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know about their people—  
and how they use that  
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## Competing on Talent Analytics

by Thomas H. Davenport, Jeanne Harris, and  
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# Competing on Talent Analytics

## Idea in Brief

Leading companies such as Google, Best Buy, P&G, and Sysco use sophisticated data-collection technology and analysis to get the most value from their talent.

These companies have taken the guesswork out of employee management by leveraging analytics to improve their methods of attracting and retaining talent, connecting their employee data to business performance, differentiating themselves from competitors, and more.

In this article are six key ways to track, analyze, and use employee data: They range from establishing simple metrics that monitor your organization's overall health to identifying talent shortages and excesses long before they happen.

Companies that want to compete on talent analytics must have access to high-quality data and manage them at an enterprise level, support analytical leaders, choose realistic targets for analysis, and hire analysts with a broad base of expertise.

*What the best companies know about their people—and how they use that information to outperform rivals.*

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Do you *think* you know how to get the best from your people? Or do you *know*? How do investments in your employees actually affect workforce performance? Who are your top performers? How can you empower and motivate other employees to excel?

Leading-edge companies are increasingly adopting sophisticated methods of analyzing employee data to enhance their competitive advantage. Google, Best Buy, Sysco, and others are beginning to understand exactly how to ensure the highest productivity, engagement, and retention of top talent, and then replicating their successes. If you want better performance from your top employees—who are perhaps your greatest asset and your largest expense—you'll do well to favor analytics over your gut instincts.

Harrah's Entertainment is well-known for employing analytics to select customers with the greatest profit potential and to refine pricing and promotions for targeted segments. (See "Competing on Analytics," HBR January 2006.) Harrah's has also extended this ap-

proach to people decisions, using insights derived from data to put the right employees in the right jobs and creating models that calculate the optimal number of staff members to deal with customers at the front desk and other service points. Today the company uses analytics to hold itself accountable for the things that matter most to its staff, knowing that happier and healthier employees create better-satisfied guests.

For example, Harrah's used metrics to evaluate the effects of its health and wellness programs on employee engagement and the bottom line. Preventive-care visits to its on-site clinics have increased, lowering urgent-care costs by millions of dollars over the past 12 months. And because Harrah's understands the relationship between employee engagement and top-line revenue, it can evaluate the program according to revenue contribution as well.

Here's how other organizations use analytics to improve their management of human capital:

Almost every company we've studied says it values employee engagement, but some—

including Starbucks, Limited Brands, and Best Buy—can precisely identify the value of a 0.1% increase in engagement among employees at a particular store. At Best Buy, for example, that value is more than \$100,000 in the store's annual operating income.

Many companies favor job candidates with stellar academic records from prestigious schools—but AT&T and Google have established through quantitative analysis that a demonstrated ability to take initiative is a far better predictor of high performance on the job.

Employee attrition can be less of a problem when managers see it coming. Sprint has identified the factors that best foretell which employees will leave after a relatively short time. (Hint: Don't expect a long tenure from someone who hasn't signed up for the retirement program.)

Professional sports teams, with their outsize expenditures on talent, have been leading users of analytics. To protect its investments, the soccer team AC Milan created its own biomedical research unit. Drawing on some 60,000 data points for each player, the unit helps the team gauge players' health and fitness and make contract decisions.

What's driving this shift to analytics? Certainly, companies today want more from their talent. That's why some are reinventing a whole range of people practices: Netflix has tossed aside traditional HR absence policies, and Best Buy's corporate office eschews standard work schedules. Analytics takes the guesswork out of fresh management approaches. At the same time, voluminous "digital trails" of data from knowledge management systems and social networks are now available for analysis. The public relations firm Ketchum, for example, analyzed personal networks in its London office to learn how easily information flowed across teams. Cognizant, a U.S.-based professional services firm with many employees in India, analyzed social media contributions, particularly blogs. It found that bloggers were more engaged and satisfied than others and performed about 10% better, on average.

In our work with companies like these, we have seen best practices emerge for using analytics to manage people.

