



Cloud Computing: A CFO's Perspective



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There is no question that Information Technology (IT) and business are inextricably linked. Ever since the internet revolutionized the business world in the 90's, companies around the world have turned to technology to increase business efficiency while boosting their competitive edge. The link between business and IT has created unprecedented growth and opportunity across all industries, making IT a key discussion topic in the boardroom of most companies. Not surprisingly, Information Technology is now at the top of the CFOs agenda—according to Gartner¹, 26 percent of IT investments require the direct authorization of the CFO and 42 percent of IT organizations now report to the CFO.

Cloud computing, like the emergence of the internet, has the potential to radically change the IT and business landscape. And while the CIO community has become well versed in the concept over the past few years, cloud computing is still an area that mystifies the business community in general and the CFO in particular. The promised financial and business benefits of cloud computing are great, but CFOs must be well informed in order to spot risks and make the best decisions for the long-term business and financial health of their organizations.

The Business Benefits of Cloud Computing

Cloud computing offers enterprises and governments the freedom to manage their business, not their IT assets. In the theoretical world of cloud computing, businesses would no longer have to make costly capital and operational investments in building and maintaining their own back-end technology infrastructure. Instead, they would have instant access to the best, most innovative business technology solutions that would be paid for by use, just like a utility.

A well executed cloud computing strategy can yield significant and long-lasting business benefits, including:

- **Moving Capex to Opex:** the most obvious, and most frequently cited, financial benefit of cloud computing is the freedom it allows to shift capital expenses to operating expenses. The transformation to metered rather than upfront costs has the potential to offer increased budget flexibility through management of more variable costs, and a much clearer mechanism for cost-allocations across the business due to usage-based reporting from cloud suppliers. This flexibility and accountability can be particularly useful through periods of economic uncertainty or reduced profitability.
- **Speed and flexibility:** traditional IT models come with a significant level of capital investment that most CFOs accept as a necessity for doing business in the information age. However, maintaining a large and fixed cost base does not bring with it the speed or agility that is needed in today's business world. Sudden or rapid changes in demand for capacity and usage can be impossible to fulfill. This lack of agility can mean the difference between competitive differentiation, quality service or accurate business decision-making and can have major impact on the fortunes of an enterprise. Not only do cloud solutions scale as needed by the business, they can also be deployed rapidly. The risk of project failure can also be significantly reduced along with the costs and frustrations that come with it.

- **Instant access to innovation:** Technology innovation happens daily. No sooner has the latest, greatest solution been deployed than a newer, better solution emerges. It is not practical or fiscally responsible to constantly acquire and deploy the newest and "best" solution. The tipping point between extracting value from a technology investment and holding onto it too long is a fine one and all too often CIOs live with the consequences of mistaken judgments that leave them funding massive maintenance costs associated with legacy systems. Cloud offers the potential to upgrade business and functional applications rapidly, with no capital outlay and no complex deployment cycles.
- **Better for the environment:** according to Forrester Research, "the cost of energy, despite green investments, will crush today's operating models."² The high costs and environmental damage associated with powering large IT data centers is well documented. Taken to its logical conclusion, cloud computing would remove the need for individual companies to operate their own data centers. Vendors would operate massively scaled centers made efficient through optimal asset-utilization and operating from locations where low-competition for energy supplies enables better cost management and minimal impact to local population needs. In the shorter term, companies can immediately improve carbon footprint and energy consumption by replacing old technology with cloud solutions.

Avoiding Cloud Computing Pitfalls

While the potential business and financial benefits of cloud computing are great, CFOs must also understand the implications in order to better inform decision making.

Understanding the implications of shifting from Capex to Opex

As discussed above, cloud computing can significantly reduce a company's Capex thus creating a more agile business environment. However, that reduction in Capex comes with an increase in Opex which may come with challenges of its own. In migrating to cloud computing, IT will drive significant increases in the total operating expenses reported by a business. A spike in operating expenses, even when accompanied by a reduction in capital expense, can cause short- or even long term impacts.

The nature of Cloud means that these costs are likely to vary over each reporting period and may increase in steps (as new applications move to the cloud) and result in sudden spikes in cost as a result of usage increases. Over time, it will be possible to model and project where these steps, peaks and troughs will occur. In the interim, CFOs will want to consider the implications of large increases in operating expenses and how to manage the less predictable implications for cash flow.

In addition, to fund cloud computing initiatives, companies will require more working capital, either through cash reserves or from short-term borrowing. CFOs will want to understand, project and monitor these changes and ensure key stakeholder and shareholder communities interpret the changes in the right way.

Rethinking TCO and ROI

The criteria associated with evaluating the total cost of ownership (TCO) associated with a cloud solution, and its eventual return on investment (ROI) need to be thought about differently. Although it's tempting to believe that a subscription or usage-based fee is all inclusive, today's reality is that it is almost certainly not the full extent of the investment. Two factors in particular will complicate the TCO analysis:

- **Legacy systems:** most large companies are heavily invested in their existing IT infrastructure which has been built up over a period of many years. Applications share many resources including data, storage, networks and systems. Consequently, moving an application to a Cloud-based solution will not necessarily eliminate the costs associated with running that application internally. Migration costs associated with training and stimulating end-users to move to new applications also need to be factored in along with costs (and risks) that will be incurred as old equipment and systems are disposed of in a secure and environmentally compliant way.
- **Public, Private, Virtual-Private:** there are many varieties of Cloud service operating in the market today. Some, known as "Public" Cloud, embrace a shared infrastructure, enabling many companies to leverage the applications and technology simultaneously with the benefit of significantly reduced operating costs. However, for most large companies, the risks associated with shared platforms and the potential data breaches mean they are most likely to move to a form of "private" cloud, where the applications and technology being utilized are on a dedicated, restricted and private technology platform that can only be accessed by their company. In this model, the cost dynamics change significantly and may include many of the costs that would be associated with more traditional IT deployments.

