MERCER WEBCAST

Big Data in Action
Using Big Data to Understand the Workforce of the Future
June 3rd, 2015

Sangita Richardson, Spirit Aerosystems, Inc.
Matthew Stevenson, Mercer
Today’s Speakers

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Questions
To submit a question, use the floating panel on the top of your screen and click the Q&A button:

CLICK HERE TO ASK A QUESTION TO “ALL PANELISTS.”
Agenda

• Strategic Workforce Planning – What’s Going on in the Marketplace?
• Using Big Data to Inform Strategic Workforce Planning
• Success Story: Sprit AeroSystems
  – Workforce Planning
  – Predictive Analytics
  – External Labor Markets
• Lessons Learned and Q&A
BIG DATA AND STRATEGIC WORKFORCE PLANNING – WHAT’S GOING ON IN THE MARKETPLACE?
What “Everyone” is Talking About

- War for Talent
- Offshoring
- Demand
- Supply
- Big Data
- Predictive Analytics
- Outsourcing
- Productivity
- Labor Shortages
Research Findings: Organizations Are Making Significant Investments in Talent Without a Plan to Understand and Manage It Effectively*

<table>
<thead>
<tr>
<th>Spend</th>
<th>Have a Workforce Plan</th>
<th>Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global 60%</td>
<td>Yes 77%</td>
<td>62% High</td>
</tr>
<tr>
<td></td>
<td>No 23%</td>
<td>14% Somewhat</td>
</tr>
<tr>
<td></td>
<td></td>
<td>24% Not at all</td>
</tr>
</tbody>
</table>

*Source: Mercer Talent Barometer Survey
Why the disconnect?
Key Lesson: Big Data is only as valuable as the questions you ask

Right questions + Right data = Answers = Results
SPIRIT AEROSYSTEMS, INC. AND USING BIG DATA TO INFORM STRATEGIC WORKFORCE PLANNING
Who is Spirit?
Spirit Worldwide Operations and Support Base

Current state

$6B revenue in 2013

~16,000 employees worldwide

- Global customers, competitors, locations
- Sole-source on multiple platforms
- Over 1,400 hardware production & design suppliers
- Focus on performance, cost, and free cash flow
Spirit Has Broad Presence on Best Programs in Industry

- Airbus A320
- Airbus A350 XWB
- Airbus A380
- Boeing 737
- Boeing P-8A
- Boeing 747
- Boeing 767
- Boeing 777
- Boeing 787
- Bombardier CSeries
- Gulfstream G280
- Gulfstream G650
- Mitsubishi MRJ
- Sikorsky CH-53K

*2013 revenues

~$1.5BN* PROPULSION

~$1.5BN* WINGS

~$3BN* FUSELAGE
Understanding Workforce Gaps: what was really the predictive indicator?
Predictive Analytics: Does Overtime Matter?
Hypothesis: Overtime usage may be leveraged to develop, reward, and retain employees

**Theme #3:**
Overtime usage may be leveraged to develop, reward, and retain employees

**Analysis Shows:**
- Overtime usage at Spirit has remained steady since 2009
- Employees who work more overtime are more likely to have higher base pay and larger base pay increases
- Overtime also drives retention for Hourly employees
The tipping points of the effect of overtime on voluntary turnover are somewhere between 800-900 hours for hourly employees overall, and between 600-700 for those younger than 35.

The models on which these results are based are controlled for individual attributes, organizational factors, and external influences. Turnover likelihoods are relative to the mean turnover likelihood for the sample.
… and the costs of overtime surpass those of a new hire when overtime hours come in near the 900 range.

In 2010, the average salary for an hourly new hire is at $37,300.

Figures are based on active hourly employees in 2010.
Understanding the External Market: How do we Big Data to inform hiring?
Practical Recruiting Boundaries
While many workers can be recruited locally, some are best sourced at the regional level.

US states with large migrations into Kansas or Oklahoma and within close proximity were selected as the regional labor market. All of Scotland was selected as the UK regional labor market.
Executive Summary
With the right data, the decision was easy: Wichita’s local market on its own was unable to accommodate Spirit’s projected hiring needs.

**Mechanics**
e.g., Assembly Mechanics and Technicians

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<table>
<thead>
<tr>
<th>Year</th>
<th>Tulsa Projected hires</th>
<th>Effective labor market pool</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>100</td>
<td>250</td>
</tr>
<tr>
<td>2016</td>
<td>50</td>
<td>200</td>
</tr>
<tr>
<td>2018</td>
<td>150</td>
<td>150</td>
</tr>
<tr>
<td>2020</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>2022</td>
<td>250</td>
<td>250</td>
</tr>
</tbody>
</table>

**Wichita**

- Hiring projections exceed the size of the effective labor pool.
- Effective labor market pool remains constant.

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Hiring projections for Spirit

**Note:**

- Hiring projections for Spirit are shown in dark blue.
- Effective labor market pool is shown in green.
- The green line shows a steady increase in the effective labor market pool over the years.
- The dark blue line shows the hiring projections for Spirit, which exceed the effective labor market pool in the later years (2018 and 2022).
Conclusion: What are the skills needed to leverage “Big Data?”…

Source: Drew Conway 2010
Questions and Answers

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QUESTIONS
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FEEDBACK
Please take a minute to fill out the feedback form so we can continue to improve. It will pop up in a new window when the session ends. Thank you!
Biography – Matthew Stevenson

• Matt is a Partner in Mercer's Talent practice in Washington, DC. He has worked at Mercer since 2000. His work involves helping Mercer clients to define their human capital strategy and fine tune the implementation and planning of that strategy in order to support business objectives. In addition, Matt is currently Mercer’s lead consultant for Mercer’s Strategic Workforce Planning offering.

• Matt has 13 years participating in and leading projects for Mercer’s Workforce Planning and Analytics Center of Excellence. Recent projects have focused on:
  – Designing a workforce planning process and writing a workforce plan for a large multi-national IT services firm planning an overseas expansion
  – Enabling workforce planning and piloting workforce planning processes for a series of North American aerospace firms
  – Specifying and implementing HR metrics dashboards and a data repository for a regional health care system to inform their workforce analytics
  – Forecasting future workforce populations at a utility firm to enable proactive interventions to maintain optimal staffing levels for a natural resources group

• Matt holds a BA in Economics from McGill University (1993), and MA and PhD in International Relations from Arizona State University (1995, 2000)
Biography – Sangita Richardson

• <INSERT BIOGRAPHY>