



How can you prepare now for the work of the future?

2021 Aerospace Talent Survey

September 2021

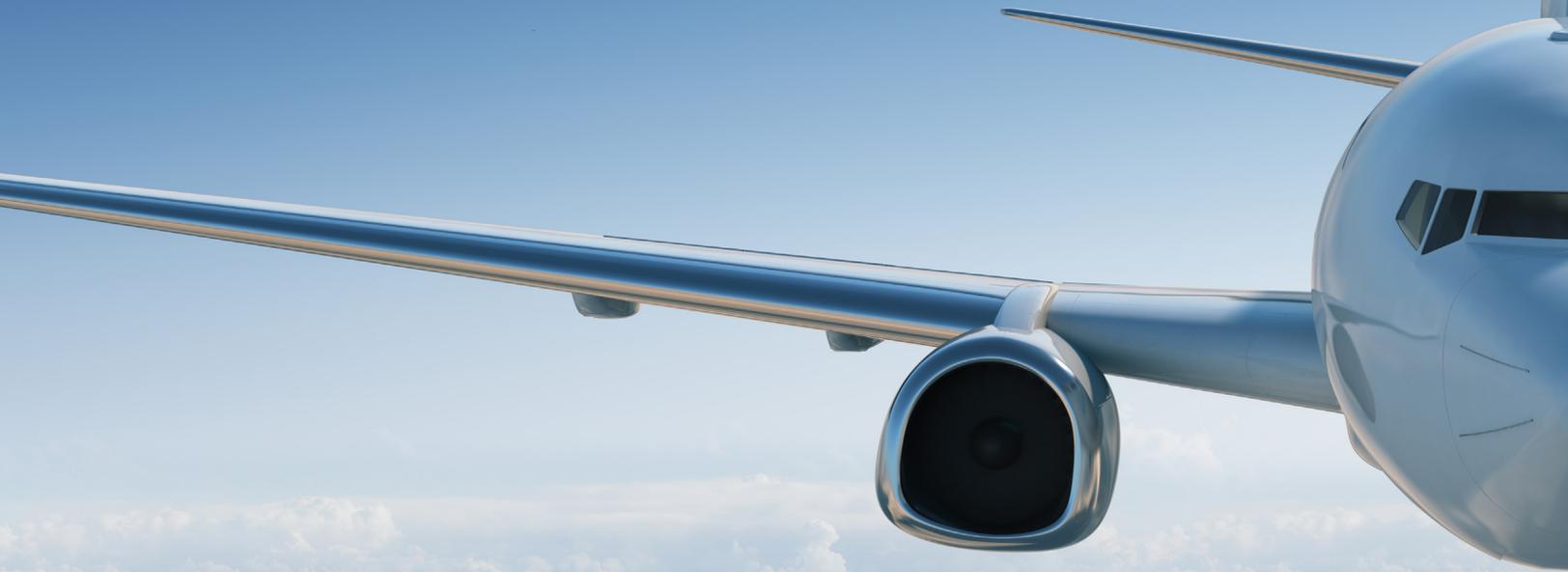
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Executive summary

COVID-19 has and continues to have a significant impact on the aerospace and defense (A&D) industry, the US economy and the workforce. The resulting challenges and uncertainty have been layered on top of persistent workforce trends that will remain relevant even after COVID-19 is behind us. The commercial aerospace market has been negatively impacted amid the pandemic's economic fallout; however, government defense spending remains stable. National security requirements continue to evolve, necessitating expanded unmanned capabilities, advances in hypersonic technology and investments in cyber resiliency, among other areas. Given these technological trends, business innovation requires a flexible, dynamic workforce, both remote and on-site, one with enhanced digital skills and continued focus on development of engineering knowledge, particularly in software fields.

At the time of this publication, workforce and talent concerns rank high at A&D companies. Central to attracting, retaining and developing top talent is a compelling employee value proposition (EVP), which we define as the perceived value employees gain by working in a particular organization. Creating a compelling EVP creates a foundation for successful recruiting, development and retention efforts. In addition, workforce expectations in the A&D sector changed because of the pandemic and will change how we work going forward. Employees now expect flexibility in where and when they work, since for many companies, the pandemic demonstrated that increased flexibility is possible and – in some cases – preferable. Finally, employees expect corporate leadership to be committed to a workplace environment shaped by diversity, equity and inclusion (DEI), making DEI a workforce and business imperative.

To understand these trends further, the Aerospace Industries Association (AIA) and the American Institute of Aeronautics and Astronautics (AIAA) have collaborated with Ernst & Young LLP (EY US) to conduct their 2021 Workforce Study. This year's study examines five key focus areas: employee and talent outlook, DEI improvement, the future of work, the A&D industry EVP and workforce trends.

This year's survey is unique in other important ways. While we have compared this year's responses with trend data from past A&D industry surveys sponsored by *Aviation Week*, this year's collaboration captured a broader collection of companies that comprise the industry. As a result, this survey has a larger population of employees and companies represented. Specifically, this survey includes companies representing the breadth of the A&D industry, including the supply chain, integrators and prime contractors. This survey also segments responses by company size and industry segments while also capturing key data related to race, gender and age. In addition, the survey utilized publicly available data and data from the latest EY thought leadership, including the Work Reimagined Employee Survey.

Finally, we conclude with insights about what leaders are doing, and need to be doing more of, to address key workforce challenges and seize opportunities to continue to maintain the vitality of the A&D industry workforce.

2021 Aerospace and Defense (A&D) Workforce Study

The survey respondents represent a total global headcount of over 950,000 employees, with 370,000 employees with security clearances globally and more than 130,000 veterans in the US across all the organizations that participated

Overview of A&D workforce demographic trends in the US

Trend data is critical to effectively manage the A&D workforce in the US for the companies surveyed.

2021 2020 2019



% of workforce - Women



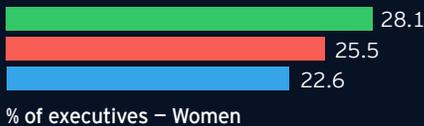
% of workforce - Hispanic



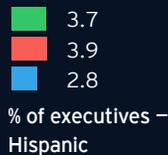
% of workforce - Black



% of workforce - Asian



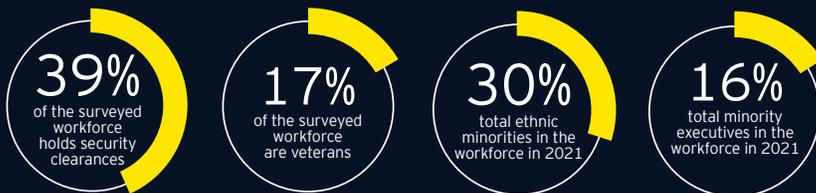
% of executives - Women



% of executives - Hispanic



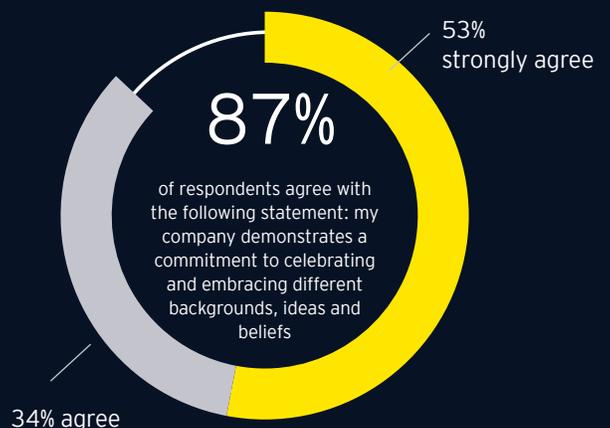
% of executives - Black



Historical data is from a separate survey. As a result, it is directionally informative. We expect to utilize this year's data to serve as a solid foundation for trend data going forward.

