

10 Minutes on the Cloud

What you need to know about emerging topics essential to your business. Brought to you by PricewaterhouseCoopers.

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Business agility, technology-enabled

Highlights

- During the economic crisis, cost-cutting introduced many companies to cloud computing, as they began to rely significantly on the cost-saving technological elements of cloud computing to deliver and manage IT.
- But cloud computing can do more, and corporate chiefs need to learn the benefits of supporting more of their business using cloud services or internal IT inspired by cloud architectures and processes.
- Lack of a cloud strategy at the center can place undue focus on cost savings at the expense of driving growth and competitiveness. It can also result in a patchwork of business-unit cloud relationships.
- A coordinated plan will allow companies to address implications on security, governance, finance, compliance, and tax.

A perennial problem with IT has been its inability to deliver solutions at the speed of business. Cloud computing is changing this dynamic: the technology deploys solutions in days, not months. It's time to rethink the pace of change your company can take on.

Imagine your employees accessing enterprise information from any place, on PCs without any software loaded on them. Or a supply chain integrated on a real-time basis, allowing rapid adjustment to inventory trends. Or faster integration of acquisitions or new lines of business to common technology infrastructures.

In fact, many of the innovations and experiments that businesses are now focused on—the smart grid, personalized medical care, real-time coordinated disaster responses, real-time financial reporting—are all predicated on widespread embrace of cloud computing.

Cloud computing can help businesses meet demands for greater agility

1. Accelerate innovation

Companies can use cloud computing to accelerate the experimentation cycle and improve on time-to-market for the successes. Companies don't have to divert time, expertise and expense to building dedicated technology to make the innovation happen.

2. Focus on customer engagement

Customers' needs are changing in ways that demand more interaction with businesses. Cloud computing offers inexpensive and flexible options to handle the immense data storage and analytical resources required.

3. Improve connections

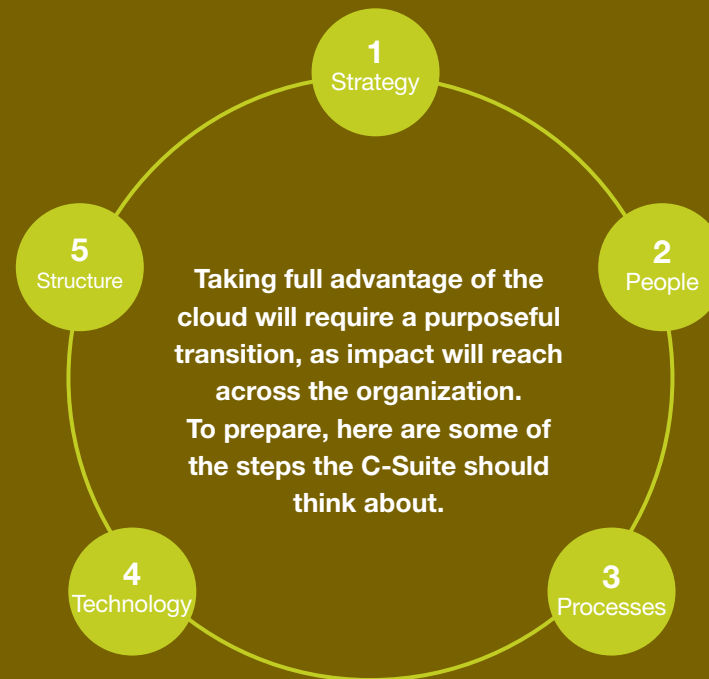
Cloud-based systems that integrate seamlessly and rapidly are making companies better orchestrators across their network of suppliers, time zones, and cultures—increasingly an attribute required for market leadership.

At a glance

Strategy. Begin with the business imperatives, then identify the technical components of cloud computing that you already have in place.

Structure. Thoughtful consideration of the organizational impacts will smooth the transition. As an example, consider the impact that rapid and inexpensive deployment of technology will have on product development. Approval processes should adapt to ensure governance models remain relevant and intact.

Technology. There are internal challenges for IT organizations, such as addressing data security and governance in the cloud model, and shifting service models to the business.



People. Cloud computing will encourage organizations to adopt a service focus, rather than a functional focus, and to realign resources in operations to support business growth needs. Anticipate a reassessment of talent needs. IT, for one, will require architects able to leverage cloud capabilities.

Processes. Anticipate changes across the organization. R&D will need to align more tightly with IT as project planning and deployments are able to accelerate. In Finance, anticipate impacts on profitability, budgeting and depreciation when the organization shifts product purchases to service delivery of IT.

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Removing the technology barriers to agility

“Cloud computing is the inevitable next wave of productive use of the Internet,” Bernard (Bud) Mathaisel, CIO for North America and Europe at IT provider Achievo Corp., told us. “I used to have to negotiate, buy and install the dedicated infrastructure before I could use it and sometimes, in the end, I didn’t even need it or needed more capacity.”

