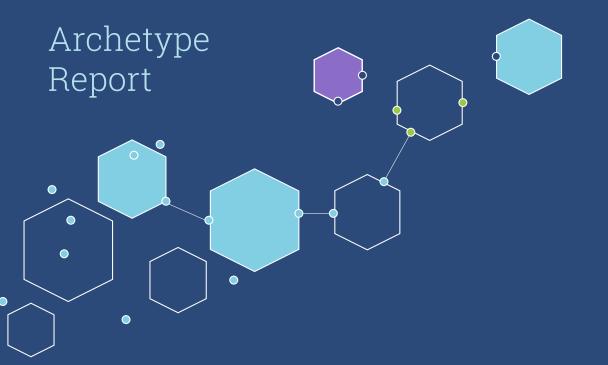
‡sg Provider Lens™

Cloud Services



A research report aligning enterprise requirements and provider capabilities

December 2017

Customized report courtesy of:



About this Report

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The research and analysis presented in this report includes research from the ISG Provider Lens™ program, ongoing ISG Research programs, interviews with ISG advisors, briefings with services providers and analysis of publicly available market information from multiple sources. The data collected for this report represents information that was current as of September 30, 2017. ISG recognizes that many mergers and acquisitions have taken place since that time, but those changes are not reflected in this report.

All revenue references are in U.S. dollars (\$US) unless noted.

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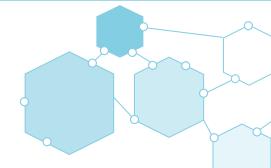
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EXECUTIVE SUMMARY

This ISG Provider Lens™ report summarizes the relative capabilities of 21 cloud services providers and their abilities to address the requirements of five typical, frequently encountered categories of enterprise users ("archetypes"). Each archetype represents a distinctive set of business and technological needs and challenges.

In our research, we found no shortage of providers with capabilities adequate to satisfy the cloud transformation requirements of most user enterprises. It is rare to find one cloud services provider that can address all cloud transformation needs across most user archetypes. That is due in large part to four core realities regarding the archetypes:

The characteristics of each archetype are a moving target over time, because, while the core requirements rarely change, the relative importance of different requirements can vary based on business and/or technological environment changes. Clients are not innovators and not inclined towards digital technologies.



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- Multiple archetypes tend to be present in most enterprises, especially in larger firms. As the requirements of each archetype evolve and adapt based on business and technological change, so too does the presence and value of each archetype.
- A good number of providers (especially large ones) come from traditional sourcing backgrounds and their operational scope is focused on "traditional" data centers. The transformation to public cloud comes in phases/ steps. As such, from a provider perspective, the archetypes offer a continuum of service opportunities for the entire enterprise as well as in individual business units within the enterprise. It should be noted that the service providers are leveraging their install bases to generate additional revenue through transformation services.
- The "born-in-the-cloud" and "cloud native" clients, as represented by the Next-Gen archetype, present exciting new revenue generating opportunities for service providers. In terms of revenue, this market segment has not reached the scale of the traditional IT sourcing business. The sourcing providers are working with CIOs not only to support the traditional workload base but also to support "cloud native" applications. As such, the leadership of many traditional sourcing companies is involved in a broad scope of activities that extends all the way from transforming traditional IT to serving Next-Gen clients.

Enterprise IT leaders, service owners, procurement managers and others involved in cloud transformation initiatives have an ongoing series of choices for cloud services provider selection. Those making the transformation must strike a balance between optimal business value and relative cost of the provider engagement, integration and management. Market changes, new business models, fluctuating economic factors and other factors will continually conspire to add to and subtract from user needs. Any client enterprise that fits solely within a single archetype will receive limited value over time from cloud transformation services. For service providers, slotting customers into a single archetype and not anticipating that their needs will change can prevent effective value from being delivered, leading to customer frustration and dissatisfaction. Please note: This report presents services providers' known capabilities in the context of user enterprises' typical project needs (i.e., archetypes). This report is not meant to rank providers or to assert that there is one top provider whose abilities can meet the requirements of all clients who identify themselves with an archetype.



Introduction

CLOUD COMPUTING ECOSYSTEM

The internet is changing the way we conduct business and interact as a society. Traditionally, hardware and software were fully contained in a user's computing environment. The computing environment was considered to be the data and applications residing on a personal computer, on various servers, within the company network and in its data centers where access is restricted to authorized personnel. Cloud computing allows the user to access the data and programs outside of the user's physical environment. Rather than storing their data and software on their personal computer or server, it is stored in the cloud. Cloud hosting also can include applications, Databases and email and file services.

A common analogy to describe cloud computing is renting versus buying. Essentially, the users rent capacity (server space or access to the software) from a cloud service provider and connect over the internet. Instead of buying their own IT resources, they are renting from a service provider, paying for only the resources that they use.

Cloud computing has many models with different access and security options. Before users move their data into the cloud, they need to consider which model works best for their business and data needs. The general model types are summarized as follows:

Private Cloud

A private cloud is where the services and infrastructure are maintained and managed by the user or a third party. This option reduces the potential security and control risks, and will suit clients whose data and applications are a core part of their business and need more security or have sensitive data requirements.

Community Cloud

A community cloud exists where several organizations with similar security considerations share access to a private cloud. For example, a series of franchises have their own private clouds, but they are hosted remotely in a private environment.

Public Cloud

A public cloud is where the services are stored off site and accessed over the internet. Storage is managed by an external organization such as AWS, Google, IBM or Microsoft. This service offers a greater level of flexibility in resource deployment and pricing; however, the client has less flexibility with the terms and conditions dictated by the cloud provider.

Hybrid Cloud

A hybrid cloud model takes advantages from both public and private cloud services. Users gain the benefits of each model by spreading their options across different cloud types.

