



Don't Get Left Behind

The Business Benefits of Achieving
Greater Cloud Adoption

An IDC White Paper, Sponsored by Cisco

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Executive Summary

25% of respondents have “mature” cloud strategies; 32% have no cloud strategy.

44% of respondents have adopted or are planning to adopt private cloud; 37% have adopted or are planning to adopt public cloud.

83% of respondents want to work with their major incumbent providers to carry current operations into the cloud.

Cloud adoption is an expanding part of IT organizations' strategies, and IT architects are growing more sophisticated in how they think about cloud; however, as of early 2015, relatively few organizations have truly advanced levels of cloud maturity. In IDC's recent worldwide *CloudView Survey*, we discovered that nearly 60% of organizations are currently using or planning to implement some form of cloud — whether for a single project or their portfolio, for test/development environments, or to run mission-critical applications 24 x 7 — but only 25% have reached the level that IDC would call “mature” — that is, building repeatable, managed, or optimized cloud strategies. There is significant room for improvement.

What IDC sees as the “second wave” of cloud adoption is on the rise. The first wave was tied to metrics such as improved service-level agreements (SLAs) and lower costs, but now organizations consider those goals to be table stakes for cloud, and in this next wave, businesses increasingly have expectations for cloud that are tied to better business outcomes, such as top-line revenue growth and the ability to invest in innovation by more strategically allocating the IT budget. For example, 54% of IDC's *CloudView Survey* respondents expect cloud — public, private, and increasingly hybrid — to enable them to be more strategic about how they allocate their IT budget, and 53% believe cloud will help them improve their revenue.

This study showed that as companies adopt cloud strategies for sourcing and building IT services, they are both expecting and achieving significant gains in business key performance indicators (KPIs) including revenue growth, strategic IT budget allocation, IT costs, quicker time to provision, and increased ability to meet SLAs. Further, our study showed that as businesses increased their orientation to cloud, these KPI benefits accelerated. IDC has identified five stages of cloud maturity: ad hoc, opportunistic, repeatable, managed, and optimized (in increasing maturity), and while there are immediate benefits from moving even from ad hoc to opportunistic, the benefits accrue and grow as you move up the adoption curve. Organizations studied are realizing \$1.6 million in additional revenue and \$1.2 million in reduced costs per cloud application.

Private clouds are a critical part of the mix. Private clouds are an evolution of conventional datacenter operations, and whether built/consumed in a customer datacenter or at a service provider's site, private clouds offer cloud infrastructure dedicated to a single enterprise or an extended enterprise. With elastic pools of storage, networking capacity, and analytical horsepower, private clouds are abstracted from specific infrastructure environments to support workload mobility and customer choice. The survey showed that private cloud adoption is even more prevalent than public cloud adoption, with 44% of respondents using or planning to use private cloud compared with 37% using or planning to use public cloud.

Both private cloud and growth of cloud-specific open source software are correlated with business value and above-average expected business outcomes. OpenStack is seeing significant adoption levels, with 65% of cloud adopters saying that either open source OpenStack distributions or OpenStack commercial distributions are important to their cloud strategy. According to the survey, private cloud and OpenStack users are more likely to believe their use of cloud improves revenue growth, strategic allocation of IT budget, and ability to meet SLAs.

IDC defines hybrid cloud as an enterprise IT architecture that unifies automated, policy-based, consumption-aware self-service configuration; provisioning and management of public and private cloud infrastructure (IaaS), middleware (PaaS), and database/application (SaaS) resources; and physical, virtual, and software-defined noncloud IT assets. Even though different companies define hybrid cloud in different ways, the survey found that hybrid cloud use is growing, with over 64% of cloud adopters using some sort of workload portability or a mix of public/private/traditional IT resources, the most common threads in the definition of hybrid cloud.

Doing hybrid cloud right requires workload migration, security, and policy-based control. Most respondents expect to migrate data between public and private clouds and have high security and policy requirements. Most IT organizations expect that as they mature, they will increasingly act as internal brokers of services, some of which are composed by their own developers and some of which are sourced from the public cloud. In this emerging role, IT service brokers need solutions to support a single view of IT and business services, irrespective of how they have been provisioned, and to support governed, policy-based access to these services, wherever they may be.

Web-scale public cloud, which is designed to serve mass markets with very little customization and relatively low service quality, is making way for enterprise-class provider-based cloud. Companies are looking to their incumbent providers; while 64% of respondents expect to have two or more cloud providers to meet their needs, 83% of respondents believe it to be important to work with their major incumbent provider to carry their operations into the cloud. IDC sees a growing potential for IT incumbents to deliver feature-rich cloud services fully managed by the enterprise, with capabilities such as mobile asset management, directory integration, and customer-managed encryption keys.

About This Study

This study is based on IDC's recent *CloudView Survey* of 3,463 executives at organizations that have adopted cloud, supplemented by a Cisco-sponsored business value extension to the *CloudView Survey* covering 2,378 respondents. The survey profiled companies' overall use of cloud as well as deployment strategies, adoption drivers and benefits, and requirements. Respondents came from 17 countries: the United States, Canada, Mexico, France, Germany, the United Kingdom, Italy, Spain, the Netherlands, Sweden, China, India, Korea, Japan, Australia, Malaysia, and Brazil. This study was supplemented by 370 responses from 15 IDC Business Value Research studies from 2012 to 2015 covering cloud maturity levels, adoption of private cloud, implementation of private cloud, and converged infrastructure in support of cloud as well as by 15 responses from a specialized study of optimized/managed cloud maturity organizations for Cisco in December 2014.

Additional details such as IDC's methodology for the survey, identification of cloud adoption levels, and business value analysis can be found in the Appendix.

