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50 Years of Growth, Innovation and Leadership

Straight Talk:

How to Cut Through Cloud Complexity and Implement Successful
Cloud Solutions in your Company

An Executive Brief
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INTRODUCTION

The question is no longer whether to enter the cloud. If your company is serious about competing in the marketplace, the cloud represents your best way to transform IT to support your company's most urgent business needs—including competitive differentiation, productivity enhancement, business agility and cost reduction.

But once you make the decision to enter the cloud, you will likely be slammed by a deluge of questions that threaten your cloud project. How and where should you start? How can you gain executive support for the project? Which workloads should be migrated, and in what order? Which deployment models are right for which workloads? Which vendors offer the best solutions? And, importantly, how can your legacy systems be incorporated into the new cloud environment to minimize disruption and protect investment?

No doubt about it, the cloud is complex. As revealed in a recent Frost & Sullivan survey of cloud decision-makers, the majority of enterprise IT decision-makers face obstacles in their efforts to make cloud decisions. In fact, most decision-makers believe that cloud decisions are even more complex in their own companies than other companies in their industry. Unless they are able to overcome the challenges and implement a solid cloud strategy, they may find themselves at a competitive disadvantage.

Truth is, if you believe developing and implementing a cloud solution in your company is difficult, you are right. Senior executives—from IT and the business—need to understand this and take steps to effectively address the challenge.

In this white paper, Frost & Sullivan sets out the key steps for cutting through the complexity and building a sustainable IT landscape through the cloud. Using data from the 2012 Global Cloud User Survey, we identify top concerns and challenges that enterprises are facing as they develop and implement their cloud strategies. We outline strategic planning assumptions that enterprises must consider as they map out their cloud strategies. Finally, we list the top criteria for overcoming complexity and selecting cloud solutions that have the best chance for success.

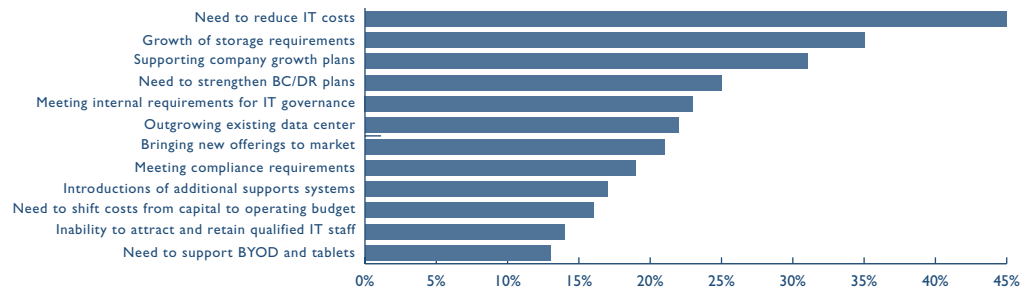
WHY CLOUD? BUSINESS DRIVERS

Today's IT leaders are increasingly squeezed by two types of business challenges. On the one hand, the competitive global landscape requires greater efficiency and budget constraints, requiring the business to rein in spending and focus on margins. At the same time, new technologies create unprecedented opportunities to grow revenue, expand services, and enter new markets. It is left to IT to determine how to balance these two types of challenges: to simultaneously contract and expand operations, to build resources in some areas while cutting back in others. As they address the struggle, one thing is clear: the old, traditional systems and processes are not sufficient to meet the new challenges.

If you believe developing and implementing a cloud solution in your company is difficult, you are right. Senior executives from IT and the business need to understand this and take steps to effectively address the challenge.

As shown in Figure 1, IT decision-makers cite a range of challenges that are forcing them to re-evaluate their corporate IT operations.

