War for talent heads to the “cloud”:
Big Data demands the right IT leaders for next-generation challenges

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About this report

Cloud computing and Big Data analytics have increasingly become a critical component of companies’ go-to-market strategies. Cloud-enabled technology has leveled the playing field between large firms that may be slow to adapt and smaller, more agile players. In the midst of this evolution, demand has increased for innovative professionals who understand the technology and know how to harness its power to guide business decisions. Winning the war for talent in this new frontier means being able to identify executives with learning agility—who can recognize and respond to trends, bring breakthrough ideas to market, and manage change in a rapidly evolving world.
The war for talent has shifted to a new terrain. Cloud computing and Big Data analytics have created demand for innovative professionals who not only understand the technology but, even more to the point, know how to harness its power to guide business decisions and accelerate business strategies.

Big Data analytics are increasingly becoming a critical component of companies’ go-to-market strategies—targeted marketing, customer retention, and other customer-centric services. The question is not if businesses are using cloud-enabled tools, but how they are using them. With ready access to mega data centers and the capability to leverage the power of cloud computing for Big Data, companies large and small are competing on what is increasingly a level playing field. Broad access to cloud computing has made the technology a “commodity,” so simply having access to Big Data is not enough. The real differentiation occurs as companies determine what to do with Big Data and how the depth and breadth of such information can and should inform business decisions, virtually in real time. (See Case Study: Black Friday Delivers an Early Present for Data Analysts.)

This next generation of concerns is creating intense demand for professionals who possess the demonstrated ability to drive new business initiatives and link enterprise data knowledge to the core business. As Accenture observed, IT has moved from a “back-office technical function to a service-oriented and strategic business resource,” which requires a different set of skills that may exceed the capabilities of some CIOs and other IT professionals.¹

Not getting it right is not an option. The cost to the company of a misalignment between IT demands and IT professionals and their leadership skills is huge. Finding the right talent with the right capabilities is becoming ever more critical. As demand for talent grows, the employers that win will likely be those that can identify, attract, retain, and develop leadership to complement technical competence and skills.

**Big Data and go-to-market strategies**

The Big Data market shift has been supported by the dramatic growth of cloud infrastructure, with Data-as-a-Service (DaaS) providing a core platform to enable this transformation. “Computing power is now inexpensive and abundant, so as a raw material for DaaS, its availability has allowed services and data providers to make their offerings available in an open cloud-services environment,” said Gary Roberts, the new CIO of JDA Software. Roberts, former CIO of Oracle, added that DaaS has risen in popularity as its counterparts, Software-as-a-Service (SaaS) and Infrastructure-as-a-Service (IaaS), are also becoming more ubiquitous.
“In almost all industries, disruptors are emerging, utilizing the power of cloud and Big Data to create business velocity and competitive advantage,” said Kim Stevenson, CIO at Intel. “Those companies that do not leverage the insights analytics can provide you about your operations and customers will be disrupted.”

Harnessing the power of Big Data is transforming other industries as well. In health care, one example is Kaiser Permanente, which uses cutting-edge technology tools to improve patient care and outcomes.

As Phil Fasano, CIO and executive vice president, observed recently, “I can tell you, as we’re looking at the world of this space of health care and data, Big Data particularly, and the use of medical analytics—population care tools, chronic care management tools—we’ve used them extensively at Kaiser Permanente. And the forecast I’d make ... is that the health-care industry is just in its infancy in both getting and using data, and then analyzing that data sufficiently so that we can get all the learnings from it. I believe that the largest medical breakthroughs are truly ahead of us and not behind us.”

This feat was accomplished by data analysts who processed consumer behavioral data around product decision making from data generated by websites, smart phones, sensors, and tablet devices, all of which could be economically stored and analyzed, said Ian Fyfe, CTO for Pentaho. Based on the data analyses, holiday promotions were tweaked virtually in real time to maximize consumer spending during a short window of opportunity. The biggest retail winners were those who strategically leveraged Big Data to optimize their cash intake during the holiday shopping period.

The Black Friday/Cyber Monday example shows the importance of doing more than just gathering the data; the power can be leveraged only when a company has the talent on board who can use data to inform and support business strategy decisions. Tapping those analytic capabilities is, essentially, a talent solution.

