

# The Grand Convergence

Cloud computing, mobile devices, social media and workforce analytics are changing the world of work. Find out what that means for HR.

By Bill Roberts

**T**he commercial real estate industry is typically a lagging adopter of technology. Mindy Geisser, vice president for global HR at Colliers International Property Consultants Inc. in Seattle, wants to change that. Colliers' 12,500 employees, about a third of whom are brokers, work out of 512 offices in 61 countries. To serve them, Geisser says, Colliers must take advantage of converging technologies that are shaping organizations and human capital management strategy. "We are a

*The author is technology contributing editor for HR Magazine and is based in Silicon Valley.*

ILLUSTRATION BY ADAM NIKLEWICZ

workforce that has to embrace these tools and methods to disseminate and share information," she says.

The converging technologies are:

- Cloud computing, including software-as-a-service (SAAS).
- Mobile devices, including smart phones.
- Social media.
- Workforce analytics.

"The cloud gives us the ability to scale applications more quickly and to collaborate more quickly," Geisser explains. "Social media enables us to message our

Inc., whose analysts study disruptive technologies. "This convergence is driving new work models, new business models and new ways of how we collaborate—or don't."

The way Wang sees it: "The cloud gives you any information, from HR data to outside unstructured information. The mobile platform is the access and interaction point to the cloud and the data of choice.

*'The cloud is the enablement component. It is hard to do the other three—social, mobile or analytics—right without getting the cloud right.'*

story to more people and create a global presence through outside networks and employee networks. Mobile is a game-changer, and what we are now developing is just the beginning. We need to get more information faster to the broker. The cloud and these other tools are also going to enable us to get more workforce analytics information faster. How these trends are interrelated is they all enable time to market."

Individually, each technology already impacts work, employees and workplace culture. Their convergence makes up the digital megatrend reshaping business processes.

### New Directions

Thought leaders expect the convergence to change everything about work. "Where we work, how we work, when we work and why we work is being decimated," says Ray Wang, principal analyst and chief executive officer at Constellation Research

Social media is the way we engage with people. Social will also generate more data, and that is going to drive new analytics."

Some HR executives see the future through a similar lens and know they have a role to play. Geisser, for instance, sits with her chief information officer on an executive team that aligns these technologies with her organization's business strategy. "I see myself as an executive leader not just in HR," she says. "I think about the business holistically and try to contribute."

Donna Morris, senior vice president of HR, sits on a similar committee at

### Online Resources

For more information about technology trends affecting HR management, see the online version of this article at [www.shrm.org/hrmagazine/1011Roberts](http://www.shrm.org/hrmagazine/1011Roberts).

## DEFINITIONS

**Cloud:** A computing architecture that provides information technology infrastructure over a network in a self-service, elastic and on-demand fashion.

**Public cloud:** A shared pool of information technology resources, such as networks, servers and storage, delivered on demand via the public Internet or a private Internet-based network to multiple customers.

**Private cloud:** An implementation of a cloud restricted to use by a single company.

**Infrastructure-as-a-service:** Servers, storage and other IT resources and support staff that replace the traditional data center with a service available to multiple customers. The vendor charges only for resources consumed, similar to the electricity utility model.

**Software-as-a-service:** Application delivery model where software and associated data are hosted in the public cloud, typically accessed with a web browser via the Internet. The application is multi-tenant, thereby allowing multiple customers on the same "instance" or copy of the software.

**Platform-as-a-service:** A service and platform, available on a subscription basis, for hosting applications and developing new ones. Some software-as-a-service offerings are evolving into platforms-as-a-service.

Adobe Systems Inc. in San Jose, Calif. The software developer for digital content creation and management employs 9,400 workers worldwide. "When I look over the 20 years of my career, now is the period of the most impact of technology and disruption to how HR does its work," she says.

In many organizations, HR professionals struggle with the disruption, says Jason Corsello, vice president for corporate development and strategy at Cornerstone On Demand Inc., a Santa Monica, Calif.-based vendor of a SAAS-based learning and talent management suite. "It is overwhelming because the technology is moving at an amazing pace," he says.