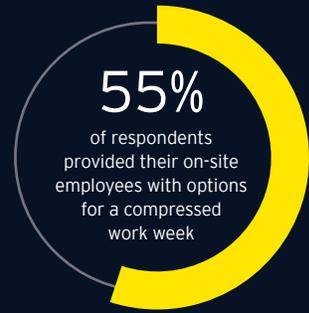
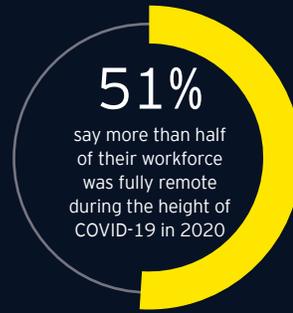
Diversity, equity and inclusion (DEI)

Organizations are increasingly focused on their DEI agenda, including improving their DEI metrics, investing in different initiatives and expanding their outreach.



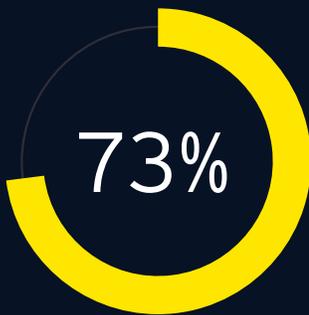
Reframing the future of work in the wake of COVID-19

A&D organizations are providing greater flexibility in where, when and how employees work.



Winning the battle for talent: how A&D companies are building a differentiated EVP

Organizations are looking at providing a differentiated Employee Value Proposition (EVP) offering to attract and retain talent amidst strong competition.



of respondents indicated that company culture (in terms of collaboration) improved since the beginning of the pandemic

The top three differentiated benefits provided are:

- 97% Recognition
- 94% Career development opportunities
- 94% Tuition reimbursement

Other top offerings included:

- 85% Flexible work arrangements
- 76% Overtime pay
- 70% Retirement

Employee and talent outlook

As the A&D industry evolves, re-skilling will be central to positioning the workforce to accommodate this evolution.

Top five areas of investment that companies are currently prioritizing in re-skilling are:

Leadership

55% of respondents

Engineering skills

45% of respondents

Cybersecurity

42% of respondents

Digital skill

33% of respondents

Manufacturing skills

33% of respondents



Survey methodology

We administered two separate surveys using a Qualtrics platform: one targeting a population of AIA and AIAA corporate members and another targeting department chairs at leading universities. Only fully completed responses were included in the results. Our survey was initiated on July 1, 2021 and closed on July 30, 2021, covering organizations with a significant US-based workforce.

The survey received a high response rate from a diverse group of companies. The survey respondents represent a total global headcount of over 950,000 employees, including almost 370,000 employees with security clearances and more than 130,000 veterans across all the organizations that participated. Moreover, the industry response has been complemented with input from several leading academic institutions who together comprise more than 25,000 engineering students.

Corporate survey details

The corporate survey results should better enable business leaders and policymakers to make informed decisions about programs and policies that strengthen recruiting, retention, development and overall A&D workforce efforts. The goals of the survey included identification of:

- ▶ Corporate employee demographic data to understand the impact of DEI efforts, including by sector (defense, civil aviation and space)
- ▶ Talent pipeline insights to gain perspective on how the A&D community can better support STEM (science, technology, engineering and math) education (K-12, college/university and beyond) and promote the industry's diverse career paths
- ▶ Workforce comparisons with competing industries, trends and "pain points"
- ▶ "Hot topics," such as the impact of COVID-19 remote work and future of the work evolution and/or technologies that are changing the industry (e.g., additive manufacturing, digital engineering, cybersecurity, sustainability) and its impact on recruiting the workforce of tomorrow

In the corporate survey, we asked 39 questions using a variety of formats, including multiple choice, free-form response, ranking and selecting all responses that apply to a given question.



University survey details

The university survey was structured to focus on the future of A&D and what university engineering students want from the industry, and to understand the university perspective about the industry EVP. The survey also aimed to learn more about the academic environment, its priorities and the current profile of student populations.

To cover these themes, we asked 29 questions in a variety of formats, including multiple choice, free-form response, ranking and selecting all responses that apply to a given question.

Corporate survey participants

Aerojet Rocketdyne
 The Aerospace Corporation
 Applied Composites Holdings, LLC
 BAE Systems, Inc.
 Ball Aerospace & Technology Corp.
 The Boeing Company
 Booz Allen Hamilton
 CPI Aerostructures, Inc.
 Dunmore International Corp.
 Eaton Aerospace, LLC
 Elbit Systems of America
 Engineer Systems, Inc.
 GE Aviation and GE Edison Works
 General Dynamics
 German Aerospace Center (DLR)
 Washington Office – we accepted responses from other non-US organizations
 GSE Dynamics, Inc.
 Huntington Ingalls Industries, Inc.
 Integral Aerospace
 L3Harris Technologies
 Leidos, Inc.

Lockheed Martin Corp.
 Mercury
 Northrop Grumman Corp.
 Pacific Design Technologies, Inc.
 Raytheon Technologies
 Rhinestahl Corporation
 Rolls-Royce North America, Inc.
 Siemens Government Technologies, Inc.
 SIFCO Industries, Inc.
 Special Aerospace Services, LLC
 ST Engineering North America Inc.
 Stratolaunch LLC
 Textron Inc.

Academic survey participants

Clarkson University
 North Carolina State University
 The Pennsylvania State University
 Purdue University
 University of Southern California
 University of Washington



The A&D industry represents a dynamic workforce composed of many types of workers. These workers span a wide range of skill sets, from skilled trade technicians to space scientists, engineers to accountants, with many becoming more digitally focused. We organized the survey into five key areas of focus:

- 1. Across industries, companies are tracking and producing more talent analytics. Trend data is critical to effectively manage the A&D workforce.** Analyzing workforce data not only offers the ability to identify progress and fluctuations, but the data also provides useful quantitative context for contracts, diversity initiatives, workforce planning and, more recently, to align with SEC human capital disclosure requirements. We set out to obtain meaningful data to identify trends to provide greater workforce visibility and to create a strong, statistically significant baseline to track year-over-year changes.
- 2. DEI is a priority.** Recent events and resulting social justice movements have triggered greater discussion and reflection across individuals, communities and organizations. Effective DEI policies are a way to better engage these groups by increasing innovation, promoting healthy conflict and ultimately driving business results. We set out to understand how A&D organizations have responded to this renewed focus and where A&D organizations have made progress regarding DEI.



3. Reimagining work is an imperative for not only this sector, but also across other industries. The A&D industry qualifies as an essential industry, one where much of its workforce has been required to continue its work at jobsites throughout the pandemic. To fulfill its obligations to the nation, the industry quickly adapted to implement new measures that safeguarded the health, safety and wellness of its employees while offering flexibility to accommodate personal needs. As a result, A&D companies tested and – in many cases – proved new ways of working from this disruption. We sought to understand how the industry is responding and compared that with worker expectations to identify insights to improve how the industry works going forward.

4. The A&D industry must create a compelling EVP to emerge from the current talent shortage with the right talent. The talent shortage is more intense than ever: baby boomers are retiring in greater numbers than we have seen in the past decade,¹ and the US labor force participation rate is at its lowest point in 50 years. As a result, the recruitment and retention of talent is facing unprecedented competition and companies must differentiate to succeed. We set out to determine how A&D organizations can continue to strengthen their EVPs to provide unique and impactful employee experiences to attract and retain top talent.

5. This future is now, and it is more important than ever to develop talent to fill personnel needs during the current talent shortage and in the coming years. The outlook for industry is dependent on A&D organizations' ability to maintain and foster strong talent pipelines. To determine how organizations are tapping into university talent, we asked both companies and university representatives (chairs of four-year programs or graduate degree programs) to identify what is working well and where there is room for improvement.

¹ Nick Blizzard, "Rising number of Baby Boomers retiring may create 'eye-opening' changes," Dayton Daily News, 20 July 2021.

