

WORKFORCE MANAGEMENT ANNUAL BENCHMARK REPORT

- Proprietary data science
- AI-powered insight

Helping organizations win and retain talent in today's hyper-competitive market.

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EMPLOYERS MUST ANTICIPATE AND PREDICT TO FIND AND RETAIN THE BEST TALENT.

For too long, employers have been recruiting, retaining, and managing talent using assumptions instead of data. But in today's hyper-competitive market, companies can no longer rely solely on their own data to build effective workforce management programs. It's not enough to react and guess. They need context and benchmarks to make fast, accurate, cost-effective decisions. They must anticipate and predict to find and retain the best talent.

That requires a more proactive, intelligence-based approach. How does a given set of workforce management metrics compare with national and peer benchmarks? What are the right comparisons by state, city, sector, and job category? How can high retention-risk employees (and their resulting job categories and skill sets) be identified before they leave and negatively impact organizational performance?

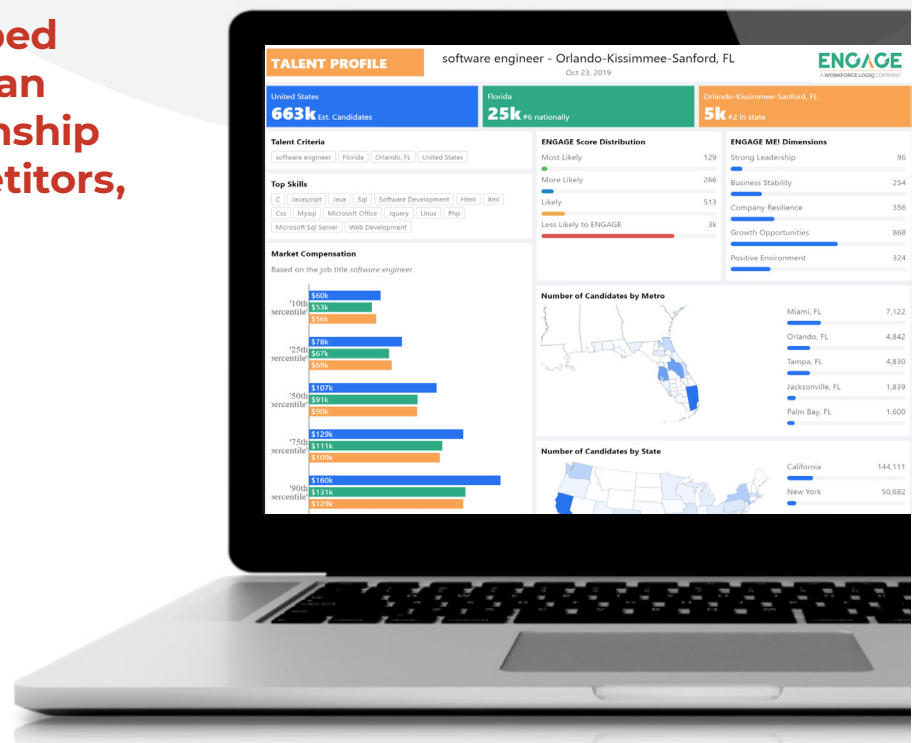
Workforce Logiq combines insights from the industry's leading expert advisors, a global technology platform, proprietary market benchmarks, and patent-pending data science to help companies answer these questions.

This inaugural **Workforce Management Annual Benchmark Report** offers a snapshot of Workforce Logiq's Total Talent IntelligenceSM platform, including macro industry insights based on more than 40,000 sources, 1 billion+ monthly interactions, and analytics on over 100 million candidates and 8 million organizations in North America. Organizations can use this report to see inside their data to create more effective and cost-efficient recruiting and retention programs. It will be the first in a series that Workforce Logiq will release.

"Workforce Logiq has developed intelligent data science that can fully map the complex relationship between people, roles, competitors, and dynamic markets."



JOE HANNA,
CHIEF STRATEGY OFFICER
WORKFORCE LOGIQ



ABOUT WORKFORCE LOGIQ TALENT RETENTION RISK (TRR) SCORES

Talent Retention Risk (TRR) ScoresSM use multiple AI techniques and patent-pending models to calculate industry, company, and candidate-specific benchmarks to predict how various factors contribute to employment stability and volatility, including how likely a professional or knowledge worker candidate is to be interested in exploring other job opportunities or unsolicited recruiting messages.

