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Talent acquisition analytics

Driving smarter sourcing and hiring decisions with data

Organizations are recruiting talent in an increasingly complex and competitive talent acquisition (TA) environment—one that requires greater market, candidate, and process intelligence. Quantitative approaches can provide that intelligence, enabling insights critical to improving operational and business outcomes, much as they do in marketing, sales, supply chain, and finance. From better awareness of candidate fit to process and technology optimization to increased understanding of TA's impact on the business, analytics is a powerful force in the quest to source and hire top talent.

The challenge

Employers have more pressure than ever to fill new jobs efficiently and effectively in the midst of low unemployment and skilled labor shortages. The challenges multiply with the increased risk of talent movement—44 percent of Millennial workers will be looking for a new job in two years,[1] and are 25 percent more likely to search for a new job than non-Millennials.[2] With average new-hire turnover rates of 14 percent,[3] a clear need exists for improved projections and insights into staffing needs and strategies.

Our research has found that 83 percent of 924 companies surveyed across the globe have low people analytics maturity,[4] focusing primarily on basic HR reporting needs, data security and privacy, etc., as compared to the high-maturity organizations, which have graduated to more advanced practices. The high-maturity organizations build consistent data definitions, use embedded reporting and analytics tools, and are building data integration capabilities to understand employee behaviors.

This indicates that a majority of organizations are under-equipped to identify problem areas and potential solutions to their recruiting challenges. Addressing this capability gap is a business imperative, given the need to effectively manage staffing and meet operational goals.

The opportunity: Why enhanced TA analytics matter

The impact of an advanced, high-maturity people analytics capability on business results is substantial, and enhancing it can increase the value of the TA and HR to the business (see figure 1).

The first step to closing the capability gap and increasing analytics maturity is to understand how TA analytics affects key stakeholders and what both they and the organization can gain from it. You should consider the outcomes stakeholders are driving toward and the types of insights that will support achieving those outcomes. For example:

Figure 1. Financial outcomes comparison between high- and low-maturity people analytics organizations

Financial performance indicator	High-maturity organizations	Low-maturity organizations	Difference in performance, high-maturity organizations versus low-maturity organizations
Three-year average revenue	$46,948,812,000	$23,947,268,000	96%
Three-year average cash flow from operations	$5,916,299	$3,138,636	88%
Three-year average gross margin (or profit)	$17,117,698	$9,409,384	82%

Source: *High-impact people analytics industry study*, Bersin, 2017, p. 45.

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Figure 2.