1. Overview of A&D workforce demographic trends

While this year's data points are valuable on their own, it is even more meaningful to look at these trends in a broader, more global context to probe into changes to the workforce. To better understand these changes, the 2021 Aerospace Talent Survey examined employee demographic information across several industry sections (defense, civil aviation, space and services) and by company size. It is important to note that historical results are based on data inputs gathered through several survey sources; however, even with the differences between surveys, the insights gleaned are relevant and informative.

One key point of focus was the percentage of women in A&D, as the industry has been historically dominated by men. Across the US workforce, women represent 47% of all employees.² This year's responses showed that nearly 25% of the US A&D workforce is women, which is significantly lower than the female representation across the US workforce as a whole. It is important to note that improvement can be found with respect to female executives. The percentage of women at the executive level (including but not limited to the C-Suite) in A&D has gradually increased over the past several years when comparing current data to historical trends. Despite the progress at the executive levels, women are still largely underrepresented both in the general population and executive levels of the A&D industry.

Another key point of focus was the racial and ethnic composition of the US A&D Industry. The percentages of Black A&D employees and executives both increased over the past couple of years. However, increases in Black representation overall in A&D companies significantly outpaces the increases in Black representation at the executive level. Similar trends are evident among the Hispanic and Asian populations. Thus, although improvements can be seen in the representation of ethnic

minority groups in the industry, targeted efforts around not only hiring but also providing development opportunities for these segments of employees is key to increasing diversity in executive leadership.

Although progress has been made, the US A&D industry is less diverse than the overall US labor force. The 2020 Bureau of Labor Statistics data reported that the composition of US employed persons (inclusive of non-citizens) is 17.6% Hispanic or Latino, 12.1% Black and 6.4% Asian.³ The composition of the Asian A&D population is above the overall US labor force, but the portion of Hispanic and Black employees in the A&D workforce still lags behind overall US representation data for these groups. To compare to other industries with similar skill sets, these numbers slightly trail the information industry (13.1% Hispanic, 11.5% Black and 9.7% Asian), which includes software publishing and data processing, and the professional and business services industry (16.1% Hispanic, 9.9% Black and 9.5% Asian).⁴

Though varying in the degree of improvement, equitable development and promotion opportunities have and will continue to push employee and executive representation to match the employee demographics of the US labor force as well as increase opportunities for ethnic minorities in the industry.

We also looked at workforce age distribution. This year's survey found that the percentage of employees over the age of 55 has decreased, albeit gradually, from around 29% to about 26%. This percentage of employees over age 55 is slightly higher when compared to the total US workforce, at 24%.⁵ Given this disparity and a projected increase in retirements, it will be imperative to retain and develop the mid-career workforce while also

^{3,4} "Employed persons by detailed industry, sex, race, and Hispanic or Latino ethnicity," [Bureau of Labor Statistics](#), 2021.

⁵ "Employed persons by detailed occupation and age," [Bureau of Labor Statistics](#), 2021.

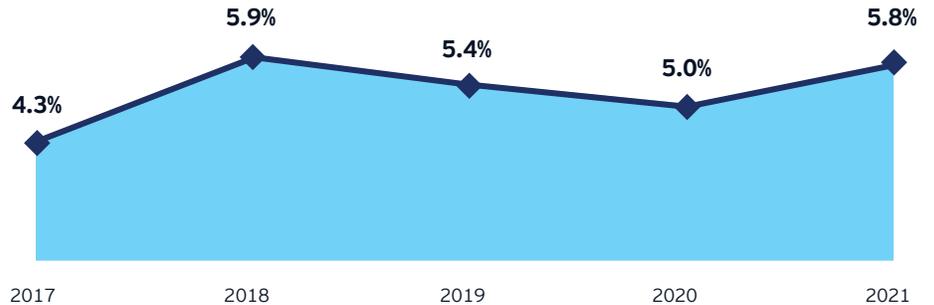
² "Employed persons by detailed occupation, sex, race, and Hispanic or Latino ethnicity," [Bureau of Labor Statistics](#), 2020.

continuing to attract top talent across the workforce to confirm that A&D companies have employees with the skills needed for future success.

Lastly, we asked questions related to voluntary attrition – always a top concern among employers. In the US labor market, voluntary attrition over the past four years has ranged between 3.5% and 4%.⁶ However, the A&D sector has historically seen higher attrition. Looking specifically at various segments of the global A&D industry, the voluntary attrition breakdowns within each subsector are as follows: 5.4% in space, 5.6% in defense, 6% in services (consulting, cybersecurity, etc.) and 5.9% in commercial. A&D attrition also varied by company size. For firms under 10,000 employees, attrition was 7.7%. For firms between 10,000 and 100,000 employees, attrition was 6.1%. Finally, for firms over 100,000 employees, attrition was 5.1%.

Regardless of organization size, talent attraction and retention will be a central theme over the next year based on the anticipation of pent-up turnover demand carried over from 2020.⁷

A&D attrition 2017-21



Age distribution	2021	2020	2019	2018	2017
% employees over age 55	26.2	N/A	29.7	28.4	29.8

Overall demographics	2021	2020	2019	2018	2017
% of workforce women	24.8	24.3	23.8	24.0	24.0
% of workforce Black	9.8	5.9	5.8	6.8	5.0
% of workforce Hispanic	8.7	7.6	6.8	7.6	6.0
% of workforce Asian	8.8	11.1	9.0	10.0	7.6

% of workforce on executive payroll	1.2	1.4	1.7	1.3	1.3
% of executive workforce women	28.1	25.5	22.6	21.1	24.0
% of executive workforce Black	5.3	4.8	3.3	4.1	3.0
% of executive workforce Hispanic	3.7	3.9	2.8	3.3	2.0

⁶ "Job Openings and Labor Turnover Survey," [Bureau of Labor Statistics](#), 2021 (does not include March and April 2020).

⁷ Roy Maurer, "Turnover 'Tsunami' Expected Once Pandemic Ends," [Society of Human Resource Management](#), 2021.

2. Diversity, equity and inclusion: a renewed focus

The A&D's industry collective efforts and focus on DEI has taken on new importance and visibility given the deaths of George Floyd and Breonna Taylor in 2020 and the resulting racial justice movements that captured the country's attention that summer. In areas where A&D companies have changed their approaches, respondents have reported increased representation in their talent pool. In areas where the industry is behind, A&D companies want to know how they can take tangible steps to advance toward a more diverse, equitable and inclusive workplace.

We looked at multiple areas to determine the intent and impact of DEI efforts. First, 73% of respondents indicated that DEI is stated in their company's mission, vision and/or values. With a significant majority characterizing these imperatives as a guiding principle, many companies provided additional insights into how DEI shapes their corporate social responsibility initiatives and informs their larger strategy. The highlighted sentiment captures the drive from A&D respondents to continue investment in their DEI initiatives.

To examine the impact of these diversity and equity efforts, we analyzed both key metrics and targeted actions companies are taking. In terms of recruiting, 64% of respondents indicated that they have begun recruiting from additional minority-serving institutions (e.g., Historically Black Colleges and Universities, or HBCUs) to increase underrepresented groups in their talent pools. Companies that implemented DEI-focused recruiting practices at different universities reported increased diversity in applicants, increased diversity in hires and stronger relationships with these schools.

In addition, respondents mentioned distributing inclusive leadership training and coaching to key leaders across their companies to provide a unified message from the top down. Finally, only 16% of respondents are using DEI-focused artificial intelligence to aid in their recruiting processes. Continued adoption of cutting-edge recruiting technology to help eliminate unconscious biases can be a powerful tool for A&D companies to verify that diverse applicants are not unduly removed from consideration for open positions.