“Generally speaking, the lower the TRR Score—or employee volatility—the better. That’s because at the company level, a lower TRR score indicates employers may have less competition for top talent, lower acquisition costs, and a more reasonable time-to-hire,” said Workforce Logiq Chief Data Scientist and Talent Economist, Dr. Christy Whitehead. “Industry TRR benchmarks versus peer groups are incredibly useful to employers to set recruiting expectations, uncover potential opportunities for improvements within their organization, and identify recruiting opportunities from competitors whose TRR Scores are under-performing.” Workforce Logiq’s AI models track more than 2,000 events, triggers and shocks that can impact employment volatility, including:

- Macroeconomic trends
- Employee churn indicators (including leadership changes, layoff announcements, job posting trends and job tenure)
- Company-level social media and news sentiment
- Other industry news and events
- Other factors proven to be correlated with workforce volatility

"Industry TRR benchmarks versus peer groups are incredibly useful to employers to set recruiting expectations, uncover potential opportunities for improvements within their organization, and identify recruiting opportunities from competitors whose TRR Scores are under-performing."



DR. CHRISTY WHITEHEAD
CHIEF DATA SCIENTIST
AND TALENT ECONOMIST
WORKFORCE LOGIQ

TRR vs. Industry Benchmark Insights

LOWER TRR then peers		HIGHER TRR then peers	
Industry TRR	HIGH	<ul style="list-style-type: none">• In a better position to attract talent from within the industry• Cost of talent acquisition will be slightly above average• Time-to-hire is likely average• Can potentially attract talent at lateral compensation and levels• Target companies in quadrant B	<ul style="list-style-type: none">• The most difficult position to attract talent from within or outside the industry• Cost of talent acquisition is relatively high• Time-to-hire is significantly above average• Focus on internal engagement and development to reduce retention risk• Develop strong promote-from-within culture to build an internal pipeline
	LOW	<ul style="list-style-type: none">• A slight advantage in attracting talent from within the industry• Cost of talent acquisition is average• Time-to-hire is likely average• Consider programs to recruit and train talent from outside the industry• Target companies in quadrant D and B	<ul style="list-style-type: none">• At risk of progressively higher churn• Cost of talent acquisition will be high• Time-to-hire will be above average• Focus on internal engagement and development to reduce retention risk• Consider programs to recruit and train talent from outside the industry• Target companies in quadrant A and B

Note: TRR Scores do not use candidate-level social media, online search history, or other personal information, including protected class data.

2019 TRR BY MAJOR INDUSTRY SECTOR

A look at 2019 by major industry sector (as defined by the North American Industry Classification System) reveals that Mining, Quarrying and Oil and Gas Extraction had the highest average TRR Score (64.0) at 24% higher than the national average for all major industry sectors (51.7). Companies operating within this sector would expect to have the most difficulty attracting talent from within or outside the industry and experience high talent acquisition costs and significantly higher time-to-hire timeframes. The December 2019 monthly jobs report highlighted that 8,000 jobs were lost in the mining sector, reflecting a slump in spending on energy exploration — both supporting and influencing the predictive high TRR Score.

Healthcare and Social Assistance had the lowest average TRR Score (39.4), at 24% below the national average. According to U.S. Bureau of Labor Statistics, healthcare occupations are projected to grow 14% through 2028, much faster than the average for all occupations, adding about 1.9 million new jobs — factors that would be included in the TRR predictive score calculation.

**SCORES ARE
RANKED ON
A SCALE:
LESS THAN**

35

IS LOW,

35-49

IS AVERAGE,

50-69

**IS ABOVE AVERAGE,
AND ABOVE**

70

IS HIGH.

Major Industry Sectors 2019 (Ranked most to least volatile)

Industry	TRR Score	% ↑/↓ US Avg.
Mining, Quarrying, Oil/Gas Extraction	64.0	+24%
Finance/Insurance	62.7	+21%
Utilities	55.1	+7%
Management of Companies/Enterprises	55.0	+6%
Information	53.8	+4%
Transportation/Warehousing	53.3	+3%
Administrative, Support, Waste Management and Remediation Services	53.1	+3%
Arts, Entertainment and Recreation	52.8	+2%
Retail Trade	52.0	+1%
Professional, Scientific and Technical Svcs.	51.8	0%
Construction	50.9	-1%
Accommodation/ Food Services	50.4	-3%
Wholesale Trade	50.4	-3%
Real Estate, Rental and Leasing	50.2	-3%
Agriculture, Forestry, Fishing and Hunting	49.4	-4%
Manufacturing	47.0	-9%
Other Services (Except Public Admin.)	46.9	-9%
Educational Services	43.7	-16%
Healthcare and Social Assistance	39.4	-24%



Q1 2020 TRR PREDICTIONS BY MAJOR INDUSTRY

Heading into 2020, the majority of industry sectors continue to have TRR Scores in the “average” or just slightly “above average” range. However, a few sectors experienced a significant jump—either up or down—in their talent retention volatility since Q1 of 2019.

