New Technology and the Bleeding Edge of Talent
# Staffing Industry Analysts Product Overview

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<tr>
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<th>Products &amp; Services for Suppliers</th>
<th>Products &amp; Services for Buyers</th>
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<tbody>
<tr>
<td><strong>Research &amp; Advisory</strong></td>
<td>![SIA Logo] (Corporate Membership)</td>
<td>![SIA Logo] (Contingent Workforce Strategies Council)</td>
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<td><strong>Events</strong></td>
<td>![SIA Logo] (Executive Forum Europe)</td>
<td>![SIA Logo] (CWS Summit North America)</td>
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<td>![SIA Logo] (Healthcare Staffing Summit)</td>
<td>![SIA Logo] (Collaboration in the Gig Economy)</td>
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<tr>
<td><strong>Editorial</strong></td>
<td><img src="image" alt="Staffing Industry Review" /></td>
<td><img src="image" alt="CWS Global Daily News" /></td>
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<td><img src="image" alt="CWS 3.0" /></td>
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<td><strong>Certification &amp; Training</strong></td>
<td>![SIA Logo] (Certified Contingent Workforce Professional)</td>
<td>![SIA Logo] (CCWP Statement of Work Expert)</td>
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SIA | Staffing Industry Analysts Contingent Workforce Strategies Council Webinar
Audio

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- Questions may be submitted at any time
- Click on the **Question Mark section** to open the Q&A window
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- The presentation will be shared with registrants
Frank Enriquez, Sr. Manager, Contingent Workforce Strategies and Research, CCWP, SIA

John Nurthen
Executive Director Global Research, SIA

Dan Rothberg
President, Workspend
Thank you to our sponsor...

Dan Rothberg, President, Workspend
Agenda

- Bleeding edge tech
- Bleeding edge workforce engagement models
The Bleeding Edge

“Technology.....is a queer thing. It brings you great gifts with one hand and stabs you in the back with the other.”

C.P. Snow, New York Times – March 1971
Artificial Intelligence Definition

“The theory and development of computer systems able to perform tasks normally requiring human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages.”
Size Matters
Four Types of AI

- Machine Learning
- Deep Learning
- Neural Networks
- Natural Language Processing (NLP)
AI is Ubiquitous

Does your solution utilize any form of artificial intelligence?

- Yes: 73%
- No: 5%
- Not currently, but it’s on the roadmap: 22%

Which best characterizes the AI you are using today?

<table>
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<tr>
<th>AI Type</th>
<th>Percentage of Respondents</th>
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<tbody>
<tr>
<td>Machine Learning</td>
<td>74%</td>
</tr>
<tr>
<td>Natural Language Processing</td>
<td>68%</td>
</tr>
<tr>
<td>Deep Learning</td>
<td>12%</td>
</tr>
<tr>
<td>Neural Networks</td>
<td>10%</td>
</tr>
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Source: Staffing Industry Analysts, Artificial Intelligence in Talent Acquisition, 2017
Talent Acquisition Technology

Online Job Advertising
- Job boards
- Job aggregators
- Social media job sites
- Community sites
- Online classifieds
- Programmatic job ads/job distributors
- Job post optimizers
- Online staffing
- Crowdsourcing
- Online work services
- Resume Parsing/Search-Match Tools
- People aggregators
- Sourcing process automation platforms
- Intelligent sourcing management systems

Human Cloud

Sourcing Automation

Employee Referrals
- Recruitment Marketplaces

Candidate Discovery

Candidate Engagement

Systems of Record

Candidate Verification

Candidate Assessment

Texting/Email Technology
- Recruitment Chatbots
- Engagement Platforms

Background Check Verification
- Social Media Screening

Applicant Tracking Systems (ATS)
Vendor Management Systems (VMS)
Software Integrators
Workforce Analytics

Psychometric Assessments
- Skills Tests
- Interviewing Platforms

Source: Staffing Industry Analysts, Workforce Solutions Ecosystem
The Old and the New

- AI is enabling the development of new Talent Acquisition Technology
  - Recruitment chatbots, Sourcing process automation platforms, Intelligent sourcing management systems

- AI is re-invigorating older Talent Acquisition Technology
  - Job Boards, Recruitment Marketplaces, Online staffing platforms, VMS
### The Rise of Recruitment Chatbots

- Recruitment Chatbots are most often used to automate the initial communication and screening of candidates.