### Six Uses of Talent Analytics

Analyzing talent is not significantly different

from analyzing customer relationships or supply chain management. It starts with the delivery of historical facts ("What happened?") and ends with real-time deployment of talent based on rapidly changing needs. The six kinds of analytics for managing your workforce, from simplest to most sophisticated, are human-capital facts, analytical HR, human-capital investment analysis, workforce forecasts, the talent value model, and the talent supply chain.

**Human-capital facts** are a single version of the truth regarding individual performance and enterprise-level data such as head count, contingent labor use, turnover, and recruiting. Companies should carefully consider what facts will give them that version. For some, one or two data points may indicate overall health. For example, JetBlue created an employee-satisfaction metric around its people's willingness to recommend the company as a place to work. This "crewmember net promoter score" (modeled after the customer-satisfaction metric) has been used to study the impact of compensation changes and to help determine executive bonuses. Employees are asked annually on their hiring date if they would recommend the company, so JetBlue can effectively monitor employee engagement monthly.

JetBlue and other successful organizations are transparent with end users about the process: Any manager or employee may see how the data were collected, what formulas are being used, and, most important, why the data matter to the operation. For example, Harrah's provides documentation in its HR scorecard to ensure that all readers understand how human-capital facts are created and what they mean for daily management.

**Analytical HR** collects or segments HR data to gain insights into specific departments or functions. For example, a manager might be able to see that staff-turnover intervention is needed for the East Coast sales team but not the West Coast team. Analytical HR integrates individual performance data, such as personal achievement in key result areas, with HR process metrics, such as cost and time, and outcome metrics, such as engagement and retention.

Lockheed Martin built a performance management system to link each employee's performance to organizational objectives. The automated system collects timely performance-review data throughout

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the year. The data can then be compared with knowledge management information, such as who has undergone formal training in specific areas. With the system, Lockheed Martin can identify its high potentials for special programs or monitor employees who need improvement in certain areas.

**Human-capital investment analysis** helps an organization understand which actions have the greatest impact on business performance. One leader in this area is Sysco, the \$36.8 billion *Fortune* 100 global food-service company. Sysco is a complex organization made up of nearly a hundred autonomous operating units and about 51,000 full-time employees serving approximately 400,000 customers. The company began its workforce analysis with three gross measures for each operating unit: work climate and employee satisfaction, productivity, and retention. It has drilled deeper to understand, measure, and manage seven other dimensions of the work environment, including frontline supervisor effectiveness, diversity, and quality of life.

Sysco's analysis revealed that operating units with highly satisfied employees have higher revenues, lower costs, greater employee retention, and superior customer loyalty. The company can efficiently identify what actions by management will have the greatest impact on the business. For example, in six years it has improved the retention rate for delivery associ-

ates—who provide customer service and build customer relationships—from 65% to 85%. Sysco tracks the group's satisfaction scores, and when they dip, it institutes immediate improvements to get them back on track. By retaining this key talent, Sysco saved nearly \$50 million in hiring and training costs for new associates.

**Workforce forecasts** analyze turnover, succession planning, and business opportunity data to identify potential shortages or excesses of key capabilities long before they happen. As Vinay Couto, Frank Ribeiro, and Andrew Tipping wrote recently in *Strategy + Business*, Dow Chemical has evolved its workforce planning over the past decade, mining historical data on its 40,000 employees to anticipate workforce needs throughout the chemical industry's volatile business cycles. It forecasts promotion rates, internal transfers, and overall labor availability. Dow uses a custom modeling tool to segment the workforce into five age groups and 10 job levels and calculates future head count by segment and level for each business unit. These detailed predictions are aggregated to yield a workforce projection for the entire company. Dow can engage in “what if” scenario planning, altering assumptions on internal variables such as staff promotions or external variables such as political and legal considerations. Workforce forecasts can be used to staff up in key growth areas or identify knowledge management risks for retiring em-

## Applying Talent Analytics

Six kinds of analytics can help companies answer critical talent questions—listed here from simplest to most sophisticated.

### Human-Capital Facts

**What are the key indicators of my organization's overall health?**

JetBlue analysts developed a metric—the “crewmember net promoter score”—that monitors employee engagement and predicts financial performance.

