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Accelerating progress: Maximizing the return on talent in A&D

2025
AIA Aerospace and Defense Workforce Study

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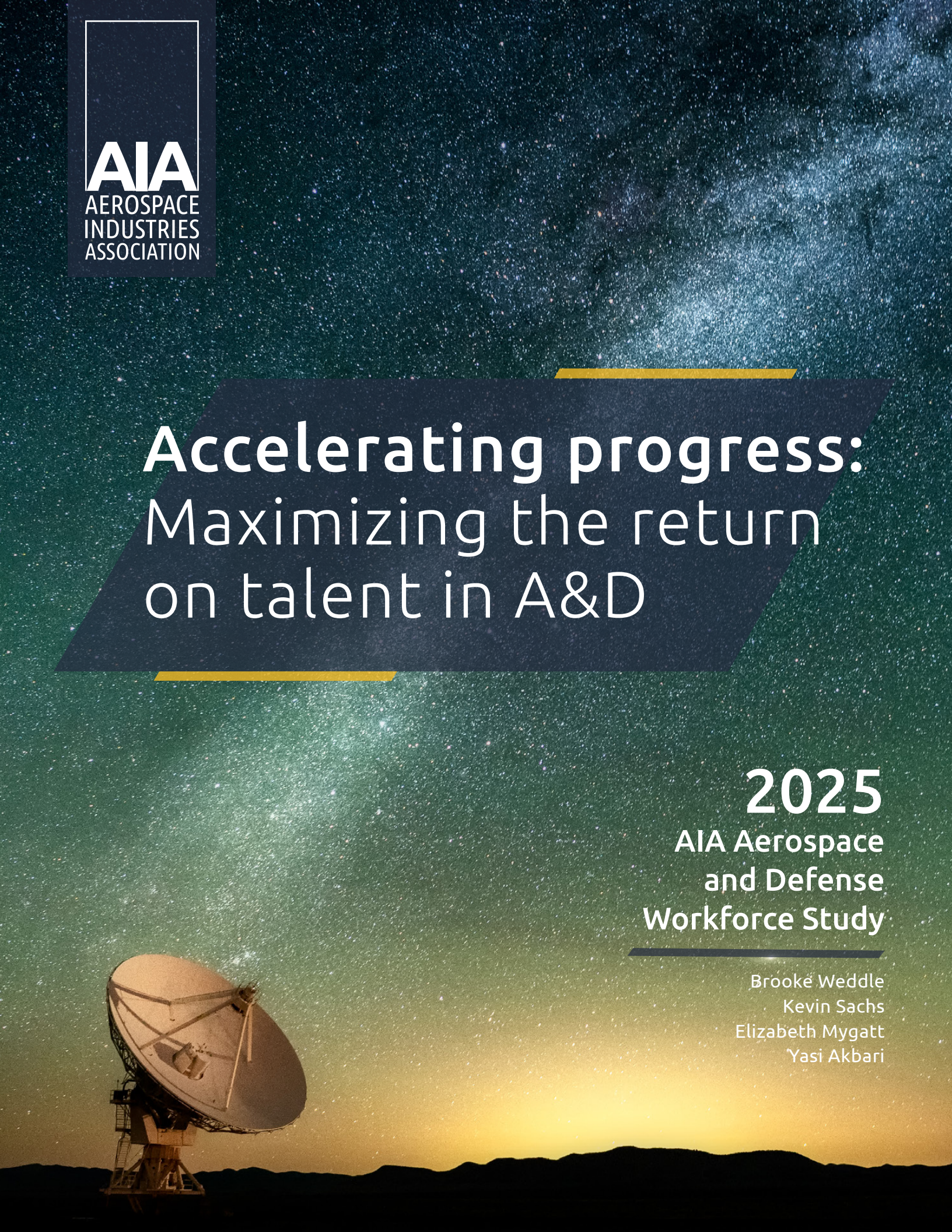

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As part of an ongoing knowledge collaboration with the Aerospace Industries Association (AIA), McKinsey is providing research on timely workforce and productivity issues facing the aerospace and defense sector. In Spring 2025, McKinsey surveyed AIA member organizations to analyze trends related to talent attraction, retention, and productivity within the aerospace and defense industry. In parallel, McKinsey interviewed A&D executive leaders—all members of the Aerospace Industries Association—to gather perspectives on priority talent challenges and generate insights for the market. We would like to thank AIA and its members for their collaboration in generating this research, which we hope will assist industry leaders as they continue to address talent headwinds.

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Introduction

Amidst a rapidly changing global geopolitical and macroeconomic landscape, the U.S. Aerospace and Defense (A&D) industry needs to evolve, driven by tailwinds of growth yet still facing talent challenges that foreshadow future obstacles.

During the past few years, A&D companies have dedicated considerable resources and efforts to improving talent attraction and retention as well as employee engagement. While there has been some progress in attraction and engagement, it has not been enough to bring down attrition rates, which remain stubbornly and significantly higher than those in other industries. As both the commercial and defense industry segments continue to grapple with a dynamic market characterized by economic uncertainty, volatility, and growing demand, both novel approaches and tried-and-true foundations are critical to enable growth and address severe workforce shortages, talent scarcity, and mounting competition.

The talent imperative only becomes more pressing given limited U.S. annual population growth. With a meager 0.2 percent annual population growth rate expected over the next 10 years, there is simply not enough talent to go around. Taking steps to stem attrition and bringing about a massive productivity unlock will be essential for A&D companies who want to remain relevant.

By working to transform their talent engines and unlocking greater productivity, A&D companies can maximize their return on talent and build the resilience they need—now and into the future. Companies that adapt and evolve their talent approach could help restore the A&D industry as a sought-after destination for top talent.

Industry overview

The U.S. Aerospace and Defense (A&D) industry's revenue reached approximately $955 billion in 2023—a 4.8 percent increase year over year amidst persistent talent shortages, supply chain disruptions, and production challenges. Additionally, the A&D sector contributed 1.6 percent of U.S. nominal GDP in 2023. The workforce within A&D companies expanded to 2.21 million employees, reflecting a robust growth rate of 4.8 percent from 2022 to 2023. The commercial aerospace sector accounts for 57 percent of A&D jobs, while the defense sector comprises 43 percent.

Key findings

This year's A&D workforce study highlights that workforce attraction and retention challenges continue to create headwinds for an industry aiming to drive digital adoption, increase productivity and fluency, and deliver on growing customer demand in a volatile climate. Talent sourcing for critical skills remains a challenge as vacancies mount in engineering and skilled trades labor. In parallel, industry attrition remained level at nearly 15 percent in 2024 despite organizational efforts to drive retention.

As industry demand grows and talent pipeline pressures mount, the need to drive at least 30 to 40 percent greater productivity within the existing workforce is paramount. A&D companies can do this by:

1. Reimagining how work is designed and executed
2. Equipping the existing talent pool with new skills
3. Incentivizing critical employees in meaningful ways

Industry attrition remained level at nearly 15 percent in 2024 despite organizational efforts to drive retention.

Methodology

To generate this report's insights, McKinsey partnered with the Aerospace Industries Association (AIA) to interview 25+ member executives and learn more about workforce and productivity challenges and opportunities within the industry. In parallel, we gathered quantitative data on talent attraction and attrition, workforce preferences and engagement, adoption of emerging technology, and productivity from 30+ A&D organizations. In total, these insights represented the employers of over 600,000 U.S. employees and an incremental 200,000 global employees. Approximately half of participating organizations specialize in defense offerings, while the remainder specialize in commercial aerospace and services. Participating organizations represented all parts of the supply chain, with approximately 46 percent reporting yearly revenues of over $1 billion. These data points, coupled with publicly available data from the Bureau of Labor Statistics (BLS) and McKinsey's ongoing talent research, served as the primary basis for our findings.

Talent attraction and retention: A few wins amid mounting hurdles

A&D organizations have made efforts to implement new talent strategies in the last decade and have achieved some gains in talent attraction, retention, and productivity—but many daunting challenges lie ahead.

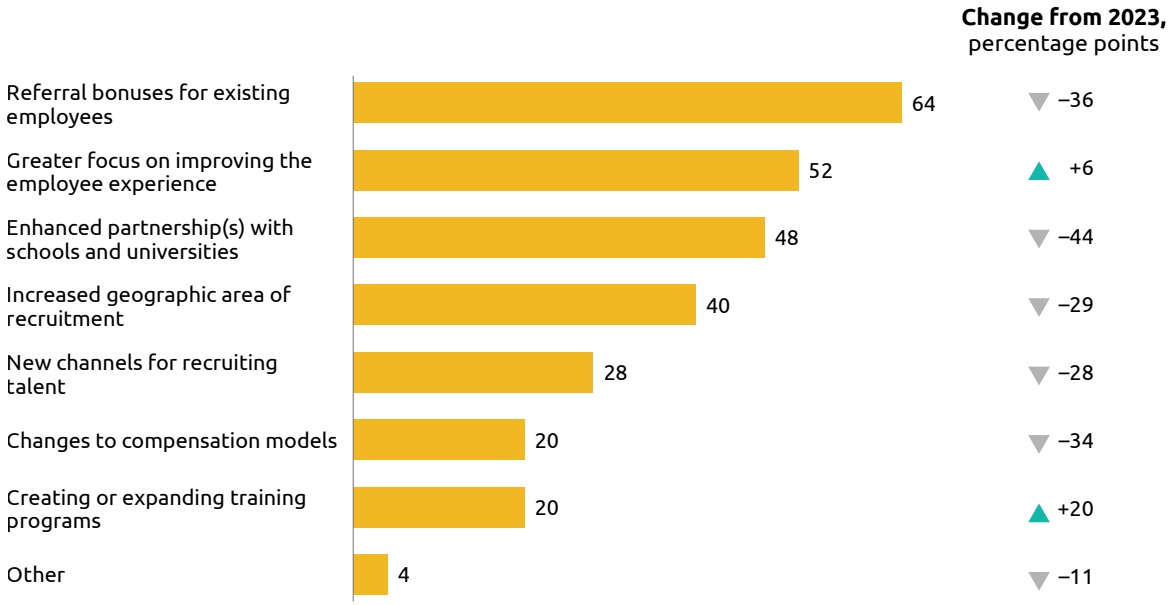
Talent attraction: Major efforts yield minor and uneven gains

A&D companies have attempted to strengthen their competitive edge in talent attraction to address rising demand for critical and increasingly scarce talent in engineering, frontline production labor, and skilled trades. Surveyed A&D companies indicated their top three actions to attract talent in 2024 were offering referral bonuses to existing employees, improving the employee experience, and enhancing partnerships with schools and universities. Notably, compared to the previous year, companies placed comparatively less emphasis in 2024 on school and university partnership development and expanding the geographic area of recruitment (Exhibit 1).

EXHIBIT 1

A&D companies continue to invest in recruitment and training, but have placed comparatively less emphasis on educational partnerships.

What actions is your company taking to attract talent?, % of companies that selected in top 3

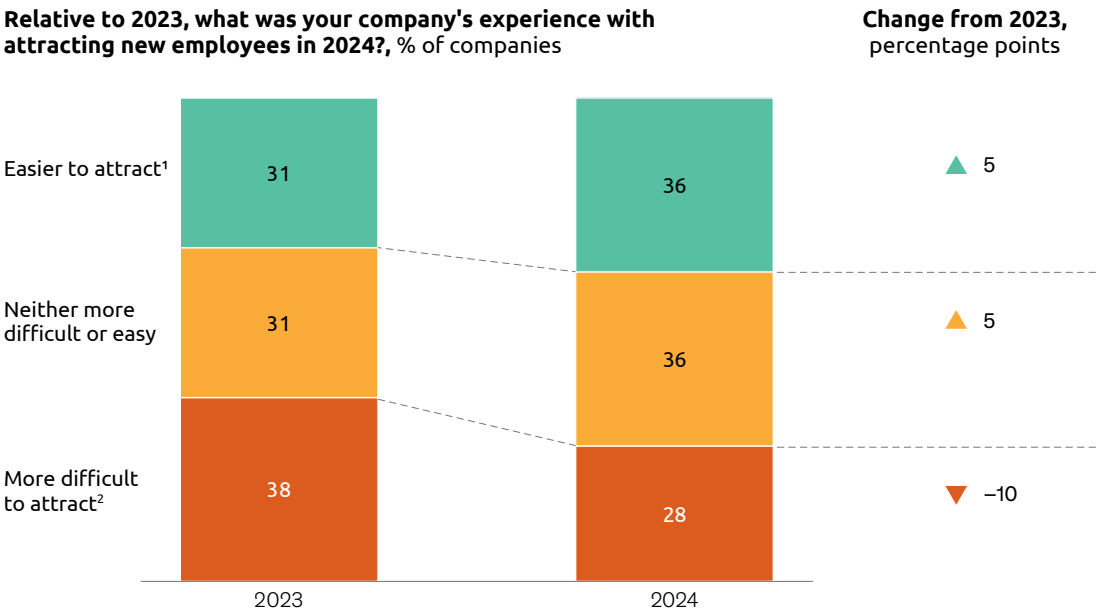


Source: AIA Workforce Survey 2025, n = 32 organizations (0 respondents selected "reduced minimum role requirements" for both 2023 and 2024)