The Second Wave of Cloud Adoption Is Emerging

Cloud Is Growing, But Most Organizations Are Still Attempting to Improve Cloud Strategies

Cloud adoption is growing. This year's survey revealed that 68% of organizations had some form of cloud strategy (public or private). A very broad range of workloads are migrating to the cloud — 30% or more of organizations have already migrated, or have plans to migrate, every workload we asked about to the cloud. The most common workloads in each deployment category include:

- **Public cloud.** Application workloads include email, enterprise social networks, and personal productivity tools (word processing, spreadsheets); data-oriented workloads include Web content management, data backup/archiving, and test/development environments; and IT workloads include mobile device management and storage overflow capacity.
- **Private cloud (at customer's site).** Application workloads include email, enterprise resource planning (ERP), supply chain logistics, and project and portfolio management (PPM); data-oriented workloads include database services (DBMS), enterprise search, and data integration; and IT workloads include mobile device management, network or application performance management, and security services.

- **Private cloud (at provider's site).** Application workloads include product life-cycle management, customer resource management (CRM), and human resources applications; data-oriented workloads include enterprise content management (ECM), cloud testing/development, and IT operations analytics; and IT workloads include storage capacity and business continuity/disaster recovery.
- **Conventional deployment (onsite).** Application workloads include human resources applications and PPM; data-oriented workloads include ECM and data integration; and IT workloads include IT help desk, server capacity, network or application performance management, and security.

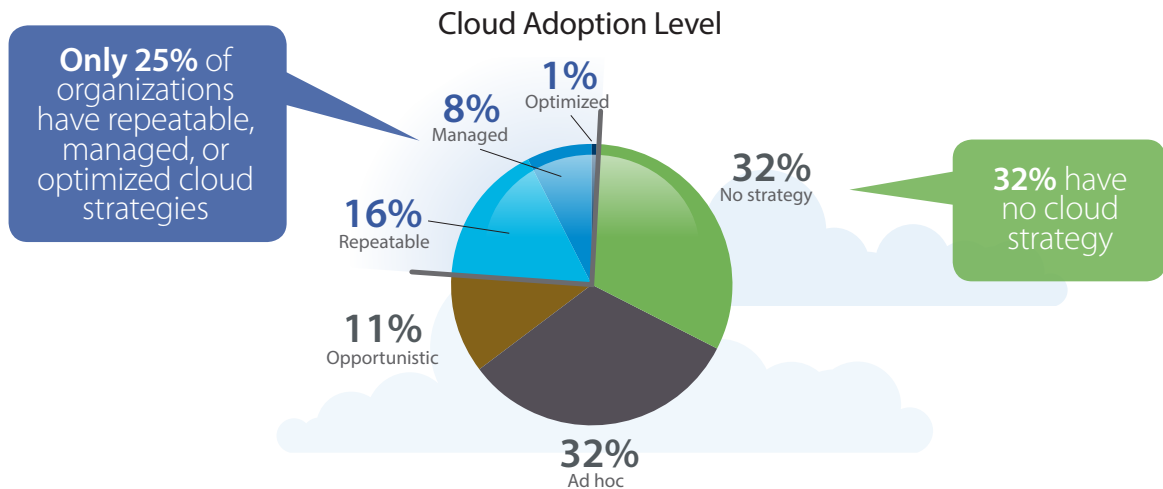
But despite this level of adoption, most organizations are still working to improve their cloud strategies. IDC defines five levels of cloud maturity:

- **Ad hoc.** Organizations are beginning the process of increasing awareness of cloud technology options and are turning to cloud because of the immediacy of their need, often in an unauthorized manner.
- **Opportunistic.** Organizations are experimenting with short-term improvements in access to IT resources through the cloud. They usually consider cloud for new solutions or isolated computing environments.
- **Repeatable.** Organizations are enabling more agile access to IT resources through the standardization and implementation of best practices. They rely on self-service portals to access cloud services.
- **Managed.** Organizations are implementing a consistent, enterprisewide best practices approach to cloud and are orchestrating service delivery across an integrated set of resources.
- **Optimized.** Organizations are delivering innovative IT-enabled products and services from internal and external cloud providers and are driving business innovation through transparent access to IT capacity, based on the value to the business and transparent cost measures.

Our study revealed that despite the overall high levels of cloud adoption, only 25% of organizations have repeatable, managed, or optimized cloud strategies — the three highest maturity levels (see Figure 1).

FIGURE 1

Most Organizations Are Still Attempting to Optimize Their Cloud Strategies



n = 19,080 (overall sample)

Note: The full survey was conducted on the 3,463 respondents in 17 countries using cloud for more than one or two small workloads.

Source: IDC's CloudView Survey, December 2014

This data reveals that there is significant room for improvement. Moving up the maturity scale is an incremental process. It's also possible for organizations to start at different stages or skip some stages completely. But the key is to adopt best practices such as workload portability, security, and policy-based automation to continue moving up the curve. For example, companies in the ad hoc category could move to opportunistic by working initially with unauthorized cloud projects and, as they yield business results, embracing them as a model for further cloud experimentation. This in turn could lead to repeatable cloud activity and so on.

