Journey to Your Cloud

Taking Your Organization From Reactive to Innovative

vmware®

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Why Make the Journey to the Cloud?

Businesses today depend upon IT to drive innovation and accelerate past competitors. While each organization may have their own unique definition of innovation, many of the elements remain common: getting closer to customers to help deliver business goals, delivering more compelling services than key competitors and making an increasingly mobile workforce more productive and effective. IT is further challenged by the need to deliver all of this more rapidly than ever and with tight budget constraints while still supporting service levels for performance, governance and security.

Across the market, successes are growing. For many established businesses and new start ups, IT has become a driving force for business results: unlocking vital revenue streams, rapidly capitalizing on new business opportunities, disrupting markets and recasting competitive landscapes. It has moved on from being a cost center to become a clear strategic partner to the business, delivering clear value and differentiation – and aligning with key business objectives.

However other IT organizations are struggling to find this same kind of success. Burdened with brittle, siloed infrastructures and outdated approaches to systems management, they find themselves working hard just to support existing systems. With resources and budgets dedicated to maintaining the status quo, IT finds itself continually running to keep up with a growing backlog of requests from the business for new services. Those caught in this reactive mode find it all but impossible to invest in the kinds of systems and services that would grow the business and deliver innovative new ways of operating.

In these organizations, there is a growing tension between IT and the business. Continued delays in delivering the services that drive revenue and operations are putting organizations at a serious competitive disadvantage. Line of business stakeholders, frustrated with IT's ability to deliver the capabilities they require, often go out and acquire IT services and business applications themselves, outside of traditional IT procurement channels. With attractive pricing and business models, and the benefit of self-service, on-demand access to services, line of business stakeholders often see public cloud and SaaS providers as a path to rapid innovation.

The truth is that there is a danger inherent in this kind of ad-hoc approach to IT delivery. While it may well offer an immediate solution to a pressing business challenge, this approach carries significant near and long-term risk with it as well:

- IT cannot ensure that innovation happens in a way that concurrently protects the organization. Public cloud providers have diverse, often unclear, standards for security, compliance and governance. Sensitive data can easily sit outside the business without robust, IT-led security measures.

- The rush for action today to drive innovation creates tomorrow's silos of technology. Creating multiple pools of disparately run and managed infrastructure limits IT's ability to leverage common management environments, to drive automation or reduce OPEX.

- Lack of portability across environments limits IT's ability to migrate workloads to best manage cost, risk, and quality of service. This becomes particularly important as applications grow and play a more strategic role in the business, demanding significantly higher service levels.

- Without embracing new models, IT organizations continue to be reactive: exhausting resources to support existing systems and failing to free up resources to deliver critical new business services.

Increasingly, IT is looking to cloud computing as a way to break this cycle. The aim? To form a new partnership with business stakeholders based upon the ability to deliver innovation and build business value. Cloud empowers IT to redefine the way services are produced and delivered for the business. The goal isn't to merely become a more efficient, reliable and agile IT organization – although cloud certainly delivers that. Rather, the goal is to operate in a fundamentally different way – more flexible and responsive to business needs.

From Client-server to Cloud

The current transition from the dominant, last-generation client-server paradigm to cloud is driven by the need for greater agility and speed in delivering innovation to support the business. IT departments operate at the frontline of this change. New entrants to the market, free of technical and cultural legacy, can quickly leverage low-cost technology to challenge incumbents, forcing IT to deliver ever more quickly to remain relevant. Employees and customers have access to a wealth of cutting edge, rapidly improving digital innovations, setting expectations for IT competence ever higher.

For most VMware customers, this transition can be understood in three layers of transformation:

From PCs to Users:
- Accelerating innovation in end user technology – both devices and services – requires IT to become more flexible, to readily accommodate new devices and services without compromising security and governance policies.

- The shift from managing and supporting device and application silos to managing user access and SLAs across multiple devices and services is top of mind for IT.

From Apps to Services:
- Historical application hardware and software silos are increasingly standardized into shared cloud infrastructures through virtualization.

- Rigid, last generation, manual processes are being automated and defined as policy, resulting in significant efficiency gains.

- New software-defined services allow IT to scale dynamically and automatically; satisfying peaks in demand with security and governance intact.

