

## EXECUTIVE SUMMARY

### Initial Question:

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What is the return on investment for having resources dedicated to workforce analytics? In other words, what benefits and cost-savings can our organization expect in exchange for hiring these resources?

### Clarification of the Question:

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After the informational interview, we narrowed our focus to the following questions. **1)** How much does an HR analytics resource cost? Specifically, what is the expected salary of a single analytics hire? **2)** What kind of benefit (in dollars) would the organization realize from hiring that resource?

### Introduction:

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According to a 2010 HBR article, leading-edge companies are increasingly utilizing sophisticated techniques to analyze their employees and improve their competitive advantage.<sup>1</sup> An IBM survey found that 60% of organizations that do not have workforce analytics applications in place intend on developing such capabilities in the next 1 to 5 years.<sup>2</sup> John Boudreau, a distinguished HR academic, has advocated that HR measurement extend beyond its traditional focus on the HR function and increase its capability to support key decisions about human capital that drive organizational performance.<sup>3</sup> The key takeaways here are that benchmark companies have implemented or are in the process of developing analytics capabilities and are transforming HR into a decision science.

### Investing in Analytics - Costs of Analytics Hires:

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Successfully creating an analytics capability requires high-quality *data*, an *enterprise* orientation towards analytics, *leadership* buy-in, *strategic targets*, and *analytic* talent, all collapsed into the acronym DELTA by Davenport et al.<sup>1</sup> Of those, analytic talent is arguably the most costly, both in terms of their salary and their limited supply in the talent pool. In 2012, HBR dubbed data scientists the “sexiest job of the 21<sup>st</sup> century” because companies are all rushing to capitalize on the potential of big data, but are facing talent scarcity issues.<sup>4</sup>

The requisite talent for workforce analytics has expertise in quantitative analysis, psychometrics, human resource management systems and processes, and employment law. Industrial-organizational psychologists possess this skillset and can be directly hired into the organization. Workforce intelligence analysts and senior specialists of

workforce analytics are other job positions with similar skillsets that companies such as McKesson, Direct TV, and Merck have sought to recruit. Statisticians possess the analytical background and can add value if they collaborate with and are guided by HR professionals within the organization. Alternatives to hiring full-time talent include working with HR academics, consultants, or commercial vendors on specific projects. Listed below are the specific salary data we found in our research.

Occupation	Source		
	Bureau of Labor Statistics (2010)		O'NET (2011) Median Salary
	Mean Salary Across Industries	Mean Salary Management Consulting Services	
Industrial Organizational Psychologist	\$124,160	\$163,080	\$94,720
Statistician	\$77,280	\$77,120	\$73,880

**ERI: Total Compensation (United States Average - January 1, 2013)**

**Industrial Organizational Psychologist**

Years Of Experience	10th Percentile	Survey Mean	90th Percentile
26	\$95,974	\$115,658	\$138,019
13	\$79,909	\$96,340	\$114,917
1	\$48,613	\$58,707	\$69,910

**Statistician**

Years Of Experience	10th Percentile	Survey Mean	90th Percentile
20	\$79,140	\$95,415	\$113,811
10	\$66,095	\$79,729	\$95,051
1	\$47,771	\$57,694	\$68,699

**Investing in Analytics - Benefits:**

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A 2012 MIT study of 179 large, publicly traded firms found that firms that use data-driven decision-making have 5-6% higher productivity and output than what would be expected given other investments.<sup>5</sup> Such decision making is also associated with significantly higher profitability and market value. A 2010 study found that organizations using analytics to differentiate themselves within their industry are twice as likely to be top performers versus low performers.<sup>5</sup>

Because it is difficult to highlight specific benefits for this company, we showcase a range of organizations that have utilized analytics to their advantage in the following paragraphs. Most reaped benefits through sizeable investments in talent and strong leadership buy-in. As this company embarks on analytically driven HR initiatives, it should identify those initial projects that can be managed by a single individual and with data already collected, although not necessarily integrated.

At Best Buy, a 0.1% increase in engagement in a particular store equates to more than \$100,000 in store operating income.<sup>1</sup> At AT&T, they found traditional selection practices were not backed by data: they discovered that ability to take initiative is much better predictor of on-the-job performance than high academic grades from reputable universities.<sup>1</sup> An initiative at Google, Project Oxygen, was undertaken to identify the attributes of successful managers. Through analysis of employee surveys, performance management scores, and interviews with highly rated and lowly rated managers, Google was able to identify 8 behaviors of good managers and 5 behaviors all

managers should avoid. The behaviors were counter-intuitive and could have only been unearthed via analytics.<sup>1</sup>

At Sysco, HR began tracking employee satisfaction, productivity, and retention. After analysis, the company discovered that units with highly satisfied employees have higher revenues, lower costs, better customer loyalty, and higher retention. To keep satisfaction high, Sysco measures 7 dimensions of the work environment and when numbers dip below targets, an intervention is implemented. Sysco was able to improve the retention rate of delivery employees from 65% - 85% within 6 years, which saved the company \$50 million in the process.<sup>6</sup>

### **Calculating ROI:**

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As this company begins building analytics capabilities, it is important to understand how to calculate ROI with the most accuracy<sup>7</sup>. Listed below are a practitioner's tips.

1. Zero in on productivity improvements (i.e. increased efficiency, reduced overtime, lower shrinkage gap) in dollar amounts.
2. Include an analysis of improvements on flexibility, transparency, and fairness brought by workforce management (i.e. stability in talent pools that reduces cost in staffing and training).
3. Take credit for analytics guided decisions (i.e. costs saved by revising poor decisions in compensation, eliminating a bad performing recruiting source).
4. Consider the additional costs associated with changes (i.e., implementations of new process).

