Modern Hire

White Paper

Combining Science and Technology to Make Superhuman Hiring Decisions

Faced with a flood of new AI-based technology solutions that claim to transform hiring, enterprise HR and talent acquisition leaders are concerned about the real-world implications of deploying these technologies. This white paper presents Modern Hire's vision for integrating trusted science and technology to predict performance, ensure fairness, and automate workflow—enterprise-wide.

Reimagining the Hiring Experience

Google "hiring is broken," and you will get millions of hits and a similar number of tools claiming to fix it. Knowing which candidates will perform well on the job, while providing the experience they deserve, is a hard problem to solve. Unsupported marketing claims that lack scientific validation abound, and HR leaders are understandably skeptical.

According to McKinsey, 83 percent of Fortune 500 executives do not trust the effectiveness of their own hiring processes.[1] Much of the problem centers on the fact that most companies do not "check to see if their hiring practices actually produce the kind of employees they want. What they check instead, obsessively, is costs per hire and time to hire. This is like checking to see the total cost of your advertising campaign without looking to see what effect it had on sales."[2]

Are humans so complex to understand and corporate hiring processes so mired in legacy systems and red tape that all we can do is continually triage hiring with the latest Band-Aid?

No.

The core problem of HR and hiring is not a lack of data. It is a lack of **meaningful** data. Cost per hire and time to fill are fine metrics, but what we really need to know is how well our new hires perform on the job and whether hiring them makes our organizations better. For this, we need quality of hire (QoH) metrics, and those metrics must be linked back to data from the hiring process so that we can measure and improve the predictive power of the hiring process. With the widespread availability of data and advanced machine-learning analytical tools, this goal has never been more achievable. Imagine a world where we can:

- Offer candidates a fast, rewarding, transparent, and engaging hiring experience.
- Move from taking hiring practices on faith to having scientifically proven, continuously updated and monitored results.
- Give talent acquisition the data it needs to hire the best dramatically faster, not just fill the seat, AND to gauge real-time process ROI.
- Manage the complexity of your unique workflows through a single configurable SaaS platform.

These goals are within reach.

1. Attracting and retaining the right talent, Scott Keller and Mary Meaney, McKinsey & Company, November 2017.
2. The Biggest Mistakes Companies Make With Hiring, Peter Capelli, The Wall Street Journal, February 2019.

How Do You Measure Good Hiring?

It is easy to mistake simple hiring-process metrics, such as time to fill and cost per hire, as indicators of good hiring, but what truly matters is whether the new hire improves the organization. The cost of a new hire might be high, but the value could be higher still. The problem is that, historically, simple metrics are easy to find, while true indicators of effectiveness, efficiency, and fairness are rare.

Effectiveness: How do you measure the effectiveness (QoH) of individual hires? There are many ways, some better than others. Common types of metrics are (1) supervisor ratings and (2) objective performance metrics. There are limitations to both, but together they often give a well-rounded view of new hire performance. Of course, some jobs have clearer objective performance metrics than others, so that must be taken into account.

Efficiency: A second way to judge a hiring process involves process efficiency. This is where typical metrics, such as time to fill and cost to hire, come into play, but it is important to recognize that, to be most useful, these metrics must take into account contextual information, such as the type of position (some naturally take longer to fill) or new hire value (some positions are worth more than others).

Fairness: Finally, ensuring that hiring processes are fair is of supreme importance. The path to removing bias uses scientifically and legally designed selection procedures complemented by AI. This technology must be implemented in a continuously updated and automated AI-powered SaaS platform that is effectively the "smarts" making sense of all the data behind the scenes. With this, AI can effectively eradicate both protected-class adverse impact and other types of common human decision-making bias. Without it, as shown by substantial research, decisions continue to be based on biased information that only leads to lower organizational performance.

Effectiveness, efficiency, and fairness are important, but measuring them in isolation can lead to faulty conclusions. If we only look at efficiency, we might conclude that a process is ideal because cost and time to hire are falling. But without knowing QoH, fairness, and more, we cannot be sure that overall outcomes are improving. The Modern Hire platform gives us this insight.

With the right data, AI can effectively eradicate both protected-class adverse impact and other types of common human decision-making bias.

The Solution Is in the Data

Data are collected in increasing amounts all around us, but their meaning is largely unknown. Data confuse and confound, but we try, often in vain, to make sense of them and use them in our decisions. **Data on their own are neither good nor bad, and it is only in its relation to other information that data take on meaning.**

How are hiring managers expected to evaluate multitudes of candidates fairly while using all the available information? They can't. As a result, they are often overwhelmed and, after finding one that is "good enough," simply ignore the rest. How to process and make sense of all the data out there is not intuitive and often fails to conform to the simplistic and usually linear hypotheses that we make.