From Servers to Cloud:
- Virtualization has already broken down the application silos of the client-server era, allowing computing resources to be pooled across hundreds and even thousands of formerly individually managed servers.

- Virtualization and management technologies enable IT to manage pooled resources across multiple physical locations, giving IT maximum flexibility in balancing cost and resource requirements.

- Physical infrastructures are increasingly giving way to a Software Defined Datacenter (SDDC): a datacenter model that recasts compute, storage, networking and security infrastructure services as virtual software services. The SDCC is a key strategy for fully transitioning to the cloud.
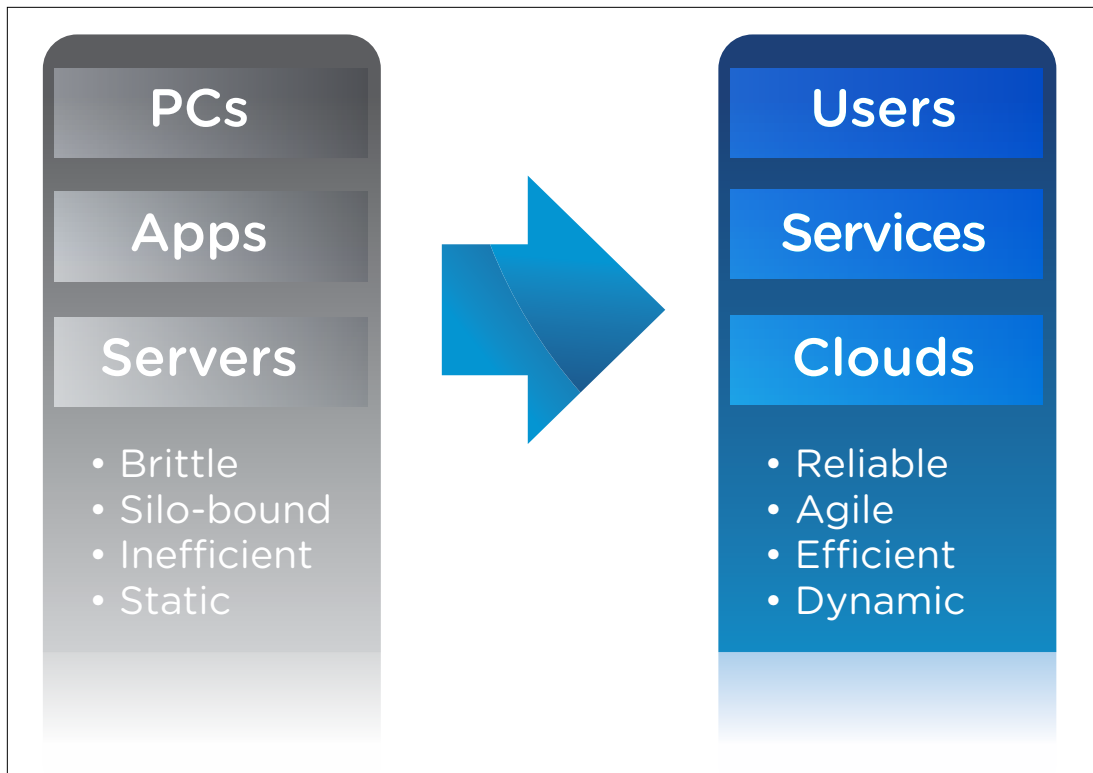

Figure 1: PC to Cloud Graphic

Empower Your IT Organization with Cloud Computing

Those organizations most successfully leveraging cloud have transformed two major elements of IT:

1. The complete technology infrastructure required to build a cloud environment, including leveraging resources from third party, external cloud providers.

2. The core operating model that establishes the processes, practices, organizational structure and financial measures required to gain the greatest benefit from this new technology foundation.

In short, these organizations have embraced cloud as a cohesive strategy, examining how to build, operate and staff their cloud environment, while continuously measuring the efficiency, agility and reliability improvements of cloud computing.

