



Operational Impact of Cloud Computing on Buyer and Service Provider Organizations

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Cloud computing has further reduced the constraints of doing business in this global economy. It has enabled flexibility, agility, mobility and ability to pay for IT services based on use. It has also changed the way IT Services has traditionally been demanded, consumed, accounted, priced and sold. Stakeholders from the buyer and provider side have to align their operations to reap the benefit of the new reality. This whitepaper attempts to shed light on the impact on the role of IT Delivery, Finance and Vendor Management from the buyer side and Sales and Solutioning from the Provider side, due to adoption of Cloud Computing.

Introduction

In a globalized world, businesses are demanding more agility, mobility, cost-effectiveness and on-demand usage from their IT solutions. Cloud computing which is addressing such demands is climbing up the priority charts. According to a recent study, CIOs will spend more than 30% of their IT budgets on cloud computing in the next five years. The adoption of cloud computing will change the way IT solutions are managed, financed, procured and sold. This whitepaper attempts to describe the impact of Cloud Computing adoption on the operational responsibilities of key stakeholders from buyer and IT service provider side. This impact is briefly introduced in the below table:

Stakeholder	Impact of Cloud Computing
<i>Buyer Organization</i>	
IT Service Delivery	Capacity based model to on-demand service provision
Finance & Accounting	Cap-Ex to Op-Ex
Vendor Management	A more thought out sourcing process and increased usage of transaction based pricing
<i>IT Service Provider</i>	
Solutioning	Bundling of hosting, service delivery and product development capabilities
Sales & Client Management	From relationship based to volume based

Table 1- Operational Impact of Cloud Computing

From a buyer’s perspective, business units will have more control of their IT expenditure and internal IT departments will become more capable, flexible and agile in offering their solutions. Accounting will take longer to complete as the CFO organization will spend more effort in tracking the computing utilization across shared resources. The vendor management will have to be more cautious as outsourcing of business processes on cloud will create a longer lock-in period with the service provider.

From a service provider’s perspective, the solutioning will have to bundle in facets of data hosting, product development and service delivery. Service providers will also have to change their sales and marketing approach as the cloud based solution will make revenue generation more volume based rather than relationship based.

The impact of Cloud Computing on Buyers

Flexibility in IT Service Delivery

Traditionally, the IT service capability in buyer organizations depends on a finite capacity model. In this model, computing and human resources are pre-allocated to fulfill a business requirement for a quarter. The allocation of resources takes place after continuous negotiations and discussions between the business units and IT delivery. IT delivery typically takes between two weeks to one month to either procure or hire resources for the coming quarter. This model proves to be rather inflexible during fluctuating or out-of-scope business demands. As a result, the load on IT delivery capability always lags or leads the business demand, thus making such an arrangement inefficient and inflexible.

This leads to IT delivery often prioritizing planned business requests and often neglecting ad-hoc but critical requests. However, with the advent of Cloud Computing, the IT delivery will now be able to deliver 'on-demand' and follow the business demand curve with more fidelity.

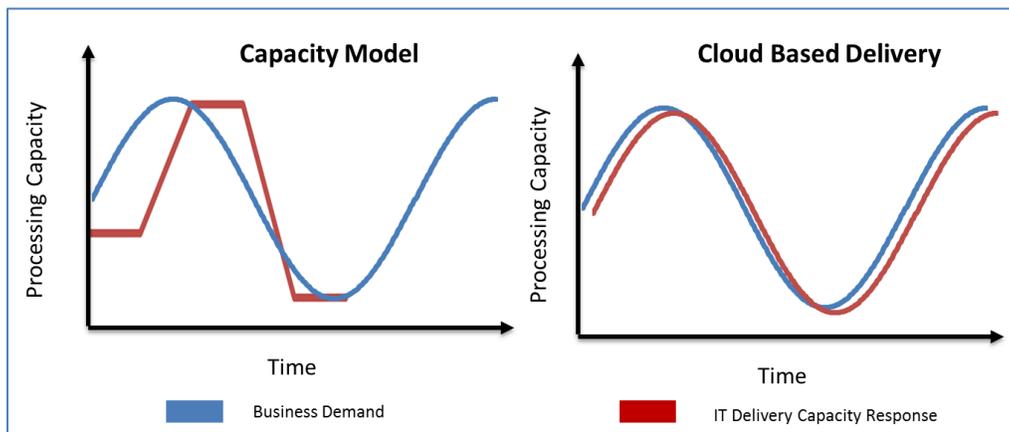


Figure 1 - Cloud provides flexibility and aligns with fluctuating business demands

It will also drastically improve its resource utilization by being able to scale up or scale down its computing resources without negatively impacting its efficiency.