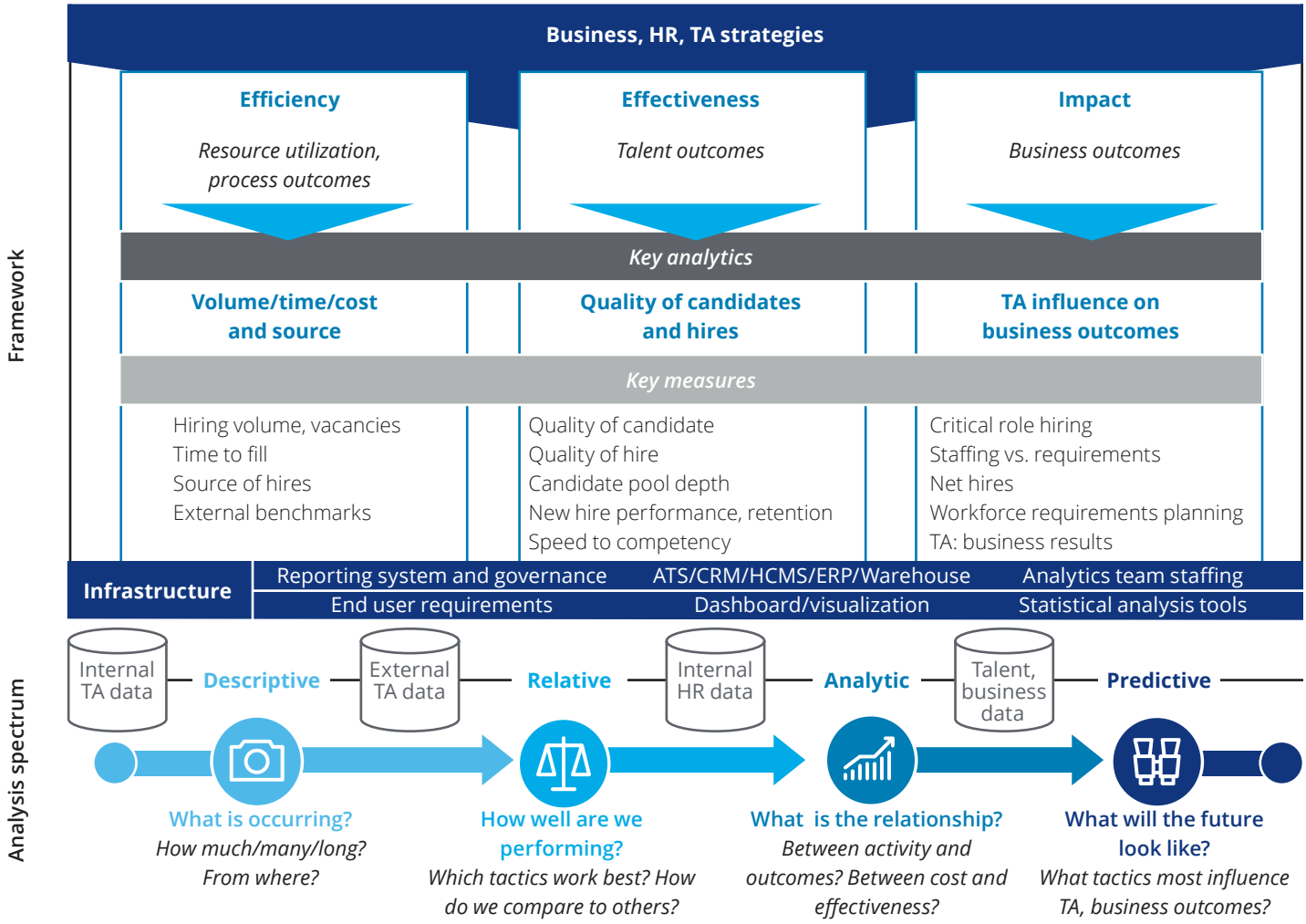
TA analytics stakeholder	TA analytics use	Desired TA analytics outcomes/impacts
Candidates	Analysis of process efficiency and the desired candidate experience	Enhance candidate satisfaction, acceptance rates, and time and cost savings to the business
Hiring managers and recruiters	Process and predictive analytics	Provide credible insights for better informed attraction, candidate review, and hiring discussions and decisions
Contractors	Process and predictive analytics	Identify skill gaps and short-term requirements for staff augmentation, and address process inefficiencies in how you source, onboard, and track the contingent workforce
TA leaders	Advanced analytics and benchmarking	Uncover trends that identify process and outcome issues, strengths to leverage, effective and ineffective sourcing options, and proactive improvements to strategies
Business and HR leaders	Advanced analytics	Drive business planning and reveal the business impact of TA strategies on talent and business outcomes

Considering the "who" and "how" of TA analytics impact not only helps stakeholders appreciate that advancing TA analytics capability can bring to the organization but also helps guide your analytics approach and develop a roadmap for the journey.

Defining leading TA analytics: A framework

"TA analytics" refers to the systematic discovery of meaningful patterns in data to support decision making related to recruitment and onboarding processes, activities, and outcomes. Three primary categories of measurement (efficiency, effectiveness, and impact) are leveraged across four types of analysis (descriptive, relative, analytic, and predictive). As the framework progresses from left to right (see figure 3), the model increases in complexity of data used, systems tapped, and the sophistication of analytics techniques used. A robust infrastructure enables the analyses, with multiple data sources, repositories, analytic tools, staff capabilities, and visualization all focused on the business and information needs of the end users.

Figure 3.



Analytic approaches

Each type of analysis offers valuable insights toward the overall success of the TA function and is progressively more sophisticated in its nature.

Descriptive analysis

Provides a view into activity, such as requisition volume, applicant or talent pool size, source of hires, etc. It reveals the levels of activity and efficiency in candidate generation and is a simple expression of volume, time, cost, or source.

