# Gaining Steam

Survey shows private cloud investments are leading the pack in their ability to provide documentable ROI

**With maturity comes clarity, and the choice between public, private or hybrid cloud deployments is a prime example. According to a recent IDG Research Survey, private and hybrid cloud adoption is gaining strength at organizations of all sizes, and has the power to serve as a competitive advantage. However IT leaders must address certain barriers to fulfilling the promise of a private or hybrid cloud initiative.**

While individual organizational needs often dictate the best approach to the cloud, survey results show when it comes to deciding between various configurations, just under one quarter of respondents (21 percent) indicate the ability to show value in public cloud investments. As such, the anticipated cost-savings story associated with public cloud is nuanced and complex. Comparatively, the private and hybrid cloud models are currently showing most significant promise. Specifically, 70 percent of respondents note their distribution of cloud application or infrastructure is across either private or hybrid configurations.

Although most companies are still in early deployment stages of private or hybrid cloud, the usage of hybrid clouds for a variety of purposes is expected to expand over the next 18 months.

The key areas where respondents see expansion of hybrid cloud configurations include:

- Using public and private cloud side-by-side (42 percent vs. 32 percent today),
- As backup (42 percent vs. 28 percent today), and
- With data on private cloud with processing on public clouds (41 percent vs. 26 percent today).

These IDG survey results echo the findings and predictions in the February 2012 paper by Gartner analysts David W. Cearley and David Mitchell Smith, “Five Cloud Computing Trends That Will Affect Your Cloud Strategy Through 2015.” In this report, the analysts state that “over time, hybrid cloud computing could lead to a unified model in which there is a single cloud made up of multiple cloud platforms (internal or external) that can be used, as needed, based on changing business requirements.” With this in mind, Gartner recommends that enterprises should focus “near-term efforts on application and data integration, while linking fixed internal and external applications with a hybrid solution. Where public cloud application services or custom applications running on public cloud infrastructures are used, guidelines and standards should be established for how these elements will combine with internal systems to form a hybrid environment.”

The key reason for enterprises moving toward private and hybrid clouds compares to public cloud is the fact that cost benefits are not easily obtained for public cloud as initially anticipated. According to the survey, only 56 percent of respondents noted the ability to meet short-term cost benefit expectations from public cloud investments whereas 28 percent fell short. In addition, only 50 percent realized long-term cost benefits with 29 percent falling short of expectations. Top project triggers for private or hybrid cloud include: new or green field application projects, (53 percent), and virtualization (45 percent).

## Building upon Benefits

Initial cloud deployments were based on cost; however, enterprises are attracted to the flexibility and agility that results from cloud computing deployments. As a result, more mission critical application workloads are moving to the cloud. When implemented using standardized modular architectures, cloud computing not only saves money it also improves service levels for all workloads.

As the IT organization approaches full virtualization, the business can realize significant cost and agility benefits by increasing automation levels and transitioning to a model that delivers IT as a service: a dynamic, scalable, secure infrastructure that is cost-efficient, easy to manage and transforms IT from a perceived cost center to an enabler of the customer's business.

The IDG survey showed 80 percent of respondents are currently embarking on some kind of cloud initiative and 54 percent are deep into an implementation. And, fortunately for those embarking on either a private or hybrid cloud approach, investments in the cloud to date are already paying off, with several survey respondents reporting the ability to increase agility (90 percent), the ability to gain long-term cost benefits realized from cloud investments (83 percent) and the ability to show value to the business (82 percent) have exceeded or met expectations. Additionally, nearly one-half have experienced better disaster recovery protection and faster provisioning and service delivery as a result of private or hybrid cloud deployments.

