A Forrester Consulting
Thought Leadership Paper
Commissioned By Infosys

October 2014

Simplify And Innovate The Way You Consume Cloud

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Executive Summary

Cloud adoption is gaining momentum globally, thanks to its agility, cost-effectiveness, and innovative approach to enabling business transformation. However, the user experience in the cloud is still far from satisfactory, making it difficult to bridge the gap between the business and IT or for a company to improve the experience alone.

In September 2014, Infosys commissioned Forrester Consulting to evaluate the obstacles that enterprises need to overcome to improve cloud adoption and what role a cloud ecosystem integrator could play. To further explore market demand, Forrester tested the following hypothesis:

Global cloud ecosystem integrators for hybrid cloud environments play an important role in the business transformation of cloud adopters.

Forrester conducted in-depth surveys with 300 technology management and business decision-makers across North America, Europe, and Australia covering various verticals, such as banking, financial services, and insurance (BFSI); retail and consumer packaged goods (CPG); life sciences; and manufacturing. These decision-makers come from large global companies with annual revenues of more than US$1 billion, and they hold various leadership roles for cloud adoption, including CIO; CTO; vice president/director of IT (infrastructure, operations, and architecture); IT head for a line of business (LOB); as well as functional LOB head, such as sales, marketing, finance, and HR.

Forrester found that companies are now at the point in the journey toward cloud maturity when they should consider cloud solutions that bring together each party in a cloud ecosystem (from both the business and from technology management) in order to truly unleash the power of cloud.

KEY FINDINGS

Forrester's study yielded four key findings:

- **Cloud adoption is maturing globally, driven by the need for agility.** Companies are adopting a richer range of hybrid cloud service categories. Decision-makers at multinational corporations are trying to leverage the power of all three forms of cloud services for various mission-critical business applications. And as they prioritize agility in order to develop new and innovative ways to increase their top-line growth, cloud computing services are becoming a serious choice for enterprises. 70% of enterprises surveyed in retail and CPG said that agility is the most important driver in their decision to use cloud; similarly 78% in both manufacturing and financial services (FS); 82% in insurance and 88% in utilities echoed the same sentiments.

- **Australia has quickly moved the cloud to production.** Some 86% of the enterprises surveyed in Australia have been using cloud computing in their production environment for more than 12 months; the corresponding figures are just 50% in the US and 58% to 60% across Germany, France, and the UK. Australian enterprises have also changed the way that tech management and the business work together more than any other surveyed country: No less than 58% say that their tech management department acts more like a profit center in containing economic risk by providing cloud services to the lines of business; the global average is just 41%.

Comprehensive cloud strategy is important for major industries globally. Companies have adopted cloud solutions across IaaS, PaaS and SaaS for various applications and initiatives, and it's time to consider holistic cloud strategy for operational excellence and business agility. For example 67% of enterprises surveyed in BFSI industry consider it important or very important to develop comprehensive cloud strategy in the next 12 months; the corresponding figures for retail and manufacturing are 68% and 56%. The survey findings suggest that across verticals private cloud is a go-to option while considering cloud strategy. 81% of the respondents from life sciences rated private cloud as their favored option followed by financial services and insurance at 68% and 64% respectively.

As for public cloud 50 percent of the respondents surveyed say that it is an important option for them to consider. Telecommunication led the pack as 77% of them preferred the public cloud but surprisingly Insurance, which is similar to financial services in nature as far as security and compliances are concerned, followed with 56%.

- **The user experience in the cloud still has room for improvement.** Globally, 73% of the companies surveyed are facing challenges on their journey to cloud maturity connected to a lack of self-service capabilities and insufficient transparency. These user-experience-related issues, as well as the classic concerns around security and regulatory compliance, need to be addressed as a high priority. In general, cloud adopters will demand operational simplicity in the future.

- **Enterprises need to work with trusted partners to enable business innovation.** Enterprises can hardly address all of these challenges and achieve business innovation alone. Forrester's hypothesis turned out to be true! Trusted partners that act as cloud ecosystem integrators will help integrate and automate the orchestration of apps and data in a hybrid cloud environment. Large companies should focus on cloud integrators that can help them effectively manage change, scale rapidly, and federate public cloud offerings with corporate service catalogs or IT management.