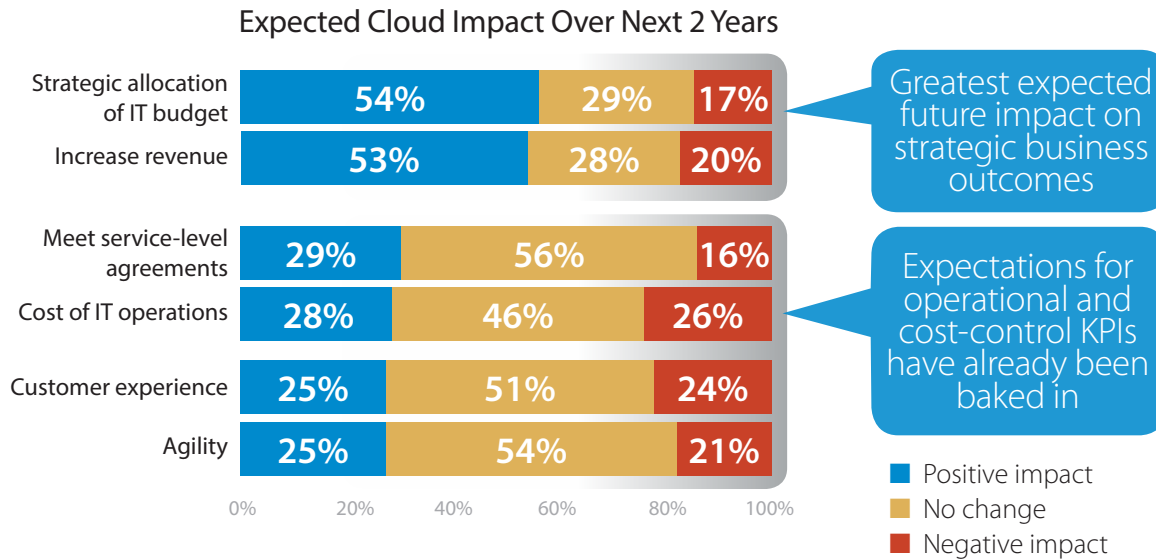
Organizations' Expectations Shifting to Improving Business Outcomes

This study demonstrated that we are entering a second wave of cloud adoption. In the first wave, beginning around 2007, the primary focus of cloud implementations was on KPIs such as reducing the cost of IT operations, better meeting SLAs, and improving the customer experience.

Figure 2 shows that those types of KPIs have become table stakes: Companies have largely baked in expectations around SLAs, cost of IT operations, customer experience, and agility improvements for cloud deployments. In contrast, companies are now starting to build expectations around how cloud can impact broader, more strategic measures of the business's success: its strategic allocation of IT budget and ability to increase revenue.

FIGURE 2

Companies Expect Cloud to Drive Key Business Outcomes



Q: Which of the following best describes your belief about these key performance indicators (KPIs) within the next 2 years from your use of public, private, or hybrid cloud services?

n = 2,378

Source: Cisco-sponsored business value extension to IDC's CloudView Survey, December 2014

The exact definitions of the key performance indicators used in this study can be found in the Appendix.

Cloud Maturity Drives Significant Business Benefits

Increasing Cloud Adoption Drives Significant KPI Improvements

IDC's Business Value Research shows that cloud adoption is improving key business outcomes across the board. Table 1 shows the benefits of moving along the cloud maturity scale. IDC determined that organizations can achieve double-digit improvements in IT costs, strategic allocation of IT budget, customer experience, and ability to meet SLAs by moving from an ad hoc cloud strategy to opportunistic and similar or greater gains from moving from opportunistic to repeatable. They can even achieve single-digit increases in top-line revenue. Importantly, while the benefits accrue to companies at all stages of maturity, they accelerate as the companies move up the adoption scale. Even those that are ad hoc should be able to achieve benefits by moving to opportunistic, but the greatest benefits are found the higher you go on the adoption curve.

TABLE 1

Moving Up the Cloud Maturity Scale Can Yield Significant Business KPI Benefits

Average KPI Benefit of Moving Between Levels of Cloud Adoption

	Ad Hoc to Opportunistic	Opportunistic to Repeatable	Repeatable to Managed	Managed to Optimized
Revenue growth	0.05%	1.4%	4.0%	10.4%
IT cost reduction	13%	29%	48%	77%
Strategic allocation of IT budget	16%	56%	100%	200%
Time to provision	27%	47%	76%	99%
Meeting SLAs	43%	20%	6%	3%

Source: Data was supplemented by 370 responses from 15 IDC Business Value Research studies from 2012 to 2015 covering cloud maturity levels, adoption of private cloud, implementation of private cloud, and converged infrastructures in support of cloud as well as by 15 responses from a specialized study of optimized/managed cloud maturity organizations for Cisco in December 2014.

Mature Cloud Adopters Are Achieving Millions of Dollars in Benefits

This study also quantified the economic benefits the most mature cloud organizations are realizing and broke them down by category (see Figure 3). Organizations studied are gaining an average of \$1.6 million in additional revenue per application deployed on private or public cloud. They are also achieving \$1.2 million in cost reduction. These economic benefits result from leveraging cloud adoption to enable better business outcomes. The revenue increases were largely the result of sales of new products and services, gaining new customers, or selling into new markets. Organizations were able to attribute revenue gains to increased innovation resulting from the shifting of IT resources (in terms of people and budget) from traditional maintenance activities to new, more strategic, more innovative initiatives. Organizations indicated that another source of additional revenue enabled by their cloud posture is the "Internet of Things" (IoT) (connected devices with IP addresses that are not traditional computer or mobile devices). In these cases, cloud enabled the organizations to launch IoT products faster and made it easier to roll out platforms, scale the platforms for more users, and get development environments up and running faster.

