REINVENTING WORKFORCE PLANNING WITH ANALYTICS ‘IN THE NEW’

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NY HR People + Strategy

New York City
Feb. 12, 2020
AGENDA

1. WHY IS ORGANIZATIONAL AGILITY IMPORTANT?
2. WHY IS AGILITY IMPORTANT TO WORKFORCE MANAGEMENT?
3. HOW CAN COMPANIES BUILD WORKFORCE AGILITY?
4. NEW INSIGHTS ON SKILLS
5. HOW CAN YOU START?
WHY IS ORGANIZATIONAL AGILITY IMPORTANT?
ORGANIZATIONAL AGILITY

The ability to **sustain performance over time** through the capacity to **rapidly sense and respond** to opportunities and challenges – both novel and familiar – **while maintaining its balance** to progress core business objectives.
ORGANIZATIONS IN OUR DATABASE SKEW SLOW WHILE MOST HAVE SUFFICIENT BACKBONE

Source: Accenture organizational survey data (N=277)
LONGER-TERM PERFORMANCE ALIGNS WITH PERCEPTIONS

10-YEAR EBITDA GROWTH % 2008-2017

Database average (6%)
THE GREAT **DIVIDE**

“Strategic Scalers” see a much higher success rate and return on AI investments compared to companies pursuing siloed proof of concepts.

**Proof of concept**

- **Strategic scalers**
  - 78%
  - Nearly 2X the success rate

- **Proof of concept**
  - 32%

**Strategic scalers**

- 86%
  - Nearly 3X the return on AI investments

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Beyond the 3x ROI difference, we uncovered a positive correlation between successfully scaling AI and three key measures of financial valuation.

**PAYING DIVIDENDS**

- **Enterprise value/revenue ratio** increased by +35%
- **Price/earnings (P/E) ratio** increased by +33%
- **Price/sales (P/S) ratio** increased by +28%

Source: Accenture Strategy report, AI: Built to Scale
WHY IS AGILITY IMPORTANT TO WORKFORCE MANAGEMENT?
DEMOCRAPHICS + TECHNOLOGY = NEW WORKFORCE PLAYBOOK

**Traditional Assumptions:**

- One role = One person
- Labor = FTR core employee
- New skill = New hire
- Digital strategy = CIO
DEMOGRAPHICS + TECHNOLOGY = QUESTIONS FOR HR

• What is our policy on workforce automation?

• Which work in my company is most automatable?

• Which roles or tasks can be sourced ‘adaptively’ – via talent platforms?

• What are the emerging skill trends in my industry?

• Which new skills are trending now, and who in my company may have them already?

• How can I mitigate potential displacement of people?
HOW CAN COMPANIES BUILD WORKFORCE AGILITY?
Evolving to an agile workforce requires insights about where and how to build, buy, borrow and bot.
Workforce insights provide a complete picture

Current workforce
Understand where you are today

Optimal workforce mix

<table>
<thead>
<tr>
<th>Example role mix</th>
<th>Up to: (AI/robots) Technology</th>
<th>Human</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Scientist</td>
<td>40%</td>
<td>60%</td>
</tr>
<tr>
<td>IT Managers</td>
<td>60%</td>
<td>40%</td>
</tr>
<tr>
<td>IT Business Analysts</td>
<td>40%</td>
<td>60%</td>
</tr>
</tbody>
</table>

Adaptive workforce
**JOB ROLES ARE BEING DECOMPOSED INTO COMPONENT TASKS**

<table>
<thead>
<tr>
<th>COMPANY TITLE</th>
<th>STANDARD TITLE</th>
<th>TASK DESCRIPTION</th>
<th>TASK TYPE</th>
<th>AI?</th>
<th>GIG?</th>
<th>RECOMMENDATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUSTOMER SERVICE ANALYST</td>
<td></td>
<td>Compare disputed merchandise to records</td>
<td>REASON &amp; PLAN</td>
<td>Y</td>
<td></td>
<td>Intelligent Process AUTOMATION</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Record customer interactions</td>
<td>REASON &amp; PLAN</td>
<td>Y</td>
<td></td>
<td>Intelligent Process AUTOMATION</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Refer out unresolved customer grievances</td>
<td>PERCEIVE &amp; SENSE</td>
<td>Y</td>
<td></td>
<td>AUGMENTED Human Intelligence</td>
</tr>
<tr>
<td>CUSTOMER SERVICE REP</td>
<td></td>
<td>Solicit sales</td>
<td>KNOW / LEARN</td>
<td>N</td>
<td>Y</td>
<td>ADAPTIVE Internal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Order root cause tests</td>
<td>KNOW / LEARN</td>
<td>N</td>
<td>Y</td>
<td>ADAPTIVE External Managed</td>
</tr>
</tbody>
</table>

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AI potential of tasks within job roles can now be assessed at enterprise level, enabling newskilling strategies.
TOP GIG TALENT PLATFORMS