Since costs and TCO analysis can vary depending upon the cloud strategy, it is important for CFOs and CIOs to be in lock-step as the enterprise-wide move to cloud gets underway. The implications both for IT and finance are such that a common understanding of the strategy and how and when it will be deployed will significantly benefit their enterprise. Since cloud is a disruptive technology with the potential to impact beyond the balance sheet and the datacenter, it makes sense for CFOs to embark on this collaborative planning approach immediately.

The Threat and Implications of "Shadow IT"

Until recently, the role of the CIO and the IT department was to control the procurement, implementation, operation and maintenance of the technologies needed to run the business. This centralized control ensured a comprehensive and informed assessment of the total costs associated with any IT project, and appropriate monitoring and evaluation of the return on investment.

Today, the emergence of cloud solutions has made technology much more accessible to the business user. Applications and solutions that previously required IT specialists to build and operate are now available to functional business leaders to buy "off-the-shelf" and can be accessed via the internet from any authorized PC or laptop. For functional leaders of a business, cloud solutions offer a quick

and seemingly easy way around the delays, complexity and cost associated with securing agreement with corporate IT to build or provide a solution. Forrester estimates that spending on these services will increase from \$28 billion in 2010 to \$258 billion in a decade and warn that companies should "get ready for a lot more shadow IT."²

For the CFO, this represents a challenge. As empowering as it may appear for functional business leaders to "procure" their own IT solutions, large businesses and CFOs will want to work with their CIO to ensure that decision making and provisioning models are put in place to fully assess investment choices and to ensure optimal realization of their value.

This new reality will inevitably lead to an evolution in the role of the IT department that will require even tighter alignment between the CIO and the CFO.

Governance and Risk Management

The operational and business burden associated with regulatory compliance, essential corporate governance and risk management, are for most large multi-national businesses an area of growing complexity, grave concern and considerable focus. For CFOs, this is arguably the single most important area of responsibility.

The disruptive nature of Cloud, its ability to change the fundamental operating rules for IT and for business, means that there is inevitably the potential for significant impact on the areas of governance, compliance and risk.

Perceived risks differ depending on different delivery models, deployment models, and other variables associated with the choice of cloud technology, the type of business function or application being supplied via cloud and the vendor company itself. But the prominent concerns today revolve around the risks associated with third party applications. Outsourcing information systems inevitably requires sharing data with a third party firm. In some scenarios, this data is stored in data centers located in different countries or regions around the world.

As cloud solutions are selected and deployed by an enterprise, CFOs may need to establish new processes and policies to ensure that a cloud service provider meets all industry standards and security requirements. In some cases, an audit may be required to understand if the data associated with a cloud solution resides with the service provider or if it has been further outsourced or subcontracted to third-parties.

Closely linked to the issue of compliance, is the issue of data security. For many CFOs and CIOs this is the primary concern associated with moving to a cloud based solution provided by a third party. Many cloud vendors, of course, understand this concern, and operate better security solutions to protect information from unauthorized access. In addition, different types of cloud solutions—public, private and hybrid—offer different levels of security protection. And arguably, such cloud vendors may also be motivated to invest in technical and security specialist staff that a normal business IT department would not.

The assessment of vendor reliability and quality is important in determining which type of business applications can and should be moved to the cloud along with a determination of what type of cloud solution to leverage. Cloud solutions are available for a wide range of business functions and applications. Thoughtfully determining which business applications are ready for “public” cloud solutions (operated from a platform used by multiple businesses) and those that require more “private” or dedicated operation is an important area for CFO and CIO collaboration.

An Evolutionary Journey

For most large organizations, the move from a traditional IT operation to cloud-based business solutions will be the product of evolution rather than revolution. In order to be successful, this evolutionary journey to the cloud requires a proactive and thoughtful approach that combines a technology roadmap with a financial roadmap. Milestones on this roadmap can represent significant opportunities to improve IT and business performance.

More and more businesses are finding that the journey to cloud based operations includes operating what is known as “private” cloud environments—solutions that leverage cloud technologies but operate behind a company’s firewall. There is considerable benefit in operating these private cloud environments including the opportunity to learn and more fully understand operational implications. Similarly, there are real benefits to be had in selectively using “public” cloud services for functions or services that represent low-risk to the business.

The ongoing journey from traditional IT applications to cloud will invariably involve creating a hybrid environment comprised of varying degrees of traditional IT, private cloud and some public cloud solutions. The key to success will be building in sufficient flexibility to ensure that decisions made early in the journey can be readily adapted to meet future needs. This only reinforces the need for CFOs and CIOs to work collaboratively on developing a strategic and financial roadmap for making the transition to cloud technology. The better the strategic planning up-front, the more successful the transition will be in maximizing the benefits and minimizing the risks of cloud.

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¹ Gartner “The CFO’s Role in Technology Investments: 2011 FEI Study May 20, 2011

² Forrester Research, Inc.: “**BT 2020: IT’s Future In The Empowered Era**”, January 7, 2011

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4AA3-8450ENA, August 2012