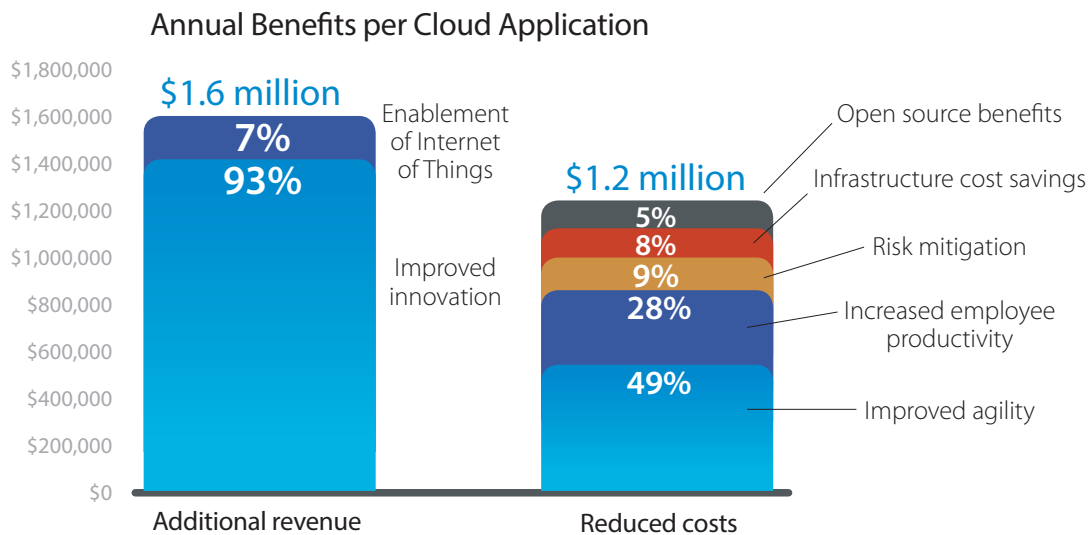
Operational cost reductions associated with cloud stem from the advantages to the business of running on a more scalable, reliable, and higher-performing environment, including:

- **Improved agility.** Cloud enables IT to develop and deploy business applications faster, which in turn enables the business to reduce the costs associated with the new products and services dependent on those business applications.

- **Increased employee productivity.** Cloud enables employees to enjoy more reliable access to key business applications from any location, at any time, and using any device — resulting in more efficient use of time.
- **Risk mitigation.** Cloud enables more consistent and reliable application availability, reducing the costs of unplanned downtime and data recovery.
- **Infrastructure cost savings.** Cloud enables more automated and efficient infrastructure, providing a consistent platform and allowing organizations to scale without having to overprovision up front or add expensive resources.
- **Open source benefits.** Cloud enables open source, which provides infrastructure cost advantages, avoidance of hypervisor costs, and technical advantages associated with a big resource pool of code base that can be repurposed.

FIGURE 3

Mature Cloud Organizations Are Achieving Millions of Dollars in Benefits per Application



Source: Data was supplemented by 370 responses from 15 IDC Business Value Research studies from 2012 to 2015 covering cloud maturity levels, adoption of private cloud, implementation of private cloud, and converged infrastructures in support of cloud as well as by 15 responses from a specialized study of optimized/managed cloud maturity organizations for Cisco in December 2014.

Private and Hybrid Cloud Are a Critical Part of the Mix

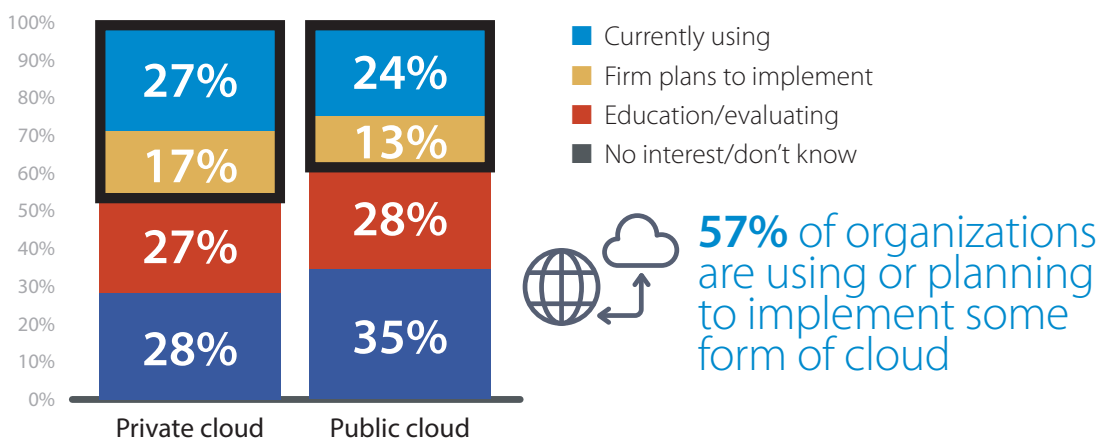
Adoption of Private Cloud Is Correlated with Better Expected Business Outcomes

Private cloud allows an IT organization to act like a large-scale public cloud supplier — with better resource use, greater scale, and faster time to respond to requests, but with the added control and security of having resources dedicated to the sole use of a single company.

Another hallmark of this second wave of cloud is the degree of private cloud adoption. Private cloud essentially represents the desire of an IT organization to act like a large-scale public cloud supplier — with better resource use, greater scale, and faster time to respond to requests, but with the added control and security of having resources dedicated to the sole use of a single company. As shown in Figure 4, 44% of all organizations either are currently using or have firm plans to implement private cloud, an even greater number than the 37% of organizations that either are using or have firm plans to implement public cloud.

FIGURE 4

Nearly Half of Organizations Are Using or Planning to Implement Private Cloud



Q: How would you best describe your organization's current or near-term plans to use public cloud or private cloud solutions to support production workloads and services?

n = 19,080 (overall sample)

Note: The full survey was conducted on the 3,463 respondents using cloud for more than one or two small workloads.

Source: IDC's CloudView Survey, December 2014

Private cloud adopters are realizing significant business benefits. 55% of current private cloud users expect their cloud infrastructure to better enable them to allocate IT budgets to more strategic purposes compared with 50% of those that are not using private cloud. Similarly, 54% of private cloud users expect their cloud infrastructure to increase revenue compared with 47% of those that are not using private cloud.