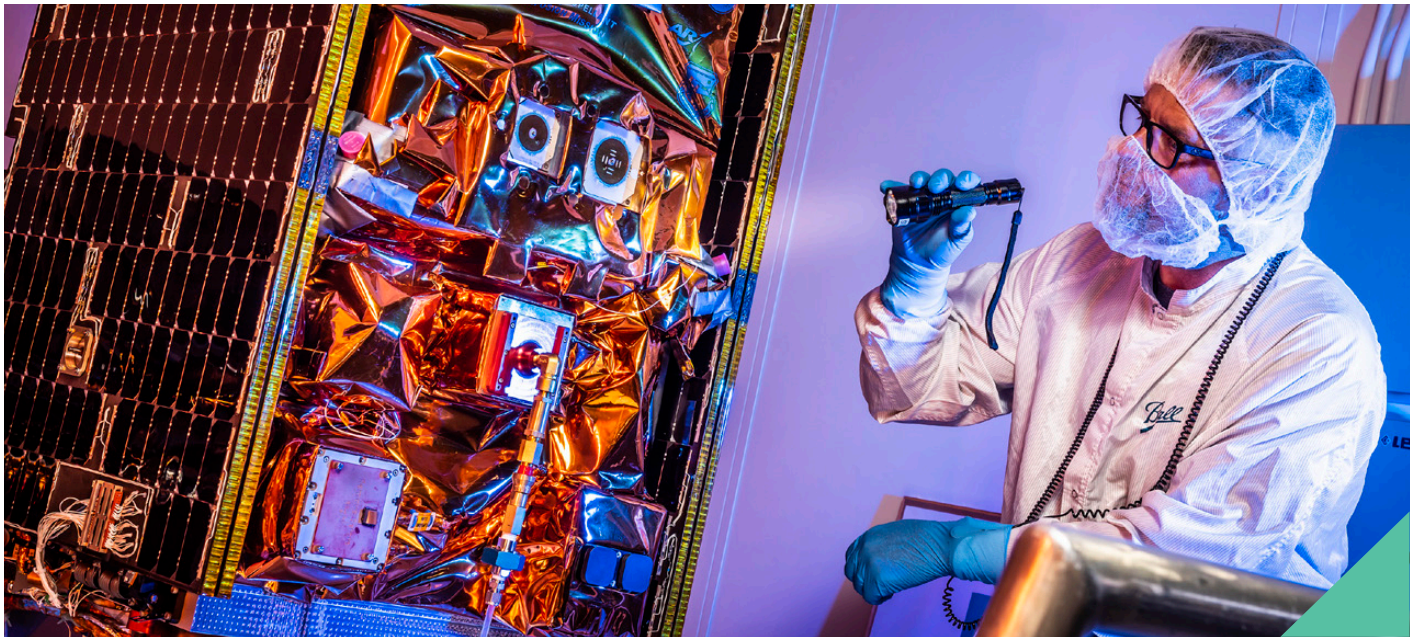
In parallel, when surveyed for this study, 88 percent of companies indicated that they increased compensation in the last 12 months to help attract critical talent. These efforts may have contributed to improvements in talent attraction from 2023 to 2024: a larger share of companies said it was easier to attract new employees and a smaller share said it was more difficult (Exhibit 2).

EXHIBIT 2

More companies said it was easier to attract new employees in 2024 than in 2023.



[1]Composed of "much easier to attract" and "somewhat easier to attract."
[2]Composed of "somewhat harder to attract" and "much harder to attract."
Source: AIA Workforce Survey 2025, n = 25 organizations

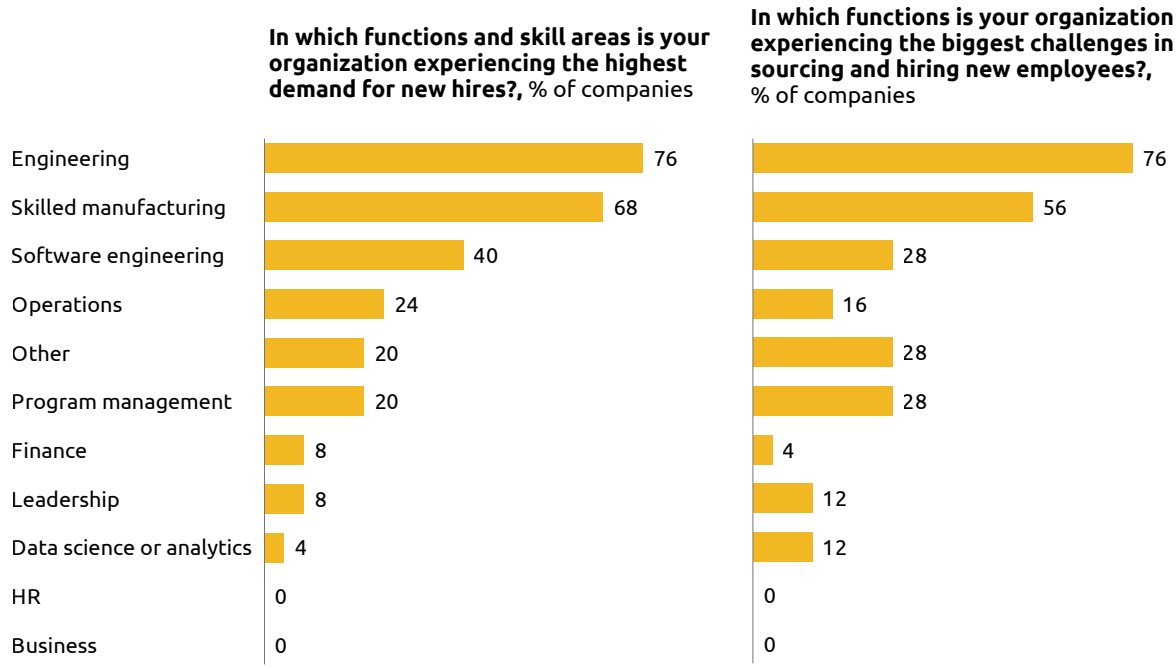


Despite this apparent improvement in attraction, A&D companies indicated that they are encountering the greatest difficulty sourcing and hiring employees for roles in the highest demand areas of their business—broad-based engineering, skilled manufacturing, and software engineering (Exhibit 3).

Executives throughout the A&D industry are expressing frustration with persistent workforce shortages—multiple executives interviewed remarked that their organization finds it especially hard to recruit skilled technical labor workers and engineers at the mid-career level. Companies are also still struggling to compete on compensation; some eight in ten surveyed organizations indicated that leading candidates selected opportunities elsewhere based on salary.

EXHIBIT 3

A&D companies continue to encounter difficulty in sourcing talent for critical program delivery capabilities.



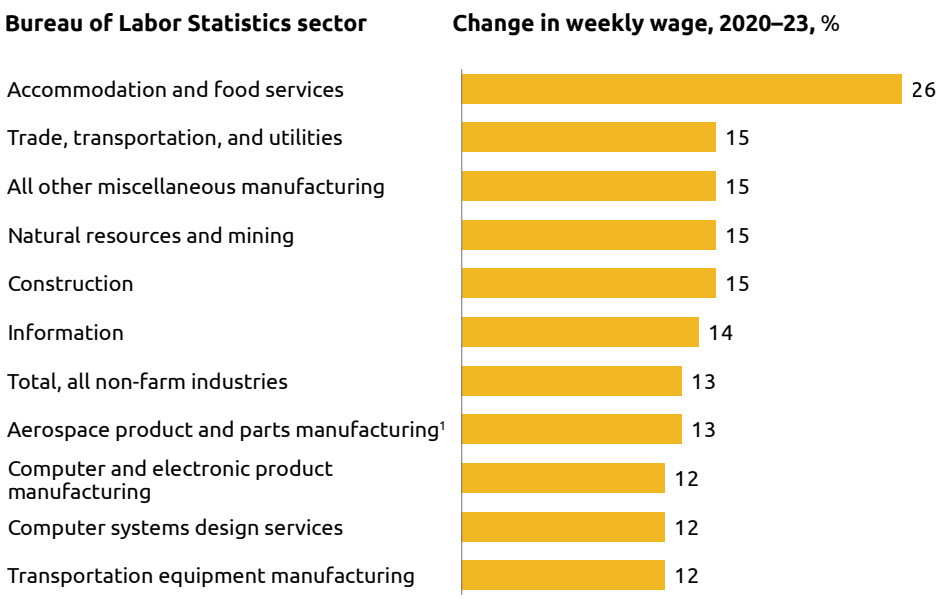
Source: AIA Workforce Survey 2025, n = 25 organizations

> "Executives throughout the A&D industry are expressing frustration with persistent workforce shortages."

This may reflect that, although nearly nine in ten A&D companies increased base compensation for critical talent, wages in private, non-farm United States industries rose at nearly the same or greater rate as A&D wages from 2020 to 2023. Thus, higher salaries could be considered table stakes by more candidates. So, while increases help make it somewhat less challenging to attract candidates, they may be insufficient to lure talent away from competitors in other industries (Exhibit 4).

EXHIBIT 4

Increases in compensation in the A&D sector were nearly equal to or lower than increases in other sectors.



[1]Serves as a proxy for the aerospace and defense sector for benchmarking purposes.
Source: "Quarterly census of employment and wages," Bureau of Labor Statistics, 2023

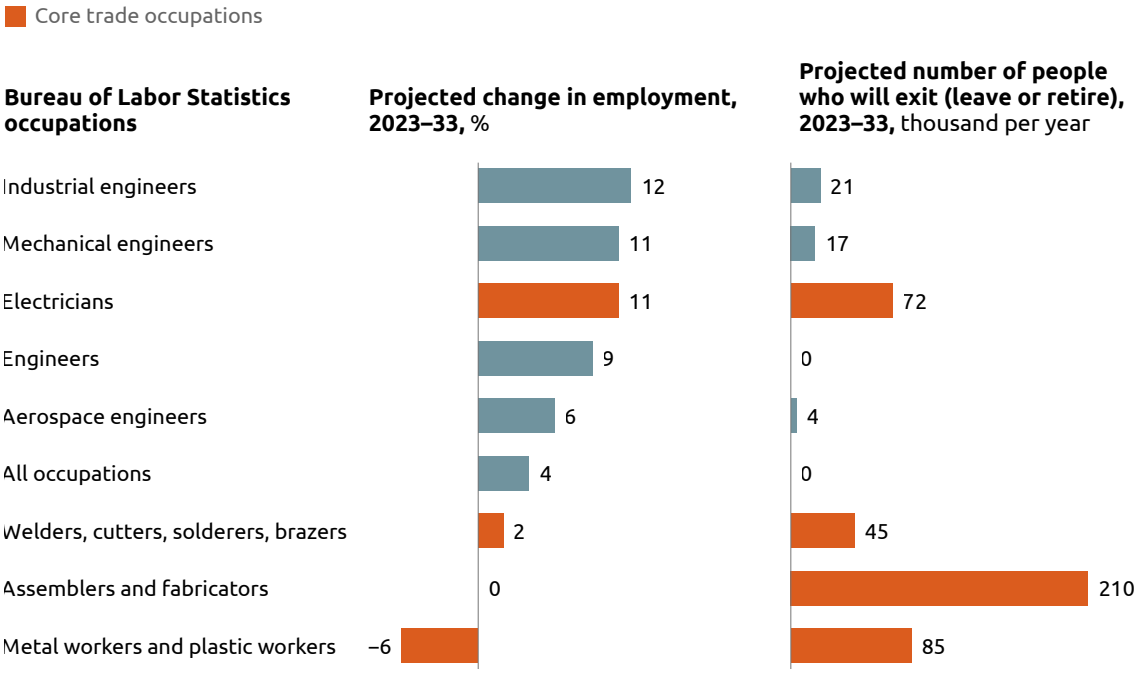
Looking ahead, trends suggest that attraction challenges will endure. In the United States, the A&D workforce growth rate has risen from 3.7 percent (2021–22) to 4.8 percent (2022–23), and interviews with AIA member executives suggest this growth trend will likely continue due to enhanced demand, thereby increasing the number of future job vacancies as population growth does not keep up.[1] Projections indicate that during the next decade demand for engineers in the United States will continue to grow at an outsize pace (around 9 percent) relative to all other occupations. And demand for some engineering disciplines is projected to grow faster than for others (Exhibit 5).

Hiring non-exempt roles will likely also continue to be problematic, although the circumstances are much more nuanced than for exempt roles. Demand for key production occupations and trade skills in the United States is projected to be minimal or, in some instances, to decline during the next decade. Nevertheless, significant shares of job exits and retirements will leave equally large numbers of job openings to fill. For example, the number of new assemblers and fabricators needed in the workforce is not expected to grow until 2033 but by then, there will likely be around 210,000 jobs vacancies annually. Similarly, the number of new metal and plastic machine employees

[1]Bureau of Labor Statistics data.

EXHIBIT 5

Hiring challenges will likely continue through at least 2033 as demand grows and job vacancies mount.



