

HR Innovation:

Make Fact-based Talent Decisions with Workforce Analytics

Human resources departments historically relied on intuition for much of their decision-making. The tools now exist, and the time has come, for HR to join the rest of the enterprise in applying scientific methods to their data.

To do that, they must develop a culture of inquiry.



An exclusive report from BusinessWeek Research Services

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Executive Summary

- The human resources (HR) function is the one domain in the enterprise that has not widely applied analytical methods to its data.
- Using analytics to support fact-based decisions improves human capital management (HCM) practices, cuts costs and contributes to business performance.
- Most organizations report several basic HR metrics, while others have acquired the analytical tools to make fact-based decisions about recruitment, deployment and performance of employees. A few have progressed to the point of applying advanced statistical methods.
- Data is the foundation, but true analytics means taking that data and using it for predictive modeling and strategic, forward-thinking purposes.
- An accurate headcount of full-time equivalents is the prerequisite of all HR analytics.
- Not every HR professional needs to be a numbers guru. With proper leadership at the top and business executives who understand the value of analytics, an HR department can develop the necessary capabilities.
- There is wide agreement that doing analytics is nearly impossible without a single enterprise HCM platform.

Methodology

BusinessWeek Research Services (BWRS) launched a research program in late 2007 to determine the views of human resources and information technology (IT) executives, and their CEOs, on how workforce analytics can help their companies. By bringing the rigors of measurement and analysis to human capital management initiatives, companies can increase their operational efficiency and gain more insight into the business value they derive from their human capital. When applied to HCM, analytics—which have proven so powerful in other areas of the enterprise—can contribute to business value by upgrading the data-based decision-making about every aspect of talent management strategies.

This report is based on in-depth telephone interviews with executives at large and midsize companies known to be employing workforce analytics. The organizations included in the research for this report are:

- BCE Inc. (also known as Bell Canada Enterprises)
- Insurance Australia Group Ltd.
- Los Angeles Community College District
- Nokia Corp.
- Providence Health & Services
- Rio Tinto Ltd.

In addition, experts from PricewaterhouseCoopers LLP, Infohrm Group Inc. and Aberdeen Group Inc. provided invaluable guidance on workforce analytics.

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Introduction

Metrics to measure the performance of the human resources department and of the workforce in general have existed for nearly three decades, but the HR function is the one domain in the enterprise that has not widely applied analytical methods to its data. Manufacturing and operations began to adopt statistical methods more than five decades ago. Marketing and customer relations departments now crunch data routinely. Finance departments have been analyzing data since the abacus was invented, or so it seems.

It is time for HR to develop a culture of inquiry. Using analytics to support fact-based decisions improves human capital management practices. It cuts costs and contributes to business performance at a time when talent is regarded as the singular asset for competitive edge. And it can make HR a real partner in business strategy.

“The use of analytics has existed in other parts of companies for decades,” says Scott Pollak, director of the Saratoga Institute, a Santa Clara, Calif.-based unit of PricewaterhouseCoopers LLP. Founded in 1977, Saratoga conducted some of the earliest HR benchmark studies. “We’ve seen the idea of pushing these tools into HR for some time,” Pollak says. “However, we haven’t seen it cross the chasm, and I still don’t know that we’re there. It is starting, but we’re still in the new adopter phase.”

Until recently, HR faced three hurdles to adopt such metrics:

- Data was not always accurate or in one easily accessible place.
- User-friendly analytical tools did not exist except for certain specific, narrowly defined problems.
- Many HR officials lacked an inquiring mind, relying instead on intuition for decision-making.

The first two obstacles have all but disappeared. The use of a single HCM software platform as the data repository for the entire enterprise is de rigueur and analytical tools are widely available. But it remains to be seen if HR staff will apply the scientific method to test their hunches. If they do, the results can be powerful.

“We call it myth busting,” says Matthew Hanwell, a senior manager for workforce analytics at Nokia Corp. of Espoo, Finland. “For example, to what extent does pay for performance hold true? Can we bust that myth or not?”