Hybrid Cloud Is Growing But Requires Workload Portability, Security, and Policy Enablement

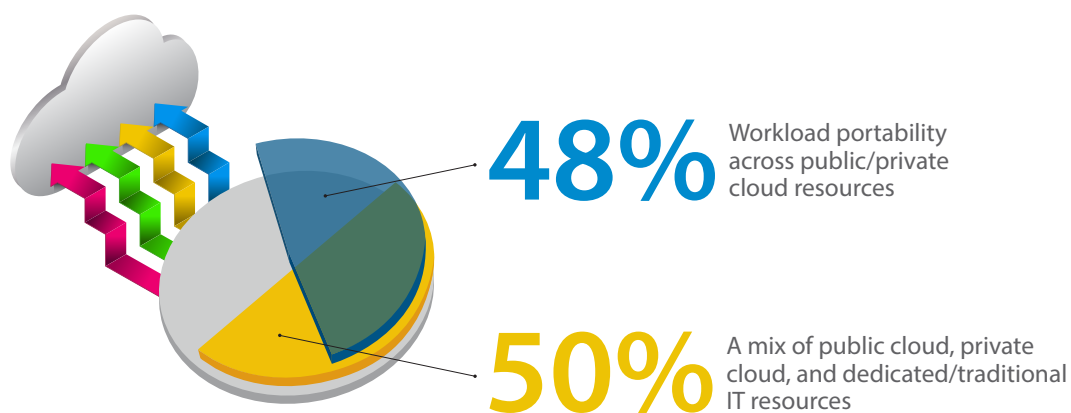
Hybrid cloud is also growing, but this study showed that organizations are using different definitions of hybrid cloud. The most common definitional threads as identified by our study include the use of subscriptions to different cloud providers for different business needs (46% of respondents); an IT environment that uses a mix of public cloud and dedicated IT assets (37%); a mix of public, private, and traditional resources using the same service catalog (34%); a cloud infrastructure made up of two or more (private, community, or public) unique entities with proprietary technology enabling data and application portability (34%); and enabling workload portability with automatic bursting and load balancing across public and private cloud resources (33%). (Note that multiple responses were allowed.)

The two common threads among these definitions are workload portability and combining the use of public and dedicated cloud. By boiling the various definitions down to one of these two themes, we found that 48% of companies with active cloud deployments are practicing some sort of workload portability and 50% of cloud users are combining public and dedicated/private IT resources. Overall, companies that are adopting at least one of these two hybrid cloud approaches constitute 64% of cloud adopters (see Figure 5).

FIGURE 5

64% of Cloud Adopters Are Using Some Form of Hybrid Cloud

% of Cloud Adopters Saying Their Strategy Includes:



Q: Under which of the following definitions of "hybrid cloud" has your organization adopted a hybrid cloud strategy? (Multiple responses were allowed.)

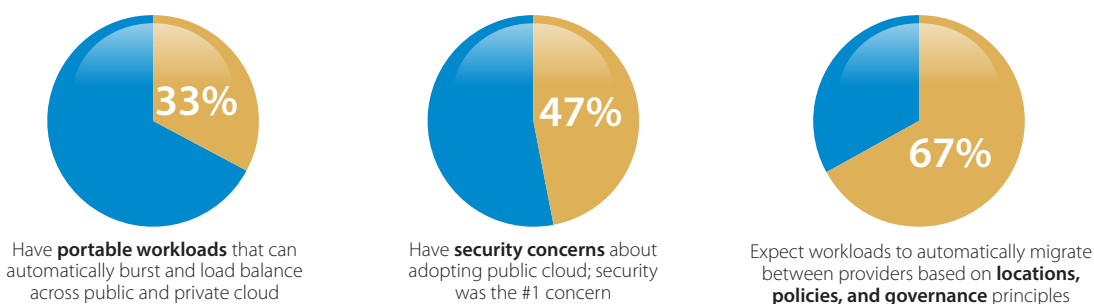
n = 3,463

Source: IDC's CloudView Survey, December 2014

Adopting hybrid cloud is more complex than adopting other forms of cloud. It requires workload portability, security, and policy enablement. These requirements came through loud and clear in our study, which showed that most respondents expect to migrate data between public and private clouds and have high security and policy requirements (see Figure 6).

FIGURE 6

Hybrid Cloud Requires Workload Portability, Security, and Policy Controls



Q: Under which of the following definitions of "hybrid cloud" has your organization adopted a hybrid cloud strategy?

Q: Which of the following best describes your organization's main concerns about cloud, and which are IMPORTANT INHIBITORS for your organization in considering services or technologies?

Q: Please note the extent to which you agree with the following statements about your organization's use of external cloud vendors (5-point scale, strongly agree to strongly disagree; top 2 box scores are shown.)

n = 3,463

Source: IDC's CloudView Survey, December 2014

In addition, most respondents (64%) expect their IT organizations to act as IT service brokers and need solutions that support a single view of the IT and business services irrespective of how they have been provisioned and to support governed, policy-based access to these services wherever they may be. This capability is increasingly important as services and software become ever more abstracted elements in an IT delivery chain. Users are focused on getting the most functional value, while IT is focused on ensuring excellent service quality, workload portability, security, and policy automation, no matter where physical IT assets are or what financial business arrangement they use to source them.

