

The 2019 State of Artificial Intelligence in Talent Acquisition

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Executive Summary

Human Resources professionals are optimistic about the role of Artificial Intelligence (AI) in improving the HR function. Specifically, HR professionals see AI playing a large role improving the talent acquisition function. In prior HR.com research, HR professionals said talent acquisition is one of the most important areas where AI will play a role over the next few years.

This report shows that many HR professionals foresee AI playing enhanced roles in most aspects of talent acquisition. Although some see possible drawbacks to increased AI usage, many also believe AI will free up talent acquisition professionals to focus on more value-added parts of their jobs.

In this research, we look at the following:

- the current status of talent acquisition (TA)
- today's usage and understanding of AI in recruitment
- possible barriers and drawbacks to using AI in recruitment
- how AI is affecting and will affect major areas of recruitment, including:
 - ▶ candidate sourcing
 - ▶ candidate assessments
 - ▶ candidate interviews
 - ▶ candidate selection
 - ▶ onboarding
- the utility of specific AI-related tools
- the future impact of AI in TA

About this Survey

The 2019 State of Artificial Intelligence in Talent Acquisition survey ran from February 2019 through March 2019. There were 484 usable responses gathered from HR professionals in a wide variety of industry verticals with every major industry represented. We also had participants from very small businesses with under 50 employees to HR professionals working in enterprises with 20,000 or more employees.

Below are some of the key findings from the research:

Most HR professionals need to learn more about how AI can be leveraged for the purpose of improving recruitment. Only about 40% of HR professionals consider themselves at least moderately knowledgeable about AI.

AI is not widely used for talent acquisition today, but usage is expected to jump dramatically over the next two years. Just 10% make high or very high use of AI in recruitment today, but 36% of participants expect usage to be high or very high in two years.

Recruitment professionals would most like AI to help them achieve higher quality and productivity. That is, they want AI to help them find more qualified candidates, and they want it to reduce the time they spend sifting through resumes.

Budget is the single biggest barrier to more adopting AI tools in the area of TA. The second most widely cited barrier is the scarcity of HR professionals who are currently skilled in this area.

Dehumanizing the recruitment process is the most widely cited potential negative impact of AI. Another potential negative is that AI could lead to hiring discrimination due to bad programming/machine learning models.



The usage of AI in TA is expected to jump most in the following area:

- *In the area of sourcing, it's expected to increase most as a means of:*
 - ▶ identifying candidates who match job requirements
 - ▶ compiling lists of qualified candidates who may only be passively looking
- *In the area of assessments, it's expected to increase most as a means of:*
 - ▶ prioritizing resumes and applications
 - ▶ matching candidates to open positions
- *In the area of interviewing, it's expected to increase most as a means of:*
 - ▶ speeding up the hiring process
 - ▶ prioritizing candidates to be interviewed
- *In the area of selection, it's expected to increase most as a means of:*
 - ▶ filtering through resumes more efficiently
 - ▶ helping to match candidate qualifications to job needs
- *In the area of onboarding, it's expected to increase most as a means of:*
 - ▶ reviewing paperwork
 - ▶ learning about policies

AI is expected to increase the speed of recruitment and raise the productivity of the recruitment function. Fully 73% expect AI to increase the speed of recruitment, and 53% expect it to raise the overall productivity of the recruitment function.

Which types of AI-related tools will have the greatest utility in TA? The data points to:

- ▶ big-data analytics
- ▶ automated assessments
- ▶ predictive analytics

The Status of Talent Acquisition Today

Talent acquisition may be the most important HR challenge of the day. According to a report HR.com released earlier in 2019, [The Advancing HR Function 2019](#), talent shortages are most widely cited as the factor having the biggest impact on HR over the next three to five years.

There are likely multiple influences at play in driving talent acquisition to the forefront of HR concerns. One influence is the overall job market, especially in the United States. The [unemployment rate](#) in the United States is reaching historic lows and stood at about 3.6% in April of 2019. This creates new kinds of challenges for talent acquisition teams as highly skilled workers are harder to find, employees feel comfortable leaving jobs to look for better ones, and people who are entering or re-entering the job market lack many of the critical skills employers require.

But how successfully are organizations managing the critical talent acquisition function? It turns out that few are excelling in this area, and some are badly struggling.

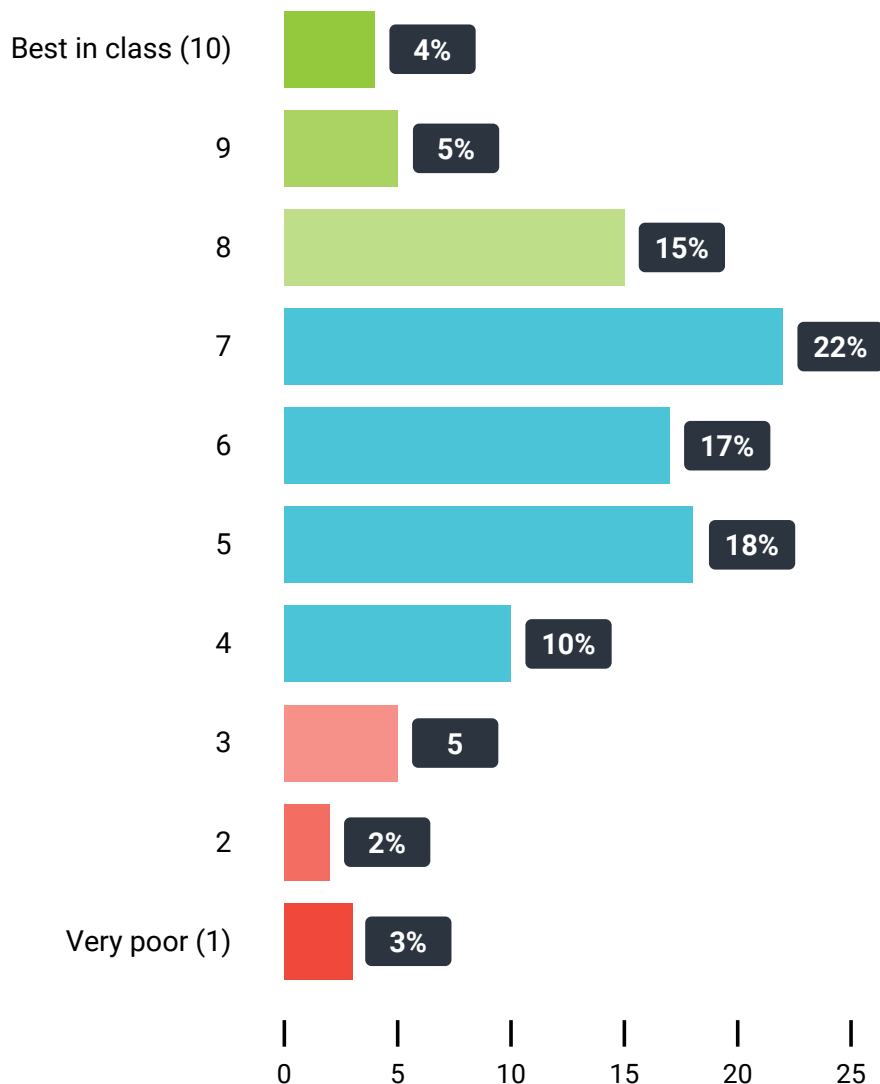
Talent acquisition departments face major challenges

Only about a quarter of HR professionals give their talent acquisition functions high marks.

We asked our survey participants to rate the quality of the talent acquisition function in their organizations. On a 10 to 1 scale, with 10 being “Best in Class” and 1 being “Very Poor,” only 24% rated their efforts at 8 or higher, ratings that we would consider high marks.

The majority of participants (67%) rated their efforts about in the middle (4 through 7), which we feel is an indicator of mediocre or worse performance and a sign that talent acquisition is ready for improvement.

Survey question: Taken as a whole, how good is the talent acquisition function in your organization? (where 10 is best in class and 1 is very poor)



Only 4% rate their acquisition functions as best in class



The Ways HR Would Like AI to Improve Talent Acquisition

Given the importance of talent acquisition and, generally speaking, HR's lackluster performance in this area, most HR professionals are seeking ways to improve TA. In December 2018, HR.com published a report called [*The Current and Future State of AI in HR*](#), in which 64% of the participants said AI has high potential to improve talent acquisition. In fact, in terms of being an area where AI has potential, TA was the second most commonly selected HR function, behind "analytics and metrics."

In short, HR professionals have exceptionally high expectations for AI in regard to the TA function.

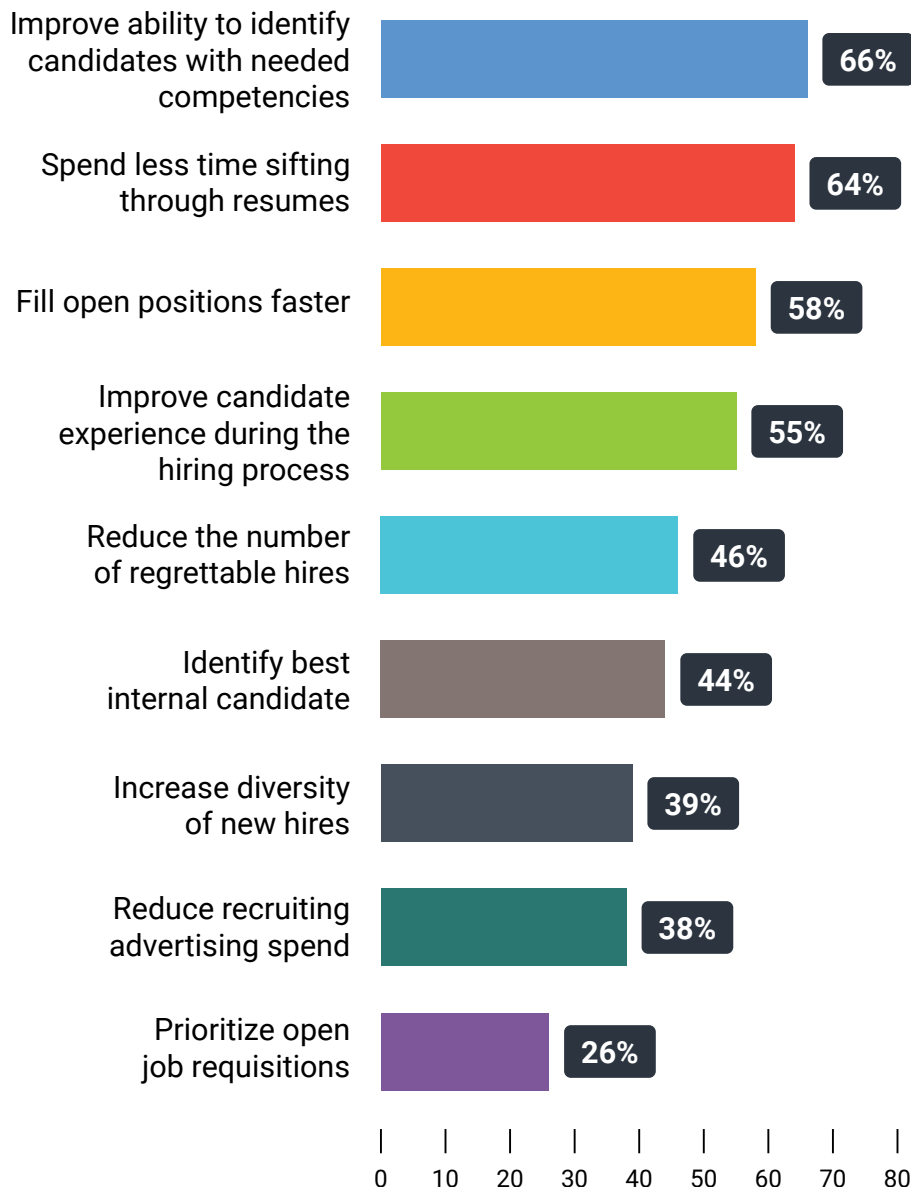
An improved ability to identify qualified candidates is the top AI-related "wish"

Respondents were asked, "What outcomes would you most like to achieve through the application of AI to talent acquisition in your organization?"

Higher quality and quantity—which are frequently viewed as mutually exclusive business goals—are the most widely cited desired outcomes. First and foremost, participants want AI to help them find more qualified candidates. Given the changing demographics of the workforce and the continued tightening of the job market, competition for talent is intense. So, it makes sense that finding better quality candidates is the top goal (66%).

The next most widely cited goal is spending less time "sifting" through resumes, cited by 64%. The sheer volume of resumes that recruiting professionals receive for average job openings can present an overwhelming challenge. Making the sheer volume even more complicated is the difficulty finding top candidates, so it makes sense that these are the top two recruiting challenges with which HR professionals are seeking help.

Survey question: What outcomes would you most like to achieve through the application of AI to talent acquisition in your organization? (choose all that apply)



Finding more qualified candidates and saving time sifting through resumes are the top reasons for adopting AI

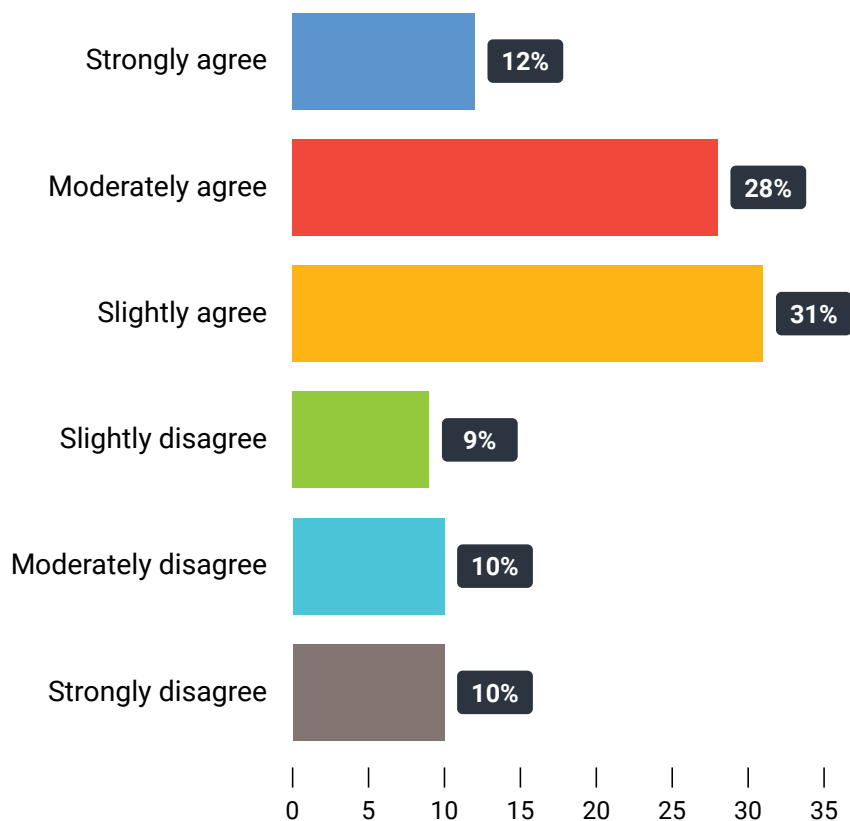


HR's Current Level of Knowledge of AI in Talent Acquisition

Most HR professionals lack deep knowledge about using AI for talent acquisition

Few HR professionals (12%) strongly agree that they are knowledgeable about the topic of using AI to enhance the TA function, but another 28% at least moderately agree that they're knowledgeable. In coming years, HR professionals will need to become more knowledgeable in this area as more recruitment-related products and services incorporate AI into them.

Survey Statement: I consider myself knowledgeable about the topic of using artificial intelligence (AI) for the purposes of enhancing the talent acquisition function



Just 12% strongly agree they are knowledgeable about using AI to enhance talent acquisition

The Current and Future Usage of AI for Talent Acquisition

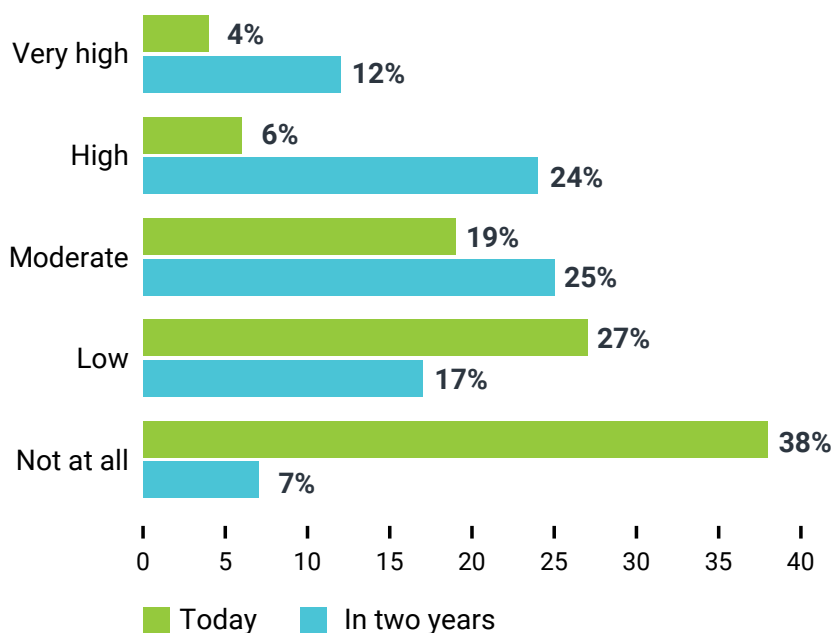
Overall Usage in Talent Acquisition

Although not highly used today, AI's usage is expected to grow very quickly

Just 10% of the participants say they currently use AI to a high or very high degree in talent acquisition. However, over a third (36%) of HR professionals say they expect such high utilization of AI in just two years. Sixty-one percent expect at least moderate utilization in two years.

Predicting the future is always a risky venture, of course. There are so many uncertain variables that looking too far ahead is risky. However, we can see that large proportions of HR professionals expect to see large jumps in usage in the near future.

