Aligning Supply and Demand of IT Services

Cloud Economics

Cloud is rewriting the contract between IT and line-of-business (LOB) owners. While public cloud services represent a relatively small percentage of the portfolio of IT services consumed by the business, they have set the bar for how the LOB thinks about how IT should perform. LOB now expect services to be easy to order, quick to instantiate and transparent in pricing and billing. This Gartner report highlights some of the key research findings and conclusions around how public cloud computing is impacting IT organizations and the enterprises they support.

One key finding is that organizations that fail to integrate the financial management of cloud services into their overall service portfolio management and governance processes are likely to spend more money on IT overall than if they delivered 100% of their services in house. This higher level of spending will result from an overconsumption of cloud services and the duplication of IT services across both internal IT and 3rd party service providers. Another finding of the report is that the financial policies that many organizations have today around the use of capital versus operational expenditures will need to be carefully examined and updated to support the creation of a more dynamic model of computing the fully leverages and embraces a hybrid cloud approach.

VMware is committed to helping IT organizations be successful transitioning to a hybrid cloud computing model that allows organizations to achieve the highest levels of agility and efficiency while still maintaining control over the delivery of IT services. By simplifying and automating IT management, VMware Cloud Automation, Cloud Operations, and Cloud Business solutions empower IT to govern services across multiple platforms and providers—reorienting IT from merely delivering services to brokering all IT services across the enterprise.
VMware Cloud Business solutions improve business-IT alignment and accelerate IT transformation by delivering complete transparency into the costs and quality of all IT services. With VMware IT Business Management Suite your organization can provide a layer of financial management and control across all IT services – whether those are delivered on premises by enterprise IT or delivered XaaS by Public Cloud Providers. This way you can ensure that you are leveraging a hybrid cloud approach that achieves maximum business agility while still optimizing your overall IT spend.

While VMware IT Business Management Suite can help organizations be successful navigating the adoption of cloud computing

VMware recognizes that the challenges that IT teams must address from a financial and quality management perspective go beyond cloud. With VMware IT Business Management Suite you can:

- Track and manage all IT costs at a service level
- Model the impact on the cost of services for proposed IT initiatives
- Present LOB with a detailed “bill-of-IT” that represents actual consumption
- Benchmark internal costs against industry and like complexity peers
- Leverage existing service cost and benchmarking data to identify cost optimization opportunities
- Integrate service level metrics alongside financial data to support cost/quality trade-offs

As CIOs move from seeing their responsibility around being a builder of services only, to being a broker of services, they must transform the business management of their own services while also adopting processes that allow them to broker 3rd party services. CIOs need tools to help determine the relative cost, SLAs, and time-to-value of consuming and delivering services via any cloud model – private, public or hybrid.

Source: VMware

From the Gartner Files:

Cloud Computing and Its Impact on IT Economics, Finances and Planning Assumptions

Finance-savvy IT and business leaders who are not concerned about the financial implications of cloud computing should be. The IT management, financial and organization implications of cloud computing can represent a big risk or opportunity for technology-enabled enterprises.

Key Findings

- Although cloud computing will often be less expensive on a per-unit basis when compared with internal IT services, many enterprises will overconsume cloud computing services and increase total IT spending when a gross reduction is expected.

- In some enterprises, valid IT organization objections to the widespread use of cloud computing will be misused as subconscious and artificial barriers to the valid use of cloud computing. This will lead to maintaining the status quo of a higher cost structure that is predicated on high service levels and high customization for all IT services.

- Like most other IT innovations, the entry point for cloud computing into the enterprise will be primarily via business units and not the central IT organization. This will increase IT spending levels due to duplication of IT service capabilities, and increase chargeback pricing for tenants and users of shared IT services.

Recommendations

- Use the maturity improvements of the IT cost transparency developed to reach cost-cutting goals to sustain shared IT services, and to exploit cloud computing opportunities.

- Evaluate change in capitalization threshold levels to encourage the adoption of cloud computing.

- Develop a policy of “decentralization with governance” that identifies exceptions to the rules regarding the use of central or shared IT services, and to encourage the adoption of more affordable cloud computing services in business units.
• Create a road map for change that includes significant increases in maturity in chargeback and cost allocation, IT and business service catalogs and portfolios, and IT procurement practices to enable better internal client decisions on cloud computing or internal IT service provisioning.

Analysis

Overview

The cloud is here, but better exploitation of cloud computing will require improving IT cost transparency management practices to prevent overspending on IT, manage decentralized IT spending, and enable sustainable shared IT service organizations. There is considerable ambiguity in many enterprises about how to financially approach the cloud at the highest levels within IT and in corporate finance. This research outlines the economic, financial and service organizational issues of preparing for cloud computing from a “finance-out” perspective.