The definitions of these various cloud types are basic. In the real world, the decision to migrate to cloud is complex and involves many steps. It starts with creating a digital strategy for the company, of which cloud is just one key component. The application portfolio needs to be analyzed to decide which applications are ready to be migrated to the cloud. This analysis should consider the benefits the business will derive from migrating to cloud and the technical, regulatory, financial and security considerations associated with each application. The manner in which these decisions are made varies from customer to customer depending on what stage of digital transformation they are in.

Some organizations may not have any interest or need to migrate to cloud, and some may be so far along the journey that they need very little handholding. In this report, we attempt to identify common customer types (archetypes) and the services for which they are looking. We also identify the service providers that are best suited for each of the archetypes.

This report focuses on public cloud services. Other cloud types will be addressed in follow-up reports.

About the Report

This report uses research and analysis from ISG's long-running work with enterprise clients and IT services providers alike to identify and examine key changes in, approaches for, and buyers of cloud services. We then map what we see as frequent user-side requirements to provider-side offerings and capabilities.

Obviously, not every user enterprise has the same requirements for cloud transformation. In this report we use five "buyer archetypes" – which are detailed in the following sections – to identify and assess buy-side requirements for business value. We compare these requirements to provider-side offerings and capabilities.

This assessment methodology has been developed and refined over several years of working with buyers to understand and articulate their services requirements and by working with providers to understand how those buyer requirements influence the development of, and go-to-market strategies for, suitable solutions.

The capabilities of 21 providers are assessed in this report. Some service providers that are typically included in our work are not included in this report. Some of those service providers were not able to participate, and some declined to participate. They may be included in future versions of this report, based on merit and on the service providers' willingness to provide current and relevant materials. Readers should not make any inferences based upon a service provider's absence from this report.

How to Use This Report

This report is intended to provide advice that is founded on ISG's experienced-based, proprietary assessment of service providers' relative suitability to the typical cloud services client's needs. This advice is then applied across each of the five archetypes as profiled. No recommendation or endorsement is indicated, suggested or implied. Clients must make the decision to engage with any provider based not only on their specific, current cloud needs, but also on other factors such as cost, culture and timing.

This report is organized as follows:

- Client Archetype Descriptions: This section identifies and describes each of the five most common user-side archetypes that we have identified in our ongoing cloud research and analysis.
- Assessments by Archetype: These sections first detail each of the five client archetypes, along with the types of service offerings that each buyer typically requires in order to realize the most business value.

Next, these sections present our assessment of the relevant capabilities and positioning of the 21 providers surveyed and interviewed. Providers are assessed separately for their relative suitability for each archetype based on the information that they have provided to ISG. These assessments are developed using the data, analysis, and comparative methodology described in the methodology section.

 Methodology: In this section, we outline and explain how the data, analysis and insights provided in this report were developed and applied.





CLIENT ARCHETYPE DESCRIPTIONS

The client archetypes used in this report (and in our ongoing advisory and consulting engagements) represent the various types of clients ISG has observed and how we classify them according to their relative outsourcing maturity and objectives. Each client archetype encapsulates the typical characteristics of a specific type of buyer that is looking to outsource one or more processes or functions. The use of archetypes enables us to develop sets of characteristics and needs that can be applied uniformly and repeatedly across multiple environments, industries, provider types and other variables within one service line.

The archetypes are not meant to be comprehensive examinations of all potential or likely client situations and requirements. They are meant to provide a simple, relevant and repeatable set of user-side requirements against which a similarly simple, relevant set of provider capabilities can be assessed.

The archetypes included in our reports are based on the most current marketplace knowledge regarding prevalent buy-side goals, resources, initiatives and requirements. Archetype characteristics are also developed (and refined over time) based on our advisory and consulting work with enterprise clients and IT service providers, and on our global business IT market research and advisory programs.

THE TRADITIONAL ARCHETYPE

The Traditional buyer hasn't accepted cloud as material to its computing needs. Their IT environment is mainly mainframe and legacy applications. Either due to regulations, security issues or pure disdain for new technology, they have not embraced cloud computing. However, this archetype is open to learning more about cloud computing benefits and is seeking assistance to assess its computing environment and strategy formulation. These clients are generally risk averse.



THE DELIBERATE ARCHETYPE

The Deliberate buyer is cautious and deliberate about moving to the cloud. They are like Traditional buyers except they will embrace cloud if there is a proven cost savings for shifting IT operations to the cloud. Deliberate clients also want to be able to demonstrate to their management and clients that they are being proactive in pursuing cloud solutions.







THE PRAGMATIC ARCHETYPE

The Pragmatic buyer advocates prudent use of cloud resources where value can be realized. Value is a combination of agility, flexibility and cost optimization - with emphasis on short time-to-value opportunities, especially for cost savings.

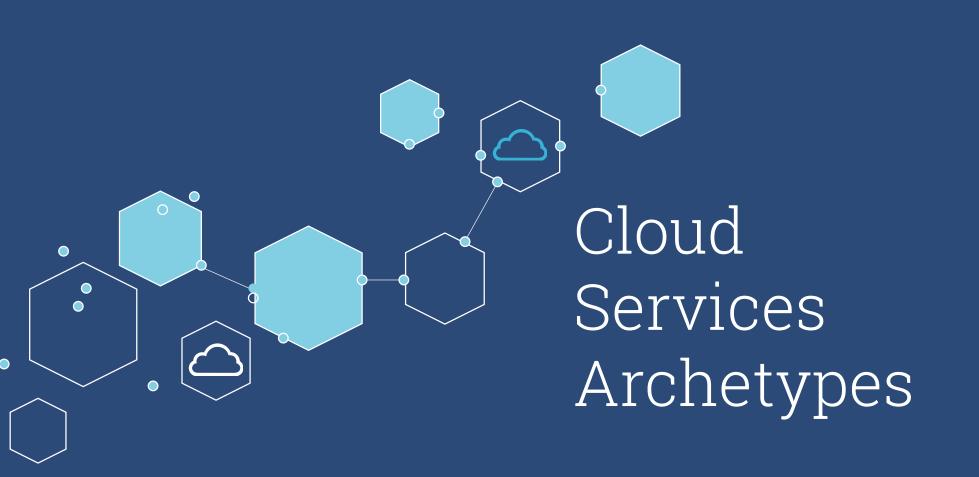


The Next-Gen buyer is an early adopter of cloud, they take a "Cloud First" approach. Focus is on using "born-in-the-cloud" applications to leverage cloud-native capabilities. Next-Gen clients are not encumbered by the requirements of legacy operations. These clients consider IT as a change agent, and in many cases IT is an enabler of revenue and profit growth.