In working with global enterprises and service providers, VMware has identified distinct patterns within IT organizations and their capabilities as they move to embrace cloud computing. We have used this insight to establish a Cloud Capability Model. This helps IT identify opportunities for growth and evolution, enabling IT to build a more effective model for delivering services to the business. VMware's Cloud Capability Model provides a path for IT to take greater advantage of existing systems and teams and resources; while embracing external cloud assets, providers and extend IT standards for security, governance and performance. This paper examines in depth the various patterns that we have identified in organizations across this model.

Figure 2. New Operating Model Graphic

At a high level, organizations fall into three operational categories:

Reactive – With IT exhausting resources in maintaining existing systems and satisfying an increasing set of user demands, reactive organizations cannot make the desired contribution to delivering against business objectives. Cloud has entered the business opportunistically, threatening to create silos of IT and business activity that fall outside the mandated standards for security, risk management and compliance. The need for rapid innovation has driven business stakeholders to bypass traditional IT channels, creating a tension between IT and business stakeholders. In today's market, most organizations find themselves operating in this reactive IT model.

Proactive – IT has moved to embrace cloud as a way to achieve the innovation requirements that the business demands through increased efficiency, reliability and agility. Shifts in processes and organizational responsibilities have started to bring structure to cloud decisions and directions. More importantly, IT has embraced a new role for itself: that of a service broker. IT is now able to leverage external cloud providers to deliver rapid innovation within the structure of IT, balancing cost, risk and quality of services. By applying proactive operational processes and governance to cloud environments, IT is more capable of supporting tier one applications in the cloud. Organizations in a proactive mode have shifted cloud from being an opportunistic purchase to a strategic environment that will have broader, more significant impact.

Innovative – IT has leveraged investments in cloud and resources freed through automation to more directly partner with the business to deliver innovation. Cloud is now the core model for delivering IT, shifting legacy systems to a more flexible infrastructure, more fully deploying automation to increase efficiency and freeing IT resources to focus on initiatives that directly drive increased value for the business. Innovative organizations have leveraged detailed measurement capabilities to quantify the financial impact of cloud. They have also redirected saved resources to the creation of new services and capabilities that advance business goals. IT is enhancing its service broker capabilities by successfully managing multiple cloud sources and balancing risk, cost and quality of service metrics while enjoying visibility across heterogeneous cloud environments.

The Path to Innovate

As with other generational shifts in IT, the move to cloud requires a new strategy. Evolution from mainframe to client-server to web models all represented not just shifts in technology, but shifts in the financial, organizational and process elements of IT as well.

Transitioning to cloud computing gives organizations access to a new class of flexible and highly automated technology. This automation enables IT teams to retire many of the slow, error-prone, manual processes and controls prevalent in their organizations. Cloud provides IT with the ability to expand upon policy-based management and automation practices initiated in virtualized environments, extending these models across multiple pools of resources. Cloud also lets IT conduct advanced measurements that provide granular data on the cost of IT services. This gives IT unprecedented insight into how cost and resource models can be adjusted, aligning investment with the areas of IT that will deliver the greatest business benefit.

This combination of process automation and financial measurement gives IT a valuable model to free resources from rudimentary tasks, while also driving clarity into resource allocation. IT teams can more effectively manage down operating expenses while creating strategic plans for reinvesting freed resources to fuel innovation. With more granular financial information, IT also gains the insight to effectively match IT projects and applications to the most cost-effective delivery resources. VMware has seen customers reduce labor operating costs by as much as 25%, freeing resources for reinvestment into new services that drive innovation. As a result, IT teams can behave as partners in business success, leveraging their skills and expertise to make the business more competitive.

The result? IT organizations are empowered to Automate to Innovate. Automation and measurement, combined with a disciplined focus on financial management enables them to realize significant efficiency gains and fuel IT innovation.