Often the costs and time required to test a new product or service or try a new way of engaging customers are so prohibitive they discourage companies from even trying them. But cloud computing offers an inexpensive and flexible way to deploy the infrastructure as needed to test ideas. The technology is being used internally and externally with cloud services, as in the examples below. It is challenging the mindset that innovative market responses always require long lead times and a lot of money.

Faster innovation

Consider 3M’s use of Microsoft’s Azure cloud platform.¹ The company’s scientists created a service to analyze the visual impact and effectiveness of new designs, based on 3M’s deep knowledge of consumer design. Using the Azure cloud platform and data hosting, 3M was able to test the viability of the application with designers quickly and inexpensively.

In another example, health care distributor McKesson is using the SAS Institute “analytics cloud” to develop more relevant analysis of marketing and sales loyalty data.² Because they were able to centralize the data, and reduce the time analysts

spend on preparing data extracts, the department became more productive, and the company concluded, more creative in their analysis.

Finally, Netflix moved to increase its own focus on innovation around “finding movies, rather than building larger and larger data centers” by migrating some of its infrastructure to Amazon’s AWS cloud services.³ It is an example of how cloud solutions enable businesses to re-deploy some of their IT resources to build what will differentiate them in the marketplace, instead of building on to existing infrastructure.

Better customer engagement

Retailers are experimenting with mobile applications like digital coupons. It is the kind of step businesses are taking to improve customer intimacy, and one which involves a greater level of targeting and personalizing content than before. Demands will grow on data storage and management as a result. Usage-based pricing for storage — a cornerstone cloud solution — offers businesses an inexpensive alternative to run these sorts of specialized marketing applications.

¹ “3M Launches Web-Based Visual Attention Service to Heighten Design Impact,” Microsoft Case Studies, Microsoft.com, Nov. 17, 2009.

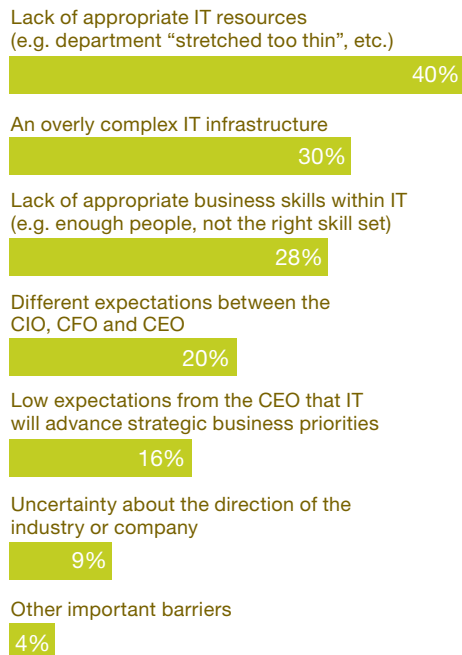
² “Placing bets on SAS, McKesson wins big” SAS.com.

³ “Companies Slowly Join Cloud-Computing”, New York Times, April 18, 2010.

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New cloud-enabled settings for agile business

Figure 1. Barriers in realizing positive business impact from IT in next 12 months



Sample of 100 senior executives of US-based multinationals

Source: PricewaterhouseCoopers, *Management Barometer Survey*, April 2010.

Business agility is not just about speed. It involves being flexible and responsive. PwC describes agility as being prepared for more than one future.⁴ "Think in scenarios, and make sure you know what to do when a scenario unfolds," says a CEO responding to PwC's *13th Global CEO Survey* about lessons learned from the crisis.

Current IT infrastructures get in the way. If a company could create its technology backbone from scratch, the results would greatly reflect the key attributes of cloud computing. It would have standardized resources that can be shared across the enterprise. It would scale easily to accommodate varying number of users at different times. It would have the flexibility to respond to changing demands, such as a new business line or new compliance requirements, without disrupting the entire technology base each time. PwC calls this Evergreen IT.⁵

As a result, projects no longer need to queue up for IT to develop software that works only in dedicated infrastructures. Once the Evergreen infrastructure is in place, timeframes to deliver new applications

drop from months, to days, to minutes for some businesses. The economics are compelling.⁶ And for CEOs, it is creating a way to deal with the inherent uncertainty of strategic options.

Look also at the level of engagement and real-time feedback that cloud-based businesses like Facebook or Twitter create. Contributors interact on a common platform with standardized tools to sort, store and share their information. The infrastructure is largely invisible to them.

What does cloud computing mean for your business?

There is no one-size-fits-all with cloud computing. Companies will craft different cloud strategies. Small businesses will take to the cloud sooner over owning their own IT infrastructure. Technology development work for some start-ups is shifting entirely to the cloud.