Cloud Adoption Is Gaining Maturity Globally, Driven By The Need For Agility

The cloud is gaining momentum globally. Cloud services have been adopted across various business applications; they're no longer limited to non-mission-critical applications. Companies are also adopting a richer range of hybrid cloud service categories. Decision-makers at multinational corporations are trying to leverage the power of all three forms of cloud services: infrastructure-as-a-service (IaaS), platform-as-a-service (PaaS), and software-as-a-service (SaaS). More importantly, as the business prioritizes the development of new and innovative ways to increase their top-line growth, cloud computing services are becoming a serious business choice for enterprises.

› **A comprehensive cloud strategy for IT infrastructure has become critical across various industries.** The cloud landscape is shifting to meet a broader range of enterprise business needs. Many large enterprises have already started their cloud journey, but their speed of adoption varies. The majority of enterprises have either been using cloud computing for 36 months or for just three to six months; a minority started between six and 36 months ago. This means that there are two camps — the innovators and the mainstream.

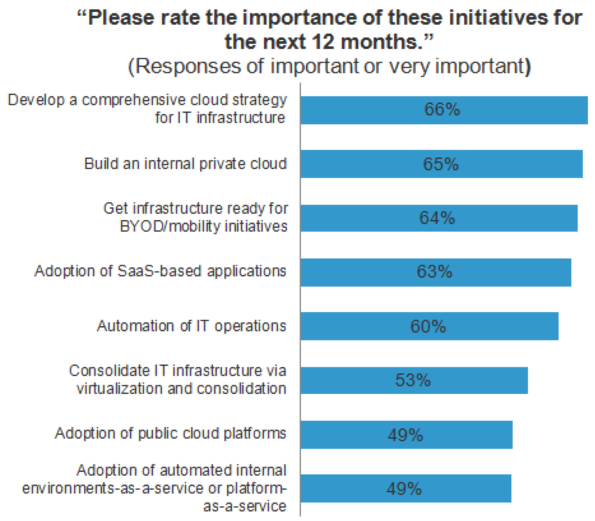
These two camps have used various approaches to move to the cloud, such as virtualizing and consolidating infrastructure, building an internal private cloud, using SaaS applications, or automating internal processes. But now, 66% of these cloud adopters agree that instead of implementing individual cloud initiatives on a project-by-project basis, they should prioritize developing a comprehensive cloud strategy for their IT infrastructure (see Figure 1).

In the age of the customer, you should evaluate the business scenarios within your company and align your cloud strategy accordingly.

Larger companies have moved beyond the exploration phase of cloud adoption and are very familiar with the technology opportunities today. They are now entering the rationalization phase and want to develop a comprehensive cloud strategy.

FIGURE 1

Developing A Comprehensive Cloud Strategy Is Critical To Each Major Industry



Base: 300 companies in BFSI, retail/CPG, life sciences, manufacturing, telecommunications, and utilities

Source: A commissioned study conducted by Forrester Consulting on behalf of Infosys, September 2014

› **Enterprises have various usage scenarios for the cloud, including mission-critical applications.** Our global respondents' requirements for the cloud span various business scenarios. We placed these business scenarios into the following six categories, many of which contain mission-critical business applications:

- **Enterprise management software.** This includes enterprise resource planning (ERP), supply chain management (SCM), product life-cycle management (PLM), enterprise asset management (EAM), procurement, finance, commerce, marketing, human resource management (HRM), customer service support (CSS), and sales force automation (SFA).
- **BPM, ECM, and industry-specific processes.** This includes business process management (BPM), enterprise content management (ECM), as well as some industry-specific processes, such as the price-comparison process in retail or the claims process in the insurance industry.
- **Business intelligence (BI).** This includes BI and analytics applications.

- **Office and collaboration.** This includes office applications and enterprise collaboration software.
- **Dev/test.** This includes applications that support development and testing environments.
- **Web content/experience management.** This includes customer experience management and web content management applications.

At least 77% of the enterprises we interviewed are using IaaS, PaaS, or SaaS today for all six categories of business applications or plan to use them within two years; this rises to 81% for enterprise management software, which contains the vast majority of mission-critical applications (see Figure 2).

