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Agile IT

Reinventing the enterprise

By Jimmy Harris and Stephen Nunn

An open technology and business environment, enabled by cloud computing and new outsourcing models, is creating a radically new approach to the delivery of business services and processes—and with it, a new, more flexible operating platform.

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It's hard to read a newspaper or magazine these days without seeing something about cloud computing. Whether being denounced as a threat to the business world or hailed as its savior, cloud computing—the dynamic provisioning of IT capabilities from third parties over a network—has become a major force, one capable of transforming the world of information systems and the organizations that use them.

As big as it is, however, cloud computing is actually part of an even bigger story: the fundamental re-creation of the traditional enterprise operating model.

A whole panoply of technologies, applications and architectures is creating a way to scale the IT function up or down immediately to meet the near-real-time needs of any large organization. Tap into only the service you need, when you need it, for as long as you need it. The result is a far more agile and cost-effective IT function.

But if such a model for delivering IT capabilities is as compelling as it sounds, why not apply the same model to any combination of people, process and technology? Because the cloud is more than a new IT architecture. It's actually a new business design as well—a new, more flexible operating platform.

Until recently, systems and processes have been siloed—hardwired to particular technologies and providers. Today, an open and agile technology environment, and the relentless expansion of outsourcing into most IT functions and business processes, is changing the nature and the economics of service delivery.

The ultimate benefit and competitive advantage delivered through this new platform and design is greater organizational agility. An agile operating platform, enabled by outsourcing models and by an IT infrastructure that expands or contracts to meet demand, can help organizations be more responsive to the marketplace and create a more open environment for innovation.

It can also help them be fast. As futuristic as it may sound, the day may not be too far off when an entrepreneur will wake up with a good idea, have the IT capacity in place by breakfast, the sales force ready by lunch, and the distribution center, HR and payroll functions up and running by dinner.

This newly enabled agility will transform business in five key areas.

Agile IT

Think of the cloud model in four levels moving up the scale of complexity and impact. At the first level is raw IT power—servers and storage that a company pays for “by the drink,” as it were, when capacity is needed or to supplement conventional systems when demand for computing exceeds supply.

The second level of the cloud model takes IT service delivery up a notch in complexity—from servers to a platform or complete computing infrastructure, including middleware and database, as well as services such as testing.

This hardware and IT services capacity can be summoned quickly

The ability to have capacity available almost instantaneously is a compelling value proposition of the cloud model.

when needed, adjusted readily either up or down, and then dialed back until it's needed again. Compare that flexibility with the model most organizations use today for IT services. A company signs, say, a five-year contract for infrastructure support with an outsourcer or other provider. Once the ink is dry on the contract, that cash is locked in for the specified period.

Saving time, money

With a cloud model, by contrast, IT services become an operating expense rather than a capital one, and allocated on an annual, quarterly or even monthly basis. The cycle times for resource allocation can be dramatically increased, shaving weeks off an organization's IT budget and approval process. That can, in turn, be translated into the potential for saving millions of dollars in opportunity costs.

Being able to shift direction faster in support of new strategies and opportunities is, however, an even more significant benefit. When the needs of the enterprise change, a company isn't locked into irrelevant IT support or saddled with obsolete infrastructure. This kind of technology elasticity and scalability is fundamental to agility.

Increasing numbers of companies now have their heads in the cloud. Global organizations such as Citigroup and Starbucks Corp. are using cloud capabilities to analyze data, provide applications to employees and run special projects. Media giant Disney is reported to be working on a cloud-like service that would enable file-based content (movies, TV shows) to be delivered dynamically in multiple formats (iPod, Blackberry, laptop, mobile phone) from remote servers and storage locations.

The primary benefits of agile IT are lower cost and faster access

to variable computing resources. Pharmaceuticals giant Eli Lilly and Co., for example, is using cloud computing to direct IT analytics power at the right place at the right time. Under increasing pressure to cut fixed IT costs without compromising IT service levels, Lilly began working with an application cloud company to provide computing capabilities to its global network of scientists.

During one drug development process, Lilly effectively paid \$89 to its cloud provider to analyze the relevant data—a task that, if performed internally, would have required the purchase of 25 servers.

When you add up savings from eliminating the cost of servers, software licenses, maintenance fees, data center space, electricity and IT labor—and include the benefits of replacing a large, upfront capital expense with a low, pay-for-use operating expense—the financial appeal of cloud computing is obvious.

