



Cloud Computing – Impact on Business & Outsourcing

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Introduction

Necessity is the mother of invention and innovation. The current economic downturn and pressures on IT budgets has thrown up a completely new business model in the form of Cloud Computing. However, Cloud computing means more than cost saving and scalability. Cloud computing allows firms to minimize use of internal IT systems and access IT services over from remote hosted locations via the internet. This provides a way for firms to increase capacity or add a mix of capabilities on demand, without investing in new infrastructure, training, or licenses.

The need to remain agile and competitive in the difficult economy, has forced firms to evaluate cloud as a solution. It is expected that cloud computing will expand to serving local needs via mobile devices even as smaller enterprises adopt the current internet-connectivity, shared-resources model. Amazon, Google and Microsoft already offer central-processing-unit cycles, data and document storage, and customer-relationship-management services with the benefit of cost-savings and scalability. The general consensus emerging is that concerns over security and reduced hardware demand are overdone. Cloud computing with its pay-per-use service is allowing organization convert capital expenditures (CAPEX) to operating expenses (OPEX). The new business model opens the possibility of fixed costs are being converted to variable costs, driving efficiencies in the organization. However, it is yet to be ascertained if such value drivers are a reality or still a myth.

Cloud Computing Defined

Amid the euphoria about a new computing model, cloud computing as a concept continues to be defined and redefined. Latest definitions of cloud computing includes within its fold all or some of the following:

Grid computing Sharing of multiple hardware resources (emphasizes the interconnections between hardware that enable cloud computing).

Utility computing Pay-per-use models, much like electricity (a pricing mechanism that forms part of a larger definition of cloud computing).

Software as a service Leasing software versus previous licensing models (e.g., Salesforce.com, Google Apps, Netsuite).

Platform as a service An environment to build, test and run applications (e.g., Google's App Engine).

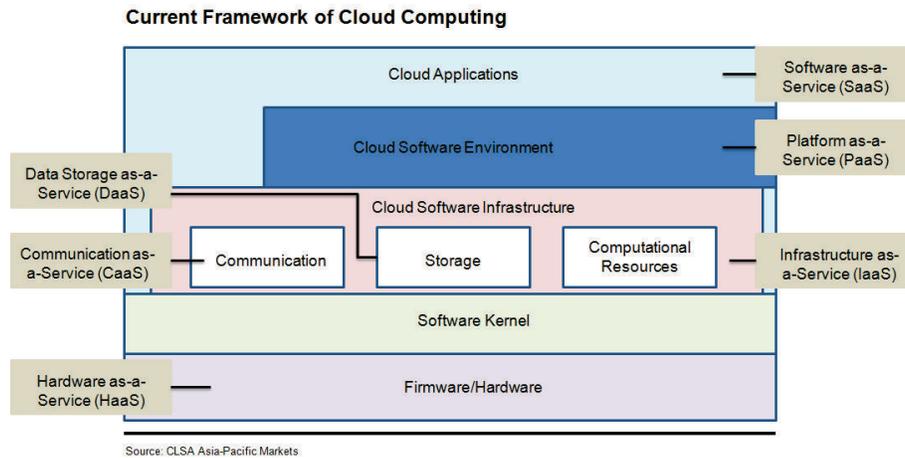
Hardware as a service Access to CPU power and storage on a pay-peruse basis, over the internet (e.g., IBM's Blue Cloud, Amazon's EC2, and S3).

Is Cloud Computing The Next Generation Of Computing Architecture?

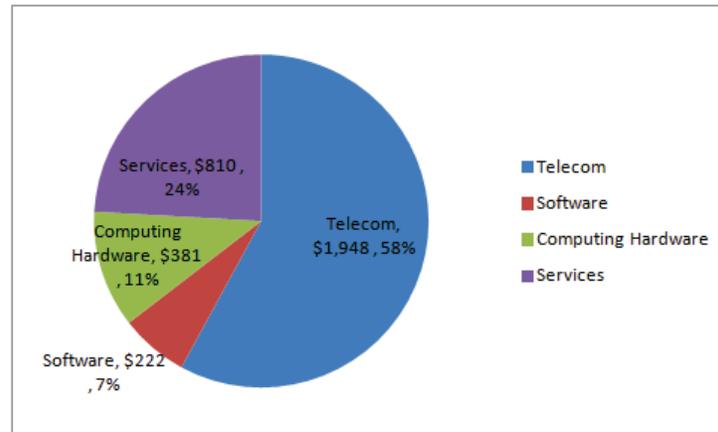
Proponents of cloud computing now call it the third era of computing infrastructure, after centralizes mainframes till the 1980s to the decentralized client-server architecture since the 1990s. Ironically, the clock seems to have turned a full circle on some fronts. The cloud-computing model is a step back into centralizing of computing and storage resources within the cloud, enabled, most importantly, by significantly upgraded internet backbone worldwide.

The benefits of cloud computing architecture conversion of capital expenditures to operating costs, ability to pay per use, and reduced need for prior provisioning. Reduced capital commitments can help smaller

companies scale hardware only when needed. Pay per use releases excess computing and storage capacity into the cloud until needed, and essentially converts these to utilities. Ease of provisioning reduces over- and under-provisioning risks within the hardware-planning process.



Impact Of Cloud Computing On Global IT Spending



Software The segment will be a potential net-loser as the traditional model of software license, implementation and support will be broken in this new computing model.