Manage Cloud Economics Before They Manage You

In its various forms, cloud computing has the potential to radically change the way IT organizations budget, fund, charge back and manage IT spending and staff. From an economic perspective, cloud computing is a direct response to an IT marketplace that is addicted to “speed and quality” in enterprises that need a shift in focus to “cost and business value.” Because the expectations of IT services have not been managed well throughout the years, there is now a gap between internal client expectations for service levels and the ability of enterprises to pay for this level of service. For 2013, the worldwide market forecast for public cloud services is estimated at $129 billion, with a five-year compound annual growth rate (CAGR) of 17%. Compared with the forecast for all IT marketplaces in 2013 of $2.7 trillion, cloud represents only 4.8% of the IT marketplace and is forecast to represent 7.7% in 2017. Before the economic downturn of 2008 and 2009, the cloud computing marketplace was a “solution looking for a problem.” Now, cloud computing is a set of IT services that can help many IT leaders reach new IT spending targets.

At face value, few IT leaders would be concerned (from an opportunity or threat perspective) with a percentage as low as 4.8%, but public cloud services have a deeper significance. As a suitable substitute for some internal IT services, public cloud computing puts pressure on the entire IT cost structure to perform better from an efficiency perspective, even if there are differences in service levels. As the value of everything changes over time, many business leaders are willing to trade higher service levels for the lower cost that cloud computing promises (in some instances, cloud may deliver higher levels of service). After decades of delivering high service levels — even for noncritical business and IT services — many enterprises can no longer afford the luxury service levels that are delivered by traditional IT organizations. Given a price comparison, some will tend toward cloud computing. Without the appropriate controls provided by better IT financial management and IT cost transparency, cloud computing will be in direct competition with traditional IT organizations for the hearts, minds and funding of business stakeholders.

From a CIO, CFO and IT CFO perspective, this research explores the impact of cloud on IT financial management, IT economics and IT service organization. This analysis is from a finance-out view versus a services-in view. Thus, it will be less focused on business value, operational considerations, specific IT providers, security risks and standards. This finance-out view is heavily weighted on financial performance and expectations, and often carries equal weight in the annual enterprise and IT planning processes when the issues of vision, strategy, values, maxims, goals and operations are considered. Calibration of the conflicting constraints of the business and IT planning process can be successful only if the numbers make sense at the end of the year. This research is not meant to discourage cloud, but to encourage its careful adoption and management. This research will help in creating the right IT planning assumptions for next year or for the next four years.

Cutting Costs Versus Increasing IT Spending

The long-term economics and the historical financial results of
innovation and value chain collapse dictate market conditions that could produce the following outcome for many IT organizations: The cost-benefits from cloud computing may be offset by higher consumption. In many instances, this higher consumption will include mostly “waste.” With all the hype around the benefits of cloud computing, it is difficult to forecast that anything other than a reduction in global IT spending or IT outsourcing (ITO) — the higher-level market category where cloud computing often fits — will occur.

However, many enterprises have historically seen instances where the IT organization ends up spending more on a technology or product once it becomes commodity-like, and its per-unit cost declines significantly (see Figure 1). This happened with massive declines in the prices for paper, storage, offshore labor and telecommunication charges. Once it becomes less expensive, IT and business users consume more of it. Thus, many IT organizations and enterprises will end up spending more in certain service and product categories when it becomes available in the cloud. Even though some of this higher consumption will map to higher revenue growth or higher benefits, this higher consumption is often wasteful and contributes only marginally to better outcomes.

So far, many of the IT services termed as “cloud” do not fit the technical definitions now set forth, with this definition requiring industry remediation of many technical obstacles. In fact, there are many cases where email, collaboration and even software as a service (SaaS) are often more expensive than equivalent on-premises capabilities. When moving like for like (or workload for workload) to the cloud, enterprises and IT organizations often spend more. Real cost savings come when organizations rethink system designs and deployments.

Many enterprises are faced with market conditions where excess capacity is being reduced, because market opportunities are reduced due to the stagnation caused by the economic downturn. Maintaining a capacity buffer due to high business demands in the past meant overinvestment in IT infrastructure and services, and was a large part of IT spending. Now, one of the major reasons for traditional IT investments (overspending for high or unpredictable growth) has disappeared for the next five years for many IT organizations. One can assume that a large percentage of unpredictable future business demand for IT capacity will be satisfied by cloud computing. In many cases, the business will attempt to forgo dealing with the central IT organization — thereby, cutting out the middleman or otherwise driving a partial disintermediation of the traditional IT organization (decentralized IT spending).