The Transformative buyer takes a strategic (long term) view of the environment. Plans are in place to transform the current IT environment to cloud, and there are usually project milestones attached. However, Transformative clients will not force fit legacy infrastructure and applications to the cloud if the strategic value is not realized. They are willing to take risks to realize strategic value.





The Traditional client has very little exposure to or interest in cloud computing. Its IT operations predominantly consist of a large mainframe or AS400 environment which the client would like to maintain; the client sees no urgency to move to a cloud environment. Because of the legacy nature of the business, even if Traditional clients were to move some workloads to a cloud environment, the migrated systems would need to be integrated with the legacy systems, which can be time consuming, expensive and risky. Traditional clients' interest in cloud computing is confined to learning and educating their staff to keep from falling far behind.

The most common trait of a Traditional client is that its IT organization is usually siloed, disjointed from other business organizations and viewed mostly as a support function and cost center. These clients are not inclined to try newer technology if there are security implications.

The Traditional client IT organization generally consists of a technology and standards group (typically under the chief technology officer) that pilot newer technology such as cloud. These pilot efforts are formal and can take many months. Standard policies and practices for IT services requisition are strictly enforced. Centralized IT service management (ITSM) is in place to address all user requests.



The Typical characteristics of Traditional clients include:

- Loss of control is a sticking point;
- Risk aversity is common;
- Flexibility and agility (response time) are not high priorities.
- The IT staff is generally older and experienced/proficient in legacy IT skills; and
- Individual business departments are satisfied with the current cost allocation process and do not demand usage-based pricing.

When it comes to cloud services, a traditional client will look for the following:

- Traditional data center services well-grounded in standard ITIL services.
- Adherence to technology standards set by the standards group,
- Enforcement of SMC disciplines, and
- Exhaustive operational metrics reporting, which will be reviewed by key IT decision makers.

Traditional clients will require a service provider partner to at least offer the following:

- Vision, focus and experience in helping clients with either a large legacy setup, or clients that are in the initial stages of a public cloud transformation journey;
- Ability to provide multi-supplier support, compliance, governance and security;
- Consulting capabilities (including strategy, evaluation and justification);
- Project oriented (fixed price) pricing; and
- Out-tasking and contract management experience.

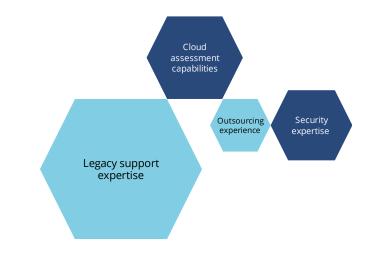


Traditional Archetype Client Imperatives

- Total control of the environment;
- Strict adherence to budgeting process;
- Minimal to no disruption of services "do not rock the boat;"
- Consistent technology standards adopted all over the company; and
- Avoidance of risk

Traditional Archetype Provider Capabilities Importance

Increasing Future Importance Decreasing Future Importance



Size based on relative current importance in the archetype profile

Fig 2 Traditional Archetype Leaders

Score 4 out of 4

Score 3 out of 4

Score 2 out of 4

Score 1 out of 4

Of the 21 providers included in
our research, we found eight
that stand out above the others
as matching the Traditional
client archetype based on our
assessment of their capabilities
as described in the Methodology
section in the Appendix. These
eight are referred to as Archetype
Leaders, and their relevant
capabilities are presented in
Figure 2 and briefly examined in
the following sections.

Note: The service providers listed are arranged in alphabetical order. No ranking is implied.

A	Expertise in Legacy Support	Cloud Assessment Capabilities	Outsourcing Experience	Security Expertise
Atos				•
Cognizant				
HCL				•
IBM				
Infosys				
Microland	•		•	
Mindtree				
Mphasis	•	•		•

Mindtree

Mindtree is focused on customers across CPG, retail, banking, insurance, travel, high technology, media and services industries. As part of its portfolio analysis services, Mindtree provides current state analysis, cloud fit analysis and migration plans. One of the key components is planning the priority and sequence for migrating applications. Mindtree undertakes that step once the infrastructure and application assessments have been completed. It provides a map to outline scenarios that would better align priorities with the client's business requirements. This helps to create a metrics-driven ROI roadmap aligned to business.



OTHER NOTEWORTHY PLAYERS - TRADITIONAL ARCHETYPE

Some other providers scored high in one or more areas that are important for an Traditional Archetype client. However, they were not categorized as leaders for this archetype because they did not rate high in enough categories.

Noteworthy providers (services providers with a high score in one or more categories) for Traditional Archetype clients are:

Dimension Data

KPIT



Fig 3 Other Noteworthy Service Providers – Traditional

Cloud Assessment Capability	Outsourcing Experience	Security Expertise
LTI	KPIT	Dimension Data
NTT Data	LTI	NTT Communication
Sonata	Virtusa	NTT Data
Trianz	Zensar	Sonata
Unisys		Zensar
Virtusa		
Zensar		





Deliberate clients are cautious and deliberate about moving to the cloud. They are like Traditional clients except they will embrace cloud services if they can be convinced there will be proven cost savings for shifting IT operations. In the journey towards cloud adoption, Deliberate clients are slightly more open to the cloud than their Traditional archetype counterparts. The increased openness may be because Deliberate clients may not feel the same regulatory and security burdens as the Traditional archetype. Deliberate clients are also likely to be getting some pressure from senior leadership about why they have not moved to cloud, or they may want to demonstrate to senior management that they are proactively pursuing cloud solutions.