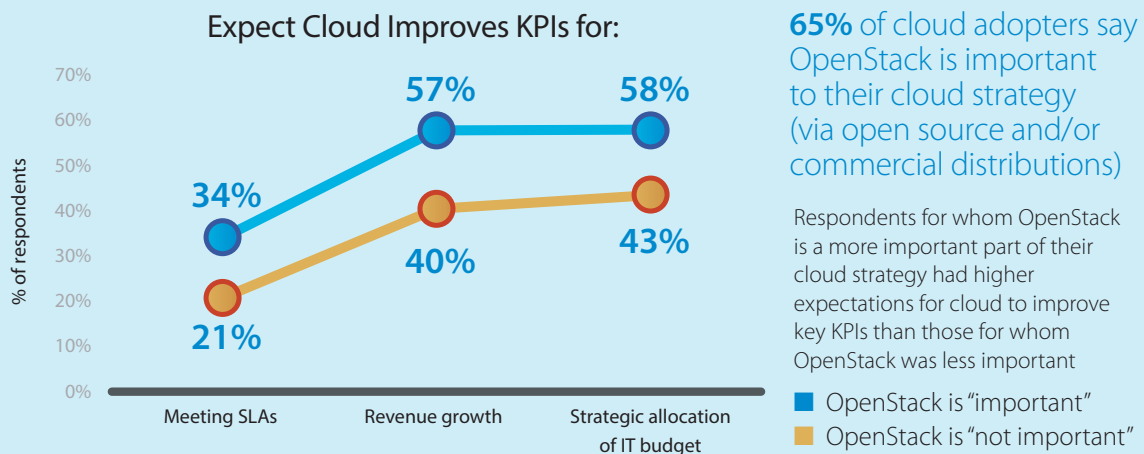
Open Source and OpenStack Are Driving Even Greater Business Benefits

OpenStack is a key driver behind private/hybrid cloud, and its importance is evident from the survey. 65% of respondents said OpenStack is important to their cloud strategy, whether via open source and/or commercial distributions. OpenStack is emerging as a private cloud orchestration platform; customers are drawn to OpenStack to reduce both vendor lock-in and long-term operational costs and to commercial OpenStack plug-in architectures to better enable OpenStack-based enterprise solutions.

Further, the study showed that those adopting private cloud and open source OpenStack technology are realizing even greater benefits than cloud adopters as a whole (see Figure 7). Firms that had OpenStack as an important part of their strategy tended to have much greater expectations about how their cloud deployments will improve their ability to optimize their IT budget allocation, improve revenue, and increase SLAs (in the case of revenue, the difference is 17%).

FIGURE 7

Use of OpenStack Correlates with Better Expected Business Outcomes



Q: (IDC's Business Value Custom Survey) — Which of the following best describes your belief about these key performance indicators (KPIs) within the next 2 years from your use of public, private, or hybrid cloud services?

Q: (IDC's CloudView Survey) — How important are the following open source and standards projects to your organization's cloud strategy? [OpenStack] (Top 2 box and bottom 2 box scores are shown.)

n = 2,378

Source: Cisco-sponsored business value extension to IDC's CloudView Survey, December 2014

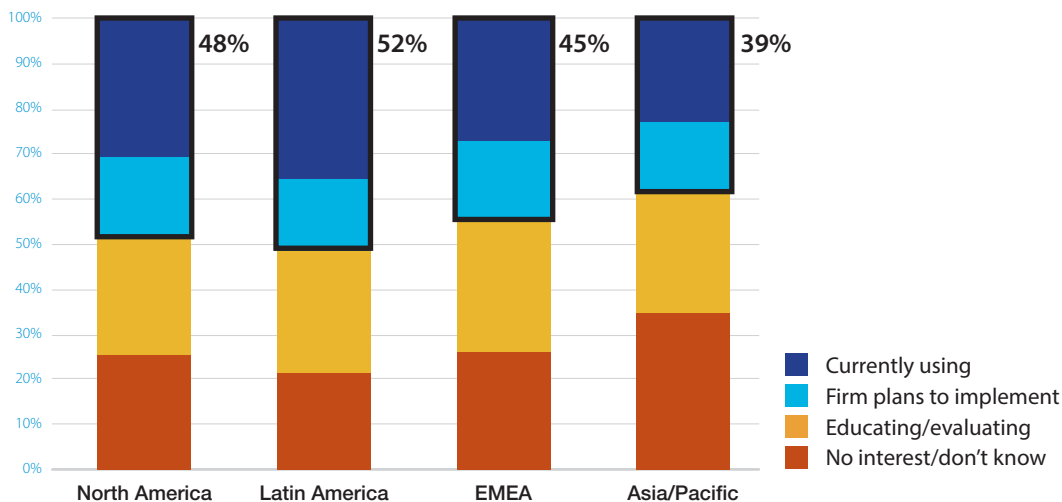
Geographic and Industry Perspectives

Enterprises of different sizes spanning various vertical markets often will prefer that certain workloads — for business, compliance, or technological reasons — remain within a private cloud rather than in the public cloud. Still, they want to realize the business agility and IT service delivery efficiencies that cloud can confer. There are many workloads, traditional and otherwise, that will never leave the enterprise datacenter, and the private cloud is well suited to meet their requirements.

This study identified some notable differences in cloud adoption across different geographies. Private cloud adoption was found to be highest in Latin America and North America where 52% and 48% of respondents, respectively, said they are currently using private cloud or have firm plans to adopt it, followed by EMEA (45%) and Asia/Pacific (39%) (see Figure 8). A similar story was found for public cloud adoption, in which 41% of Latin American, 38% of North American, 36% of EMEA, and 35% of Asia/Pacific respondents said they are currently using or have firm plans to implement public cloud. 59% of North American, 66% of Latin American, 57% of EMEA, and 51% of Asia/Pacific respondents said they had implemented or have firm plans to implement cloud services of any type.