As the collection and storage of vast amounts of data increase exponentially, our ability to understand those data remains largely constant. A single data point is simple to view and comprehend for what it is—a number—and our brains take over from there, ascribing meaning and import to this simple descriptor. Attaching a number to some phenomenon is easy; understanding what that number predicts is quite difficult. It turns out, to accurately understand the meaning of a measurement, we must collect vast amounts of similar data points as well as associated measures (including outcome data such as job performance) and investigate this large dataset using AI and other statistical techniques. Only by aggregating data can we have some ability to detect the relationships between data points.

The techniques used to understand data took a revolutionary step forward just after the turn of the millennium with the invention of deep-learning neural networks. Deep learning powers most of the major advances in technology today, from self-driving cars to talking "smart" assistants. Its power to make sense of complex and unstructured data is a tremendous advance over historical methods, and on top of this, there is exponential growth of available data from a variety of HCM systems. Yet, until now, the potential of deep learning and big data to better understand people and how they interact together to create individual and organizational success has not been realized.

The path to better decisions about people is through the collection and study of data. By combining data from sources across the hiring process and beyond, we can create massive datasets of linked/related data points, and by applying advanced machine learning and deep learning we are able to discover even more powerful relationships in the data. This enables organizations to make reliable, predictive decisions about people that impact organizational performance. In short, the mission is to **make data meaningful.**

Augmented Intelligence

Most hiring tools promise incredible results with little proof. As a result, users must take their value on faith, based on claims from the vendor. But there is a better way. Every single data point has value. Together, in large numbers, they paint a vivid picture of reality. The prevalence of big and especially meaningful data, along with advanced analytics, allows us to state unequivocally that **the path to better decisions about people is through the collection and study of data.**

Gone are the days when organizations had to make people decisions based solely on intuition. Organizations should capture any and all human data associated with the hiring process and post-hire job success. Once collected, the data can be processed and analyzed for insights that include:

- Relationships between pre-hire and post-hire data, including job performance and turnover.
- Redundancies in the predictive value of pre-hire data, which can be eliminated to enhance the hiring process.
- Evidence of bias, meaning a prejudice based on irrelevant or unfair factors. Bias is common in human-oriented data, and in the past it has been difficult to identify and root out, but with modern analytics it can finally be identified, controlled, and eliminated.

End users should never need to guess what data points mean or invest any energy in interpreting their impact. Instead, users need to see **validated and predictive** scores, giving recruiters, hiring managers, talent acquisition professionals, and organizational leadership the precise insights they require to make immediate decisions based on factual data points and scientifically proven relationships. In short, we must **let the data speak**, giving organizations the unprecedented ability to make optimal, bias-free decisions every single time.

Advanced analytics and predictive power are only useful to the extent that they are easy-to-access and used by talent acquisition. That is why they must be presented in intuitive ways through an easy-to-use SaaS platform. Instead of complicated data visualizations to process, we must use simple scores that require no interpretation. As humans, we are often confounded by too much data, and much research has found that we often over-interpret meaningless information. Effective dashboards show fewer but more useful scores, which can guide our decisions to be more accurate and consistent. And in a SaaS platform, these insights can be delivered "in-line" with the actions recruiters and hiring managers are taking.

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AI Is Not Enough

AI is revolutionizing our world, but it is insufficient on its own to solve hiring problems. For at least the decade ahead, AI will be deployed as narrow, super-smart, problem-solving algorithms, not as the general, conscious entities of our science fiction dreams (or nightmares), such as HAL 9000 or the Terminator.[3] The AI of today is better at finding patterns in data than any statistical technique in history, yet it is limited to the data it is given. It has no context, worldly experience, knowing wisdom, legal expertise, or sensitivity to social or human issues. **To deploy AI effectively is to deploy it in a narrow, managed, and monitored fashion.**

In addition to AI expertise, good hiring requires:

- **Hiring Know-How and Experience**—Hiring processes are often complex, and successful offerings must integrate with other HCM systems to create a seamless and appropriate candidate experience. This requires a broad and deep understanding of the hiring process.
- **Industrial/Organizational Psychology**—The scientific discipline of industrial/organizational psychology promotes an understanding of why and how data predicts outcomes and provides an imperative guidance and structure to AI tools.
- **Legal Expertise**—Making decisions about who to hire requires a deep understanding of employment law and litigation, and a SaaS platform allows us to Institutionalize legal behavior and audit hiring practices in a consistent manner.
- **Job Relevance**—When collecting information from candidates, questions and prompts must be job-relevant to ensure maximal predictive power. Job-relevant exercises, in contrast to less-relevant tools such as games, will also give candidates a deeper understanding of the job, which contributes to the final requirement for good hiring: a positive candidate experience.
- **Candidate Engagement**—While much focus has been placed on making experiences more convenient for candidates, hiring success depends on candidate engagement, a two-way process that requires the meaningful and transparent exchange of relevant information. AI and deep learning can be used to automate interactions that are personalized and intuitive early in the hiring cycle—resulting in data and predictive insights that improve hiring experiences and outcomes. Effective candidate engagement ensures that the employer selects the best person for the job AND that the candidate picks the best opportunity to suit his or her career objectives.
- **SaaS Hiring Platform**—The benefits of AI and predictive analytics can only ultimately be achieved when each of the above requirements is enabled within a robust and proven SaaS hiring platform that embeds best practices, enables configurable and automated workflows, and allows for the capture and analysis of data from diverse sources quickly and painlessly. Modern candidates expect a hiring experience to be engaging, transparent, quick, and convenient. Recruiters and hiring managers need solutions that are simple, flexible, and insightful. And finally, the hiring platform must meet stringent enterprise requirements for reliability and availability, data protection, hiring compliance, and integration with other HCM systems.

3. Kelly, 2016.

Making Hiring Personal to Improve Experiences and Results

Hiring is personal. It is not about coldly matching bodies to requisitions. It is about helping human beings to find their fit in a world filled with options and unknowns. It is about helping organizations to perform with teams of motivated and collaborative individuals. Good hiring benefits the organization and the individual in equal measure.

There is no conflict between basing hiring decisions on data and supporting the needs and desires of the individual candidate. Data can and should benefit the candidate as well as the employer. Old methods of vetting candidates so that they may be "gifted" with a job if they pass muster are here put out to pasture because, to find the best, you must engage and converse with them as equals.

Big data, deep learning, and predictive analytics are transforming all facets of the modern enterprise, enabling more intuitive customer experiences, streamlining operations, accelerating fraud detection, and empowering new products and services.

According to a McKinsey & Company poll, CEOs say their HR organizations lack "the ability to embed data analytics into day-to-day HR processes consistently and to use their predictive power to drive better decision making."[4]

HR leaders can enable better, data-driven hiring decisions through the responsible integration of trusted science and proven technology. While adhering to the values of transparency, openness, and privacy, talent acquisition can achieve step-change improvements in hiring to predict performance, ensure fairness, and automate workflow throughout the enterprise.

There is no conflict between basing hiring decisions on data and supporting the needs and desires of the individual candidate.

4. McKinsey Quarterly, The CEO's guide to competing through HR, July 2017.

Insight, Scaled

The scientific method thrives with big data and advanced analytics, and these elements are now, for the first time, becoming available in hiring. In moving from a world of disjointed hiring tools to one with an integrated stream of data, we are finally able to connect all pre- and post-hire data points in a systematic and wide-scale SaaS platform.

Relevant data need not be finite or static. World-class decision making requires the real-time integration of new information and insights with AI-driven interpretable scores. Knowledge is constantly expanding as new candidate data become available and their relation to business outcomes evolves. Only a true SaaS-based platform that integrates all sources of data and automatically analyzes them for evidence of predictive relationships, bias, and more can equip talent acquisition professionals with the information they need to always make business-optimal hiring decisions.

The Modern Hire platform combines trusted science and technology to predict performance, ensure fairness, and automate workflow—enterprise-wide. It includes AI, predictive analytics, assessment, interviewing, and scheduling technology in a single SaaS solution that integrates with leading HCM systems.

Modern Hire: Make Hiring Personal

Modern Hire is the new name for Montage and Shaker International. We've created an all-in-one enterprise hiring platform that enables you to continuously improve hiring results through more personalized, data-driven experiences for candidates, recruiters, and hiring managers. The Modern Hire platform combines trusted science and technology to predict performance, ensure fairness, and automate workflow—enterprise-wide. It includes AI, predictive analytics, assessment, interviewing, and scheduling technology in a single SaaS solution that integrates with leading HCM systems.

Discover how we're helping 47 of the Fortune 100 make hiring personal to continuously improve experiences and results.

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