Just like Traditional clients, the Deliberate IT client organization generally consists of a technology and standards group (typically under the CTO) that pilots newer technology such as cloud. These pilot efforts are formal and can run for many months. Standard IT services requisition policies and practices are strictly enforced. Centralized IT service management (ITSM) is in place to address all user requests.



The typical characteristics of Deliberate clients include:

- Client has a steady growth rate with minimal use of mergers and acquisitions to enter new areas.
- Clients are risk averse and not inclined to try newer technology if there are security implications.
- IT leadership is under some pressure from senior management to migrate to cloud.
- Flexibility and agility (response time) are not high priorities.
- IT staff members are generally older/experienced and proficient in legacy IT skills.
- Individual business departments are satisfied with the current cost allocation process and are not demanding usage based pricing.

When it comes to cloud services, a Deliberate client will look for the following:

- Governance and security as key requirements;
- Traditional data center services well-grounded in standard ITIL services;
- Adherence to enterprise technology and standards set by the standards group;
 and
- Exhaustive use of operational metric reporting, which will be reviewed by key IT decision makers.

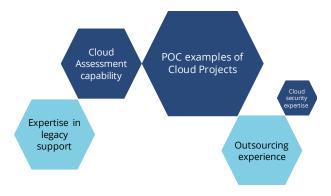
Deliberate clients will require a service provider to at least offer the following:

- Vision, focus and experience in helping clients with either a large legacy setup or clients who are in initial stages of a public cloud transformation journey;
- Consulting capabilities (Cost-benefit evaluation of cloud and non-cloud implementations, business case creation in addition to strategy, evaluation, and justification);
- Project oriented (Fixed price) pricing; and
- Out-tasking and contract management experience.



Deliberate Archetype **Provider Capabilities Importance**

■ Increasing Future Importance ■ Decreasing Future Importance



Size based on relative current importance in the archetype profile

Deliberate Archetype **Client Imperatives**

- Cost reduction the reason to embrace new technology;
- Fixed pricing preferable;
- Strict adherence to standards across the company;
- Political awareness willing to make politically astute moves, such as undertake pilot projects, to show senior management interest in new technology; and
- Avoidance of risk

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Score 1 out of 4

Fig 5 Deliberate Archetype Leaders

Score 3 out of 4

Score 4 out of 4

Of the 21 providers included in our research, we found nine that stand out above the others as matching the Deliberate client archetype based on our assessment of their capabilities as described in the Methodology section in the Appendix. The nine are referred to as Archetype Leaders, and their relevant capabilities are presented in Figure 5 and briefly examined in the following sections.

Note: The service providers listed are arranged in alphabetical order. No ranking is implied.

	30010 4 000 01 4	30010 3 001 01 4	30010 2 00		016 1 001 01 4
A2	Expertise in Legacy Support	Cloud Assessment Capabilities	POC Examples of Cloud Projects	Outsourcing Experience	Cloud Security Expertise
Atos		•	•		•
Cognizant		•			
HCL		•		•	
IBM					
Infosys		•			
Microland	•	•		•	
Mindtree					
Mphasis	•			•	
Virtusa	•				

Score 2 out of 4

Mindtree

Mindtree is focused on assisting clients with digital transformation. It takes a three-step approach. The first step is to help the client identify and assess the key decisions related to pursuing cloud computing and managing its deployment. The next step is to migrate old applications and/or deploy new ones to support a seamless transition to the cloud. Once migrated, the final step is to establish unified governance and performance management for cloud services.



OTHER NOTEWORTHY PLAYERS — DELIBERATE ARCHETYPE

Some other providers scored high in one or more areas that are important for a Deliberate Archetype client. However, they were not categorized as leaders for this archetype because they did not rate high in enough categories.

Noteworthy providers (services providers with a high score in one or more capabilities) for Deliberate Archetype clients are:



Fig 6 Other Noteworthy Service Providers – Deliberate



Cloud Assessment Capabilities	POC for (Projec
LTI	Dimensio
NTT Data	LTI
Sonata	Trian
Trianz	Unys
Zensar	Zensa

Outsourcin Experience
KPIT
LTI
Zensar

lloud

n Data

Cloud Security Expertise
Dimension Data
NTT Communications
NTT Data
Sonata
Zensar



The Pragmatic client advocates prudent use of cloud services where value can be realized. Value is determined by a combination of agility, flexibility and cost optimization. Pragmatic clients emphasize realizing value (especially cost) in a short time frame. They are focused on improving their IT operations with an aim of attaining cost savings and improving efficiency.

The typical infrastructure of Pragmatic clients consists of legacy and virtualized systems. These clients have been running their data centers for a long time and now want to leverage the public cloud. Cost and efficiency are the prime drivers and clients will consider tradeoffs between the two. Pragmatic clients are willing to entertain SaaS and PaaS where applicable. Usage-based chargeback is important to the Pragmatic client because it can tie costs to the resources consumed.

Pragmatic clients are willing to seek outside consulting help for cloud strategy formulation, evaluation, migration and implementation as long costs can be justified. They are also willing to use outside resources to satisfy their technical skill gap because they do not have sufficient experience and resources for automation and DevOps related technologies.

The typical characteristics of this Archetype include:

- Advocates prudent use of cloud where value can be realized;
- Desires a short time to value, especially for cost reduction;
- Has a combination of legacy and newer technology skills; and
- Faces some (but not excessive) change in demand for IT services due to divestitures, mergers and acquisitions.

