LEADERSHIP IN THE CLOUD COMPUTING ERA

Cloud computing, which was once viewed by some industry leaders as a marketing buzzword as much as a definable concept, has evolved into a clear and promising vision for a new era of computing. Today, cloud computing's powerful potential both to enhance business performance and to increase technology's accessibility for consumers has caused companies to embrace it on an unprecedented scale.

As defined by the U.S. Department of Commerce's National Institute of Standards and Technology, cloud computing is "a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage applications and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction."

By permitting unprecedented mobility for workers, increased scalability and speed of deployment for organizations, and the potential for greatly reduced capital expenditure costs, cloud computing is changing the way that companies do business. It is also evolving the requirements for the leaders of companies that seek to both access and provide a growing variety of cloud services.

To further explore the leadership implications of this trend, Spencer Stuart recently interviewed several CEOs and general managers around the world from leading companies at the forefront of the cloud computing revolution. Their insights inform this study.

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The Promise of the Cloud

Among cloud computing's chief benefits is the broader access to technology it enables by allowing the purchase of software, platform and infrastructure services on demand over the Internet. "Small businesses and businesses in emerging countries that haven't spent a lot on IT will be able to leapfrog the big players in many respects and access very good technology on the cloud without outlaying a huge amount of capital," said Andrew Greenway, global cloud computing program lead at Accenture. "That will enable them to compete on a much more level playing field."

Greenway also noted that even companies that previously had the best technology will now be able to use cloud computing to analyze huge quantities of data and relatively cheaply get at nuggets of information that in the past were just too expensive. Cloud computing additionally permits greater business agility, both by increasing capacity at peak periods without requiring expensive IT infrastructure additions to facilitate it, and by allowing faster time to market.

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"In the old days, our project teams helping clients develop new systems would often have to go out, buy a server, wait six weeks for it to arrive, and then three more weeks to configure it and get a test environment up and running," Greenway said. "Now we can provision a test server within a half-hour through the cloud and have a development environment up and running in a few hours."

Cloud computing is being firmly embraced by large enterprises, as well. "We are witnessing a rapid and permanent shift in how corporations leverage the IT value chain," said Brooks Borcherding, president of NaviSite, a Time Warner Cable company. "Companies, large and small, recognize they no longer want to own or manage physical IT assets. Instead, they are focusing their time, energy and resources on the strategic core differentiators for their businesses. The question is, 'Why would any company spend the time or money to build a private data center when cloud computing offers such compelling financial and operational benefits?'"

Also intrinsic to cloud computing is the concept of mobility. "Today, much of the functionality that people need is saved in their computers and devices," said Von Wright, vice president of consumer digital experience at AT&T Mobility. "But your device is always one mistake away from being lost or obliterated. You want people to be able to access their applications and data from any device — be it their smart phone, iPad, e-reader or digital camera — and have them all work together without systems integration. Storing this information in the cloud can allow people to access it, securely tied to their identity, regardless of where and how they connect."

This flexibility could change the nature of work itself. "Cloud computing will give tomorrow's workers an unprecedented level of mobility and physical location will become less and less important," said Andrew Dutton, VMware's general manager for Asia Pacific and Japan. "It will effectively give globalization its next boost by delivering on the true promise of technology as a business enabler. Today we are seeing IT departments rapidly transform from cost centers to service centers, delivering on-demand applications securely to users from both private and public clouds."