- Investment and development in chatbots has increased dramatically as advances in processing power and AI have intersected with business needs for automation.

- Chatbots range from basic hard coded dialog trees to some of the most advanced practical applications of AI in existence.

- The four most significant Recruitment Chatbots by funding have raised more than $100 million to date.

- Some vendors claim that as much as 80% of a recruiter’s daily tasks can be built and customized in a chatbot process.

**Chatbot investment by year (recruiting v general) 2014-2019 YTD ($ millions)**

Source: SIA Introduction to Chatbots (Crunchbase)
Chatbot Segmentation

Pre-configured vs. AI and General vs. Niche

Source: Staffing Industry Analysts, Introduction to Chatbots
Sourcing Automation Technologies

- Sourcing process automation platforms (SPAP)
  - Workforce aggregators that do lightweight candidate pre-qualification with bolt-on marketing automation features to fully automate the sourcing process, from search to application

- Intelligent sourcing management systems (ISMS)
  - Enterprise-grade data management solutions that aggregate multiple internal ATSs or candidate databases into a single system of record, perpetually “clean” and update such databases in an automated fashion, combining internal candidate data with hundreds of millions of public profiles across dozens to hundreds of websites

Source: Staffing Industry Analysts, Introduction to Sourcing Automation Technologies
Intelligent Sourcing Management Systems

Candidate info “cleaned”, duplicates removed

Candidate info “enhanced”, people aggregation

Aggregate info fed to platform

All job postings fed to platform

Candidate info stored in multiple databases

AI-sourcing platform acts as single “source of truth”

All jobs

End result is a ranked list of candidates for every open position

AI uses internal hiring patterns and external data to rank candidates

Every job automated against every candidate

Source: Staffing Industry Analysts, Introduction to Sourcing Automation Technologies
Revenge of the Job Board

- Enhancements to existing products and services
  - Matching algorithms through AI/machine learning
  - Development of mobile apps
  - Video functionality
  - Data analytics
  - Augmented reality
  - Integration/API’s
  - Gamification
  - Migration to cloud services architecture

Source: Staffing Industry Analysts, Online Job Advertising Market Update
Recruitment Marketplaces

- Recruitment Marketplaces facilitate a platform of hundreds to thousands of individual freelance recruiters and/or staffing agencies that employers can tap into to help fill open roles.
  - Typically, there is a set placement (or “success”) fee, which is split between the recruiter that “places” a candidate and the platform.

Source: Staffing Industry Analysts, Introduction to Recruitment Marketplaces
Innovation in Online Staffing Platforms

- Growth in enterprise-strength products
  - Onboarding, compliance/classification services, advanced analytics, enhanced support
  - Access to “premium” talent pools
  - Refined pricing plans to better match the varying needs of enterprises
  - Integration of Human Cloud applications into VMS

- Development of new blockchain models

Source: Staffing Industry Analysts, The Gig Economy & Human Cloud Landscape
VMS Innovation

- Automated view of compliance, vetting and screening requirements
- Guided buying using machine learning to recommend solutions (SOW/IC/temp/freelancer) based on client preferred outcomes
- Ability to ‘classify’ workers via integration with compliance solution partners
- Use of AI, machine learning, and natural language processing to ‘read’ resumes to produce a candidate summary
Digital Credentialing using Blockchain

- Blockchain can potentially provide fully verified candidate credentials prior to the interview stage
  - Recruit, Workday, Kelly Services and PwC actively investing in blockchain-based credentialing technology development and/or partnering with blockchain companies
  - A few technology start-ups are developing credentialing solutions using blockchain to facilitate credential verification and access
  - Collaboration/consortia approaches

- Candidate control of their digital identity

Source: Staffing Industry Analysts, Trends in Digital Credentialing
Agenda

- Bleeding edge tech
- Bleeding edge workforce engagement models
MSP Innovation

- Diversity and inclusion becoming a KPI
  - Worker and supplier diversity
  - Executive training to shift perceptions and improve gender balance

- Specific programs targeting groups such as veterans

- ‘Persona-based hiring’ to fill peak volume temporary worker positions for challenging shifts, with targeted marketing and social media campaigns
Total Talent Deficit

Gap between the importance of Practices/Strategies and Current Capabilities

Implement decision tools
Educating managers
Reliable data
HR/Procurement work together
Integrated technology solution
Maximize brand to source non-employed
Maximize brand to source employed
Sr. Exec Support
Unified management platform

These practices and strategies are highly important, yet capabilities are lagging in most.