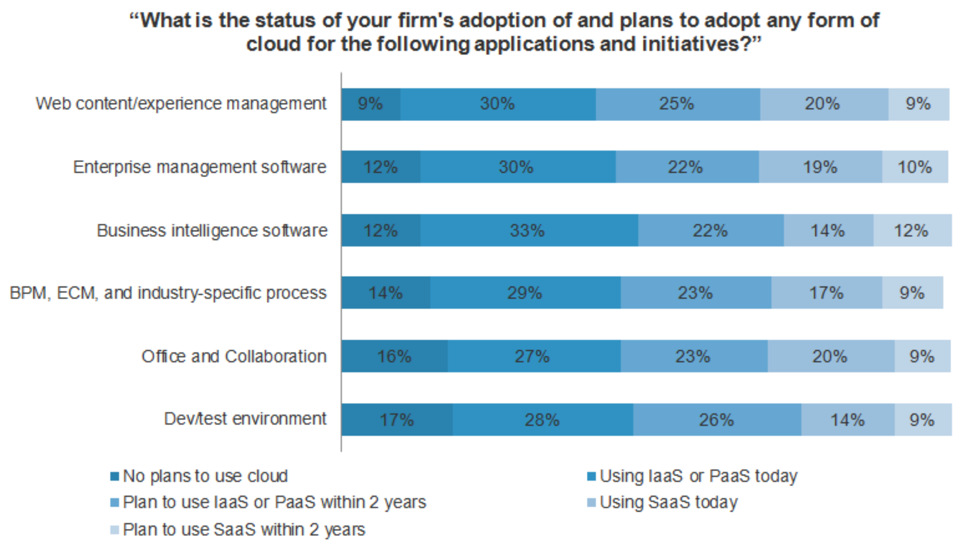
30% of respondents are using IaaS and PaaS today; 22% of them plan to use IaaS or PaaS within two years; 19% of them are using SaaS right now; and another 10% of them plan to use SaaS within two years.

From another perspective, IaaS and PaaS are the top priorities when we look at the technology service categories.

- **IaaS/PaaS have the highest adoption rates.** Our respondents report IaaS/PaaS adoption ranges of 28% to 30%, while SaaS adoption ranges from 14% to 20%.
- **IaaS/PaaS are also the focus for strategic planning.** We asked respondents about their plans to adopt IaaS/PaaS within the next two years; 22% to 26% plan to do so across the range of usage scenarios. These rates are higher than for plans to use SaaS, which range from 9% to 12%.

Respondents told us that various business and technology needs will further drive their adoption of SaaS, PaaS, and IaaS to expand and anchor cloud platform ecosystems that weave together application, development platform, and infrastructure services.

FIGURE 2
Enterprises Have Various Usage Scenarios For Cloud Adoption



Base: 300 companies in BFSI, retail/CPG, life sciences, manufacturing, telecommunications, and utilities

Note: Excludes responses of Don't know/Does not apply

Source: A commissioned study conducted by Forrester Consulting on behalf of Infosys, September 2014

› **Agility is the most important driver of cloud adoption**

77% of the enterprises interviewed cite agility as the most important driver for cloud adoption. Agility includes responsiveness, resource utilization, collaboration, and innovation.

- **Better responsiveness.** The cloud model speeds implementation and deployment; SaaS/-as-a-service providers can achieve faster delivery of new features and functions.
- **Better resource utilization.** The cloud reduces the need for in-house IT staff to maintain traditional software solutions; enterprises can instead dedicate these resources to more important projects.
- **Better collaboration.** Companies gain access to a wide ecosystem of solutions around the core SaaS application.
- **Better innovation.** The iterative deployment model supports a higher level of innovation within the business.

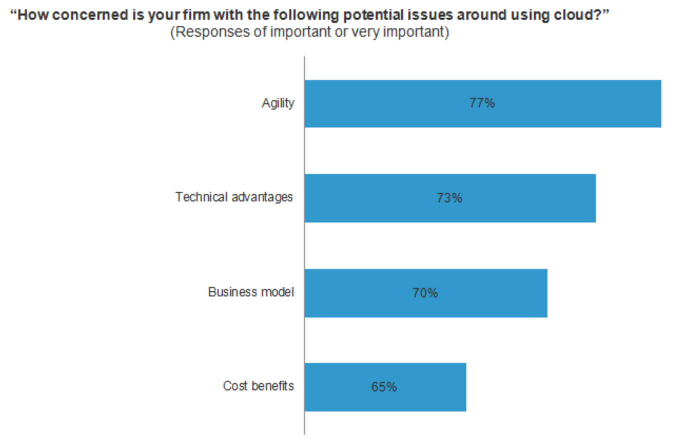
Some 73% of the companies interviewed also considered technical advantage to be an important driver, while 70% flagged the business model as key. The cost benefit was the least important driver of cloud adoption, with just 65% of respondents citing it (see Figure 3).