Source: *2024 occupational outlook handbook*, Bureau of Labor Statistics, updated March 14, 2025

needed in the workforce is estimated to decline by 6 percent but around 92,000 job vacancies annually are likely. Given security requirements within the industry, filling job openings becomes even more challenging with a declining population, and all of these roles are essential to A&D production (Exhibit 6).[2]

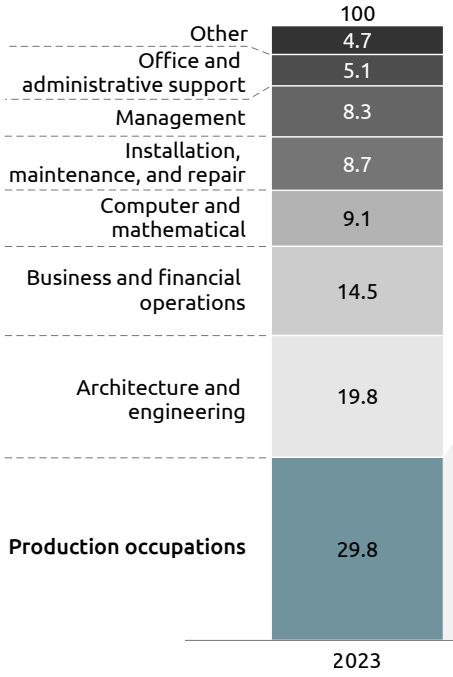
Drilling down into metal and plastic machine worker demand reveals that demand for welders, cutters, solderers, and brazers will grow marginally (by 2 percent until 2033) but annual job vacancies will likely be around 43,000. It's also worth noting that job matching and job readiness would need to be nearly universal for those who complete welding, cutting, soldering, and brazing training programs (approximately 46,000 completed programs in 2023) to meet the demand.[3] This is unlikely to be the case for roles in the A&D sector, as industry requirements such as domestic citizenship and security clearances limit the qualified skilled labor supply considerably.

[2] BLS Job Openings and Labor Turnover projections; BLS projection analysis.
[3] BLS Job Openings and Labor Turnover projections; Ezra Greenberg, Erik Schaefer, and Brooke Weddle, "Tradespeople wanted: The need for critical trade skills in the US," McKinsey, April 9, 2024.

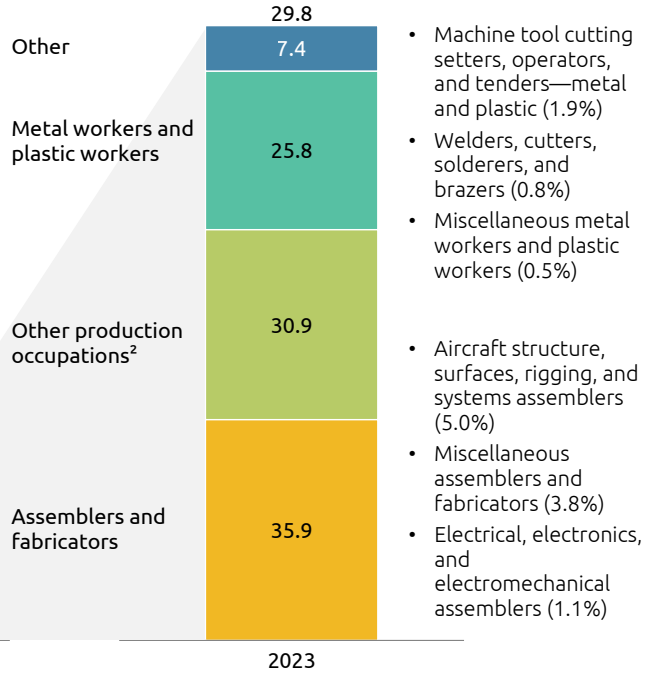
EXHIBIT 6

Critial production occupations make up the largest share of A&D roles – particularly in metal and plastic work and assembly and fabrication.

Breakdown of aerospace product and parts manufacturing by job category,[1] 2023, %



Breakdown of the production occupations job category within aerospace products and parts manufacturing,[1] 2023, %



[1] "Aerospace products and parts manufacturing" is the closest proxy for the aerospace and defense (A&D) sector in Bureau of Labor Statistics data. The total employees listed is 534,000 which is ~24% of the AIA's 2.21 million workers across A&D.
[2] Not broken down into further occupation categories.
Source: "May 2023 national industry-specific occupational employment and wage estimates: NAICS 336400—Aerospace product and parts manufacturing," Bureau of Labor Statistics, updated April 3, 2024

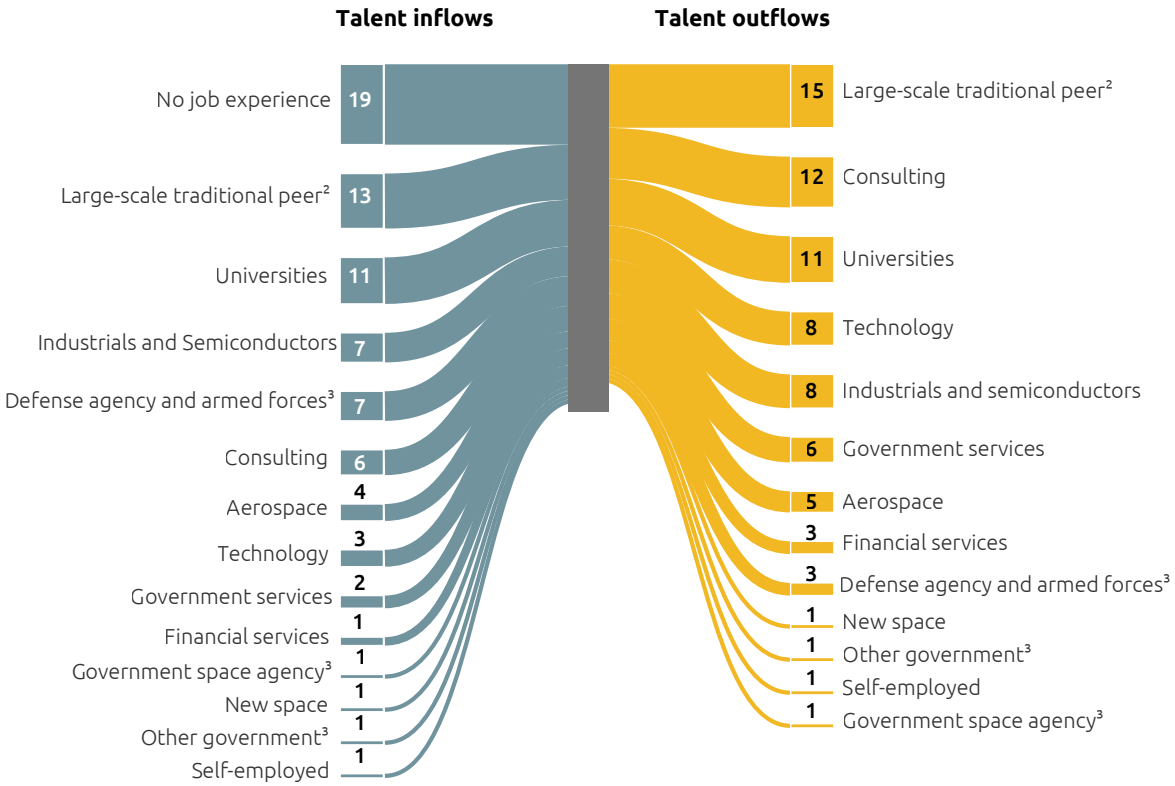
For engineers, the attractiveness of careers in A&D may also evolve as competition from other sectors heats up. In 2024, A&D companies comprised half of the top ten most attractive employers for engineers.[4] However, as technology companies compete for larger shares of engineering talent this could change. A&D companies now account for only 1 percent of the U.S. Fortune 500 companies, while tech companies make up 10 percent.[5] Technology companies have stronger employee value propositions (EVPs) than A&D companies along most dimensions (including culture and values, diversity and inclusion, leadership, and agility), lagging A&D only on motivation.[6] And analyzing talent inflows and outflows shows that outflows from A&D to tech are occurring at twice the rate of inflows to A&D from tech (Exhibit 7). Talent attraction challenges amid enhanced demand and geopolitical conflict highlight that driving talent retention and enhancing talent productivity is even more critical than before.

[4] U.S. Fortune 500.
[5] Ibid.
[6] Varun Marya, Michael Park, Andy Voelker, and Brooke Weddle, "Navigating the gray-to-green transition in aerospace and defense," McKinsey, March 16, 2023.

EXHIBIT 7

A&D organizations are losing large shares of talent to players both within and outside the sector.

Talent inflows and outflows in selected industries,[1] 2021–24, %



[1] Does not include "Other" category (21% for inflows and 25% for outflows).
[2] For example, Airbus, BAE Systems, Boeing, General Atomics, L3Harris, Northrop Grumman, and RTX.
[3] Includes both U.S. and foreign government agencies.
Source: Proprietary organizational data platform storing data from professional networks, reviews, and job posting sites, containing information on more than 500 million professionals and more than 10 million reviews, tracking flows from 2012 onward

Talent retention: Attrition looms large as companies battle multiple headwinds

Challenges with talent retention within the industry create profound implications for A&D's workforce and long-term competitiveness. The aging talent base, where nearly a quarter of the workforce is over 55, poses a retirement wave risk and a sudden deficit in critical institutional knowledge (Exhibit 8).

High early-career attrition exacerbates this issue, as the employees in younger age demographics who comprise the bulk of the manufacturing and engineering workforce are the most likely to leave the aerospace and defense sector for higher paying jobs with greater workplace flexibility in other industries (Exhibit 9).

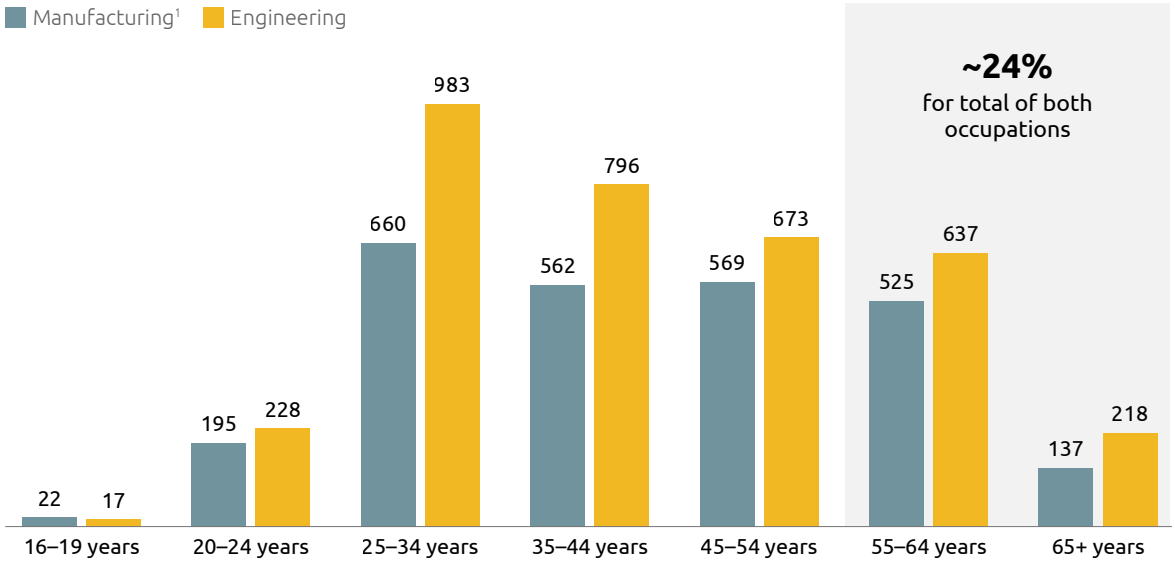
Retaining workers has proven even more challenging than attracting them for A&D organizations. While attrition rates in A&D have fallen slightly since 2022, they remain markedly higher than rates in other industries. This disparity is largely linked to turnover in the non-exempt workforce; current trends indicate that the disparity will continue to grow.

> **"Retaining workers has proven even more challenging than attracting them for A&D organizations."**

EXHIBIT 8

A&D organizations retain an aging talent base, where nearly a quarter of manufacturing and engineering employees are 55 years or older.

Age distribution of manufacturing and engineering employees, number of employees, thousands

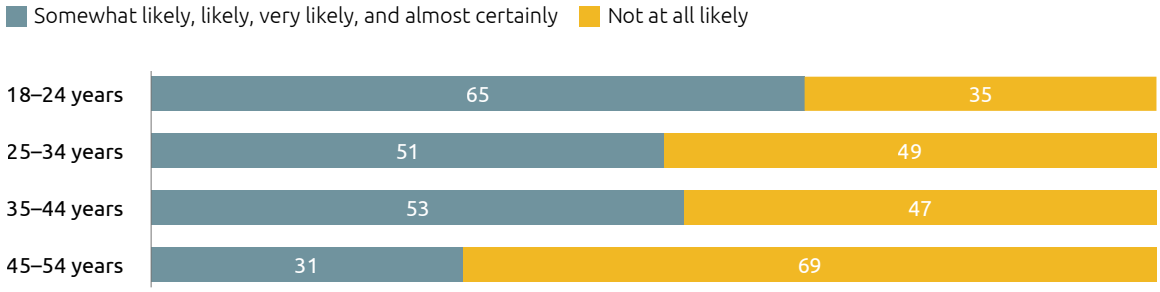


[1]Transportation equipment manufacturing.
Source: "Labor force statistics from the Current Population Survey," Bureau of Labor Statistics, updated January 29, 2025

EXHIBIT 9

Employees younger than 25 are far more likely to consider job changes than those 45 and older and slightly more likely than those 25 to 44.