**Figure 1**  
*Cost per Unit and Gartner Market Forecast CAGRs*

<table>
<thead>
<tr>
<th>Cost Per Unit</th>
<th>2001-2011 10-Year CAGR</th>
<th>2012-2017 5-Year CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wintel Server</td>
<td>14,800 11,428 -2.6%</td>
<td>Data Center Services 6.6%</td>
</tr>
<tr>
<td>Unix Server</td>
<td>67,600 44,688 -4.1%</td>
<td>End User Devices 2.2%</td>
</tr>
<tr>
<td>Installed MIPS</td>
<td>17,500 5,575 -10.8%</td>
<td>Help Desk 4.0%</td>
</tr>
<tr>
<td>Client/Peripheral</td>
<td>1,580 1,039 -4.1%</td>
<td>Enterprise Network 2.9%</td>
</tr>
<tr>
<td>HD Contact</td>
<td>18.46 19.39 0.5%</td>
<td></td>
</tr>
<tr>
<td>LAN Port</td>
<td>231 111 -7.1%</td>
<td></td>
</tr>
</tbody>
</table>

- Symptom: Declining unit costs and increasing vendor revenue
- Enterprises consume, buy and manage resources inefficiently when they become dramatically cheaper

Data from Gartner’s 2010 IT Key Metrics Data and 2011 actual; Unix and Wintel CAGR is nine years, and 2010 actual; and Gartner’s “Forecast: IT Services, 2011-2017, 1Q13 Update” (G00248578).

Source: Gartner (June 2013)
Although the economic concept of higher consumption being a result of lower pricing is one reason many enterprises will spend more with cloud computing, there are many other reasons, such as poor project planning, failure to consider business process re-engineering, poor integration, poor estimating and failure to adequately manage systems after projects are completed. These reasons often have nothing to do with the technology or vendors that provide cloud computing services. Examples include:

- **A state government entity** created a joint venture shared-service center with an external service provider for infrastructure services. Processes for provisioning, procurement and demand management became so simple that agencies bought more IT units, and IT spending increased 30%.

- **A health food company** became overly enthusiastic about the promise of SaaS implementation benefits and made some poor management decisions about “technology” implementation. After the technology decisions, the company discovered that it could not re-engineer many of its business processes or decustomize its enterprise systems enough to adapt the SaaS offering, and misspent 50% of its annual capital budget trying.

- **A financial services company** acquired SaaS for back-office processes, only to customize something that was meant to be only configurable. Although these processes were non-mission-critical in nature, integration of data and systems was not considered, and a massive customization initiative began after implementation. This situation caused IT costs to increase 100%, and the company basically traded one problem for another.

   It will be easy for enterprises to spend too much on cloud computing — and not just because higher consumption is based on reduced price or cost. Type B enterprises adopting Type A enterprise technology are always problematic. Most Type B and Type C enterprises could and should wait for market standards to appear. As was the case with early ERP package implementations, there will be many failures, mistakes and expensive learning experiences from alternative delivery model implementations. As with many innovations or new sourcing strategies, many enterprises end up spending more than they think — and often quite a lot more.

**Action Items:**

- CIOs should improve the maturity of IT service management, benchmarking and chargeback to manage demand for cloud services and to better understand when the price is right for migrating IT services outside the IT organization.

- To prevent disenfranchisement due to cloud computing and wasteful decentralization of IT spending related to the cloud, the same IT management practices are necessary. CIOs need to expand their strategic vendor management and IT procurement practices to prepare for the cloud computing revolution. Better business case templates and management will help focus the cloud decisions on business value.

**The Convergence of IT Service Portfolios, Cloud Computing and Chargeback Processes**

Although the shift in IT’s role in the long term will be from an organization that builds IT systems to one that brokers the integration of IT services, there are other reasons that CIOs and IT leaders need to round out the management functions when they are in a low-maturity state. Three trends or industry circumstances will drive functional maturity within the office of the CIO during the next five to 10 years:

- Sustain shared IT services
- Prepare for cloud computing
- Prepare for the next recession

   Given the context of what each office of the CIO should be preparing for or sustaining, the natural market forces are also forcing the convergence of three unconnected IT management streams and phenomena (see Figure 2):

   - IT service portfolios and catalogs
   - Chargebacks and cost allocations
   - Cloud computing

   Our research shows that, usually, improvement in the maturity of one IT management practice or capability is accompanied, out of necessity, by improvements in the maturity of two or more additional IT management practices. In the case of chargeback, improving the management practices of chargeback, IT service management, IT strategic vendor management and IT procurement activities simultaneously will enable success with chargeback change and
will deliver better IT supply chain management than in the past. It will also create a critical capability for demand management. What external cloud computing is doing now, and will do, is force the convergence of nomenclatures and metrics for IT services, chargeback metrics and IT service pricing.