### Analytical HR

**Which units, departments, or individuals need attention?**

Managers at Lockheed Martin use an automated system to collect timely performance-review data and identify areas needing improvement.

### Human-Capital Investment Analysis

**Which actions have the greatest impact on my business?**

By keeping track of the satisfaction levels of delivery associates, Sysco improved their retention rate from 65% to 85%, saving nearly \$50 million in hiring and training costs.

### Workforce Forecasts

**How do I know when to staff up or cut back?**

Dow Chemical has a custom modeling tool that predicts future head count for each business unit and can adjust its predictions for industry trends, political or legal developments, and various “what if” scenarios.

### Talent Value Model

**Why do employees choose to stay with—or leave—my company?**

Google suspected that many of its low-performing employees were either misplaced in the organization or poorly managed. Employee performance data bore that out.

### Talent Supply Chain

**How should my workforce needs adapt to changes in the business environment?**

Retail companies can use analytics to predict incoming call-center volume and release hourly employees early if it's expected to drop.

ployees before they are clear to managers.

The **talent value model** addresses questions like “Why do employees choose to stay with our company?” A company can use analytics to calculate what employees value most and then create a model that will boost retention rates. Such a model can help managers design personalized performance incentives, assess whether to match a competitor’s recruitment offer, or decide when to promote someone. Google uses employee performance data to determine the most appropriate intervention to help both high- and low-performing employees succeed. Laszlo Bock, Google’s vice president of people operations, told us, “We don’t use performance data to look at the averages but to monitor the highest and lowest performers on the distribution curve. The lowest 5% of performers we actively try to help. We know we’ve hired talented people, and we genuinely want them to succeed.” The company’s hypothesis was that many of these individuals might be misplaced or poorly managed, and a detailed analysis supported that idea. Under-

standing individuals’ needs and values allowed Bock’s team to successfully address a number of difficult situations.

The **talent supply chain** helps companies make decisions in real time about talent-related demands—from optimizing a retail store’s next-day work schedules, on the basis of predicted receipts and individuals’ sales performance patterns, to forecasting inbound call-center volume and allowing hourly staff members to leave early if it’s expected to drop. This is the most complex of the six kinds of talent analytics, because it requires particularly high-quality data, rigorous analysis, and the integration of broad talent management and other organizational processes. Talent supply chains are still in their infancy, but the early success of some organizations, particularly in the retail space, suggest that they will spread.

### Mastering Talent Analytics

Unsurprisingly, building a capability in this domain requires the same fundamentals that most other business analysis does. We summarize them with the acronym Delta (access to high-quality *data*, enterprise orientation, analytical leadership, strategic targets, and analysts).

**Data.** Organizations can get increasingly good HR data from their enterprise systems, but they sometimes need to augment them with new metrics, like JetBlue’s. At Harrah’s many line managers, who are already on the floor at its properties, observe and record the frequency with which customer-facing staff members smile, because that behavior is highly correlated with customer satisfaction. Data needn’t be perfect to be appropriate for analysis—just sufficient to understand trends that matter.

**Enterprise.** HR can no longer confine employee data to its silo; organizations need access to those data to be successful. JetBlue, Best Buy, and Limited Brands have observed an important statistical relationship between employee satisfaction and company performance—usually at the station, branch, or store level. The significance of the relationship motivated Best Buy to make its employee engagement surveys quarterly rather than annual.

**Leadership.** The success of almost any initiative depends on its leaders, and talent analytics is no exception. In fact, at the organizations we’ve researched and worked with,

## Talent Analytics at Google

Google’s highly analytical culture and practices extend to its human resources function. The company’s goal is to identify leading people-management practices and confirm them with data and analysis. To achieve it, Google created a people analytics function with its own director and a staff of 30 researchers, analysts, and consultants who study employee-related decisions and issues. The People and Innovation Lab (PiLab) conducts focused investigations for internal clients

Google has analyzed a variety of HR topics and has often moved in new directions as a result. It has determined what backgrounds and capabilities are associated with high performance and what factors are likely to lead to attrition—such as an employee’s feeling underused at the company. It has set the ideal number of recruiting interviews at five, down from a previous average of ten.