Survey question: For the purpose of talent acquisition in your organization, to what extent is AI being used today and to what extent will it be used two years from now? (please provide your best estimate)*



Just 10% currently use AI to a high or very high degree or the purposes of talent acquisition

*Does not include "Don't Know" responses, so bars will not add up to 100%

Usage of AI in Five Key Areas of Talent Acquisition

We posed a series of five questions, each containing several sub-parts, to learn more about the specific uses of AI in recruitment today and how participants see the usage of AI changing in two years. We covered these broad topics:

- Candidate sourcing
- Candidate assessments
- Candidate interviews
- Candidate selection
- Onboarding

A couple of consistent themes run through the data. First, AI is not widely used to a high degree today, but in the near future high AI usage is expected to jump by two, three or even four times, in some instances. Second, where the specific facet of a talent acquisition area is dependent on quantifiable data, the participants tend to be more optimistic about the future levels of AI usage. They tend to be more skeptical of AI's future role in areas where human judgement must be applied to subjective or judgement-based factors.



AI for Candidate Sourcing

The changing job market creates a new set of challenges for talent acquisition. Before candidates can be interviewed, resumes sorted and offers made, quality candidates must be found or sourced. Finding pools of qualified candidates represents a profound challenge for successful talent acquisition.

To learn more about how AI is used to find these pools of qualified candidates, we posed a series of questions to our participants that lead with the following question: “For the purpose of candidate sourcing in your organization, to what extent is AI being used today and to what extent will it be used two years from now in the following ways? (please provide your best estimate).”

We then broke this broad inquiry down into several sub-parts to explore different aspects of candidate sourcing. The responses to the sub-parts to this question follow.

In each section, we list the TA activities according to the predicted degree of usage in the future. That is, the first item is the activity that is predicted to have the highest usage in two years, and the last item is predicted to have the least future usage.

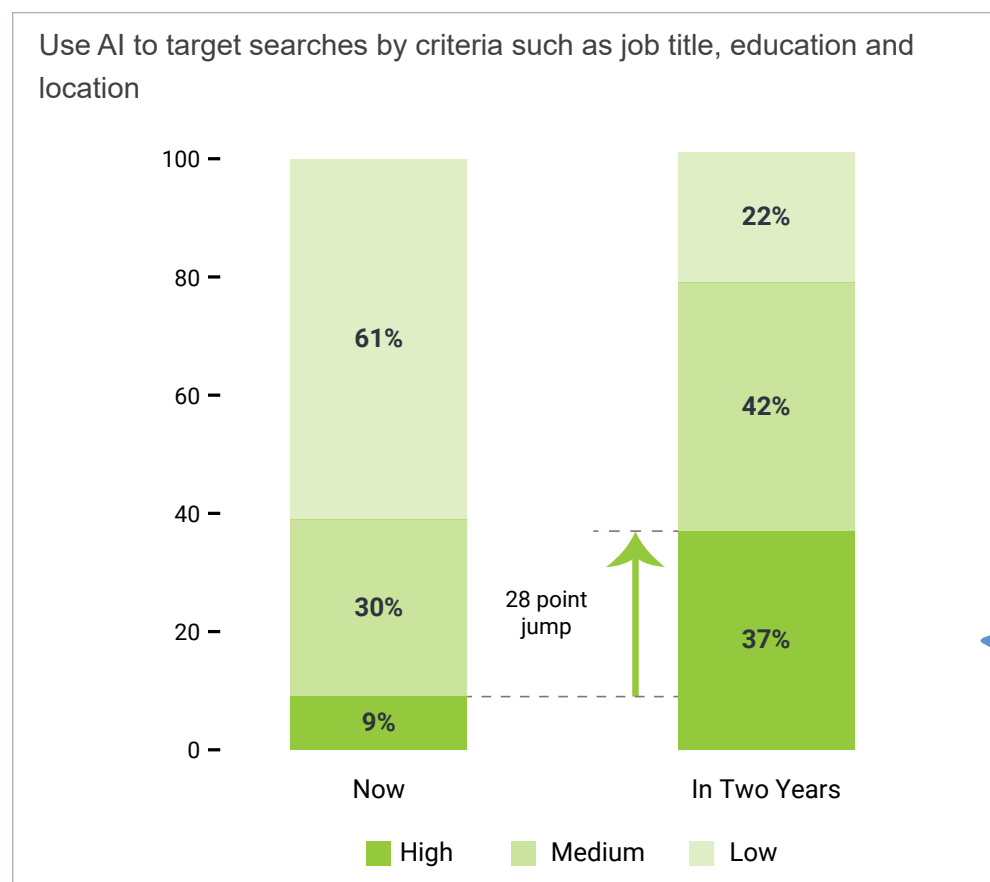


To target searches

Thirty-seven percent of participants say that, within two years, AI will be used to a high extent to target candidate searches by relevant job criteria. Today, it is being used to this extent for this purpose by 9% of respondents.

We believe it makes sense for HR professionals to expect more of AI-directed search capabilities in the future. After all, the powerhouse search engine Google has incorporated deep learning into its [search engine](#). This AI-powered capability helps generate responses to many search queries where it can do the job better than the algorithmic rules programmed by human developers.

Using machine learning and neural networks, it's likely that similar technologies will be increasingly leveraged to target job searches by criteria such as job title, education, location and more.



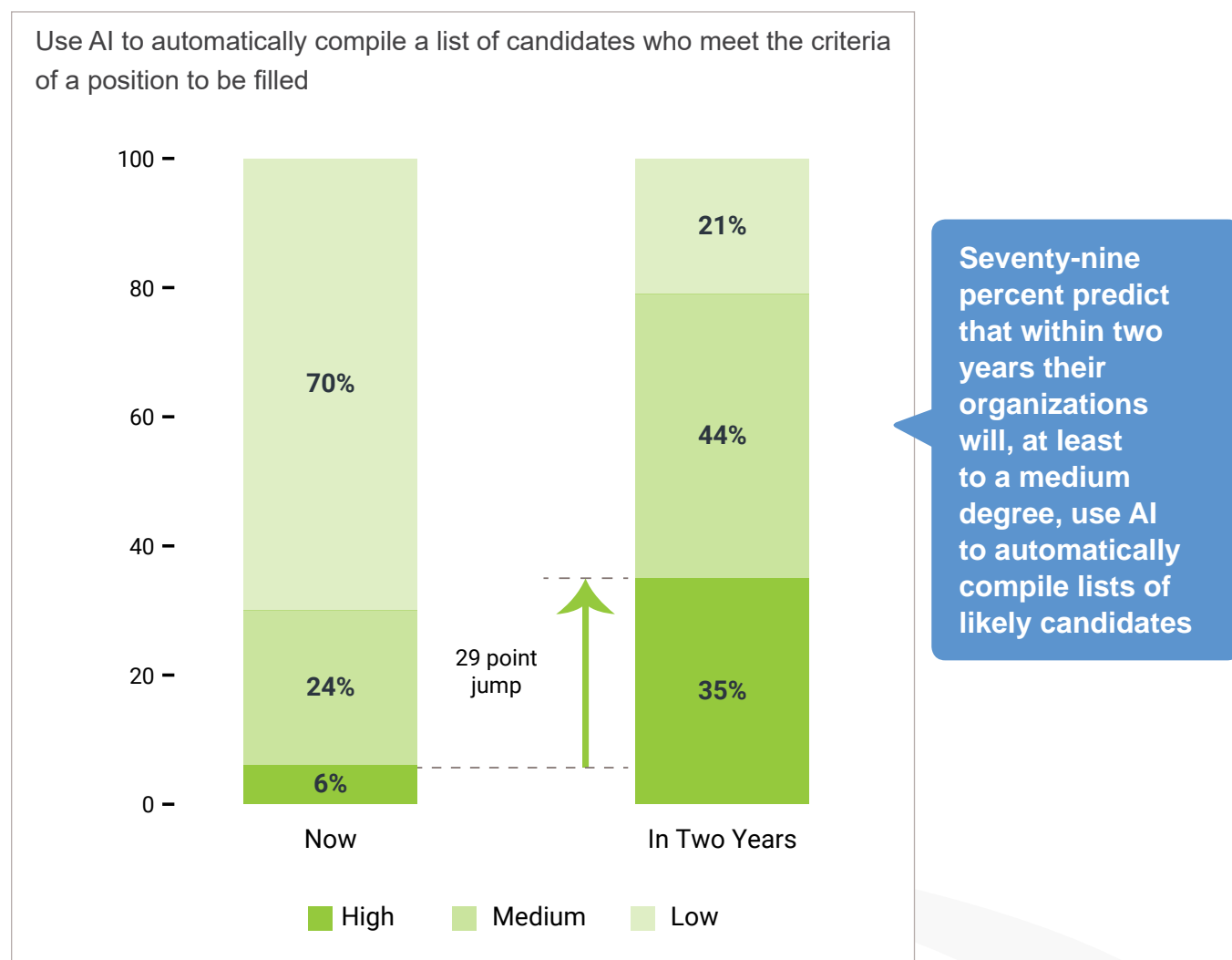
Almost two-fifths believe AI will be highly used to target searches to find qualified candidates*

*In each of the graphs that follow, we will illustrate the jump in percentage points from current levels of high usage to the levels of expected high usage in 2 years.

To compile a candidate list

Thirty-five percent of participants say that, within two years, AI will be used to a high extent to compile a list of candidates who best meet the criteria of the position to be filled. Today, AI is being used to this extent for this purpose by 6% of respondents.

In a sense, this is similar to the previously stated search capability but with the added functionality of weighting the best candidates and compiling a list. This could help HR more easily find the proverbial needle in the haystack of resumes. If AI lives up to this potential, talent acquisition professionals could make substantial gains in effectiveness and efficiency.



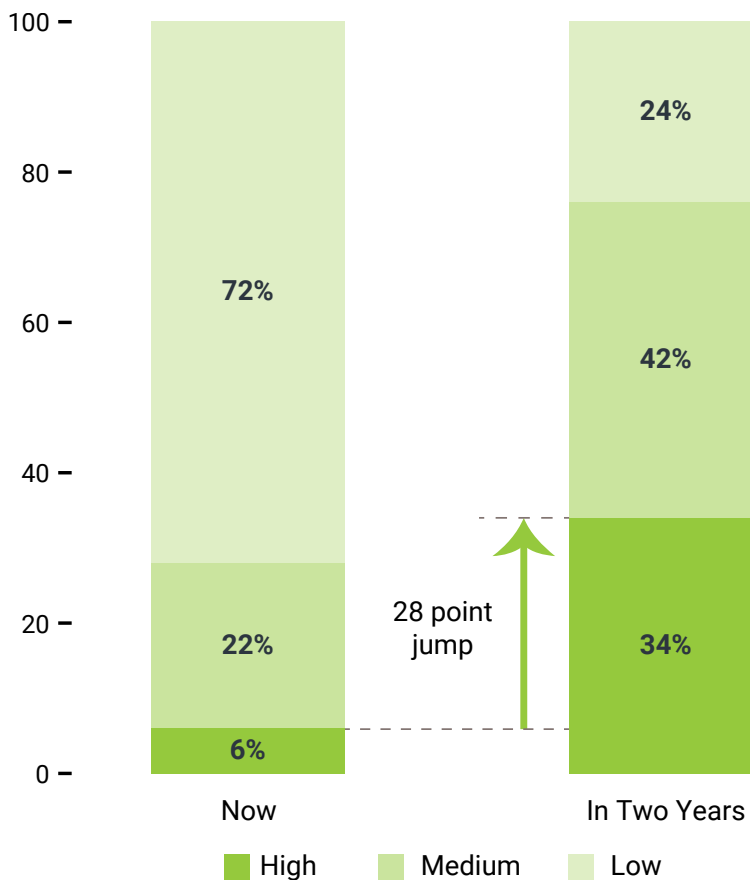
To identify potential candidates

Thirty-four percent of participants say that, within two years, AI will be used to a high extent to better identify potential candidates who meet the criteria of a position to be filled. Today, AI is being used to this extent for this purpose by 6% of respondents.

One of the biggest challenges for talent acquisition professionals is matching criteria for open jobs to candidates who are not actively seeking new work. Although this functionality is similar to targeted search, it may incorporate certain AI-powered subtleties to identify quality candidates who, if approached, might be interested in a new position, as opposed to those who are clearly happy in their current positions.



Use AI to better identify potential candidates who meet the criteria of a position to be filled

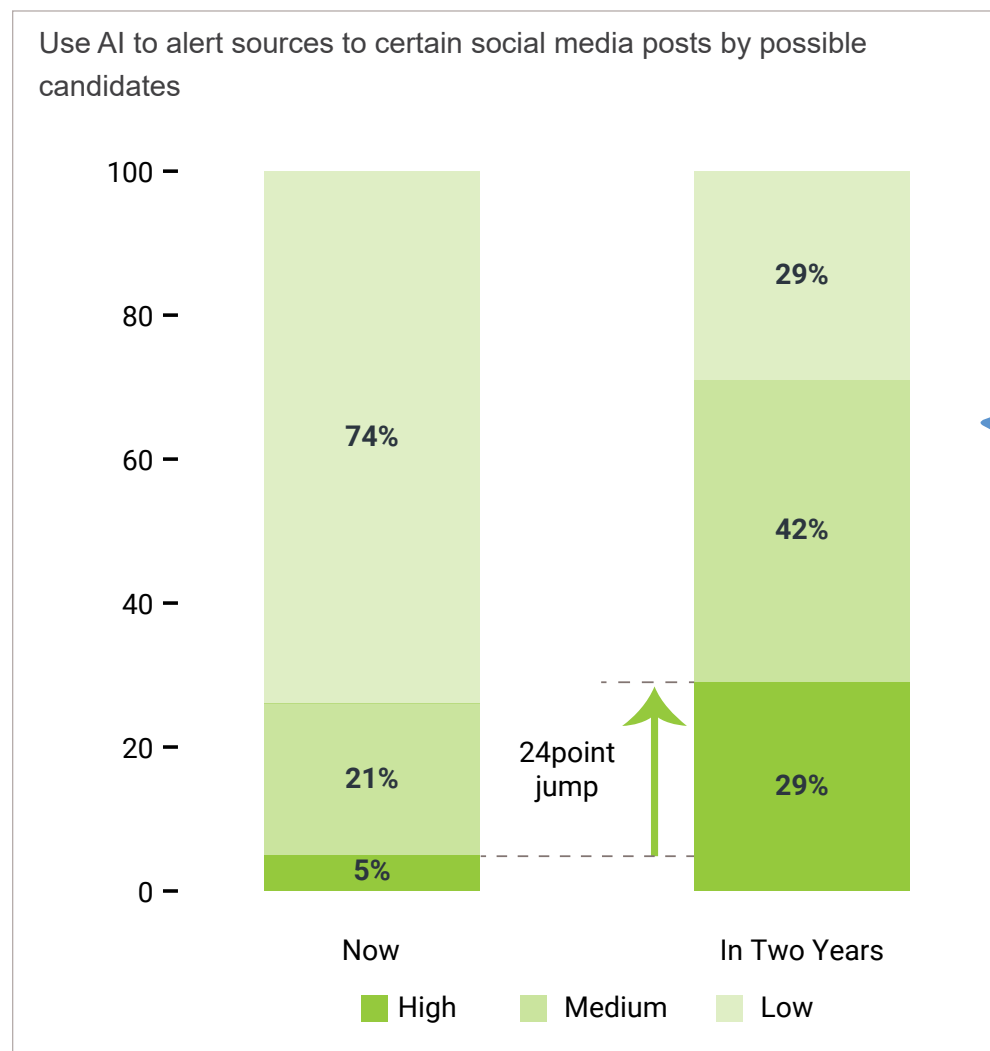


The high usage of AI for identifying candidates is expected to jump almost six times in just two years

To monitor social media

Twenty-nine percent of participants say that, within two years, AI will be used to a high extent to alert recruitment professionals to certain social media posts by possible candidates. Today, AI is being used to this extent for this purpose by 5% of respondents.

Social media is so vast, and the channels that people use are so diverse, that it's nearly impossible to manually track and follow every candidate's activity and posts. Yet, talent acquisition professionals would be well-served to learn about relevant thought leadership as articles and posts occur. In the future, AI may be increasingly useful in this area.

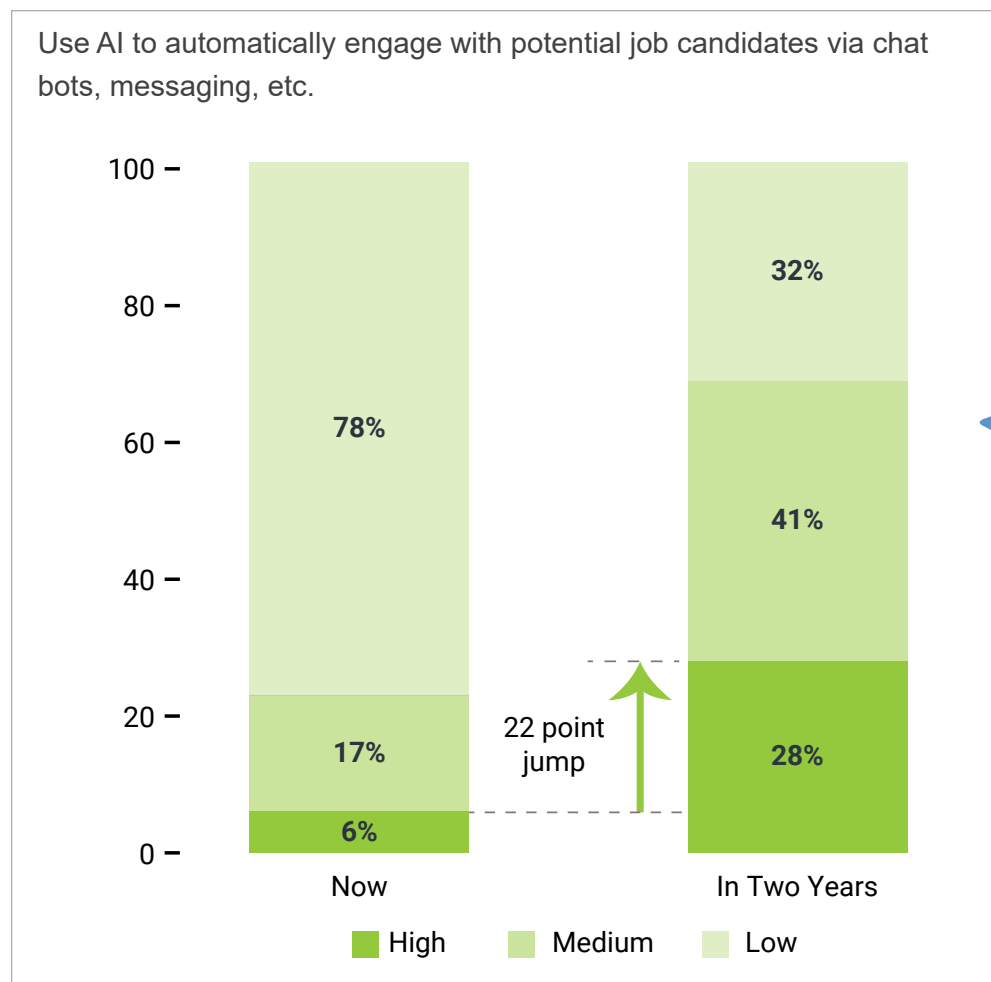


HR professionals foresee a jump in the usage of AI to create alerts based on social media posts

To engage candidates

Twenty-eight percent of participants say that, within two years, AI will be used to a high extent to automatically engage with potential job candidates via chat bots, messaging, etc. Today, AI is being used to this extent for this purpose by 6% of respondents.