At one time, only the most sophisticated IT organizations or large market leaders were able to create a service catalog or portfolio where internal and external pricing was published to internal users at the same time. As a further challenge to IT and business leaders, there are many combinations and iterations of shared IT services, public cloud and private cloud. Controlling the various entry points of external services into the enterprise and making the right sourcing decisions (internally versus externally) will depend more on IT financial management and IT service management practices. These capabilities are often in place now or will require increases in maturity to meet the new requirements of the convergence of IT service portfolios, cloud services and chargeback.

With most new IT innovations throughout the decades (such as client/server computing, desktops and handheld devices), the entry point based on business need occurred primarily in the business units, only to come under the control of central standards at a later date. There is little evidence that this will not be the case with external cloud computing as well and begin a partial disenfranchisement of the traditional IT organization — otherwise known as “decentralization.” To manage the public cloud, most IT organizations must become the broker of these services. The legitimacy to do this is accomplished by successfully managing the now independent IT management practices and phenomena of IT service portfolios, cloud computing and chargeback. As an added benefit, this convergence also fulfills the preparation needed for sustaining shared IT services, cloud computing in general and the next economic recession.

**Action Item:**
- In addition to IT service management, chargeback and cost allocation, IT leaders should explore what other IT management practices will be required to sustain shared IT services, and prepare for external cloud computing and the next recession.

**Cloud Computing and the Capitalization of IT Investments**

From a financial perspective, cloud computing adoption and exploitation are at odds with many of the capital and expense policies implemented recently because of austerity actions and changing enterprise financial goals.

**Shift to an “Asset-Lite” Model**

First, many enterprises have business goals to shift to an “asset-lite” model, which is driven by a goal to increase the return on assets (earnings divided by total assets) during the next five years, which favors an externalization policy within IT. This externalization would favor immediately traditional ITO, where IT assets are transferred to service
providers (fewer total assets increase the metric). Cloud computing would also align with these long-term goals; however, because of issues discussed later in this research related to IT organizational and IT service provider barriers, adoption of cloud computing could be slower than desired. At this point, cloud computing would have only a minor impact on new return-on-asset goals.

Also, many traditional ITO deals exclude asset ownership, where ownership is often retained by the client enterprise, or creative financing and leasing are arranged by a third party. However, recent U.S. accounting regulation changes threaten to end off-balance-sheet operating leases. To add further to the complexity, the tax accounting complexities become exponentially more complicated in treatment of depreciation in a financial lease in various countries, especially when IT organizations move to managing scores or hundreds of such procurement transactions.

Austerity in Expense Policies

Second, many enterprises are blessed with liberal amounts of available capital, not just for IT but also for other enterprise goals. However, at the same time, there are policies to freeze expense levels and even decrease expense ratios during the next few years. Without the ability to pay for the maintenance in future years for new IT investments, the business cases for new investments will be delayed or rejected. Thus, even though cloud computing investments could represent a significantly reduced level of capital investment, austerity in operational expense policies will act as an inhibitor to cloud computing investments, even if there is a positive ROI. Many IT finance professionals estimate annual maintenance (expense) levels for cloud computing at 20% of the purchase or capital cost of a service or system divided by the useful life of that investment, and this is not much different from that of ERP or point solution investments.

Significant Transition Costs

Third, still other enterprises are intrigued and tempted by the promise of reducing capital expenses or investments altogether because of cloud computing. Many of the estimates by Gartner clients have shown that there are still significant transition costs (including write-offs of existing assets if replaced by the cloud) because of any new investment — whether it is infrastructure utility computing, SaaS or other cloud alternatives. The capital requirements don’t go away.

Treatment as Expenses, Not Capitalized

Lastly, after partnership with a cloud vendor, some of what we now consider to be traditional “maintenance” costs will continue to be expensed annually, because they are expenses that are predictable year over year, and no additional business benefits are delivered from the existing functionality. This is similar to how purchased software is treated, but there are many other scenarios that include cloud maintenance that are not renewed predictably year over year. Some include a one-time fee, some include a monthly charge associated with use, and still other cloud purchases will be predictable monthly charges that do not change. Because of the categorization of a purchase as “cloud,” it will tend to be expensed more, rather than capitalized, even if it is above the enterprise capitalization threshold. Often, similar systems created by the IT organization are not retired, and costs can increase because of cloud vendor ambitions for upgrade and the IT organization’s failure to retire legacy systems. Hereafter, the risks of vendor lock-in begin.