The User Experience In The Cloud Still Has Room For Improvement

Despite the drivers behind and the progress made on cloud adoption, global companies still face challenges with the cloud. Besides the classic concerns around security and regulatory compliance, respondents mentioned user-experience-related issues, such as limited self-service and insufficient transparency, as high priorities. In general, cloud adopters will demand operational simplicity in the future.

› **User-experience-related issues still need to be addressed as a high priority.** Right after the long-standing concerns of security, compliance, and cost is a group of criteria related to various aspects of the user experience: 66% of our respondents told us that they are concerned/very concerned about the complexity of managing and governing a hybrid cloud environment; 65% are concerned/very concerned that application performance, such as availability and speed, will be negatively affected; and 60% are concerned/very concerned that integration with other applications might be a challenge.

FIGURE 3
Agility Is The Most Important Driver Of Cloud Adoption



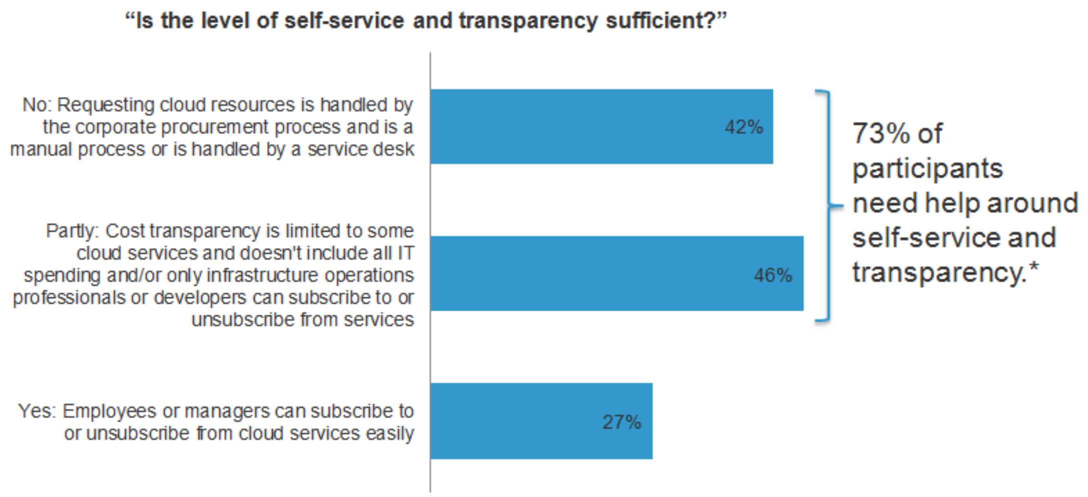
Base: 300 companies in BFSI, retail/CPG, life sciences, manufacturing, telecommunications, and utilities

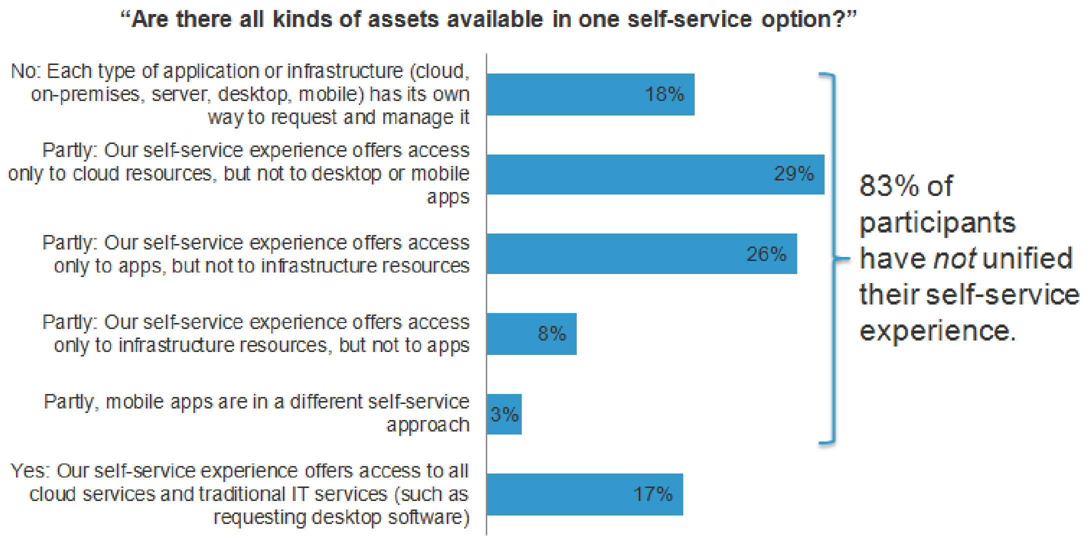
Source: A commissioned study conducted by Forrester Consulting on behalf of Infosys, September 2014