**Considering the results of your organization's private or hybrid cloud deployments to-date, specify whether the following have exceed, met or fallen short of expectations.**

| Private Cloud | Exceeded/Met Expections (NET) | Exceeded Expectations | Met Expectations | Fell short of Expectations | Base* |
|---|---|---|---|---|---|
| The ability to improve agility | 90% | 28% | 62% | 10% | 81 |
| The ability to gain long-term cost benefits realized from cloud investments | 83% | 15% | 68% | 17% | 75 |
| The ability to show value to the business | 82% | 18% | 65% | 18% | 85 |
| The time period for recognizing return on cloud investments | 72% | 13% | 59% | 28% | 78 |
| The ability to gain short-term cost benefits realized from cloud investments | 70% | 12% | 58% | 30% | 83 |
| The ability to accurately calculate costs resulting from cloud deployments | 70% | 9% | 61% | 30% | 79 |

**Considering the results of your organization's public cloud deployments to date, please specify whether the following have exceeded, met or fallen short of expectations.**

| Public Cloud | Exceeded/Met Expections (NET) | Exceeded Expectations | Met Expectations | Fell short of Expectations | Base* |
|---|---|---|---|---|---|
| The ability to show value to the business | 82% | 21% | 61% | 18% | 71 |
| The ability to improve agility | 75% | 17% | 58% | 25% | 72 |
| The ability to gain short-term cost benefits realized from cloud investments | 72% | 72% | 56% | 28% | 71 |
| The ability to gain long-term cost benefits realized from cloud investments | 71% | 71% | 50% | 29% | 68 |
| The ability to accurately calculate costs resulting from cloud deployments | 68% | 68% | 51% | 32% | 68 |
| The time period for recognizing return on cloud investments | 67% | 67% | 51% | 33% | 69 |

One of the strongest benefits provided by cloud computing is flexibility, which is difficult to measure, but results in IT's ability to better align with business decisions increasing user satisfaction. With a strategic cloud deployment, IT can remain active in meeting internal customer needs. An active approach reduces shadow IT environments while yielding better governance and security. There is no reason for users to look outside, when IT is capable of fulfilling their requests.

Respondents at companies in later stages of private or hybrid cloud deployment (deploying critical business applications or using an IT as service model) are more likely than others to report this outcome has met or exceeded expectations. Of course, getting to the point where IT is ready to deliver IT as a service (ITaaS) is a journey with multiple IT infrastructure initiatives—which may or may not happen in order. Each stage of the journey provides financial advantages and business value.

## Proven Process

For most private cloud deployments, IT typically moves through four crucial stages, with many of these stages happening in parallel: consolidation of assets, virtualization, standardization and automation of service delivery. As the organization initiates each stage, it becomes more efficient, agile and capable of effectively supporting a dynamic ITaaS environment. Since this future-focused transformation ultimately provides increased efficiency and business agility, it is critical not to view each stage as completely independent. Instead, each is an interconnected stage of the larger journey where technology decisions accelerate or impede success.

**Consolidation:** In the consolidation phase, the focus is often on reducing costs related to IT infrastructure by promoting greater coordination and resource sharing within the data center. Unifying data center platforms and networks enables the organization to maximize the efficiency benefits of consolidation, while making it easier to ensure the architecture continues to support compliance and secure multi-tenancy as workloads on virtual machines travel across data centers.

In most instances, data center architectures were built before virtualization when individual applications ran on infrastructure silos consisting of multiple operating systems running on dedicated infrastructures.

The result was large capital expenditures, power and cooling costs, low utilization of resources and complex management. The primary objectives in this phase include converging LAN and SAN infrastructure, unifying network operations, reducing cabling, increasing application bandwidth and facilitating dynamic quality of service.

**Virtualization:** The goal of this stage is to systematically increase utilization while consolidating the number of physical servers to gain new efficiencies, reduce energy costs, reclaim floor space dedicated to infrastructure, and reign in license costs. As IT organizations progress along a learning curve, they try to improve their agility—rolling out new applications faster and offering new services that provide the benefits of the virtual infrastructure, like virtual desktop infrastructure (VDI). These organizations increase the likelihood of success by leveraging pretested and proven processes to accelerate their transitions and mitigate risk.

For organizations to achieve pervasive virtualization, the virtualized data center must be designed to facilitate and not fight change. Consequently, IT organizations must emphasize implementing solutions that provide ease of management, and tight and appropriate security.