And while security concerns have traditionally been a barrier to greater cloud adoption, and some companies may continue to keep their most sensitive information out of the cloud, many cloud experts see these worries as overblown. "Not all cloud providers are created equal," said Francis deSouza, group president of enterprise products and services at Symantec. "From a security perspective, a cloud provider should at least be able to verify that they are meeting an organization's internal security bar. A good cloud provider should be able to raise the bar."
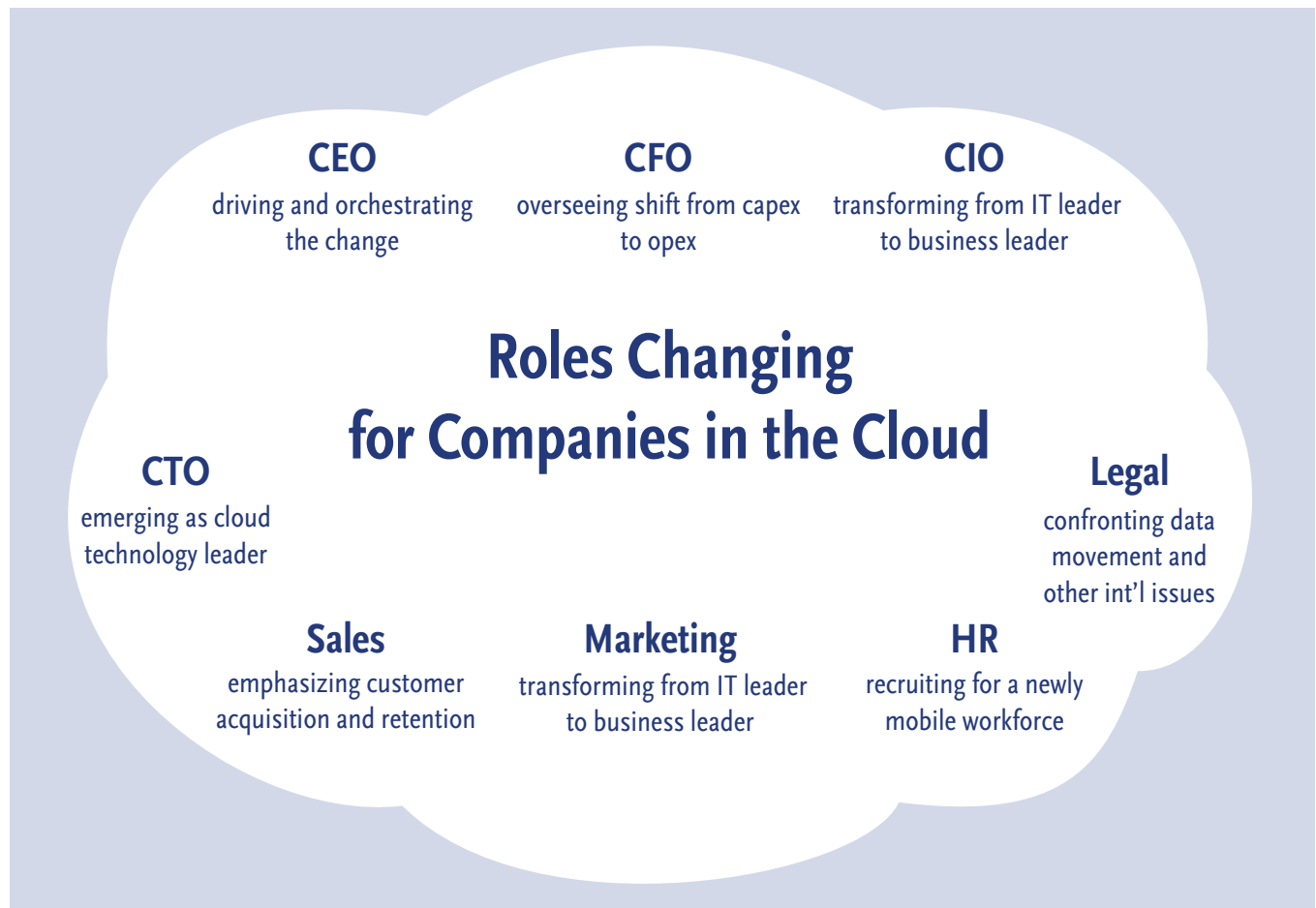
Changing Roles

As it changes the landscape of business, cloud computing is also changing certain leadership roles within organizations — with no position being more affected than that of the chief information officer. "The CIO has changed over

the last several years from an IT position to a business leader position," said Nelson Fonseca, chief operating officer for Terremark Worldwide, a subsidiary of Verizon Communications. "Cloud computing allows the CIO to focus more on the productivity of the applications the company will need to be successful, as opposed to worrying about the infrastructure needed to support those applications."

Meanwhile, CEOs and CFOs are getting more involved as they see opportunities to cut IT infrastructure costs and make technology into a competitive advantage. Many leaders expect CEOs to be responsible for driving and orchestrating the change, while also assembling a team to lead it. And CFOs will be key players in decisions about when to reduce capital expenditures and increase operating expenditures by using cloud services instead of purchasing infrastructure. They are also getting more involved because of the risk and compliance issues related to cloud solutions.

"You're definitely seeing more business heads weigh in a lot more on IT than ever before," said Steve McWhirter, senior vice president of enterprise sales for Asia Pacific for salesforce.com. "They are tired of software complexity, long implementations, maintenance and upgrade projects that add no value to the company's bottom line. The business is saying, 'We can remove these headaches, be more agile, and create greater shareholder value.' Cloud CIOs have the freedom to meet the pace of innovation for their business without compromising on enterprise class requirements like privacy, security and performance."

Some leaders additionally believe that cloud computing will facilitate the advance of the chief technology officer role, which tends to focus more on new technologies rather than on enhancing existing ones. "CIOs are always worried about taking on something new since they never seem to have the budget they need," said Bruce Richardson, chief strategy officer for Infor. "If you go with a CTO, you're saying that we've got to do something big and bold. I think

Roles Changing for Companies in the Cloud

CEO
driving and orchestrating the change

CFO
overseeing shift from capex to opex

CIO
transforming from IT leader to business leader

CTO
emerging as cloud technology leader

Legal
confronting data movement and other int'l issues

Sales
emphasizing customer acquisition and retention

Marketing
transforming from IT leader to business leader

HR
recruiting for a newly mobile workforce

there is potential for companies to make mistakes on both the cloud and mobile platforms. You really need someone who understands all of these technologies."