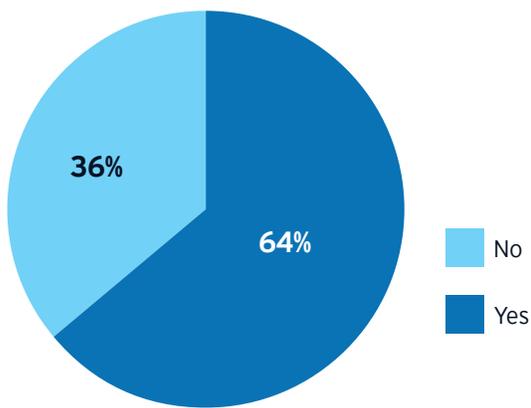
Although DEI is well represented in both the values and the actions of respondents, only 63% of respondents engaged in data-driven DEI strategies measured in real time. A continued shift toward quantifying tangible results of DEI strategies is crucial to increasing DEI impact by A&D companies while still identifying opportunities for improvement. One respondent referenced how their leadership representation data allows their business to rapidly identify a diverse pipeline of successors where gaps may be present and to leverage other leadership-focused DEI programs to position employees for success when opportunities arise. The availability of these insights allows companies to rapidly act to leverage DEI initiatives to provide better outcomes for their employees.

DEI initiatives will continue to be a focus given the expectations of activist investors, shareholders, employees and communities. We look forward to continuing to track progress in future years.

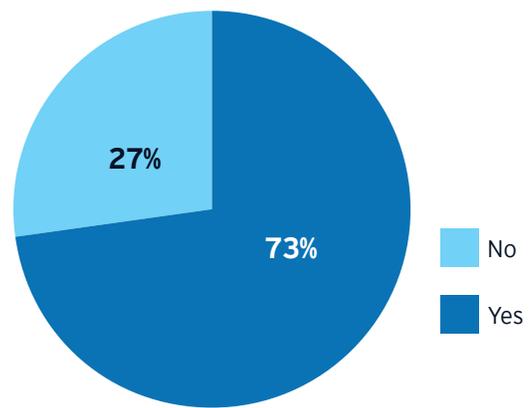
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These principles are also foundational to our business success and our social sustainability goals ... our diversity numbers are on par with the A&D industry, but we want to do better.

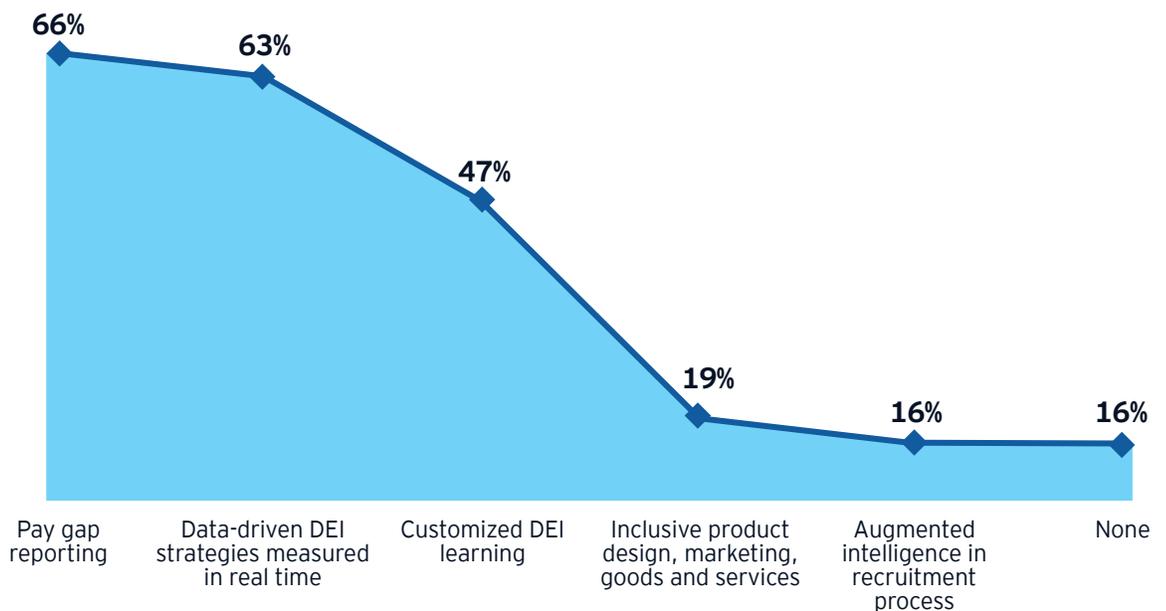
To increase ethnic minority representation in your talent pool, have you begun recruiting from different universities (i.e., HBCUs)?



Is DEI stated in your company's mission, vision or values?



Which of the following DEI initiatives does your company currently conduct?



3. Reframing the future of work in the wake of COVID-19

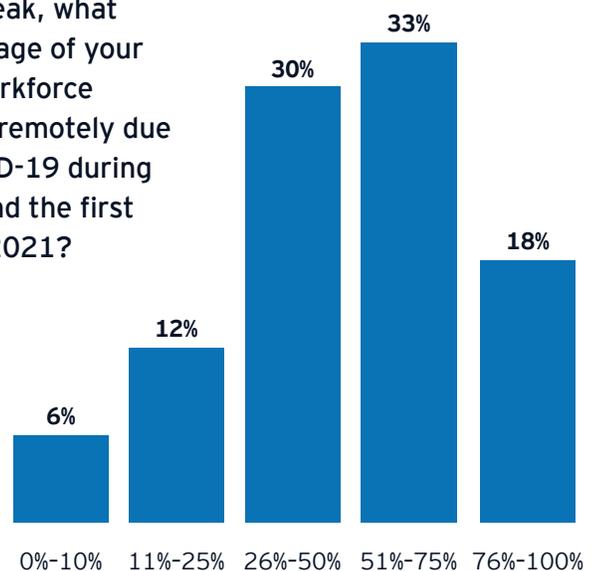
During the height of the pandemic, companies were able to rapidly shift to workforce models designed to maintain business continuity while also focusing on employee safety. We set out to see not only how companies initially responded to the pandemic, but also how they plan to adjust work models should pre-pandemic normalcy begin to return. We also compared trends from the A&D industry with insights from the EY Work Reimagined Employee Survey that interviewed over 16,000 employees across 23 industries.

The onset of the COVID-19 pandemic highlighted the unprecedented dexterity of the A&D industry to provide flexibility while maintaining operations tied to its essential workforce. While some organizations were able to apply a standard flexible work policy, many A&D companies faced an additional layer of complexity tied to governing both employees who were able to work virtually and essential workers whose role criticality required continued on-site work. To examine this further, we asked how companies decided on work models for virtual and on-site workers.

We found that at the peak of the COVID-19 pandemic, 51% of respondents said that more than half of their workforce was fully remote. The guidelines for decisions on work models were primarily based on job and role requirements (39% of respondents), but respondents also factored in leader and manager preferences and clearly defining in-office activities. A shift to remote work was and will remain successful for employees whose job duties did not require them to have an on-site presence. Companies reported that remote work helps keep employee safety top of mind and promotes workplace flexibility. As people return to the office, our study finds that A&D employers are willing to make accommodations for flexible work arrangements as needed. For employers that allow this type of work, many reported that they are working toward employees either having full on-site, virtual or hybrid work models.

For employees whose job duties required them to be physically on-site, respondents took two main approaches to provide additional flexibility to employees. First, 85% of respondents offered flexible start and finish times for on-site employees to accommodate schedule differences that became necessary during the pandemic (to accommodate enhanced physical distancing during shifts) or to enable additional balancing with family care responsibilities (e.g., homeschooling, caregiving, etc.). Moreover, 55% of respondents provided their on-site employees with options for compressed work weeks.

At its peak, what percentage of your total workforce worked remotely due to COVID-19 during 2020 and the first half of 2021?



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In 2020, we established relationships at three HBCUs that have resulted in both intern and new grad hires.