### The Great Enabler

Colliers' HR team seems undaunted by that pace. "We will have 70 percent of our information in the cloud in the next two years," Geisser says. "We have a higher risk tolerance for moving in that direction because we are eager to accelerate success and because we are highly distributed."

Colliers is rolling out a SAAS-based talent management suite from Taleo Corp. and uses a SAAS-based payroll system from ADP Inc. in many locations. Colliers University is hosted in a "private cloud," an implementation of a cloud restricted to use by a single company. The company has a LinkedIn-like application for maintaining employee profiles built on Microsoft's SharePoint. Colliers is deploying mobile applications such as a sales strategy tool and using social media, including Facebook, for recruiting. The chief information officer is also moving non-HR systems, including collaboration tools, to the cloud, Geisser says.

"The cloud is the enablement component," Corsello says. "It is hard to do the other three—social, mobile or analytics—right without getting the cloud right."

As Nicholas Carr explains in his best-seller *The Big Switch: Rewiring the World, from Edison to Google* (W. Norton & Co., 2008), cloud computing changes how companies use information technology

resources the way the electrical infrastructure changed how they used electricity—transforming it from something each organization must own to a shared utility on a subscription basis.

Software-as-a-service represents just one element of cloud computing, but

this aspect has the most direct impact on HR operations. The SAAS vendor hosts, maintains and upgrades the software, adding features often based on suggestions from users who pay subscription fees.

Rob Jackson, manager for global human capital management at H.B.



The Ultimate Collaboration of Talent Acquisition Strength!



**RightThingRecruit™** is a software breakthrough that takes the complexities out of global hiring. Combining sourcing, recruiting, contact relationship management (CRM), applicant tracking, onboarding, reporting, and compliance into one unified platform, everything's easier and faster. Born and created from recruiters, it provides stronger performance with improved results. Others may offer you software, but everything's extra. At The RightThing, there's only one extra. The extra success in your work day.

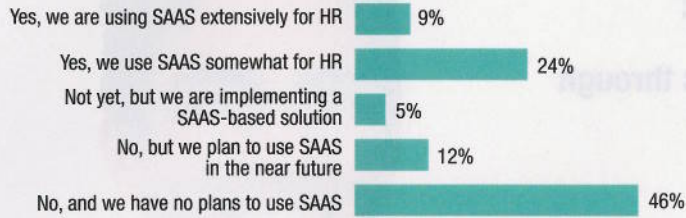
For more information, visit [www.rightthinginc.com](http://www.rightthinginc.com)



### Software-as-a-Service

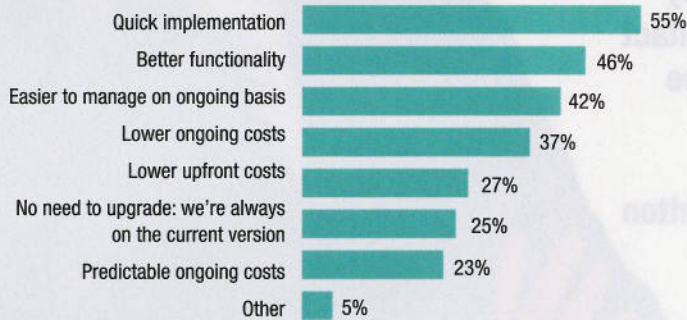
Responses to a 2011 survey of HR and HR information technology executives from 444 organizations worldwide. Multiple responses were allowed.

Is your organization using software-as-a-service (SAAS) to support HR service delivery?



### Software-as-a-Service—Benefits and Concerns

Primary benefits realized by moving to software-as-a-service (SAAS) among companies currently using it. Multiple responses were allowed.



Concerns or apprehensions about using software-as-a-service among companies not planning to use it. Multiple responses were allowed.



Source: 2011 HR Service Delivery Survey results, Towers Watson.

Fuller Co. in St. Paul, Minn., adopted human capital management software from Workday Inc. in 2008. Today, he's still happy with Workday and with SAAS in general for his 3,400 employees who work in 39 countries for the adhesive manufacturer. "We're implementing an applicant tracking system on SAAS now," Jackson says. "We are trying to move toward SAAS wherever feasible because of the benefit we've found from that model."