Statistical Methods and Tools

Workforce analytics is the use of statistical methods to interpret data to determine the effectiveness of HCM practices in contributing to business goals and to predict the impact of future practices on business objectives, including financial performance. The tools range from spreadsheets to executive dashboards containing historical trends, metrics and perhaps some tabular or graphing features. The most advanced HR departments are adopting statistical methods long used by social scientists, including regression analysis, causal pathway modeling and predictive modeling (see Table 1, “Some Key Statistical Tools,” above).

Table 1

Some Key Statistical Tools

Descriptive statistics: Tabular, graphical and numerical summaries to assist in the presentation and interpretation of data. Most HR metrics in use today are used descriptively. *Example: To understand the demographics of the workforce.*

Regression analysis: A technique that examines the relation of a dependent variable and one independent variable or two or more variables (multiple regression analysis). A model of the relationship is hypothesized; various tests are used to determine if the model is satisfactory. *Example: To determine whether incentive pay led to an increase in sales.*

Causal pathway analysis: Seeks causal relations among data. It is not by itself a method of discovering causal laws, rather it is a procedure for giving a quantitative interpretation to an assumed causal system. The assumption that employee attitude impacts sales, for instance. *Example: To better understand the relationship among several variables, such as employee attitude, customer attitude and profits.*

Predictive modeling: A process used to create a statistical model of future behavior. A predictive model is made up of a number of predictors—variable factors that are likely to influence future behavior or results. *Example: To predict which changes in compensation practices might have the biggest impact on sales.*

Source: BusinessWeek Research Services

Most organizations try to report at least some basic HR metrics—number of full-time equivalents (FTEs) and demographics such as gender, ethnicity and tenure—using descriptive statistics such as tabular, graphical and numerical data summaries. Only a minority of companies have acquired the analytical tools and developed the inquiring attitude required to make fact-based decisions about recruitment, deployment and performance of employees, or the HCM practices that support these metrics.

Fewer still consider HR data alongside corporate financials, customer relations data and other sources, and apply statistical methods to understand relationships between employee behavior and corporate goals. And hardly any forecast the impact of recruiting, training and other HCM programs.

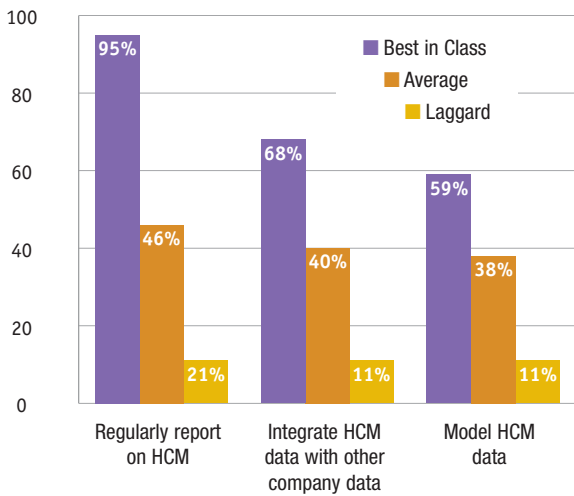
Insurance Australia Group Ltd. (IAG), a Sydney, Australia-based international general insurance group with operations throughout the Asia-Pacific region and the United Kingdom, is an early adopter. It began to use workforce analytics in 2004 and has become a relatively sophisticated user. Wayne Gobert, head of HR at the time, remembers his epiphany that led to the adoption of workforce analytics. At a board meeting, he gave his report—some summary statistics and the results of the employee engagement survey—and then a board member asked what value had HR added. “They had given me \$4 million to spend in the

past year, and I couldn’t tell what the company had gotten from it,” Gobert says.

Chart 1

The Workforce Analytics Gap

Although many companies regularly report on HCM data, relatively few industry average companies have taken workforce analytics to the next level.



Source: Aberdeen Group

Beyond Just Gathering Data

The ROI for workforce analytics depends on more than the quality and quantity of HR data, of course. “The data is the foundation,” says Kevin Martin, research director for HCM at Boston-based Aberdeen Group Inc. “Identify the metrics, collect them and report them. This is the basis for an analytic solution, but it is not analytics. That may be how it used to be defined, but not now; people want to take the data they have and use it for predictive modeling and strategic forward-thinking purposes. That is where the true value comes.”