As a means of candidate sourcing, the use of chatbots is *least* widely predicted to be highly used in the near future. This may be because chatbots are often viewed as having an “annoyance” factor when used in certain contexts. Candidates could get “turned off” chatbots that cannot answer their questions or offer the personal touch that a human brings to the table. As we’ll see later in the report, many HR professionals are concerned that AI could “dehumanize” sourcing and recruitment. The use of chatbots in the wrong contexts could be a case in point.



Respondents predict that within two years, 28% will make high use of chat bots and messaging to automatically engage with candidates

AI for Candidate Assessments

Assessments have long been a staple of the candidate selection process. Talent acquisition professionals sometimes use a variety of assessments in efforts to develop reasonably objective data about candidate skills, proficiency, motivations, personality and culture fit. In general, the goal of candidate assessments is to provide as much information as possible to allow both talent acquisition teams and hiring managers to make the best possible choices.

The assessment process also poses several challenges. Some assessments tend to carry more weight than others. Assessments may also be difficult or complex to interpret.

But this section does not just focus on assessment tools per se but rather than on the assessment of candidates in general. That is, it is concerned with how organizations can decide which candidates might make the best hires.

AI holds the potential to synthesize data from multiple sources into a cohesive data set, allowing talent acquisition professionals and hiring managers to see the “big picture” of a candidate’s potential for success. This potentially keeps them from becoming mired in the details of multiple isolated data points.

To learn more about how AI is used for candidate assessments, we posed a series of questions to our participants that lead with the following question: “For the purpose of candidate assessments in your organization, to what extent is AI being used today and to what extent will it be used two years from now in the following ways? (please provide your best estimate).”

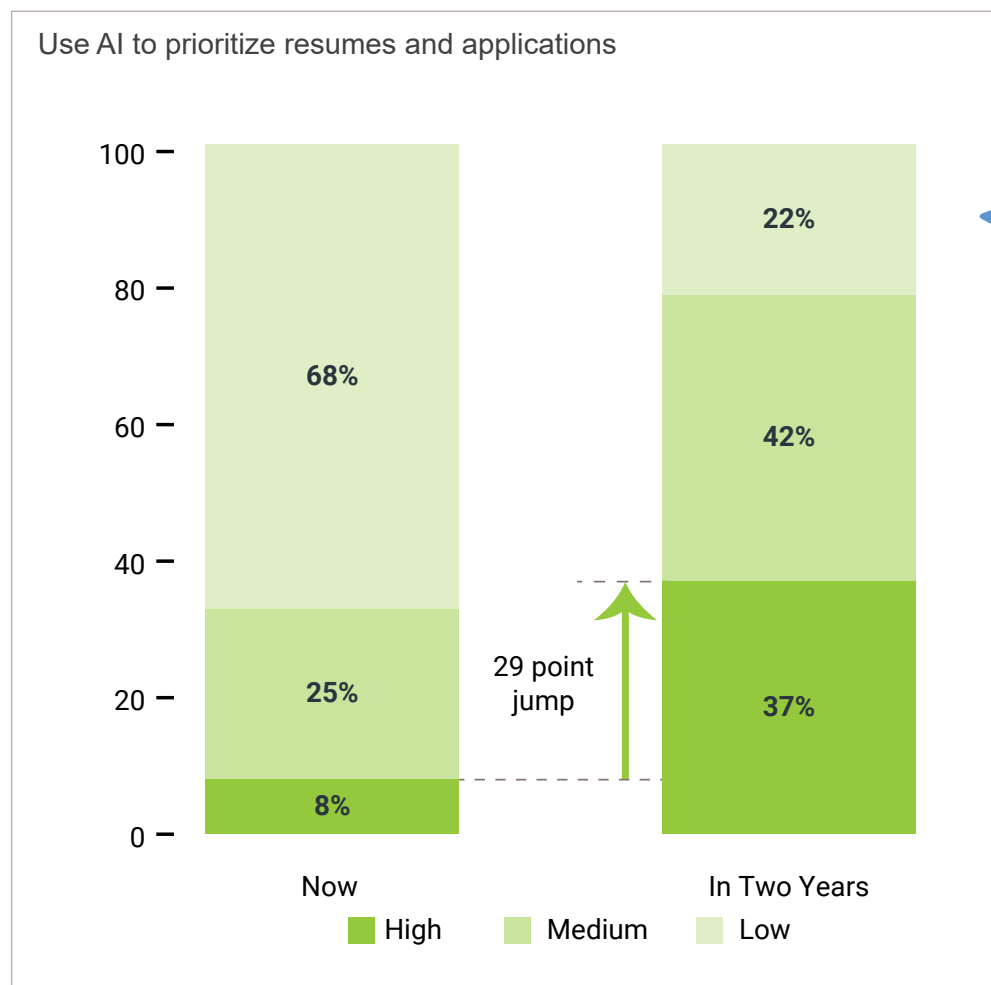
What follows is the breakdown of the various sub-parts to the main question.



To prioritize resumes and applications

Thirty-seven percent of participants say that, within two years, AI will be used to a high extent to prioritize resumes and applications. Today, AI is being used to this extent for this purpose by only 8% of respondents.

Not all resumes are created equal, and the website Glassdoor [reports](#) that there is an average of 250 resumes for any given corporate job opening. Talent acquisition professionals need to find the best one quickly and efficiently. The challenge humans confront when reviewing resumes is about more than just the volume and lack of time. Humans also bring a series of biases to their work. For most professionals, the biases are not intentional. But they are real, and bias in the hiring process creates exposure to claims of unfair hiring practices.



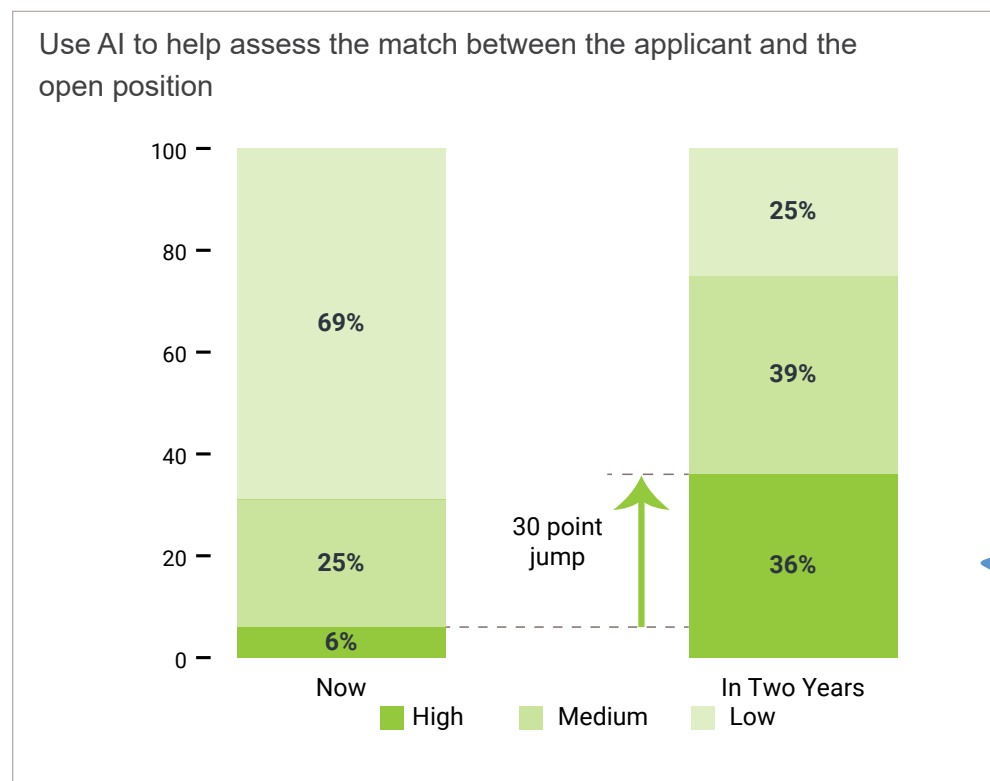
Less than one-in-four believe AI will be used to a *low* degree to prioritize resumes in two years

To assess the match with the opening

Thirty-six percent of participants say that, within two years, AI will be used to a high extent to help assess the match between an applicant and an open position. Today, AI is being used to this extent for this purpose by 6% of respondents.

This is the second facet of candidate assessment where over a third of participants see AI being highly utilized in two years. That is a six-fold increase over current high levels of usage.

Perhaps this confidence stems from widely known AI applications such as e-commerce (matching buying history to new products), display advertising (ads are shown based on assessments of interest and behaviors) and music apps like Pandora (music played gets refined as users access songs and artists). Each of these applications connects a user (e.g., applicant) to content that matches user's profile and traits (e.g., open positions).



Thirty-six percent expect to make high use of AI to help assess the match between a candidate and the job requirements of an open position

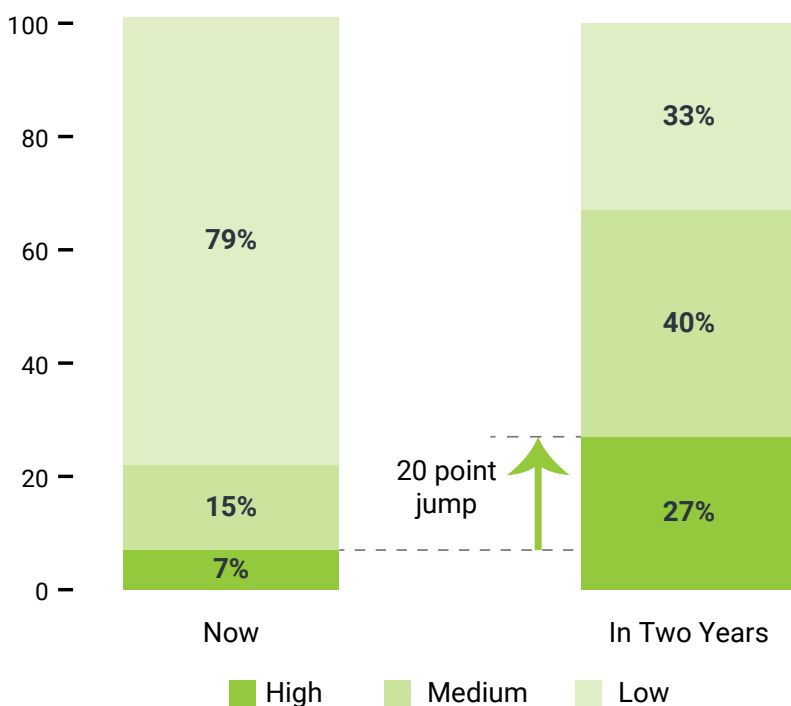
To assess the cultural match

Twenty-seven percent of participants say that, within two years, AI will help assess the match between the applicant and the organization's culture. Today, AI is being used to this extent for this purpose by 7% of respondents.

Culture can be a difficult and complex element of jobs to quantify or express as data. Moreover, cultures tend to be unique to specific organizations. This reality may help explain why only 27% of the participants believe that in two years AI will be used to a high extent for matching candidates to culture. There are probably more hurdles to overcome in this area than in, say, prioritizing resumes based on skill sets.



Use AI to help assess the match between the applicant and the organization's culture



About a quarter foresee that AI will be used to a high degree in assessing the match between a candidate and the culture

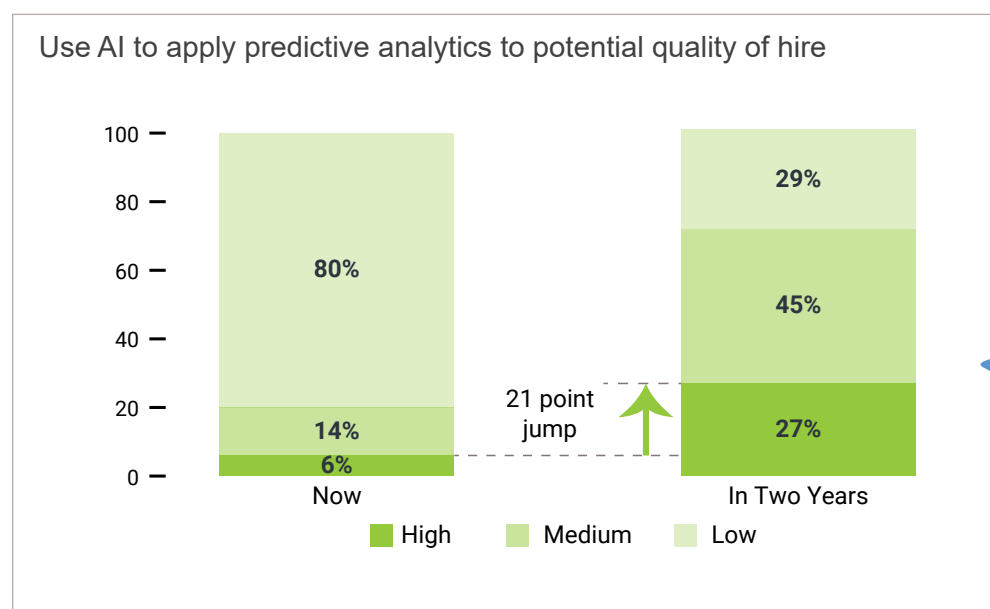
To apply predictive analytics

Twenty-seven percent of participants say that, within two years, AI will apply predictive analytics to potential quality of hire. Today, AI is being used to this extent for this purpose by 6% of respondents.

Although survey participants see a sizeable jump in high usage in two years, it is not as high a jump as expected in various other areas. We find this interesting because machine learning can be viewed as a branch of predictive analytics. In some contexts, it's virtually the same thing. Indeed, in his book *Predictive Analytics: The Power to Predict Who Will Click, Buy, Lie, Or Die*, author Eric Siegel notes, "Learning how to predict from data is sometimes called *machine learning*."¹

In theory, machine learning could become a very useful tool for predicting which job candidates could become the best hires. On the other hand, machine learning tends to require rich source data from which to learn, and this data can change from company to company. Moreover, designations of "quality" can be subjective. So, perhaps HR professionals are correct to maintain a certain level of skepticism here.

On the other hand, as we will see later in this report, predictive analytics is one of the primary AI-related tools that HR professionals believe has high potential to improve talent acquisition processes.



Today, four out of five make low use of AI for predictive analytics

¹ Siegel, Eric (2013). *Predictive Analytics: The Power to Predict Who Will Click, Buy, Lie, or Die*. Wiley.

To reveal and assess bias

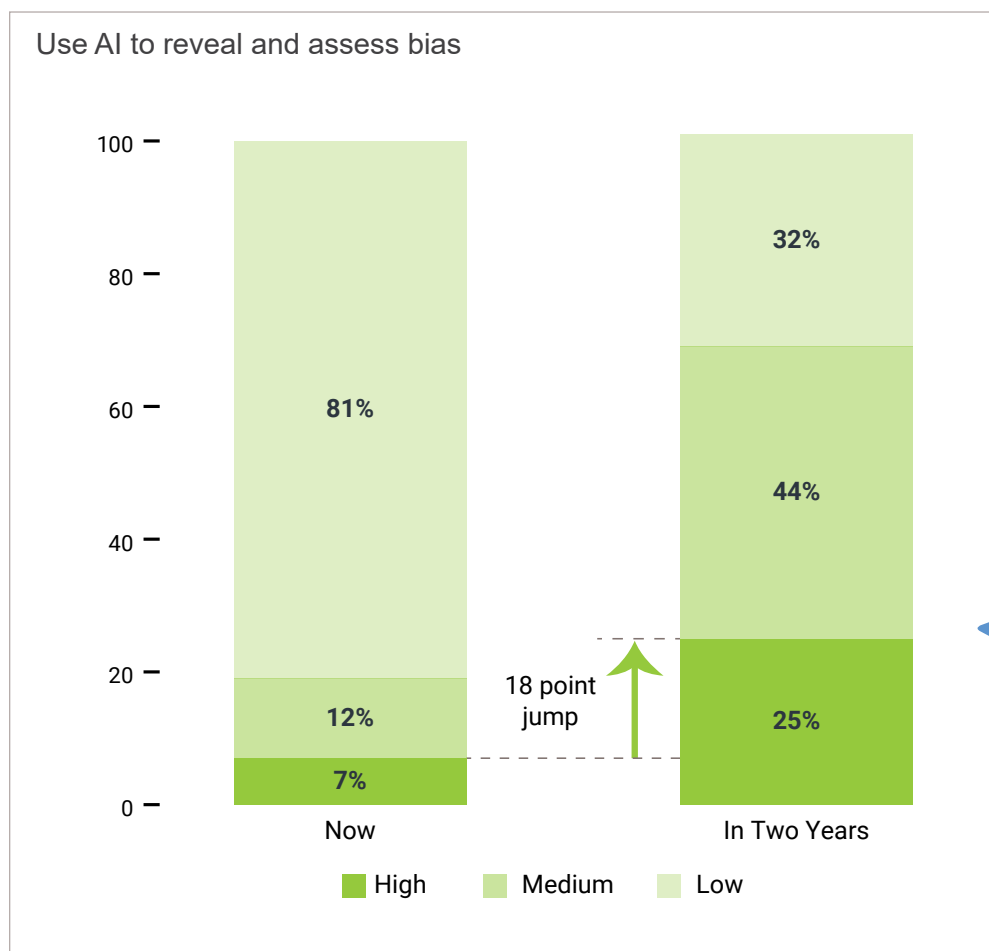
Twenty-five percent of participants say that, within two years, AI will apply artificial intelligence to reveal and assess bias. Today, AI is being used to this extent for this purpose by only 7% of respondents.