Figure 3. Automate to Innovate Graphic

The figure shows four panels arranged on a trapezoid with an arrow from AUTOMATE to INNOVATE:

- **Processes and Control** — Define, refine, & automate to increase agility and operational efficiency
- **IT Business Management** — Measure to capture re-investment of Opex savings
- **Software Technology and Architecture** — The Software-defined Data Center - resilient, flexible, scalable, automatable
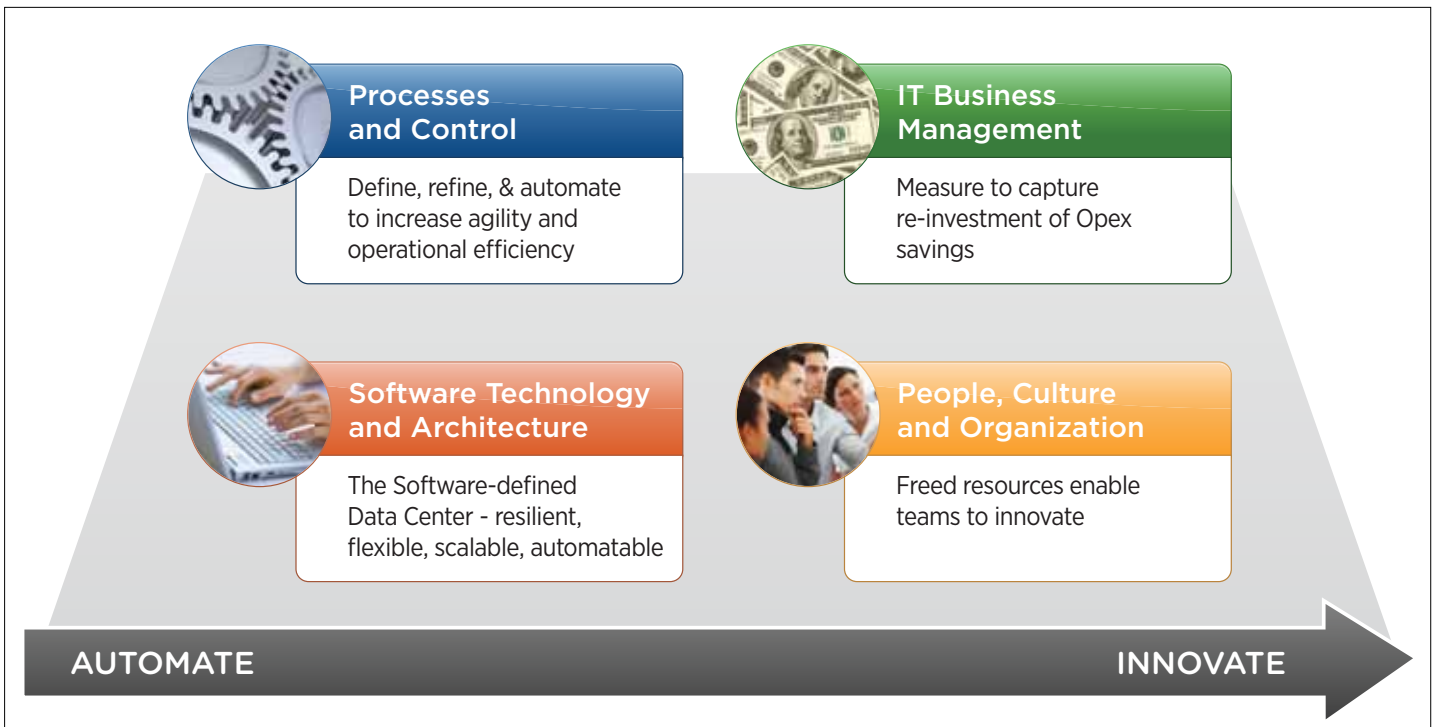- **People, Culture and Organization** — Freed resources enable teams to innovate

AUTOMATE → INNOVATE

Essential Cloud Capabilities to Advance a Cloud Operating Model

VMware has worked with some of the most successful enterprises and service providers around the globe on the development and execution of cloud computing strategies. This insight has helped us identify a set of core capabilities that organizations must implement and evolve in order to gain the greatest benefit from cloud computing. Each of the capabilities below has a role in the success of the IT organization and in the ability of IT to be a more significant contributor to business growth.

- **On-demand services: automating the front-end of service requests with a service catalog and self-service portal.** Cloud computing can deliver dramatic gains in efficiency through the introduction of new IT self-service models that were previously impossible. But shifting an IT organization to a self-service model takes more than technology. IT must understand how to develop and support key processes that make on-demand services successful, while adapting the organization culturally to support self-service access for the business.