To gauge the level of an HR organization’s maturity with analytics, Martin looks at the number of HCM data points it monitors and three other indicators:

- Whether it regularly collects and reports HCM data
- Whether it integrates HCM data with financial data
- Whether it models HCM data for predictive purposes

Aberdeen used these indicators in an October 2007 survey of 229 organizations worldwide on the current and planned use of workforce analytics. In its methodology, Aberdeen classifies the top 20 percent of a sample as best in class, the bottom 30 percent as laggards and the middle 50 percent as average.

Among the best in class, 95 percent regularly collect and report HCM data, 68 percent integrate HCM data with other company data and 59 percent model HCM data (see Chart 1, “The Workforce Analytics Gap,” above). On average, the best in class monitor 98 data points (see Chart 2, “More Measurements Yield Better Results,” on page 7).

The best in class identified the three main reasons propelling adoption of analytics:

- To increase the quality of HR-related decisions (41 percent)
- To improve company performance (41 percent)
- To reduce costs (32 percent)

Asked whether they had achieved a return on investment (ROI) for their analytics solution, 55 percent of the best in class said “yes,” 14 percent said “no” and 31 percent said “they did not know” (see Chart 3, “Percentage of Companies that Experienced ROI from Workforce Analytics,” on page 8).

Starting with Baby Steps

Aberdeen’s three indicators define a progression in workforce analytics. In a similar vein, Peter Howes, CEO and founder of the HR consulting firm Infohrm Group Inc. of Brisbane, Australia, talks about three increasingly sophisticated levels of reporting:

- Simple administrative reports with descriptive statistics
- “Professional” reports that integrate multiple views of two- and three-dimensional data
- “Strategic” reports that look for correlation and causation among workforce data, financials and other business performance data

Howes sees few companies at the third level.

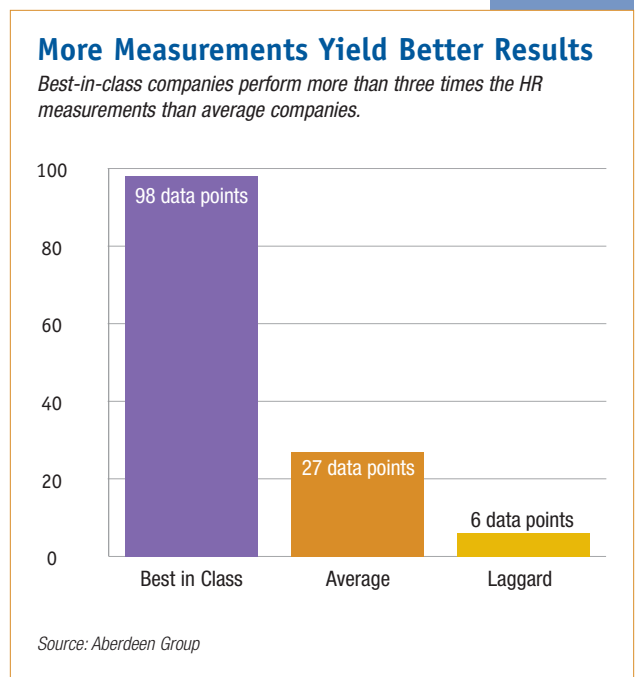
There is wide agreement that doing analytics is nearly impossible without a single enterprise HCM platform. Once that is accomplished, companies need to agree on a single set of definitions for what HR data means, says Mike Ryan, global process team lead for the manage people team at Rio Tinto Ltd., a global mining company with its headquarters office in London. Workforce analytics are one of the goals on his agenda.

“When you use analytics, you expose the quality or lack of it in the underlying data,” Ryan says. “We want one version of the truth, a single set of definitions and one system by March 2008 for about 20,000 employees on the existing system.” (This system will not include the workforce Rio Tinto acquired when it recently bought Alcan Inc.)

“An accurate count of FTEs is the hub of all HR analytics,” Ryan adds, “but we had business units calculating FTEs in different ways, and in some cases more than one way within the same unit.”

