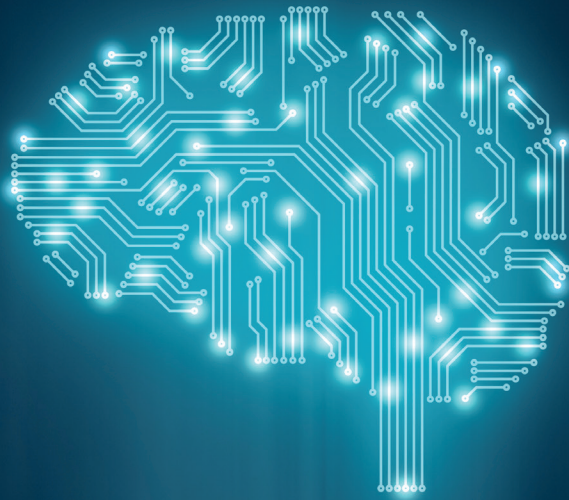




Authored by:

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THE EVOLUTION OF
**TALENT
ACQUISITION
TECHNOLOGY:**
AI'S LASTING IMPACT



This report was sponsored by **Modern Hire**



INTRODUCTION

Talent acquisition is one of the most complex areas of HR technology. Once considered a small part of talent management, it has evolved to a strategic business initiative that operates with its own tech stack. Over the past two years, the pandemic and labor market have accelerated the demand for talent acquisition (TA) technology in driving transformation and improving speed. According to Aptitude Research, 73% of companies have increased their TA tech investments in 2022.

The talent acquisition technology landscape has shifted significantly with new providers and categories entering the market, but AI is the common denominator. Companies are using, on average, 10 or more providers to support everything from recruitment marketing to onboarding. The interest and investment in AI show no signs of stopping, and today's companies have more options and opportunities than ever before. But navigating this landscape and truly understanding AI's impact has become increasingly complex even for the most sophisticated buyers. Companies are not always clear what solutions to consider and what drives results.

Aptitude Research has identified three trends that are influencing the TA tech market today:

TA tech investment is increasing. As companies increased their investment in talent acquisition technology in 2022, 70% stated they will continue to invest the same or increase this investment during a recession.

Business leaders are more focused on TA tech. Over 50% of companies state that business leaders are more focused on TA tech this year than last. With multiple stakeholders involved in decision making, companies must think more strategically about investments.

AI is here to stay. We have moved past the early fears of AI and employers, recruiters, and candidates are embracing AI-driven solutions. One in two companies believe that AI will improve the candidate experience. Companies must carefully consider the role that AI plays in transforming the TA tech stack and which providers take an ethical approach to AI.



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This report, based on data collected in 2022, looks at the evolution of TA technology and the impact of AI in the future of talent acquisition. The report will answer the following questions:

How has TA technology evolved over the past two decades?

What is driving TA tech decisions today?

How have priorities shifted?

What are companies replacing?

What role does AI play in the future of TA?

KEY FINDINGS

1 Quality is a priority.

For the first time in two years, quality of hire is the number one driver in technology investments over efficiency for 70% of companies. While efficiency is still critical for companies looking to improve time to fill and recruiter productivity, quality will see a renewed focus over the next year.

2 Companies are planning to increase investment even during an economic downturn.

Seventy percent (70%) of companies plan to continue to invest the same amount or increase their investment in TA tech even in the event of an economic downturn. With remote work and recruiter experience challenges over the past two years, the demand for technology has never been greater. Companies see the value during both strong and weak economies.

3 Companies have more solutions but are less happy with them.

Over 60% of companies are using more solutions today than before COVID, yet only 11% of companies are satisfied with this technology. The buying behavior has changed over the past two years suggests that companies must be careful when evaluating providers and consider true partnerships. Many of these companies are finding it challenging to implement and adopt these systems.

4**DEI can benefit from technology.**

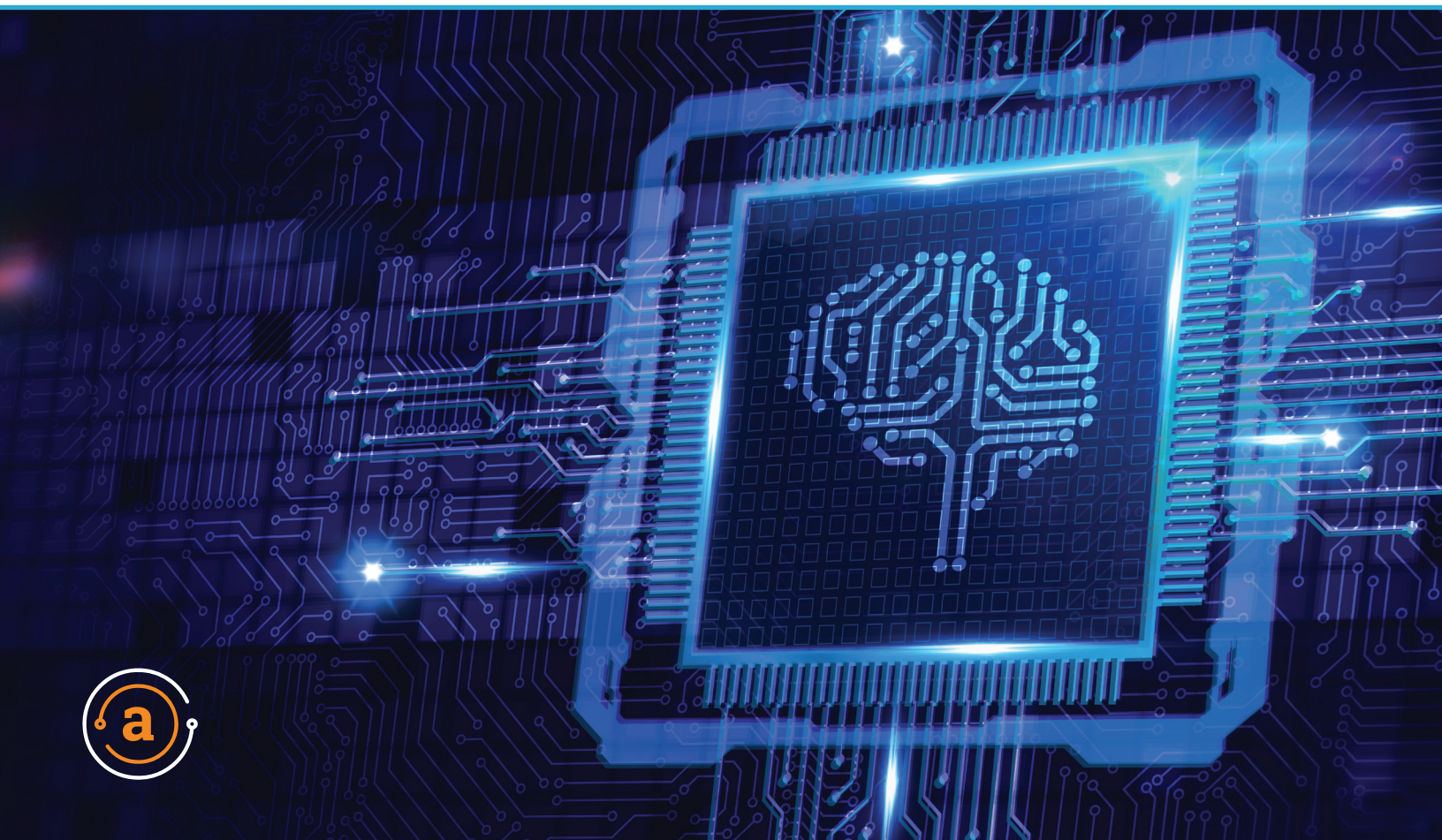
Diversity, equity, and inclusion (DEI) was a key driver in technology decisions two years ago. Today, companies identified efficiency, quality, and experience over reducing bias. Companies should not sacrifice reducing bias for other outcomes. The right technology can solve for multiple outcomes in talent acquisition.