FIGURE 8

Private Cloud Adoption by Region



n = 19,080 (overall sample)

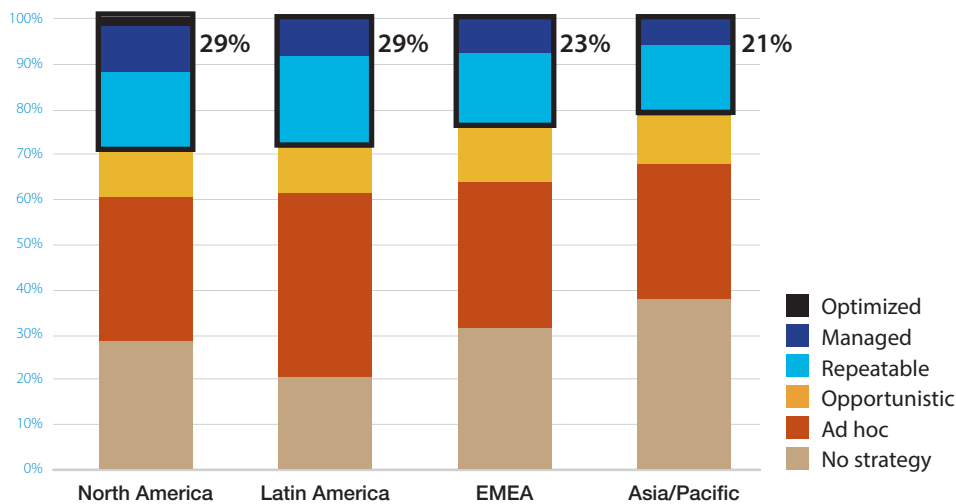
Note: The full survey was conducted on the 3,463 respondents using cloud for more than one or two small workloads.

Source: IDC's CloudView Survey, December 2014

There is a fair amount of consistency in maturity levels across geographies (see Figure 9). North America and Latin America have the largest number of companies in one of the top 3 cloud adoption categories (optimized, managed, or repeatable), each with 29% of companies falling into this camp. EMEA is next at 23%, and Asia/Pacific has 21%. There are several drivers behind these differences. Asia/Pacific and Europe had lower adoption rates of cloud than the Americas. Specifically, Europe had lower public cloud adoption and Asia/Pacific as a whole had lower private cloud adoption. And among noncloud adopters, respondents in Asia/Pacific and Europe scored lower on the readiness scale based on the cloud-specific skills and tasks they currently perform.

FIGURE 9

North America and Latin America Lead in Cloud Maturity



n = 3,463

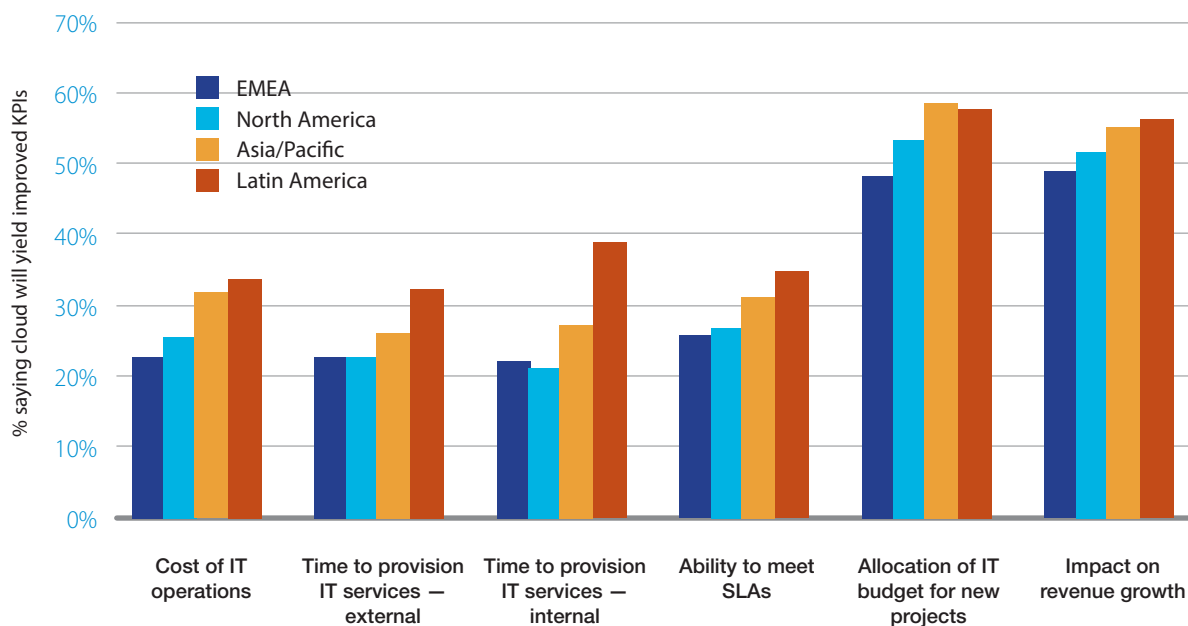
Source: IDC's CloudView Survey, December 2014

By industry, manufacturing has the largest percentage of companies in one of the top 3 adoption categories at 33%, followed by IT (30%), finance (29%), and healthcare (28%). The lowest adoption levels by industry were found to be government/education and professional services (at 22% each) and retail/wholesale (at 20%). Roughly 20% of the federal government's \$100 billion IT budget is spent on physical infrastructure equipment, and even though state and federal government IT operations have made use of a "shared services" network architecture for many years, state agencies are particularly slow to make the change to buy services, not infrastructure. IDC expects public sector use of cloud to ramp fairly rapidly over the next few years as procurement processes become more agile, allowing different agencies to share IT costs.

The expected KPI benefits by region tell a slightly different story. Through this lens, our study found that Latin America and Asia/Pacific had the largest percentages of respondents who believe that cloud will have a positive impact on their KPIs (see Figure 10). North America had somewhat fewer respondents who believe cloud will positively impact their KPIs, and EMEA had the least. (Note that because multiple responses were allowed for this question, a large number of respondents in all regions indicated at least one KPI benefit, and often several KPI benefits, associated with cloud.)