Likelihood of younger employees considering leaving their job in the next 3–6 months, % of respondents



Source: Bureau of Labor Statistics; McKinsey Great Attrition/Great Attraction Survey, McKinsey Global Institute, September 2022

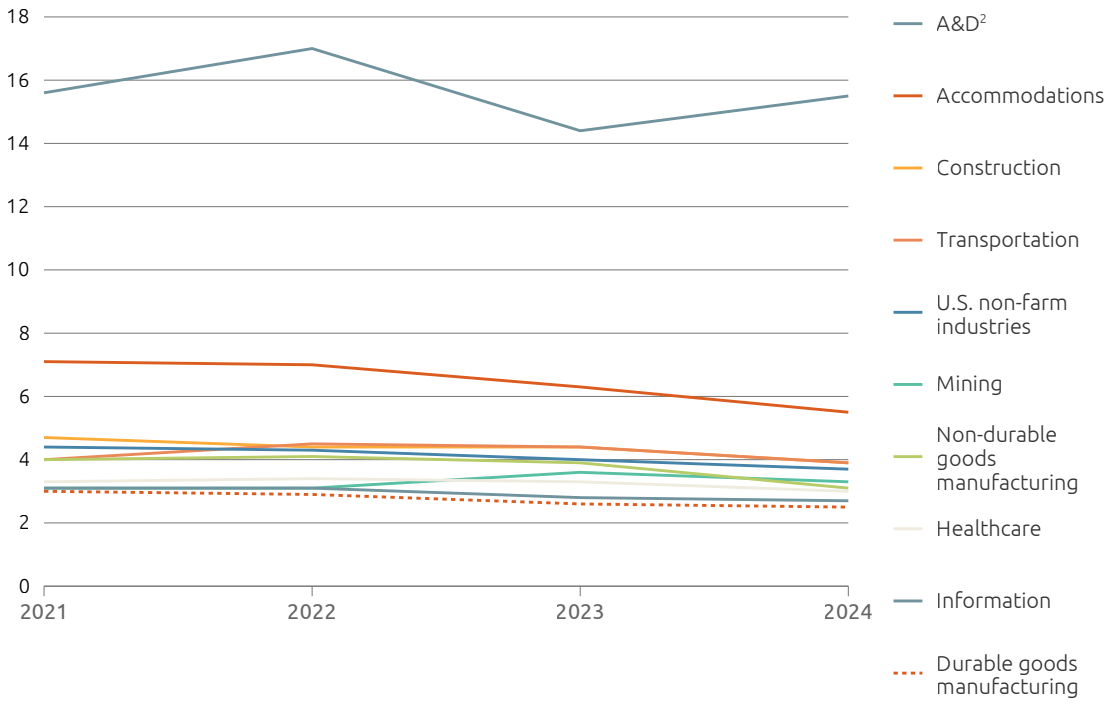
> **"Attrition has dropped from a peak of 17 percent in 2022 to approximately 14.5 percent in 2024."**

A&D companies indicate they have made modest improvements on attrition across the last four years. Attrition has dropped from a peak of 17 percent in 2022 to approximately 14.5 percent in 2024. However, not only are A&D's attrition rates much higher than in other industries, which range from 2.5 percent to 7 percent, but average rates in those other industries have also, for the most part, declined faster during the same timeframe (Exhibit 10).

EXHIBIT 10

A&D attrition rates are markedly higher than those of other industries.

Attrition rates in different industries,[1] 2021–24, %



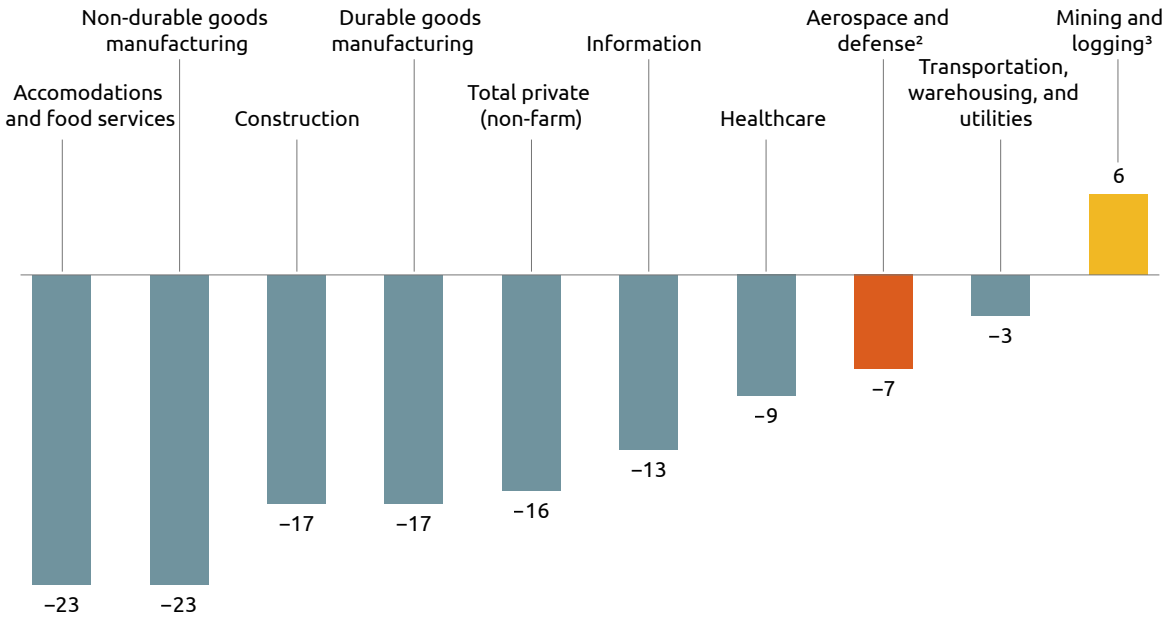
[1]Defined as the 2024 total separation rate (TSR), minus the 2021 TSR, divided by the 2021 TSR. TSR is calculated as the number of total separations during the entire period as a percent of employment.
[2]Aerospace and defense is not defined as a sector by the Bureau of Labor Statistics. The AIA Workforce Survey 2025 was used instead.
Source: AIA Workforce Survey 2025, n = 26 organizations; Bureau of Labor Statistics Job Openings and Labor Turnover Survey (2021–24)

In fact, all industries save two realized larger reductions in their attrition rates than A&D in 2021–24. Attrition rates in durable goods manufacturing and in construction, for example, fell 17 percent in this period while A&D's dropped by only 7 percent (Exhibit 11).[7]

EXHIBIT 11

From 2021 to 2024, reductions in attrition rate in A&D were significantly smaller than those in most other industries.

Percentage reduction in attrition,[1] 2021–24, % change



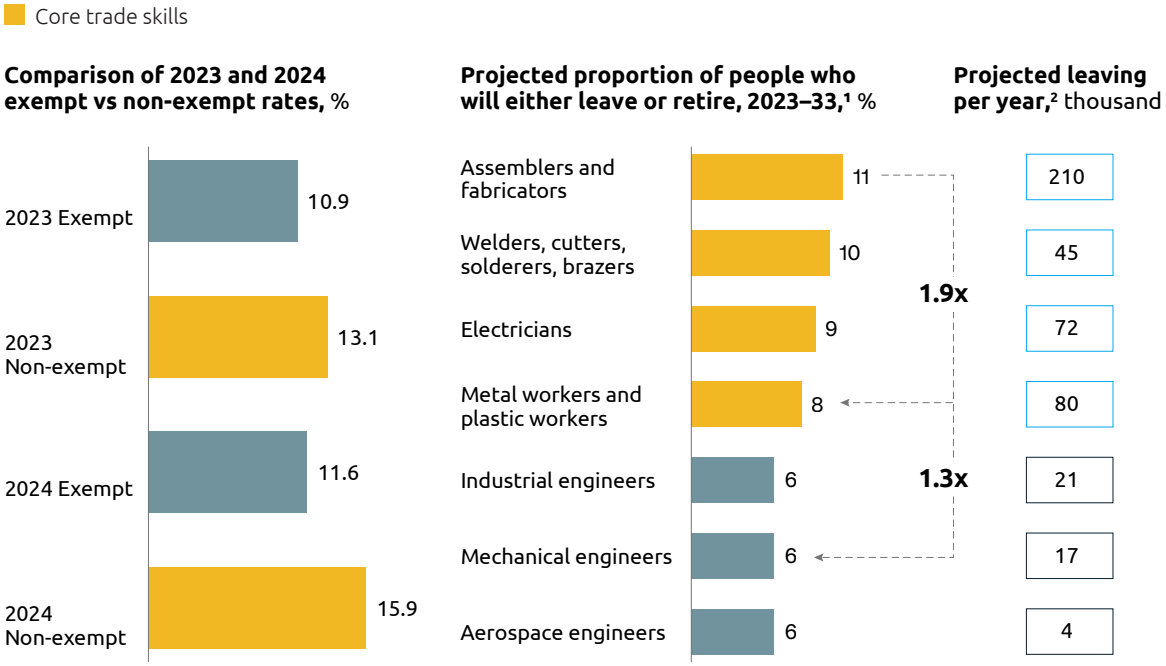
[1]Defined as the 2024 total separation rate (TSR), minus the 2021 TSR, divided by the 2021 TSR. TSR is calculated as the number of total separations during the entire period as a percent of employment.
[2]Aerospace and defense is not defined as a sector by the Bureau of Labor Statistics. The AIA Workforce Survey 2025 was used instead.
[3]Volatile market conditions and fluctuations in prices, coupled with industry uncertainty, resulted in a higher attrition rate.
Source: AIA Workforce Survey 2025, n = 26 organizations; Bureau of Labor Statistics Job Openings and Labor Turnover Survey (2021–24)

Exceptionally high attrition rates at A&D organizations appear to be driven largely by departures from the core trade workforce. Multiple executives shared that it has been particularly tough to retain employees in skilled trades such as welding, pipe fitting, and plumbing, adding that their organization's attrition rates have reached more than 40 percent for skilled trades employees in some geographies. This tracks with what A&D companies surveyed in 2025 reported: higher average attrition rates in their non-exempt workforces (predominantly core skilled trades) than in their exempt workforces (Exhibit 12).

[7] AIA Workforce Survey data; BLS Job Openings and Labor Turnover Survey (2021–24).

EXHIBIT 12

Attrition rates in the A&D industry are higher for non-exempt roles than exempt roles.



[1]As shown, outlook projections indicate that voluntary attrition rates are 1.3 to 1.9 times higher for skilled trades professions than for traditionally exempt roles in A&D.
[2]As defined by the Bureau of Labor Statistics. Includes those leaving the profession to work in another or due to retirement.
Source: *2024 occupational outlook handbook*, Bureau of Labor Statistics, updated March 14, 2025; AIA Workforce Survey 2025, n = 26 organizations; AIA Workforce Survey 2024

Additionally, job outlook projections indicate that voluntary attrition rates (from churn and retirements) are 1.3 to 1.9 times higher for skilled trades professions than for traditionally exempt roles in A&D, such as engineers.

Attrition rates for assemblers and fabricators, for instance, will likely reach 11 percent per annum during the next decade, alongside high per-annum attrition rates for metal and plastic workers (8 percent), welders, cutters, solderers, and brazers (10 percent), and electricians (9 percent). Notably, these are higher than the 6 percent per-annum attrition rates for industrial, mechanical, and aerospace engineers who comprise a comparably smaller share of the workforce. Given these churn rates, attrition and vacancies in skilled trade skills could represent approximately $200 million to $218 million in value for a median employer.[8]

Understanding where attrition is occurring more granularly, at a company level, is fundamental to addressing it effectively. Industry-wide, high attrition rates do not reflect a lack of effort to improve employee experience or training; in fact, 2024 data reveals the highest volume of upskilling since AIA began collecting data. Specifically, when asked what measures they had implemented to address attrition, 75 percent of A&D companies said increased training and development opportunities, 67 percent enhanced opportunities for internal mobility, and 54 percent reported augmenting total compensation (role agnostic).

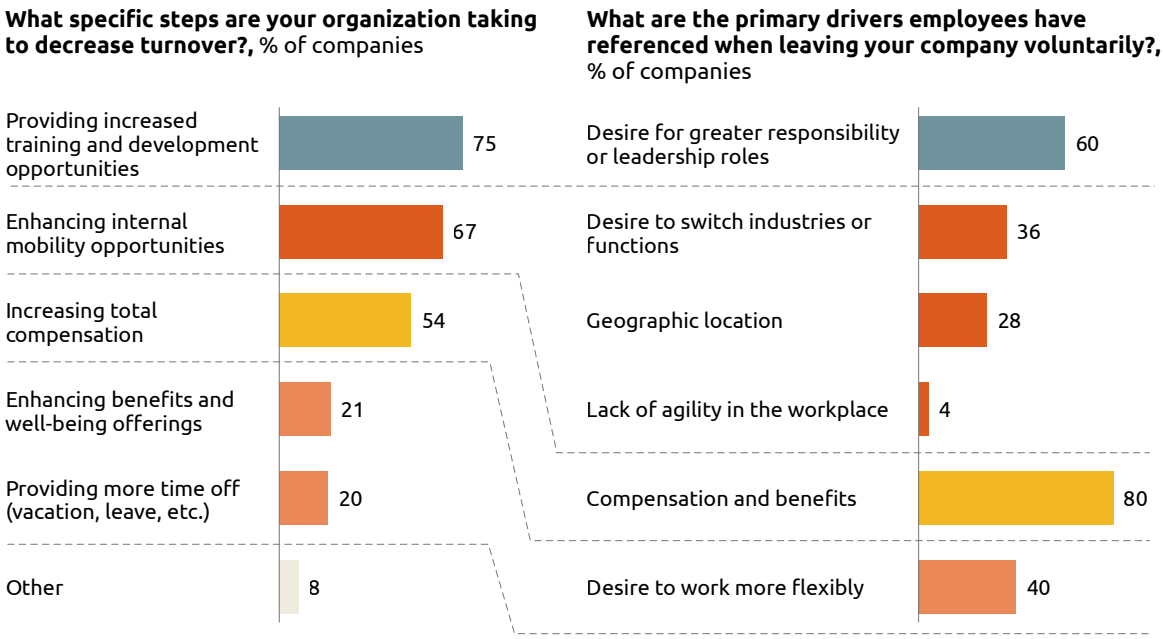
[8]Research conducted by Steven G. Rogelberg and Otter.ai; Bureau of Labor Statistics; McKinsey analysis.