In some cases, of course, AI-powered programs have not reduced hiring bias but actually replicated it. For instance, when online retailer Amazon built a program to review job applicant resumes, it discovered that the program was exhibiting bias based on gender. Why? Because the program was trained to filter applicants by using years of data during which the majority of resumes were received and then passed along for interviews by men. So, the AI was screening resumes using a built-in bias in favor of men resulting in gender bias.²

HR and talent acquisition practitioners already struggle with unconscious bias, of course, and AI tools may offer the illusion of being strictly data-based. As with any other data-driven tool, however, bad data in results in bad data out.

This does not mean that all future systems will be biased, but it does illustrate the challenges inherent in creating such systems. It will be incumbent on organizations to strip away such bias in the data their AI tools use.

² Dastin, Jeffrey (2018, October 9). "Amazon Scraps Secret AI Recruiting Tool That Showed Bias Against Women, Reuters. Retrieved from <https://www.reuters.com/article/us-amazon-com-jobs-automation-insight/amazon-scraps-secret-ai-recruiting-tool-that-showed-bias-against-women-idUSKCN1MK08G>

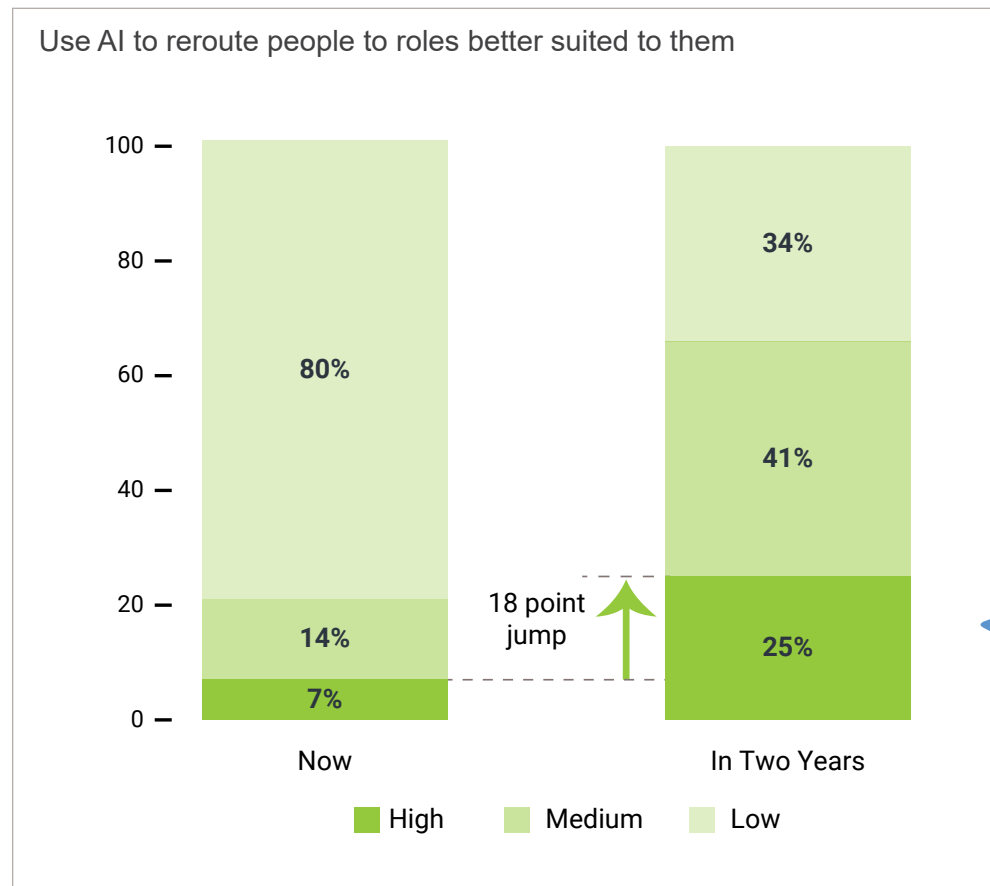


About a quarter foresee that AI will be used to reveal and assess bias to a high degree



To reroute candidates

Twenty-five percent of participants say that, within two years, AI will reroute people to roles better suited to them. Today, AI is being used to this extent for this purpose by 7% of respondents.



AI is expected to play a growing role in rerouting candidates to appropriate job postings

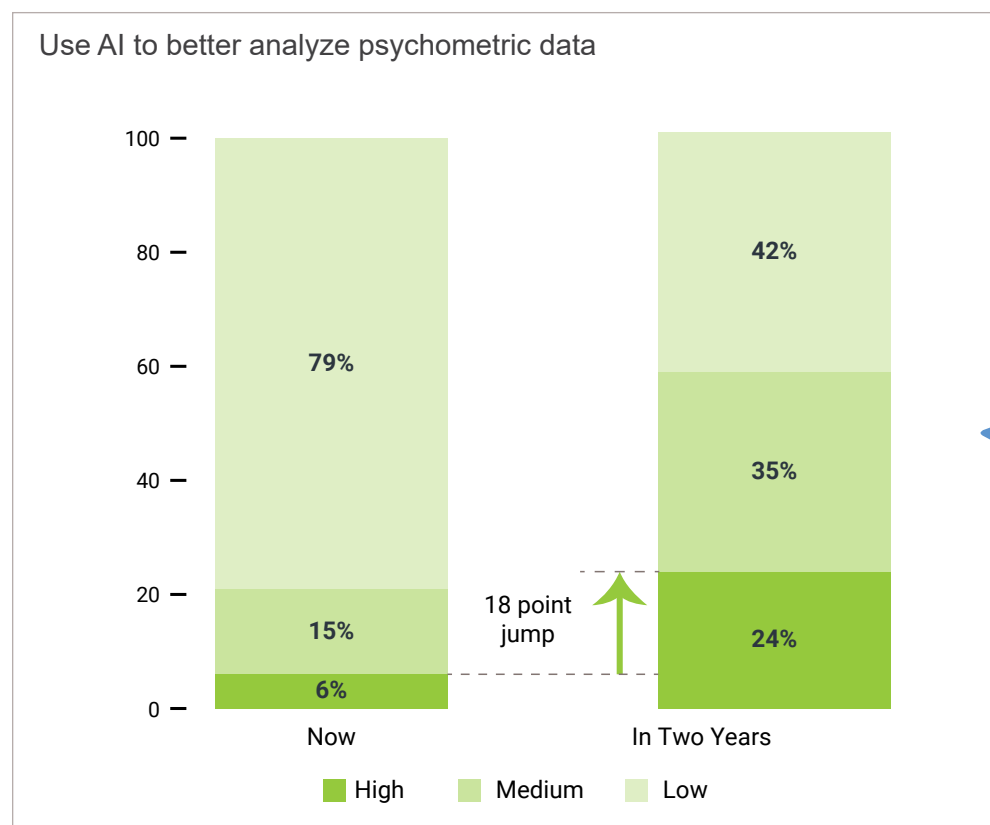


To analyze psychometric data

Twenty-four percent of participants say that, within two years, AI will allow for an improved ability to analyze psychometric data. Today, AI is being used to this extent for this purpose by 6% of respondents.

Psychometric testing and the resulting data generally needs to meet certain criteria. U.S. law allows employers to administer “professionally developed ability tests.” Personality tests are also permitted under the law, but these types of tests must be administered and used in non-discriminatory ways. The final, and probably most important requirement, is that any assessment must be job-related for the position at issue and consistent with a business necessity.³

As long as AI can be used to analyze such data in ways that are valid and permissible, it may become a more useful tool in the future.

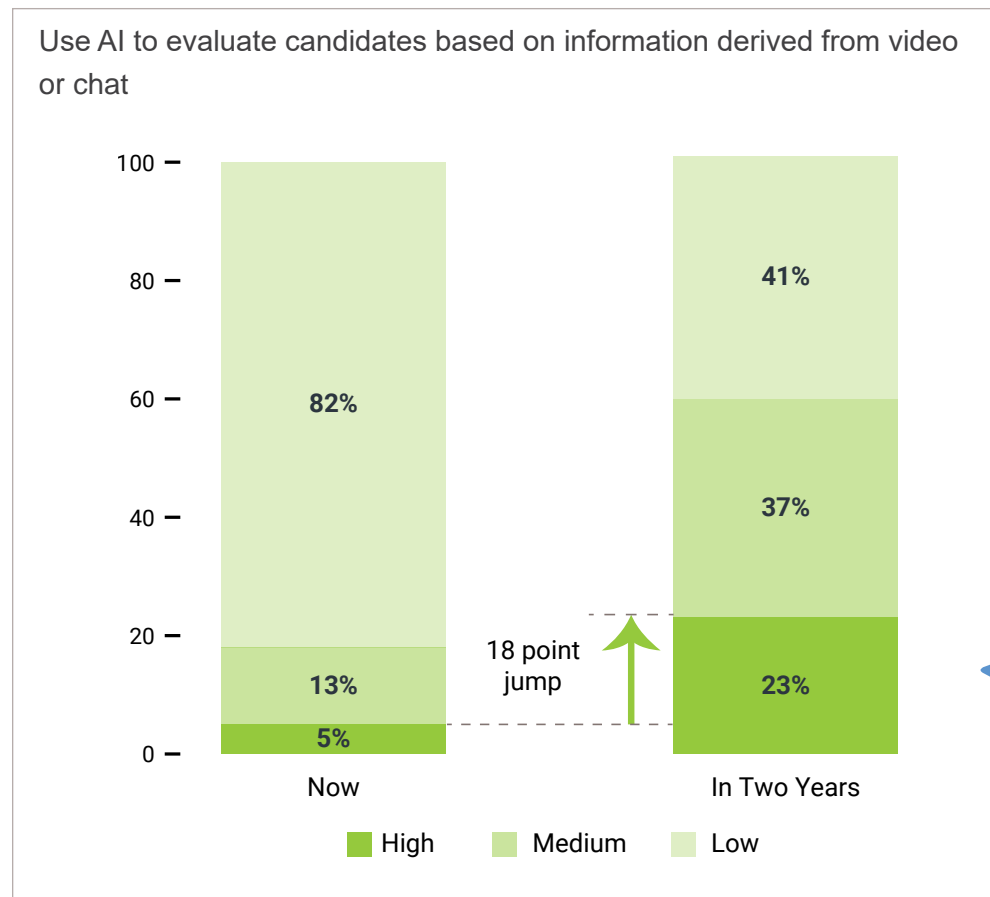


About one in four say AI will play a substantial role in analyzing psychometrics data in two years

³ Anderson, Matt. (2018, April 10). HR Law Matters. Retrieved from <https://www.hrlawmatters.com/2018/04/legal-implications-employee-personality-testing/>

To evaluate candidates based on video or chat

Twenty-three percent of participants say that, within two years, AI will help companies evaluate candidates based on information derived from video or chat. Today, AI is being used to this extent for this purpose by 5% of respondents. HR professionals seem less confident about AI's abilities here compared to various other recruitment tasks.



Twenty-three percent believe AI will be used to a high degree to evaluate candidates based on information from video or chat

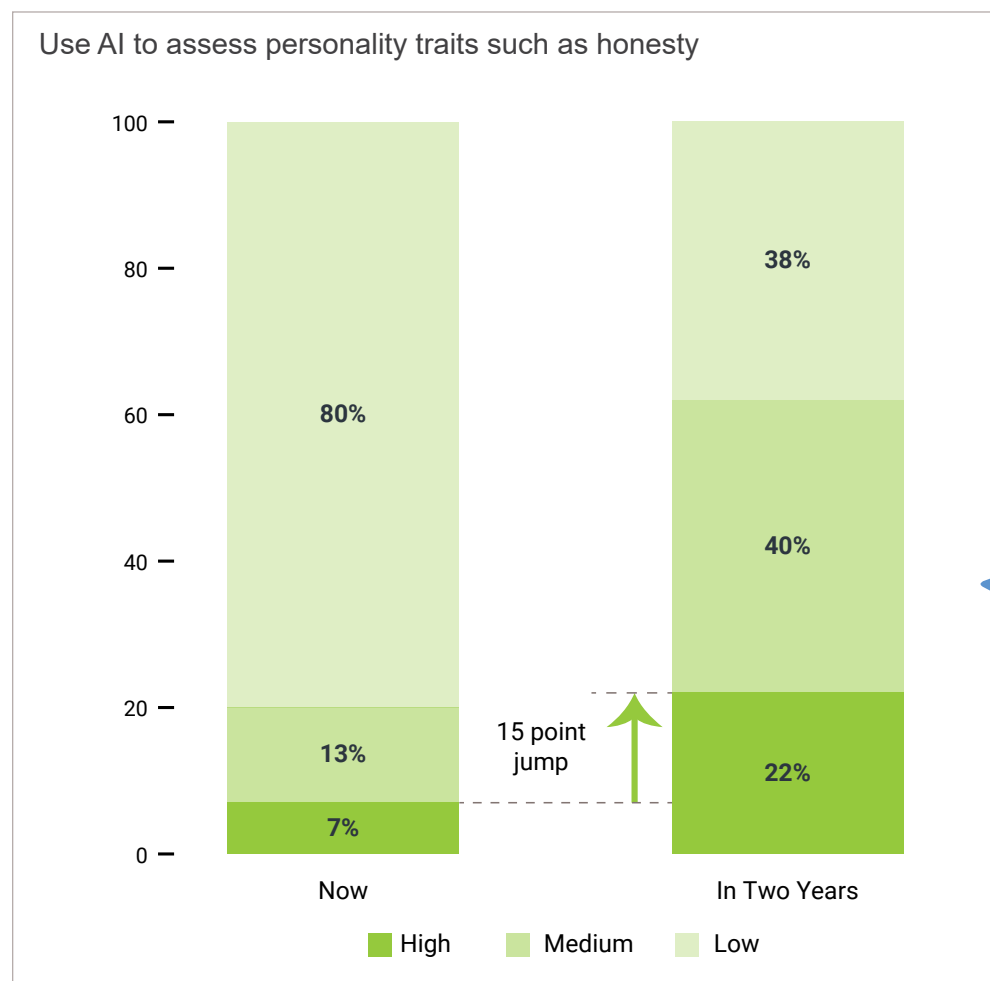


To assess personality traits

Twenty-two percent of participants say that, within two years, AI will help companies assess personality traits such as honesty. Today, AI is being used to this extent for this purpose by 7% of respondents.

Candidate personality traits might be important to hiring managers and talent acquisition professionals. But personality is difficult to quantify, and as such, the participants appear to be less optimistic about AI's ability to assess personality traits than, for example, its ability to prioritize resumes and applications.

Another potential issue is that HR professionals may believe—to the extent they use them—that current assessments work well enough without the need for additional help from artificial intelligence.



Slightly more than one-in-five predict AI will be used to assess personality traits to a high degree

AI for Candidate Interviews

The interview is a crucial stage in the candidate selection process. Interviews have always been an integral part of the recruiting process, and the interview still holds a central place in the process. However, interviews are also a stage in the process where talent acquisition professionals and hiring managers alike have been known to make mistakes.

In fact, another HR.com [report](#) finds that that, on average, HR professionals would not rehire 31% of their recent hires if given the chance to do it again. This is a high rate of regrettable hires.

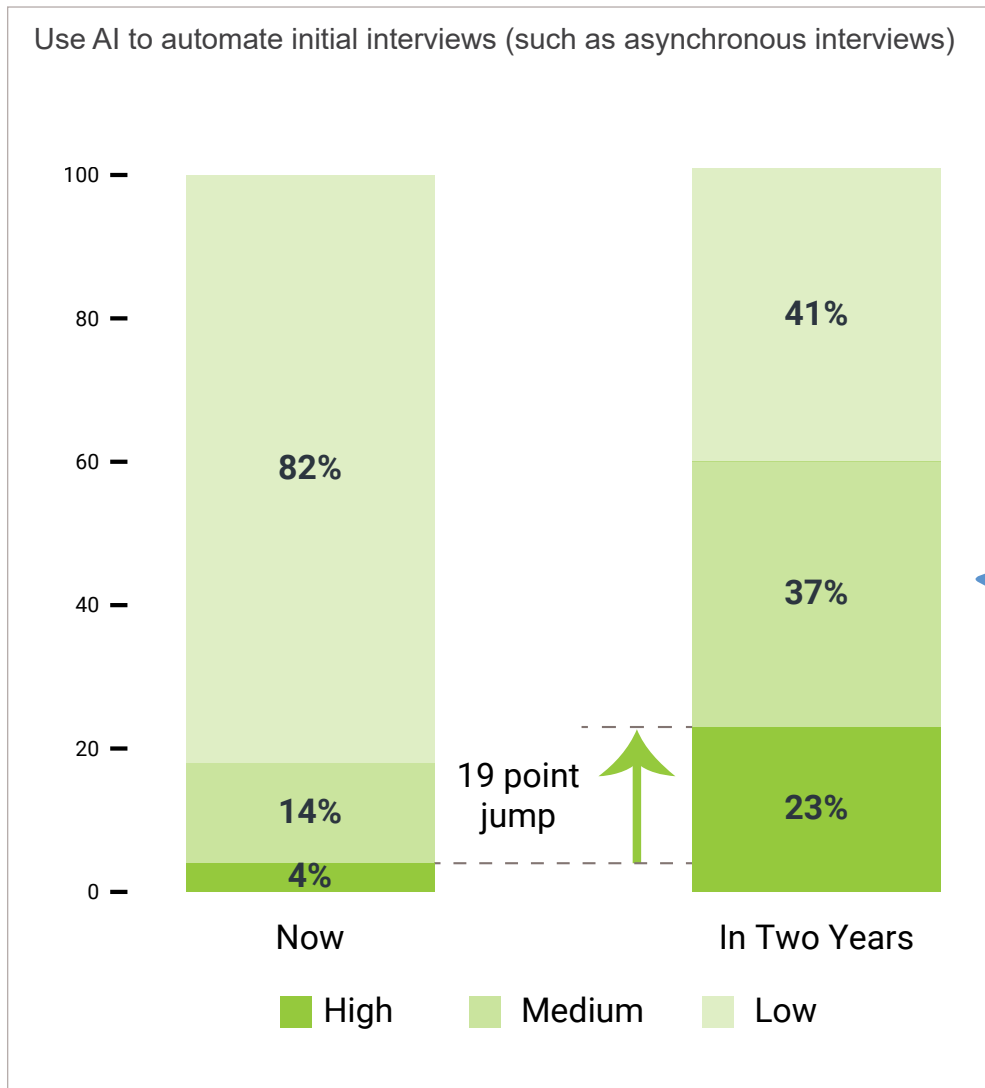
To learn more about AI's role in the candidate interview process, we asked: "For the purpose of candidate interviews in your organization, to what extent is AI being used today and to what extent will it be used two years from now in the following ways? (please provide your best estimate)."