Practitioners like Ryan and experts like Aberdeen’s Martin urge companies to start slowly. “Organizations would do well to take baby steps,” Martin says. “Look internally and ask what is critical to you. Understand the key business drivers and your specific pain points. Look holistically, but don’t take a shotgun approach; use a rifle” (see Table 2, “Recommended Actions,” on page 9).

Chart 2



Here's an example of the go-slow approach. Los Angeles Community College District (LACCD) comprises nine colleges that employ a combined staff of 10,000. Each college has its own HR team, and all share data from a central platform, which is part of the enterprise resource planning (ERP) system.

About 60 percent of the faculty and staff have a single assignment as a teacher, janitor or whatever. The other 40 percent have multiple part-time assignments, often on different campuses, adding up to full-time employment. The average number of part-time assignments is between three and four, with some workers having as many as 10. Each of these assignments can have a different pay scale, work rules, retirement benefits and rates of sick time. And the employee could hold assignments classified with different unions or none.

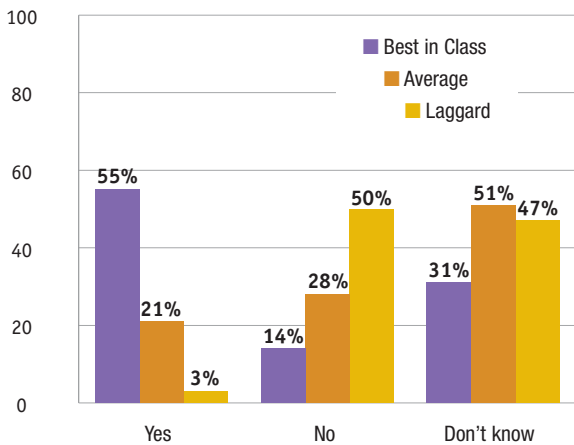
According to Andrew Duran, manager of the ERP system at LACCD, the district needed to report this hydra-headed mess of data in a way that HR and administrators could use: How many FTEs are there and what does each cost in salary, benefits and so on. With all of the concurrent part-time assignments, this was not an easy goal. After the district migrated from a mainframe personnel system to an HCM platform, Duran has been able to report reliable, usable data accurately and on a regular basis since 2005.

Calculating Return on Culture

Insurance Australia Group is on the other end of the continuum—level three in the model created by Infohrm's Howes. It took a few years to get there. "I could report turnover, but could not tell you what that meant or predict what strategies might improve it," IAG's Gobert says. "We had lots of data but no insight."

Chart 3

Percentage of Companies that Experienced ROI from Workforce Analytics



Source: Aberdeen Group

Gobert tackled the problem in two stages. First, he looked at everything HR did that could be defined by outcomes. He assigned dollar amounts to each, based on research from Corporate Leadership Council, the HR practice of Washington, D.C.-based Corporate Executive Board Co., which researches best practices in various areas. Gobert focused on turnover/retention, employee engagement (morale), absenteeism and workplace safety, and then measured the improvement made in each over the previous two years.

He worked with his CFO to determine an ROI formula for the four metrics. Once they agreed on how much the improvement in each area was worth in dollars, and how much could be attributed to HR, Gobert reported that to the board. They agreed that the total ROI for the improvements was 167 percent and that HR was responsible for one-fourth of that amount. "It was like calculating goodwill," he says. "We called this our 'return on culture.'"

Gobert put the four metrics and six others on a dashboard for managers. He reported them to the board twice a year and monthly to managers, redlining those that needed attention.

In the second stage, Gobert used HR data, financials and other non-HR data to determine the impact of certain HR strategies. He knew of the groundbreaking analytical work at Sears, Roebuck and Co. A decade ago, the Hoffman Estates, Ill.-based department store chain used

causal pathway modeling to analyze the relationship of employee satisfaction to customer satisfaction to profits, finding that employee satisfaction was the driver of the other two. (For a description of what Sears did, see “The Employee-Customer-Profit Chain at Sears” in the January-February 1998 issue of *Harvard Business Review*.)