But the efforts that companies emphasize most may not correspond with some of the primary drivers of employee departures, such as a desire for greater responsibility or leadership roles or a lack of agility in the workplace (Exhibit 13).

Notably, A&D companies report offering almost all the components of comprehensive and competitive benefits packages (life insurance, overtime pay, funded professional and career development opportunities, for example). Still, 80 percent of companies reported compensation and benefits as the primary driver for attrition. The value proposition of these benefits for employees could serve as a lever to evaluate further as organizations explore ways to revamp incentives and provide table stakes compensation.

EXHIBIT 13

Industry efforts to reduce turnover aren't necessarily targeting employees' primary motivations for leaving their jobs.



Note: Zero companies reported that a lack of community at work or a desire for more opportunities to innovate motivated employees to leave.
Source: AIA Workforce Survey 2025, n = 25 organizations

Despite these efforts, and improved engagement scores within A&D companies, macro demographic trends represent escalating difficulties that must be addressed. Because a sizable share of the A&D workforce is eligible for retirement, companies must shift their approach to attract and retain younger employees. Younger employees are less likely than their older counterparts to remain at one company long term and more likely to change jobs frequently.[9] And skilled trades roles may be an especially tough sell to younger workers: in a 2023 survey, 74 percent of 18-to-20-year-olds reported a perceived stigma associated with attending a vocational school rather than a four-year university, 79 percent said their parents wanted them to attend college, and only 5 percent said their parents encouraged them to pursue vocational school.[10]

[9] McKinsey Great Attrition/ Great Attraction Survey, McKinsey Global Institute, September 2022.
[10] Ezra Greenberg, Erik Schaefer, and Brooke Weddle, "Tradespeople wanted: The need for critical trade skills in the US," McKinsey, April 9, 2024.

The A&D industry labor pool in the United States will likely shrink further in the coming decades; while the American population is projected to grow, the already sparse rate of growth is slowing considerably[11] and immigration is driving a greater share of growth.[12] Because non-U.S. citizens cannot obtain the security clearances A&D companies often require, companies must compete for a limited talent pool to fill roles vacated by their aging workforce, further raising the stakes on retaining the next generation of workers.

All of this points to a resounding conclusion: organizations must figure out how to do more with their current workforce to drive productivity and growth.

[11] *The demographic outlook: 2025 to 2055*, Congressional Budget Office, January 2025.
[12] "Net international migration drives highest U.S. population growth in decades," U.S. Census Bureau, December 19, 2024.

Maximizing the return on talent: Three actions to take to boost productivity

The A&D industry continues to face persistent headwinds and tailwinds, including increased demand amidst geopolitical conflict, supply chain challenges, and a need for continued innovation to meet the customer challenges of tomorrow. All of this requires top talent, and the organizational initiatives set forth to improve talent attraction and retention have not, to date, been sufficient. Attrition remains prohibitively high amidst the gray-to-green transition. This, coupled with declining population projections, means that the current approaches are no longer feasible. Instead, organizations must figure out how to do more with the workforce they already have, which means retaining the talent they've worked so hard to secure and driving a significant boost in productivity with that talent.

Maximizing the return on A&D talent is critical to ensure industry-wide success, and for a median-size aerospace and defense company the value at stake in closing the talent gap could be $300 million to $330 million a year (Exhibit 14).

These ongoing talent-related challenges highlight that the productivity imperative is more important than ever. Achieving 30 to 40 percent productivity growth will require significant effort and holistic business commitment to drive change. Our research highlights that successful business and talent transformation is achieved when organizations take a greater number of actions at once instead of focusing on singular levers to unlock value. To drive greater productivity and better retention within their organizations, A&D companies should prioritize three key levers:

1. Reimagining how work is designed and executed by getting the foundational work right, coupled with enhanced automation and AI

2. Equipping the workforce with new skills by creating a talent development engine around both exempt and non-exempt employees

3. Incentivizing employees to drive better engagement, ownership, and accountability and thereby reduce attrition

By taking the essential actions discussed in the following sections, A&D companies can help stem the tide of turnover, position themselves to compete effectively for talent in shrinking labor pools, and enhance productivity within their organizations to deliver on the industry's enhanced demand and desire for interoperable, mission-critical technologies.

Action 1: Reimagine work and workflows leveraging technology

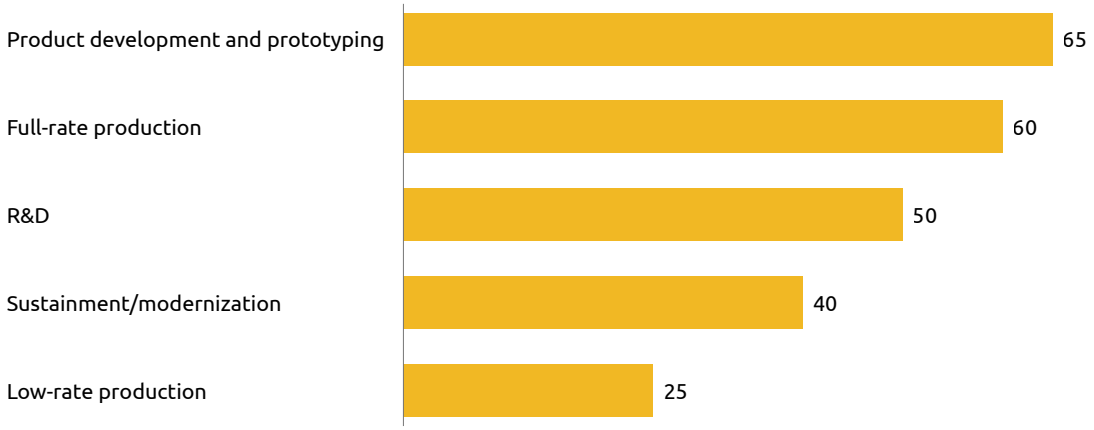
Our research on digital workflows highlights that advancing digital adoption across the advanced industrials industry could unlock up to $2 billion in annual EBITDA in both cost savings and growth opportunities across the end-to-end value stream.

This year, our AIA study highlights that many A&D companies are investing in net new efforts to automate both development and production in hopes of driving better business and industry outcomes.

EXHIBIT 14

Over half of surveyed A&D companies are investing in efforts to automate production development, full-rate production, and R&D.

For which of the following steps in your organization's production process(es) have you invested in new automation efforts during this calendar year?, % of companies



Source: AIA Workforce Survey 2025, n = 12 organizations

> "Many A&D companies are investing in net new efforts to automate both development and production in hopes of driving better business and industry outcomes."

Though organizations continue to invest in automation of production and development processes, generative AI (gen AI) adoption is lagging, with no organizations reporting large-scale efforts to drive gen AI usage (Exhibit 15).

While many A&D organizations are making some investments in automation and AI, increased adoption of emerging technologies will be critical to both meeting emerging demand and driving greater productivity within the workforce. And despite meaningful hurdles such as regulatory and data concerns, the industry is operating in a new era where other geopolitical players, like China, are rapidly advancing the integration of gen AI into their workforce to drive greater productivity. The industry must prioritize driving digitally-enabled talent productivity. Our research highlights that when used meaningfully across various parts of the value chain, emerging technology like automation and gen AI can unleash up to $290 billion in productivity gains within advanced industries organizations. Organizations should challenge themselves to design a future with "zero FTE functions"—that is, FTE functions where processes and workflows can be completely automated. This type of ambitious productivity uplift can only be achieved if A&D companies drive greater adoption of emerging technology.

So how can A&D organizations feasibly achieve these types of productivity gains?

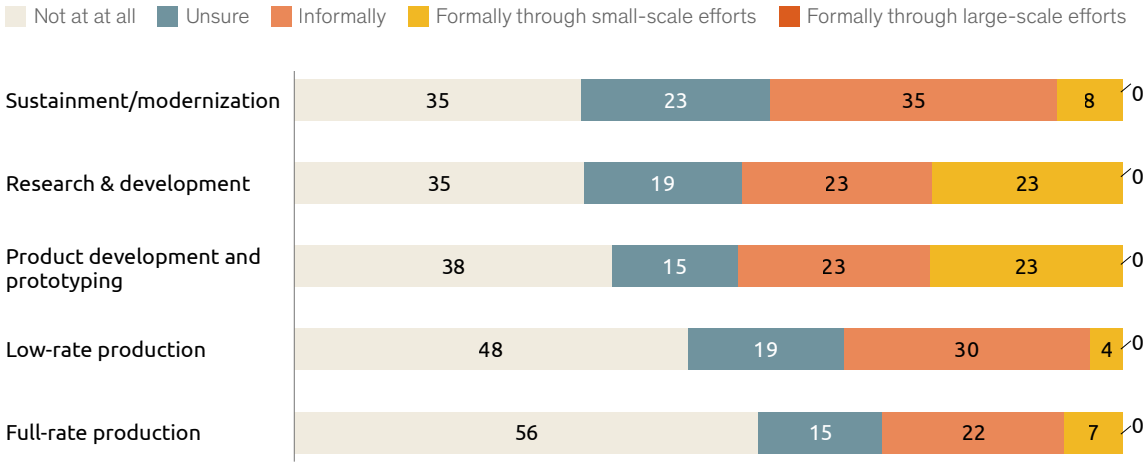
Build a foundation of fast and frictionless workflows

To drive this enhanced productivity, A&D organizations must think differently about how work is completed—whether that is in the back office, in R&D, or within customer programs. To do this, organizations must have the foundations in place: that means well-designed processes and effective human interaction around those processes. Many AIA member executives agreed that process design

EXHIBIT 15

Formal gen AI adoption is very low across all elements of the production process.

For each of the following steps in your organization's production process(es), how much are workers using gen AI?, % of companies



Note: Figures may not sum to 100%, because of rounding.
Source: AIA Workforce Survey 2025, n = 26 organizations

> **"Employing best practices and tools such as value stream mapping, process redesign, and standardization should precede or coincide with the implementation of technology and automation solutions."**

continues to be a challenge for many parts of the business—and to realize meaningful gains through technology and digitization, organizations must revisit and rewire workflows in a simple, outcome-focused manner. A&D organizations can unleash greater talent productivity by spending meaningful time designing and optimizing foundational processes, then leveraging technology to drive speed to impact.

Empower your employees to drive digital transformation

Less than a third of digital business transformations achieve their goals to improve organizational outcomes.[13] McKinsey's research highlights that employee-led transformations that elevate core employees into transformation and empower their creativity and influence can achieve 2.6 times greater returns on their transformation initiatives.

One AIA executive member described a citizen-led digital shopfloor transformation, as program managers and engineers came together to highlight a dire need for a modernized infrastructure to accommodate agile prototyping and delivery of development programs. Before undertaking significant infrastructure and capital investments, the team spent meaningful time defining future state processes and ways of working. This enabled more successful adoption of new digital and manufacturing tools and processes because they were being applied to a robust foundation.

Technology alone cannot resolve all challenges consistently. Although technology offers significant potential to rewire and enhance processes, without first engaging business users to address core inefficiencies, organizations risk digitizing fundamentally flawed processes. Employing best practices and tools such as value stream mapping, process redesign, and standardization should precede or coincide with the implementation of technology and automation solutions. All of this should be driven by an organization's top talent, including managers, supervisors, and influencers across the value chain with deep knowledge of the business.

[13] "Losing from day one: Why even successful transformations fall short," McKinsey, December 7, 2021.

Action 2: Continuously equip the workforce with new skills by creating a talent development engine

The talent and skills that got us to today won't get us to tomorrow. As labor challenges continue to limit organizational ability to deliver, the need for organizations to better upskill their existing workforce is more important than ever.