FIGURE 10

Expected Cloud KPI Benefits by Region



n = 3,463
 Note: Multiple responses were allowed.
 Source: IDC's CloudView Survey, December 2014

By industry, professional services, technology, and transportation, communications, and utilities (TCU) expected the greatest impact on KPIs across the board, while retail/wholesale expected the least (see Table 2). And the point bears repeating that because multiple responses were allowed, an even larger number than that indicated in Table 2 found KPI benefits across at least one (or more) areas.

TABLE 2

Expected Cloud KPI Benefits by Industry

	Finance	Manufacturing	Retail/ Wholesale	TCU*	Healthcare	Government/ Education	Professional Services	Technology	Other
Cost of IT operations	29%	25%	21%	31%	29%	27%	29%	34%	27%
Time to provision IT services — external	23%	23%	18%	25%	22%	27%	30%	28%	28%
Time to provision IT services — internal	20%	27%	22%	26%	25%	23%	29%	28%	26%
Ability to meet SLAs	29%	27%	26%	33%	30%	28%	28%	26%	31%
Allocation of IT budget for new projects	50%	57%	50%	54%	49%	53%	55%	56%	58%
Impact on revenue growth	46%	53%	50%	54%	57%	45%	55%	54%	56%
Average across all	33%	35%	31%	37%	35%	34%	38%	38%	38%

*TCU = transportation, communications, and utilities

n = 3,463

Source: IDC's CloudView Survey, December 2014

■ Highest ←————→ Lowest

Making Way for Provider-Based Cloud

Respondents trust incumbent IT providers with their cloud services. 83% of respondents said they think it is important to work with their major incumbent providers to carry current operations into the cloud (see Figure 11). Further, more respondents expect to have a single major cloud provider rather than two or more major cloud providers. IDC sees a growing potential for IT incumbents to deliver feature-rich cloud services that are fully managed by enterprise customers, with capabilities such as mobile asset management, directory integration, and customer-managed encryption keys.

FIGURE 11

Companies Trust Their IT Incumbents as Cloud Providers



n = 3,463

Source: IDC's CloudView Survey, December 2014

Essential Guidance

- **There are compelling reasons to increase your cloud adoption level — now.** Survey and maturity model data points to outcomes of better top-line revenue, improved strategic IT allocation, greater flexibility with reuse of IT assets and staff, reduced costs, and increased service performance as key benefits, and the gains increase as cloud use grows. But most organizations are not very far along the adoption scale and should focus on the items required to get themselves to the next level.
- **Leverage the Cisco Business Cloud Advisor enabled by IDC to benchmark against your peers.** Knowing how your cloud adoption efforts compare with the cloud adoption efforts of other companies in your industry, country, and size of company can yield valuable insights. Understanding where you are on the adoption scale relative to competition can help you understand what you need to do to keep pace and/or gain advantage against competitors by lowering your costs, gaining greater levels of flexibility, reducing your capital footprint, or accelerating new product innovation.
- **Optimizing the mix requires hybrid cloud with all it entails.** Organizations need to be able to put the right workloads on the right resources based on a variety of factors, including cost, scalability, security, and governance. Sometimes this analysis of workload factors will point to public cloud, and sometimes this analysis will point to the use of dedicated/private resources. Putting an optimized hybrid cloud in place requires an infrastructure that not only enables workload portability but also does so in a secure, policy-based manner that supports the needs of the enterprise.

- **Go with a provider you trust.** For many enterprises today, the compute infrastructure represents the crown jewels. It supports things like mobile, which enables you to interface with your customers, while Big Data and analytics provide the engine against which key business decisions can be made. As you transition from traditional IT to embrace the cloud, you need someone who understands both where you are today and where you need to go.

Appendix

Methodology

The information for this white paper came from IDC's recent *CloudView Survey*, conducted in December 2014, plus a Cisco-sponsored business value extension to the survey covering 2,378 respondents. IDC surveyed 3,463 executives at the director level and above from IT and lines of business from organizations actively using cloud services. Respondents were randomly recruited and screened from international panels and came from 17 countries: the United States, France, Mexico, China, India, Korea, Brazil, Germany, the United Kingdom, Japan, Australia, Canada, Malaysia, Italy, Spain, the Netherlands, and Sweden. The survey was conducted over the Internet and administered in the local language.

IDC's *CloudView Survey* along with the Cisco-sponsored business value extension provided a comprehensive and broad-based sample that was used to determine respondents' level of cloud adoption as well as cloud needs and drivers. It collected demographics, cloud adoption profiles, expectations of benefits from cloud and drivers for cloud, and opinions on different types of cloud technology and standards.

The core survey was supplemented by additional research including 370 responses from 15 IDC Business Value Research studies from 2012 to 2015 covering cloud maturity levels, adoption of private cloud, implementation of private cloud, and converged infrastructures in support of cloud as well as 15 responses from a specialized study of optimized/managed cloud maturity organizations for Cisco in December 2014.

For this white paper, IDC's Business Value Research team used the data from these studies to ascertain the specific business value improvements associated with advancing to each level of cloud maturity. The team combined the results of these studies to inform a model of quantified business benefits accruing to each stage of cloud maturity. This enabled IDC to provide measures of the business value experienced at each stage.

Key Performance Indicator Definitions

Definitions of the key performance indicators used in this study are as follows:

- **Cost of IT operations:** The cost of technology, services, and people
- **Customer experience:** Time to provision IT services for external business customers
- **Agility:** Time to provision IT services for internal line-of-business users
- **SLAs:** Ability to meet service-level agreements
- **Allocation of IT budget:** Ability to fund strategic versus routine/maintenance projects
- **Increase revenue:** Ability to help lines of business positively impact revenue growth