The relationships between corporate IT departments and the lines of business are similar to external customer relationships. Transparency, simplicity, and self-service, even for hybrid cloud services, stimulate cloud adoption.

› **Limited self-service, insufficient transparency, and the inability to access application and infrastructure assets are leading concerns.** The majority of cloud adopters have implemented cloud services to some extent and have achieved both business and technical benefits. However, only 27% of respondents think that the levels of self-service and transparency are sufficient, and only 17% believe that all asset types are available via one self-service experience (see Figure 4).

FIGURE 4
The Levels Of Self-Service And Transparency Aren't Sufficient





Base: 300 companies in BFSI, retail/CPG, life sciences, manufacturing, telecommunications, and utilities

Source: A commissioned study conducted by Forrester Consulting on behalf of Infosys, September 2014

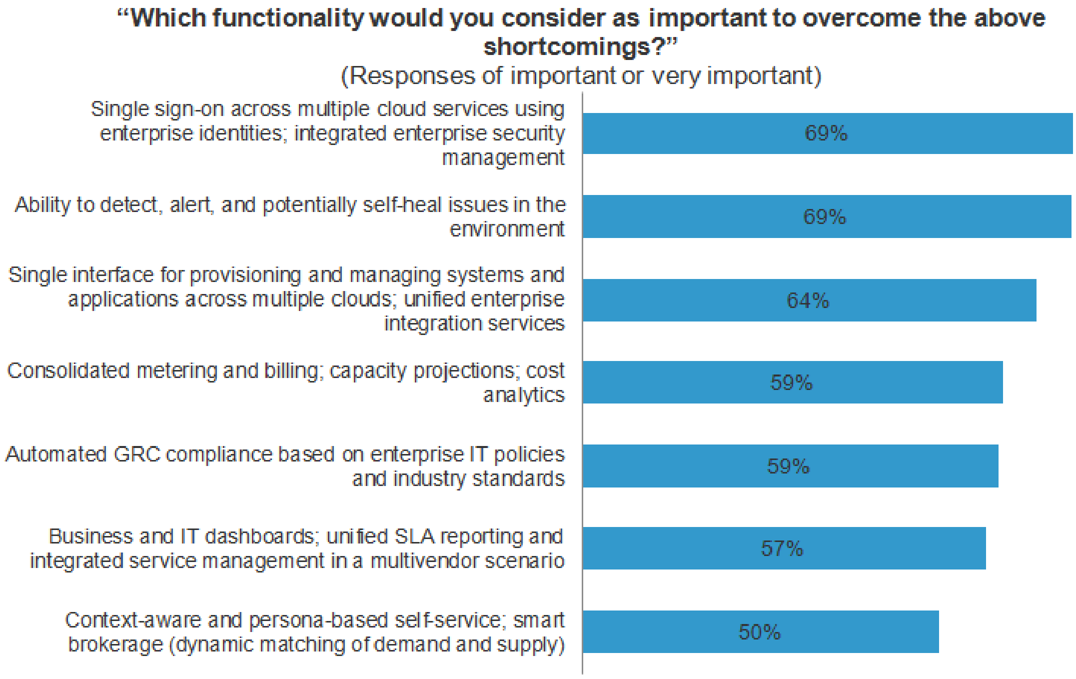
The lack of transparency and self-service has a severe impact on the operational performance of the cloud and its adoption. Forty-five percent of companies take more than three months to make new or customized business logic in SaaS applications available for use, and it takes more than three days for 55% of these large companies to get the new virtual infrastructure from their private or public cloud infrastructure.