35 million users in 247 countries
14 million freelancers in 180 countries
Millions of creatives in 190 countries
10s of thousands of designers

Data source: 2020 Technology Market report by Josh Bersin @ www.hrtechconference.com
TOP SKILLS ON UPWORK

Android Developer
Bookkeeper
Content Writer
Copywriter
Customer Service Representative
Database Administrator
Data Scientist
Facebook Developer
Front-End Developer
Game Developer
Graphic Designer
Information Security Analyst
iOS Developer
Java Developer
JavaScript Developer
Logo Designer
Mobile App Developer
PHP Developer
Python Developer
Resume Writer
Sales Consultant
SEO Expert
Social Media Manager
Software Developer
Software Engineer
Technical Writer
UI Designer
UX Designer
Virtual Assistant
Web Designer
Wordpress Developer
Writer
TYPICAL SKILL PROXIMITY MODEL
ROLE ADJACENCY VIEW

ROLES ADJACENT TO PURCHASING (AT CENTER) ARE SHOWN IN THIS ANALYSIS

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SKILL OVERLAP ANALYSIS IS REQUIRED TO PLAN ROLE TRANSITIONS

**Current role that has declining skills**
- Solution Architect

**Declining skills in the current role**
- Ruby on Rails
- Crystal Reports
- AJAX
- Business Intelligence

**Skills with proximity to declining skills, to transition**
- Big Data
- Python
- Apache Hadoop
- Data Warehousing
- Tableau
- R
- Django
- SQL
- QlikView
- Scala
- AngularJs
- JavaScript
- JSON
- Machine Learning
- Data Architecture

**Roles containing proximity skills, to transition**
- Data Scientist
- Data Architect

**Indicative new skilling timelines**
- 0-6 months
- 6-12 months
- 12-18 months
- Declining Skills

**Note:**
1) Time to upskilling is based on the skill proximity – the more proximate a skill is to another, lesser time is taken to upskill.
2) Thickness of the line represents more correlation.

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ESTIMATING JOB ROLE SIMILARITY IS KEY TO RESKILLING AT SCALE

“AVERSATILE ANALYST OF THE FUTURE”

SYSTEMS ANALYST (82 FTEs)

PROGRAM DELIVERY MANAGER (33 FTEs)

DATA ANALYST (26 FTEs)

QUALITY ASSURANCE (26 FTEs)

PROGRMR ANALYST (36 FTEs)

BUSINESS ANALYSIS (35 FTEs)
NEW INSIGHTS ON SKILL TRENDS
84%

Executives say skills are a core issue

Source: SHRM report, The New Landscape: Recruiting Difficulty and Skill Paths
Highest-demand “hard” skills in US (2019)

1. Cloud Computing
2. Artificial Intelligence
3. Analytical Reasoning
4. People Management
5. UX Design
6. Mobile Application Development
7. Video Production
8. Sales Leadership
9. Translation
10. Audio Production
11. Natural Language Processing
12. Scientific Computing
13. Game Development
14. Social Media Marketing
15. Animation
16. Business Analysis
17. Journalism
18. Digital Marketing
19. Industrial Design
20. Competitive Strategies
21. Customer Service Systems
22. Software Testing
23. Data Science
25. Corporate Communications

Source: https://learning.linkedin.com/blog/top-skills/the-skills-companies-need-most-in-2019--and-how-to-learn-them
### Clustering roles offers a unique lens to evolving work patterns

<table>
<thead>
<tr>
<th>Role Category</th>
<th>Role Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management &amp; leadership</td>
<td>Corporate managers &amp; ed administrators</td>
</tr>
<tr>
<td>Empathy &amp; support</td>
<td>Psychiatrists &amp; nurses</td>
</tr>
<tr>
<td>Science &amp; engineering</td>
<td>Chem engineers &amp; computer programmers</td>
</tr>
<tr>
<td>Process &amp; analysis</td>
<td>Auditors &amp; clerks</td>
</tr>
<tr>
<td>Analytical subject-matter expertise</td>
<td>Air traffic controllers &amp; forensic science technicians</td>
</tr>
<tr>
<td>Relational subject-matter expertise</td>
<td>Medical team workers &amp; interpreters</td>
</tr>
<tr>
<td>Maintaining tech equipment</td>
<td>Mechanics &amp; maintenance workers</td>
</tr>
<tr>
<td>Operating &amp; maneuvering machine</td>
<td>Truck drivers &amp; crane operators</td>
</tr>
<tr>
<td>Physical/manual labor</td>
<td>Construction &amp; landscaping workers</td>
</tr>
<tr>
<td>Physical services</td>
<td>Hairdressers &amp; cooks</td>
</tr>
</tbody>
</table>

**SOURCE:** Accenture study, “It’s Learning, Just Not As You Know It”
### Percentage of time potentially augmentable / automatable