The answers to the sub-parts to this question follow.

To automate initial interviews

Twenty-three percent of participants say that, within two years, AI will allow for automated initial interviews. Today, AI is being used to this extent for this purpose by only 4% of respondents.

Current widely used examples of AI and human interaction such as Alexa or Siri suggest AI isn't at the level where verbal interactions are typically as rich as verbal interactions between people. Indeed, this data indicates that respondents are more skeptical about AI's near-future "interviewing" capabilities than they are about other capabilities, such as sorting resumes. However, if AI's primary responsibility is to simply ask candidates predetermined questions and ensure that interviews are being properly recorded, then we can envision its utility as a tool in the near future.

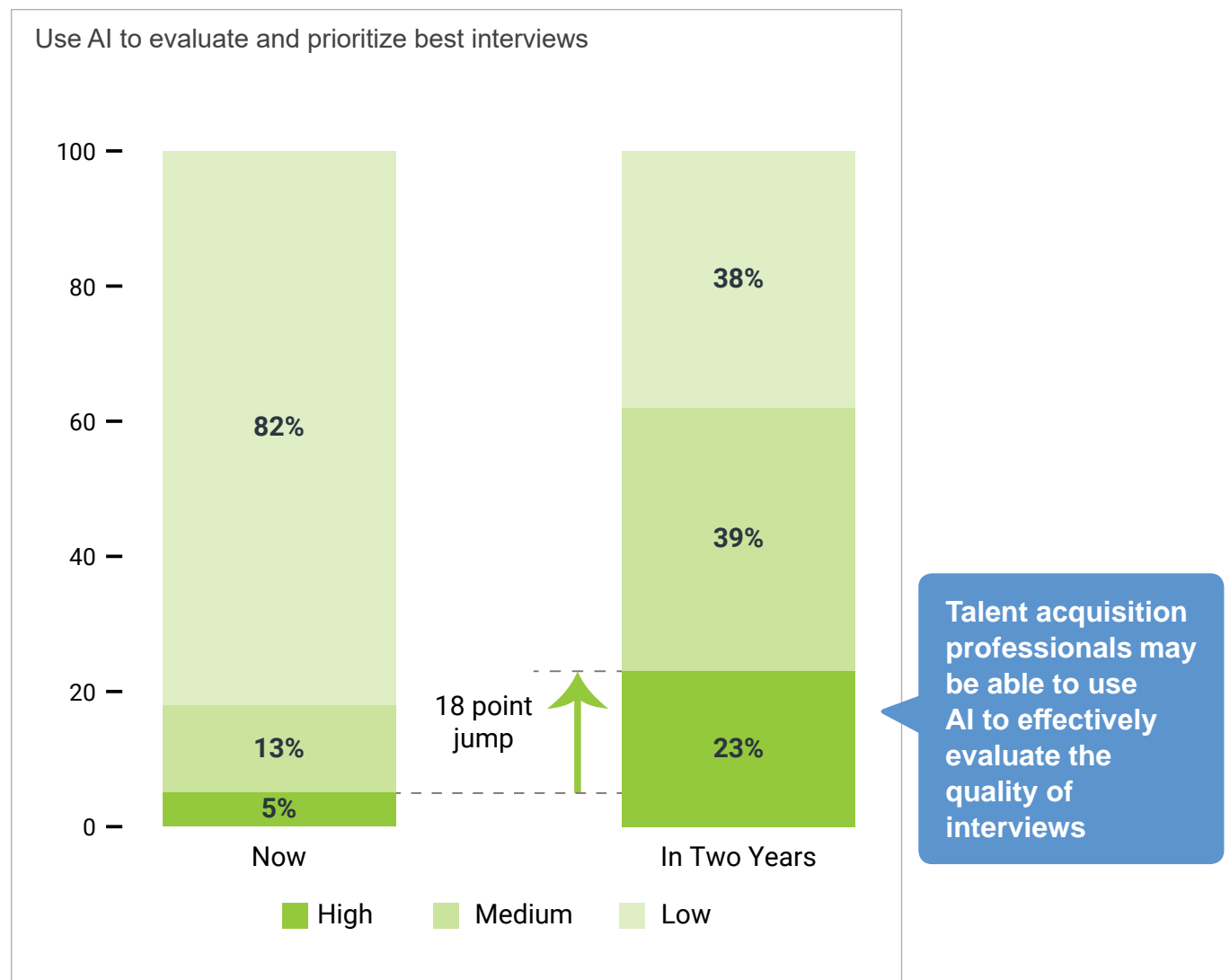


Compared to other areas, AI is predicted to have a less significant role in initial interviews



To evaluate and prioritize best interviews

Twenty-three percent of participants say that, within two years, AI will allow for evaluating and prioritizing best interviews. Today, AI is being used to this extent for this purpose by 5% of respondents. Because this requires a certain amount of educated judgement on the part of AI-based systems, it may be more challenging to achieve in the next two years.



To evaluate candidates

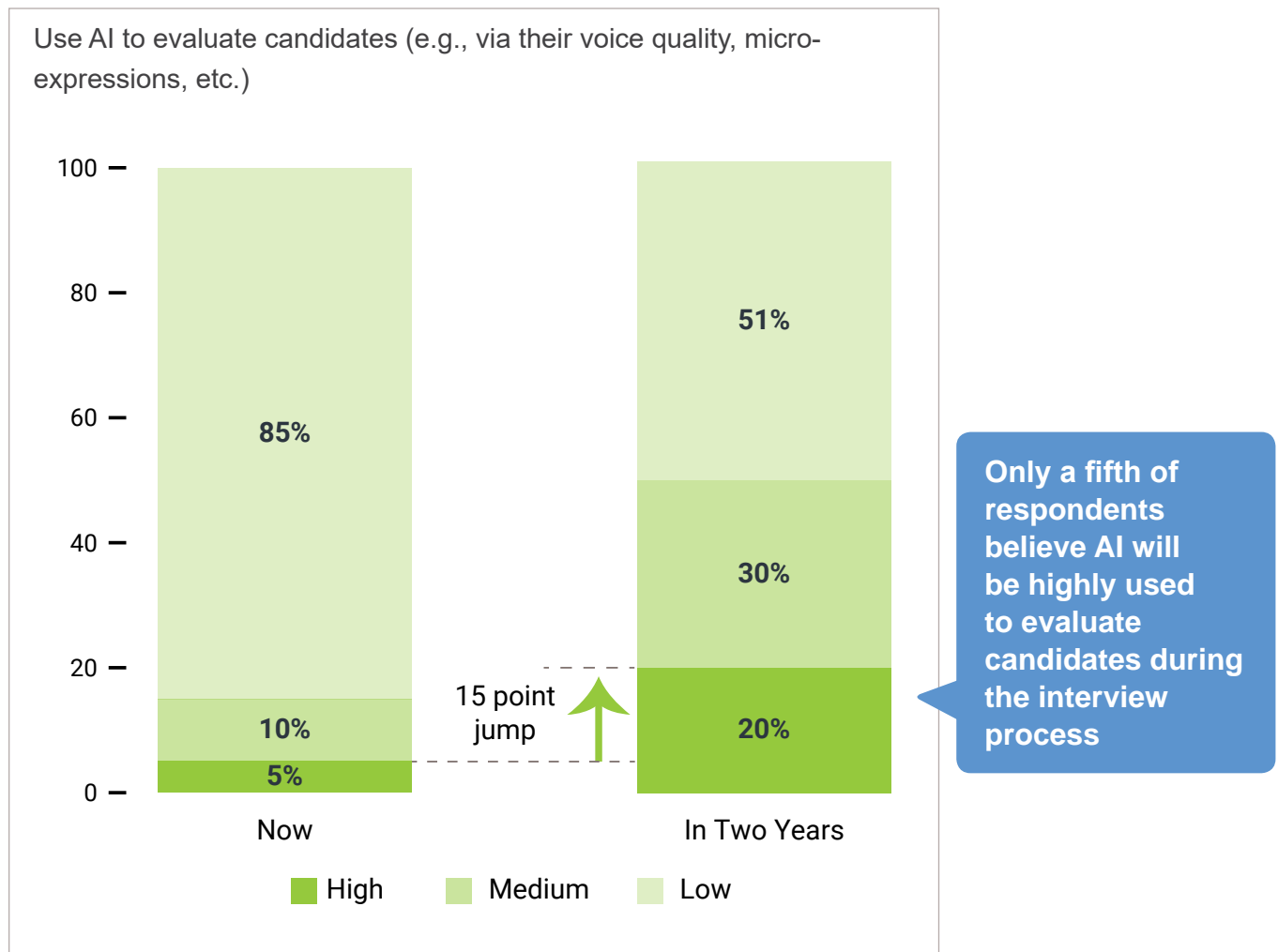
Twenty percent of participants say that, within two years, AI will allow for evaluating candidates based on video and candidate expressions. Today, AI is being used to this extent for this purpose by only 5% of respondents.

Computers powered by machine learning are reportedly able to assess an individual's micro-expressions by watching their face on a video. Potentially, there are many things a computer could pick up on, the obvious ones being emotions such as happiness, fear, surprise, and confusion. In essence, this is no different from what a human interviewer would do. However, the computer can do it for every minute of every interview and record every point of data for use in analysis.

There are three main [points](#) to understand about this technology:

1. It is still a new technology, which means there are many questions organizations will need to grapple with.
2. The value is largely unproven, but it could become important in candidate assessment, especially when paired with the right questions or right assessment simulations.
3. If it turns out to be a viable technology, it could become a relatively inexpensive option that comes as a standard component of many interviewing platforms.





AI for Candidate Selection

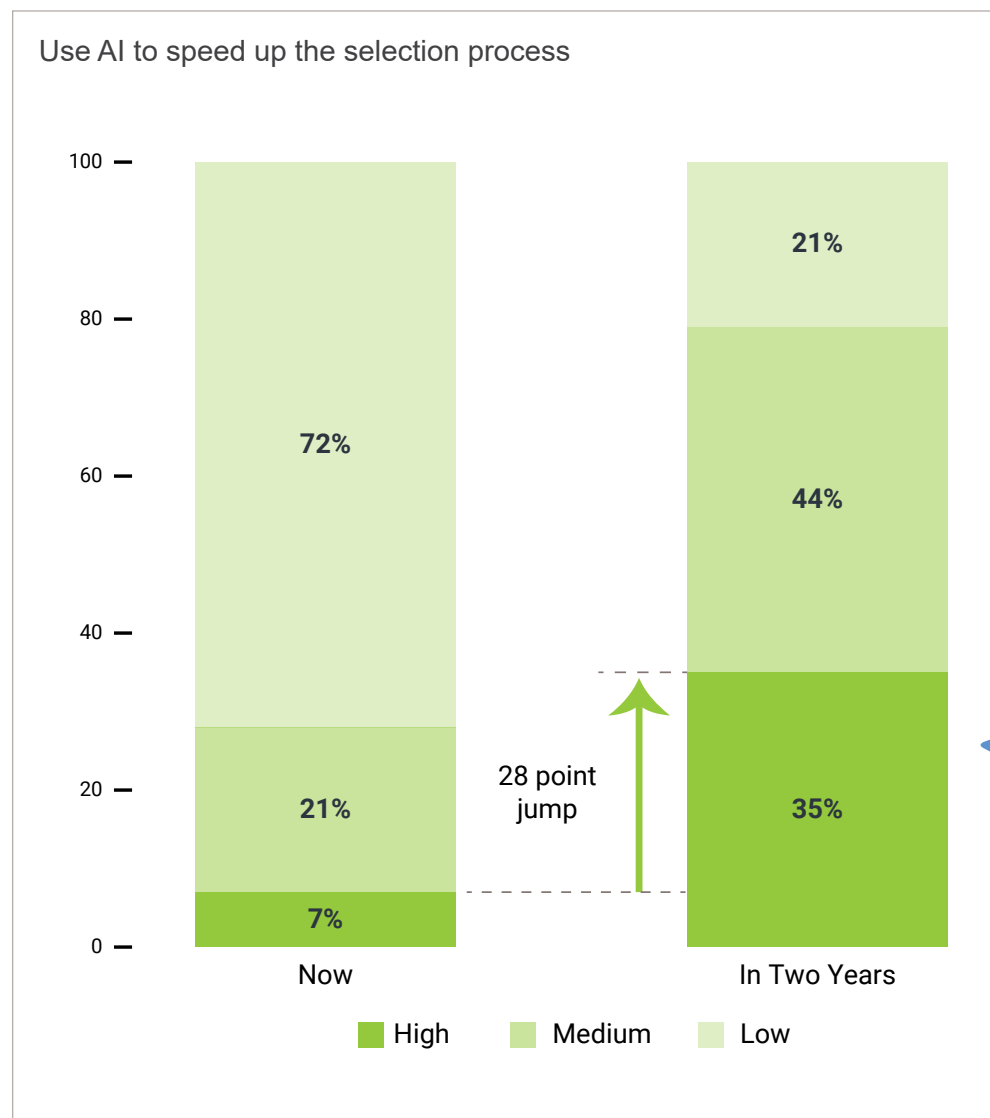
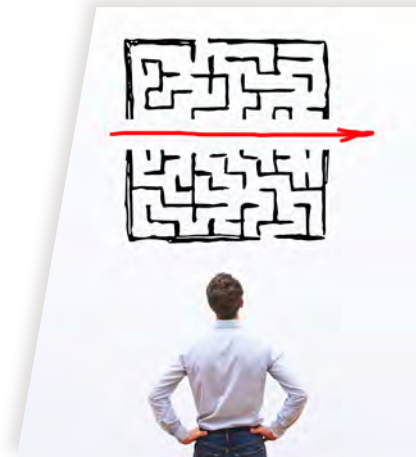
The selection of candidates represents the final decision-making stage of the talent acquisition function. As such, organizations frequently subject these decisions to more scrutiny than any other separate stage.

To learn more about how AI is currently used in candidate selection today and to see what participants think may happen in the next two years, we asked: “For the purpose of candidate selection in your organization, to what extent is AI being used today and to what extent will it be used two years from now in the following ways? (please provide your best estimate).” The answers to the sub-parts to this question follow.

To speed up the selection process

Thirty-five percent of participants say that, within two years, AI will speed up the selection process to a high extent. Today, 7% of respondents see AI offering this benefit to this extent.

The selection process for candidates can take substantial time, and this can be costly. While job roles remain vacant, productivity suffers and the time to bring a new hire up to speed keeps getting pushed back. So, there are substantial business benefits to finding ways to reduce the time to select the right candidate, and our participants are relatively optimistic about AI's role in speeding up the process.



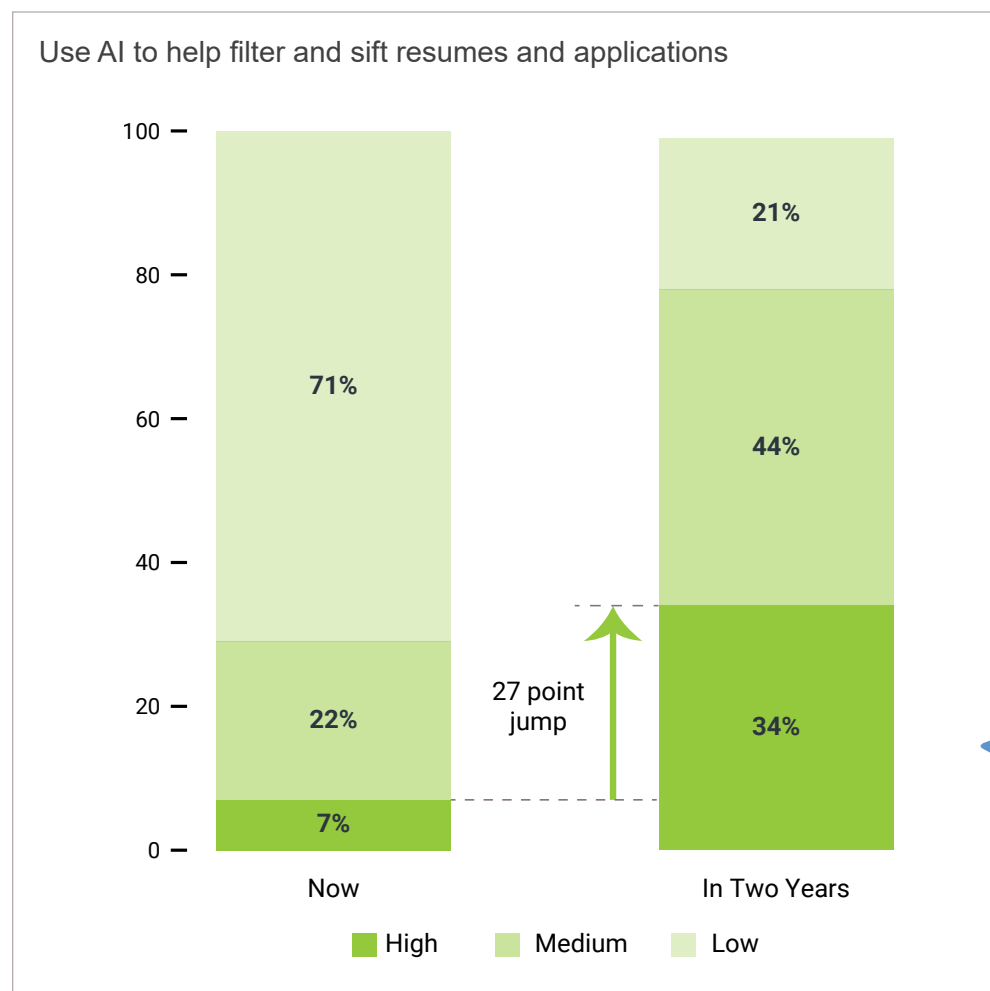
Talent selection appears to be poised to gain speed through AI

To filter and sift resumes and applications

Thirty-four percent of participants say that, within two years, AI will help filter and sift through resumes to a high degree. Today, 7% of respondents see AI offering this benefit to that same extent.