Google’s Project Oxygen—so named because good management keeps the

company alive—was established to determine the attributes of successful managers. The PiLab team analyzed annual employee surveys, performance management scores, and other data to divide managers into four groups according to their quality. It then interviewed high- and low-scoring managers (interviews were double-blind—neither interviewers nor managers knew which category the managers were in) to determine their managerial practices. Google was eventually able to identify eight behaviors that characterized good managers and five behaviors that all managers should avoid.

Google’s vice president of people operations, Laszlo Bock, says, “It’s not the company-provided lunch that keeps people here. Googlers tell us that there are three reasons they stay: the mission, the quality of the people, and the chance to build the skill set of a better leader or entrepreneur. And all our analytics are built around these reasons.”

## Common Mistakes in Talent Analytics

Companies that use analytics for employee management can create tangible value for themselves as long as they avoid these mistakes:

- Making analytics an excuse to treat human beings like interchangeable widgets
- Keeping a metric live even when it has no clear business reason for being
- Relying on just a few metrics to evaluate employee performance, so smart employees can game the system
- Insisting on 100% accurate data before an analysis is accepted—which amounts to never making a decision
- Assessing employees only on simple measures such as grades and test scores, which often fail to accurately predict success
- Using analytics to hire lower-level people but not when assessing senior management
- Failing to monitor changes in organizational priorities, thus creating irrelevant—if accurate—analyses
- Ignoring aspects of performance that can't easily be translated into quantitative measures
- Analyzing HR efficiency metrics only, while failing to address the impact of talent management on business performance

leaders' commitment to this approach is the single most important factor in whether it succeeds. Because the data pertain to human behavior, executives may be skeptical. Comcast's senior vice president of compensation and benefits, Bill Strahan, recalls, "It was crucial for manager adoption that we present the analytics business case in the language of our company, focusing on competitive pressures and the people component of our change."

Leaders who believe that human-capital insights should be used to solve business problems must constantly press for decisions and analyses based on facts and data rather than on tradition, hearsay, or supposition. And they should foster a culture that allows for experimentation and mistakes—which are often unacceptable in HR functions today.

**Targets.** Organizations that use talent analytics have already made people the focus of analytical activity. But should they concentrate on hiring, assignments to projects and tasks, or retention? Which types of employees need the most analytical attention? Which of the six kinds of talent analytics should be employed when? When Google was adding 100 employees a week, from 2005 into 2008, hiring the right people was its primary focus. When hiring slowed in 2008 and 2009, the company turned

to gaining insights into employee attrition and effective management approaches.

**Analysts.** Analytical theory must be converted into practice. This requires experts not only in quantitative analysis but also in psychometrics, human resource management systems and processes, and employment law. Industrial-organizational psychologists are especially helpful in creating analytical initiatives and ongoing programs. Google, P&G, Royal Bank of Scotland, Intel, and Tesco have all established HR analytics groups to get deeper insights into their people practices.

The best analysts can persuade managers to adopt analytical decision making. In late 2009 Harrah's began recruiting an external sales force and used organizational psychologists to create a predictive assessment for the job. But during the interview process managers became emotionally attached to some of the candidates with low probabilities of success. The analysts were prepared: They used randomized testing to prove that analytics was the superior method, and relied on their interpersonal skills to sway decisions when necessary. One management team at a troubled Harrah's location was astounded by the high call volume and conversion rates the new hires achieved, which helped reverse a decline in sales.

No organization we've worked with has embraced an analytics-only method of managing, motivating, and retaining employees. But early adopters have created tangible value for themselves by applying the right data and tools to people processes. The best organizations see their people not only as individuals but also as a rich source of collective data that managers can use to make better decisions about talent.

Future organizational performance is inextricably linked to the capabilities and motivations of a company's people. Organizations that have used data to gain human-capital insights already have a hard-to-replicate competitive advantage. Others, too, can draw on these new techniques to improve their business results.

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