Figure 1: Drivers for Re-evaluating IT Landscape



Source: Frost & Sullivan

The cloud can address many of these challenges. Cloud services utilize technologies, such as virtualization and service automation platforms, that are based on principles of standardization, automation, and replication. Through the use of templates, application programming interfaces, and pre-tested platform tools, cloud solutions can reduce cumbersome manual processes, ensuring consistent, high-quality, replicable delivery of IT services. Because the cloud reduces highly manual processes to a few keystrokes, it can take less time to provision, test, scale and administer workloads in a cloud environment than in a traditional IT environment. Furthermore, user-friendly cloud tools generally demand a lower degree of technical specialization, giving IT departments the flexibility to share staff as needed across functions.

As a result, IT and the business can realize several important benefits from a well-executed cloud strategy, including:

- **Lower costs** – Virtualization technology, which underlies cloud configurations, enables more workloads to share less hardware. This means that IT has to invest less capital in new and upgraded servers and storage. In addition, automated cloud processes can reduce costs associated with maintenance, testing, and rollout of workloads. Furthermore, a flexible cloud environment can result in greater availability of workloads, thus minimizing opportunity costs associated with downtime.
- **Scalability** – Cloud environments enable IT to scale applications up or down on demand in a process that can take just minutes via a Web-accessible portal. For cloud-enabled workloads, this eliminates the costly and time-consuming effort to provision and test new physical hardware as workloads grow or to take servers out of commission when they are no longer needed.
- **High availability** – In a global environment, business is conducted 24x7. Customers, suppliers, and employees expect to be able to access their applications any time, from anywhere, and they have little tolerance for downtime, whether for planned maintenance

or unexpected disaster. Because of the ability to easily replicate and move workloads, enterprises are incorporating the cloud into their disaster recovery and business continuity planning.

- **Business agility** – As market conditions change, IT can quickly respond to line-of-business requests for new or updated workloads. In many companies, this ability elevates the status of IT from supplier organization to strategic enabler, thus paving the way to business process transformation.
- **Security** – Though it may seem surprising, many enterprises turn to the cloud to gain greater control over their data security environment. Enterprises understand that any Internet-accessible data center environment (public or private, on-site or remote) has risks and they expect to work with their cloud vendors to manage those risks. Businesses benefit when their cloud provider utilizes highly secure and resilient (Tier III or IV) data center facilities. In addition, businesses can benefit when they apply consistent security profiles across their cloud-based workloads, reducing human error.
- **Innovation** – The pace of new technology introductions in the market is staggering. Companies that invest in business-enhancing technology to serve customers, generate revenue, or deliver products and services are more likely to stay ahead of the competition. One way the cloud model supports innovation is by offering a low-cost test environment to try out new applications. In addition, innovative companies are finding that, by reducing the amount of time and effort spent on mundane maintenance tasks, the cloud can free up more IT staffers to pursue creative solutions to business problems.

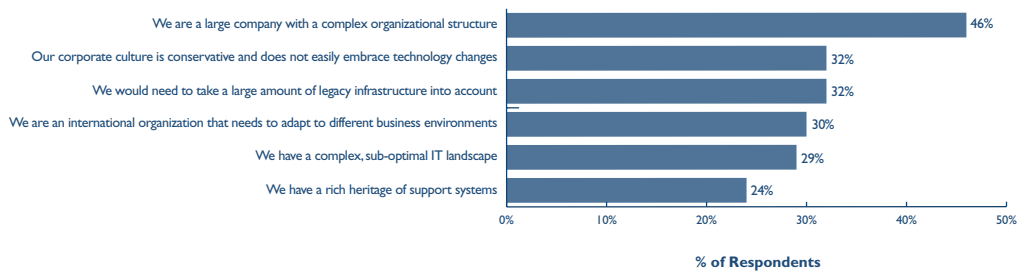
Enterprises understand that any Internet-accessible data center environment has risks, and they expect to work with their cloud vendors to manage those risks.

As the role of IT shifts from operational to strategic, from supplier organization to driver of business growth, the cloud is increasingly seen as a way to enable and accelerate the shift.