“This is exactly what you’d expect to see in an economy with just about full employment,” Whitehead explains. “But TRR Scores are ‘living’ benchmarks that we update daily. They typically rise and fall in response to the national economy and unemployment rates, but are most impacted by industry-specific shocks.”

The industries with the three highest average TRR Scores for 2019 also saw the greatest increase in their scores from January to December of 2019. Utilities saw an increase of 15%; Mining, Quarrying, and Oil and Gas Extraction saw an increase of 10%; and Finance and Insurance had an increase of 5%. In other words, these industries have been the most volatile in terms of talent retention—and are predicted to become increasingly volatile into Q2 2020.

Meanwhile, Healthcare and Social Assistance—the industry with the lowest average TRR Score in 2019—is also the industry that saw the most significant decrease (8%) from the beginning of the year. This industry sector is therefore predicted to be more stable in Q1 2020 versus 2019.

Major Industry Rankings

(Greatest to least change since Q1 2019)

Industry	TRR Score	% ↑/↓ JAN 2019
Utilities	59.3	+15%
Mining, Quarrying, Oil/Gas Extraction	66.2	+10%
Finance/Insurance	61.6	+5%
Accommodation/ Food Services	53.8	+4%
Transportation/Warehousing	52.5	+2%
Manufacturing	47.7	+2%
Educational Services	43.9	+1%
Information	52.9	0%
Retail Trade	51.4	0%
Agriculture, Forestry, Fishing and Hunting	49.8	0%
Arts, Entertainment and Recreation	53.2	-1%
Real Estate, Rental and Leasing	53.0	-1%
Administrative, Support, Waste Management and Remediation Services	52.9	-1%
Construction	50.7	-1%
Wholesale Trade	50.1	-2%
Management of Companies/Enterprises	54.0	-4%
Professional, Scientific and Technical Svcs.	51.3	-1%
Other Services (Except Public Admin.)	44.9	-8%
Healthcare and Social Assistance	38.0	-8%

“TRR Scores are ‘living’ benchmarks that we update daily.”

DR. CHRISTY WHITEHEAD
CHIEF DATA SCIENTIST
AND TALENT ECONOMIST
WORKFORCE LOGIQ



ARE WORKERS ‘LIKELY TO ENGAGE?’

Workforce Logiq’s “Likely to ENGAGE” categorization is based on the proprietary TRR Score methodology, but with additional data sources and metric-specific algorithms. Likely to ENGAGE scores are used to predict how likely an employee is to be interested in exploring other job opportunities or unsolicited recruiting messages. This helps organizations create more impactful retention programs and more targeted recruiting outreach.

The Likely to ENGAGE algorithm was validated by professors Brooks Holtom and David Allen – science advisors to ENGAGE Talent – in a recent podcast and Harvard Business Review article.



Candidates that Workforce Logiq identified as “most likely” to be receptive to new job opportunities were twice as receptive to unsolicited recruitment messages and 63% more likely to change jobs compared to those identified as “unlikely” to be receptive.

2019 Likely to Engage Scores by Job Category

By job category, Recruiting, ironically, had the highest percentage of employees open to an unsolicited recruitment message at 115% above the national average. Software Engineering, a heavily in-demand job category, was second at 105% above the national average. That means, for example, that employers who rely on high Likely to ENGAGE scored job categories like Software Engineering and other professional and knowledge worker roles should be proactively monitoring their internal talent for retention risk, as well as targeting competitors’ talent resources to build up a talent pipeline in these categories. On the flip side, Skilled Trade had the lowest, at 81% below the national average.