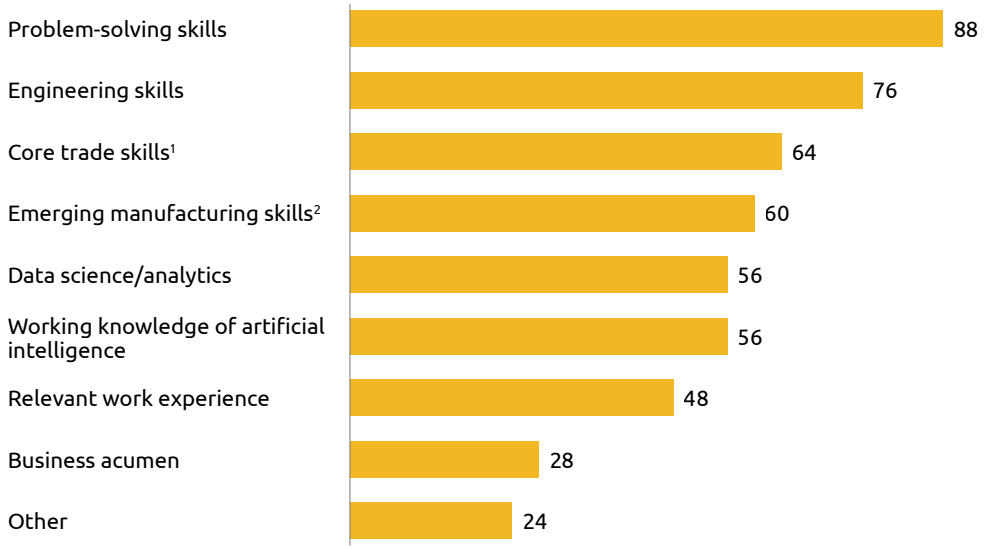
A&D companies seem to have a clear sense of which skills they need to prioritize. Organizations overwhelmingly agreed that a blend of behavioral (for example, problem-solving) and functional or technical (for example, core trade and engineering skills) are most valuable in entry-level hires (Exhibit 16).

Alongside recognition of critical skill gaps, nearly all AIA member organizations surveyed and interviewed highlighted university engagement to attract skilled early tenure engineers, and about half reported engagement with trade schools and community colleges to source skilled trade talent.

EXHIBIT 16

The most valuable future skills in A&D are problem-solving, engineering, core trades, and emerging manufacturing.

What competencies/certifications do you think your company will value most from university- or entry-level hires in the next 4–5 years?, % of companies



[1]Such as welding, electrical, and assembling.
[2]Such as robotics and additive manufacturing.
Source: AIA Workforce Survey 2025, n = 25 organizations

Yet despite awareness of the competencies needed to remain future-oriented, A&D organizations are struggling to do so. Recruiting efforts are rarely sufficient; increasingly, organizations are recognizing they need to prioritize building the requisite skills internally.

Over half of A&D organizations reported increased upskilling and reskilling efforts in 2024, and we anticipate this trend will continue as organizations increasingly recognize they need to reskill or upskill internally to make up the gap. How can A&D organizations build this organizational muscle?

Create a talent development engine that nurtures both leadership attributes and functional skills

Given higher-than-average turnover within the A&D industry, leading companies need to increase their ability to upskill at scale. There are three important considerations as organizations design their upskilling priorities:

1. **Develop a holistic upskilling approach that is meaningfully tied to your business strategy.** For example, if your organization's goal is to expand into new markets or grow an emerging capability, identify the internal talent that can get you there and design a curriculum tied to those future-focused capabilities. If your organization's goal is to expand its existing production capacity, design a curriculum that focuses on training existing talent in needed capabilities. These types of new capability building and cross-training can create the added benefit of easier talent mobility, which can also drive greater employee engagement and loyalty.

2. **Identify the critical roles and skill pools that drive the most business value and prioritize their learning journeys.** Research highlights that approximately 20 percent of roles drive 80 percent of business value. Analyze your organization to understand where those roles sit and create an integrated learning experience for those roles. While some parts of the

business need enhanced digital fluency, other parts may need refreshers on lean principles and effective task management. One AIA member executive highlighted that within their organization, today's supervisor cohort is, on average, ten years less experienced than the previous one. In this instance, upskilling may require a blend of supervisory skill-building and continued trade skill development.

3. **Build the system needed to reinforce new skills.** Balance upskilling with the right talent system—effective incentives, ongoing performance management and real time feedback, and clear succession planning—to effectively integrate upskilling into the broader employee engagement journey.

   As employee demographics continue to shift with the gray-to-green transition, curating a learning approach tailored to an organization's specific needs is required to close to skills gap and drive greater productivity.

Action 3: Incentivize employees to drive engagement and reduce attrition

We know why employees join A&D companies: 93 percent of A&D companies report that new hires join their organizations because they are motivated by a sense of mission or purpose. Meaningful work, inspirational leadership, and sense of community and belonging all contribute to a desire to join A&D companies. But A&D companies are losing leading talent due to compensation (Exhibit 17). While 88 percent of AIA surveyed organizations indicated that they increased total compensation in 2024, 80 percent of organizations also indicated that compensation and benefits were the primary reason for

voluntary departures. Our research also highlights that compensation is the number one reason why employees are willing to stay at or leave an organization.

What does this tactically mean for employers? To compete with other organizations to hire and then retain their top, most productive talent, it is clear that compensation matters: Successful organizations take stock of what the labor market seeks and tailor offerings in ways that are meaningful to critical talent. They then complement this with a holistic employee value proposition and talent experience.

In an era where competition for A&D talent is not limited to traditional organizations across the supply chain, but also to new, non-traditional competitors across industries, the definition of table stakes compensation has changed. Today, meaningful compensation for employees will vary based on role and location. For engineering talent or future-focused digital or AI skills, companies may need to reevaluate current pay bands and perks to become more competitive with tech and consulting organizations and provide broader development opportunities to combat a sense of stagnation or lack of mobility. For skilled trades, on the other hand, effective measures may include sign-on bonuses or relocation packages to fill gaps in regions with significant shortages.

EXHIBIT 17

The factors that motivate employees to join, stay, or leave advanced industrial companies shift as employees advance in their careers.

Top employee experience factors, by career phase and region, advanced industries,[1] ranking

	Why they join	Why they stay	Why they leave
Meaningful work	1	3	8
Coworkers	2	4	5
Workplace flexibility	3	2	4
Inspiring leaders	4	10	6
Community	5	11	10
Compensation	6	1	1
Health and well-being	7	7	3
Career development	8	6	2
Sustainable work expectations	9	8	9
Geography and travel	10	9	12
Safe workplace	11	5	7
Resource accessibility	12	12	11

[1]Survey question posed to respondents based on their career status (eg, new joiner, in role and planning to stay, or in role and planning to leave).
Source: McKinsey Talent Trends Survey of advanced industrial companies incl aerospace and defense, n = 1,546, Jan 2023

Compensation isn't the only lever available to organizations as they look to drive enhanced retention and thereby improved productivity. Creating a "healthy" organization where critical employees are empowered to make decisions, drive impact, and bring problem-solving energy into the workplace is crucial to driving workforce engagement as well as to overall value creation. In fact, organizations that actively work to improve their organizational health realize increases in their EBITDA of up to 18 percent after one year.

Given current and estimated attrition numbers among younger employees, remaining competitive means A&D companies will need to gain a full understanding of their primary drivers and where their biggest risks lie to take the proper action to hire and retain them. And in a workforce where fewer and fewer people stay at one or two companies for their entire careers, it's simply no longer enough to get the employee in the door; companies must couple a thoughtful total rewards strategy with a holistic set of factors that drive retention—flexibility, meaningful work, a dynamic workplace environment, and market-leading career development opportunities.

A&D companies can prepare for the future now by implementing the changes needed to maximize their return on talent and drive greater talent productivity across their existing workforce. With a solid foundation in place to support its evolution, the industry could enter a new golden era in which A&D companies not only compete successfully for talent but also enhance their service to their customers, employees, shareholders, and the nation at large.

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The authors wish to thank Alex Abarca, Andy Voelker, Frank Coleman, James Oliver, and Michelle Bryant for their contributions to this study.

Appendix: Additional data

At-a-glance: AIA Workforce Survey 2025 participants

25 Organizations interviewed	**~$171B** Total revenue[2]	**613k** U.S. employees
32 Organizations surveyed[1]	**46%** Companies with revenues >$1 billion	**199k** Employees outside of U.S.

Subsectors surveyed

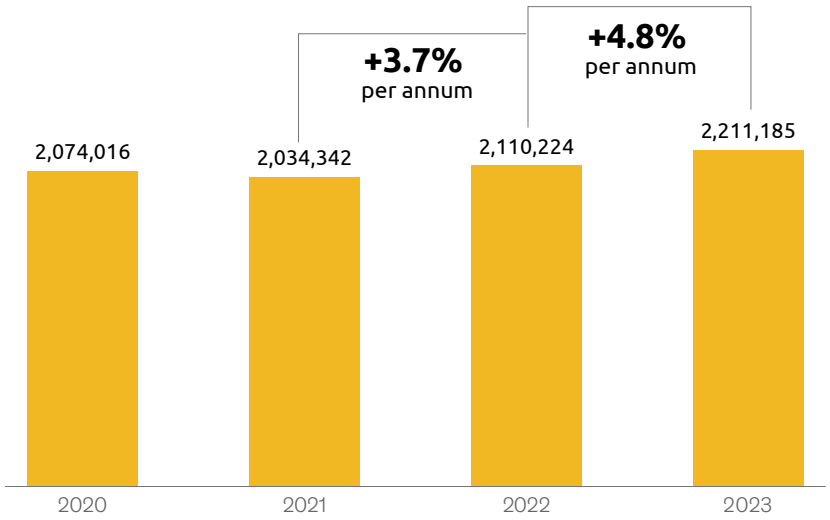
10 Commercial	**15** Defense	**7** Services

Question: What is the name of your organization?; What was the global headcount of your organization as of December 31, 2024?; What was the U.S. headcount of your organization as of December 31, 2024 (permanent employees only)?; What is the global revenue of your organization (includes all business units)?
[1] Thirty-two organizations answered the survey, but not all respondents completed all questions.
[2] Calculated using the midpoint of ranges companies selected.
Source: AIA Workforce Survey 2025

Talent Attraction and Retention

The aerospace and defense industry has been expanding at an increasing rate since 2021.

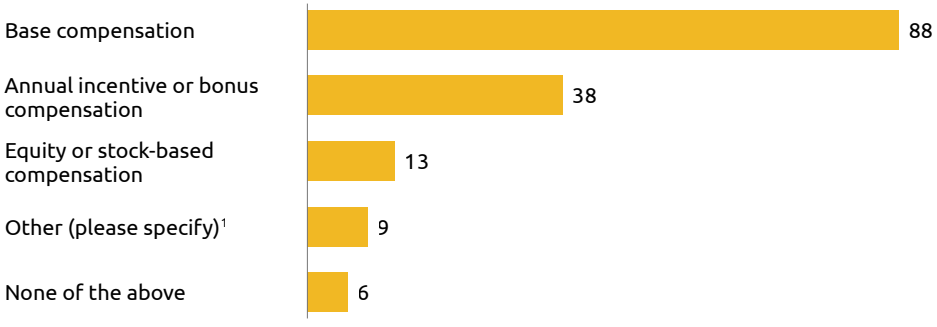
Aerospace and defense workforce over time, 2020–23, number of employees



Source: *2024 facts & figures: U.S. aerospace & defense*, AIA, September 2024

Almost all aerospace and defense companies increased base compensation in 2024 to attract critical talent.

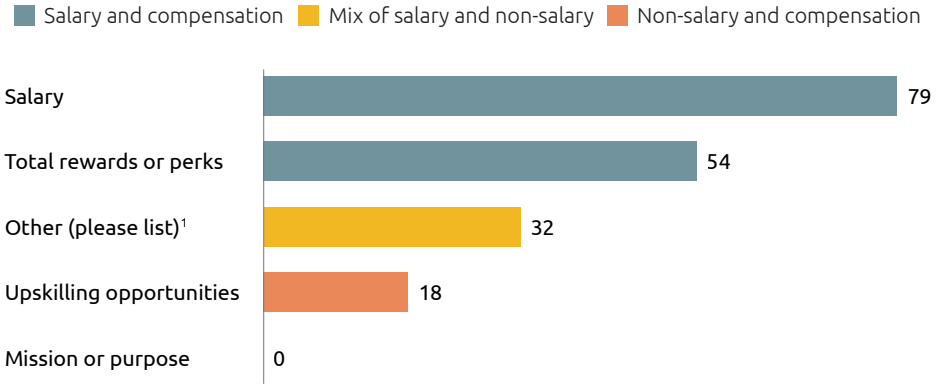
What types of compensation have you increased in the past year to support attraction of critical talent?, % of respondents



[1]Responses include, among others: changed application process, dynamic salaries, and monthly bonuses.
Source: AIA Workforce Survey 2025, n = 32 organizations

Aerospace and defense companies are losing leading candidates to organizations with more-attractive compensation and benefits.