Therefore, companies need innovative solutions that help them bridge these gaps in the cloud ecosystem: They need transparency around general cloud usage and to access self-service cloud resources to make consumption easier and improve the user experience.

› **Cloud adopters will demand operational simplicity in the future.** Operational simplicity includes a single interface for provisioning and managing systems and applications with unified enterprise integration services; consolidated metering and billing; and automated governance, risk, and compliance (GRC) with self-healing support. These demands fall into three camps (see Figure 5):

- **The early cloud management challenges.** The majority of enterprises in the early phase of adoption want the ability to detect, alert, and (in the future) resolve issues themselves. Features that offer essential convenience, such as single sign-on across multiple cloud services, also fall into this category. Some 69% of respondents rated these capabilities as important or very important.

FIGURE 5
Cloud Adopters Will Demand Operational Simplicity In The Future



Base: 300 companies in BFSI, retail/CPG, life sciences, manufacturing, telecommunications, and utilities

Source: A commissioned study conducted by Forrester Consulting on behalf of Infosys, September 2014

- **Mature cloud management.** More mature enterprises usually request features like a single interface to provision systems and apps across multiple clouds and consolidated metering and billing: 64% and 59% of our respondents, respectively, are already demanding this sort of functionality.
- **Forward-looking cloud consumption.** More sophisticated customers demand modern dashboards, context-aware and persona-based self-service, and (later on) smart cloud broker capabilities: 57% and 55% of our respondents, respectively, are requesting these capabilities.

Work With Trusted Partners To Enable Business Innovation

When it comes to business innovation, enterprises can't address all of these challenges and achieve future improvements alone.

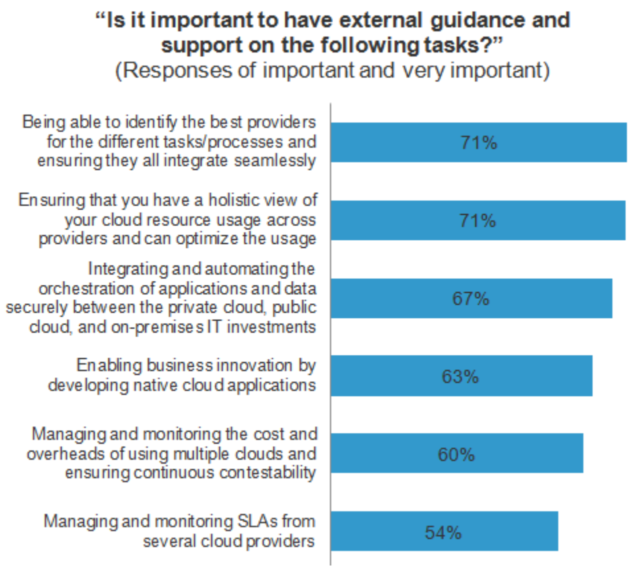
We believe that trusted partners are key enablers that will help integrate and automate the orchestration of apps and data in a hybrid cloud environment. Enterprises should therefore focus on the companies that can help them effectively manage change and enable them to scale rapidly.

› **Trusted partners are key enablers that will help integrate and automate the orchestration of apps and data in a hybrid cloud environment.** Some 77% of our respondents trust global or local system integrators to act as their cloud implementation providers, rather than implementing it themselves. However, not all service providers are qualified. The key characteristic of trusted partners is that they are able to provide guidance and support to cloud adopters, enabling business value.

› **The cloud ecosystem integrator acts as a broker.** In a hybrid cloud environment, 71% of interviewed companies consider it important/very important for cloud partners to be able to identify the best providers for the different tasks and processes and ensure that they integrate seamlessly; 71% think it's important/very important for partners to ensure that they have a holistic view of their cloud resource usage across providers and can optimize usage; and 67% want to have external guidance and support to integrate and automate the orchestration of applications and data securely between the private cloud, public cloud, and on-premises IT investments (see Figure 6).

FIGURE 6

Focus On The Companies That Could Help You Effectively Manage Change And Enable You To Scale Rapidly



Base: 300 companies in BFSI, retail/CPG, life sciences, manufacturing, telecommunications, and utilities

Source: A commissioned study conducted by Forrester Consulting on behalf of Infosys, September 2014

› **Focus on the companies that can help you effectively manage change and enable you to scale rapidly.** Having the essential capabilities is only the first step; cloud adopters are also looking for business and technology deliverables from their cloud engagements.