With typical cloud deployment, the short-term cost benefits often surface early during the consolidation and virtualization phases. However, the standardization and automation stages commonly yield the highly attractive, sought-after long-term benefits and ROI.

**Standardization:** IT standardization requires establishing uniform specifications for IT infrastructure and processes, minimizing the number of similar technologies used to address the same basic need. Standardization can streamline procurement, simplify management, reduce maintenance effort and speed deployment. Businesses can achieve a high level of agility, allowing resources to focus on strategic and business-critical priorities. Ideally, standardization is a step adopted in parallel with consolidation and virtualization; practically, it is a focus set of initiatives taken as IT makes the next step to private cloud.

Another key component of this phase is the use of standards-based products with open APIs. Industry standards-based solutions promote common architectures and make it easier to integrate new technologies and functionality into core business processes. It is rare to find an off-the-shelf product that precisely matches all business needs, making it necessary to combine products from different vendors—a process made easier by standard interfaces and protocols.

Research has repeatedly shown that a standards-based infrastructure also leads to a more stable environment because industry standards typically evolve slowly without rapid, disruptive changes.

Hardware and software aren't the only aspects of IT that benefit from standardization. Organizations seeking operational excellence are increasingly looking at IT management processes to identify best practices, establish a common set of expectations and drive consistency. As with infrastructure, standardization paves the way for automation, while also increasing business agility, improving infrastructure flexibility and lowering support and maintenance costs.

**Automation:** Introducing automation solutions to already virtualized and standardized IT processes can dramatically increase efficiencies, productivity and agility, including the ability to deliver ITaaS. Business demands for IT services continue to grow, but, unfortunately so can IT costs, if the systems are not managed with greater efficiency. To keep the value of IT services growing faster than IT costs, IT organizations need to expand automation across all processes by simplifying deployments, reducing operational costs, improving productivity and increasing business time-to-market, while decreasing the opportunity for error.

To accomplish this, it's crucial to design virtualized IT infrastructure from its foundation for simplified management. To preserve existing investment in management platforms and the management systems that govern data center solutions, IT organizations must also seamlessly integrate investment in other management platforms within the existing IT ecosystem. As organizations continue to evolve to the private cloud, the number of requests from internal constituents will continue to increase. Businesses need solutions capable of meeting these requirements quickly and building solutions to leverage the power of a cloud-based infrastructure.

## Planning for Success

As with any initiative, achieving anticipated benefits from a cloud deployment starts with establishing a solid plan that accounts for individual needs while holding firm to best practices. Unfortunately, when it comes to the cloud, strategic planning is often a stumbling block, even for the most progressive organizations. According to IDG survey results, a lack of a clear cloud strategy (49 percent) and confusion around pricing models (48 percent) are barriers to realizing cost benefits.

Finding success within the cloud centers on an organization's ability to embrace a "plan, build and manage" approach. Recognizing the importance of strategic planning is the key to overcoming most inherent obstacles and ultimately realizing a positive ROI. In fact, early and continued planning is not only the key to a successful rollout, but also can increase the cost savings.

The starting point in determining which type of cloud deployment best suits organizational needs and limitations is to fully articulate what business needs are. This is often where IT can investigate and spotlight the key challenges. This is best achieved by evaluating and understanding IT and business drivers while conducting a thorough technology assessment. If public cloud services are already in the mix—whether through formal IT channels or shadow IT deployments, it's important to fully identify the reasoning behind each deployment. This often means a willingness to ask tough questions and insist on real answers. Achieving a solid understanding is a crucial step in developing a clear direction and solid foundation.

The next step is to go through the application portfolio and determine where each application should live, and which applications are mission-critical to the enterprise or have sensitive data. This knowledge is crucial as the organization decides where to build-out each application. For instance, should a mission-critical application be built on a public platform as a service or on a private platform as a service? Should it be migrated to a SaaS platform or should it be brought into a managed service? The primary goal in this phase of strategic plan development is to fully develop an application-decision framework capable of serving as a foundation going forward.