Larger companies will increasingly see the potential; for example, subsidiaries will share applications in the cloud rather than keep separate proprietary IT.

4 PricewaterhouseCoopers, *10Minutes on driving change*, January/February 2008.

5 PricewaterhouseCoopers Center for Technology and Innovation, *Technology Forecast*, Summer 2009.

6 For one company's journey, see "Evergreening IT at Bechtel" <http://www.pwc.com/us/en/technology-forecast/summer2009/interview-cloud-computing-evergreen.jhtml>.

03

The cloud is not just an IT initiative

Clearly, undertaking the transformation of IT for greater business agility isn't just an IT initiative. Embracing cloud principles means a shift in the way your company will do business, and there are various aspects that C-Suite executives need to consider.

Finance. Cloud computing is challenging the treatment of IT as a capital expense because of the ability to procure IT hardware and software as a service. The new pricing schemes will result in volatile IT costs as consumption ramps up and down. This is a sharp departure from traditional, straight line depreciation models for IT. There can be a significant write-off of hardware and software with replacing existing equipment with cloud computing. Finally, companies should employ the same buy vs. rent decision model in place for other fixed assets. The expectation is that cloud service providers can price more competitively, but be prepared do the math.

Security. Data security and privacy consistently rank among top concerns with cloud solutions. While the concerns are certainly valid and relevant, they are manageable through various cloud implementation models.⁷ In fact, the sheer

complexity of non-cloud IT infrastructures can make it more difficult to prevent intrusions and breaches.

Compliance. Regulated industries such as financial services and healthcare have specific governance and compliance requirements. There are country-specific protection and export laws surrounding the movement of data, and many of these regulations are predicated on the ability to identify the physical location of data and technology. Businesses should assert their needs about data ownership and control while negotiating service level agreements with cloud vendors. Can the company, for example, audit the controls themselves? Cloud services are not yet standardized at this stage. Companies should ensure service level agreements are best suited to their distinct compliance needs.

Tax. Cloud providers face material income tax or indirect tax implications depending on the cloud infrastructure and type of revenue model employed. The nature of cloud-based global sourcing and global delivery models can raise international tax jurisdiction issues. Cloud purchasers can encounter unforeseen — and at times significant — income and sales tax variations, depending on the type of cloud services they've contracted for.

⁷ PricewaterhouseCoopers, *Security among the clouds*, September 2009.

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Agenda for C-Suite discussion on the cloud

Cloud computing has come into focus as a method to cut and contain IT costs. There is a much larger opportunity at stake. We're entering an era of computing where flexibility in IT drives business agility, and it's not unlike how the Internet found its way into the C-Suite agenda in the mid to late nineties.

Most businesses are using cloud technologies in some form. To realize the full benefits, and minimize the risks inherent in the growth of shadow IT, business leaders need to set the strategic direction on cloud computing and rally the organization. Here are questions to consider in beginning your journey.

For the CEO

How do you need to rethink innovation in a world where cloud infrastructures create instant environments to try new ideas?

What transformations could your business undergo with the help of cloud solutions?

How will you encourage greater collaboration among your business network of internal and external partners?

How can you set the foundation that enables your company to prepare for more than one future?

For the CFO

How do you analyze and benchmark current IT costs, and how will you benchmark internal IT effectiveness against external cloud providers?

What access will you require from cloud service providers to audit, assess, and maintain control over workflow processes?

What are the implications of moving to external clouds from the regulatory, compliance, accounting and tax perspective?

For the CIO

Which of the CEO's strategic imperatives can cloud solutions help right away?

Do you have a roadmap to evaluate and deploy the cloud infrastructure—public, private or hybrid?

What decisions must be made now to assure you can be agile in the mix of public and private cloud resources you deploy?

How can your company capture the benefits of the cloud while mitigating the risk of overwhelming the IT organization?

How does your talent strategy need to change to support an Evergreen IT infrastructure?

Upcoming 10Minutes topics

From crisis mode to sustainable efficiency

Companies have yet to ease up on cost reduction measures, and many are now rethinking their operating models to deliver more value at lower cost. 10Minutes looks at how companies are embedding lessons from the crisis into more-disciplined management of corporate performance.

The changing face of financial reporting

Standards setters have proposed fundamentally changing the ways public companies gather and display financial data for investors and the general public. 10Minutes discusses what's changing and how it will affect your company's systems, processes and controls, key financial ratios, operations and shareholder communications.

Fundamental questions about IT security

Emerging technologies can pose the greatest potential for breakthroughs in productivity and innovation. But they often pose new risks, including IT security challenges. Instead of slowing down the company's ability to take advantage of new technologies, boards and CEOs can arm themselves with fundamental questions to ask about their company's ability to manage IT security risks.