5**Not all AI is the same.**

Every provider in talent acquisition seems to be tackling AI, but companies must carefully consider the quality of data and ethical AI. Companies must engage in due diligence when evaluating providers.

6**Candidates are embracing AI.**

One in two companies believe that AI is improving the candidate experience. But, nearly half of companies in this study do not know when they should use AI to support talent acquisition. For many companies, humans are still doing tasks that can be supported through AI, including communication and screening.

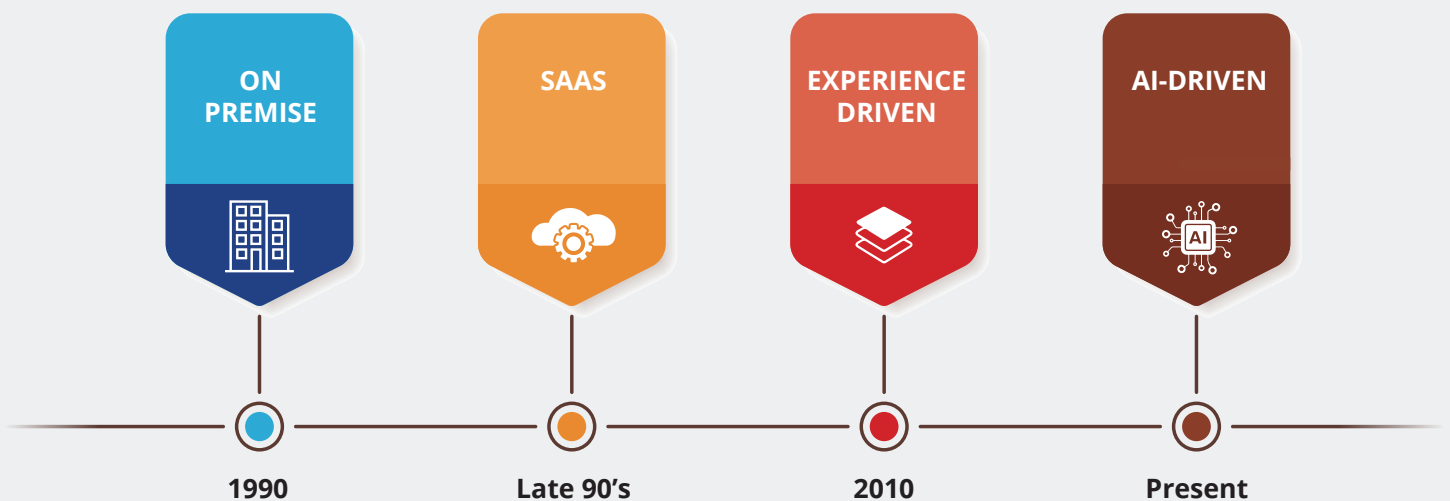


Part 1: Where Have We Been?

Ten years ago, the talent acquisition technology market was comprised of multiple providers offering clear products in defined categories, including background screening, job boards, applicant tracking systems, assessments, and onboarding. Today, the market has exploded with hundreds more providers with new vendors entering each month. Additionally, the lines have blurred – many offer several solutions in talent acquisition or have created new categories of technology, making the buyer's decision more complicated.

As the talent acquisition function grows in scale, it also grows in complexity. Companies are turning to AI to help influence the future of their TA tech stacks – not as a single capability, but as a foundational layer. The Aptitude Research Evolution framework identifies four distinct stages that shape the development and delivery of talent acquisition systems over time.

Figure 1: *The Evolution Model of TA Tech*



On-Premise Solutions:

In the 1990s, solution providers introduced a more advanced ATS that was installed on an organization's workstation. These systems offered high-volume résumé processing, résumé scanning, and search technology. Installation was time-consuming and created several challenges, including configuration management issues and problems loading new applications. These systems required additional support to make sure that the installation procedures were activated on each individual workstation. Legacy ATS systems (such as Restrac and Resumix) offered limited security since the database was housed on the PC. Similar to the PC-based ATS of the 1980s, legacy systems only addressed the back-end of the recruiting experience, and organizations still relied on outside providers for background checking and assessments.



SaaS Solutions:

In the late 1990s, web-based systems changed the face of talent acquisition. Legacy applicant tracking systems were replaced with end-to-end talent acquisition systems that could support everything from the requisition to onboarding. With a new delivery model came new providers and capabilities. These solutions moved away from PC-based software and could be accessed over the Internet. They also introduced the front-end solution (e.g., candidate career sites) that was missing from the legacy ATS. These solutions improved the user experience for the recruiter, hiring manager, and the job seeker.



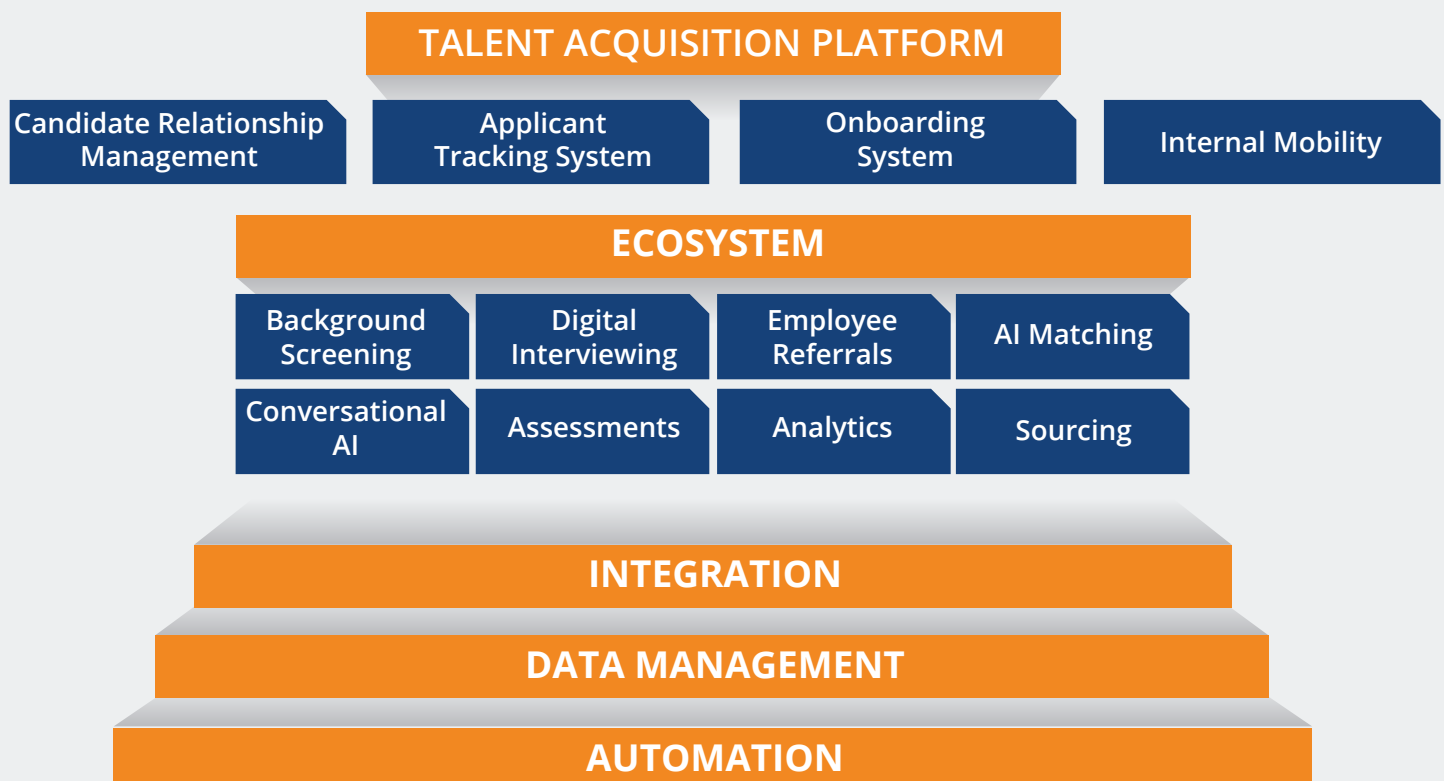
Experience-based Solutions:

Over the past decade, companies began to look beyond the ATS and build TA tech stacks that would improve the experiences for candidates, recruiters, and hiring managers. These tech stacks include multiple systems that would fill the gaps missing from the ATS. The modern talent acquisition technology stack includes three layers:

- **Talent Acquisition:** Four major technology solutions including CRM, ATS, onboarding, and internal mobility.
- **Ecosystem:** An ecosystem of solutions to enhance the value of integrated talent acquisition.
- **The Foundation:** The foundation of integration, data management, and automation.

When combined, these layers represent a holistic approach to strategic talent acquisition that aims to improve experiences of multiple stakeholders.

Figure 2: *The Talent Acquisition Framework*





AI-Driven Solutions:

Although experience-based solutions greatly improve how companies approach talent acquisition, they do not address the data issues that most companies face today. The final stage and the future of talent acquisition systems lies in the ability to use data and AI to drive outcomes including efficiency, experience, and quality. The first three stages – even with advanced capabilities, SaaS solutions, and automation – still require significant manual work. AI-driven technology helps companies reduce administrative burden and provide improved experiences. AI is not a capability or a single solution. Rather, the use cases extend across all of talent acquisition.

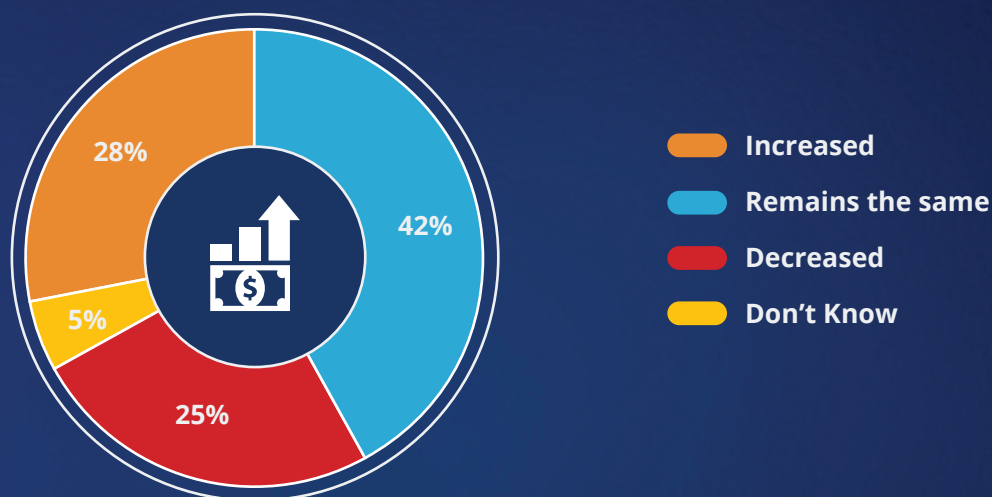
This evolution of TA technology is shaping buying behavior, investment, and priorities. Companies are shifting how they evaluate providers based on a new set of criteria.

What is Driving Technology Decisions?

Investment in talent acquisition technology has skyrocketed over the past few years with 73% of companies increasing their investment in 2022. Companies looked at technology to fix immediate needs brought on by remote work, the pandemic, and the labor shortage.

This level of investment remains a priority even as organizations prepare for an economic downturn. According to this study, 70% of companies stated that they would continue to invest the same or more during a recession, with 28% increasing investment (see Figure 3). Companies are looking at technology to support every area of recruitment, from recruitment marketing to onboarding. But decisions around what technology to use will need more due diligence, and TA leaders will be held more accountable for what technology is driving ROI than in the past.

Figure 3: *Estimated Investment in Talent Acquisition if a Recession*



Companies will rely heavily on technology during economic uncertainty because of the following:



Recruiter Experience:

Aptitude Research found that 40% of companies laid off recruiting teams in 2020 and as hiring ramped up in 2021, one in three recruiters began to look for new opportunities. The recruiter experience is a critical topic in talent acquisition today. Companies need technology that will improve the recruiter experience and provide support for companies that have limited recruiting resources.



Talent Analytics:

As finding quality hires to fill critical positions becomes more important to companies during a down economic cycle, companies need additional insights into talent acquisition. Talent analytics is a necessary and critical part of any talent acquisition strategy.



Shifting Hiring Needs:

Companies are still hiring even during uncertainty. Forty-two percent (42%) of companies are accelerating their hiring this year, even if the roles they are hiring for have shifted. Companies need technology to help support these efforts especially when they are facing limited resources on their recruiting teams.

How Has Investment Changed?

For the past two years, efficiency remained the number one driver of investment in TA tech. Companies look at providers to improve time to fill, increase recruiter productivity and speed, and improve overall decision-making in talent acquisition technology. Improved efficiency benefits the candidate as well as the employer by helping candidates receive communication, stay informed, and move through the process. The reality is that recruiters and hiring teams need help. The average time to fill a position is 45 days and many companies, especially in high-volume industries, cannot afford to wait that long.

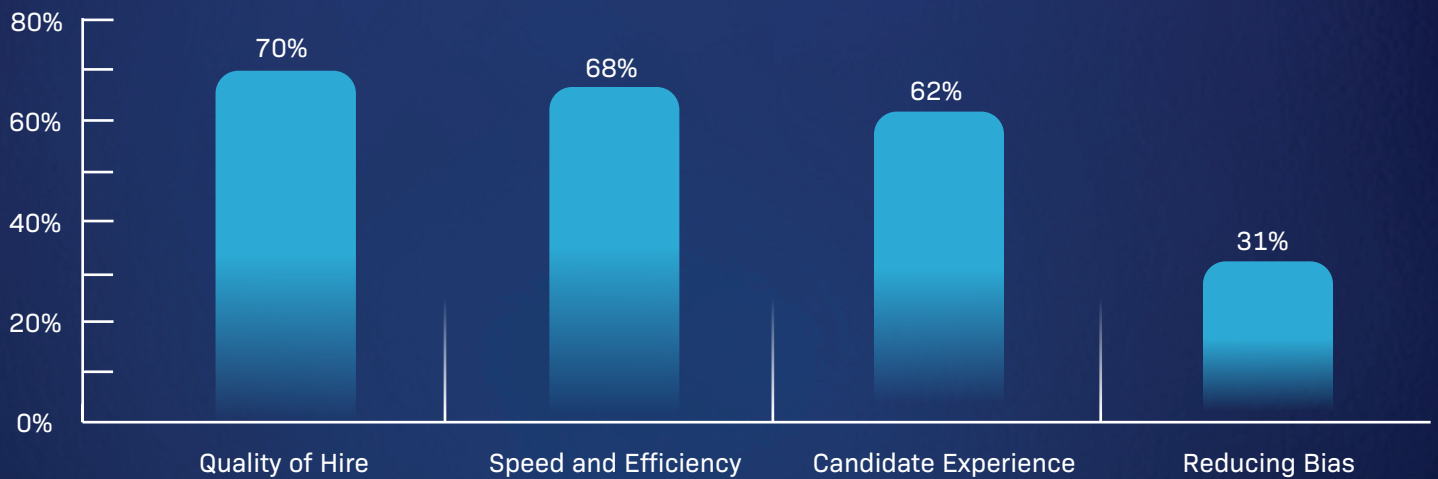
Although efficiency continues to remain critical to TA, the pendulum is swinging back to quality of hire as the number one driver in TA investments in 2023. One reason is the increased focus on retention. With more business leaders aware of TA tech decisions this year, recruitment serves as the first line of defense for turnover and identifying quality hires early helps organizations prepare for future needs. Quality of hire and efficiency can at times conflict, but companies looking at technology should not have to sacrifice one over the other.