N=167 (Single response per company)

Source: SIA/AMS Toward a Total Talent Future 2019
Total Talent Barriers

Which of the following are significant barriers to implementing TTA or TTM in your company?

- Organizational silos and complexity: 75%
- Data analytics for making decisions not available: 46%
- Lack of a business case with compelling ROI: 39%
- Fear of organizational/management changes: 36%
- Misclassification/compliance/co-employment concerns in treating employees, non-employees similarly: 36%
- No department has sufficient authority: 27%
- Integrated technology needed to do this right isn’t available: 26%
- Not enough case studies prove that it’s worth doing: 21%
- No department has sufficient expertise: 17%
- Lack of credible solutions from third parties: 15%

Source: SIA/AMS Toward a Total Talent Future 2019
Total Talent Trendsetters

Based on what you know about your organization, to what degree do you agree with the following statements?
(Net Positive Score*)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Laggards</th>
<th>Followers</th>
<th>Trendsetters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hiring of employed talent is a competitive advantage</td>
<td>37%</td>
<td>49%</td>
<td>60%</td>
</tr>
<tr>
<td>Sourcing of non employed workers is a competitive advantage</td>
<td>20%</td>
<td>32%</td>
<td>50%</td>
</tr>
<tr>
<td>Have talent needed to achieve business objectives</td>
<td>-34%</td>
<td>-2%</td>
<td>30%</td>
</tr>
</tbody>
</table>

*Net Positive Score=Net Agree (Strongly Agree/Agree) Minus Net Disagree (Strongly Disagree/Agree) - N=187 (Total Respondents)
Freelancer Management Systems

- End to end platform that enables enterprises to self-manage their engagements with independent workers and freelancers and, in certain cases, a company’s own internal workforce
  - Activate, complete, and pay for the work engagement within the system
  - Standalone FMSs partnering with VMSs
  - Public v private talent pools
  - A bifurcated market
    - FMS for high-skilled consultants
    - FMS for lower-skilled freelance talent

Source: Staffing Industry Analysts, Freelancer Management Systems Landscape and Differentiators
Advantages of Robotic Process Automation

RPA can reduce operational costs and attain ROI goals faster than other transformation approaches.

Source: Deloitte
SOLUTIONS — INDUSTRY — BANKING AND FINANCIAL SERVICES

Banking and Financial Services
WorkFusion's AI-driven RPA automates complex and time-consuming processes, reducing costs and risk while improving customer experience.
What Next?

- More products, more confusion
- Advantages of the select few with the data, resources, computing power, and talent to make AI work to full effect
- Continuing focus on integration of tools
  - Sourcing to Matching to Selection to Onboarding
- Leaps forward
  - Predictive analytics, workforce mix analysis, talent pipelining, personalized candidate communication, shared talent exchanges
  .......and more
Time for Your Questions...
Thank you to our sponsor...

Dan Rothberg, President, Workspend
SIA Reports used in this Presentation

- Artificial Intelligence in Talent Acquisition
- Workforce Solutions Ecosystem
- Introduction to Chatbots
- Introduction to Sourcing Automation Technologies
- Online Job Advertising Market Update
- Introducing Recruitment Marketplaces
- The Gig Economy & Human Cloud Landscape
- Trends in Digital Credentialing
- Toward a Total Talent Future (available to non-members)
- Freelancer Management Systems Landscape and Differentiators
- Introduction to RPA

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Founded in 1989, SIA is the global advisor on staffing and workforce solutions. Our proprietary research covers all categories of employed and non-employed work including temporary staffing, independent contracting and other types of contingent labor. SIA’s independent and objective analysis provides insights into the services and suppliers operating in the workforce solutions ecosystem including staffing firms, managed service providers, recruitment process outsourcers, payrolling/compliance firms and talent acquisition technology specialists such as vendor management systems, online staffing platforms, crowdsourcing and online work services. We also provide training and accreditation with our unique Certified Contingent Workforce Professional (CCWP) program.

Known for our award-winning content, data, support tools, publications, executive conferences and events, we help both suppliers and buyers of workforce solutions make better-informed decisions that improve business results and minimize risk. As a division of the international business media company, Crain Communications Inc., SIA is headquartered in Mountain View, California, with offices in London, England.

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