For cloud service providers, software development roles have also become more critical as these companies realize the need to continuously roll out new features and applications for their products, while also integrating software from other vendors. "Some things you want to do on your own because they're highly differentiated portions of your business, but there are other areas where different providers have the functionality we're looking for," said Fonseca. "Who you partner with and what software you integrate as part of your overall solution is becoming more and more important."

Sales and marketing roles are also evolving in the new cloud environment. Sales departments are changing their approach because of the lower margins associated with cloud service offerings and because of the need to focus on customer acquisition and retention in what are typically subscription-based or pay-as-you-go billing models. They must also be ready for an expanding customer base.

"In selling cloud solutions, companies are confronted with more diffuse buying centers and different routes to market," said Gert-Jan Schenk, president of EMEA for McAfee. "The CIO is no longer the sole technology buyer — the marketing department and CFO are also purchasing and running their own applications, as are the company's partners who host the services. It requires much more flexibility from sales executives than before."

Marketing likewise has to deal with these issues, and with a fiercely competitive marketplace. "If you're marketing to businesses, you have to think more like you're selling that consumer application in terms of how you create that value proposition," said Richardson. "In every category except CRM, which salesforce pretty much owns, it's very cluttered, so marketing skills are going to be everything."

HR's role will also be affected as the adoption of cloud computing facilitates the creation of a highly mobile and globalized workforce, while the data movement and inter-

national considerations accompanying this shift will also affect corporate legal departments.

The Seven Key Competencies for Cloud Leaders

According to the leaders we interviewed, several traits are critical for cloud computing leaders across a variety of roles. These skills include:

1 **Broad technology and business savvy**. As companies strive to create new cloud computing business models, they need leaders who understand software, hardware and mobile technologies and additionally offer a broad view of both product development and the larger business. "There's a lot of experimentation going on right now, and I think having people with 360-degree perspectives is going to be critical, instead of just viewing things from the development side or the line side of things," said Steve Renda, senior vice president of global sales and marketing for NTT/Verio.

2 **Agility**. "Leaders need to be flexible enough to adapt to changing business models as companies redefine their strategies for a cloud-oriented world," said Michael Väth, senior vice president of global business innovation for Hitachi Data Systems. Several leaders said that they expect the pace of change to just get faster as cloud adoption continues — and that leaders who embrace business change will do well, while those who are stuck in a certain way of doing things will be bypassed.

3 **Openness**. Success in the cloud depends upon leaders who are willing to be collaborative and give up a measure of control. "One of the most important things is to learn how to partner with other entities" said Bill Chang, executive vice president of the business group at SingTel. "Companies will need to focus on what they do well and acknowledge that partners are better at doing other things in the overall value chain. In this way, we can best meet our customers' needs together."

4 **Financial acumen**. "While outsourcing contracts would often run five years, service commitments on the cloud are made for a year at most, sometimes even just for quarters or months," said David Milot, managing partner for Unisys Technology Consulting and Integration Solutions in EMEA. "Leaders need to understand the financial implications of these shifts." Leaders must also make many other choices around customer

acquisition and business model that require a full under-standing of all economic ramifications. According to Richardson, "You have to be fixated on all the costs involved. The price of subscriptions keeps getting driven down, and as soon as you have to send a team onsite to do a demo or fix a problem, you can lose a year of margins."

5   *A consumer and service orientation*. With its on-demand and subscription-based approach, cloud computing puts companies under pressure to provide customers what they need, when they need it, and places a constant focus on customer acquisition and retention. "Cloud means understanding customer needs," said Chang. "It requires far more in-depth thought processes than selling fixed-feature products. I look for sharp thinkers who can anticipate customer needs."

6   *An innovation mindset*. Given the sheer amount of change going on right now, companies benefit from leaders who have a history of innovation experimentation in their background. "I'm looking for for-ward-looking people with a strong bias toward people who have been through multiple evolutions of technology," said Wright. "You need to have seen a previous version of the basic principles of technology to understand some of the basic elements that make the difference between some-thing having really cool technology and something actually taking off from an adoption perspective."

7   *Vision*. Leaders with the ability to think through all cloud-related considerations — including plat-form, security, access, technology and economic issues — to arrive at a clear vision for the business are crit-ical for cloud companies today. "Right now, we have a mas-sively fragmented industry around cloud, from the infra-structure end of the spectrum to the SaaS end of the spectrum and a jillion companies in between and a jillion being formed every year," said Mark Templeton, president and CEO of Citrix Systems. "It's not going to be this way forever. Leaders with a vision and some ideas on how to be a survivor in such a crazy environment are going to be in demand."