- **Automated provisioning and deployment: optimizing the back-end of service governance and fulfillment with automation and policies.** The ability to automatically provision new infrastructure is a vital building block to establishing an on-demand model for IT to better serve the needs of the business. Cloud offers the ability to reduce the time it takes to provision services from weeks to hours. But how can IT establish processes that best take advantage of this new model while also measuring its financial impact? How can this approach translate to gains in efficiency for delivering new applications and services back to the business? Mature cloud organizations complement their technology investments with expertise in operating, staffing and measuring the impact of automated provisioning.

- **Proactive incident and problem management: applying intelligent analytics to monitor and filter events facilitating automatic incident resolution and problem diagnosis.** Organizations leveraging cloud computing have the ability to evolve traditional management approaches to more proactively diagnose and address service issues before they escalate and threaten availability. To become proficient in this requires new operational best practices.

- **Cloud security, compliance and risk management: embedding policies into standard configurations to support policy-aware applications and the automation of security, audit and risk management processes.** Organizations consistently identify security and compliance issues as an impediment to more widespread cloud adoption, particularly for business-critical applications. While cloud security technologies continue to mature, organizations need to understand the impact to established security and management processes posed by the cloud. Many enterprises have critical security and compliance concerns when migrating workloads to the cloud. These can be mitigated by evaluating the security requirements for specific workloads and defining new models that take advantage of software-driven security capabilities. IT organizations that learn how to adapt technologies and processes for security and compliance find that they are operating a significantly more secure model than a traditional IT environment creates.

- **IT financial management (ITFM) for cloud: basing IT cost recovery on a granular cost attribution model and the actual consumption of services, enabled automated metering and 'showback' / 'chargeback' mechanisms.** Cloud computing delivers a fundamentally new economic model for IT; one where the costs of IT are more transparent and can be more effectively aligned to the value delivered to the business. As solutions continue to mature to provide ever more granular financial detail about IT environments, organizations can take advantage of this data, leveraging this new insight to build greater value and relevance for IT's contributions to the business. This financial alignment allows organizations to precisely tie the costs of computing to new business initiatives, facilitating business trade-offs and investment decisions. ITFM is a critical complement to on-demand services – associating a cost with services to help manage the spikes in demand that occur when users can provision resources at the touch of a button.

IT organizations that do invest in evolving their cloud infrastructure, operational processes and internal structure can see significant benefit in the way that IT operates and in the value IT can deliver back to the business. Advancing core cloud capabilities helps IT operate more efficiently and with greater agility, while also delivering a more reliable environment for the broadest range of workloads. While the above provides just an overview of each area of capability, VMware has developed deep expertise in each of these core capabilities, making this expertise available to customers along with strategic counsel.

As customers become more sophisticated in their cloud capabilities, they are able to shift the way they operate, moving from being a reactive organization, to becoming proactive and a source of innovation – more successfully partnering with the business to achieve common goals. VMware's experience has helped to identify common characteristics of these most successful organizations as well as specific steps that IT can take to shift how they operate and evolve the role that they play in the business.

Reactive: Managing the Growing Demands of the Business

The majority of IT organizations today are still struggling to shift from a reactive mode of operations. They face a growing tension with their business stakeholders as inflexible IT systems and outdated processes prevent IT from satisfying the need for the rapid delivery of new services and applications to advance the business.

Most reactive organizations find that cloud has entered the business opportunistically, with lines of business procuring infrastructure, developer services and applications direct with external providers. The primary driver for these purchases is time to market. The availability of on-demand services provides buyers with immediate operational benefits delivered via innovative business models and self-service environments. A common IT reaction is to view these external providers as a threat both to the relevance of IT and to the standards for compliance, risk management and security that IT is charged with delivering.

However, there is a greater risk. With applications, data and resources now residing outside of the IT service model, security, performance, reliability and governance is not ensured. Public cloud and Software as a Service providers offer a range of infrastructure environments, policies and standards that can create a risk for sensitive data, intellectual property and services that are critical for revenue generation and business operations. In the future, these opportunistic investments often become siloed environments. Inconsistent platforms across multiple vendors, disconnected management environments and costs dispersed across multiple cost centers, threaten IT's ability to properly manage efficiencies through automation, common management platforms and financial planning.