Natural language processing and recognition represent subfields of AI that are concerned with the interactions between computers and natural human languages. This often involves having computers process and analyze large amounts of such data.

Since the average job opening gets, as reported above, an average of 250 resumes, humans can suffer information overload and so miss good candidates. Study participants seem to recognize this AI has the capability of playing a large role here.

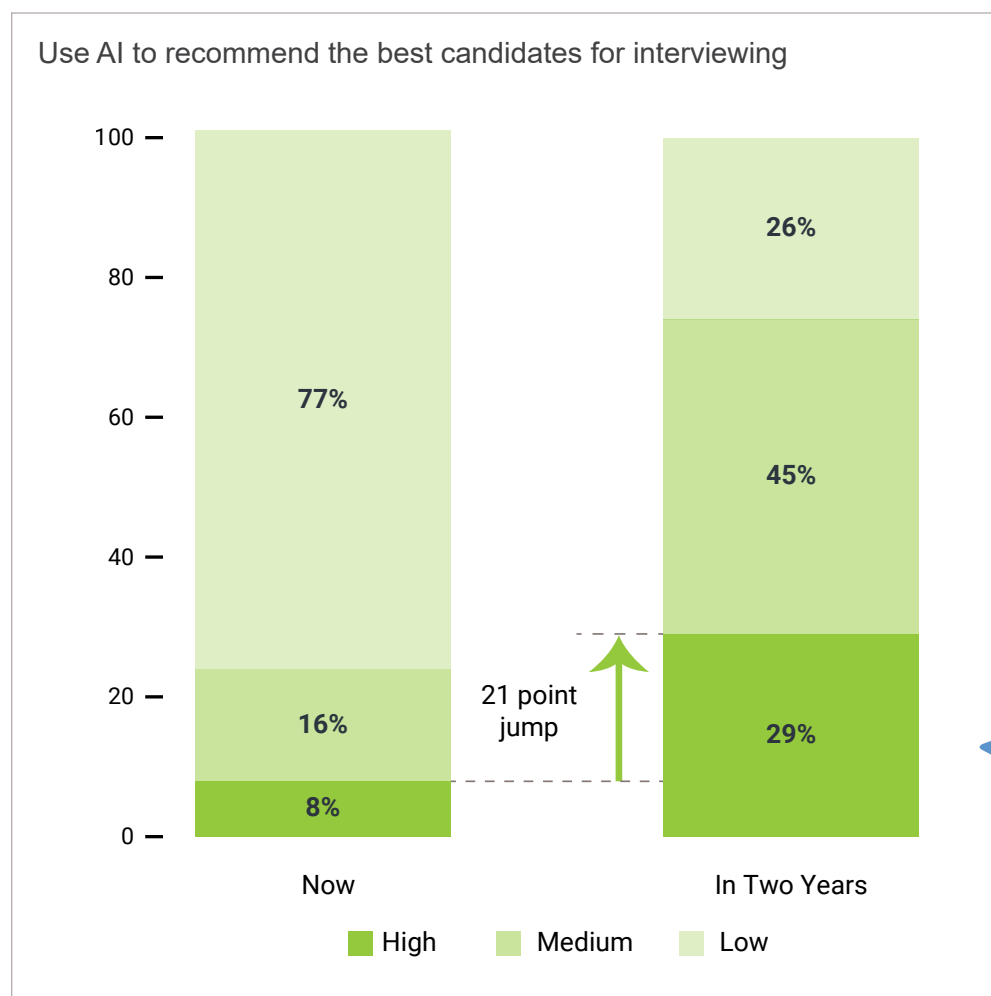


About a third believe AI will be used to a high degree to filter and sift resumes and applications

To recommend the best candidates for interviewing

Twenty-nine percent of participants say that, within two years, AI will help recommend the best candidates for interviewing to a high extent. Today, 8% of respondents see AI offering this benefit to that same extent.

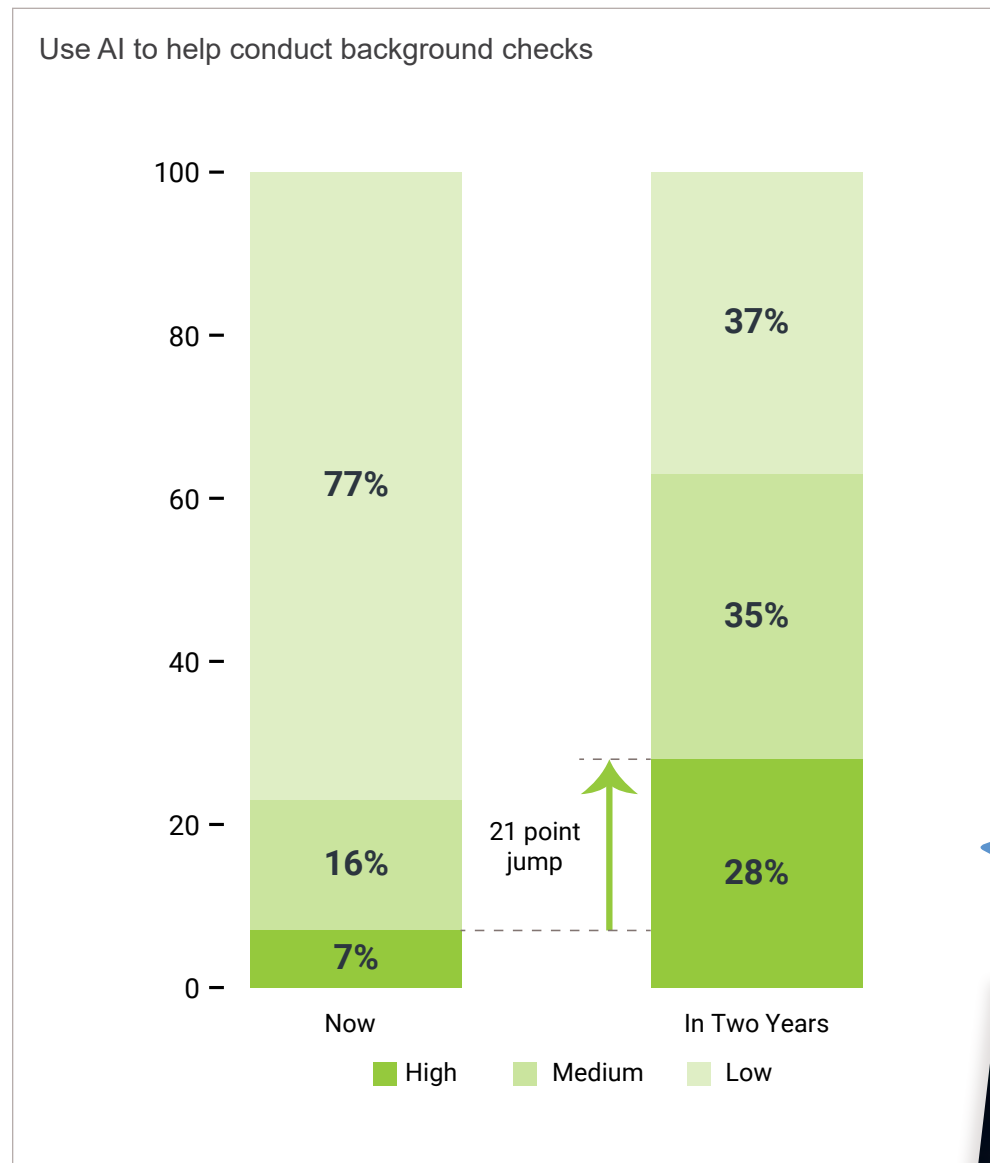
Recommending the best candidates to interview is a pivotal decision in the recruitment process. Such decisions are usually based on a blend of data (skills, competencies, experience, etc.) and judgement (cultural fit, personality, etc.). AI-based programs are likely to get better at making such judgements over time, but it's unlikely that companies will be able to do without the human element anytime soon.



Twenty-nine percent expect that AI will recommend the best candidates for interviewing to a high extent in two years

To help conduct background checks

Twenty-eight percent of participants say that, within two years, AI will help conduct background checks to a high extent. Today, 7% of respondents see AI offering this benefit to that same extent.



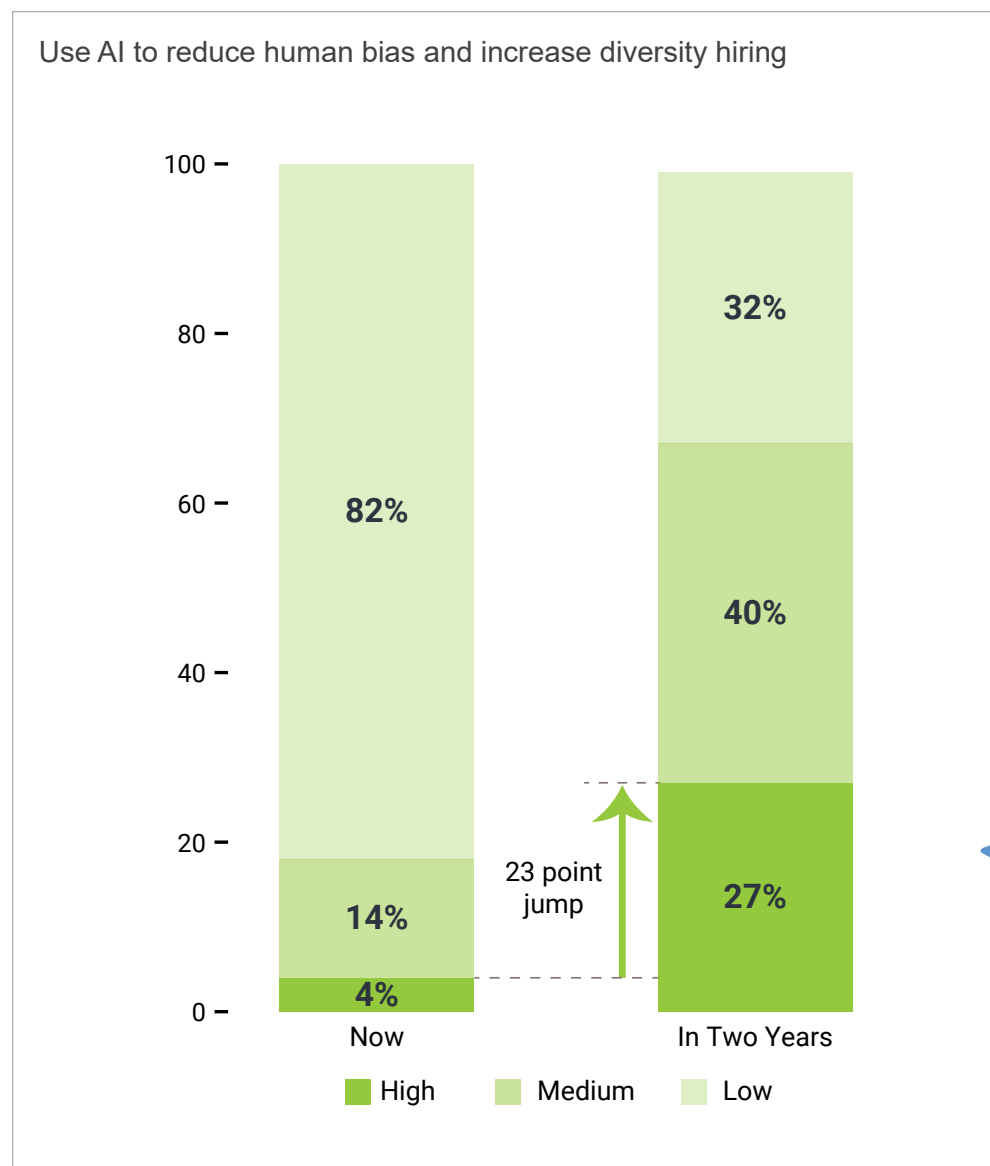
Background checks appear to be an area where talent acquisition professionals will maintain the dominant role



To reduce human bias and increase diversity

Twenty-seven percent of participants say that, within two years, AI will reduce human bias and increase diversity. Today, only 4% of respondents see AI offering this benefit.

We have already discussed the complex relationship between AI and bias. This will be a challenge that will developers in this industry will increasingly try to address. In the end, though, hiring decisions must be made by people who understand the advantages of diversity in today's workplace.



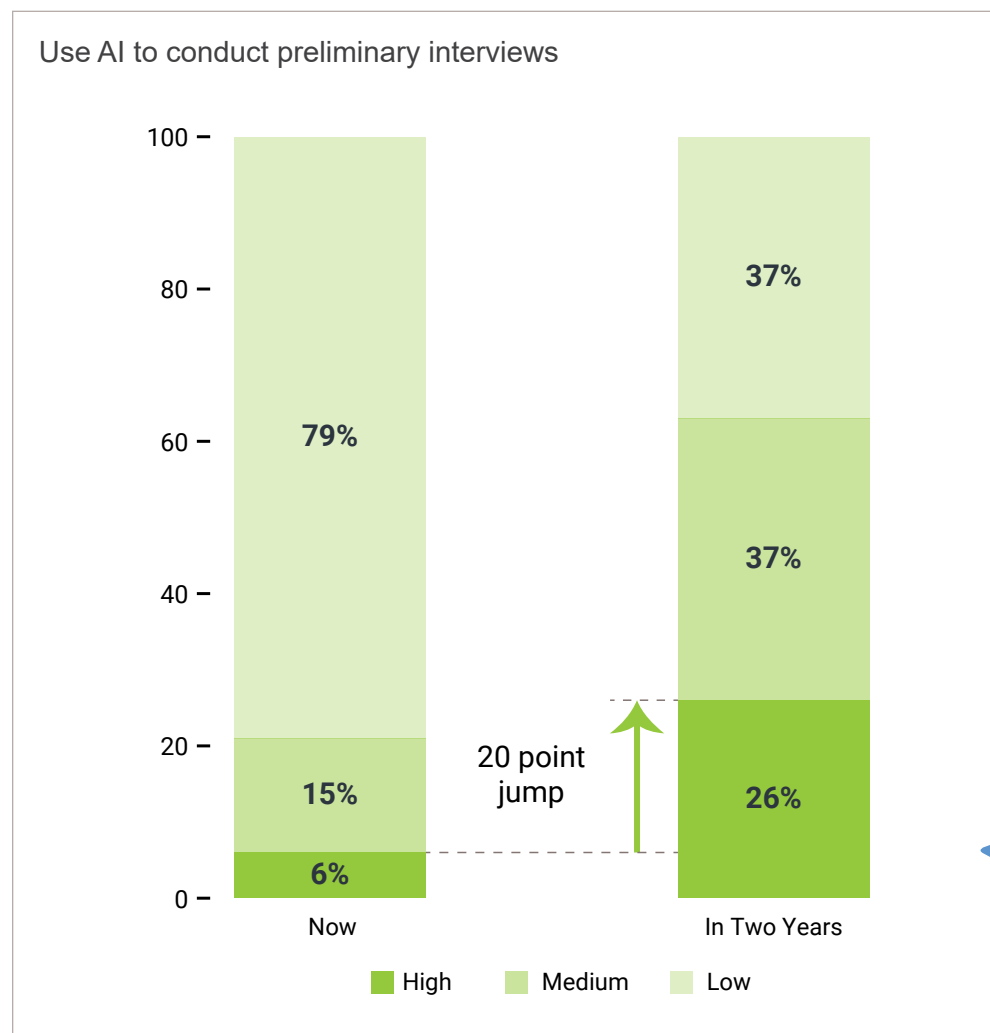
AI currently plays little role reducing human bias and increasing diversity

To conduct preliminary interviews

Twenty-six percent of participants say that, within two years, AI will help conduct preliminary interviews to a high extent. Today, 6% of respondents see AI offering this benefit to that same extent.

If we think about candidate selection as a process, the responses to this survey are fairly consistent. Where data drives the process or decision-making, participants are relatively optimistic about AI's future role. Where the facet of the process or decision-making rests on human judgement, participants tend to be less optimistic about AI's future role.

Interviews, even preliminary screening interviews, do not appear to be a place where AI will see high usage in two years in most organizations.



About a quarter expect AI to help conduct preliminary interviews to a high degree

AI for Onboarding

Onboarding is a critical step in the employee life-cycle. Effective onboarding improves employee retention, productivity and engagement. It's an employer's chance to make the newly hired candidate feel welcome, confirm their decision and set the stage for long-term success.

Onboarding can also be a mind-numbing procession of forms, policies and processes that can blunt all of the positive energy the newly hired candidate and organization should be feeling. It makes sense, then, that HR professionals should want to automate parts of the process to make it less time-consuming for new hires as well as managers.

AI-related automation in onboarding should create time and space for more substantial human interaction with new hires, which holds the potential of improving onboarding outcomes.