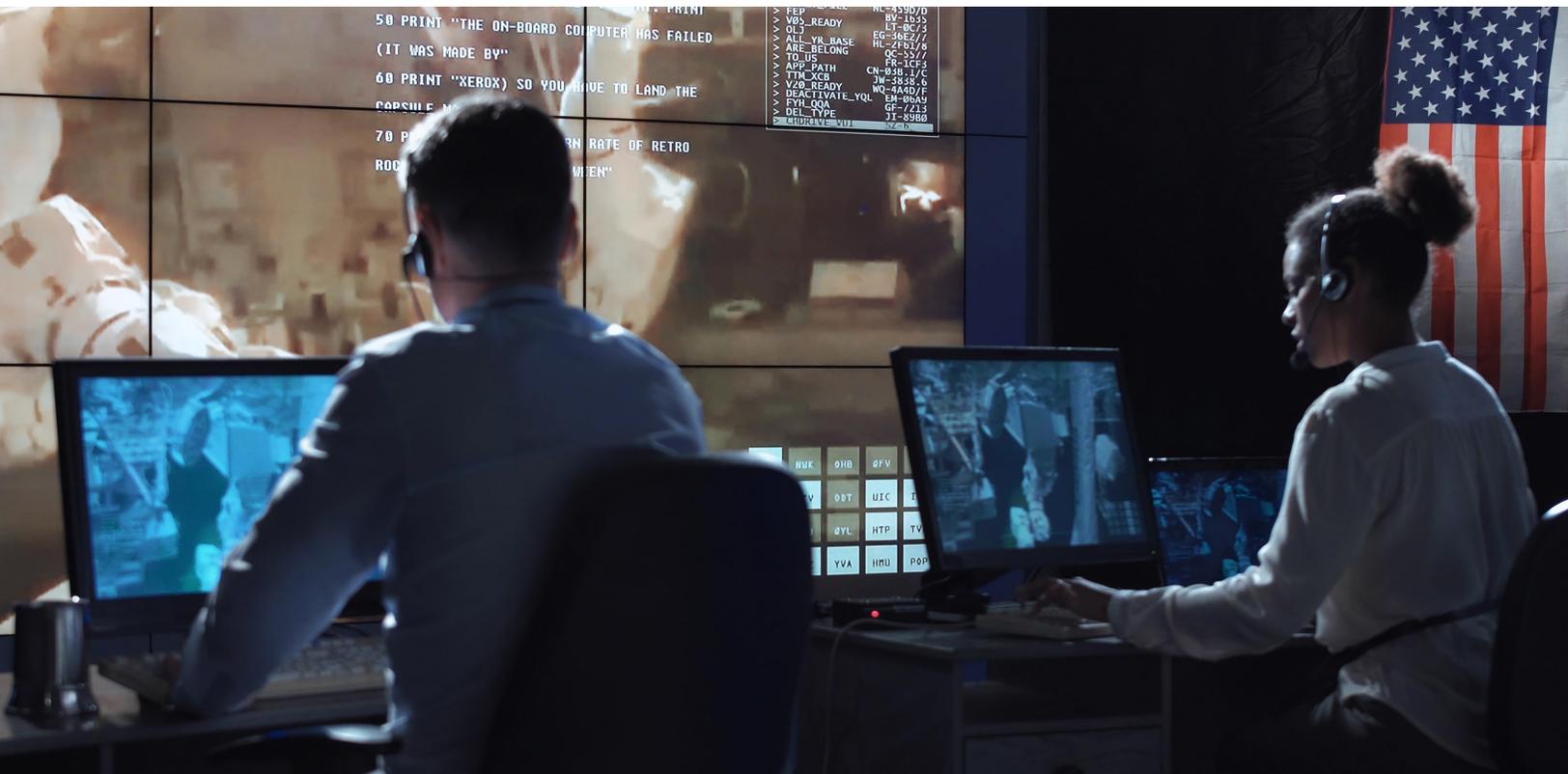


According to the EY Work Reimagined Employee Survey, when given a choice between where and when to work, respondents had 1.4x greater preference for flexibility in when they work. In fact, flexible start and finish times was the top choice related to employee flexibility preferences (68% of responses). This demonstrates that even though uniform flexible work policies cannot be applied across many A&D companies, most respondents are working to provide the types of flexibility that align with what most employees in the market want. Additionally, 54% of respondents of the EY Work Reimagined Employee Survey stated that they are likely to quit if they are not offered the flexibility they want (including both office and factory-floor employees). Within that number, millennials, Generation Z,⁸ technology workers, financial workers and employees with

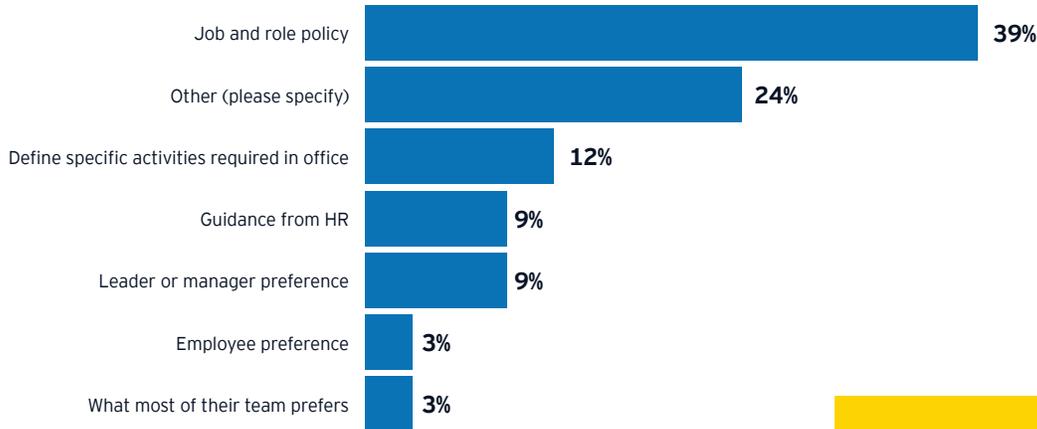
caregiving responsibility were disproportionately more likely to leave if flexibility is not provided. These results show that tailored approaches to flexibility will be needed across employee segments.

As the COVID-19 pandemic altered the way we work, some of these changes allowed workers greater flexibility, better work life balance and financial savings (on commuting, meals, etc.). As companies review lessons learned from the pandemic, many situational necessities in the nature of work bettered the employee experience and should be adapted as leading practices.

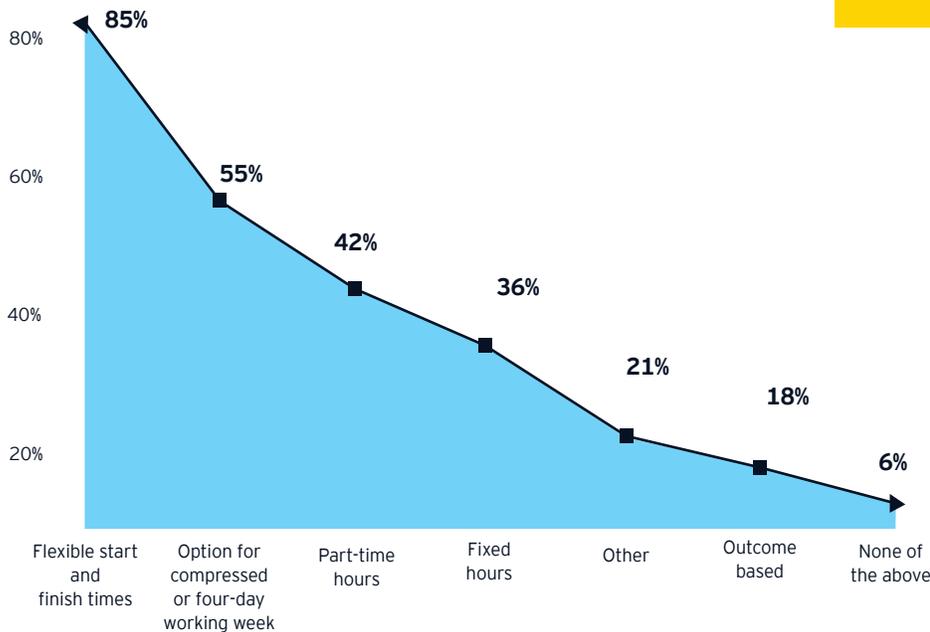
⁸ Cary Funk, Brian Kennedy and Alec Tyson, "Gen Z, Millennials Stand Out for Climate Change Activism, Social Media Engagement With Issue," Pew Research Center website, <https://www.pewresearch.org/science/2021/05/26/gen-z-millennials-stand-out-for-climate-change-activism-social-media-engagement-with-issue/>, 26 May 2021.