The cloud provider deliverables that our respondents consider to be most important include the following: 70% of respondents think that it's important/very important for this partner to enable them to scale rapidly and capitalize on opportunities; 70% think that the partner should provide a single point of accountability; and 67% think that the partner should reduce vendor liaison effort as well as commercial and legal complexity. Other key deliverables include effectively managing technology and organizational change as well as future-proofing unit prices.

Key Recommendations

Cloud computing has reached a tipping point for enterprises — they now need a comprehensive strategy for broad adoption and use. Until now, most companies have adopted public cloud services in an ad hoc fashion, driven mostly by business leaders and developers creating new customer-facing systems that corporate IT could not deliver quickly enough. These initial experiences prove that cloud applications, platforms, and business services are now ready to be strategic resources in your business technology portfolio. Forrester's in-depth surveys with technology management and business decision-makers lead to these important recommendations:

- **Improve the user experience to help take cloud adoption mainstream.** Some 73% of the enterprises we surveyed are struggling with cloud computing's self-service experience. Both external customers and your internal business stakeholders are your customers. Providing a unified user experience that offers simplicity, cost transparency, and agility will drive further cloud adoption. Ideally, both the processes for corporate service catalogs and the cost transparency of public app stores should be available in a future "service app store."
- **Choose trusted innovation partners to accelerate your business transformation.** The cloud partners on your list should be able to seamlessly integrate with various product and solution providers for the different tasks and processes; they should also have a holistic view of their cloud resource usage across the whole ecosystem in order to optimize its use. With their help, the constantly changing app store content or service offerings from public providers should appear seamlessly inside your service app store. Work with your partners on your innovation journey and to continuously improve the user experience, based on the secure orchestration of applications and data between the private cloud, public cloud, and on-premises IT investments.
- **Consider a cloud ecosystem hub to show all assets from one perspective.** Some 83% of the enterprises we surveyed are struggling to bring together all their cloud services — from IaaS, PaaS, and SaaS and from public and private clouds to traditional IT. Make sure your stakeholders, right down to individual employees, are able to compare all of these services across these hybrid environments. Some people will want to "give back a service" and subscribe to another service from a different provider using the budget saved.

Appendix A: Methodology

In this study, Forrester interviewed 300 organizations in the US, the UK, Germany, France, and Australia to evaluate how a cloud ecosystem integrator can bridge the gap between what the business wants from the cloud and what IT delivers. These organizations come from a variety of verticals, including banking, financial services, and insurance (BFSI); retail and consumer packaged goods (CPG); life sciences; and manufacturing. Survey participants come from large global companies with annual revenues of more than US$1 billion, and they hold various leadership roles for cloud adoption, including CIO; CTO; vice president/director of IT (infrastructure, operations, and architecture); IT head of a line of business (LOB); as well as functional LOB head, such as sales, marketing, finance, and HR. We asked participants about their cloud adoption status, achievements, and shortcomings; potential for innovation; and their options for trusted partners. The study began in July 2014 and was completed in August 2014.

Appendix B: Supplemental Material

RELATED FORRESTER RESEARCH

"Accelerate Market Responsiveness With A Holistic Cloud Strategy," Forrester Research, Inc., June 9, 2014

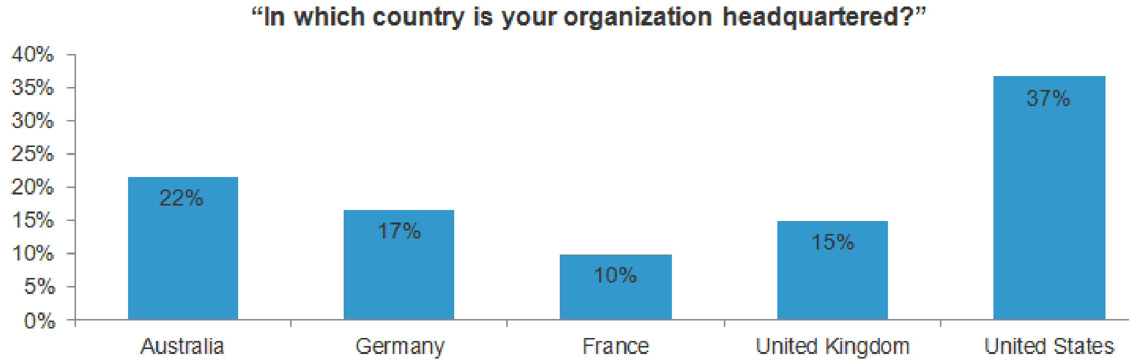
"Cloud Keys An Era Of New IT Responsiveness And Efficiency," Forrester Research, Inc., November 19, 2012