Adoption of cloud computing will also change the way business units interact with IT delivery. Due to the self-service feature of cloud computing, business units will now only have to request for additional delivery rather than negotiate frequently with IT delivery. This will also reduce the demand backlog and conflict of prioritizing the demands from multiple business units. Standardization of IT service software functionalities will enable the CIO to speedily configure and package his services rather than follow the capacity based development for a new requirement or application. Adoption of cloud computing will also enable the CIO to bring innovative approaches to revenue generation by being able to use technology to creatively solve business problems or create market opportunities.

With cloud enabling dynamic capacity adjustments and reduced time to market, by compressing process time of 'concept to sales', CIOs will now be able to support product innovation faster in the organization.

Increased Accounting Responsibilities

Contrary to having capital apportioned to procurement of IT capacity, assets or computing resources, cloud computing will enable businesses to pay per use.

Adopting cloud will mean that the accounting practices will now become more Op-Ex intensive rather than Cap-Ex intensive which was a traditional practice for procurement of large legacy systems. Since the business units will now share the same CPU space, a CFO will have to track the utilization for each application and resource. He will not be able to simply divide the resourcing capacity by the number of users. Also, because the pricing will be transactional or based on utilization, the accounting system post cloud will also have to ensure that a tracking mechanism is developed to track utilization, cross referenced with each transaction. This increase in accounting time will result in increasing costs for the CFO to build new algorithms and scout for fresh financial talent.

The flexibility of cloud computing will make budgeting for IT more cumbersome. A significant portion of what used to be IT budgets for infrastructure, licensing and software will now be wrapped under one unified budget for the business units. This may lead erroneous accounting of the expenditure due to non-standardized way of tracking each IT component. To avoid this, the trends over the past few years will have to be studied to ensure that deviation of down time and peak time from the average usage is noted. The impact of economic cycle and various factors like political stability and business climate on IT usage should also be noted. This should give the CFO and the business units a fair idea of the utilization rate based on which a budget for the first year of cloud computing adoption can be decided. The budgeting and accounting mechanisms will mature as organizations get more accustomed to cloud computing.

High Vendor Switching Costs

Although adopting cloud service will help organizations gain significant operating cost reduction and enhanced agility, they should tread with caution. The selection of cloud services is not as easy as it may seem initially. It is not a mere change in the way buyer organizations will be charged. The decision to choose a service provider will be irrevocable and will create a vendor lock-in. Moving to cloud will primarily involve a transfer of ownership either of infrastructure, platform, software or all. This will mean the CIO will have to be comfortable with submitting control of their systems to a third party. Moreover, enterprises will have to be comfortable with another enterprise, not just another department managing their systems. This means the buyer organizations will need to be aware of different quality checks, different upgrade schedules, differing priorities and differing business goals of the service provider. A cloud buyer will thus have to ensure that their service provider selection becomes a key in their transformation to cloud services. An organization will have to choose a service provider with similar business values, business processes and strive towards operational excellence. This service provider will have to understand the enterprise's industry and respond to the changes and regulatory enforcements at

the same speed the enterprise themselves would. Decision making can also be delayed as these enterprises have their own protocols for action.

Due to the irreversibility of an enterprise's decision, choosing a cloud service provider or a cloud partner should be done thoughtfully. A CIO should be able to work with different department and process owners to ensure that the processes can be ranked for 'cloud-transferability'. They should share the fruits of success or failure with their service providers and have a strong risk mitigation and business continuity plan.

Contract management will be the most essential part of the cloud transformation journey that will ensure that the success and failures are quantified and designated parties are accountable for each consequence. The most cloud favorable contracts are currently SLA driven, charging the service providers for a part of their transaction for any slippages in their delivery of cloud services. Currently, more progressive buyers are charging their service providers per transaction depending on success or failure. This mode is different from the traditional mode of rewarding or penalizing depending on the deal value.