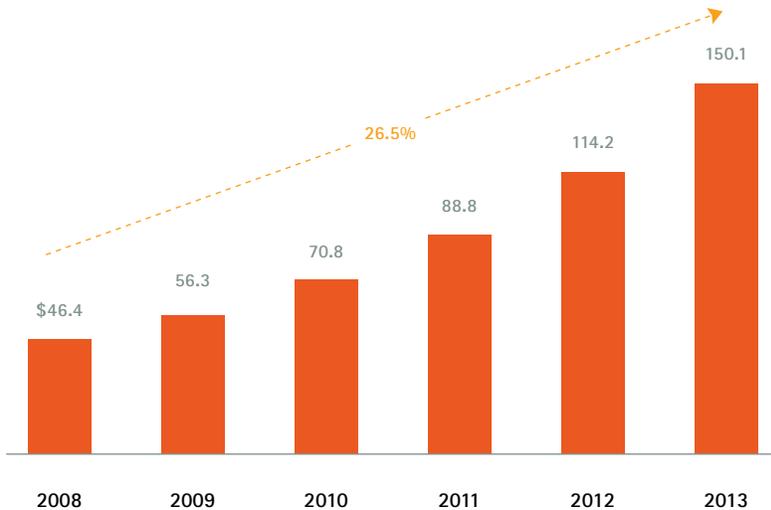
The ability to have capacity available almost instantaneously is also a compelling value proposition of the cloud model. Lilly now can have the servers it needs to run complex drug data analysis up and running in three minutes—compared with the seven or eight weeks it would take to deploy similar capabilities internally.

Supporting the variability of computing needs is another important benefit of cloud computing. In the media and entertainment industry, for example, companies must manipulate and process media files hundreds of gigabytes in size. The amount of computing power needed to process and distribute those files is variable, characterized by sporadic spikes of activity followed by periods of much lower volume.

Cloud cover

Cloud services, according to Gartner analysts, were estimated to be worth \$46 billion in 2008—and may grow to a whopping \$150 billion by 2013, a compound annual growth rate of more than 26 percent.

Cloud services, worldwide, 2008–2013 (billions of dollars)



Source: Gartner Group, "Sizing the Cloud; Understanding the Opportunities in Cloud Services," by Ben Pring

Traditionally, the computing infrastructure has had to be sized to support those peaks—a significant cost drain. With a cloud model, however, massive digital media files can be processed on a pay-as-you-go basis from remote locations using a global network. That enables companies to better manage hardware costs, process orders on a more timely basis and support deal making more effectively.

Media giant Warner Bros., for example, recently completed a proof of concept demonstrating that the major cloud providers could help it handle peak processing more efficiently. The project confirmed that the use of cloud resources could lower unit costs substantially compared with providing the same services in-house.

Agile workplace

Agile IT is also transforming the way business is done by making it easier for people to use the right computing or communications device to access the information they need, when they need it, and to collaborate more effectively with others both inside and outside the organization.

The traditional way companies have thought about linking workers with information has generally been device specific. People used laptops or desktop PCs to access enterprise information, phones to communicate by voice and so forth. Today, smartphones and PDAs are becoming much

more common ways for connecting with transactional business services, and that is bringing another type of agility to the organization.

Mobile applications available at “app stores” are revolutionizing how consumers use their mobile devices, and we can expect similar developments at the enterprise level. Interoperability and integration are concerns, but mobile operators are working proactively to solve those problems. At the most recent GSMA Mobile World Congress in early

2010, 15 of the world’s largest mobile operators announced an alliance to launch an open international applications platform. This will enable developers to create apps across multiple devices and networks.

Once this challenge is met, CIOs will be able to think about an entirely different IT model: provisioning services by linking multiple providers and applications in a reconfigurable, end-to-end manner to meet the ongoing needs of workers and the entire business.

Agile processes

The cloud model becomes even more compelling as one moves from hardware to software to processes and functions. In this third area affected by the cloud model, we find providers offering software or services that enable an entire function or workforce. Often called “software as a service,” this aspect of the cloud model begins to point to more radical changes in how businesses operate.

Consider, after all, both the benefits and the costs of the workforce and capability overhead that comes with any specialized function. It is more true than ever before that differentiated workforce capabilities are a key factor in driving high performance. At the same time, there are commodity aspects to almost any standard business function that enable a cloud provider to offer that service on a pay-as-you-go basis.

Salesforce.com offers customer relationship management capabilities as a cloud service. A client using this pay-as-you-go capability can create a much more nimble sales function—financially, operationally and commercially. Companies can move to a variable cost base for the sales

function, rapidly implement applications to support the sales force and evolve the sales applications more easily as business requirements change.

Stable and sustainable

The value to the company of this kind of agile operating infrastructure is that executives can make sourcing decisions in a rhythm that is more attuned to business cycles, rather than decisions that will result in a fixed condition over a period of many years.