Top 35 Job Categories (Ranked from most to least volatile)

Job Category	% ↑/↓ US Avg.
Recruiting	+115%
Software Eng.	+105%
Marketing	+82%
Finance	+77%
Investment	+65%
HR	+61%
Sales	+40%
Accounting	+39%
Operations	+28%
Engineer	+17%
Banking	+15%
Customer Relations	+12%
IT	+8%
Consulting	+6%
Law	-1%
Military	-3%
Insurance	-7%
Science	-8%
Real Estate	-8%
Technical	-14%
Education	-17%
Film & TV	-27%
Arts	-39%
Writing	-39%
Medicine	-40%
Dining & Hospitality	-50%
Administration	-51%
Construction	-53%
Dentistry	-62%
Religion	-64%
Healthcare	-67%
Nursing	-70%
Public Safety	-74%
Education	-76%
Skilled Trade	-81%

2019 LIKELY TO ENGAGE SCORES BY TOP 25 MSAS

At the city—or more specifically, the metropolitan statistical area (MSA)—level, the San Francisco-Oakland-Berkeley area in California had the highest percentage of employees open to an unsolicited recruitment message at 50% above the average for the top 25 MSAs. This reflects, among other factors, the concentration of Fortune 500 companies, including technology industry and other professional and knowledge worker jobs in this MSA and the stiff competition among the big tech players for top talent.

The Riverside-San Bernardino-Ontario area in California had the lowest, at 59% below the national average. The relatively low Likely to ENGAGE score for professional and knowledge workers in this MSA is indicative of the level of relevant job opportunity availability. For example, in the Riverside-San Bernardino-Ontario area, transportation and material moving jobs accounted for over 11% of MSA employment versus 7% nationally; management-related jobs are 20% lower than the national average. The lower share of professional and knowledge worker job categories available for job change opportunities is resulting in a less volatile employment environment for these workers.

Top 25 MSAs

(Ranked from most to least volatile)

Metropolitan Statistical Area (MSA)	% ↑/↓ US Avg.
San Francisco-Berkeley-Oakland (CA)	+50%
New York-Newark-Jersey City (NY, NJ)	+23%
Boston-Cambridge-Newton (MA)	+16%
Seattle-Tacoma-Bellevue (WA)	+14%
Washington-Arlington-Alexandria (DC, VA, WV)	+8%
Chicago-Naperville-Elgin (IL)	+5%
Denver-Aurora-Lakewood (CO)	+4%
Charlotte-Concord-Gastonia (NC)	+3%
Minneapolis-St. Paul-Bloomington (MN)	-6%
Portland-Vancouver-Hillsboro (OR, WA)	-7%
Dallas-Fort Worth-Arlington (TX)	-7%
Los Angeles-Long Beach-Anaheim (CA)	-10%
Atlanta-Sandy Springs-Roswell (GA)	-11%
Houston-The Woodlands-Sugar Land (TX)	-11%
Philadelphia-Camden-Wilmington (PA, NJ, DE)	-15%
San Diego-Chula Vista-Carlsbad (CA)	-19%
Baltimore-Columbia-Towson (MD)	-20%
Phoenix-Mesa-Chandler (AZ)	-21%
Tampa-St. Petersburg-Clearwater (FL)	-21%
St. Louis (MO, IL)	-23%
Detroit-Warren-Dearborn (MI)	-23%
San Antonio-New Braunfels (TX)	-27%
Miami-Fort Lauderdale-Pompano Beach (FL)	-29%
Orlando-Kissimmee-Sanford (FL)	-33%
Riverside-San Bernardino-Ontario (CA)	-59%