These issues along with lack of security, accountability and transfer of ownership will further delay adoption of cloud by the larger enterprises. Their adoption will follow the maturity curve of the cloud as a solution led by the mid-market buyers. Mid-market buyers will adopt cloud due to its low start-up costs and lesser number of mission critical processes.

For buyer organizations, the key factors in choosing a service provider will be:

- **Service Reliability** – The provider must have reliable cloud infrastructure supported by robust DR/BCP to ensure high level of service.
- **Customization** – The service and application must provide for easy customization for specific needs of customer. However, more customization will not make a cloud offering very viable as the real value of cloud lies in its ability to standardise and scale
- **Accounting & SLA** – Must have an easy to understand and transparent accounting and billing system which is also aligned with the SLAs agreed.
- **Mission Criticality** – Beside the company's willingness in moving mission critical applications to cloud, the service provider may not be able to fulfil the high expectations of the SLAs.
- **Stage of Growth** – Public Cloud could be the best option for the early stage of growth while on campus private clouds will be a better option as the company matures and stabilises.
- **Regulatory Environment** – Stringent compliance and regulatory focus may make it unviable for a service provider to deliver cloud services. Also regulations for sharing the data outside an organization will also have a critical role to play in deciding whether to go with on-campus private cloud or public cloud.
- **Broadband infrastructure** – Since Cloud Computing is accessed through the World Wide Web, the bandwidth of the network is very important to ensure consistency and constant availability of your connectivity the cloud application.

The impact of adopting Cloud Computing on buyer organization can be summarized as below

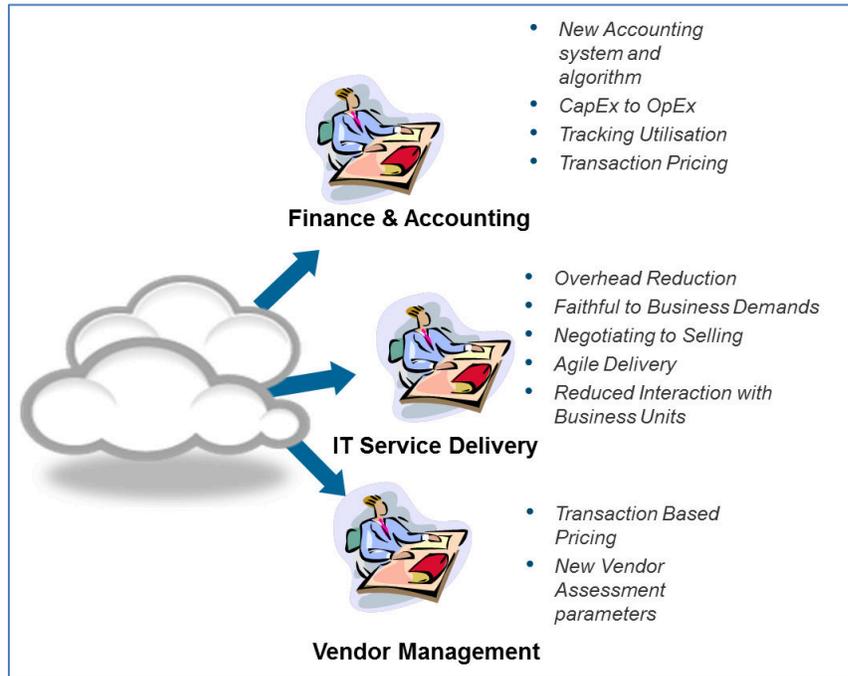


Figure 2 - Summary of impact on Cloud Buyers

Impact on IT Service Providers

Amalgamation of Hosting, Product Development & Service Delivery

Cloud computing is an amalgamation of hosting, product development and service delivery capability. Currently, the leading IT service providers have capabilities in hosting through their traditional infrastructure management services and service delivery through their long stint in delivering traditional IT services with consistent high level customer satisfaction ratings. However, to achieve competitiveness in cloud, an IT service provider can take three routes – acquisition, partnership or organically:

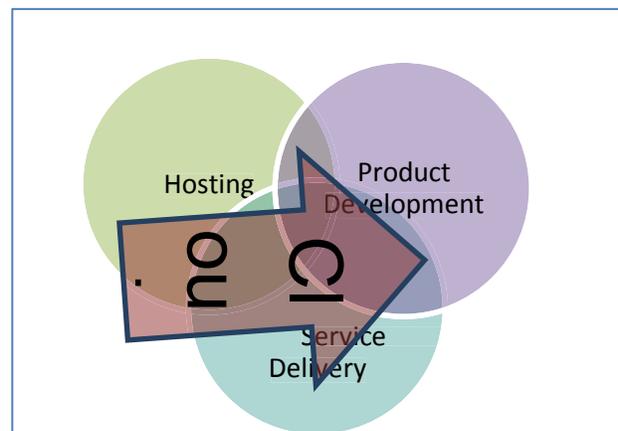


Figure 3 - Cloud provision will need amalgamation of three capabilities

Acquisition: Capgemini acquired IBX to leverage on its 20,000 customer strong procurement solution that is based on Software as a Service cloud offerings. Infosys has made acquisition priority in order to develop its cloud and platform based offerings

Partnership: HCL has partnered with Trinitech to take advantage of its last mile of finance to help its customers with further cost reduction and process improvement. Last mile of finance is basically a web based platform solution for F&A.

Organically: Genpact has transformed its in-grown F&A process solution called Genpower onto a cloud platform.

IT Service providers will also have to consider mobility while designing their cloud based products. Currently, all the applications developed by the biggest IT Service Providers can only be accessed by laptops or desktops. With 43% worldwide penetration of Smartphones and 70% growth in 2010, this trend will have to change. To achieve this, IT service providers like Infosys and TCS are focusing on making their solutions and products device agnostic.

Client Mining to Volume-Led Product Selling

Cloud computing being a solution based service will be sold more as a product rather than a service. This will require change in the focus from investing in long term relationships to customer care. The traditional account management team of service providers will have to be re-trained to change to handle a different type of sales scenario e.g. telesales way of selling pay-as-you go call packages. With large number of SME buyers purchasing cloud based solutions, IT Service providers will be able to reap the benefits from economies of scale rather than 3-5 large clients. This may increase the demand for cloud customer care agents and will slowly re-structure the traditional mode of account management.

The impact of acquiring Cloud Computing capabilities on Service Providers are summarized as below:

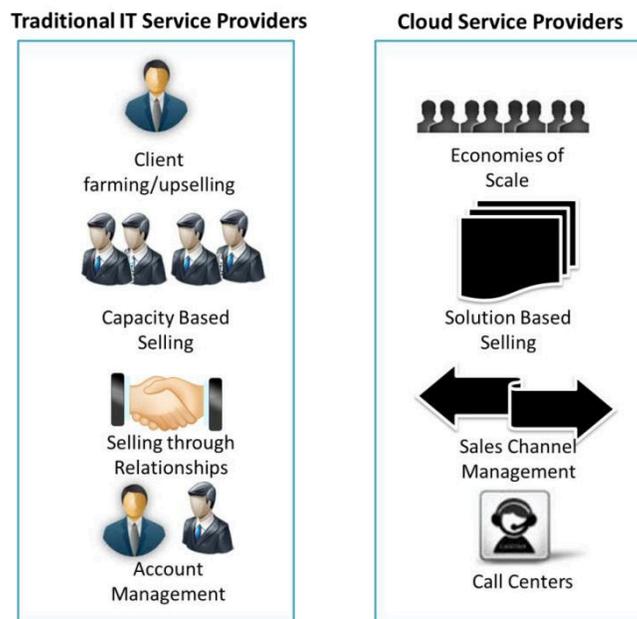


Figure 4 - Cloud will change the way IT Service providers approach sales and marketing

Conclusion

- Adoption of Cloud computing will change the Business-IT relationship. IT Service delivery will change from capacity based to on-demand service provision
- Finance involvement in IT and associate costs will increase as the accounting and utilization tracking will need to more detailed and tedious
- IT/Cloud Service provider selection and management will need to be rethought of as the control and ownership of IT will shift to cloud service providers.
- SMEs will be the greatest benefactor – with low upfront costs, agility, and scalability along with shifting paradigms of traditional outsourcing will push IT service providers to serve SMEs like the way Telecom Service providers service their customers.
- IT service providers will have to restructure and reposition their IT solutions by bundling their hosting, service delivery and software packages. They will have to move from traditional account management to a more volume based sales

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