With the promise of switching vendors quickly because of commodity market conditions, IT organizations would seem to enjoy a buyer’s market to force prices down because of competition. However, for some cloud computing services, there may not be competition. Changing or reinsourcing may be architecturally difficult and require transition capital, and larger organizations may require multiyear contracts and minor customizations that change the service from cloud computing back to traditional ITO. Today, switching cloud vendors is difficult and obstacle-laden because of a lack of standards. Although standards will emerge in the long term, in the meantime, the marketplace has responded with increasing the number of cloud brokers that can be engaged by the IT organization to migrate systems from one provider to another.

Life Cycle of Current IT Investments Inhibiting Cloud

A major inhibitor of cloud computing from a financial perspective is the life cycle of new and current IT investments on the books. Few IT organizations will undertake major architectural changes to accommodate new cloud computing services, as long
as the depreciation and amortization remain on the books from previous investments. With useful-life decisions of five or seven years, this period may well represent the time to wait for significant cloud computing adoption, although smaller and marginal adoption may take place based on contingencies or for experimental purposes, specifically for application development and testing. Thus, the end-of-life period is a significant milestone in any cloud computing policy or goal. Failure to take advantage of this critical event could mean another waiting period of five to seven years.

In the end, the percentage of IT spending devoted to IT capital may decline because of cloud computing and follow a pattern similar to that of software in general. However, before this can happen, enterprise policies will have to change related to caps on the operational budget, an increase in capitalization thresholds (for example, from $5,000 to $10,000) and long-term asset ownership decisions (push assets to vendors, or push assets to end users in the form of user-provided PCs). In practice, it can be much more difficult to go “asset-free.” Many major vendors’ software licenses continue to drive corporate accountability for the business beneficiaries of user-owned or provider-owned software. Many clients believe that the financial benefits from cloud computing exploitation will not come organically (except when business units adopt outside of the IT organization), but from well-defined and well-managed financial goals.

**Action Items:**

- Review IT and corporate financial policies with an eye toward driving the adoption of cloud computing and lower-cost external services.
- Evaluate a policy to shift the risk of assets to IT service providers and to end users.
- Increase capitalization thresholds to allow more cloud services to be procured using operational expenses if there is scarcity in capital.
- Lower capitalization thresholds to allow for more capitalization of initial cloud computing contracts.

**Traditional IT Service Providers Versus New IT Service Providers**

With an annual growth rate of about only 6% worldwide over the five-year planning horizon for traditional ITO, the growth rate for public cloud computing is nearly three times greater, but growing from a significantly lower base. Conventional wisdom and early thinking during the past three years were that ITO was sure to increase more significantly because of the economic downturn and that, as a market, it was countercyclical to economic changes. However, the opposite happened because of a reputation of ineffectiveness in cutting costs quickly, the IT organization’s preoccupation with consolidation or shared IT services, and best-practice procedures where the due diligence necessary for big outsourcing takes two or three years to figure out. Also, often seen as a macroeconomic segue to more industrialized cloud computing services, offshore delivery of services still showed healthy growth — even during the economic downturn — for the obvious reasons of lower labor cost opportunities. These offshore capabilities are seen by many as having a huge impact on future changes with cloud brokering.

Cloud computing also fits into the picture in a more subtle way as a significant inhibitor to traditional ITO. Cloud computing as part of a multivendor strategy is a viable alternative in a multisourced world. Adding the possible impact and benefits of cloud computing to the strategic sourcing decision has confused the decision by adding another alternative to the decision process. This has been said to have frozen the discussion about outsourcing, because few large enterprises want to entertain a risky long-term sourcing strategy (traditional ITO) if a viable alternative (cloud computing) may appear in the shorter term, and lock them into a career-threatening and higher-cost relationship. Even IT organizations in a life-and-death struggle to avoid ITO were seen as very rational in their self-interest, given the promise and hype around cloud computing. The “uptake” nature of cloud computing versus the “takeover” nature of ITO should make cloud more palatable for traditional IT organizations.

However, Gartner has seen cloud computing used not only as a subconscious pawn to stifle traditional ITO, but also as a wedge to keep the traditions of high cost, high quality and high speed alive in many IT organizations — even in enterprises...
faced with severe cost pressures. The security risks and being married to strict IT standards are often used as bureaucratic vetoes to many of the benefits of cloud, and enable the status quo to continue with speed and quality — even if these problems have been solved and marginal returns ensue from the continued focus on these goals.