Relative analysis

Offers insights into TA performance against requirements or standards, including cost-per-hire, time-to-fill, pre-hire assessment scores, etc. It compares performance to budgets, tests, SLAs, or benchmarks; is represented as ratios or comparisons; and is critical to the efficient operation of the TA function.

Analytic analysis

Answers questions regarding the relationship between activities and outcomes, as in the quality of candidates or hires, skill match between candidates and position requirements, critical-skill hire retention, speed to competency, etc. It uses basic statistics and multiple datasets to map TA activity to subsequent talent outcomes.

Predictive analysis

Identifies statistical relationships between multiple activities and outcomes to either (1) predict what will happen in the future or to explain the drivers of that outcome, such as a candidate's likely cultural fit, level of performance, and retention, or (2) detect potential talent shortages/skills gaps and market availability (workforce planning). Predictive techniques also identify possible adjustments to TA strategies and the opportunity to deploy automation and/or contingent workforce solutions. These techniques leverage advanced statistical and modeling techniques with large, integrated datasets.

Leading organizations measure and report on all four metrics across the analysis spectrum, presenting reports and dashboards specific to the information needs of each end user group.

A key consideration: Sources of data

Leading companies no longer rely exclusively on the applicant tracking system (ATS) for reporting on transactional data. With the adoption of more advanced systems, data repositories, and analytics capabilities, the aperture expands to provide more integrated insights into the impact of TA processes and practices, including data from:

- Core HR, talent, learning, and performance management and compensation systems for new-hire and high-performer demographic information and their influence on talent outcomes (performance, employee movement, speed to competency, high potential status, etc.)
- Skills inventories to identify skill surpluses and shortfalls within roles
- Candidate relationship management (CRM) systems for talent pool
- Social networks for passive candidate and employment brand strength insights
- Employee engagement surveys for evaluating new-hire satisfaction, retention risk, and hiring manager success
- Operational and financial systems (e.g., Sales, ERP) for recruiting costs, and the impact of hiring activity on team, business unit, and/or corporate results

Data from these systems also shed light on the relative talent management value of sources of hire—both internal and external—for generating high performers, highly engaged employees, or future leaders within a critical role, line of business, geography, or diversity group.

Case in point

A global financial services organization sought an analytical approach to ensure that its future customer service workforce would be successful in a new organization model. A robust pre-hire analytics model was developed to predict employee success on the job. More than 6 million records were amassed using 12 internal and external data sources that spanned 70+ disparate files and contained 100+ data elements. The model validated that representatives in the highest predicted success group realized a 45 percent actual success rate versus 8 percent in the lowest predicted success group.

Where to apply analytics for high impact and value

High-impact, high-value applications of TA analytics focus on desired talent and business outcomes and provide actionable results. These enable robust decision support related to candidate selection, process design, budget/resource investments, and TA activity's contribution to business objectives (see figure 4).

Figure 4.

Use case	Types of data/measures	Business value
Quality of candidate and hire prediction	Pre-hire assessments Performance evaluations and feedback speed to competency retention/turnover risk Cultural fit	Understanding and leveraging the demographics and drivers of short- and long-term job success Evaluating the quality and depth of talent pools Looking beyond the candidates' presentation to more objectively understand their motivations and workstyles
Process of optimization assessment	Time to fill (by process step) Digital experience Cost of quality hires per source	Assessing processes that increase time to process/close qualified candidates Identifying where in the digital experience that desired outcomes begin to diminish, and by how much Understanding the cost/benefit of candidate sourcing tactics for tactical adjustments
Business impact	Staffing to budget/workforce plan TA outcomes' impact on business results University/diversity/veteran hiring against goals Internal mobility impact on retention, replacement timeliness, and business outcomes	Assessing TA goals vs. organizational objectives Understanding the relative influence various TA processes and practices have on business goals/objectives Identifying the success and impact of targeted recruitment programs Evaluating the drivers of the successful onboarding and retention of new hires Assessing the relative value of external recruiting vs. internal development and succession strategies

The future of TA analytics

New advancements in cognitive technology are gaining a foothold in TA, creating opportunities for increased efficiency, accuracy, and insights. While these are advancing rapidly, the most ready-now solutions exist in candidate sourcing and screening and can potentially increase new-hire quality and reduce the impact of selection biases.