When it comes to cloud services, the Pragmatic client will look for the following:

- Traditional data center services well-grounded in standard ITIL services,
- Exhaustive operations and cost metrics reporting, which will be used to make key IT decisions,
- Vision to transform the IT environment to a digital environment that includes cloud,
- Education and skill enhancement services to prepare client staff for the eventual digital environment, and
- Usage-based pricing

Pragmatic clients will require a service provider partner to at least offer the following:

- Strategic partnership with large public cloud providers,
- Strong consulting skills (including demonstrated abilities for show and tell, financial justification, transformation and implementation),
- Experience with output-based and fixed-fee pricing,
- Mature services (SaaS, PaaS, integration, transformation and implementation), and
- Usage-based contract management and implementation experience.



Pragmatic Archetype Client Imperatives

- Prudent use of cloud services where value can be realized (value is determined by a combination of agility, flexibility and cost optimization);
- Cost and efficiency as the prime drivers clients will consider tradeoffs between the two;
- Usage-based chargeback desire to tie costs to the resources consumed;
- Traditional data center services well-grounded in standard ITIL services; and
- Usage-based costing



Pragmatic Archetype Provider Capabilities Importance

Cloud
Management
Platform
offerings

Cloud
Cloud
Transformation
services

Cloud
Migration and
Professional
services

Cloud



plementatio

experience

Size based on relative current importance in the archetype profile

Contract

management

experience

Fig 8 Pragmatic Archetype Leaders

Score 4 out of 4 Score 3 out of 4

Score 2 out of 4

Score 1 out of 4

Of the 21 providers included in our research, we found nine that stand out above the others as matching the Pragmatic archetype based on our assessment of their capabilities as described in the Methodology section in the Appendix. The nine are referred to as Archetype Leaders, and their relevant capabilities are presented in Figure 8 and briefly examined in the following sections.

Note: The service providers listed are arranged in alphabetical order. No ranking is implied.

43	Cloud Implementation Experience	Cloud Management Platform offerings	Cloud Transformation Services	Cloud Migration and Professional services	Cloud Contract Management experience
Atos		•		•	
Cognizant					
HCL			•		•
IBM					
Infosys	•	•			
KPIT					•
LTI		•	•		•
Mindtree					
Mphasis			0		

Mindtree

Mindtree does not own any data centers. It provides managed services support to customer-owned or hosted data centers. Mindtree is assisting one of the largest PaaS provider in operating their public cloud globally. It manages 24/7 through multi shore NOC's all of its Infrastructure and ensures availability. It also supports cloud clients and has strong case studies of helping clients transform their legacy applications to the cloud. Mindtree's core business includes the Platform Solution Group, which focuses on licensable software for enterprise customers in specific industries. Some of its offerings include ShotClasses, a platform for continual on-the-job training for employees, partners and customers, and Floorsense, a companion app for retail sales associates that creates intelligence using video analytics from surveillance cameras.



OTHER NOTEWORTHY PLAYERS - PRAGMATIC ARCHETYPE

Some other providers scored high in one or more areas that are important for an Pragmatic Archetype client. However, they were not categorized as leaders for this archetype because they did not rate high in enough categories.

Noteworthy providers (services providers with a high score in one or more capabilities) for Pragmatic Archetype clients are:



Fig 9 Other Noteworthy Service Providers – Pragmatic



Cloud Implementation Experience	Cloud Management Platform	Cloud Transformation Services	Cloud Migration and Professional Services	Cloud Contract Management
Dimension Data	EPAM	Microland	Microland	EPAM
NTT Communications	NTT Communications	Virtusa	NTT Data	Microland
Unysis	NTT Data	Zensar	Sonata	
Virtusa	Zensar		Unysis	
Zensar			Virtusa	
			Zensar	



A Transformative client is constantly reinventing and transforming itself to stay ahead of the curve, to be on the leading edge and to be more effective. Reinvention is not limited to a single business unit or a functional area. It extends to all aspects of the business. In that context, IT is a key element to transformation and is an enabler of change.

The Transformative client has an exceptionally diverse mix of legacy systems and newer technologies that includes cloud services. Senior executives do not consider IT as a cost center but rather as a growth enabler. In most cases, Transformative clients consider enterprise IT a siloed and disjointed function. However, there is a desire and readiness to transform and embrace digital and cloud disruption.

Transformative clients are mature in sourcing enterprise IT services. They often use a focused operating expenditure (OPEX) business model to minimize being held back by sunk technology costs for owned devices.

A Transformative client has skilled IT staff well versed in the latest technology – including cloud, DevOps, agile development, containers and tools, such as Chef, Puppet and others. Most of the development staff has mid-to-high level certifications from the hyperscale cloud providers and are experienced and knowledgeable about public cloud services. If additional resources are needed, Transformative clients are willing to acquire technical expertise and resources from outside organizations to complete projects.



The typical characteristics of this archetype Include:

- While the planning horizon to justify projects varies by project,
 Transformative clients usually take a long-term view that exceeds two or three years.
- Technology (including cloud) is viewed as just a means to achieve the end. Older technology is still acceptable if it can assist in the transformation and help maintain the technical edge.
- Projects are managed closely and conform to milestones and business cases. Projects have regular review cycles with senior management.
- Clients advocate the use of automation and DevOps. They have many development projects using the latest technology in progress.
- SaaS applications are being used in many centrally deployed solutions such as email, finance and HR, though no major effort has been undertaken to transform legacy applications to the cloud.

To help achieve their goal of transforming their IT environments, Transformative clients will have the following priorities:

- Partners with a vision and focus on adopting cloud-based environments and solutions;
- IT organization redesign and realignment from a silo structure to a streamlined organization to support the new environment:
- Business advocates within the IT organization that not only make sure that end users and business units are being supported but also have an added responsibility to look for opportunities where IT can be a growth enabler; and
- Expertise in creating financial models that link with business models/outcomes.