The pressure for the status quo comes from large IT service providers that have significant market share for ITO. From an investor perspective, the business model for traditional ITO provides different returns from cloud computing. ITO is a low-transaction and high-profit-margin business model, which is opposite to that of cloud computing, which is a high-transaction and low-profit-margin business model. Given this financial ambiguity, a house divided cannot stand, and few traditional ITO providers will probably be successful launching and sustaining “real” cloud computing practices alongside traditional ITO. Margin and cash-flow expectations will favor the more profitable (but slow-growing) ITO business and crowd out the fledgling cloud computing business, even if it is innovative or somewhat acceptable to the marketplace.

In this environment of rapid financial fluctuations (which can also be best characterized as conflicting), many large ITO providers have fielded well-promoted cloud service offerings to entice new clients into discussions about engagement. After the typical discussions about security risks and standards, the provider often continues with a well-fleshed-out lead for traditional ITO. Here, the ITO provider (and the impression for quality and low risk that comes with their brands) has a sophisticated onramp to feed their pipelines for traditional IT services. Although their complement of cloud services can be used in point areas of a traditional ITO deal, many providers will disengage from the sales process when faced with IT organizations that are stubborn about procuring the benefits of cloud computing. In many instances, the use of cloud computing in larger ITO deals will resemble the desktop outsourcing marketplace, where cloud is provided by third parties, but the ultimate contract will be owned by a large ITO provider. Given the current investor expectations for large IT service providers, lower-margin business models tend to exit the service portfolio periodically (via divestiture, joint venture and other means). In this strategy, it is difficult to see how cloud would enter the portfolio.

For IT organizations engaged in legacy ITO relationships and deals, many clients are seeing severe resistance to providers, including cloud computing in renegotiations and renewals, even if these services are available from service providers. Few account or engagement teams will be rewarded well for losing wallet share with an individual and large consumer of traditional ITO. Also, it is no longer guaranteed that IT service providers will make up for lost wallet share in negotiations and renegotiations through higher client consumption, especially because mature or late maturity enterprises are typically the prime customers for traditional ITO (and recent economic problems have frozen many opportunities for higher than mature growth). Thus, ITO providers in this environment must deal with not only the existing high expectations for significant per-unit cost reduction in contract renewals, but also with the pressure and promise of lower costs available from cloud computing services. In many ITO renegotiations, the issues of cloud security risks, noncompliance with IT standards, missing functionality and lower service levels (or no service-level guarantees) have strangely created a hidden and unspoken partnership between their ITO partners and IT organizations, with a common goal to maintain the status quo with high quality and high customization, and to exclude cloud’s cost-benefits — even though contract terms for large ITO deals have declined to five years, or even three years, over the original and often customary 10 years.

Given that the heir apparent for cloud computing will most likely not be the current holders of large market share ITO providers, many clients state that new and emerging IT vendors and providers without the constraints of high profit margins will be the new face of ITO and cloud computing. Given the investor expectation constraints with traditional ITO vendors, the one segment that makes sense to many clients that do not see cloud computing as a business burden is telecom providers with ITO capabilities, because telecommunications is accustomed to high-transaction and low-margin services, and cloud services would be seen as a positive movement up the value chain of services, instead of downward by traditional ITO providers.
Action Items:

- Choose future external IT service partners whose business model rewards the performance of cloud services and where cloud services are their primary business.

- When renewing a large ITO provider, negotiate shorter contract terms to allow for flexibility when cloud computing services become more viable or acceptable to the organization.

- Benchmark traditional ITO service pricing, internal service pricing and cloud computing pricing to help make decisions on the right sourcing strategy and source.

- Ensure that business cases show alternative vendors for cloud computing services as a contingency or exit plan for switching cloud vendors and as a litmus test of whether it should be externalized.

Freedom Versus Control, and Centralized Versus Decentralized

Cloud computing represents not only long-term implications for IT costs and IT standards, but also implications from an organizational perspective. As stated earlier, the organic benefits of cloud computing will most likely come from business units, agencies and departments that are willing to fund cloud computing to avoid shared IT services. Whether it’s driven by the high cost of centralized services, lack of funding from the IT budget or a want of control with IT, most innovations in IT enter the enterprise from outside a central IT function. There is no reason to believe this will not be the case with cloud computing over the planning horizon for many IT organizations. From an IT financial management perspective, this will mean that a higher amount of fixed costs managed centrally will generally be serving a few users, customers or transactions that are controlled, funded and managed by business units.

For the typical enterprise with the right demand governance, cloud computing should not be “competing” with the traditional services of an IT organization. The optimal solution to prevent a massive infusion of public cloud services in the business units is for stronger IT governance that includes simple rules for independent use of cloud services, and a focus on rules regarding the protection of internal and client data, a list of preapproved cloud vendors, and minimal service levels that can be tolerated by the enterprise (in general and with a larger goal to reduce friction or improve the “speed” of the implementation).