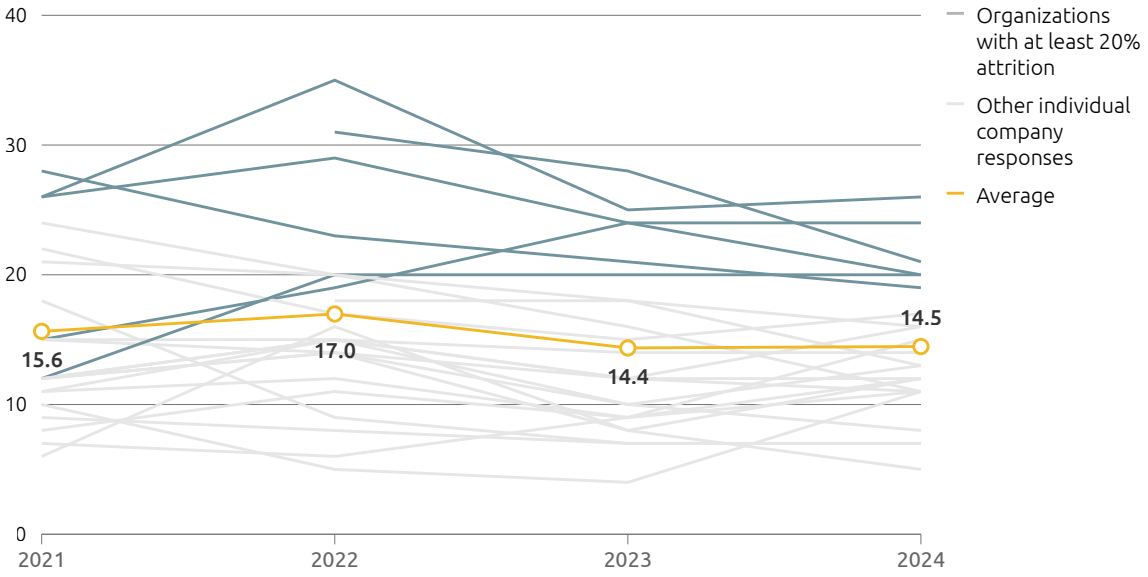
What is leading candidates to select other organizations during the hiring process?, % of companies



[1]Responses include, among others: higher bonuses, wanting a different career path, desire for more flexible working arrangement, and industry stigma.
Source: AIA Workforce Survey 2025, n = 28 organizations

Attrition rates are 20 percent or greater at some aerospace and defense companies, considerably higher than industry averages.

Please input your organization's overall turnover rates, 2021–24, %



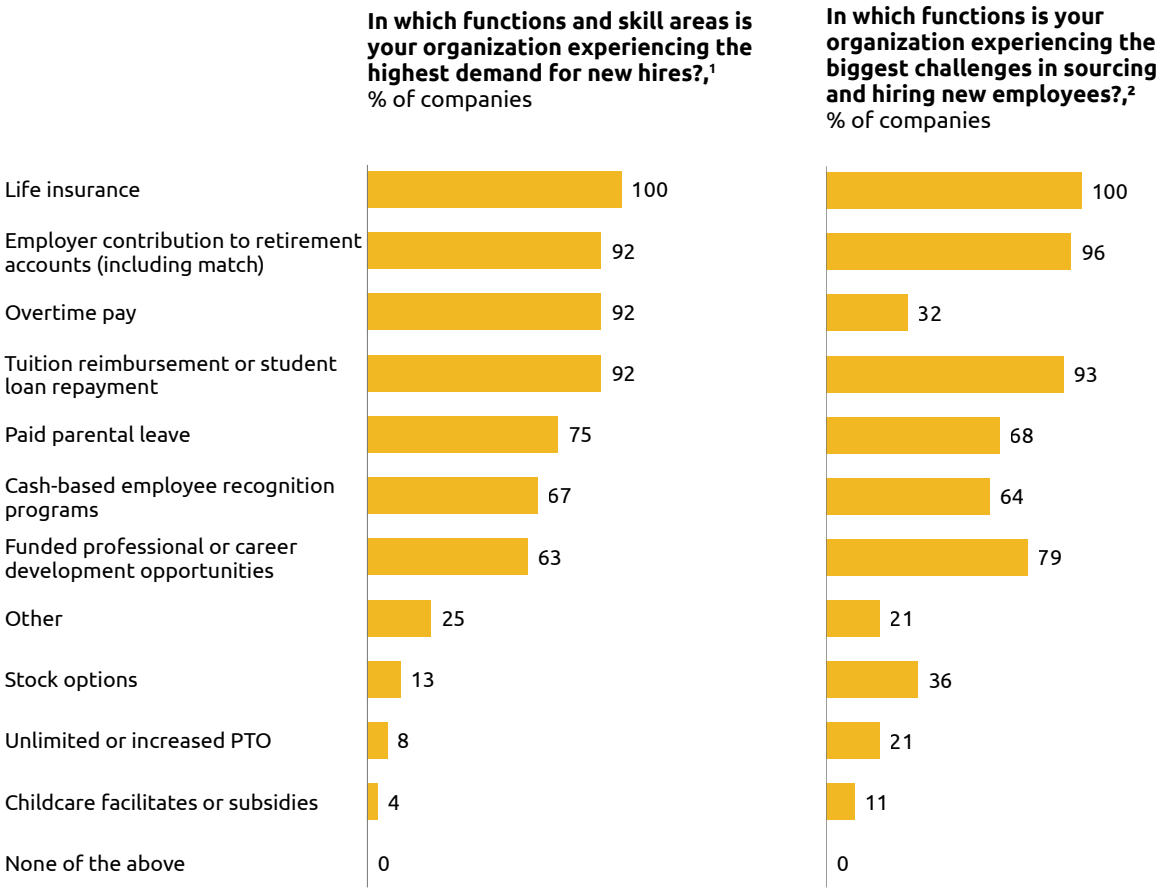
Source: AIA Workforce Survey 2025, n = 25 organizations

In 2024, voluntary departures rose in aerospace and defense, while involuntary departures fell substantially.

Category	2023 respondents (n = 27), %	2024 respondents (n = 26), %	Year-over-year change, percentage points
Exempt[1]	10.90	11.57	0.67
Non-exempt[2]	9.09	15.90	6.81
Statistics exclusive to permanent employees[3]			
Voluntary departures[4]	6.31	7.88	1.57
Retirements	–	2.04	–
Involuntary (RIF)[5]	10.63	1.92	–8.71
Involuntary (performance)	–	3.32	–

[1]Salaried employees.
[2]Hourly employees.
[3]Permanent employees can include either exempt or non-exempt employees, but they cannot be interns or employees with a fixed end date.
[4]Non-retirement and non-involuntary, typically resignations and departures.
[5]Reductions in force or restructuring.
Source: AIA Workforce Survey 2025, n = 26 organizations; AIA Workforce Survey 2024, n = 27 organizations

While most aerospace and defense companies offer employees a range of financial incentives, few offer more time off or childcare assistance.

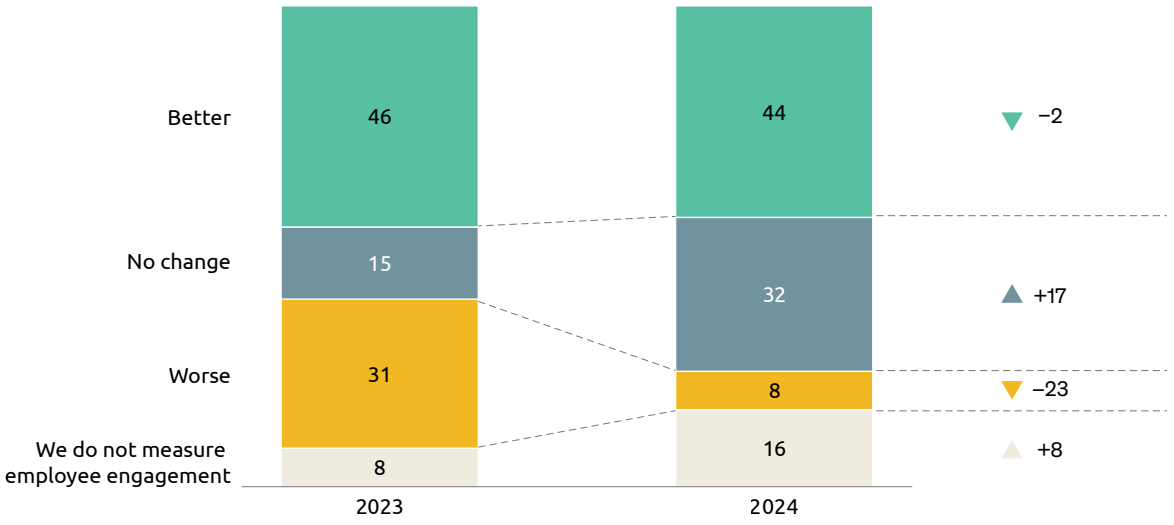


[1]N = 24 organizations.
[2]N = 28 organizations.
Source: AIA Workforce Survey 2025

The share of companies reporting worse employee engagement scores fell significantly from 2023 to 2024, while more reported no change.

How have employee engagement scores within your company changed over the last 12 months?, % of companies

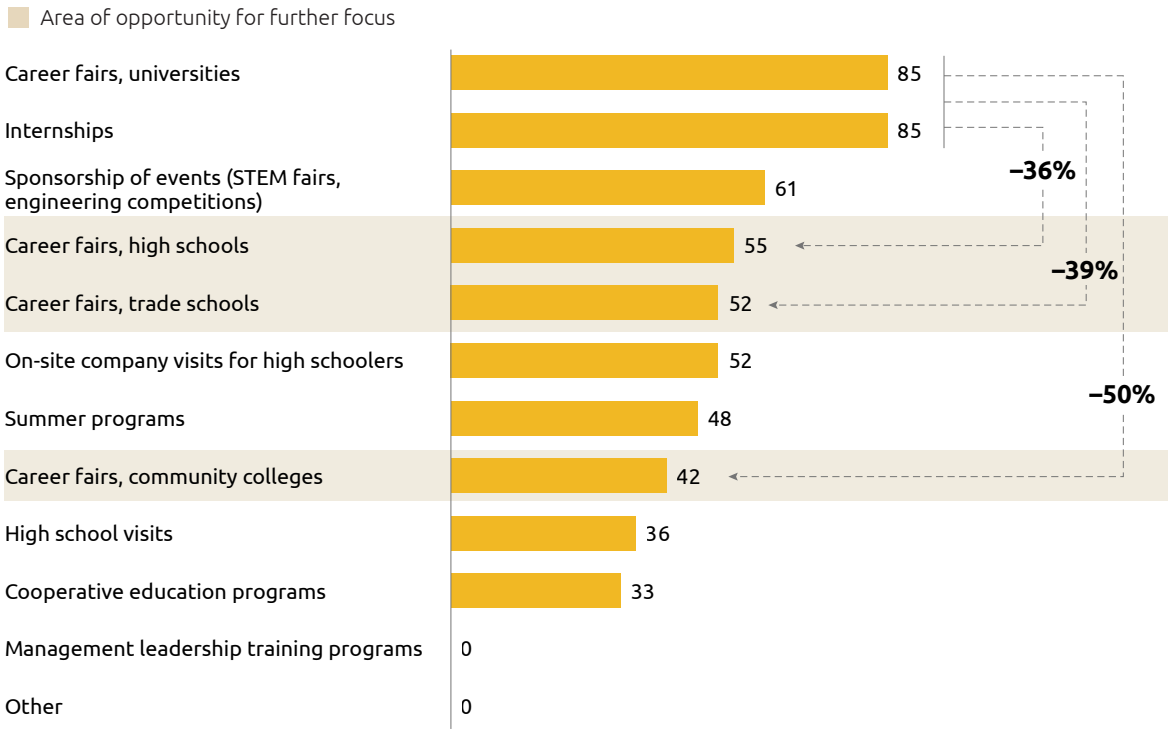
Change from 2023, percentage points



Source: AIA Workforce Survey 2025, n = 25 organizations

Aerospace and defense companies have room to expand their engagement with trade schools, high schools, and community colleges.

How does your company get involved in schools?, % of companies

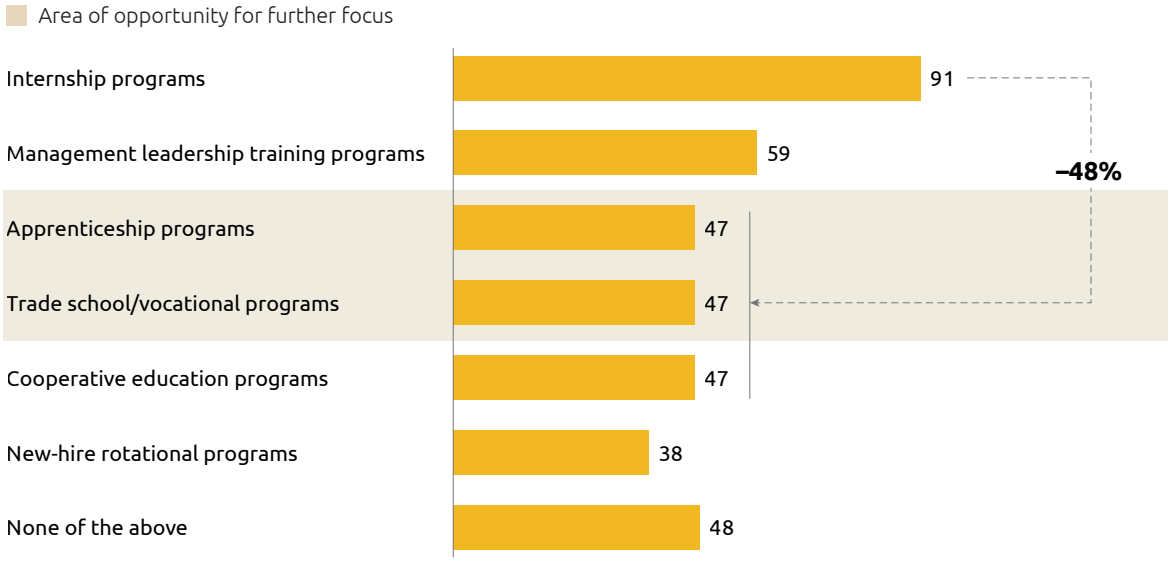


Source: AIA Workforce Survey 2025, n = 32 organizations

Talent Development and Technology

Fewer than half of aerospace and defense companies participate in apprenticeship, vocational, or cooperative education programs.