<table>
<thead>
<tr>
<th>Category</th>
<th>Augmentable</th>
<th>Automatable</th>
</tr>
</thead>
<tbody>
<tr>
<td>All occupations</td>
<td>51</td>
<td>38</td>
</tr>
<tr>
<td>Science &amp; engineering</td>
<td>74</td>
<td>18</td>
</tr>
<tr>
<td>Empathy &amp; support</td>
<td>64</td>
<td>23</td>
</tr>
<tr>
<td>Relational subj. expertise</td>
<td>61</td>
<td>25</td>
</tr>
<tr>
<td>Analytical subj. expertise</td>
<td>61</td>
<td>30</td>
</tr>
<tr>
<td>Management &amp; leadership</td>
<td>54</td>
<td>26</td>
</tr>
<tr>
<td>Process &amp; analysis</td>
<td>51</td>
<td>40</td>
</tr>
<tr>
<td>Maintaining tech equipment</td>
<td>47</td>
<td>49</td>
</tr>
<tr>
<td>Operating machines</td>
<td>46</td>
<td>51</td>
</tr>
<tr>
<td>Physical services</td>
<td>45</td>
<td>34</td>
</tr>
<tr>
<td>Physical/manual labor</td>
<td>31</td>
<td>66</td>
</tr>
</tbody>
</table>

**Source:** Accenture study, “It’s Learning, Just Not As You Know It”
The rising importance of new skillsets

<table>
<thead>
<tr>
<th></th>
<th>Complex reasoning</th>
<th>Creativity</th>
<th>Socio-emotional intelligence</th>
<th>Sensory perception</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management &amp; leadership</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Empathy &amp; support</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Science &amp; engineering</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Analytical subject-matter expertise</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
<td>High</td>
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<tr>
<td>Relational subject-matter expertise</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
<td>High</td>
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<tr>
<td>Process &amp; analysis</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
<td>High</td>
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<tr>
<td>Physical services</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
<td>High</td>
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<tr>
<td>Technical equipment maintenance</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
<td>High</td>
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<tr>
<td>Machine operation &amp; maneuvering</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
<td>High</td>
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<tr>
<td>Physical manual labor</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
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</table>

**Importance:**
- High
- Medium
- Low

**SOURCE:** Accenture study, “It’s Learning, Just Not As You Know It”
Science and engineering roles already require creativity and socio-emotional intelligence. This trend will accelerate with human-machine collaboration.

The changing importance of skills for science and engineering roles (2004-2017)

Creativity
Social-emotional intelligence
Sensory perception
Simple reasoning
Complex reasoning
Psychomotor
STEM/Analysis
Physical
Simple communication
Management and organization
Technical-operational

Scale based on US Department of Labor (O*Net) measure of skill importance, 1-5 scale
Source: Accenture analysis of data from The Occupational Information (O*Net) from the US Department of Labor
The changing importance of stem analysis and complex reasoning skills

STEM skills are important for some people, but every worker needs to get better at complex reasoning.

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</table>

**Note:** Complex reasoning includes critical thinking, deductive reasoning, active learning and a set of higher-order cognitive capabilities. Source: Accenture analysis of data from The Occupational Information Network (O*Net) of the US Department of Labor.
Highest importance skillsets now
– all have trended up since 2004

- Complex reasoning
- Creativity
- Social-emotional intelligence
- Sensory perception

Management & leadership

Science & engineering

Empathy & support

Maintaining tech equipment

Operating machines

Analytical subject expertise

‘HEAT’ IS THE NEW ‘STEM’ IN 2020

SOURCE: Accenture OrgAnalytics group
Top power skills across all roles in US

**Creativity**

*Why it matters, in one sentence:* While robots are great at optimizing old ideas, organizations need great employees who can conceive the solutions of tomorrow.

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**Persuasion**

*Why it matters, in one sentence:* Having a great product, a great platform or a great concept is one thing, but the key is persuading people to buy into it.

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**Collaboration**

*Why it matters, in one sentence:* As projects grow increasingly more complex and global in the age of AI, effective collaboration only grows more important.

---

**Adaptability**

*Why it matters, in one sentence:* An adaptable mind is an essential tool for navigating today’s ever-changing world, as yesterday’s solutions won’t solve tomorrow’s problems.

---

**Time management**

*Why it matters, in one sentence:* A timeless skill, mastering time management today will serve you the rest of your career.

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WHERE CAN YOU START?
What to do tomorrow

The revolution begins with you:

1. Ignite the workforce strategy discussion (or join it): What is yours?
2. What does the complete ‘4B’ picture look like for you: Buy, Build, Borrow, Bot?
3. Re-imagine the work using the Human + Machine concept (“Augmentation”)
4. Identify intersection points with current workforce planning process
5. Identify high-automatability roles as an early reskilling signal
6. Taking both company culture and economics into account, where would you focus first? Second? Third?
7. Build rapid prototypes, test, learn, improve, refine, then kill or scale
THANK YOU!

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Scan QR code to link in with me!
Click here for the full research reports:
AI: Built to Scale, Newskilling for Growth
It’s Learning, Just Not As We Know It