Altera Corp., a San Jose, Calif.-based developer of programmable logic for semiconductors with 2,900 employees worldwide, has "gone feet first into SAAS" by using offerings from Workday and Taleo, says Kevin Lyman, senior vice president of HR. "We calculated it would defer at least several headcounts in HR. That would be 5 percent to 10 percent savings just on labor costs. More important, we projected we could scale without further investment. We're running 3,000 employees on Workday, and I could add 1,000 without batting an eye."

Flextronics International Ltd. in Singapore, one of the largest electronics manufacturing service providers, uses several SAAS applications. "We prefer cloud-based applications because we run a relatively lean IT shop," explains Debi Herslag, vice president of worldwide HR. "We use SAAS for salary planning, learning and talent management, applicant tracking, human resource information systems, and case management." With a workforce of 200,000—about half of which is in China—Flextronics represents an industrial-strength test of SAAS, using Workday to consolidate employee data from 81 HR systems. "We are still Workday's biggest customer with about 150,000 employees on it," Herslag says. She expects to move the remaining employees to it this month.

Many HR executives are reluctant to adopt SAAS. In a Towers Watson survey of HR executives at 444 companies of all sizes worldwide, 46 percent said they were not using SAAS and had no plans to.

Security concerns, real or perceived, are one reason for skepticism.

One HR executive says the cloud is important, but that he and his chief information officer still view it “as immature and behind where a lot of enterprises need to be with data privacy and security.”

In contrast, Jackson says his company’s chief information officer finds that a SAAS provider like Workday “can afford more resources than an internal IT shop can to ensure that data is protected and maintained safely.”

Few groups are more concerned for data privacy than the workers’ councils in Flextronics’ European plants. Herslag says once SAAS was fully explained, the councils dropped their objections. “The security and privacy question is no longer on the table. The more sophisticated companies get it,” she adds.

## Ubiquitous Access

As the cloud emerges as a great enabler, mobile platforms are providing ubiquitous access to applications and information in the cloud and replacing personal computers for a number of computing chores. Workers at many organizations are finding ways to use smart phones and tablets



buildings. We have to enable them with tools that allow instant access.” Working with a vendor, Colliers’ IT staff ported one application its employees use on computers to the iPhone. The application helps a broker determine a sales strategy based on his style and the prospect’s personality

Employees expect the workplace to offer similar capabilities in mobile and social media as they have access to outside of work.

to access and interact with all kinds of information, most of it in the cloud.

“We are all about the accessibility of information and software tools on mobile devices,” Geisser says. “If you look at how our real estate brokers do business, they have to be out with clients looking at

traits. “We see mobile as exceedingly strategic and important,” Geisser says. “We are leasing some mobile apps now that let you see building details, just what brokers need in the field.”

Many SAAS vendors, and more-traditional human resource information

systems vendors, are starting to port or build from scratch applications for handheld devices, extending many self-service applications to mobile. For example, Kronos, Oracle, SAP and other vendors have developed workforce scheduling and other applications for these devices.

Flextronics’ managers review and approve some basic HR-related administrative procedures using workflow applets that Workday has created for the BlackBerry. Herslag is testing Workday applications for the iPad, including the ability to review employee data individually and in aggregate. The BlackBerry and the iPad give access to job history, organizational directories, compensation information, head counts and other employee-related data. H.B. Fuller is adopting iPhone applications from Workday, including time-off request approvals, searches for individual employee data and other routine HR-related administrative tasks, Jackson says, adding, “Running reports and a lot of HR administrative tasks are not feasible from an iPhone, but they might be from the iPad” or other tablet devices.

Forward-thinking HR leaders recognize that employees expect the workplace to offer similar capabilities in mobile and social media as they have access to outside of work. As of June, 78.5 million Americans owned smart phones among 234 million with mobile devices, according to comScore Inc. of Reston, Va., which tracks digital trends.

The cloud’s importance will grow as more enterprises build mobile applications.