In an environment of stronger governance, cloud computing will be adopted and implemented in a more efficient and effective manner, and will prevent end-user organizations from becoming technologists, data experts or cloud experts when their time and efforts can be focused on their typical business imperatives. Additionally, legitimate needs for the independent use of cloud computing services can be protected and encourage innovative and entrepreneurial activity. The challenge for many IT organizations will be accepting the ambiguity of a healthy tension or friction of balancing central IT standards with speed to market or benefit considerations.

For the atypical enterprise with the wrong demand governance, cloud computing will follow the business penetration pattern of previous IT innovations. With a major focus on implementing shared IT services during the past three years, after these programs begin to settle in, the business units will begin to slowly and organically increase enterprise IT spending levels by duplicating services now provided centrally, but from a cloud computing cost level and not a higher per-unit level that is most likely happening with shared IT services. This will create another huge cost optimization opportunity just in time for the next recession or major business change. The challenge, from an IT finance perspective, is keeping track of this decentralized or “maverick” IT spending to have an accurate assessment of benefits and opportunities.
There is a major opportunity from a strategic level to allow more freedom to the business units, where they would realistically and unknowingly be testing cloud computing vendors, services, elements and contracts. Where there are successes, this is replicated to other business units via centralization. Where there are failures, lessons are internalized, systems are centralized and rationalized, and the IT organization preserves its conservative spending and staffing levels. Here, the business units take the risks, but the IT organization benefits from perhaps an increase in IT budgets because of management of new systems. The enterprise benefits overall from an informal emerging technology function that does not encroach on limited IT funding and capital budgets.

**Action Items:**

- Evaluate policies and strategies that include “decentralization with governance” to allow and specify circumstances and exceptions to centrally provided IT services, especially for fast-growing business units, product lines or regions.
- Monitor the level of decentralized IT spending to gauge the level of cloud computing adoption, and opportunities for consolidation and centralization.
- Monitor the cost per unit or cost per service in centralized IT organizations. Increases will signal and drive higher adoption of rogue cloud computing services by business units.

**Why Not Wait for the Cloud, and Skip Consolidation and Shared IT Services?**

Many strategic and tactical choices are available to enterprise and IT leaders regarding cloud computing. Some organizations that are challenged by cultural and political issues regarding consolidation and shared IT services may not fight as hard under the belief that cloud will “arrive” in five years and make the shared IT service organization redundant. This strategy is somewhat risky considering other issues:

- Consolidation, in the form of centralization or shared IT services, is a necessary optimization event to remove the periodic growth in redundancies and high cost. By waiting for the cloud, enterprises are essentially leaving money and earnings on the table.
- Consolidation and shared IT services are necessary and critical to prepare for cloud computing. The management practices that are required to sustain shared IT services are the same for managing and harvesting the opportunities of cloud computing.
- Cloud computing may not be the same or advertise the same benefits five years from now. The name may change, the market will see early cloud vendor failures, and the market will resemble something probably closer to a hybrid of traditional ITO and what is thought of now as cloud computing.

**Action Items:**

- Increase the intensity of management actions to start, complete and sustain shared IT services and centralization as a precursor to sustaining cloud computing benefits.
- Focus on increasing the maturity of IT management and IT cost transparency practices to better control shared IT services and centralization.

- It will take several years to build the capabilities, competencies and skills to manage cloud computing vendors. Now, many organizations struggle with managing one ITO provider, and this will increase as a challenge when scores of cloud vendors are added to the mix. The consolidation and shared IT service events are necessary to pool the functions that will transform into strategic functions about the time that cloud computing is viable.
- Shared IT service success will be or is now a major test for IT leaders. The inability to manage the business and finances of shared IT services will often mean an inability of the IT organization to manage the benefits and opportunities of cloud computing.
IT Cost Transparency: Preparing for Cloud Computing

Given all the financial scenarios, dynamics and decisions related to cloud computing, IT leaders must create the management and analytics capabilities now to benefit most from future adoption of cloud computing. Many found that IT cost transparency was necessary to cut costs the right way. These same IT leaders have also discovered that the disciplines, capabilities and competencies were useful in sustaining shared IT services. This will be no different for cloud computing. IT cost transparency practices and elements will provide the necessary platform for success.

Figure 3 shows the Gartner framework for IT cost transparency. Each element will play a critical role in the success or failure of managing cloud computing services.

Each element of IT cost transparency plays a critical role not just in cloud computing, but also in sustaining shared IT services. Many IT leaders use the eight elements as a portfolio, where four elements (for the sake of discussion) are targeted for implementation or maturity improvement, two of the four will exceed expectations in increasing transparency and enabling better demand management, and the other two will deliver mediocre or “table stakes” results. A brief description for each element and how it can impact better management of cloud computing follows:

• IT portfolio management: Due diligence with business cases for infrastructure and application investments should include an expansion of alternatives to include cloud computing, especially for non-mission-critical services. Maintenance and other cost estimates should be mandatory.