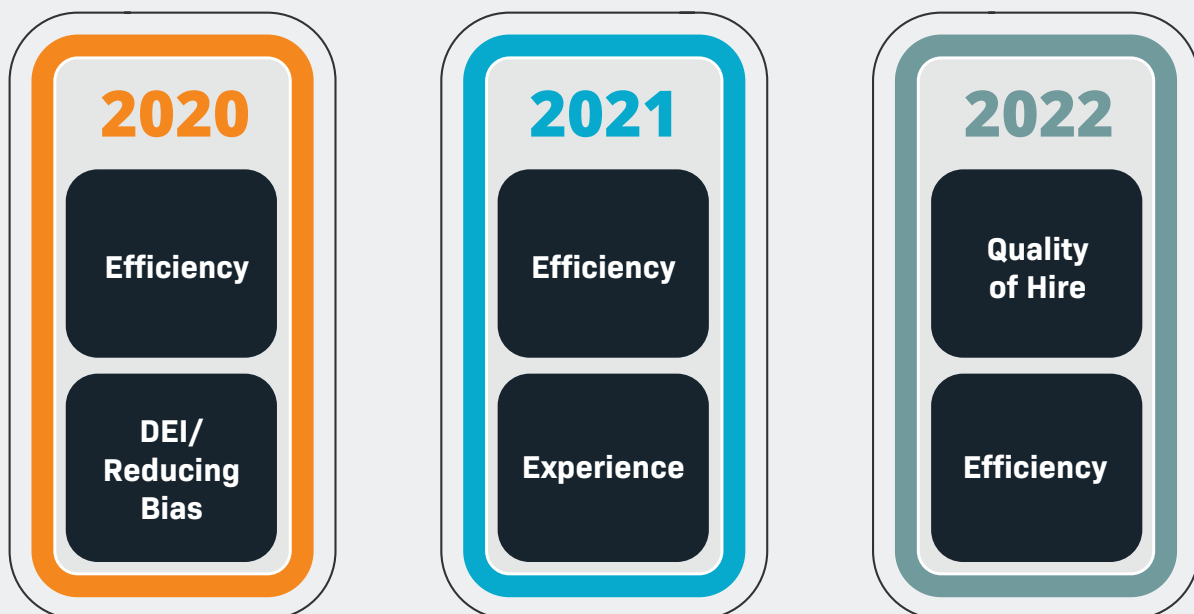
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Figure 4: Key Drivers for Investing in Talent Acquisition Technology

One of the most surprising results from this year's survey is the reduced focus on DEI and reducing bias. Our research found that reducing bias was the second largest driver for technology investments in 2020, but this year it has fallen below quality, efficiency, and experience. Companies are twice as likely to prioritize other metrics over reducing bias. For some companies, DEI was a reaction to the events of 2020 and not a strategic commitment to how they recruit talent. For other companies, technology is not as important as process or strategy design. In either scenario, the result is that providing a fair and equitable experience to every candidate appears to be less of a priority this year.

Figure 5: Priorities Over the Past Two Years

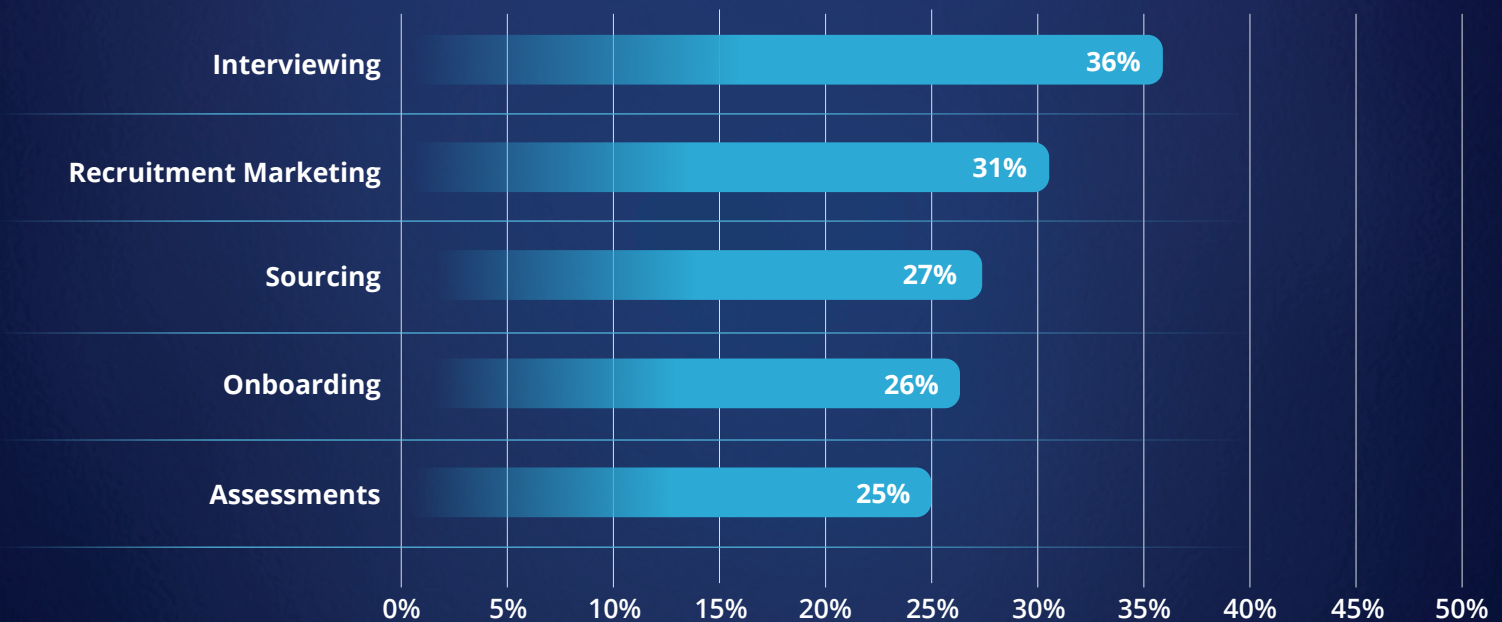
As companies look to improve their approach to diversity hiring and ensuring inclusivity, reducing bias through every stage of talent acquisition is critical. Some companies are looking at providers to blind resumes or interviews, while others are using AI matching and solutions to improve their job descriptions and communication with candidates. Technology and AI can help reduce bias, but companies must still make changes to their culture and processes.