Computing hardware The current utilization of most data centers are below 20%. The cloud model will leverage a large part of this unutilized capacity. As such, the race for more computing power and storage (MIPs and GIGs) shifts away from building more capacity to better access to the cloud’s installed capacity. This trend is expected to slow down expenditure on hardware.

Telecom As networks and connectivity will take on more powerful roles, this sector is likely to be a beneficiary.

Services A mixed future, Service vendors will need to shift their focus towards developing applications that work in and with clouds. Proprietary software/legacy software maintenance models will come under threat. Complex installations will yield way to innovative new business models that will grow around the cloud and will demand application support

Impact of Cloud Computing on Outsourcing

A recent survey revealed that over 80% of the 100+ IT managers/ decision makers interviewed, are considering cloud computing for their business needs and over 50% have begun adopting it in a small manner. Although most IT Managers were not convinced of using the cloud for their core IT projects, they have continued to proceed with cloud computing solutions for some of the non-core applications. The approach is very similar to the one adopted in the early days of Global Sourcing, when organizations were testing out efficacy of the sourcing model with non-core applications.

Cloud computing will open a very large market in the Small and Medium Business (SMB) segment which has till now been hesitant to embrace outsourcing. Smaller firms will see the benefit from cloud as it would provide them a lever to manage their IT investments and become competitive.

Though there is room for greater standardization in many areas of business technology. But blindly adopting standardization across enterprise wide application does not result in competitive advantage for an organization. Large firms having a suite of highly customized IT products and unique applications already aligned to business needs, will pose a challenge to IT departments in their bid to adopt cloud computing. Also large firms are likely to demonstrate less risk appetite while adopting the new computing model. As such, it is likely to take some time before Cloud Computing becomes the preferred model in large organizations.

For outsourcing service providers, wanting for long to move away from resource linked linear growth model, cloud computing will become a preferred business paradigm. It will enable them achieve non-linear growth. Pricing models will also move from being an input based model to an outcome based model. Offering cloud services within their portfolio will enable providers expand their client base by reaching out to SMB segment. Even though new applications may not get developed frequently, the need to customize will still remain. Consulting around integrating enterprise IT with private and public clouds to create a hybrid environment, developing applications to migrate to cloud softwares and the related testing, certification, and governance for risk and compliance would emerge as key service lines.

We believe that initially firms will begin to adopt the new model with large, stable and established outsourcing companies. Outsourcing firms such as IBM, HP and Accenture will only stand to benefit from businesses' need for services to help clients transition their IT systems into the cloud. Large enterprises will focus on seeking consultancy help in creating private cloud for their proprietary core applications before seeking solutions using the public cloud model.

For most enterprises capacity planning or a data center refresh will be the right time to consider the merits of cloud computing. They will seek help from a partner offering specialized cloud services, such as cloud consulting, cloud readiness assessment services, cloud migration services, and hybrid services, to build a diversified portfolio of delivery options.

Crystal Ball Gazing – Likely Trends

Most organizations will carefully weigh the pros & cons of the new computing architecture before taking a decision to move applications to the cloud.

Pros	Cons
<ol style="list-style-type: none"> 1. Lower costs through economies of scale - Converting CAPEX to OPEX 2. Leverage from Next Generation Architectures - Highly responsive to change and easy to upgrade 3. Scalability is high 4. Performance monitoring and management made easy - Reduced complexity of varied IT application management 5. Robust disaster recovery 	<ol style="list-style-type: none"> 1. Reliability issues 2. Lack of Control - Loss of Ownership, managed by a third party 3. Security of Enterprise data - Most applications lie outside the firewall, hence higher risk 4. Risk of getting 'locked - in' to vendors - High cost of migration

Cloud computing is about resources (hardware and applications) deployed and accessed remotely that were earlier uniquely owned. The internet depicts the first cloud, providing connectivity between systems. A pay-per-use model (utility computing), shared resources (grid computing), as well as software, hardware or platforms as a service form the second cloud. The third cloud, propagated by social networking, will augment the local identity, context and ability of users within their proximate spaces. Handsets will be its chief medium, connectivity the enabler.

Early adopters of the current cloud-computing concept will be small enterprises, which will have the option to scale without owning large-scale resources. Fortune 100 companies could easily morph into cloud providers rather than just users. There is a surplus of applications lying untapped for want of computing power, and this is where the action will begin as cloud computing takes root. Global corporations from any industry could just as well become providers to the cloud rather than just consumers, given their installed hardware base, analytical platforms and business intelligence.

Conclusion

- Clearly, the next 5 years will see a mix of traditional outsourcing with some experimentation on the cloud model. Cloud computing will make an impact, but will not replace traditional outsourcing
- Core legacy applications will continue to remain in-house and not move to the cloud model. High sunk costs on recoding will discourage the cloud model for core applications
- Pricing models of outsourced vendors will see high degree of innovation to compete with the 'pay-per-use' cloud model

- Providers will move up the value chain to offer end-to-end services including cloud computing. Assisting clients in creating private clouds could potentially be a litmus test before they adopt the public cloud model
- Buyers will find it easier to integrate the cloud approach with existing providers, thereby reducing risk and being cost effective
- Reduced regulatory concerns on data security and reliability will drive cloud computing to a success

About the author

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