Some organizations do choose to run revenue-generating or core business applications in their cloud under these conditions. However, most restrict their cloud environment to test, development and opportunistic applications until they have put in place more stringent processes and capabilities for disaster recovery, security and compliance that satisfy enterprise-level SLAs.

In order to break away from this reactive mode of operations, IT needs to establish some degree of order over how IT services are being leveraged via the cloud. IT is typically shifting and evolving not just the core infrastructure technology, but also key operational processes, beginning to operate as more of a cloud provider for their organization. A key milestone is to establish a self-service environment that helps to create efficiencies for IT and faster environment provisioning for application test and development. IT must also begin to understand how it can embrace third party resources, including creating a centralized model for provisioning and managing SaaS applications. For IT to benefit from a self-service environment, discouraging flight to third-party infrastructure providers, it must understand best practice not just for building this environment, but for operating and managing a self-service model for their internal stakeholders.

Organizations that are able to evolve away from a reactive state of operations have understood what it takes to be more responsive to the needs of the business and to deliver innovation at the pace that the business needs. IT is making deliberate investments that move them further away from opportunistic cloud investments that fit a single narrow need, but lack an overall strategy for a standard architecture and a standard model for future IT evolution. Building a strong business plan for cloud and beginning to establish a standard infrastructure model for how cloud services will be built, delivered, staffed and measured, creates a foundation for future cloud investments and sets up a transition for IT to take up a new, more strategic role within the business.

Moving Beyond a
Reactive State of IT

In order for IT to shift away from this reactive operating model, an organization needs to take specific steps to redefine the way it operates and the foundation technology it leverages. Investments at this stage should be made that bring greater order to pre-existing cloud installations and work to ensure that rapid innovation can be delivered in a way that does not create risk for the business through the creation of future silos.

The specific steps that need to be taken include:

• Beginning to identify IT costs in greater detail, laying the foundation for more mature financial models such as 'showback' and 'chargeback'.

• Expanding the service catalog to include business-impacting public and private cloud services.

• Enabling self-service to free-up request management resources.

• Identifying core processes for automation, including the provisioning and deployment of standard services across clouds and new service development and release processes.

• Employing heterogeneous cloud management tools for proactive management and visibility across clouds.

• Applying intelligent analytics to monitor and filter events and facilitate proactive incident resolution and problem diagnosis.

Proactive: IT as a Service Broker

As cloud investments shift from being opportunistic to becoming part of a coherent IT strategy, organizations assume a more proactive state of operations. Early investments in self-service models and new investments in automation continue to free IT resources. These can then be redirected towards further innovation and transformation. Organizations operating in a proactive state typically have the ability to derive greater cost and financial data from IT systems, gaining a deeper understanding of OPEX across IT. They also begin using industry and peer benchmarking as a mechanism for gauging progress.

Proactive organizations are able to link individual cloud decisions, including the selection of external cloud sources and services, to a common, overarching strategy directed at long-term goals. By aligning these decisions with the organization's broader IT strategy, greater visibility is achieved over the costs associated with external providers as well as over the gains achieved in efficiency and cost control that can be reinvested into resources that grow and competitively differentiate the business.

IT organizations operating under this model have evolved more than just technology. They have evolved their associated processes and organizational structures too, supporting cloud as an increasingly core component of the long-term IT strategy and business vision. Because of investments in infrastructure and operations, proactive organizations are able to support business-impacting, tier one applications in the cloud, enjoying a high degree of confidence that key SLAs can be supported. This is a critical step to expanding the pervasiveness of cloud computing beyond test, development and opportunistic applications. Establishing an infrastructure and processes to support cloud-level disaster recovery, along with security, compliance and governance practices ensures that applications linked to revenue generation and customer relations can benefit from IT's cloud model. Incorporating the broadest set of business-impacting applications into IT's cloud environment also ensures a greater impact to OPEX savings, due to automation and common management models.