How are Priorities Shifting?

The focus over the past decade has been on recruitment marketing and talent attraction. Companies have increased their investment in services and technology to identify and engage with talent before they apply for a job. Although recruitment marketing is a critical part of talent acquisition, companies often neglect the hiring process (from interview to onboarding) and leave candidates with a poor and inconsistent experience that ultimately impacts the employer brand and recruitment marketing initiatives.

Priorities have shifted over the past two years and remote work has forced companies to rethink how they hire talent. This study found that interviewing is the top priority for TA leaders in 2022.

Figure 6: Talent Acquisition Priorities



When asked why interviewing is a priority, companies identified improved quality of hire and better decision making as the top reasons. Interviewing is the reality check in talent acquisition. It is the time when companies provide information about a job, team, or organization not found in a job description or career page. It is also the time when candidates may share their own career story, giving insight into their capabilities and ambitions. While a resume provides insights into where a candidate has been, it does not provide insights into who a candidate is in today's world. When combined with assessments, interviewing gives companies greater visibility into talent. The reason that companies are shifting priorities relates to quality of hire, yet it is surprising to note that more companies are not prioritizing assessments. Companies stated that interviewing impacts quality (see Figure 7), but the combination of interviewing and assessments allows companies to quantify interviews and how they relate to job performance.

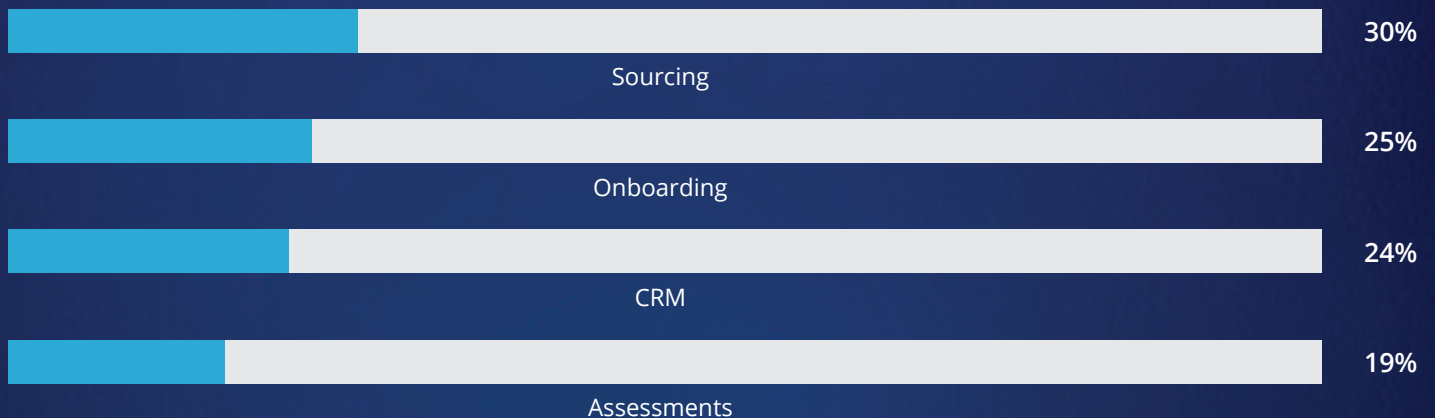
Figure 7: *Reasons Interviewing is a Priority*



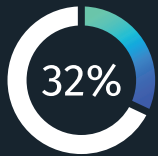
What Solutions are Companies Replacing?

Companies are not only buying more technology this year, but they are also replacing areas of technology. Outside of the ATS, the top areas of TA tech replacement this year include sourcing solutions, onboarding, CRM, and assessments. This wave of replacements is across all areas of talent acquisition from solutions that aim to fill positions quickly to solutions that help companies find quality talent.

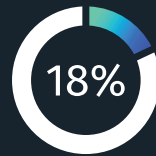
Figure 8: *Areas of Technology Replacement*



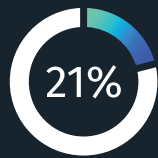
When asked why companies are replacing these providers, they stated the following reasons:



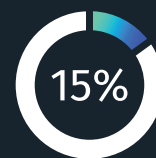
They want to consolidate providers



They are not happy with data



They want AI-driven solutions



They are replacing because of price

One of the top reasons that companies are replacing solutions is the demand for AI. AI helps companies improve efficiencies as well as quality of hire and experience. AI comprises subsets that include machine learning (ML) and deep learning (a subset of ML). Machine learning allows companies to use structured data to predict outcomes. On the other hand, deep learning allows companies to use unstructured data and free-form text and speech to provide more accurate information and insights. Using deep learning and unstructured data gives organizations a competitive advantage. It means that a system is not just programmed to perform a specific task. Instead, it can learn independently.

The following pages of this report will look at how AI is addressing many of the challenges that companies are facing today.



Part 2: Where Are We Going?

As companies invest in new technology to support talent acquisition over the next year, they must lean into the power of AI. AI-driven talent acquisition can help companies improve quality, experiences, and efficiency. But companies investing in AI will need to carefully evaluate providers for data quality, transparency, and ethical AI.

Addressing the Data Issue

The success of a talent acquisition function is no longer measured by its ability to fill positions quickly and cost-effectively. It must also be measured by its ability to make smarter and more equitable decisions around talent. Before companies can mature to an AI-driven TA tech stack, they must address the challenges with data. Companies must have a better understanding of the data they are using, the quality of that data, and where that data is sourced. When asked what one thing companies would like to see from their technology in the next 12 months, one in four companies stated capturing data to make better decisions.

Figure 9: *What Companies Want from Technology*



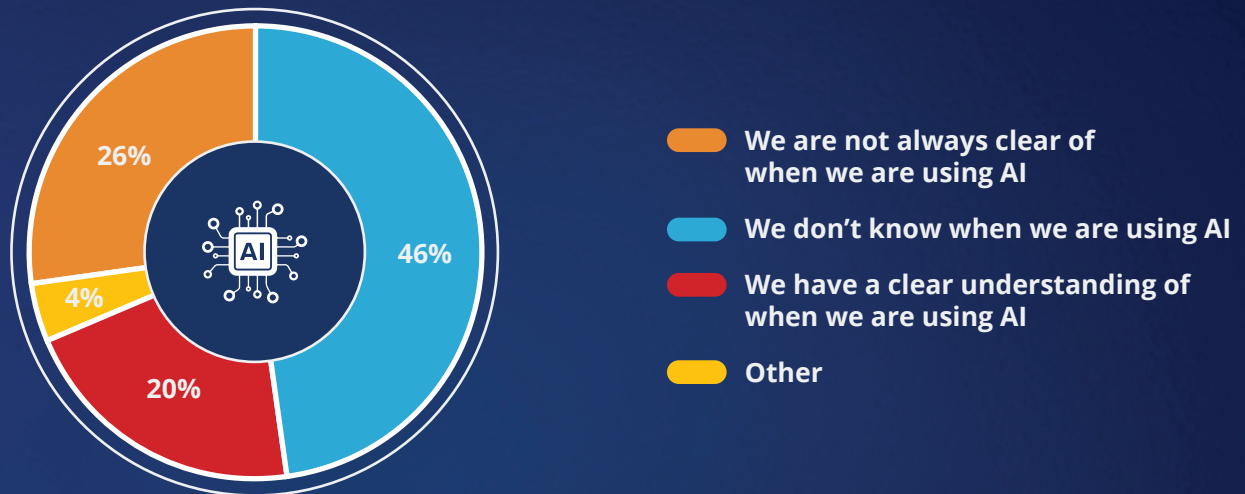
With the number of different systems that companies are using and the influx of data over the past few days, most talent acquisition teams struggle to manage this data. The primary challenge companies face is not necessarily having too much data, but rather accuracy and integrity.