Transformative clients will require a service provider partner to offer at least the following:

- Strategic partnerships with leading public cloud providers who have references and demonstrable experience;
- A risk/reward-based pricing model;
- Experiences and references in legacy-to-cloud transformation projects;
- Demonstrable skills and experience in newer technology (DevOps, containers, etc.); and
- Experience in structuring and managing transformation management contracts.



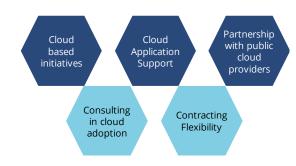
Transformative Archetype Client Imperatives

- To constantly reinvent and transform itself to stay ahead of the curve, to be leading edge and to be more effective;
- To consider IT not as a cost center, but as a growth enabler;
- To use a long-term planning horizon to justify investments;
- To use a risk/reward-based pricing model; and
- To advocate focused operating expenditure (OPEX business models to minimize being held back by sun technology costs for owned devices



Transformative Archetype Provider Capabilities Importance

Increasing Future Importance
Decreasing Future Importance



Size based on relative current importance in the archetype profile

Score 4 out of 4

Score 1 out of 4

Fig11 Transformative Archetype Leaders

Score 2 out of 4

Of the 21 providers included in our research, we found nine that stand out above the others as matching the Transformative archetype based on our assessment of their capabilities as described in the Methodology section in the Appendix. The nine are referred to as Archetype Leaders, and their relevant capabilities are presented in Figure 11 and briefly examined in the following sections.

Note: The service providers listed are arranged in alphabetical order. No ranking is implied.

30010 4 00		0010 3 001 01 4	30010 2 001 01		ore I out or 4
4	Cloud Based Initiatives	Consulting in Cloud Adoption	Cloud Application	Contracting Flexibility	Partnership with Public Cloud Providers
Atos	•				
Cognizant					
HCL					
IBM					
Infosys					
LTI					
Mindtree					
Mphasis					
Virtusa	•	•	•		•

Score 3 out of 4



Mindtree

Mindtree's cloud-related services can be essentially classified into two categories: data center consolidation and digital transformation. Mindtree has found that between 60 and 70 percent of the workloads of data center consolidation clients take the form of a lift-and-shift application scenario. Approximately 15 percent of workloads are either never migrated or implemented through SaaS. The rest are timed with a platform upgrade or tuned with reengineering efforts. In Mindtree's Digital Transformation engagements, it sees platforms being engineered for the cloud, with options ranging from cloud services adoption to cloud-mobile and cloud-agnostic architectures. Mindtree has established partnerships with AWS, Azure and SAP.



OTHER NOTEWORTHY PLAYERS - TRANSFORMATIVE ARCHETYPE

Some other providers scored high in one or more areas that are important for Transformative Archetype client. However, they were not categorized as leaders for this archetype because they did not rate high in enough categories.

Noteworthy providers (services providers with a high score in one or more capabilities) for Transformative Archetype clients are:

Cloud Base

Microland Zensar



Fig12 Other Noteworthy Service Providers – Transformative

ed s	Consulting in Cloud Adoption	Cloud Application	Contracting Flexibility	Partnership with Public Cloud Providers
	Dimension Data	ITC Infotech	EPAM	EPAM
	EPAM	KPIT	ITC Infotech	KPIT
	KPIT	Microland	Microland	NTT Communications
	Zensar	NTT Communications	NTT Data	Zensar
		Sonata		
		Trianz		
		Unysis		
		Zensar		

NEXT-GEN ARCHETYPE

A Next-Gen client truly believes in a consumption-based and as-a-service model. These clients believe in using the as-a-service model to achieve true differentiation and market leadership. For a Next-Gen client, adopting transformative cloud technology is not driven only by cost savings, but by leveraging cloud tech for a competitive advantage.

Next-Gen clients do not have a huge backlog and dependency on historic legacy applications and data and are open to taking the cloud journey. They are not burdened with integrating the newer (to be developed) applications with legacy systems.

Next-Gen clients will have their enterprise IT operations deeply integrated with their business functionalities. Transformation demands will come from the business units, and transformation impacts will be measured by business outcomes more often than by cost savings.

For these clients, the transformation is not just aimed at improving operational efficiency. Their goals may be related to enhancing employee productivity, achieving a competitive advantage or creating business differentiation.



The key characteristics of a Next-Gen client are:

- Early cloud adopter of cloud and a "cloud first" approach.
- Prefer "born-in-the-cloud" applications
- Believe that IT is an enabler for business growth.
- Usage-based pricing is the preferred method for cost allocation.
- Agility (notably speed of implementation) and flexibility to respond to changing needs are valued immensely.
- Staff is well versed in the latest technologies (including DevOps, cloud and agile).
- These clients look for a highly automated IT support system with a heavily dependency on self-service and knowledge asset features.

In their quest to adopt transformative cloud technology for a competitive advantage, the Next-Gen clients have these priorities:

- Highly flexible service provider contractual arrangements that are linked to business outcomes;
- Data analytics used extensively to measure cause and effect;
- Advanced use of automation to promote self-service and optimize costs; and
- Agility and flexibility as the main thrust.

The Next-Gen client will require service providers to at least offer the following:

- Ability to formulate a creative and visionary business contract structure and explore areas such as:
 - Risk/reward
 - Equity participation,
 - Charges based on revenue growth,
 - Flexible terms and conditions, and
 - Creative/unconventional financial structure
- Strategic partnership with leading public cloud providers who have referenceable and demonstrable experience;
- Experience working with "cloud first" clients; and
- Experience implementing and managing usage-based contracts.