The common framework must provide guidance for which applications and data are allowed on the public cloud environment, and what must stay inside the firewall in a private cloud environment due to regulatory and corporate compliance requirements. The framework should also offer insight into how management and monitoring resources can be shared and optimized to create transparency and facilitate integration across all of the cloud environments.

Irfan Saif, who leads Deloitte's security and privacy practice for the technology, media and telecom sectors, believes defining a holistic strategy is critical with any cloud implementation. Users must also understand their responsibilities, especially as they relate to regulatory compliance, security and risk management. Where are the lines drawn? What kinds of specific requirements are there? How can they be adequately embedded into the contract? "Make sure you have a vehicle to go out and test these third-party solution providers to make sure they are doing what they say they are doing and that they are in compliance with the requirements you are putting on them," Saif notes. "Ultimately the responsibility lies with you. It's your data or it's data about your customers."

With a framework in place, organizations must properly plan for solid sustainable security. Regardless of how cloud has matured with higher levels redundancy and disaster recovery capabilities, security must remain a top priority. Businesses require visibility into user traffic and identity management. In addition, data governance—including compliance and policy, ranging from supply chain information to employee records—needs to focus on understanding both exposure and where key data resides. A solid plan must incorporate each aspect and outline feasible contingencies. With an overarching goal of new levels of agility and usability, a strategic plan must also account for the level at which the organization's deployment will provide secure mobile support. After all, putting the application in a cloud environment gives open access to personnel vs. on-premise solutions.

Addressing cost concerns is often one of the most crucial components of any cloud strategy, especially within an environment where flat or even shrinking IT budgets are the new reality. Often tasked with doing more with less, IT needs to keep spend under control and truly understand associated costs, which can be a significant challenge especially when venturing into new territories.