AI is dependent on the quality of data. Providers across all areas of talent acquisition seem to be leading with a message around AI but they do not always treat data the same. Not all data sources are equal and may amplify existing biases and alienate candidates. But, as the demand grows, confusion around the basic definition of AI persists.

Clearing Up Confusion Around AI

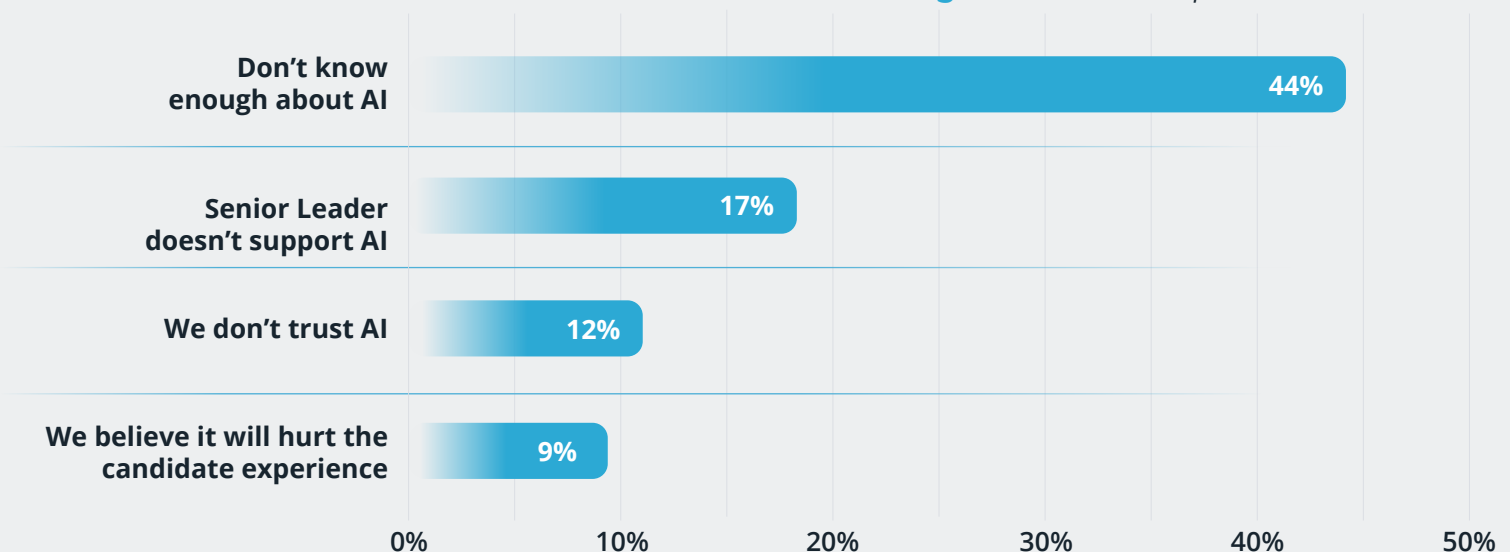
For many companies, AI is misused and misunderstood. Even if companies are adopting AI, they do not always understand it. Only 20% have a clear understanding of when they are using AI in talent acquisition (see Figure 10).

Figure 10: *Understanding of AI*



Aptitude Research found that the number one reason some companies are hesitant to invest in AI is that they do not know enough about it (see Figure 11). Although awareness around AI has improved, it is still the most significant barrier to investment. Without a way to clearly articulate the value of AI, it can be challenging to get senior leader support. Additionally, only 12% of companies stated that a lack of trust impacts AI decisions, and only four percent (4%) of companies fear AI will replace the role of recruiters (compared to 16% in 2020).

Figure 11: *Misconceptions Around AI*



Some of the myths around AI include the following:

MYTH 1 AI Introduces Bias:

Some companies believe AI can contribute to bias since it is developed by humans. If used correctly, technology and automation can help companies reduce bias and encourage greater humanity in the hiring process. It is important to consider the data that providers are using and starting with in the hiring process, the hypothesis they are using in their algorithms, and the data's transparency. Technology, unlike humans, can be trained to reduce bias, so it is critical to look at providers' visibility into the algorithms and methodologies they use to reduce bias.

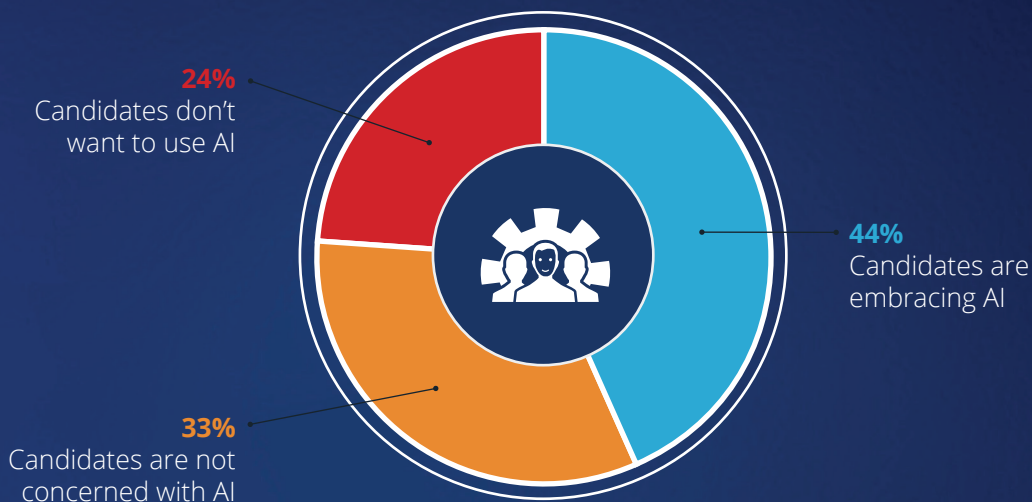
MYTH 2 AI is Too Risky:

Investing in AI presents risks, but the reality is that investing in the right providers brings value. Every individual uses AI in their personal lives to inform decisions around day-to-day activities; AI can also provide the same assistance in professional lives.

MYTH 3 AI Hurts the Candidate Experience:

Most candidates are not concerned with AI and would prefer this option to a recruiter who has no time to respond or a hiring manager who acts on bias. Through AI, candidates receive communication that managers and recruiters are often too busy to provide. Companies that use AI and define it as "machines that learn about candidates" are twice as likely to improve the candidate experience. Companies are less concerned with AI hurting the candidate experience than they were a few years ago (see Figure 12).