"Understand The Cloud Service Provider Market Landscape," Forrester Research, Inc., May 19, 2014

"Assess Your Cloud Maturity," Forrester Research, Inc., May 29, 2012

Appendix C: Demographics/Data

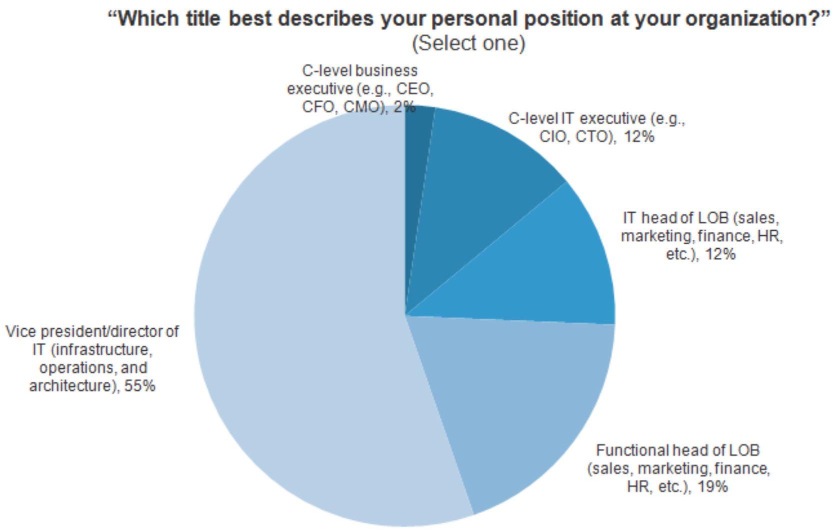
FIGURE 7
Country Split



Base: 300 companies in BFSI, retail/CPG, life sciences, manufacturing, telecommunications, and utilities (percentages do not total 100 because of rounding)

Source: A commissioned study conducted by Forrester Consulting on behalf of Infosys, September 2014

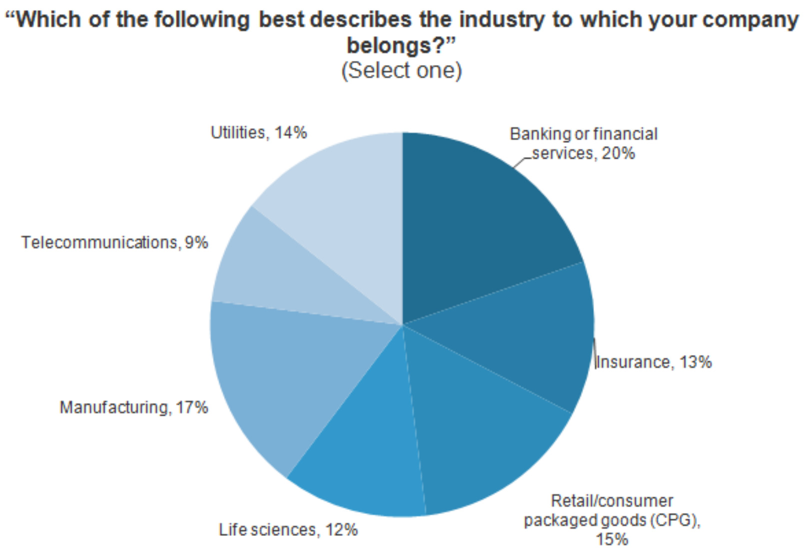
FIGURE 8
Respondent Role



Base: 300 companies in BFSI, retail/CPG, life sciences, manufacturing, telecommunications, and utilities

Source: A commissioned study conducted by Forrester Consulting on behalf of Infosys, September 2014

FIGURE 9
Company Industry



Base: 300 companies in BFSI, retail/CPG, life sciences, manufacturing, telecommunications, and utilities

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