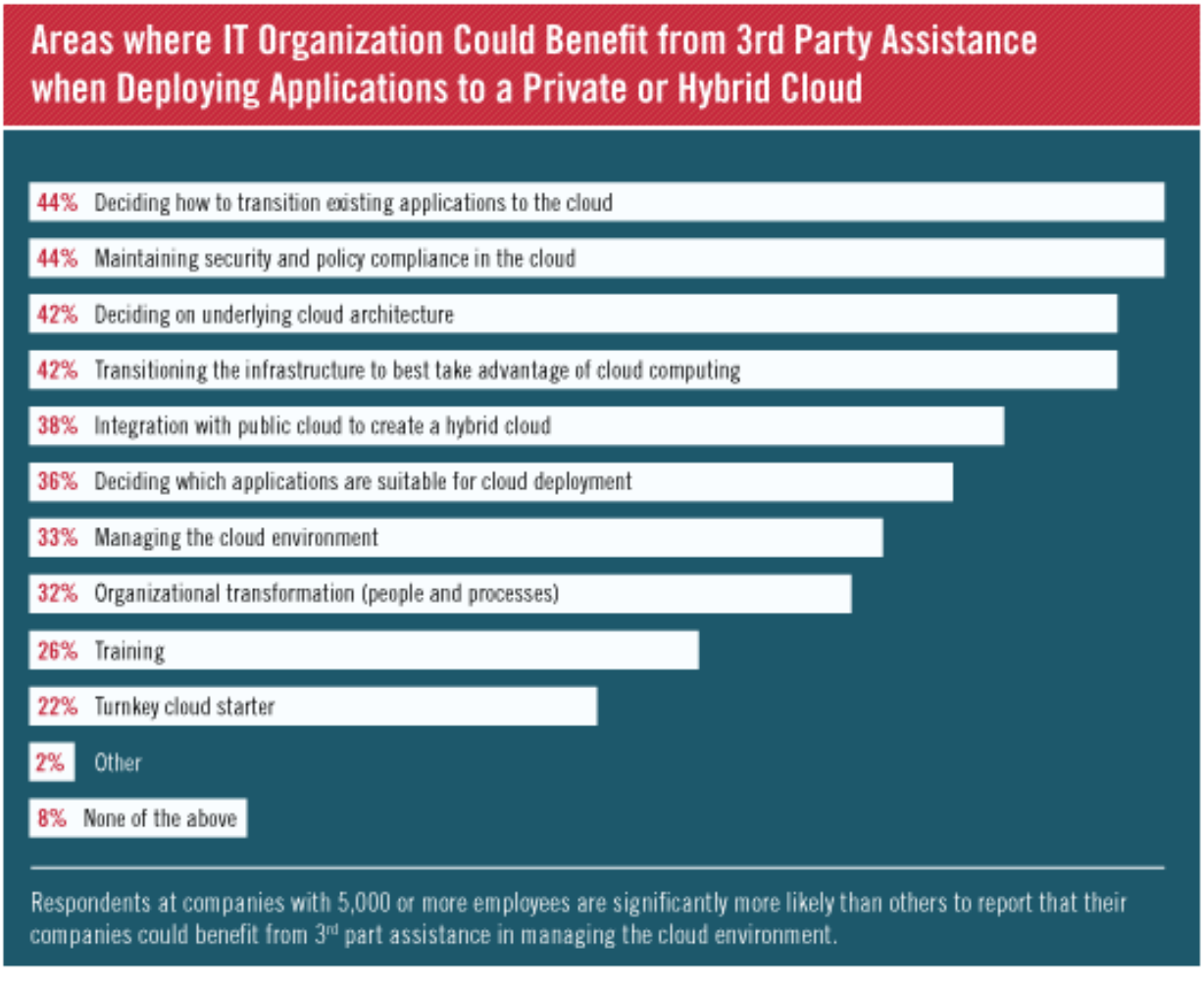
 

The best strategic cloud plan needs also account for steady growth as well. Whether growth is organic or driven through departmental requests, it puts pressure on IT, and when unaccounted for can yield shadow IT environments including unapproved public cloud deployments. Understandably this presents security issues, as well as cost and version control problems. With the right planning, IT can create agile and responsive solutions and get ahead of business needs.

## Finding Help

A trusted advisor involved both early on and throughout the process can make a big difference. Among other reasons, many respondents indicate their companies are most likely to reach out to third parties for help in:

- Deciding how to best transition existing applications to the cloud (44 percent),
- Maintaining security and policy compliance (44 percent),
- Deciding on underlying architecture (42 percent)
- Transitioning the infrastructure to best take advantage of cloud computing (42 percent).




Embracing the cloud should revolve around getting the most out of IT spend, while becoming agile and responsive. Engaging a strategic third-party partner should help IT leverage best practices to put in place specific and prescriptive steps to build a roadmap to success. A solid partner should also be able to assist with cloud vendor management. The goal should be obtaining a holistic view of costs, establishing effective tracking and an understanding of whether or not vendors are satisfying service level agreements for the largest areas of spend.

There are three key areas where a partner can help the business fundamentally establish this environment: determine applications and services to move to the cloud, identify cost effectiveness of any as-a-service offering and identify impacts to existing security policies and compliance guidelines. The overarching goal should be to develop, deploy and nurture a migration plan that assures current needs are maintained while controlling costs and increasing responsiveness. It is important to find services at a price point that fit the overall budget.

Whether the organization is new to cloud technology implementations or working toward optimizing existing deployments, strategic partners like Cisco can play a key role both with strategy and with the tactical deployment issues.

## Power of Private

The private hybrid approach allows organizations to enjoy the most significant, sustainable benefits of agility and long-term cost efficiencies.

Organizations making the most of private or hybrid cloud configurations understand and appreciate that the best approach is to avoid one-size-fits-all solutions. By design, private and hybrid cloud configurations are distinctly focused on what the company truly needs rather than forcing it to order from a menu or predetermined configurations or offerings that may or may not apply.