Where to Find Cloud Talent

As more and more companies seek to provide cloud servic-es, they are competing for a very limited pool of executives with the requisite expertise to lead cloud efforts. While the leaders we spoke with tend to prefer executives who under-stand both the software and services sides of the cloud

computing equation, they acknowledge that few possess these traits. "There's a body of people who have crossed over from services to software and vice versa, but it's not a large body," said Renda. "Until we get a few more years under our belt, people will be contending for a small pool of talent."

Today, according to the leaders we interviewed, the U.S. is the undisputed leader in cloud adoption. "Silicon Valley leads in implementations, and the U.S. as a whole probably represents 70 to 80 percent of the cloud markets, followed by English-speaking Europe and Australia and New Zealand," said Richardson.

As a result, Silicon Valley is also the first place companies look for cloud computing leaders. "It's a relatively rare skill set, even for a software company going out to recruit peo-ple," said Richardson. "Much of the talent is concentrated in Silicon Valley, and there, despite California's 10 percent unemployment, you can quit a job at 9 a.m. and be in a new one at 9:15. If you're anywhere else, your No. 1 concern is going to be retention."

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Over time, however, the talent pool is likely to become more geographically dispersed. Most leaders agreed that Europe was closely behind the U.S. in cloud adoptions, and that the popularity of cloud services in other markets depends on their existing levels of IT and telecommunica-tions network infrastructures.

"If you categorize Asia into mature vs. emerging IT mar-kets, many companies in emerging markets have a head start because they have not been hustled into cumbersome legacy IT investments. Whereas cloud services don't require big capital investments up front," said McWhirter. "Whether you are leading a large enterprise or a startup, you can't afford to spend precious capital on IT that takes years to implement, is difficult to use, and is barely used by your employees. The cloud helps you to leap into the future and evolve with the pace of change in your business."

As they look for cloud talent in an environment where few executives possess the full suite of skills they desire, companies tend to select executives whose main expertise is most relevant to their specific cloud offerings. "The foundation for cloud computing is virtualization, so clearly the most obvious leaders come from companies that are strong in virtualization," said Dutton of VMware, the market leader in virtualization technology.

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"Our legacy coming into the cloud was as a managed service provider," said Fonseca of Terremark, which focuses primarily on Fortune 1000 and federal government clients. "For our approach, we focus more on finding people with a managed services background — people who understand software, but at an enterprise and integration level. But we now also hire pure software developers."

Telecommunications companies, meanwhile, are seeking executives accustomed with the fast pace and service orientation of the cloud world. "I had to go to IT companies to hire people who were more customer-focused and solutions-oriented," said SingTel's Chang. "I also went for people who valued partners and knew how to work with partners."

These companies see leaders who can facilitate a paradigm shift within their organizations as a critical component of their competitiveness in the cloud. "We've got a completely different asset base than the companies we're competing against, so we have to understand how they operate and their mindset and move at the speeds they're moving," said AT&T Mobility's Wright. "We have to understand the new business, not the business that was based on all those old assumptions that said it was all about the network."

Leadership for a New Cloud Era

As they struggle to get their business models right and scale up to meet increased demand for cloud services, companies are also in the early stages of developing the next generation of cloud leadership. Many are starting to create their own training programs to develop future leaders for a field that has only rarely been addressed at the university level in explicit degree-level cloud computing programs.

"We're developing new training programs and internship programs and other ways of bringing in fresh young minds to develop our future leadership from within," said Fonseca. "It's a challenge because at the same time, the business is growing so fast that it puts pressure on the organization."

For now, the experienced senior talent pool remains limited and in great demand and, in this age of experimentation, even experienced leaders don't have all the answers. "In some ways, it's like the early days of software," said Templeton. "You couldn't go to school somewhere to learn how to run a software business. Instead, what everybody had in common was a love deep in their soul for software. So I look for people who are young, who are athletes and who have a deep love in their heart for doing this."

As the nascent industry develops, companies looking to take advantage of the cloud face a considerable challenge today in attracting and retaining the right senior talent to win in this intensive landscape of fierce competition and constant innovation. While cloud computing promises to make technology invisible and its advantages accessible to anyone anywhere, getting there will take highly visible leadership and considerable IT skills on the part of companies in the cloud. Given the tremendous business and commercial potential of cloud computing, this human capital challenge is one that an increasingly number of companies are more than willing to take on.

Contributors

Spencer Stuart consultants Wai Leong Chan, Singapore; Lee Esler, Atlanta; Jason Hancock, Boston; Tim Henn, Atlanta; Ben Holzemer, San Francisco and Sao Paulo; and Alexander Strahl, Frankfurt, contributed to this article.

About Spencer Stuart

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