• Benchmarking and measurement: For many cloud services, price lists are available online for the services offered. This will often show IT services to appear expensive because of market dumping, pricing and

Figure 3 | Cost Transparency Framework and Elements

<table>
<thead>
<tr>
<th>IT Service Portfolio and Catalog</th>
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<tbody>
<tr>
<td>Benchmarking and Measurement</td>
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<tr>
<td>IT Performance Management</td>
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<tr>
<td>IT Portfolio Management</td>
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</tbody>
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| Chargeback/Cost Allocation      |
| IT Asset Management/Configuration Management Database |
| Market-Based IT Chart of Accounts |
| Hardware | Software | Outsourcing | Personnel |

| Procurement Commodity Taxonomy |
| UNSPSC | NIGP | eCl@ss | Others |

Source: Gartner (June 2013)
market share goals, and a variety of reasons that prevent a fuller “apples to apples” comparison. However, this will drive the adoption of cloud, and force IT leaders and business users to further justify higher-cost systems and applications. As a first step, measurement programs should compare like-for-like IT costs to those of peers as a starting point before tackling cloud computing pricing comparisons.

**IT performance management:** Goals for cloud adoption, the percentage of cloud spending in the business units, the availability rates of cloud services, the percentage of infrastructure and applications that are cloud, and the percentage of IT spending that is cloud or external will be necessary to monitor progress and trigger corrective action when goals aren’t met.

**Chargeback and cost allocation:** Almost mandatory now to make the right long-term decisions about in-house services versus cloud services versus traditional ITO services, chargeback and cost allocation must mature to the point where cross-charging is automated, and rates and prices are used for external comparisons. Without chargeback, adventures into private clouds will also be at risk. For advanced organizations, dynamic provisioning will become essential, and automated chargeback will become even more important.

**IT service catalogs and portfolios:** A pinnacle in showing IT business value, representation of services in business terms, whether they are IT services or business services, is essential for like-for-like comparisons against external cloud services. Higher-maturity enterprises will incorporate external cloud services into their IT service catalogs and portfolios as alternatives to internally produced IT services.

**IT asset management:** The “devil is in the details,” and better IT asset management practices will drive accountability for chargeback metrics and system interdependency for proper cloud integration, and be a transformation platform from keeping track of hardware and software to keeping track of contracts and partners in the cloud.

**Market-based chart of accounts:** IT leaders will fail to prove success or performance to goals if the coding for the things bought is not changed to reflect the new marketplace of cloud computing. IT finance will be unable to show money spent on cloud versus noncloud services, or to drive lower hardware and software spending because of cloud computing.

**Procurement commodity taxonomy:** As an enterprise issue, the DNA of coding for procurement activity will be necessary to track the decentralized IT spending that will occur as cloud computing matures. Enterprise standards and rules must be enforced to get the maximum benefit of this critical event shift from buying “things” to purchasing cloud “services.”

**Action Items:**
- Identify what IT cost transparency elements are in need of focus, repair or maturity increase.
- Plan to increase the staff size of the office of the CIO, especially the IT financial management function, to prepare for cloud computing and to sustain shared IT services and centralization.
- Build a five-year road map for IT cost transparency changes.
- Use IT cost transparency improvement as a cultural change agent to move the IT organization from a focus on “speed and quality” to one of “IT cost and business value.”
- Evaluate the automation of IT cost transparency elements to prepare for cloud computing and dynamic provisioning, and simplify IT cost transparency elements that are now overly bureaucratic.

Because all the IT financial management issues are directly related to the maturity of many other IT capabilities, IT leaders should conduct the Gartner ITScore Enterprise assessment to define gaps in capabilities required for the future, which includes cloud computing.

Source: Gartner Research G00253434, K. Potter, 24 June 2013
About VMware

VMware® IT Business Management Suite™ provides transparency and control over the costs and quality of IT services enabling the CIO to align IT with the business and to accelerate IT transformation. By providing a business context to the services IT offers, IT Business Management helps IT organizations shift from a technology orientation to a service broker orientation, delivering a portfolio of IT services that align with the needs of line of business stakeholders. With benchmarks providing objective evidence, IT Business Management also provides the fact-based approach needed to minimize the cost of IT while maximizing the value IT delivers to its customers.

Greater transparency and alignment, and the continuous improvement of IT services they enable, support IT as it seeks to develop competitive advantage through major IT transformation initiatives such Cloud, Mobility and Data Center Modernization.

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