Many customers have also leveraged a Cloud Infrastructure Operations Center of Excellence to help drive their cloud strategy. This team brings together unique cloud expertise with cross-functional domain expertise within the IT organization to help make smart, business-focused architecture and implementation decisions concerning the cloud infrastructure. The Cloud Infrastructure Operations Center of Excellence evaluates key processes that will need to evolve and key technology investments to ensure that cloud moves forward along a strategic path. The Cloud Infrastructure Operations Center of Excellence plays an important role in helping an organization evolve pragmatically while constantly moving towards IT's overarching cloud vision.

Another innovation that supports this advanced level of capability is Cloud Tenant Operations. Cloud Tenant Operations is central to governing, developing and providing cloud service offerings in a strategically aligned way. It incorporates Service Governance and Lifecycle Management, Service Design and Development Management, Service Operations, Provisioning Management, and Consumer Management. Cloud Tenant Operations define and deliver services that could be deployed to internal systems, a private cloud, to an external cloud managed by a cloud provider, or both in the form of a hybrid public/private cloud. In this way it creates an ideal service orientated business.

The Impact of IT as a Service Broker

One of the most significant shifts in proactive organizations is their ability to behave as a service broker. IT service brokers are able to strategically manage multiple cloud sources, including those delivered by external providers, matching these resources to the unique needs of specific applications or services. As demands for IT services are made, IT is able to balance each request based on the standards of cost, risk and quality of service required for each application or service.

As an example, a specific line of business may require the resources to develop a new service that will be piloted to a small group of customers. The requirements are relatively low for performance, security and scale. However, the application must be deployed rapidly to ensure that testing and further development can move forward quickly to capture a first mover advantage. If the application succeeds with the test group, the team will want to ensure the application can be migrated to a more scalable, more secure environment with limited revision. Based on these requirements, IT would be able to match these needs to the optimal resource within IT's portfolio.

Another scenario may involve an update to an existing financial system where confidential data on customers and transactions is maintained. The requirements for this scenario are quite different, requiring that data be stored in a highly secure environment while supporting stringent compliance standards. Again, IT would be equipped to match the specific needs of this request to the cloud resources that support the highest standards for risk management, understanding that the budget requirements were justified given the demands of the specific service.

Becoming a service broker is a fundamental step in embracing cloud services from third party providers, in addition to an internal cloud, and leveraging both as an innovation accelerator. As a service broker, IT can ensure that business stakeholders are leveraging approved third-party suppliers and that all IT resources take maximum advantage of shared management and automation.

But even more importantly, becoming a service broker, extends IT's role as a source of innovation for the business. By brokering a range of services, from on-demand infrastructure to SaaS applications and developer environments, IT helps to enable the business to be more agile in the way that services are built, deployed and consumed. Over time, the role of the service broker plays an important role in establishing IT as a strategic partner for the business.

Advancing to an Innovative Cloud Organization

Proactive organizations are defined by their ability to provide an expanded portfolio of business services, to increase levels of service, to bring order to cloud investments and to drive a cohesive strategy for how cloud benefits the business in the long-term. A more granular understanding of the financial aspects of IT – utilizing industry and peer benchmarking and implementing clear cloud-era processes and organizational changes – helps to transform cloud from an opportunistic investment to a strategic model for IT. With the role of Service Broker, IT becomes an advisor to the business, helping to link key IT services to business requirements across a portfolio of capabilities.

In order for IT to further mature and expand its ability to act as a source of innovation for the business, the organization can take specific steps to redefine the way that IT operates and the technology it leverages. Investments at this level expand and formalize earlier decisions, making cloud the standard operating environment across the broadest set of use cases by:

- Leveraging granular financial data to counsel the business on tradeoffs between cost, quality of service and risks across diverse service and sourcing options.

- Managing IT performance against a balanced scorecard and comparing to industry and peer benchmarks that examine efficiency, agility and reliability metrics.

- Expanding the scope of the Cloud Infrastructure Operations Center of Excellence to manage a broader percentage of the IT infrastructure footprint.

- Extending the role of Cloud Tenant Operations to provide best-of-breed business services through a combination of in-house private cloud hosted and external cloud provider hosted SaaS applications.

- Extending the service catalog to include business critical services.

- Driving continuous improvement through increased automation and the integration of all cloud operational processes.

- Enabling predictive operations and automated, policy-driven remediation.