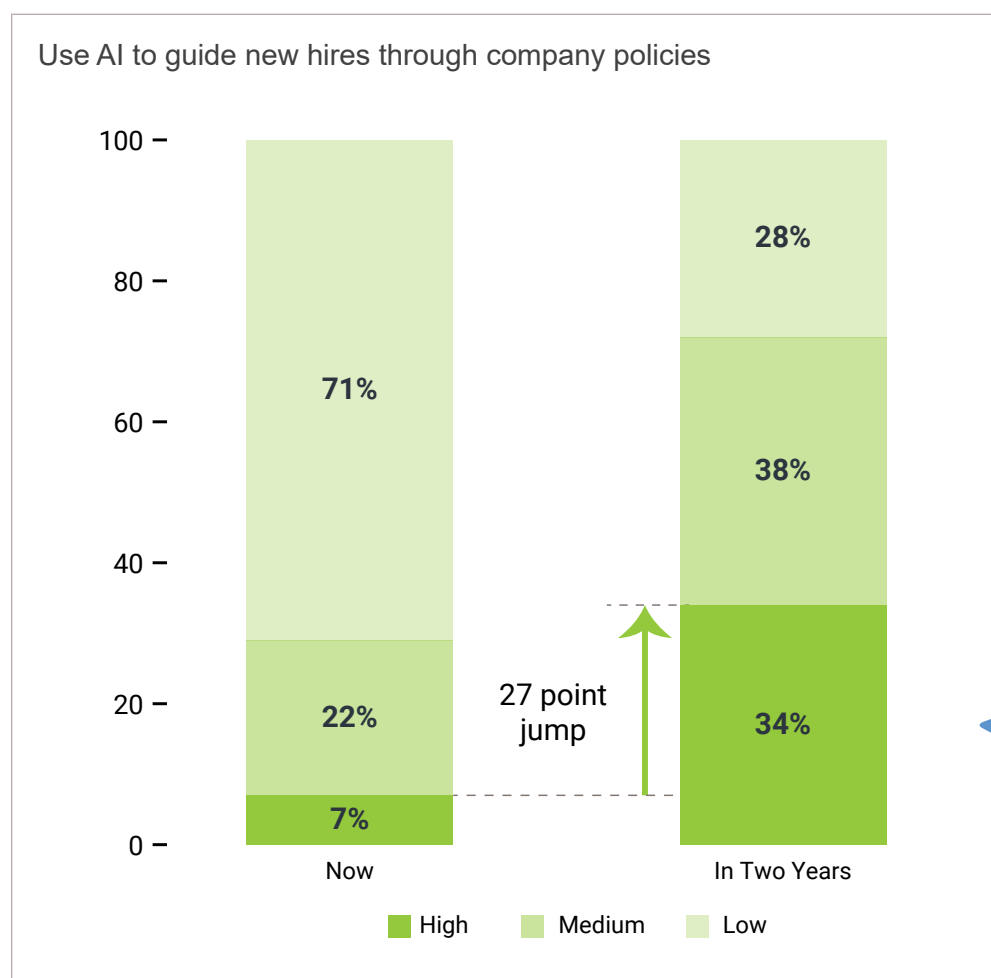
To learn more about AI in onboarding, we posed the following broad question: "For the purpose of onboarding of new hires in your organization, to what extent is AI being used today and to what extent will it be used two years from now in the following ways? (please provide your best estimate)." The answers to the sub-parts to this question follow.



To guide new hires through company policies

Thirty-four percent of participants say that, within two years, AI will guide new hires through company policies. Today, AI is being used to this extent for this purpose by 7% of respondents.

This finding is supported by another HR.com research report, [The State of HR Automation in Today's Large Organizations](#). In that report, when participants were asked about what HR functions their firms are most likely to automate over the next two years, the most commonly given answer was onboarding.

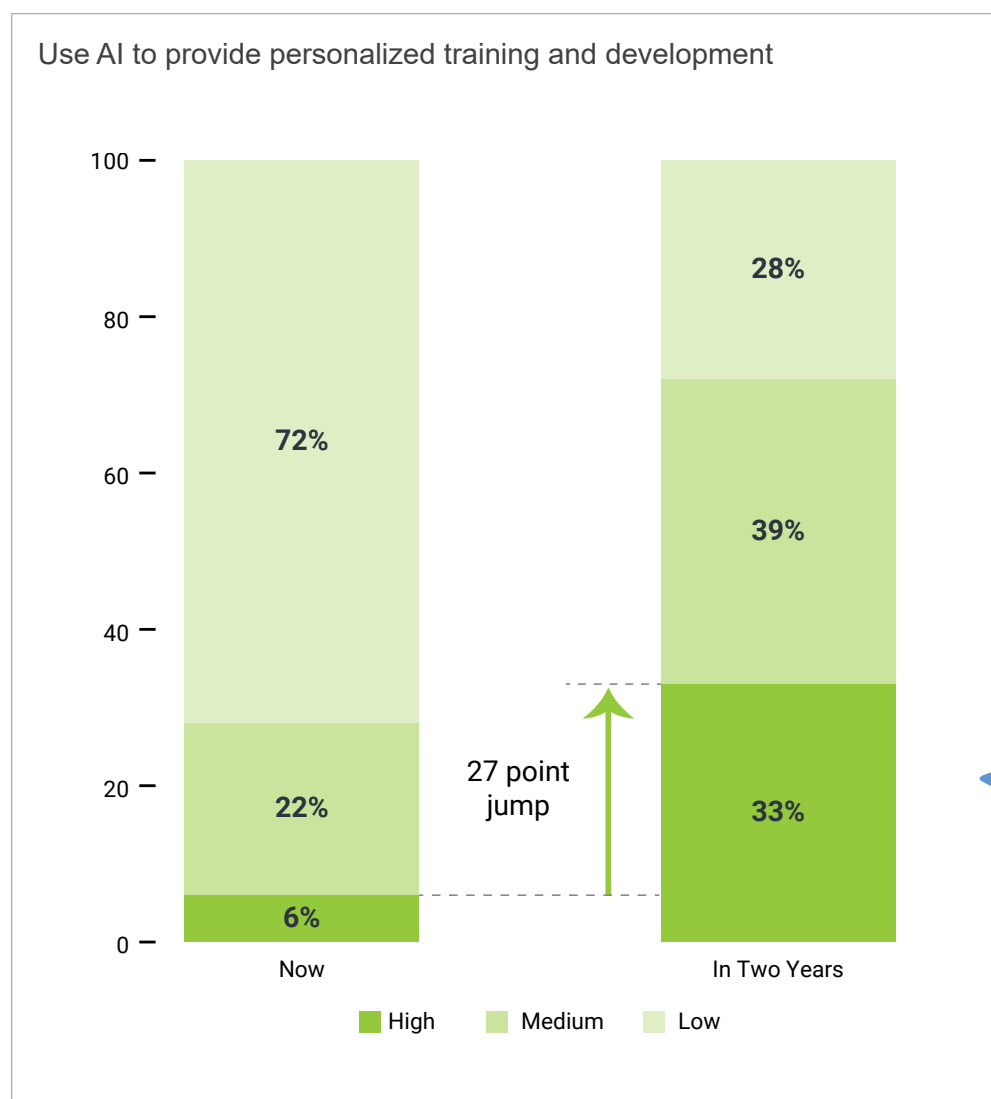


Over a third expect AI to help new employees learn about company policies and procedures to a high extent

To provide personalized training and development

Thirty-three percent of participants say that, within two years, AI will provide personalized training and development to a high extent. Today, AI is being used to this extent for this purpose by 6% of respondents.

A sizeable segment of the learning technology market already provides many tools and methods to personalize the learning experience for employees. Early generations of AI have been used in learning technologies to suggest courses, offer assessments, generate automated playlists based upon skill gaps, etc. As AI continues its evolution, it's likely there will be greater adoption in employee learning and development.

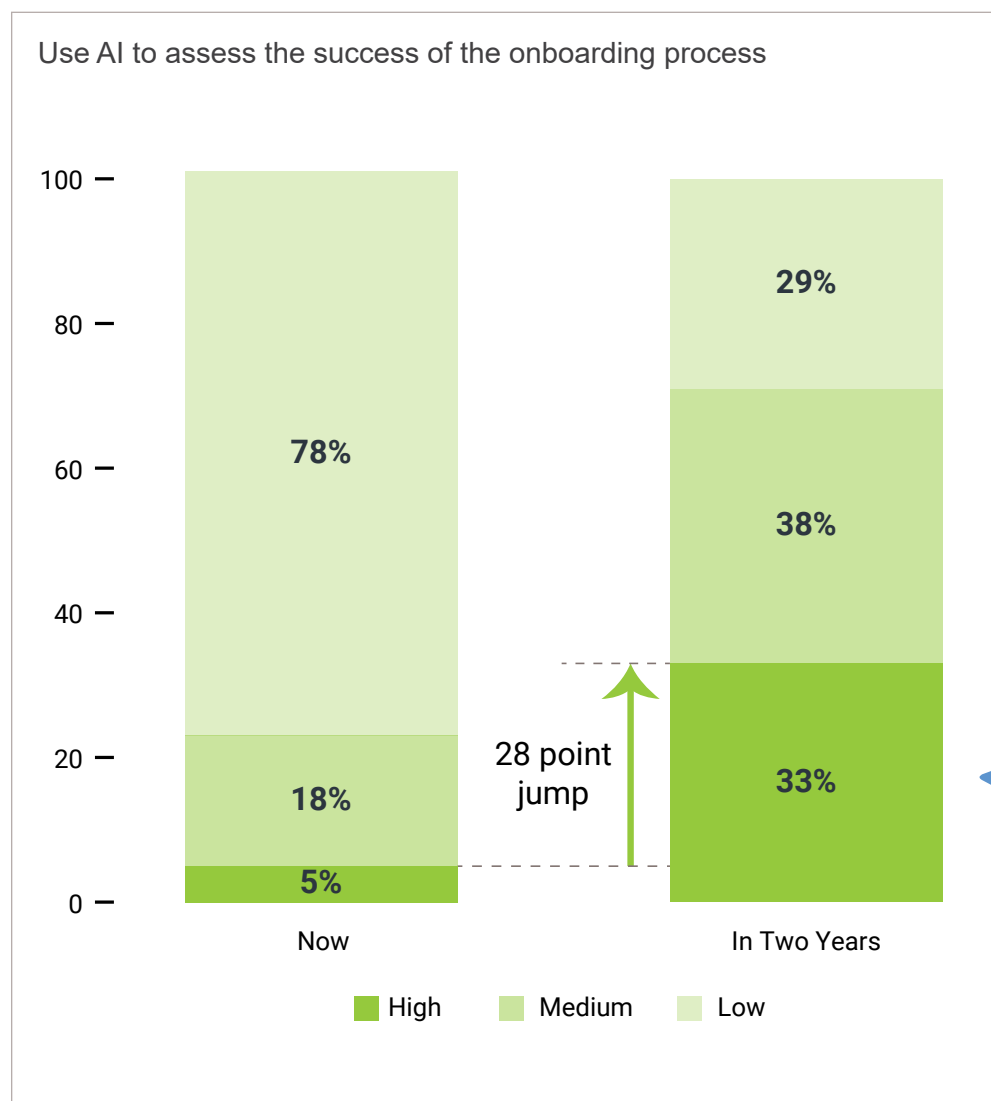


Participants expect a five-fold increase in AI's ability to deliver personalized training to a high extent

To assess the success of onboarding

Thirty-three percent of participants say that, within two years, AI will assess the success of onboarding to a high degree. Today, AI is being used to this extent for this purpose by 5% of respondents.

To gauge the success of onboarding initiatives, some employers use surveys, feedback initiatives or even learning assessments. By leveraging AI, organizations may be able to factor in other issues such as peer support, supervisor support, progress towards learning goals, and the time it takes new hires to reach full productivity.

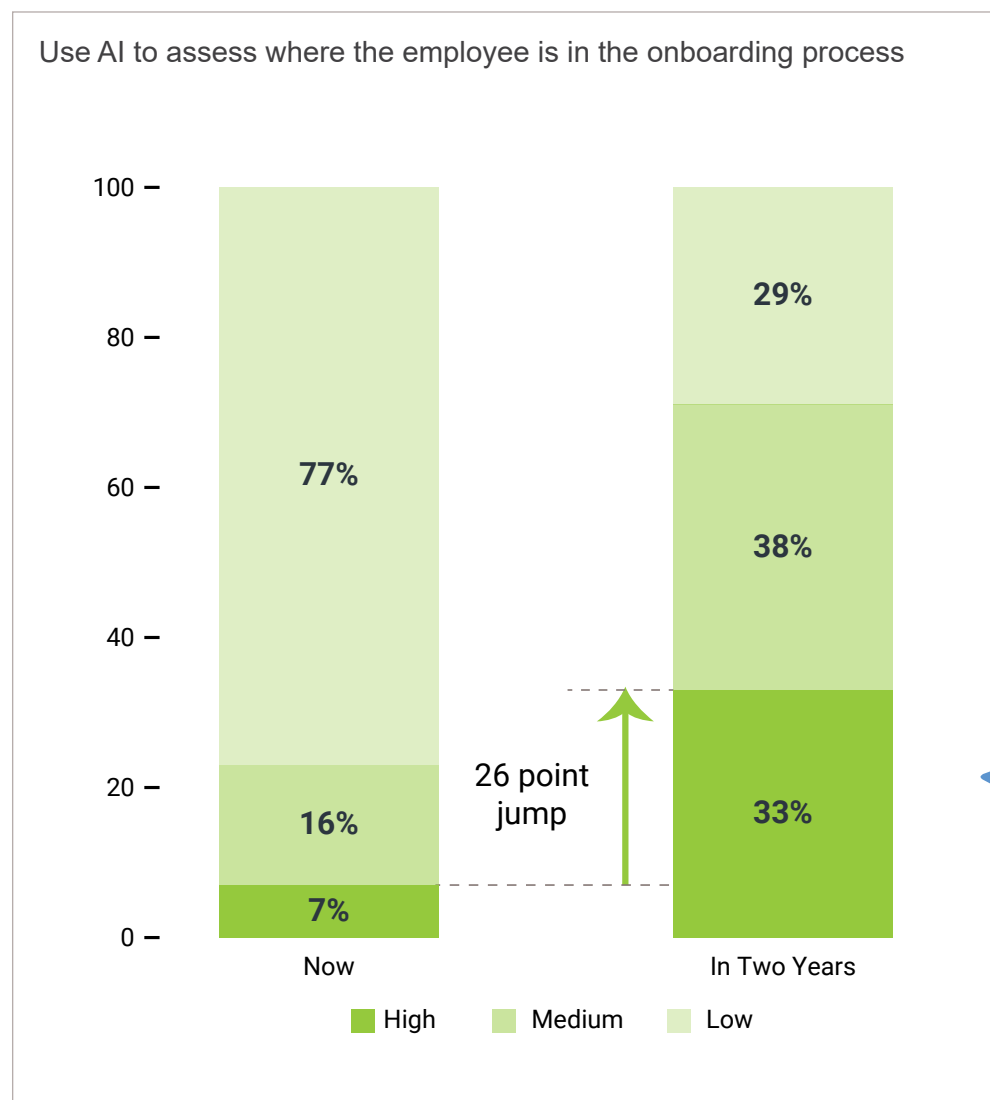


There is a six-fold increase in the percentage of respondents who believe AI will be able to assess the success of onboarding to a high extent

To assess where the employee is in the onboarding process

Thirty-three percent of participants say that, within two years, AI will be highly used to assess where employees are in the onboarding process. Today, AI is being used to this extent for this purpose by 7% of respondents.

AI has the potential to automatically track where new hires are in the onboarding process and feed them content and messaging depending on their needs.



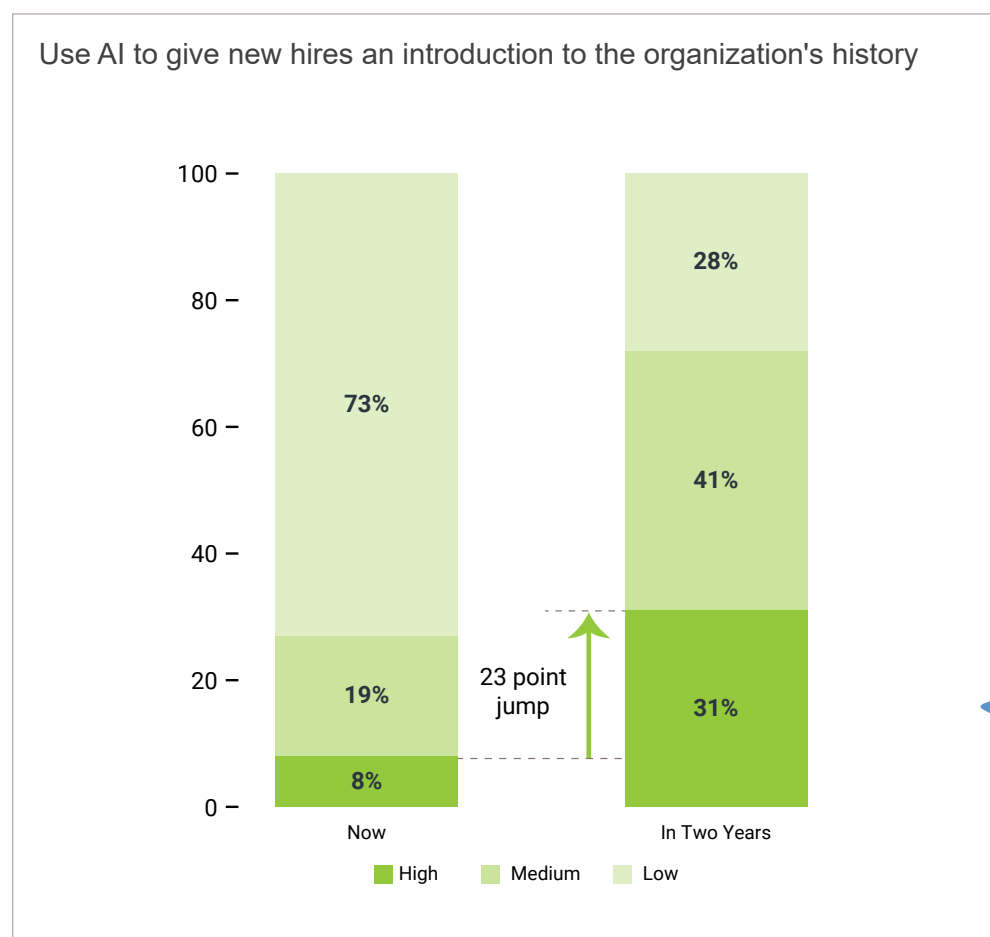
AI may increasingly be highly used in the tracking of the onboarding process

To give new hires an introduction to the company's history

Thirty-one percent of participants say that, within two years, AI will give new hires an introduction to the company's history to a high extent. Today, AI is being used to this extent for this purpose by 8% of respondents.