How does your organization decide when and where these employees are required to work? The decision is made based on ...



How much flexibility does your company offer in when these employees work? Select all that apply.



According to the EY Work Reimagined Employee Survey, flexible start and finish times were the top employee preference with regard to when they work.

4. Winning the battle for talent: how A&D companies are building a differentiated EVP

The current US labor force participation rate (61.7%)⁹ has fallen to levels not seen since the late 1970s. These shortages intensify the competition for talent across all industries. As a result, a differentiated EVP offered by A&D companies is key to attract and retain their most valuable assets: their people. To assess the current state of the industry's EVP, we asked companies what they offer their employees to differentiate themselves from competitors in the overall talent market. Almost all companies surveyed are providing similar benefits, such as recognition (97% of respondents), career development opportunities (94% of respondents) and tuition reimbursement (94% of respondents), showing that companies within the industry are aligned on standard benefits. However, one benefit that is not offered as extensively is unlimited paid time off (PTO; 12% of respondents).

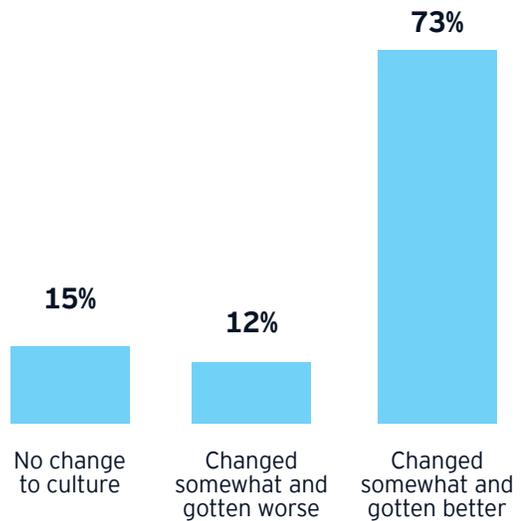
The pandemic has provided a unique opportunity for companies to adjust benefit offerings to better accommodate employee needs. Respondents indicated providing temporary benefits like job protection, additional time away and special volunteer benefits for COVID-19-related causes that added value for employees. In addition, changes to work models to embrace flexibility provided a major shift in the EVP afforded by A&D companies. A continued emphasis on flexibility of benefits and work models will be a powerful tool as organizations within the industry seek to establish more permanent policies post-pandemic. First movers who act quickly to implement lessons learned from the pandemic will help further differentiate their EVPs from those who return to previous offerings.

Additionally, as the A&D industry evolves, re-skilling will be central to positioning the workforce to accommodate this evolution. Respondents indicated that the top three areas of investment in re-skilling are leadership (55% of respondents), engineering skills (45% of respondents) and cybersecurity (42% of respondents). Interestingly, only one-third of respondents indicated one of their top areas of investment to be related to digital skill sets, demonstrating that A&D organizations are largely focused on developing more traditional skills within the industry. On the other hand, respondents indicated that they are leveraging a significant variety of learning modalities. While the majority of respondents are using standard modalities like web-based training (94%) and virtual instructor-led training (85%), certain respondents are using cutting-edge learning modalities such as virtual and augmented reality (39%) and gamification (21%). By utilizing advanced learning methodologies, companies can increase employee engagement to maximize the return on re-skilling and learning investments.

⁹ "Civilian labor force participation rate," [Bureau of Labor Statistics](#), 2021.

Finally, engagement is a major component of the EVP. Engagement strategies like regular virtual team sessions; regular communications acknowledging different work models; and virtual 1:1 sessions with advisors and peers were popular among the majority of respondents. However, it is important to note that while 73% of respondents to this survey indicated that company culture (in terms of collaboration) has improved since the beginning of the pandemic, the EY Work Reimagined Employee Survey found that roughly 48% of employees believe their culture has improved while 52% of employees believe their culture has remained the same or worsened. While the EY Work Reimagined Employee Survey covered employees across industries, the disparity raises culture as a focus area. To improve culture, the EY Work Reimagined Employee Survey found that pulse surveys, 1:1 sessions with leaders and regular touchpoints that foster open and transparent dialogue can help to improve culture.

To what extent do you believe your company culture (in terms of collaboration) has changed since the beginning of the pandemic?

