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CFO Insights
Is the cloud within your reach?

Technology decision-makers, notably CFOs and CIOs, are facing the reality that their organization's computing technology and data will likely be "in the cloud." In fact, with the cloud market expected to grow from $40.7 billion in 2011 to $241 billion in 2020,[1] businesses will likely soon grapple with the decision of what to move to cloud, when to move it, and how to transition from an on-premises computing technology environment to a cloud computing technology environment.

The decision on cloud computing is broader than the information technology department and requires a productive working relationship between the CIO and the CFO. With the CFO driving decisions through the lens of the Four Faces[2]—strategist, catalyst, steward, and operator—he or she can embrace cloud to catalyze behaviors across the organization and to execute strategic and financial objectives, while diligently creating a risk intelligent culture. Furthermore, the CIO and the technology department—which reports directly to the CFO in 42% of organizations surveyed[3]—can increase their visibility as valued service providers to the broader organization.

While there is a clear difference among the CFOs and CIOs interviewed for this article[4]—some technology companies, for example, nearly require a business case *not* to use cloud computing, while other companies continue to struggle with how cloud can help their organizations— there is recognition of the need for greater understanding. And in the issue of *CFO Insights*, we examine how to test out cloud computing in your organization as well as how to find your cloud comfort level.

Separating theory from reality

The concept behind cloud computing has existed for a long time. The basic idea is that the business outsources the day-to-day management of a resource and only buys what it needs, the quantity it needs, and when it needs that resource, similar to buying some utilities, such as power and water. Also, and in contrast to on-premises technology, the cloud computing resource is delivered over the Internet.

Cloud resources generally fall into one of four categories: public clouds, private clouds, community clouds, and hybrid clouds. Moreover, there are three basic uses (or delivery models): SaaS, Platform as a Service (PaaS), and Infrastructure as a Service (IaaS). Most individuals think of SaaS when they talk about cloud computing, which is the provisioning of software applications on demand. The most common examples are email, file storage and backup, and business applications, such as customer relationship management and financial applications.

There are other uses, however. For example, PaaS is often used by organizations for the development of new software applications without the need to acquire and install the hardware and operating system. IaaS is an option used to obtain hardware resources without the need to actually purchase those resources, and with the benefit of cancelling the use of those resources when they are no longer needed.

As with any initiative with notable uncertainty, however, most organizations will pilot the use of cloud computing with either low-risk projects, or projects in which the on-premises computing resources would not normally be available. In reality, though, organizations often discover that a number of business units are using unapproved cloud computing resources: business unit managers and employees opportunistically identify technology to meet their business needs and contribute to their ability to complete tasks. While many organizations do not penalize business units much, if any, for using unapproved cloud technology, the practice does raise several technology governance issues:

- What would happen in your organization with business units purchasing their own cloud computing technology to satisfy business needs?
- Would you allow the creation of an "ends justifies the means" culture?
- Have you examined IT governance as it relates to cloud computing?
- Have you examined the risk exposure related to different tasks and incorporated this into IT governance?

How do you know when cloud is right for you?

When evaluating an approved use of the cloud, the relative costs, benefits, and risks should be examined. The benefit cited most often in interviews with CIOs and CFOs is the agility that the cloud provides; businesses are not saddled with technology infrastructure and can react more quickly to change technology. Also, cloud computing is an operating expense, paid for as it is consumed, and does not require a significant capital investment in computing resources. There is a little concern for over/under buying, as there is dynamic provisioning of the computing resource.

There is also the potential for the reduction in IT support staff needed as the vendor of the SaaS cloud computing service maintains the hardware and software environments, and there is no need to "patch" the software locally when security or other performance updates are released. However, organizations will likely find that some type of local help desk support is valuable.

Another benefit companies cite is the ability to quickly respond to opportunities or competitive threats through the use of cloud computing. Still, interviewed CFOs and CIOs raised the following security concerns as they relate to SaaS:

- How do I know that my data is safe?
- How do I know where my data is stored?
- Is my data backed up? Will my data be able to be audited?
- What guarantees should the cloud vendor provide?

Another concern relates to vendor dependency and potential "end game" scenarios. For example, what does an organization do when and if it needs to move from one cloud technology provider to a different one? Other concerns are related to how cloud computing fits into the entire computing portfolio for the organization.

On a positive note, CFOs and CIOs mentioned that cloud vendors are likely able to provide better security and guarantee higher levels of performance. This is the line of business for that vendor and as such, they hire employees who are experts in security and in their software. Those employees do not need to know how to operate multiple systems and software applications that are typically found in corporate environments. The vendor also has an economic stake in providing high-quality, secure, reliable services; if that cloud service fails, that vendor will quickly lose clients and revenue.

Finding your cloud comfort level

The basic message for companies is to become comfortable with cloud computing. Determine what type of applications are candidates for the cloud and which will not be moved until the distant future. Initially, choose applications that have low risk associated with them, or choose those that have a business need that cannot be fulfilled using traditional computing services. One critical aspect is to ensure protection against various types of misfortunes, and to have contract service level and security agreements with the vendor and a contract for end-game scenarios. While these contractual agreements will not prevent problems, they may offer some type of recourse if problems do occur.

By assessing on-premises applications along three dimensions—customization required, process complexity, and application risk—decision-makers can perform a preliminary ordering of which applications to move to a cloud environment, and when.

- **Customization required:** The extent that software or technology customization is required to align with processes or to satisfy business requirements.
- **Process complexity:** The degree that organizational processes are inter-related with technology amplifies change management implications to moving to a different technology platform.
- **Application risk:** The consequences of "what could go wrong" and the sensitivity of the data that resides in the application. Risk aversion among decision-makers also plays a role with application risk.

The less prevalent these three dimensions are as they relate to technology applications, the earlier in the transition sequence a given application is for moving to a cloud environment.

CIOs' and CFOs' alignment through the cloud decision can help them decide where cloud is appropriate for their organization. The approach to determining whether cloud is appropriate involves assessing technology in the context of business purpose and risks. One recommendation is to start small and sample technologies with less risk and related influences on the business. Following the pilot approach and with greater comfort in the cloud, continue to shift the computing environment to cloud by using an appropriate assessment-based road map. For many organizations, technology does not keep up with the rate of change in business, which often results in an "ends justifies the means" culture. But with CFOs' and CIOs' evaluation of governance and how the availability of cloud technology can impact their organization, they can at least help their companies drive with the fog lights on.

Endnotes

[1] Forrester Research, April 2011, "Sizing the Cloud" by Stefan Ried, PhD, Holger Kisker, PhD.

[2] Deloitte CFO Center – Four Faces of the CFO.

[3] CFO magazine, December 2011, "CFOs and CIOs: Can We Talk?" by David Rosenbaum.

[4] Interviews conducted as part of Deloitte's CFO Program Fellows & Scholars initiative which connects Deloitte practitioners ("Fellows") and professors from universities ("Scholars") to develop CFO relevant insights and research.

—Excerpted from the article, *CFOs and CIOs: How do you know when to reach for the clouds?* by Severin Grabski, associate professor and senior faculty advisor for Instructional Technology, Michigan State University; Daniel Root, manager, Deloitte Consulting LLP; and Ajit Kambil, global research director, CFO Program, Deloitte LLP.

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