The use of a cloud model can also deliver a more stable and sustainable business function. Say your company is having difficulty managing fluctuating demand in its online shopping system—spikes in demand, for example, fueled by marketing promotion, that can temporarily crash your website. To provide a more stable online sales capability, your company can leverage a cloud provider, whose large server farm could reduce downtime to near zero, assuring that temporary increases in demand could be met in real time.

This kind of capability begins to take a company into new territories

of value. One IT services and solutions provider, for example, used Salesforce.com's approach to improve sales effectiveness and efficiency across five global regions. Creating a global reporting standard for customer relationship management helped the company increase the value of its sales pipeline by 172 percent.

The virtualization of IT capabilities is more than a fad. A recent survey from the International Association of Outsourcing Professionals found that almost half the executives surveyed (47 percent) are making initial forays into software as a service, and 43 percent are experimenting with cloud computing.

To be sure, many challenges lie ahead, especially the issue of

providing assurance to companies and governments that their data on the cloud can be secure, and that environments can be quickly restored in the event of an outage. The patchwork quilt of information and communications technology regulations across borders must also be better understood as it relates to cloud models.

There are organizational obstacles, as well—the existence of legacy IT systems and data that must be migrated to a radically different environment, for example. Managing IT and organizational change, and enabling the workforce with training and tools, are other factors to consider, so experienced integrators are likely to be as important as ever.

Agile business

But it is at the enterprise level where the use of the cloud model truly gets interesting. Here we find an enterprise operating platform that takes the app store approach to configuring IT capability and applies it to the business as a whole.

In this model, chief executives not only manage their organizations; they help design and redesign them too. They are managing, in fact, a virtual enterprise—an ecosystem of cloud providers, IT and business process outsourcers, and a host of other parties, both internal and external.

We are some years away from this kind of enterprise operating model on a large scale. But it does not require too great a leap of faith to envision the convergence of a number of trends in outsourcing and cloud-based provisioning of services and then to plot what the future might hold.

The harbingers are already here. Consider “bundled outsourcing.” By having a single provider responsible for several related functions—human resources, finance, procurement, learning and so on—an organization gets the equivalent of the interoperability of technologies and processes at the enterprise level. That is, a single outsourcing provider can optimize end-to-end processes across organizational silos and rapidly configure modular, industrialized business services for a specific client need, then take those processes and services apart and reconfigure them for a different set of needs.

This was the approach used by Thomas Cook UK and Ireland, the international leisure travel group. In association with Accenture, the company created a single service center to manage multiple processes—IT, finance, human resources and payroll—across the global enterprise. Bundling the provision

of back-office services brought a number of advantages, including the ability to align and reconfigure business functions with changing organizational needs.

Just as speed is a major benefit of the cloud model at the hardware and infrastructure level, so is it a benefit at the level of business design. Thomas Cook discovered this in 2007, when the company merged with the UK-based My-Travel Group—a strategy designed to create a more flexible and cost-competitive travel company.

By having multiple back-office functions managed by a single

provider, Thomas Cook was able to complete the integration of the two companies' systems and HR/finance functions in record time.

The integration of capabilities and services will be one of the greatest challenges companies face with this new cloud model of design and management. As noted, technology and platform providers are meeting the challenge of agile IT by seeking to open up the application programming interfaces (APIs) between devices and applications. What an open business process interface, or BPI, means and how to achieve it will be one of the most interesting questions of the next decade.

For further reading

"Industrialize and innovate," *Outlook*, February 2010

"A new value proposition," *Outlook*, October 2009

Agile innovation

Every day, we see more and more examples of the ability of a collaborative technology environment to encourage innovation. In the course of just a couple of years, Apple's App Store, for example, went from offering 500 applications to more than 150,000. By making it possible for almost any developer to create applications, Apple enabled a level of innovation and productivity it could not have achieved itself.

At the level of business design in the cloud, we believe similarly unprecedented levels of innovation will occur. One of Accenture's outsourcing and consulting clients, for example, has proposed a pilot to consider how continuous innovation can occur in an operating arrangement in which the company is interacting with, and integrating, multiple providers across a set of common processes and functions.

Such a model of innovation will involve, fittingly, a combination of technology-driven analytics—made possible by cloud computing—and insights and experience made possible by the deep knowledge of a company that is accumulated day by day by an outsourcing provider. This will be innovation not driven by a special "project" but something achieved in real time, all the time, and matched more effectively to a company's business cycle.

The cloud model represents another stage in the relentless disaggregation of the business—breaking up the organization and its functions into logical components, keeping in-house those that are core and letting someone else run everything else. This model requires new kinds of management styles, new ways of managing people and new ways of valuing the enterprise itself. Certainly these are significant challenges.

But in a world where responsiveness and agility increasingly mark the difference between high performers and also-rans, agile IT and agile business will continue to be a distinctive feature of marketplace success..

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