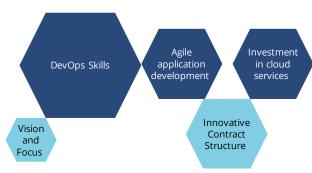
Next-Gen Archetype Client Imperatives

- Adaptation of transformative cloud technologies for a competitive advantage;
- Adoption of a "Cloud first" approach;
- Flexible service provider contractual arrangements that are linked to business outcomes;
- Advanced use of automation to promote self-service and optimize costs; and
- Agility and flexibility



Next Gen Archetype Provider Capabilities Importance





Size based on relative current importance in the archetype profile



Next-Gen Archetype Leader assessments across capability parameters

Of the 21 providers included in our research, we found ten that stand out above the others as matching the Next-Gen archetype based on our assessment of their capabilities as described in the Methodology section in the Appendix. The ten are referred to as Archetype Leaders, and their relevant capabilities are presented in Figure 14 and briefly examined in the following sections.

Note: The service providers listed are arranged in alphabetical order. No ranking is implied.

Score 4 out of 4 Score 3 out of 4 Score 2 out of 4 Score 1 out of 4

45	Vision and Focus	DevOps Skills	Agile Application Development	Innovative Contract Structure	Investment in Cloud Services
Atos					
Cognizant					
EPAM	•				
HCL	•	•			
IBM					
Infosys		•	•		
LTI	•	•			
Mindtree		•			
Mphasis		•	•		
Zensar	•			•	•



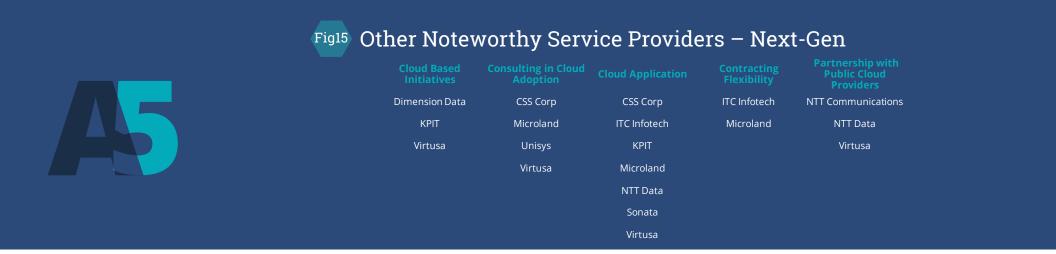
Mindtree

Mindtree is receptive to outcome-based contract structures. The company is servicing many contracts in which the fee is based on the client realizing predetermined savings after migration to a public cloud model. Mindtree also has invested heavily in DevOps. It has more than 160 DevOps-certified professionals. The company's stated vision is to "shrink time and effort in delivering digital solutions by evangelizing agile methodology, industrializing DevOps platforms through new-age tools and technology frameworks". Mindtree has developed many tools and processes to facilitate DevOps. Its integrated platform called CAPE (Composable Automated platform for Enterprises) accelerates DevOps and CloupOps adoption . CAPE amongst several other features enables an automated delivery pipeline that reduces delays caused by manual setup and configuration. It also, enables faster deployments of environment-as-a service by sharing templates, containers and scripts and leveraging "infrastructure as code" principles. It offers MWatch for Applistructure services, its unique approach to infrastructure monitoring and management across all environments.

OTHER NOTEWORTHY PLAYERS - NEXT-GEN ARCHETYPE

Some other providers scored high in one or more areas that are important for Next-Gen Archetype client. However, they were not categorized as leaders for this archetype because they did not rate high in enough categories.

Noteworthy providers (services providers with a high score in one or more capabilities) for Next-Gen Archetype clients are:



SERVICE PROVIDERS ACROSS ARCHETYPES

	Traditional Archetype	Deliberate Archetype	Pragmatic Archetype	Transformative Archetype	Next-Gen Archetype
Atos	*	*	*	*	*
Cognizant	*	*	*	*	*
CSS Corp	*	*	*	*	√ √
Dimension Data	√ √	///	✓	✓	✓
EPAM	*	*	✓ ✓	√√√	*
HCL	*	*	*	*	*
IBM	*	*	*	*	*
Infosys	*	*	*	*	*
ITC Infotech	*	*	*	√ √	√ √
KPIT	√ √	√ √	*	///	√ √

[★] Indicates Leaders

^{*} Not In – Indicates that Service Provider wasn't considered for this archetype



Indicates Noteworthy Players (number of check marks indicate degree of alignment with the capability requirements of each client archetype)

	Traditional Archetype	Deliberate Archetype	Pragmatic Archetype	Transformative Archetype	Next-Gen Archetype
LTI	√ √	V V V	*	*	*
Microland	*	*	V V V	V V V	///
Mindtree	*	*	*	*	*
Mphasis	*	*	*	*	*
NTT Communications	✓	✓	√ √	√ √	✓
NTT DATA	√ √	√ √	√ √	✓	√ √
Sonata	√ √	√ √	✓	✓	✓
Trianz	✓	√ √	*	✓	*
Unisys	✓	✓	√ √	✓	✓
Virtusa	√ √	*	V V V	*	////
Zensar	√√√	////	////	////	*

Indicates Leaders



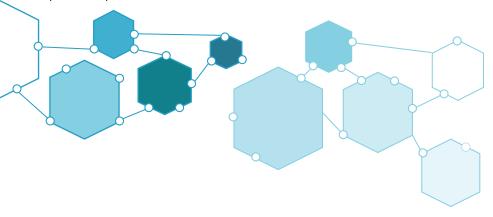
Indicates Noteworthy Players (number of check marks indicate degree of alignment with the capability requirements of each client archetype)

Not In – Indicates that Service Provider wasn't considered for this archetype

GUIDANCE

This report highlights five different client archetypes for cloud transformation and those are based on one key theme: what is the maturity level of the client in relation to their transformation to a public cloud environment? Each client archetype encapsulates the typical characteristics of a specific type of buyer that is looking to outsource one or more processes or functions to public cloud.