*Backed by networking and security expertise, an innovative unified architecture and a broad ecosystem of partners, Cisco can help build a highly secure, agile and automated cloud infrastructure. Visit* **www.cisco.com/go/privatecloud** *to learn more about how Cisco and its partners' offerings can help in tackling specific obstacles and realize the full business value of IT investments faster.*

## Obstacle Awareness

Missteps can be commonplace when embarking on a cloud endeavor, as is the case with any major initiative. While determining which applications are best suited for cloud deployment or transforming IT, it is easy to become laser focused on the task at hand and lose sight of the big picture. As such, it's especially important to remain cognizant of potential pitfalls. Below are a few of the most common dangers:

- **Partner selection:** While a company can rely on a partner to play an instrumental role, you still own the journey. Businesses must be full-fledged participants if they expect to receive documentable returns. In fact, in most cloud deployments, many activities actually require companies, not partners, to be lead player. For instance, often the cloud journey is about how things work in conjunction with internal processes. External experts, for instance, know little about how you process a purchase order. In these instances it is internal experts, not external teams, who need to be actively involved to realize success.

- **Dialogue discrepancies:** Dialogue discourse breakdowns between the business and IT occur far too often when a business explores entering the cloud. Oftentimes the business sees this as IT dragging its feet. Unfortunately, this often leads to the business pursuing its own initiatives and establishing a dangerous and difficult-to-control shadow IT environment.

- **Irregular alignment:** It is critical to understand exactly how the cloud drives meaningful business change. IT often talks about how a project can quickly provision infrastructure-as-a-service. Although this can yield documentable business results, this approach is very IT-centric. IT needs to take an additional step to clearly and distinctly identify the business benefits to gain valuable buy-in. Simply put, business is most concerned about cost savings and increased revenues.

- **Cost conundrum:** Successful cloud journeys must start with a solid cost model. For instance, once the business owns an asset, it becomes a sunk cost. When deciding to build out a plan using what is already on the floor, the company could be forgoing a giant cost benefit by modernizing infrastructure built from the ground up for virtualization.

## Reaping Rewards

According to the IDG survey, 44 percent of respondents are currently utilizing computing infrastructure or applications via the cloud. And, respondents at companies in later stages of private or hybrid cloud deployment—defined as deploying critical business applications or using an IT as a service model—are more likely than others to report that investments are meeting or exceeding expectations in several areas. These same respondents are also more likely to report that *the productivity of the IT organization has increased and that asset utilization has improved* as a result of private or hybrid cloud deployments.

Throughout deployment the array of cost benefits associated with private or hybrid configurations include savings in infrastructure, disaster recovery, deployment times, IT staffing, as well as power and cooling costs. According to the survey, respondents across the board cite better disaster recovery protection as the top benefit experienced as a result of a private or hybrid cloud deployment.

Seven Corners is a prime example having slashed network outages, for cost savings of $100,000 per month. At any given time, there are 70 to 120 Seven Corners Assist service professionals, claims analysts, enrollment agents and other staff accessing IT services. More than half of the company's external business comes in through its e-commerce Web presence of some 45 Web sites and more than 200 branded domains. To support these members, staff and business processes, Seven Corners requires nonstop technology availability.

At the same time, Seven Corners is enjoying a new level of agility common with private or hybrid cloud deployments. "In our business, where customers are clamoring for new services, time to market in many cases determines which company gets the business—typically the first to deliver a solid new product wins 60 percent of the revenue," explains George Reed, CIO. "The agility and flexibility we've gained from this infrastructure help us deliver products to the market faster, more quickly identify and reduce losses on unproductive programs, and more rapidly capitalize on successes. Our product teams used to review programs and make major decisions quarterly. Today, with aggregate claim reporting and actuarial at their fingertips, they can do it weekly."

The key to success here is to be able to take a well-crafted plan and apply it to action not only through the build and deployment stage but also throughout the run process. This means being able to conduct stability and best practice audits, while continually focusing on process and architecture optimization.

## Setting the Stage

Making the most out of a cloud deployment often requires strategic planning and attention to detail throughout the implementation process. As the survey showed, progressive organizations are not afraid to turn to third-party partners to assist along the way. However, there are a host of qualities organizations must consider when selecting an organization to serve as a strategic partner—not only in formulating but also deploying and maintaining a forward-looking plan.