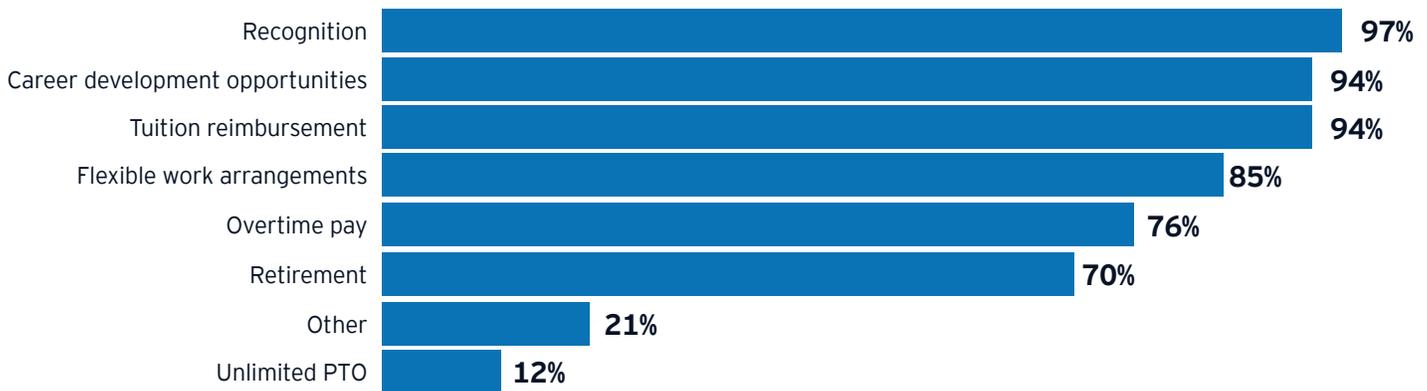


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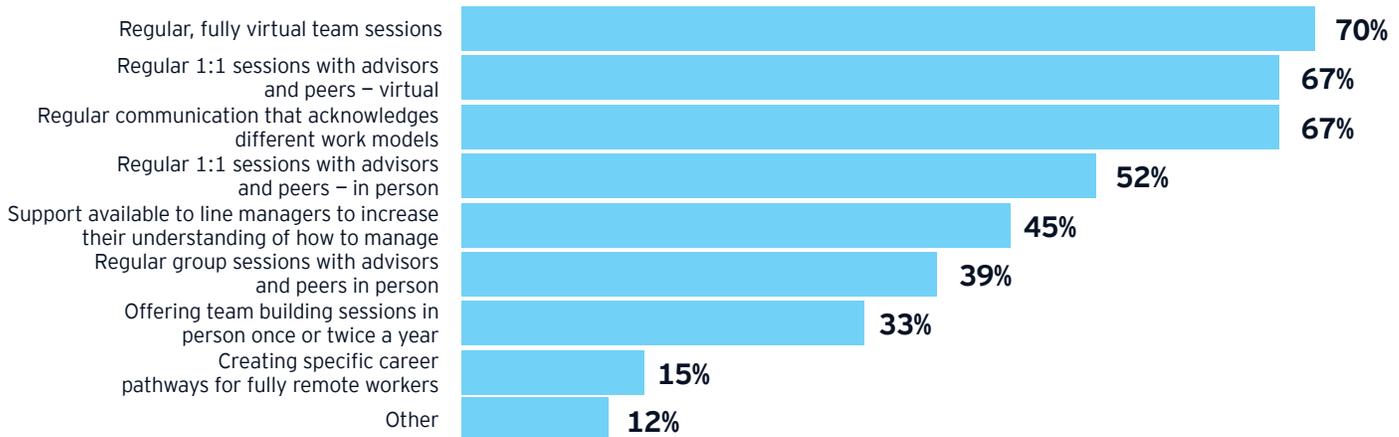
Everything is being reviewed as [we] believe there has been a seismic shift in the ways of working for the A&D industry, and we will be looking to modernize the way we support our global and domestic customers in a way that deepens our relationship with our employees.



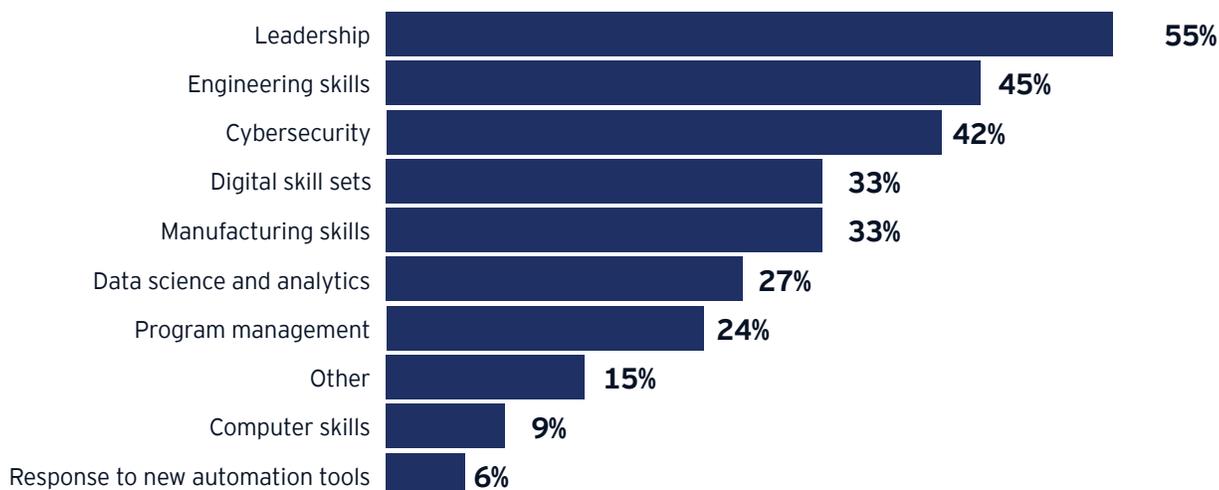
What types of differentiated employee benefits does your company offer?



Which of the following employee engagement strategies have you seen a positive demonstrated impact from?



What are your company's top three areas of investment into re-skilling (i.e., training of incumbent workers)?



5. Employee and talent outlook: preparing to replace an aging workforce

Increased demand for digital and analytical talent, the changing nature of how and where work gets done due to COVID-19, and several other factors have impacted the A&D outlook on talent. As the array of employer-desired skills evolves, competition for top talent crosses industry lines more so than ever. Corporate survey respondents indicated that the skills they anticipate to value most from university hires in the next four to five years are engineering skills (81% of respondents), data science and analytics skills (41%), and digital skill sets (28%).

To obtain these skill sets, workforce planning is critical to the future of the industry, and yet, a large portion of survey respondents (38%) only complete workforce planning activities between 6 and 12 months into the future. When combined with the 26% of the A&D workforce nearing retirement age, this short-term look outlook creates risk to a future-ready workforce. This is further amplified given that university survey respondents indicated they need up to five years to adjust their curricula to meet employer requirements. Given this disparity in timing it will be imperative to consider additional sources of talent (trade schools, two-year colleges and others).

We also observed that this year's respondents to the survey largely mirrored age demographic trends from past surveys sponsored by *Aviation Week*. Since 2017, the average age of A&D employees has been approximately 47 years old, and employees 55 or older have comprised between 28.2% and 29.8% of the workforce. This year showed progress toward a more even age distribution, but the largest segment of the surveyed A&D workforce still remains 55 or older (26%). These statistics further highlight the A&D industry's need to continue the focus on attracting younger talent, as studies suggest it may take 10 to 20 years to fully replace retiring employees in the industry.¹⁰

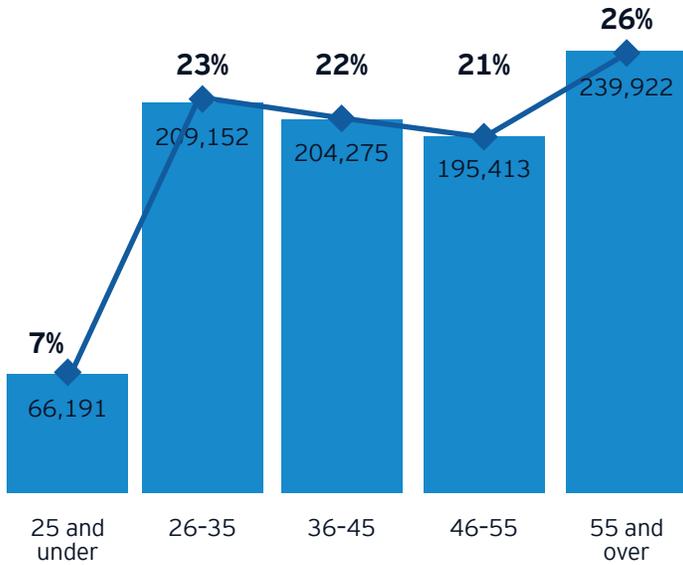
Differences in career goals across age groups must also factor into talent attraction and retention efforts. While the baby-boomer generation generally values stability and tenure, millennials (ages 25 to 39) and Generation Z (ages 18 to 24) in the workforce tend to value internal or external job mobility to gain a wealth of experiences, purposeful corporate social responsibility initiatives and flexibility. In fact, according to the most recent EY Work Reimagined Employee Survey, millennials and Generation Z are two times more likely to find a new job than baby boomers if they are not afforded flexibility.

When it comes to preparing the A&D workforce of the future, most university survey respondents (67%) reported that A&D companies currently do an adequate job of communicating their needed skill sets. Although current skill sets are well defined, some respondents remarked that A&D companies could miss out on qualified talent when recruiting based solely on academic major in the future as universities integrate new skills across majors. Shifting toward a skill-based recruiting approach and considering additional fields of study moving forward may help A&D companies find additional candidates.