Likely to ENGAGE Segmentation vs. Top 25 MSAs

San Francisco-Oakland-Berkeley, CA MSA



Riverside-San Bernardino-Ontario, CA MSA



Likely to ENGAGE Legend

■ Least Likely ■ Less Likely ■ More Likely ■ Most Likely



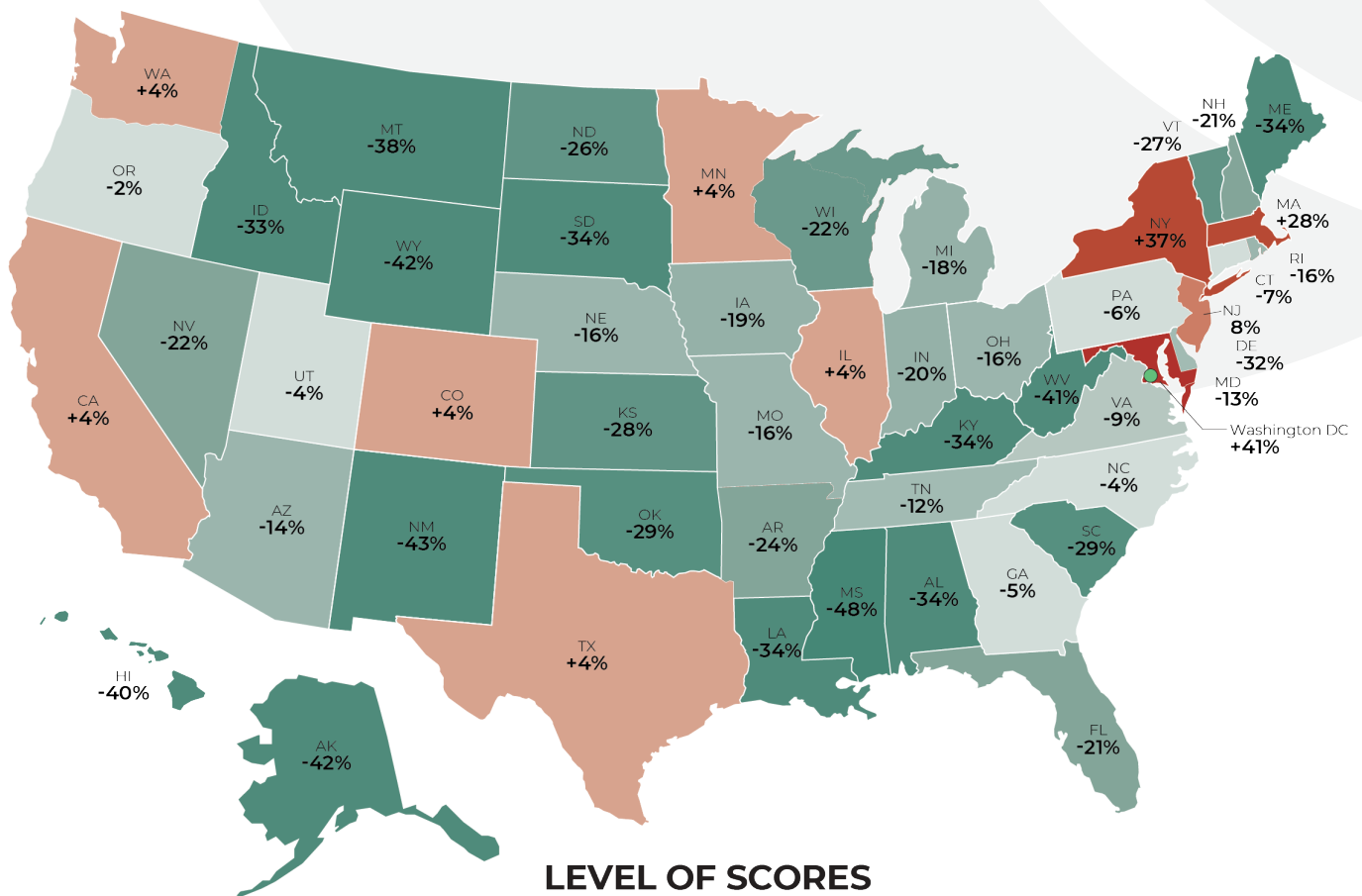
2019 LIKELY TO ENGAGE SCORES BY STATE

Washington, D.C., a job market with a majority of professional and knowledge worker employment opportunities, has the highest percentage of workers likely to engage with an unsolicited recruitment message at 41% above the national average. The lowest is Mississippi, where the average is 48% below the national average. Mississippi is one of a handful of states with no Fortune 500 company and only one from the Fortune 1,000 list.

“At the state and city level, higher Likely to ENGAGE percentages for professional and knowledge worker job categories can be a reflection of more—and more varied—opportunities,” said Workforce Logiq Chief Strategy Officer Joe Hanna. “States with the highest percentage of workers Likely to ENGAGE are typically the largest, and the scores are driven, in large part, by the number and type of enterprises located within their boundaries. That means there is typically a higher demand for professional and knowledge workers, and these workers have a greater choice of employers. Not coincidentally, more of the job categories that experience the most volatility—like software engineering, marketing and finance—are also more likely to be located in larger states.”

SCORES BY STATE

(Percentage as compared to National Average)