Emerging capabilities in data mining and pattern recognition enable best-fit recommendations to candidates for open roles,[6] and can better identify the combinations of top-candidate social and technical/professional media viewing patterns for enhanced targeting. Machine-learning methodologies also hold the promise of continuously updating (statistical) validation of candidate assessments, enabling more efficient and responsive evaluations of the accuracy of pre-hire, retention, and other types of predictions (see figure 5).

Figure 5.

Artificial intelligence
Talent analytics, metrics, and insights to drive decision making

Candidate scoring against desirable skills and competencies

Pattern recognition
Works closely with data mining to identify sequences and logical grouping in data

Resume screening and candidate experience

Data mining
Powered by machine learning to evolve with time and experiences to manage unstructured data

Automated job and candidate matching

Robotic process automation
Routine, standardized, manually intensive, high-volume tasks

Automation of manual license and document verification processes

Smart chatbots
Interactions with users to achieve specific objectives

Interview bots for initial candidate assessment

Semantic computing
Text analytics, computer vision and voice recognition to understand semantics

Special media/portfolio scans for candidate screening

Getting started: How organizations can begin to upgrade

As noted above, moving beyond traditional analytics into an expanded range of insights starts with understanding the needs of your business and stakeholders—a valuable opportunity to improve their experiences and outcomes. To understand the most useful TA analytics, we recommend focusing on:

- Business strategies: What are the primary business goals and associated talent outcomes required to meet business strategy?
- Decision support: What insights will best support talent and business decision making by leaders, hiring managers, and recruiters, each of whom has unique information needs?
- "Moments that matter": What process steps differentiate the experience for critical-skill candidates and hiring managers? These moments then become process and outcome measurement targets.

In addition, include these infrastructure considerations when designing your delivery of new analytics:

- Data source integration: What types of data are available, such as ATS, CRM, HRMS, and ERP data? What tools are available/needed to compile and analyze the data?
- Visualization: What is your ability to present and deliver timely, consistent, and easy-to-digest reports and dashboards?
- Analytic capabilities: What are the current analytic skill levels of recruiters, hiring managers, HR business partners, and business leaders to adopt and use the insights?

Answering these questions gives you a gauge of where you stand, where strategic opportunities lie, and what infrastructure components to target so you can begin to apply TA analytics and derive tangible insights and business value from your existing data.

Endnotes

1. 2017 Deloitte Millennial Survey: Apprehensive Millennials seeking stability and opportunities in an uncertain world, Deloitte Development LLC, 2017, https:// www2.deloitte.com/ch/en/pages/human-capital/articles/millennialsurvey.html.

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3. Deloitte Consulting LLP, *Bersin interactive factbook* (talent acquisition benchmarks listing), Bersin, 2015, https://benchmarking.bersin.com/dashboard, p. 47, 58.

4. Madhura Chakrabarti and R. J. Milnor, *High-impact people analytics: The "recalculated route" to maturity*, Deloitte Development LLC, 2017, http://login.bersin.com/uploadedFiles/AE1_RS_0523_1145_BecomingHIPANOrg_MC_RM(1).pdf, p. 30.

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6. Michael Stephan, "Say hello to the cognitive recruiter," *Wall Street Journal,* April 12, 2017, https://deloitte.wsj.com/cio/2017/04/12/say-hello-to-the-cognitive-recruiter/.

Contacts

Art Mazor
Principal
Deloitte Consulting LLP
+1 404 631 3917
amazor@deloitte.com

Kevin Moss
Managing Director
Deloitte Consulting LLP
+1 212 313 2796
kevinmoss@deloitte.com

Bill Cleary
Senior Manager
Deloitte Consulting LLP
+1 215 405 7853
wcleary@deloitte.com

Charles Goretsky
Manager
Deloitte Consulting LLP
+1 571 229 3279
cgoretsky@deloitte.com

Dave Fineman
Specialist Leader
Deloitte Consulting LLP
+1 617 585 4843
dfineman@deloitte.com

Deloitte.