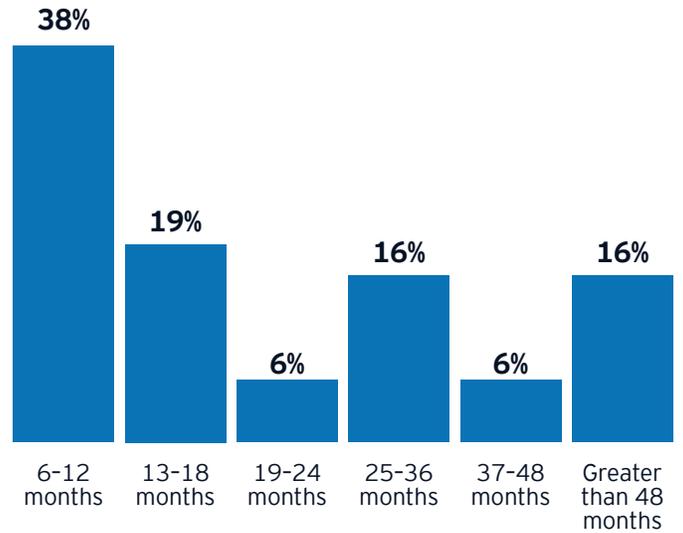
From a student engagement perspective, over two-thirds of university respondents (67%) believe that career fair involvement is the most effective on-campus recruiting tactic. This aligns with the corporate survey's insight that 84% of A&D companies reported engaging with students at campus career fairs. We also found that involvement with technical, diverse student chapters of national organizations (e.g., Society of Women Engineers, National Society of Black Engineers) was reported as an effective way for A&D companies to diversify on-campus recruiting pools.

¹⁰ "The Defining Workforce Challenge in U.S. Aerospace & Defense" STEM EDUCATION, TRAINING, RECRUITMENT & RETENTION." https://www.aia-aerospace.org/wp-content/uploads/2016/09/STEM_Report_lowres_V11.pdf, Aerospace Industries Association, 2016.

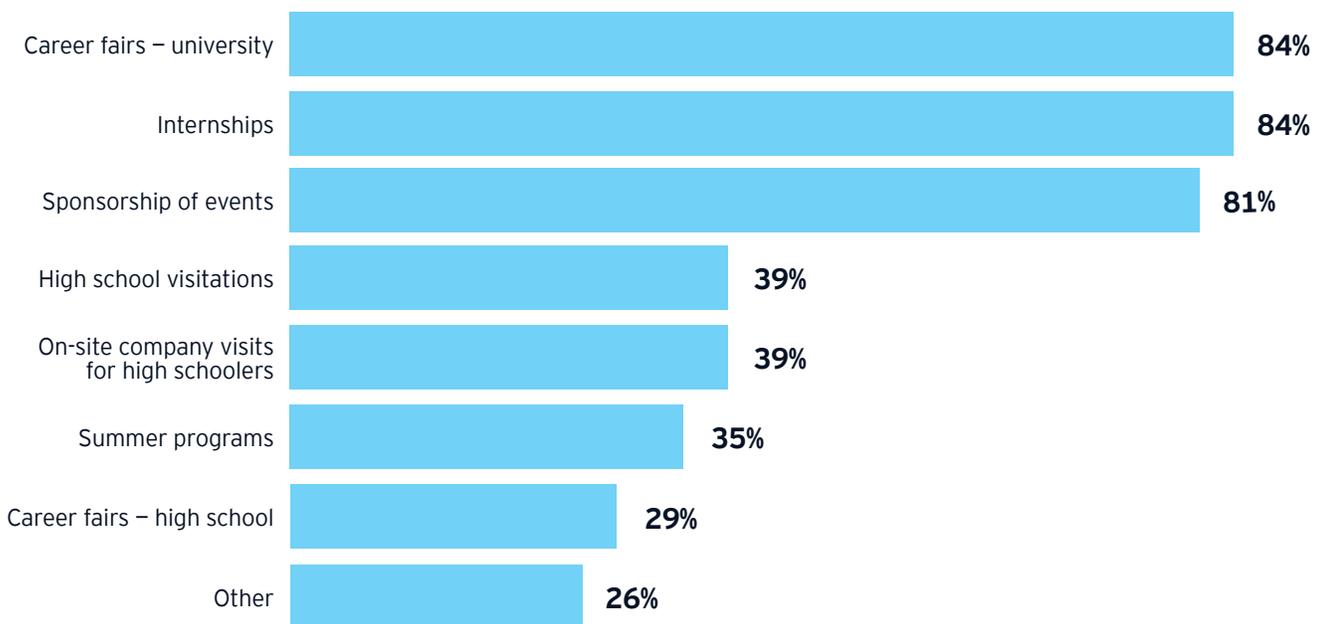
How many individuals in your workforce fall into the following age groups?



How far into the future do you complete workforce planning activities?



How does your company get involved with schools?





Conclusion

As the A&D industry continues to transform through the digital age and the COVID-19 pandemic, organizations will need to enhance their EVP and offer a differentiated employee experience to be competitive in the market. They can continue to do this through innovative talent management programs, a continued emphasis on employee engagement efforts, and further development of relationships with educational institutions to create a sustainable talent pipeline.

Below are the key recommendations for A&D organizations:

1. Foster distinctive talent partnerships: Organizations will continue to grapple with a talent shortage amid competition from industries that may be perceived as more promising, purpose driven and future oriented. Leading organizations use analytically driven approaches to assess the maturity and effectiveness of talent programs. A great example of this is utilizing analytics to quantitatively execute workforce planning to identify both near- and long-term workforce needs. Interestingly, with regard to workforce planning, we found that only 16% of corporate respondents perform workforce planning beyond 48 months, while university representatives

indicate that curricular reviews can span roughly 5 years. **Organizations will need to continue building a strong and collaborative relationship with universities, along with other sources of talent, and play a more active role that goes beyond talent acquisition, e.g., co-designing curriculum, collaborating on research projects and participating in teaching special topics.** This will drive brand recognition and help potential candidates seamlessly transition to jobs when it is time to hire.

2. Develop a future-ready workforce: Data science and analytics skills and digital skill sets are highly valued in the A&D industry, as organizations adopt the concept of modern factories during the fourth industrial revolution (Manufacturing 4.0). Employees will need to be more agile in technology delivery and be provided with opportunities that promote these new ways of working. **Organizations must not rely on universities alone to acquire these future-looking skill sets, but meaningfully invest in innovative and interactive internal programs that resonate with the younger workforce.** Some clear examples include digital academies, learning badges tagged to roles and aligned to proficiency levels and leadership programs targeting transformative behaviors.



3. **Create a stronger value proposition:** The A&D industry voluntary attrition continues to outpace high-tech industries, as the younger workforce is potentially looking for opportunities in a modern workplace offering a differentiated value proposition. Often, organizations under index on employee value and those with a **“humans at the center”** philosophy are more likely to attract and retain their top talent and differentially achieve business objectives. A human-centered enterprise defines its purpose and creates an ecosystem of long-term value, including the well-being of human stakeholders. While A&D organizations are offering a plethora of employee benefits (flexible working, rewards, etc.), it is imperative to ensure that work culture is able to create the employee connection; one that accelerates transformational behaviors, encourages new ways of working, drives a change mindset and provides opportunities for continuous learning.
4. **Enhance the future of work experience:** The future of work is changing the boundaries of the HR function and asking more of the function. Organizations need to **reimagine the way HR operates to create a consumer-grade experience for employees** that can deliver on the humans at the center philosophy while also meeting the needs of the business. HR transformation efforts should focus on enhancing HR systems, rewards, mobility and related service delivery models, and building skill sets for an agile HR workforce. This can significantly influence the employee experience, create organizational scalability and serve as a differentiator in the labor market.
5. **Provide a more equitable employee experience:** Organizations have never been more focused on improving their DEI metrics (66% of respondents measure DEI metrics on a quarterly basis and 72% of respondents track or compare representation in leadership). However, it is not only about increasing the numbers of diverse employees but also about creating **equity in experiences and opportunities across the organization**. Organizations should perform a holistic assessment of their DEI portfolio – HR processes, policies, programs and “voice of the employee” – to determine areas requiring enhancement to promote equity; a compelling brand; and, ultimately, better organizations and communities.

Contact us



Paul Feeko

Partner, US Aerospace and Defense
Sector Leader
Ernst & Young LLP
paul.feeko@ey.com



Steve Fuller

Partner, People Advisory Services
Ernst & Young LLP
steve.fuller@ey.com

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