Case study: Black Friday delivers an early present for data analysts

Reaching customers in real time with the right products or services at the right price happens at an ever-faster pace. Consider the experience of Black Friday 2012, when consumers spent more than $1 billion in U.S. retail stores in one day. On Cyber Monday, an additional $1.5 billion was spent. It was a real retail bonanza and a rich opportunity for some well-known retailers that adjusted their offerings and pricing in real time in response to customer preferences.

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Beyond the cloud

The evolution started with the cloud—the technological innovations made possible through cloud computing and analytics of data gathered from a variety of sources. Having the technology firepower, however, is only the beginning. The issue, increasingly, is alignment—across the breadth of the IT platform and with the business strategy. This is a challenge for Fortune 500 companies as they implement cloud infrastructure (see Case Study: Industrialization of the Internet), while smaller, nimbler players can respond quickly and adapt to emerging market trends and shifts in consumer preferences—and also surpass slower-moving technology firms.

As we at Korn/Ferry advise our clients, regardless of where they are—at the initial phase of implementation or the more advanced stages of business transformation by analyzing and using Big Data—the right talent must be in place every step of the way.

The Big Data analytics environment is also putting more pressure on CEOs to deliver ever-greater shareholder value through the use of tools that require specialized talent to build and manage the appropriate organizational response. Increasingly, Korn/Ferry notes that companies are hiring chief data officers and chief digital officers, titles that, until recently, were rare among mainstream firms. In addition, the data analytics role is reporting to the CMO, CIO, and CTO.

Demand for Big Data analytics talent, however, is causing shortfalls, a sobering fact highlighted in a recent report from McKinsey & Company, which stated: “The United States alone faces a shortage of 140,000 to 190,000 people with analytical expertise and 1.5 million managers and analysts with the skills to understand and make decisions based on the analysis of big data.”

“Big Data is like searching for a needle among not one, but several haystacks,” said Bask Iyer, CIO of Juniper. “We need individuals who can find business intuition buried within unstructured data. You first need to know to ask the right questions, then have the ability to mine for the answers among several disparate sources spread throughout the cloud, and create the model. Sometimes the questions are more important than the mechanics of getting the answer. We have all worked with those rare business leaders who have the amazing ability to ask the absolute right questions at the right time. Where do you train them, and how do you train for that skill?”

Furthermore, according to Gartner Inc., over the next two years, almost 5 million new jobs will be created worldwide in the Big Data ecosystem (including all things cloud- and infrastructure-related). And, as we have seen in our own Search work, for each new Big Data role created, an additional three people will be employed outside IT—yet, only a third of those jobs will be
filled. As any company seeking to meet this immediate and growing need will attest, it is a challenge to identify qualified talent and distinguish the “A-list players” who possess the necessary transformational and leadership skills.

Big Data and how business gets done

Big Data means different things to different companies. Indeed, the term is overused to the point that it lacks specificity. What we do know about Big Data analytics is that end users are experiencing how it can be overwhelming, as well as empowering.

Previously, risks to an organization’s information were fairly easy to mitigate, given that information was stored within its own walls. Now, connecting and blending corporate networks to the cloud will introduce increased threats from unknown sources. These kinds of security problems exponentially increase as social media and web-based applications enter the picture—the “shadow IT” that encompasses open applications that are highly appealing to end users, but also pose potential security threats to an organization’s internal IT systems.

“Most enterprises struggle with meeting the increasing demands of business units for speed, flexibility, and agility. Shadow IT has become a quick and easy way for enterprise users to improve their agility and innovation,” said Anand Bhadouria, senior technology strategist at Rackspace Advisory Services. “However, the potential dangers of shadow IT involve governance, security, and control issues that could lead to revenue loss, loss of business intellectual property, and brand deterioration. Rather than standing in the way of employees using the cloud and Big Data to do their jobs better, CIOs should embrace and encourage it, while implementing a development/operational organization and talent structure.”

This complex environment calls for talent that knows how and from where information is collected. Thus, Big Data transformation calls for leadership skills that combine technical knowledge with strategic thinking and foresight. Power player IT services vendors were seen as having the answers and being able to employ them accordingly, but today’s internal IT leadership also needs to have this knowledge and know when, how, and where to use it. This, in turn, has led corporations to add CIOs to their boards in efforts to help guide companies through this most difficult and dangerous time.
Learning agility and building Big Data capabilities

As Big Data expands across all industries, traditional avenues for identifying and recruiting talent will not suffice. To stay competitive, companies will need to innovate their talent selection and development practices.