Gobert conducted an empirical study of two year’s worth of data to understand the relationship of employee satisfaction, retention, leadership capability of managers, customer satisfaction and increased profits at IAG. He discovered that a 10 percentage point improvement in employee morale boosted profits by 4 percent. “We’re a multibillion dollar company, so that’s a lot of dollars.”

Busting Long-held Myths

Nokia has gone farther than LACCD but not as far as IAG. The communications company rolled out a global HCM platform in 2000 and began reporting data in 2001. “This was useful, but it was like a two-dimensional, black-and-white X-ray,” Hanwell says. “We wanted a multicolor, three-dimensional MRI scan of our people information.”

More advanced reporting, metrics and analytics began in 2004. First, the company conducted a pilot study, slicing, dicing and analyzing HR data to demonstrate new ways to look at it. “By disaggregating it and identifying hot spots, we saw insights we did not previously have,” Hanwell says.

For example, aggregate voluntary turnover was relatively low companywide, but the analysis found a few problem areas by region, country, business unit and groups. Nokia also used scatter plots to see trends by age, tenure, performance ratings and grade.

Here’s where myth busting came into play. Nokia’s conventional wisdom held that a high emotional commitment among employees equaled low turnover. By comparing employee engagement survey data to turnover rates, the company found higher voluntary termination among those who had the *most* emotional commitment to Nokia, while voluntary turnover was lower among employees with a somewhat less intense emotional commitment.

“We were able to come up with a commitment endurance profile—what level of commitment was best for Nokia,” Hanwell says. “The great thing about this was not the data itself, but the discussion we had about it. That was its power.”

Hanwell is building a center of excellence in workforce analytics and employing a full-time consultant until his staff is up to speed. The company hasn’t used non-HR data yet. “Unlike the financial community, HR people have not had the numeric experience, the analytical thinking,” he says. “We’re teaching HR people in one- and two-day events, and in remote sessions over our intranet.”

Table 2

Recommended Actions

Evaluate your workforce-related decisions. Do operating managers know what workforce optimization questions to ask and what key performance indicators need to be tracked to answer them?

Evaluate your current workforce-related data. Do managers have easy, secure access to clean data on workforce composition, individual worker and workgroup performance, and business operations performance?

Evaluate the culture of workforce decision-making in your organization. Is it largely driven by intuition or do senior managers require data to justify employee transition decisions? Does it afford enough time to make data-driven workforce decisions?

Source: BusinessWeek Research Services

Creating a Culture of Inquiry

Other practitioners report varying degrees of support from above and among rank-and-file HR professionals, too.

“About 20 percent of our HR professionals have the ability to use the tool we developed,” says Rio Tinto’s Ryan. “This is the biggest failing we’ve had. We can build it, and I’m good at dreaming up metrics. But when I ask if they’re using it, they are using it for the simple headcount and nothing else.”

Ryan studied economics but has made a career of advising HR executives; he launched Rio Tinto’s people management programs as part of a larger corporate effort and has a dotted line relationship to the top HR executive. Since August 2007, Rio Tinto has had a new HR executive who is highly supportive. “The first thing he said was, we’re trying to make too many decisions without data,” Ryan says. “He wants numbers, facts and data.”

Table 3

Develop a Culture of Inquiry

HR officials need a clear mental framework that guides them to know:

- The most important workforce performance questions that need to be answered
- The metrics that must be tracked to answer those questions
- The data required to define and populate the metrics
- The context for interpreting the data in a way that drives operational decision-making

Source: BusinessWeek Research Services

At Montreal-based BCE Inc. (also known as Bell Canada Enterprises), which set up an HR analytics unit several years ago, some business unit leaders have been quick to use metrics and other data reported by the unit. Other business unit leaders and many HR generalists have not been wildly enthusiastic, according to Ralph Nobel, senior consultant for employee metrics at the telecommunications company. Among HR generalists, one-third has an analytical perspective, but some of the rest “look at the numbers and their eyes glaze over,” he says. Each business unit HR generalist is now appointing someone with an analytical background to interface with Nobel’s unit.

Nobel senses the political winds changing, though. A private equity group has acquired BCE in a deal expected to close in the first quarter of 2008. And Nobel expects the new management to demand more of HR and that analytics may be one of the things they want to see.