- Extending heterogeneous cloud management environments to support seamless operational management across internal and external clouds providing unmatched visibility to optimal 'point-in-time' cloud sources – based on cost, quality of service and risk.

Innovative: A Strategic Partner to the Business

Through continued investments in automation and optimization, the evolution of IT into the role of a service broker and increasingly more detailed financial analysis and benchmarking, IT is now in a strong position to play a strategic role in driving innovation that advances the goals of the business.

Innovative organizations have further matured their operational foundations, enabling the more unified management of hybrid environments enhancing the provisioning and management of resources across diverse infrastructure sources. Broader deployments of automation capabilities and deeper analytics help to predictively prevent service issues and interruptions. From a business user perspective, the underlying technology and physical location of resources become irrelevant, shifting the conversation between IT and the business to service types and service levels, rather than infrastructure.

Organizationally, teams and structures like the Cloud Infrastructure Operations Center of Excellence and Cloud Tenant Operations expand in scope to manage a broader set of decisions and strategies, as cloud becomes the dominant model for IT. With investment in skills development focused on how to successfully operate cloud environments, cloud expertise and a service-oriented mindset starts to define the IT organization's culture.

But the most significant change for innovative organizations is the team's ability to contribute to overall business strategy. These types of organizations are able to more effectively link financial measurement and benchmarking with specific business decisions, as well as freeing up more resources through automation for initiatives that grow the business – rather than simply maintain current operations. It is this ability to make strategic decisions based on their positive business impact that best defines innovative organizations. By effectively managing cloud resources, including those from multiple external providers, IT is in an optimal, proactive position to contribute to the strategic direction of the business, rather than simply respond to the various demands brought to it. In short, IT is fully enabling the business and in some instances, actually driving it. These capabilities are essential to establishing the role of IT as a partner not just in business decision-making, but in business success.

How VMware Can Help You Become a Strategic Partner to the Business

VMware has been the common element behind some of the largest and most successful cloud environments around the world. This includes private cloud implementations and a global network of public cloud service providers leveraging VMware technology to create a standardized infrastructure across clouds. In working with these organizations, VMware has gained unique insight into how IT organizations are evolving not just their cloud infrastructures, but their wider Cloud Ops to gain the greatest advantage from the transformation underway in the industry.

These VMware customers are leveraging cloud computing to deliver new services, enter into new markets, get closer to customers and make increasingly mobile and demanding employees more productive. Leveraging this expertise, VMware is helping to extend the results of these leading organizations to the broader market.

VMware cloud solutions improve IT efficiency, agility and reliability and help drive innovation. By combining the technologies, services and guidance required to build, operate, staff and manage your cloud, VMware cloud solutions help organizations maximize the benefits of cloud computing. The technical foundation of VMware cloud solutions, VMware vCloud Suite® is the industry's first complete and integrated cloud infrastructure suite and the platform underpinning the software-defined datacenter. The vCloud Suite dramatically simplifies IT operations and delivers the best service-level agreements (SLAs) for all applications.

The operational and organizational foundations of VMware cloud solutions are based on proven education, certification and implementation services and guidance from unparalleled VMware experience with customers moving to the cloud.

VMware Cloud Operations Services provide you with insight, prioritized recommendations, and expert guidance to transform operational processes and organizational structures, and apply financial models to realize the greatest value from your cloud. Services delivered by VMware and its partner ecosystem help customers develop essential capabilities within their organization:

- **On-demand Services** – Implement a new self-service model to lower IT costs and increase agility.

- **Automated Provisioning and Deployment** – Evolve request fulfillment, application development and deployment processes to gain newfound efficiency.

- **Proactive Incident and Problem Management** – Leverage automation and policy-based management to eliminate error-prone manual processes and proactively manage systems before issues arise.

- **Security, Compliance and Risk Management** – Safeguard the business by ensuring enterprise-level standards for how systems are protected across your cloud environment.

- **IT Financial Management for Cloud** – Transition to a new financial paradigm that provides transparency and directly links the costs of IT services to their demand and consumption.

Flexibly-designed, Cloud Operations Services offerings provide you with collaborative assistance in analyzing, designing and implementing focused cloud ops across functional areas that address integrated process, people and supporting management tools.

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