CHALLENGES TO IMPLEMENTING A CLOUD SOLUTION

While IT leaders generally agree that the cloud can help them solve their key IT challenges, they can easily be overwhelmed in their attempts to build and implement a cloud solution in their own companies. IT leaders are keenly aware of the uniqueness of their companies—uniqueness that manifests itself in corporate culture, organizational structures, geographical presence, infrastructure and processes. Therefore, they anticipate significant difficulty in navigating their own corporate decision-making processes. The majority (59 percent) of IT decision-makers believe that cloud decisions are unusually complex in their organizations, with a range of reasons shown in Figure 2.

Figure 2: Reasons for the Complexity of Cloud Decisions



Source: Frost & Sullivan

For these companies, an off-the-shelf cloud solution that fails to accommodate their own company’s differentiators has a high probability of failure.

Furthermore, the decision-making complexity is exacerbated by heightened expectations. To today’s IT leaders, the cloud is more than an alternative solution to current IT challenges. Increasingly, they consider the cloud as a catalyst for major business process transformation. As the role of IT shifts from operational to strategic, from a “supplier organization” to a driver of business growth, the cloud is increasingly seen as a way to enable and accelerate the shift.

This, of course, increases the complexity of the cloud initiative. No longer a “decision” but a journey, the cloud strategy is understood as a foundation for business growth. This places additional pressure on enterprise IT leaders to develop a comprehensive strategic plan for implementing a cloud solution.

STRATEGIC PLANNING ASSUMPTIONS FOR ENTERPRISE CLOUD STRATEGY

Through their cloud research, most enterprise decision-makers have gained a solid understanding of cloud technologies and the way the model operates. The challenge is making the cloud an integral part of the fabric of their company. Here are some strategic planning assumptions to consider in developing and implementing a cloud strategy for your company.

1. Cloud is complex. This basic assumption bears repeating; if overlooked, your cloud project risks failure. To ensure your company gains full value from your cloud strategy, you must develop, implement and manage a multi-faceted yet cohesive plan. This likely will require relying on third-party experts to augment your own staff during the cloud journey. The key is to anticipate the complexity and set the expectations of your team and stakeholders (e.g., senior leadership team, line-of-business colleagues, finance and security executives), so that you gain the support you need to make the best choices for your company.
2. Complexity necessitates choice. The cloud model manifests itself in a range of deployment models: private, public or hybrid configurations; on-premises or hosted; with shared and dedicated resources. Be aware that there is no “right” or “best” model; your team will make decisions on a workload-by-workload basis. Furthermore, you should assume that changes in your company and industry will require a recalibration of your cloud solutions. Therefore, you should be sure your cloud strategy accommodates the broadest range of choices.
3. Complexity necessitates interoperability. Not all clouds are alike, but all your clouds must work together in a hybrid configuration. Regardless of deployment model or vendor, each cloud environment you use should support common management and administrative interfaces and enable you to easily move or split workloads. Interoperability is an important consideration as enterprises take the leap from “trying out” multiple cloud offers to implementing a comprehensive, consistent cloud strategy.
4. Complexity necessitates integration with legacy infrastructure. Few enterprises are interested in replacing their existing data centers with cloud. Nor will they be satisfied with maintaining two parallel environments, traditional and cloud. Instead, they expect to leverage their existing infrastructure as part of the new cloud-based IT environment. Assume your legacy infrastructure can and should be part of your cloud, and find a provider that can support the configuration you want.
5. Complexity necessitates customization. Each enterprise is unique and complex. Even the most successful and well-run companies have different ways of attaining success and different operating procedures. For a broad-scoped cloud initiative to succeed, it must respect the unique culture and procedures that are inherent in the enterprise. As you develop your cloud strategy, steer away from “off-the-shelf” best practices. Instead, ensure that you and your partner will invest time in developing cloud processes that fit your unique company.
6. Complexity necessitates end-to-end responsibility. A cloud environment has a lot of disparate components, including hardware (servers, network, storage), software (hypervisors, service automation platforms) and services. Often, they are procured from a variety of vendors at different times. As the piece-parts are combined, it can be difficult to establish end-to-end responsibility for performance, security and availability. Assume that your cloud partner will fill that role, offering service-level agreements for the attributes that are most important to your company.

