisory, next-level leadership development, and performance-based employee engagement. Learn more and check out the AEC Leadership Today podcast at www.ActionsProve.com.

in https://www.linkedin.com/company/actionsprove/

ANTHONY FASANO, P.E.
President and Founder of The Engineering Management Institute

Engineering Management Institute helps consulting firms build professional development systems to attract, develop, and retain an engaged workforce, including people leadership and project management development programs. To learn more about their proven process, call 800-920-4007 or visit EngineeringManagementInstitute.org.

in https://www.linkedin.com/company/engineering-management-institute/

ActionsProve

EMI
ENGINEERING MANAGEMENT INSTITUTE