The most important criteria when evaluating a partner includes access to highly skilled and qualified resources, experience with technologies specific to your infrastructure, proven methodologies and processes, and a documentable reputation, results and market presence. In addition partners are often detached from internal politics. As a result, a properly positioned strategic partner has the ability to help an organization navigate through difficult questions to yield insights into the best individualized approach to the cloud.

Take Cisco, for example. Because of its expertise as a vendor of data center hardware and software, Cisco not only provides the technology infrastructure to help successfully build and deploy high-performance, cost-efficient private clouds, it also has the experience to serve as a guide.

As its own most demanding customer, Cisco has worked to transform its business using its own data center technology in a private cloud. The project has several objectives: improving competitiveness by improving IT agility to meet business needs while reducing costs, as well as providing valuable insight that helps inform its product development. This highlights the real value its technology can provide customers and partners. In 2011 Cisco IT reached a milestone in its data center transformation effort by launching its private cloud with self-service and on-demand provisioning from a shared pool of infrastructure resources.

By leveraging Cisco Unified Computing System (UCS) for infrastructure, Cisco Nexus for networking, and Cisco Intelligent Automation for Cloud management software, a small technical team deployed this service in less than eight weeks. The system went live, implementing IaaS in June 2011. The results include a significant reduction in total cost of ownership—specifically, Cisco realized a 37 percent reduction through virtualization and an additional 31 percent by evolving to a cloud environment. Cisco now enjoys much shorter IT service delivery cycle times—reduced from an average of eight weeks to less than 15 minutes today. It was a quick win for Cisco, but the company did not stop there. The technical team went on to enable platform as a service (PaaS) in December 2011.

Understandably, the planning process can be quite complex, and often benefits significantly from having a strategic partner in the fold. When looking for a partner, real-world experience as well as a breadth and depth of technical knowledge is often crucial in supporting a successful deployment.

However, it's important to note, as with any other journey, achieving success within the cloud very much takes a village. No single entity possesses all of the skills needed to succeed, which means part of selecting a partner should center on understanding the provider's ecosystem. It's important to understand how well a partner works with complimentary peers. For instance, IT leaders need to explore whether or not the prospective partner can take an active lead role as well as a secondary role.

In taking an ecosystem approach, Cisco, for example, may serve as the cloud planning office. However, Cisco will leverage one of its many partners to effectively build out key components of a cloud deployment whether it's computing infrastructure, storage or network. A properly chosen partner will also realize the significance of dealing with an ongoing enterprise entering the equation with an array of existing assets that need to integrate into the cloud configuration.

When selecting a partner it's crucial to remember that someone who was an expert on a past project is not necessarily an expert for a future project. Taking this approach can sometimes lead you into a less than optimal deployment. Instead, companies of all sizes must realize that cloud is a journey capable of yielding long-term sustainable results, which dictates taking the time to evaluate potential partners prior to making commitments.

## Size Matters

While size differences do not always translate into differing approaches, the IDG survey put a spotlight on what the cloud journey means to different sized-organizations.

One of the most notable differences associated with respondents at larger companies is that they are significantly more likely to indicate a desire to migrate test and development workloads. This is a trigger for private or hybrid cloud investment. This points to an appreciation for the level of flexibility and scalability a well-planned cloud deployment offers.

When compared to smaller counterparts, respondents at larger companies are significantly more likely than others to report current and future use of cloud bursting capabilities. This is a key indicator of the importance agility plays as the IT organization works to support ever-increasing requests from across the enterprise. For instance, adequately supporting short-term development needs for engineering or rapidly processing a request from the sales teams.

When asked which areas an IT organization could best benefit from third-party assistance along the cloud journey, larger organizations are significantly more likely than others to report their companies could benefit from assistance in managing the cloud environment. This makes sense considering the level of complexity commonly associated with large IT enterprises. Having help from an external partner capable of understanding and appreciating the organization's goals allows IT teams to continue dealing with ongoing issues, especially throughout the transition process.