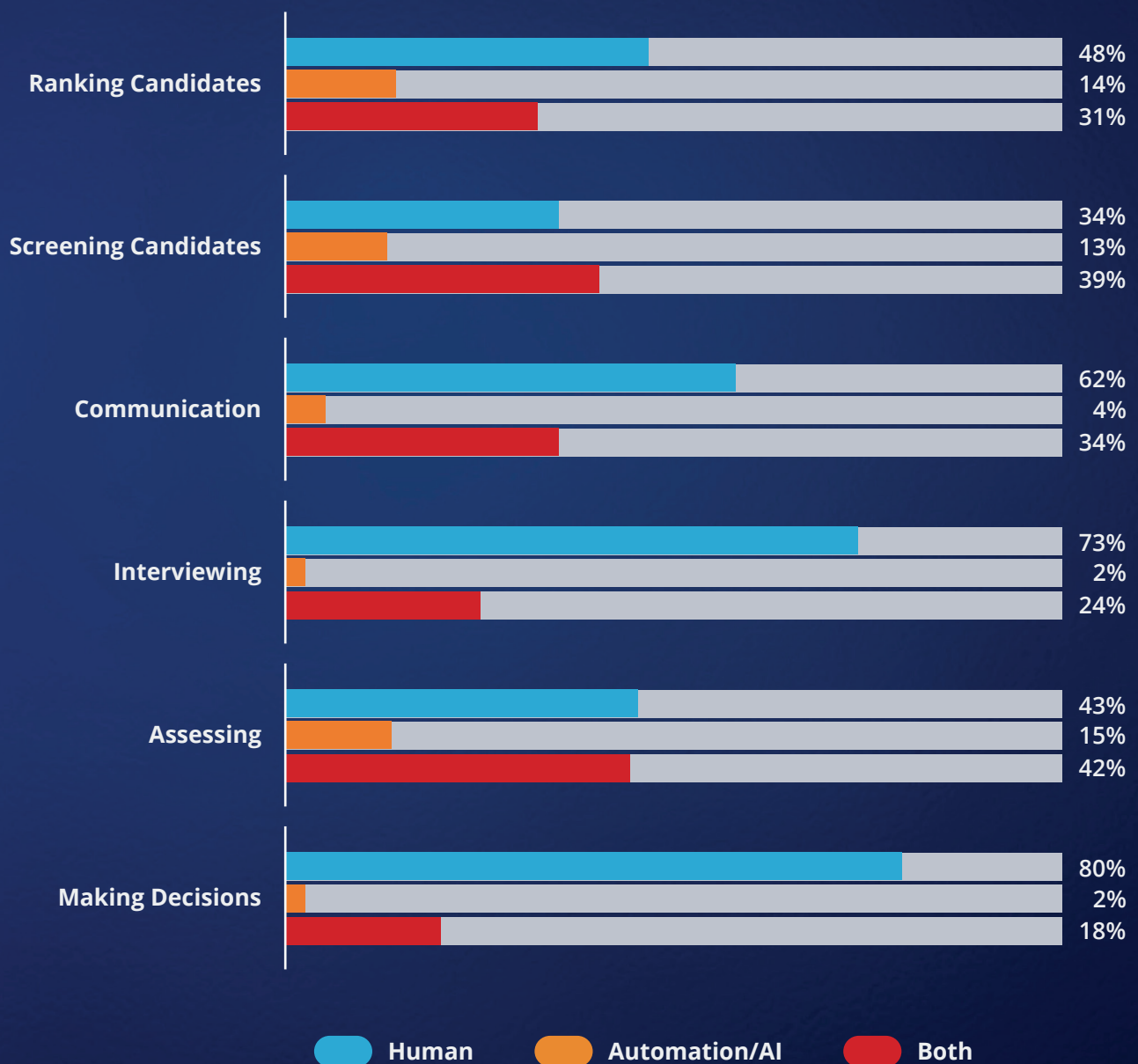
Figure 12: Candidate's Perception Around AI



MYTH 4 AI Removes the Human:

AI does not take away the human element of talent acquisition. It has the potential to enhance it. It learns more about candidate behavior, provides recommendations, increases personalized communication, and offers consistent communication. AI can help companies better connect with candidates, target the right talent, match the right candidates to jobs, and make decisions on talent that will predict performance. Aptitude Research found that for 80% of companies, humans are still making decisions around talent and for nearly a third of companies, both humans and AI are supporting different areas of talent acquisition (see Figure 13).

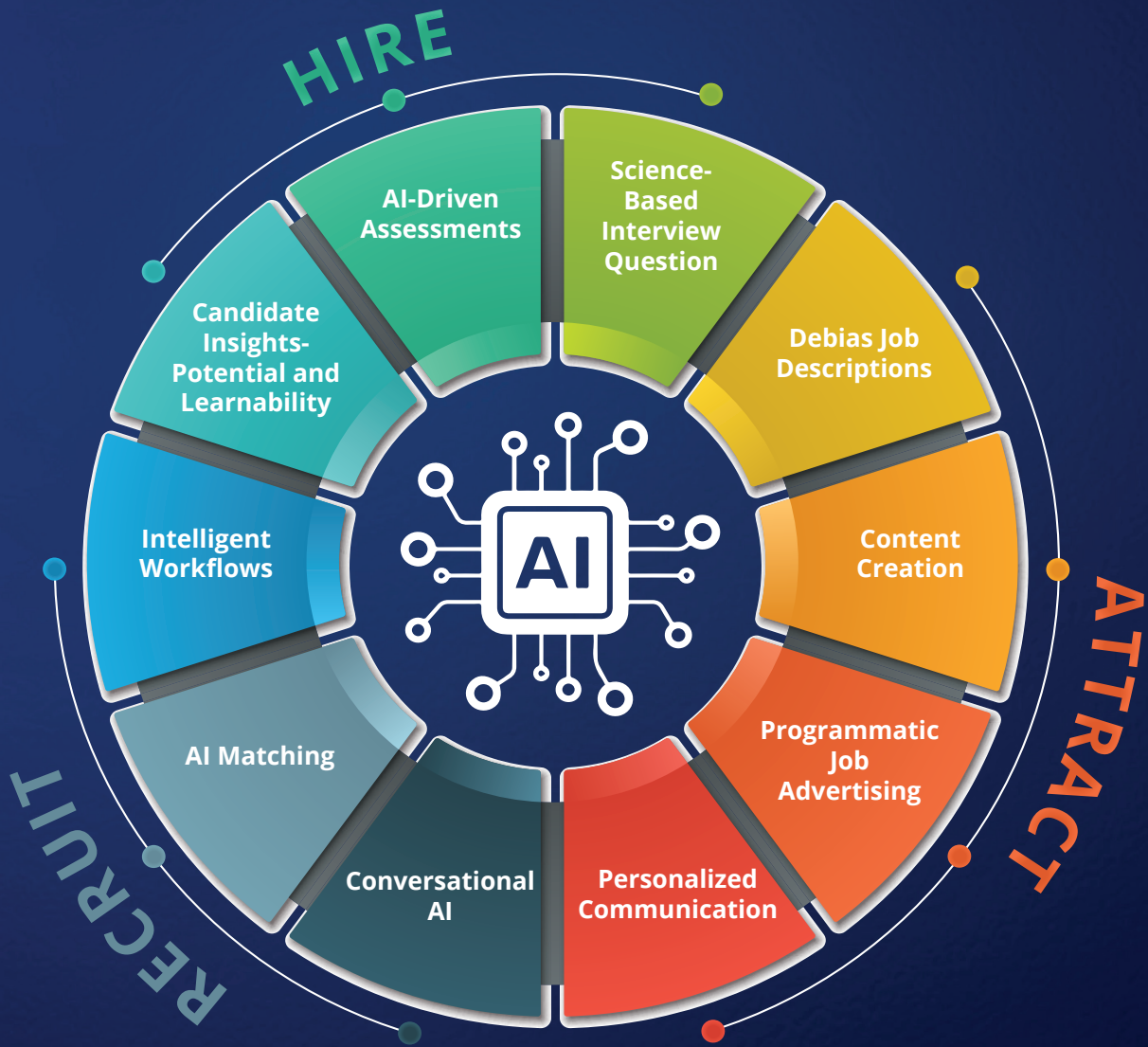
Figure 13: Human vs. AI in Talent Acquisition



Looking Across Talent Acquisition

One additional misperception around AI is that it only supports one area of talent acquisition. Companies often view it as a capability or point solution, but AI plays a role across all areas of talent acquisition. Figure 14 highlights some of the applications of AI across attraction, recruitment, and hiring.