Communicating organizational history is often a dull process. There may be a video to watch, and the video may or may not be professionally produced. New hires may also be given a section of the handbook and website to read. Or, a senior leader may appear and tell new hires about the company.

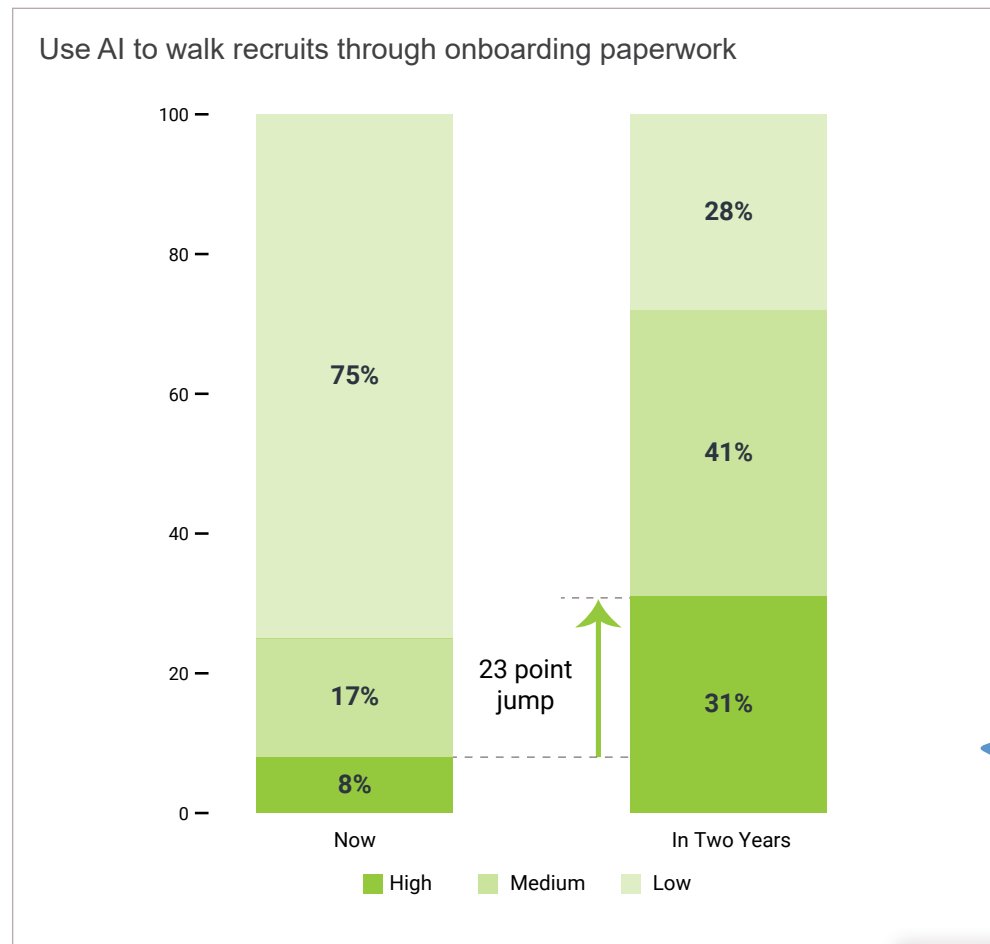
Content is seldom tailored to the interests, motivations or needs of the new hire. At least in theory, AI should be capable of delivering specific content of interest to each new hire rather than offering a rote recitation of dates and leadership changes.



AI may become the key “tour guide” through company history

To walk recruits through onboarding paperwork

Thirty-one percent of participants say that, within two years, AI will walk recruits through onboarding paperwork to a high extent. Today, AI is being used to this extent for this purpose by 8% of respondents.



Onboarding paperwork is an area where AI will be especially helpful in two years



The Barriers to Greater Usage of AI for Talent Acquisition

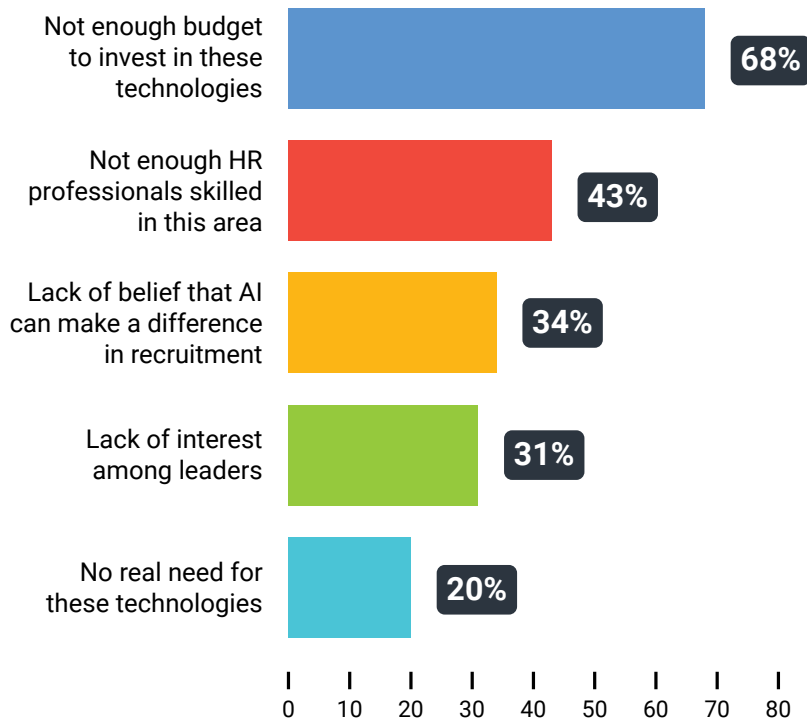
The biggest barrier to greater usage is a limited budget

Over two-thirds (68%) of HR professionals cite budget a barrier to adopting AI for talent acquisition. However, the true cost of a product hinges on the value it ultimately delivers. At least for now, the business benefits and value delivered by AI are not well understood by most HR professionals.

Therefore, it is important for HR professionals to gain a solid understanding of the return on investment of using AI-enhanced talent acquisition technologies.



Survey question: What are the barriers to making greater use of AI for talent acquisition in your organization? (choose all that apply)



Many also note that there are not enough HR professionals skilled in this area

The Potential Disadvantages of Using AI for Talent Acquisition

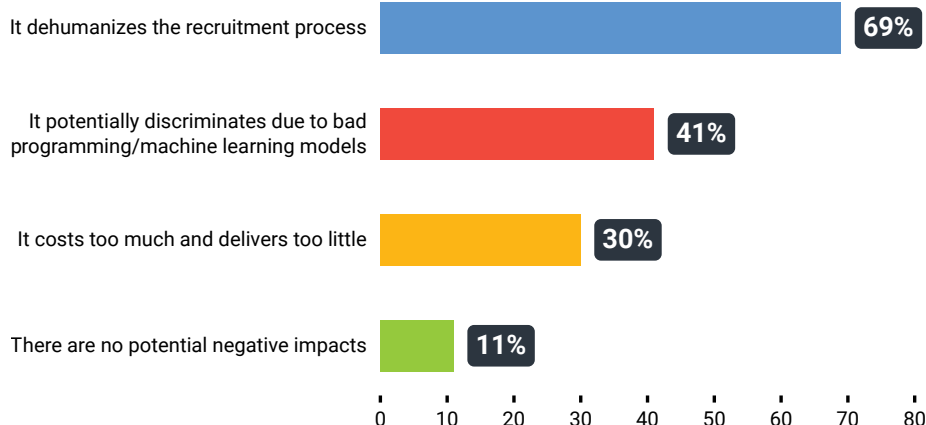
The most widely cited potential disadvantage is dehumanization

As AI capabilities are leveraged to improve talent acquisition, will the process lose its human touch? Many survey respondents are concerned it might. In fact, 69% cite the dehumanization of the recruitment process as a potential negative impact of using AI in TA.

Although this is a legitimate concern, some have argued that AI could also “re-humanize” aspects of the recruitment process. The idea is that AI might help free recruiters from the time-consuming administrative recruitment duties associated with applicant tracking systems, background checking, resume reviews, and more. If these can be automated via AI, then it may give talent acquisition professionals more time to engage on a more personal level with promising candidates.

The second most widely cited potential negative impact is that AI potentially discriminates based gender, ethnicity or other areas due to bad programming and/or machine-learning models. As we noted earlier in the report, these legitimate concerns must be addressed if AI is to fulfill its potential as a recruitment tool.

Survey question: What are the potential negative impacts of using AI for the purpose of talent acquisition? (choose all that apply)



Few believe that there are no potential negative impacts resulting from using AI

The Expected Future Impact of AI in Talent Acquisition

Increased speed is the most widely anticipated impact of AI

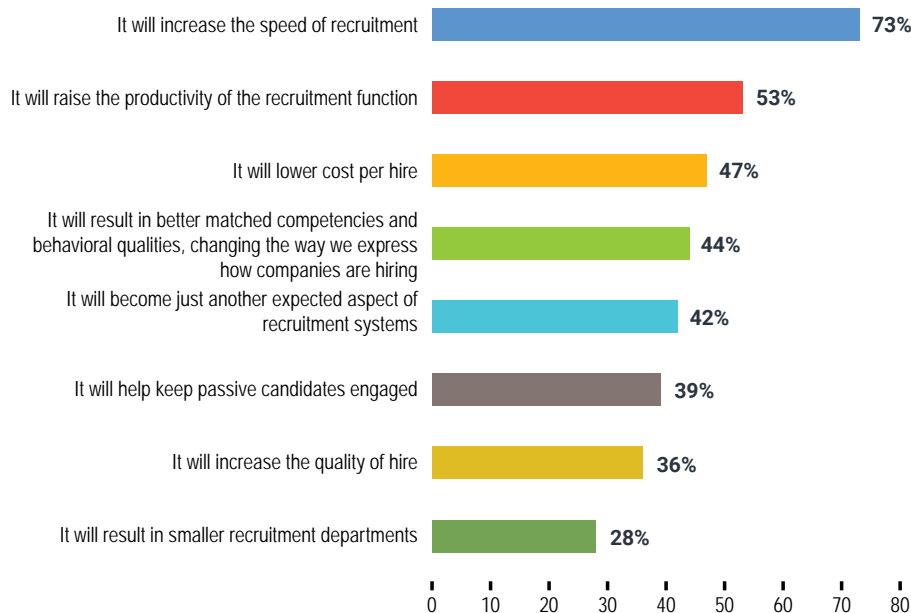
According to study participants, AI is most likely to impact the speed of hire in the coming two years, with 73% citing this impact. The only other impact selected by more than half of the participants is raising the productivity of recruitment (53%).

This is consistent with other study findings, which generally show that HR professionals are most optimistic about the ability of AI to speed up processes rather than improve the quality of talent-related judgment.

This does not mean that HR professionals do not *want* even more from AI in the area of recruitment. Indeed, as we noted earlier, what they actually want *most* is an improved ability to identify candidate with needed competencies so they can boost quality of hire. But what they most *expect* from AI is improved speed and productivity.



Survey question: What do you think the future impact of AI in talent acquisition will be in the next two years? (choose all that apply)



Only 36% believe AI will improve the quality of hires in the next two years

The Utility of Specific AI-Related Tools in the Area of Recruitment

HR professionals point to three areas where they see the greatest utility of AI-related tools

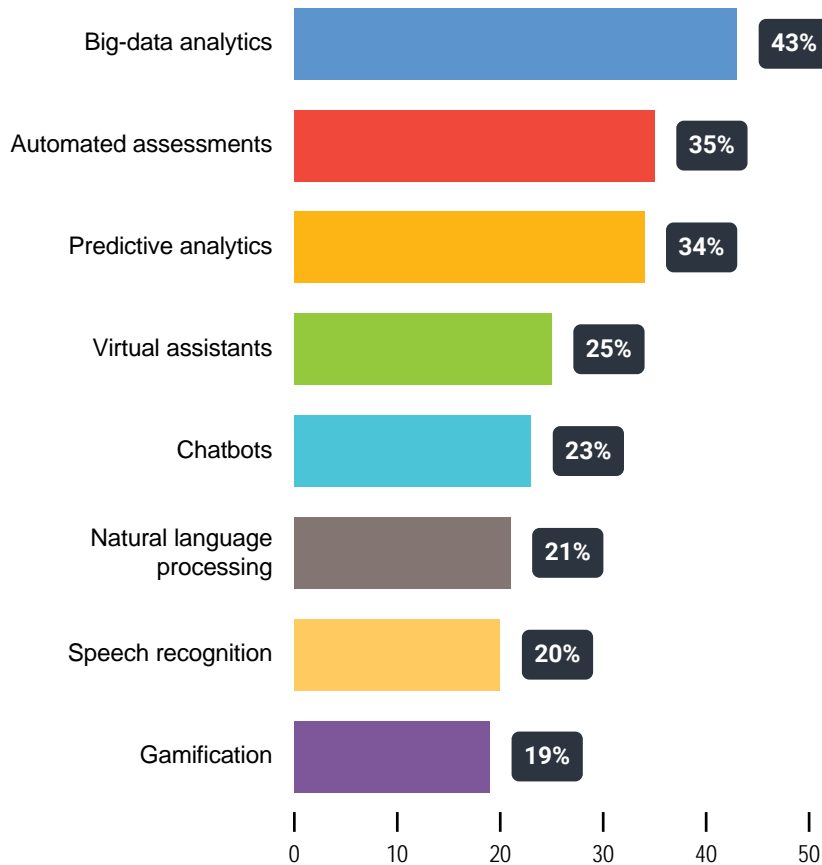
Big data poses a substantial challenge to organizations in just about every functional area in which data can be applied. Participants see the analysis of big data as having the greatest potential utility when it comes to leveraging AI in the TA function. Indeed, the sheer volume of resumes and applications is daunting for recruitment professionals. Having AI tools to help manage and analyze the data is, therefore, very appealing.

The other two most commonly mentioned AI-related tools are automated assessments (35%) and predictive analytics (34%). Both can be challenging areas for recruiters. Managing assessments is sometimes seen as a repetitive, low-value task. AI should be able to help the distribution and selection of assessments, based on specific job openings, professions and other factors.

Then there's the issue of prediction analytics. Predicting which candidates will make good hires is never easy, and the cost of regrettable hires can be staggering. But there are other areas where predictive analytics can have an impact as well, such as deciding which job advertisements will work best, finding the best sources of passive job candidates, and honing the employer brand to have a maximum positive impact.



Survey question: Please rate the potential usefulness of AI-related tools in terms of their ability to improve talent acquisition. [% answering "very useful"]



Tools using AI functionality should help recruitment teams handle and analyze data affecting candidates



Key Takeaways

1

Improve the AI technology literacy of your HR team. As AI tools become more common, the HR professionals managing the systems and processes will likely need higher levels of digital/technology literacy. Find ways to increase the level of AI among current team members. There are a variety of information sources available, such as:

- HR technology conferences
- vendor-based information
- online forum discussions
- HR periodicals
- HR thought leadership

2

Ask your current HR technology vendors about their current and planned AI functionality. AI is not yet highly used in talent acquisition processes in most organizations, but there is a widely held assumption that the usage in this area will grow quickly. In fact, AI may eventually permeate just about every HR technology solution available. You may be able to take advantage of AI's growth in cost effective ways by leveraging your provider's evolving suite of HR technology.

3

Review technologies that offer smart and customizable searches as well as some automation. These are areas where HR professionals more typically expect AI to add the greatest value. Also look for the improved ability to assess the match between candidates and job openings and to prioritize applications and resumes.

4

Experiment with leveraging AI in the interviewing process, especially at the preliminary stage. However, ultimately it may be more important to develop solid interviewing skills among those on your hiring team while finding AI-driven efficiencies elsewhere.

5

Collaborate with internal data analysts HR technology, metrics and reporting. AI will result in “big data” landing in the HR team’s domain. Currently, there do not tend to be many HR professionals with the skills and knowledge required to effectively manage big-data solutions. Your data analysts may be important members of an extended HR team that strives to fully leverage the advantages offered by AI.

6

Strive to make AI a part of a productive but humanized talent acquisition function. Talent acquisition can already feel impersonal in many ways. It’s incumbent on talent acquisition professionals to make sure current processes retain a personalized touch and feel. After all, the entire process is about attracting great people. Make sure that great people know that you want, need and like them. One way to approach AI is by using it to gain efficiencies in administrative areas while also pouring more human energy into connecting and understanding people. In doing so, you can help insulate your talent acquisition process from creeping dehumanization.

7

Embrace AI’s potential to diminish the effect of human bias in recruiting. AI holds the promise of truly objective decision-making in the recruiting process. However, it does not necessarily result in better or even less biased hiring decisions. Therefore, HR professionals must be careful in using AI for these purposes, selecting technologies with good record in reducing bias.

8

Assess new onboarding technologies by their abilities to personalize learning, guide employees through policies and assess current status. These are the areas where HR professionals expect the greatest onboarding usage in the near future.

9

Seek better big-data analyses, more automated assessments and improved predictive analytics. HR professionals tend to most highly rate the potential utility of AI-related tools in these three areas. But HR will need people with the right skills and understanding to properly leverage these tools.

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