The challenge, however, is that Big Data metrics remain unclear. Those who are most likely to succeed in senior Big Data roles are executives who are able to see trends and are also strategic. They know how to bring breakthrough ideas to market, can comfortably handle ambiguity, and manage change to create the desired impacts.

Without a robust track record in what is still a new industry, the best indicator of that talent potential is learning agility, which Korn/Ferry defines as the capability to apply past experiences to first-time situations and, most important, to stay flexible and open in the face of unfamiliar challenges. Learning agility can be measured by formal assessments (such as the ViaEdge tool), but can also be probed through targeted interviewing. Our research has shown that learning agility is a key predictor of leadership potential and an important characteristic to select talent in the Big Data world.

Case study: The industrialization of the internet

The majority of U.S.-based companies face very different realities in implementing Big Data initiatives than those of technology trailblazers such as Google, Amazon, Facebook, eBay, Yahoo, and LinkedIn. Indeed, the average Fortune 500 company is tasked with simply managing and making sense of years of legacy data that has been stored throughout the organization. As a result, they approach such things as social media, sensor technology, and the cloud at a much slower pace.

One traditional firm that is taking the initiative in Big Data is GE, which recently set up a global software center of excellence in Silicon Valley. GE has hired 200 software engineers in the last 18 months and is eventually targeting 800 software engineers and researchers.

Centered on what GE calls the "Industrial Internet," the company is clearly enhancing its traditional competencies, such as predicting when and where a jet engine could fail; developing technologies for repairing equipment remotely; making devices more intelligent and self-monitoring; integrating consumer technologies; improving and standardizing user interfaces; and developing networks of sensors.

“Big Data is the lifeblood of the Industrial Internet,” said Bill Ruh, whom GE recruited from Cisco to head this initiative. “By connecting machines with the Internet, data is produced and insight gained, but what’s more is that these machines are now part of a cohesive intelligent network that can be architected to automate the delivery of key information securely to predict performance issues. This represents hundreds of billions of dollars saved in time and resources across industries.”
space. However, not everyone displays the characteristics associated with learning agility, such as gravitating toward novelty, dealing with ambiguity, and mastering significant challenges on the job. And, not everyone naturally possesses the propensity to learn from experiences and navigate first-time situations with curiosity and openness.

Part of the solution lies in distinguishing those skills and competencies that can be acquired through on-the-job training and those that are rare and harder to develop. Technical skills are a given (price of admission), but mastery of analytics and data systems alone does not ensure success, particularly in other critical elements of the role, such as change management, building and leading innovative teams, and strategic planning. Since seasoned leaders in the space are few and far between, identifying candidates with leadership potential is essential.

Companies will realize a faster return on investment by developing their high potentials through a targeted program. For instance, Action Learning programs can be developed to broaden the divergent thinking and unstructured reasoning skills in data scientists who have been trained in statistics, mathematics, and the engineering sciences. Companies can also deploy best-in-class organizational design and team formation strategies, in which members with different and complementary skills are thoughtfully assembled to generate the optimal team dynamics, interactions, and thinking, which can significantly add to a company’s Big Data competence.

Winning the war for Big Data talent

The world of cloud computing and Big Data analytics is changing the competitive landscape for companies, not only in terms of deriving market insights from the data in real time, but also in recruiting and developing talent that can help devise and implement business strategies informed by the data. Technology tools alone will not suffice. To remain competitive, companies large and small must also look at their talent capabilities in light of their broader needs for technical expertise and leadership potential. As data analytics talent is increasingly in demand, companies will need to sharpen their overall talent management strategy, aligning corporate strategy with targeted solutions. Those that do will create the internal expertise to make the most of Big Data where it really counts—in anticipating and responding to the needs of the marketplace.
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The Korn/Ferry Institute generates forward-thinking research and viewpoints that illuminate how talent advances business strategy. Since its founding in 2008, the institute has published scores of articles, studies and books that explore global best practices in organizational leadership and human capital development.

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