## 21st Century Network

Mobile devices and social networks go together. “The more people use their mobile device, the more they use it for social. The more they use social, the more they need mobile,” says Amy Wilson, principal analyst and vice president of Constellation Research. “The best apps for mobile are going to be socially oriented. HR administration is not where mobile is going to be key. Where it becomes key

is getting work done and collaborating in real time.”

There are two business aspects to social media: public social websites such as Facebook, LinkedIn and others, and the internal use of social media tools for collaboration.

HR professionals in most companies are further along in using public sites, especially for recruiting. Corsello argues that social networks are crucial to developing talent supply chains. LinkedIn and

guides what tool you use and how you use it,” he says.

Colliers has been rolling out internal social media to mixed reception, Geisser says. “Our most senior executives are pretty progressive thinkers, but we have a mixed bag in the field. The whole idea is to create a collaborative environment. You have to be open to sharing information.” That is an unnatural act for brokers who historically “own” the customer relationship and do not share it. “Now, there is

**New analytical tools not widely adopted provide insights into communication and collaboration patterns.**

other sites help locate external sources of talent. Internal tools, including employee profile pages, help managers know where talent is in their own organizations.

Morris says Adobe is a big user of public social media: 30 percent of new hires come from LinkedIn; it has 57 Facebook pages with 2.6 million followers; it has 250 Twitter handles with more than 400,000 followers; and it has 15 channels on YouTube with 8.6 million upload views.

“Social media is a key aspect to how we make people aware of our organizational values and is important to our focus in attracting talent,” Morris says. “We encourage our employees to share on Facebook, and we have an internal version of Twitter to exchange data and resources to provide an environment of transparency to our employees.”

Altera employees use Facebook and other social networks as well as Yammer, a micro-blogging tool like Twitter, inside the corporation. Before a company adopts any tools, Lyman encourages decision-makers to ask themselves what business problem they are trying to solve. “That

a business incentive,” Geisser says. “We need to collaborate to give the customer a consistent experience wherever they do business with us.”

### Finding Patterns

All of this will lead to a new era where workforce analytics occur in real time and become predictive and highly strategic.

The cloud can store and make accessible employee data as well as financial and other information needed for analytics that correlate employee and financial performance. Social media platforms will produce their own set of data—patterns of communication and collaboration—that can be examined with new analytical tools. HR will be able to deliver analytical content on mobile devices that managers can access on demand.

Corsello says trendsetters in workforce analytics study factors that contribute to high performance, performance itself and bench strength.

Some SAAS vendors are now infusing their products with analytic capabilities.

For example, Workday analytical

applets, including those that deliver HR metrics on a dashboard, contribute to H.B. Fuller’s analytics efforts. Among the dashboard items: turnover, new hires and pay-for-performance metrics. “We need to start telling our executives something they don’t already know, and the language they already understand is numbers,” Jackson says. One goal is to deliver metrics and analyses to executives in real time. “I can see a day when the iPad will get analytics,” Jackson says.

Flextronics’ HR professionals also use some of Workday’s analytics tools and have developed their own predictive models—albeit not available on mobile devices. One cost-of-attrition model shows plant managers how much worker turnover costs them, and suggests areas for cost-effective investment—in a very low-margin business—that might help reduce attrition. “We fill in the data for the plant site based on salaries, productivity, cost of productivity, quality issues,” Herslag says. HR analysts do the analyses and deliver the results in a meeting with plant managers.

New analytical tools not widely adopted provide insights into communication and collaboration patterns. Known as social network analysis, or social graphing, it shows everyone on the social network who they connect to, how often and why. More-advanced capabilities track the people and any source of information the individual connects with on a network.

“The social graph helps you understand the way people actually work and who they go to for information,” Corsello says. It “allows you to see how work really gets done.”

Adobe’s leaders are starting to look into social network analysis, Morris says. A workgroup of HR and marketing professionals is driving the effort. “We are looking at analytics based on social interactions.”

All of these converging technologies are enablers of people, she adds—enablers that “can provide more effective ways of managing and communicating.” ■