## Cited References

(Listed in order cited within Executive Summary)

1. Davenport, T. H., Harris, J., & Shapiro, J. (2010, Oct 2010). Competing on talent analytics. *Harvard Business Review*, 88(10), n/a-58.

*Abstract:* Leading-edge companies such as Google, Best Buy, Procter & Gamble, and Sysco use sophisticated data-collection technology and analysis to answer these questions, leveraging a range of analytics to improve the way they attract and retain talent, connect their employee data to business performance, differentiate themselves from competitors, and more. The authors present the six key ways in which companies track, analyze, and use data about their people—ranging from a simple baseline of metrics to monitor the organization's overall health to custom modeling for predicting future head count depending on various "what if" scenarios. [ABSTRACT FROM AUTHOR]

2. Getting Smart about your workplace: Why Analytics Matter. *IBM Global Business Service*.

*Abstract:* This article discusses the current status of the utilization of workforce analytics by organizations, as well as the trends of acquiring workforce analytics capacity through the findings of a survey.

3. John W Boudreau. (2006). Talentship and HR measurement and analysis: From ROI to strategic organizational change. *HR.Human Resource Planning*, 29(1), 25-33.

*Abstract:* The author extends earlier work by proposing a framework of four elements integrating HR measures within a system for achieving strategic organizational change. The framework provides a diagnostic tool for finding the "sweet spots" where HR measurement is most feasible and effective, and it provides a guide to HR and business leaders looking to take their HR measurement systems to the next level.

4. Thomas H Davenport, & D J Patil. (2012, Oct 2012). Data scientist: The sexiest job of the 21st century. *Harvard Business Review*, 90(10), 70-76.

*Abstract:* The profession as the data scientist is emerging as the hottest job in 21<sup>st</sup> century. The business review explores the profession's development history, current status in academic and industrial fields, and touches upon the future implications for this profession.

5. Brynjolfsson, E., Hitt, L., & Kim, H. (2011). Strength in numbers: How does data-driven decision-making affect firm performance? *Available at SSRN 1819486*

*Abstract:* The study uses detailed survey data on the business practices and information technology investments of 179 large publicly traded firms, and finds that firms that adopt data-driven decision-making have output and productivity that is 5-6% higher than what would be expected given their other investments and information technology usage.

6. Harris, J. G., Craig, E., & Light, D. A. (2011). Talent and analytics: New approaches, higher ROI. *The Journal of Business Strategy*, 32(6), 4-13. doi:<http://dx.doi.org/10.1108/02756661111180087>

*Abstract:* Leading companies are using six analytical tools to improve the connection between HR

investments and business returns: employee databases; segmentation of talent; targeted investments; customization of the employee value proposition; long-term workforce planning; and talent supply chains.

7. Rick Seeley, & Rick Glew. (2007). Calculating the return on investment of workforce management. *Customer Inter@ction Solutions*, 25(12), 20-21.

*Abstract:* The author discusses how ROI terms should be clearly outlined in accordance with business needs and project expectations, as well as how to decide on the true implications of ROI.

### Other Sources Consulted & Further Reading

1. Levenson, A. (2005). Harnessing the power of HR analytics. *Strategic HR Review*, 4(3), 28-31.

*Abstract:* The article addresses the emerging discipline of HR Analytics. Analytics enable HR to make strategic contributions, but not all analytics offer equal insights. The usefulness of ROI, cost-benefit, and impact analysis are compared. Two action steps are identified: 1. Build an HR-Analytics center of expertise. 2. Create a foundation of analytic skills across the function.

2. Mondore, S., Douthitt, S., & Carson, M. (2011). Maximizing the impact and effectiveness of HR analytics to drive business outcomes. *People and Strategy*, 34(2), 20.

*Abstract:* The article focuses on the concept of analytics in human resources (HR), highlighting the correct method of implementation to ensure utmost effectiveness and competitive advantage for the organization. It discusses HR analytics' benefits and strategic value to business, pointing out the wrong notions about the concept, and explaining the proper way to execute the process to achieve maximum value. Included is a case study on process analytics using the employee survey data gathered by Baptist Health Care.

3. Center for Advanced Human Resource Studies (CAHRS), (2010). State of HR Analytics: Facts and Findings from CAHRS Topical Working Groups.

*Abstract:* In 2010, CAHRS, the Center for Advanced Human Resource Studies at Cornell University, launched a series of working groups to gauge how partner companies are using HR analytics and what challenges remain. Over 50 participants from nearly 30 CAHRS partner companies participated in the working groups. This publication is based on the surveys completed by participants, and addresses topics on the application, perceived value, systems & structures, and the Future of HR analytics in large organizations.

4. Roberts, B. (2009). Need an HRIS Person? Consider a Digital Native. 9/1/2009

Retrieved from: <http://www.shrm.org/Publications/hrmagazine/EditorialContent/Pages/0909tech.aspx>

*Abstract:* To fill in the gap between the increasing application of HR information systems and lagging HR analytical competency, organizations eye recent graduates in information science and statistical studies who have an HR savvy.

5. Pease, G., Byerly, B., & Fitz-Enz, J. (2013). *Human Capital Analytics*. Hoboken, NJ: John Wiley & Sons. ISBN: 978-1-118-46676-6.

*Abstract:* The book provides an insightful look at the implementation of advanced analytics on human capital. Human capital analytics, also known as human resources analytics or talent analytics, is the application of sophisticated data mining and business analytics techniques to human resources data.