Figure 14: AI Across Talent Acquisition



ATTRACT

AI provides value in this phase, insights into the right content, and automated messages to attract the right talent. AI supports both tactical and strategic initiatives. It can also help provide the right personalized communication and information to candidates to keep them informed about the employer. De-gendered job descriptions and debiased job descriptions can help to reduce bias in the process as well.

Outcome	Impact of AI
Efficiency	Quickly convert talent when communication is consistent and personalized; Predict spend for advertising
Experience	Save recruiters' time and provide personalized experiences to candidates
Quality	Target the right talent

RECRUIT

AI and intelligent workflows ensure that the right candidates are moving along in the process of being dispositioned at the right stage. Candidates during this phase will receive consistent and personalized communication about their status and what they can expect moving forward. AI will ensure that candidates are provided with pre-screening questions, interview self-scheduling, and realistic job previews via assessments. Companies can offer the right workflows and ranking of candidates through AI-powered analysis.

Outcome	Impact of AI
Efficiency	Move the right candidates through the process
Experience	Save recruiters' time and provide immediate answers to candidate questions; Provide a fair and inclusive process
Quality	Understand candidate in a more relevant way

HIRE

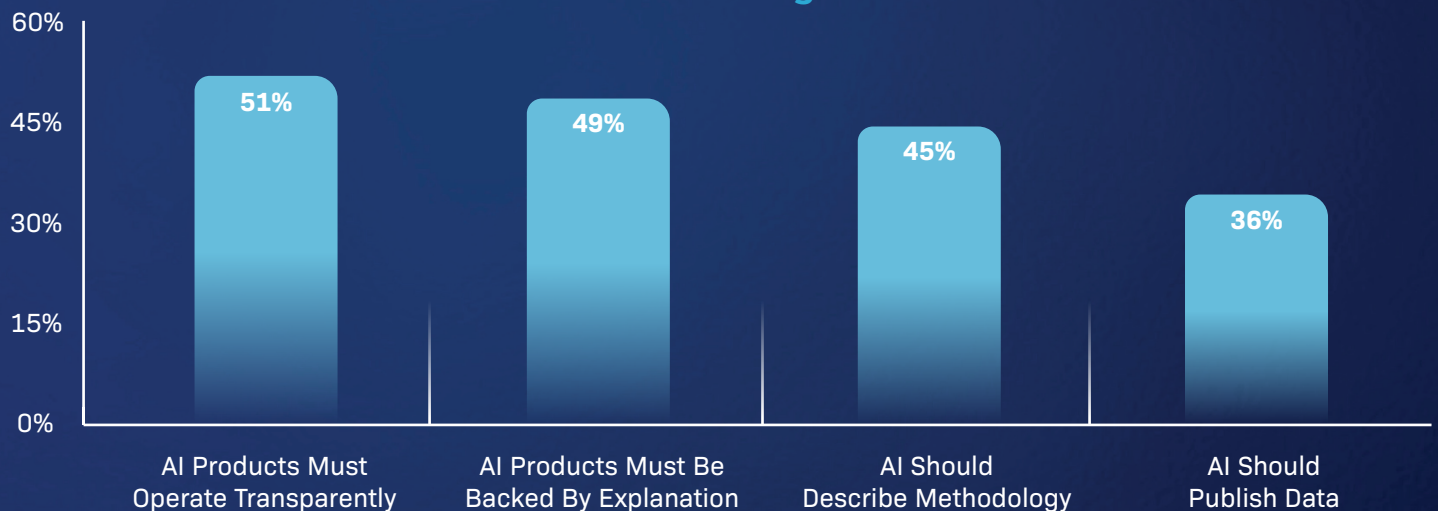
During the final stage of the recruitment process, AI enables smarter decision-making, reducing bias and eliminating gut decisions. AI-driven assessments can provide candidate insights that include potential and learnability to predict performance. The AI-driven interview process provides insights to support better communication, a positive experience during onboarding, and socialization into company culture.

Outcome	Impact of AI
Efficiency	Reduce the number of interviews; Personalize the assessment process; improve time to offer
Experience	Provide every candidate with consistency and fairness in the hiring process
Quality	Understand candidate insights beyond experience, including potential, performance, and learnability

Understanding the Growing Importance of Ethical AI

The topic of ethics in AI raises questions about humanity in the talent acquisition process. Companies must also consider the pending legislation on AI, especially in high-stakes decision making which includes hiring. New York City's Automated Employment Decision Tools law will require annual bias audits for AI hiring tools. Companies must consider ethical AI as they evaluate providers and understand if products operate transparently, are backed by explanations, as well as if providers describe their methodology and frequently publish their data (see Figure 15). In addition, addressing ethics in AI builds confidence with employers and candidates who want to understand how their data is being used.

Figure 15: *Considerations for Ethical AI*



The responsibility of ethical AI is not always on the provider. Companies have an obligation to ensure the ethical use of these solutions. Aptitude Research found that companies are taking more responsibility for their use of AI by seeking outside expertise, legal counsel, and ethics committees.

Figure 16: *Companies Ensuring Ethical Use of AI*



Unfortunately, not every provider today upholds ethical AI, resulting in bias in the hiring process and data and decision-making that cannot be trusted.

KEY RECOMMENDATIONS

The TA tech landscape is complex and continues to evolve, and AI is driving this change. The benefits of AI extend beyond efficiency and the tactical elements of talent acquisition. When used correctly, AI can improve quality of hire; diversity, equity, and inclusion efforts; and overall candidate and recruiter experiences. In addition, it enhances the human side of talent acquisition and offers a support system for companies looking for smarter ways to attract, recruit, and hire talent. Companies looking at the future of TA tech must consider the following:

- ◆ **Prioritize Ethical AI:**

Not all providers take an ethical approach to AI. Companies must consider providers that are transparent and provide visibility into their approach to data.

- ◆ **Start with Quality Data::**

Companies need to start with quality data. Without a clear vision or strategy for data management, companies do not clean up their data or check for accuracy often enough.

- ◆ **Define Success:**

Companies must define what success in talent acquisition looks like moving forward. Efficiency was the consideration for 2021 but quality, fairness, and experience will help organizations drive change moving forward.

ABOUT US



Aptitude Research is a leading human capital management (HCM) research and advisory firm. Our in-depth research and vendor assessments help HR leaders develop a deep understanding of the HCM technology landscape, including talent acquisition and engagement, to ultimately make better purchase decisions.

Our flagship research, The Aptitude Index Report: delivers a comprehensive look at talent acquisition trends and technology. This knowledge, combined with our consulting and advisory services, enables companies to save time, money and improve the recruiting, hiring and workforce management experience.

Founded by leading analyst Madeline Laurano and based in the Boston area, Aptitude Research provides a wealth of HCM expertise to companies, vendors and investors. View our recent and upcoming research at www.AptitudeResearch.com or connect with us on [Twitter](#) or [LinkedIn](#).



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Modern Hire's intelligent hiring platform transforms each step of the process with screening, assessment, interview, and workflow automation tools that make hiring more effective, efficient, ethical, and engaging. Modern Hire is differentiated by its advanced selection science and is trusted by more than 700 leading global enterprises and nearly half the Fortune 100. Find out more about Modern Hire's commitment to seriously better hiring at www.modernhire.com.