Nearly everyone interviewed for this report points out that HR training at the undergraduate level is focused on soft skills, with little analytical emphasis. It is only when they move into graduate studies of some kind that HR professionals encounter research methodology and statistics (see Table 3, “Develop a Culture of Inquiry,” above).

It isn’t necessary for every HR professional to become a numbers guru. With proper leadership at the top, nudged by business executives, an HR department can adequately develop the capabilities needed.

Isaac E. Dixon, regional director of employment at Providence Health & Services, the Portland, Ore., region of Seattle-based Providence Health System, a long-time HR professional and an advocate of fact-based decisions, puts it this way: “You have to develop the culture of inquiry. You have to be curious. You can’t be willing to settle for the first blush of why something is happening.” ■



Gain Insight into Your HR Data to Better Support the Business

Embedding analytic tools and solutions within the very business processes they support is the catalyst most companies have been waiting for. Everyone recognizes that decision support is vastly enhanced by simulation modeling, analysis of past behavior and fact-based reasoning, but the path to adoption has been fragmented. Embed analytics and analytic processes inside an application, and suddenly all relevant information is aggregated, integrated and presented in a single, actionable view. It's not enough, however, to provide great analytic tools and insights. The context in which they are delivered is also key, as is the simplicity of the user experience.

If you look at dashboards with analytics offered by SAP today, you will find that they hide technical complexity, are simple to use and are delivered in the context of a specific business process, optimized for a specific role and often tailored to the requirements of a specific industry. Powerful insights through these embedded analytics enable your HR staff and managers to know more, know it sooner and see farther ahead.

Within the text of this report it is noted that, "Fewer still consider HR data alongside corporate financials, customer relations data and other sources, and apply statistical methods to understand relationships between employee behavior and corporate goals. And hardly any forecast the impact of recruiting, training and other HCM programs" and later, "there's wide agreement that doing analytics is nearly impossible without a single enterprise HCM platform...."

To speak to these points, SAP offers The Power of One, a complete solution for talent management with the following shared components:

- One competency catalog
- One set of person data used by employees, managers and HR professionals
- One business intelligence function for analytics
- One organizational structure for determining management hierarchies and cost center allocations
- One workflow engine
- One integration broker (exchange infrastructure) for service-enabled talent management
- One coherent source of analytics to understand the impact of talent and workforce performance on the operating results that matter to your business
- One entry point for employees and managers to access key information and execute business processes

SAP's single platform for all of our solutions and applications allows organizations to run integrated end-to-end business processes with the corresponding analysis of HCM data in correlation with other business and financial data.

SAP ERP HCM leverages the newest technology to consolidate HCM analytics, support HCM processes and deliver HCM services to everyone in the organization:

- Beyond traditional boundaries—across all operational/functional boundaries
- With integrated business intelligence—analytics are designed to be an integral part of all business processes and portal-based dashboards
- From a single analytical platform—full business intelligence platform, including all necessary analytical tools and capabilities

SAP is a trusted partner of over 11,000 HR organizations globally. Today, with heightened competitive pressure to maximize the return on human capital, organizations look to SAP to support new ways to measure the value of the people to an organization. SAP ERP HCM also delivers the tools to help organizations measure the impact of an HCM strategy and further prove HR's value to the business.

Benchmarking can further enhance the value of insights derived from metrics and dashboards, as it provides an additional external perspective to assess an organization's performance. SAP, in conjunction with the Americas' SAP Users' Group (ASUG), is offering an ongoing HCM benchmarking program that allows participants to compare key metrics against those of peer companies, including other SAP customers. In addition, the benchmarking study allows companies to determine the value of adopting best practices, understand how IT drives performance and track value realization—year after year.

Participation is free, and participating companies will receive a detailed and comprehensive custom report that compares the efficiency and effectiveness of HCM processes and systems based on a benchmarking comparison for key metrics as well as a best practice assessment. Over 250 companies have participated in the study to date.

For more information and to sign up, please visit: <http://www.sap.com/usa/solutions/asugbenchmarking/index.epx>