Cloud is complex. The key is to anticipate the complexity and set the expectations of your team and stakeholders, so you gain the support you need to make the best choices for your company.

Cloud is too complex and touches too many parts of your business to trust to a provider that delivers an off-the-shelf service. Instead, look for a partner that understands your company and delivers the right level of service, when and how you need it.

CUTTING THROUGH THE COMPLEXITY

The strategic planning assumptions become the foundation for defining your company’s requirements in a cloud solution and thus, for identifying cloud service providers who can meet those requirements.

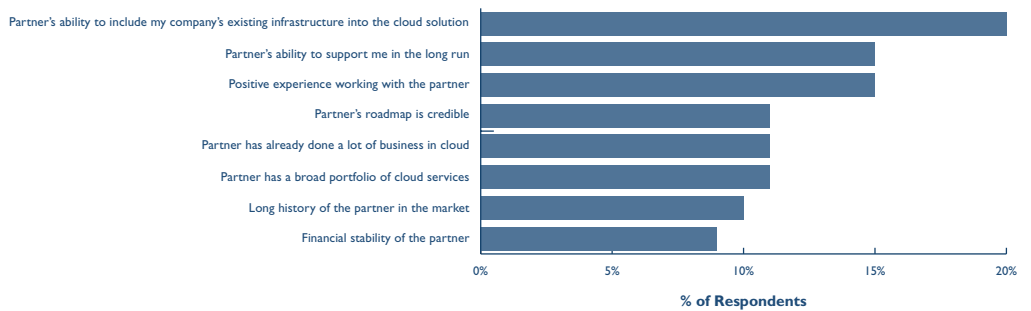
In defining your cloud requirements, keep in mind that the cloud is not a one-time initiative, but an ongoing journey. Your goal is to develop a framework that will work for your current needs as well as potential future needs. As a result, your requirements list should be broad and inclusive, but enable you to move as quickly or as slowly as you choose in implementing your cloud.

In addition to establishing your own requirements, you need to assess your resources and determine how and what type of partner support you will require. A qualified cloud service provider can help develop the roadmap that will cut through the complexity of cloud decisions and enable you to move forward.

For many companies, the right choice is to look for a cloud partner, not simply a provider. Cloud is too complex and touches too many parts of your business to trust to a “provider”; that is, a vendor that delivers an off-the-shelf service, no matter how competently. Instead, look for a “partner” who understands your company and your needs and delivers precisely the right level of service when and how you need it. Furthermore, with a partner, you can establish joint success measures, so that you both are in agreement about the goals of your cloud journey, and you jointly share responsibility for achieving them.

But how do you choose a partner or partners you can trust? Figure 3 shows the top-ranked factors that IT decision-makers use in determining the type of service provider they would trust to be their primary cloud partner.

Figure 3: Top Factors for Trusting a Cloud Partner



Source: Frost & Sullivan

As you work with cloud partners, seek advice on the following:

- 1. Cloud choices.** Since your cloud environment can be expected to extend across multiple deployment models, you need a provider that can support the full range of options. This includes hosted public and private clouds, as well as traditional and cloud-based premises configurations. Furthermore, the provider should deliver a true hybrid cloud solution that integrates multiple environments. Look for a provider that supports a common service automation platform and easy-to-use management portal across all cloud deployment models.
- 2. Solutions for all or part of your cloud landscape.** Some businesses begin their cloud journey with a comprehensive effort, while others prefer to start with a few discrete solutions. Wherever your cloud journey starts or leads, ensure the solutions you choose support your timeline and roadmap. As your cloud landscape evolves, your provider should be prepared to step up with expanded solutions to meet your needs.
- 3. End-to-end solutions.** As noted, a cloud environment comprises multiple components (software and hardware), from multiple vendors, that must be configured for optimal results. But who tracks the results? Your cloud partner should take responsibility for end-to-end delivery of workloads, ensuring that the parameters you have established for availability, performance and security continue to be met. The end-to-end responsibility must be backed up with strong service-level agreements that reflect your company's priorities.
- 4. Linking your traditional infrastructure to the cloud.** This is a critically important criterion, and one that is not supported by some of the largest cloud service providers. Enterprises understand that the only way their cloud strategy can achieve the goal of transforming IT is if it includes the legacy systems (hardware and software) that consume 80 percent of enterprise IT budgets and resources. Otherwise, the cloud will remain peripheral to the main business of IT. A provider with deep experience in traditional enterprise data center infrastructure and design—including security, servers, storage, network and services—is best positioned to integrate the traditional with the cloud in achieving the desired transformation.
- 5. Security.** Security remains a significant concern for companies as they seek to protect their data and business processes, and comply with governmental and industry regulations. The cloud raises the stakes, especially when workloads and data are shared among data centers and accessed by multiple constituents. With security threats continually multiplying and changing, and with regulatory bodies continually issuing new and disparate data-handling rules, it takes a security expert to ensure that the cloud environment remains secure. Be sure your cloud solutions have flexible security parameters, enabling you to apply the right level of protection to each workload. A provider with security experts on staff can run a security assessment of your workloads and data, and recommend the appropriate cloud or traditional deployment model for each.

6. Global presence. Every business today is global, with customers, suppliers and often employees located around the world. A local or regional provider does not have the experience, knowledge, or physical presence to support global operations. Instead, choose a global provider that is equipped to help your business grow worldwide.

7. Navigating complexity. If you are among the enterprises that will seek assistance in managing the complexities of the cloud—from decision to implementation to management—then be sure to select a partner that has the operational support structure and processes to address each customer’s organizational uniqueness. Look for a partner that is willing to work with your company’s unique decision-making hierarchy, corporate culture, business processes and priorities, and on-staff resources. The partner should offer flexible, professional and managed services that complement your own staff’s expertise and availability. Furthermore, the partner should be willing to work not only with your existing legacy infrastructure, systems and processes, but also with your existing partnerships with other companies.

8. Track record in serving enterprises. Many cloud providers are start-ups with a great deal of enthusiasm but little history in actually providing services to real customers. Your business is too valuable to risk with an untried provider. Instead, be sure to select a partner with years of experience serving companies like yours.

In the end, you need to select an approach that will work for you and a key element in your success is your choice of partner. Look for a partner that has proven expertise in cloud and related fields, including building and managing enterprise data centers, offering hosting services and providing security services. Choose a provider that has the knowledge and capability to integrate your existing infrastructure as part of your new cloud-based IT environment. A provider that you can count on to deliver just the assistance you need, when you need it, is a valuable ally in your successful cloud implementation and evolution.

THE LAST WORD

The cloud decision is complex because the cloud is complex and because your business is complex. As you approach your cloud decision, consider not just your current needs but what your company may require as it grows and evolves. Successful cloud deployments require continual access to the following eight criteria:

- A broad range of integrated cloud deployment options
- Solutions that can be applied to all or part of your cloud environment
- End-to-end solutions, backed by service-level agreements
- The ability to link your traditional and cloud infrastructure
- Strong security parameters in all aspects of the solution
- Global support
- A no-nonsense approach to decision-making and management
- A cloud partner with expertise and experience

There are only a few cloud partners that will be able to meet all your criteria, so choose wisely. Your cloud initiative has the power to transform not only IT processes, but business processes that can increase your company's competitive success. With the right partner at your side, the cloud is no longer a challenge, but a strong enabler for your business.

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