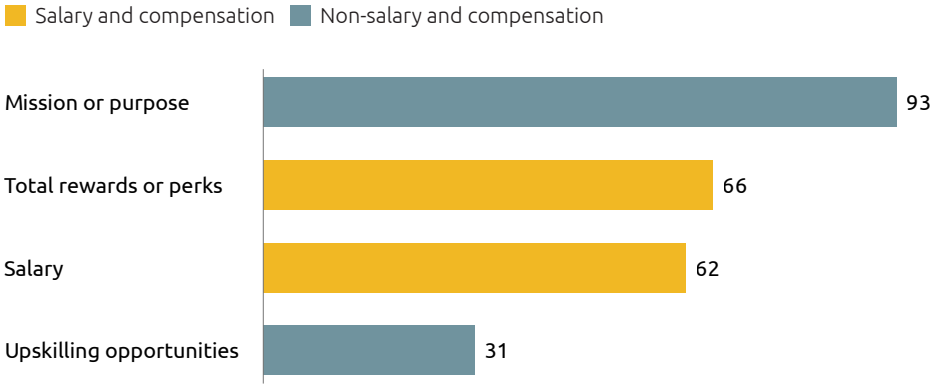
Which of the following do you participate in?, % of companies



Source: AIA Workforce Survey 2025, n = 32 organizations

Most aerospace and defense companies report that their new hires are motivated by a sense of mission or purpose.

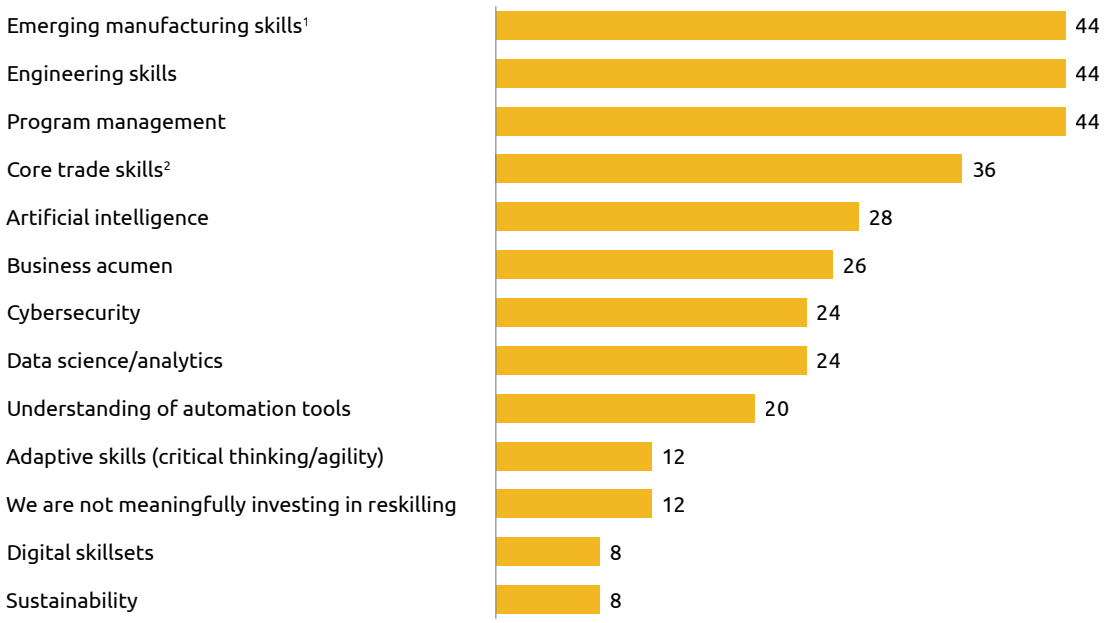
What specific aspects are leading candidates to select your organization during the hiring process?, % of companies



Source: AIA Workforce Survey 2025, n = 29 organizations

Aerospace and defense companies' reskilling investments focus most on emerging manufacturing, engineering, and program management.

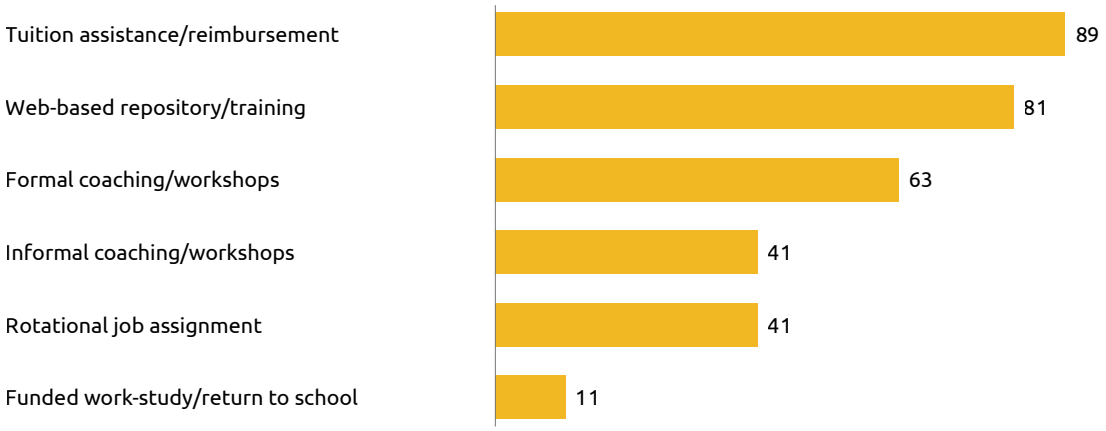
What are your company's top 5 areas of investment into reskilling?, % of companies



[1]Such as robotics or additive manufacturing.
[2]Such as welding, electrical, and assembling.
Source: AIA Workforce Survey 2025, n = 25 organizations

Most reskilling efforts focus on formal or web-based training, while only 41 percent target informal coaching or job rotation.

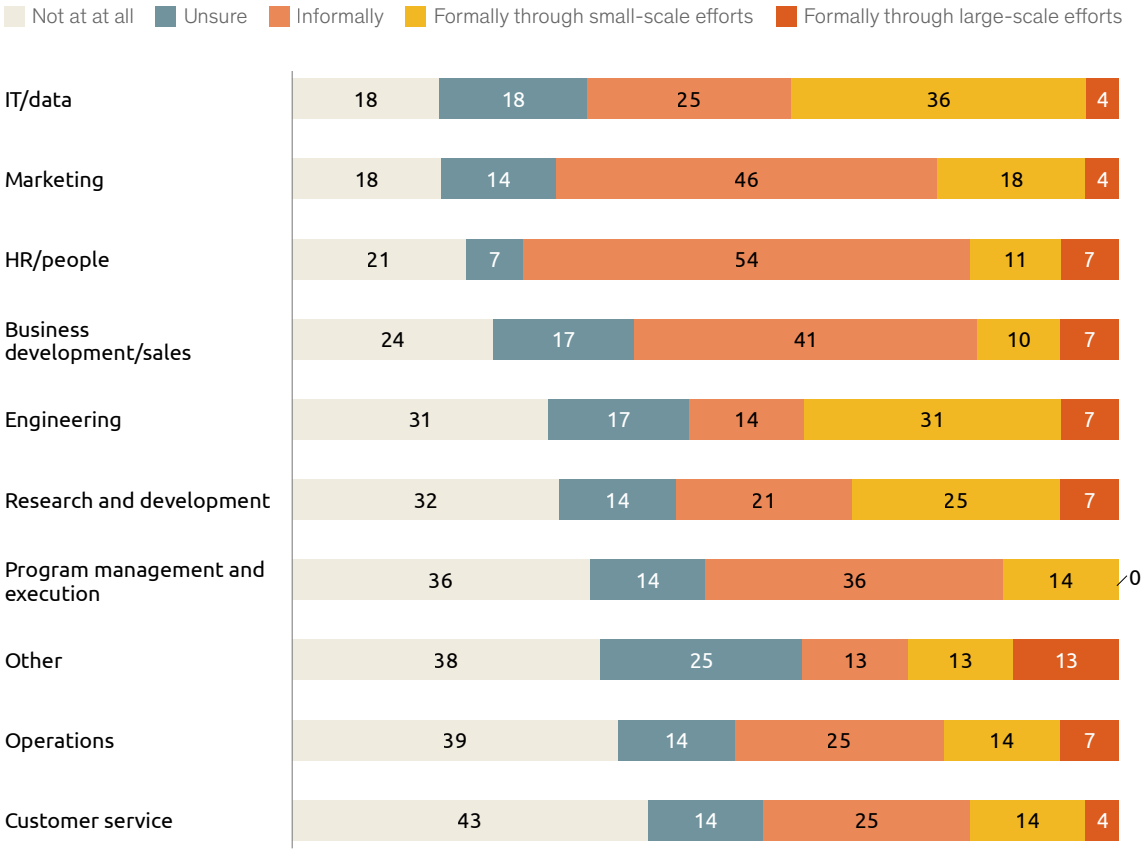
Which of the following upskilling/reskilling programs do you offer?, % of companies



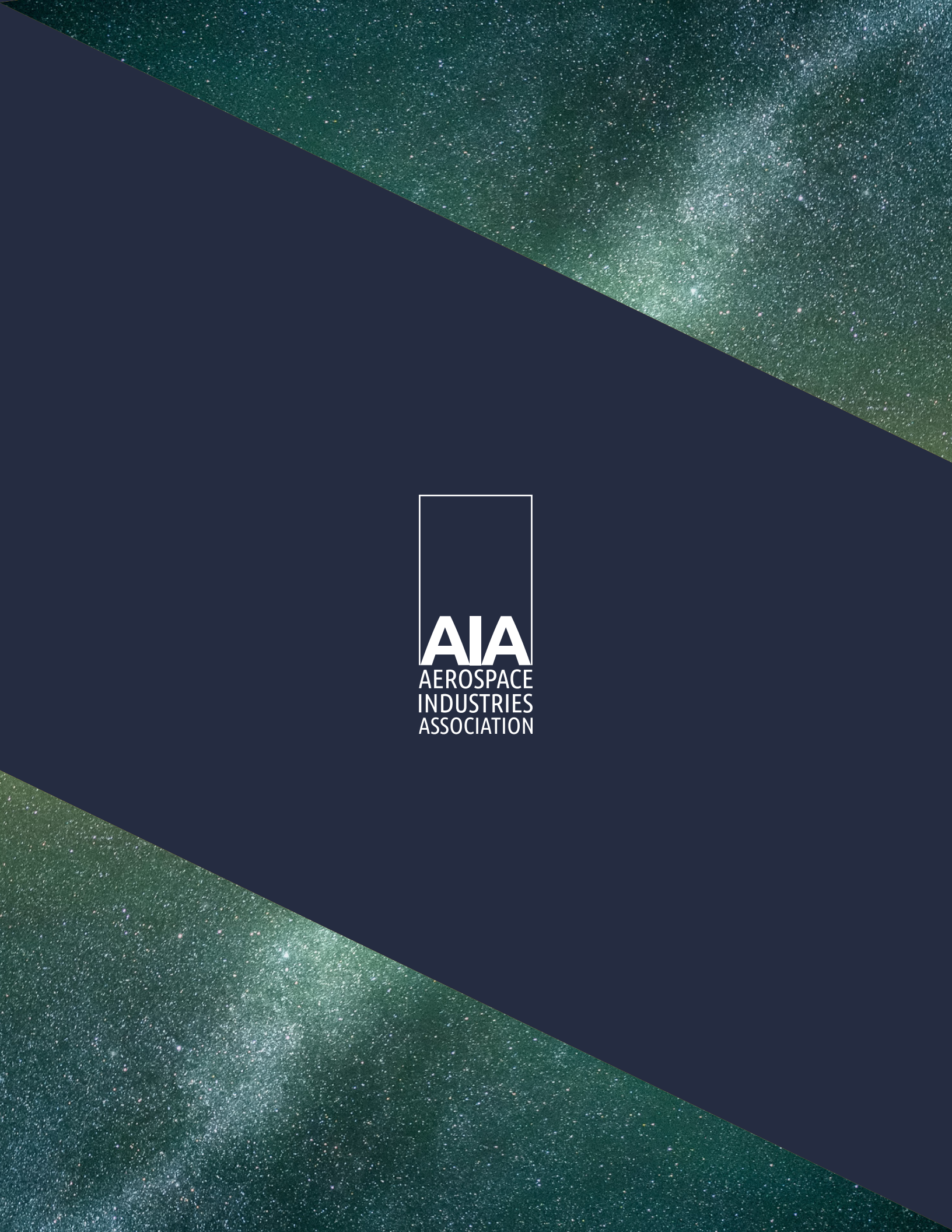
Source: AIA Workforce Survey 2025, n = 27 organizations

Gen AI is used most frequently in IT and data, marketing, and HR and least frequently in customer service.

For each of the following functions within your organization, how frequently are workers using gen AI?, % of companies



Note: Figures may not sum to 100%, because of rounding.
Source: AIA Workforce Survey 2025, n = 26 organizations


AIA
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INDUSTRIES
ASSOCIATION