LEVEL OF SCORES

- Highest
- Average
- Lowest
- Above Average
- Below Average

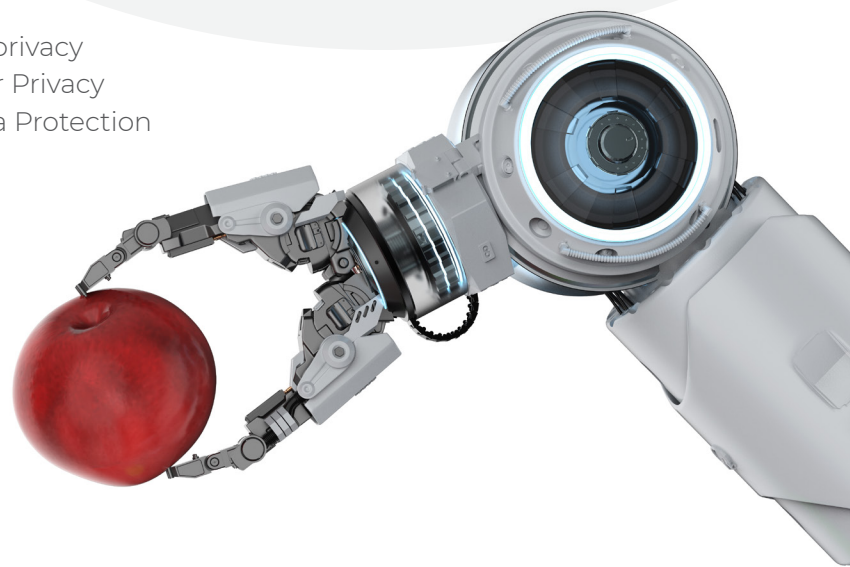
STATEMENT ON ETHICAL, NON-BIASED AI

Workforce Logiq has helped hundreds of companies recruit, retain and manage their full-time and contingent workforces. That means the company has helped match hundreds of thousands of individuals with contingent and full-time employment opportunities they may not otherwise have found.

One area Workforce Logiq invests in to connect employers and talent at scale—faster and more cost-effectively—is advanced technology, including artificial intelligence and machine learning. And as with any technological advancements, their power must be deliberately and carefully marshalled in order to ensure positive impacts for employers—and the individuals they recruit.

Specifically, this means Workforce Logiq is committed to a strict set of guidelines to ensure its data science and algorithms are fair and free from bias. For example:

- Workforce Logiq performs 4-part validated discrimination testing (plus annual retesting), designed and reviewed with outside counsel to:
 1. Ensure parameters are free of bias;
 2. Review historical data for any hidden bias;
 3. Audit results for any statistically significant disparate impact; and
 4. Track how users utilize the AI results.
- Privacy and data protection are designed into Workforce Logiq's solutions and infrastructure from the beginning—and regularly audited and updated.
- Workforce Logiq does not include candidate-level social media, online search history, or other personal information, including protected class data in its algorithms.
- Workforce Logiq does not knowingly collect personal information from data subjects within the European Union. If the company learns that it has collected or received personal data from an EU data subject, it will delete that information.
- If an individual or organization determines that their profile may be incomplete or that inferred or factual information about him or her or their company is incorrect, he or she may propose an addition or a correction.
- Workforce Logiq is compliant with relevant data privacy regulations, including CCPA (California Consumer Privacy Act) in the United States and GDPR (General Data Protection Regulation) in the European Union.
- Workforce Logiq's internal processes encourage feedback and criticism on any and all aspects of its solutions and technologies, including a global anonymous hotline number on which to report any concerns, including those associated with its data science and data privacy approach.
- Workforce Logiq's Key Science and Industry Advisors provide independent perspectives on its use of data science and algorithms.



Above all, Workforce Logiq continues to carefully listen, seek feedback and evolve its business and practices as the market evolves, so that it is at the forefront of ethical AI.

ABOUT WORKFORCE LOGIQ

Workforce Logiq's mission is to deliver the expertise, continuous innovation and insight to reimagine and transform how organizations win the talent they need to grow.

Workforce Logiq is a leading global provider of predictive workforce management and universal sourcing solutions, helping companies achieve greater management, performance and financial control over their workforce and talent supply chains.

With clients in 50+ countries, Workforce Logiq provides expert guidance, real-time and predictive analytics, and patented and award-winning technologies. Workforce Logiq's universal sourcing solution addresses all elements of its clients' acquisition and retention programs, including full-time (RPO), contingent (MSP) and freelance "gig" (FMS) workers.

Today, Workforce Logiq is powered by more than 1,000 workforce management experts and manages 8,000 active supplier relationships and \$4 billion in spend globally. Workforce Logiq is headquartered in Orlando, Florida; its European headquarters is in Stockholm. Workforce Logiq's portfolio of companies include AI software company [ENGAGE Talent](#), advanced payroll provider [LOKI Systems](#), and background screening provider [Quick Search](#). For more information visit workforcelogiq.com, follow on Twitter [@WorkforceLogiq](https://twitter.com/WorkforceLogiq), or connect with [Workforce Logiq](#) on LinkedIn.

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