The archetypes are not meant to be comprehensive examinations of all potential or likely client situations and requirements. They are meant to provide a simple, relevant and repeatable set of user-side requirements against which a similarly simple, relevant set of provider capabilities can be assessed.



The report distinguishes different buyer behavior based on their current needs in the cloud transformation journey. It addresses a continuum, from the Traditional clients, who view transformation to public cloud as a little more than a curiosity, to the Next-Gen clients, to whom public cloud is almost a necessity. Interspersed in between the two extremes, moving left to right are: Deliberate clients, who understand that public cloud has a place in their IT environment, but not today. These clients want to get educated and need financial justification to migrate to cloud. Next are Pragmatic clients, who advocate prudent use of cloud resources where value can be realized. Value here is defined as a combination of agility, flexibility and cost optimization. Then there are Transformative buyers, who take a strategic (long term) view of the environment. Plans are in place to transform the current IT environment to cloud, and there are usually project milestones attached.

The characteristics of each archetype are a moving target over time, because while the core requirements rarely change, the relative importance of different requirements can vary based on business and/or technological environment changes. Multiple archetypes tend to be present in most enterprises, especially in larger firms. One division's needs may be different from the other's. As the requirements of each archetype evolve and adapt based on business and technological change, so too does the presence and value of each archetype.

In the next few years, we may see different types of client archetypes emerging based on changes in business, technology, and the cloud ecosystem.

Enterprise Leadership Actions

Enterprise executives face significant new challenges when it comes to running their IT operations. This is especially true as the number and demand for new cloud applications spur a corresponding complexity of service delivery models.

More and more, IT departments are choosing a hybrid model for applications that incorporates several options: developing "born-in-the-cloud" applications, sunsetting legacy applications and renting new software in a SaaS delivery model and modifying existing applications that can be hosted either on-premises or in the cloud. In the end, IT executives must ensure that each application meets the business needs and computing architecture policies of the company. Irrespective of the archetype or combination of archetypes, IT leaders must apply a set of high-level evaluation questions:

1. Does the application meet the business need?

It is time for enterprises to stop taking a one-size-fits-all approach to EUC. It is important to note that the workplace is not just devices, and devices are not just end users. It is particularly important for clients falling into the Ad-hoc Archetype category to change their thinking. Fortunately, many organizations have started looking at implementing the end-user personal approach, which matches devices and services to the end user's role and needs.

2. How long will it take to modify an existing application?

Is the timeframe consistent with the business plan timeline to exploit the market opportunity? On-premises applications often require time to acquire, install and test hardware, prepare the facility for installation and load the software and test. On the same token, a cloud-based application may be faster to implement but may not be better than the on-premise application.

3. What does the business case say?

When hosting applications on-premise, an enterprise incurs higher capital expenditures than it would if it used cloud-based options. However, the price of public cloud services is largely tied to usage, as seen in the ISG Cloud Computing Index. Depending on the configuration, it's possible that a company would save money if it runs an application that needs computing capacity for a sustained period (i.e. high utilization for long periods) on its own infrastructure. This is similar to situations with applications that experience seasonal fluctuations in demand for services on a cloud-based model.

4. Can the application be integrated with the legacy environment?

No piece of the computing puzzle can function in isolation. Each application must be operationally integrated with other parts of the organization. The operational activities and financial management of a traditional IT environment are different than those in a cloud environment. An organization may need to consider a redesign of its structure to cater to both cloud and legacy applications.

5. How can we ensure security and compliance?

Each organization has its own specific security and compliance requirements. Since security is essential to the success of cloud providers, the general assumption is that the provider will have invested in highly skilled security personnel and infrastructure. Many experts now consider security in a cloud environment to be as tight as or tighter than a traditional IT environment.

Enterprise Leadership Actions

6.What is the total cost of ownership (TCO)?

A full TCO analysis will include the cost of:

- Power and facility costs: In addition to facility costs, on-premise options must consider the expenses associated with power to run and cool the servers. In the cloud delivery model, these costs are included in the provider's rate.
- Hardware upgrades: On-premise budgets must allocate for the cost of technology refreshes and the future purchase of hardware to support growth. In the cloud, the provider's rate will include costs associated with technology refreshes and hardware upgrades.
- Network/bandwidth: In on-premises models, most network costs go toward internal network infrastructure, including switches and cabling for bandwidth inside office walls.
 Offloading heavy workloads to the cloud will call for a bigger pipe and higher bandwidth cost.
- Service integration: The integration of the cloud environment with the rest of the IT
 organization may require revised processes and organizational structure, a cost that may
 be easy to overlook.
- Data integration: Any new application will depend on data from multiple sources or feed data to other applications. The cost of this integration will differ depending on the configuration.

- Application development and modification: The costs of "cloudifying" an existing application and integrating it with other applications must be considered. Developing a new application to meet the business needs is also an option, though it may be a more expensive one.
- Operational support: Whether the application is run in an in-house environment or in the cloud, operational support will be needed. Cloud service providers typically take care of most of the infrastructure support and the cost is included in their rates.
- Monitoring and reporting: Basic monitoring and reporting provided by cloud service providers may fall short of customer's expectations. Additional costs may come in the form of software or advanced monitoring and reporting services that are added to the cloud solution.
- Training: Although training is needed for both delivery options, additional training may be needed for a cloud environment because the end user will interface directly with the cloud environment and be responsible for provisioning tasks.

Cloud can offer solutions that are highly beneficial, agile, elastic and adaptable. However, the age of the cloud brings its own set of questions and decisions which must be addressed on a case-by-case basis.

Provider Leadership Actions

The IT leadership in enterprises are getting pressure from all directions to move to cloud. Their senior line executives and the company board are inquiring about migration to cloud. The trade press is touting advantages of cloud and advocating for cloud as a less expensive option than traditional data computing environment – which is not always true. The business units and shadow IT prefer cloud as they can liberate themselves from a controlling central IT organization. Added to all this is the bombardment from cloud providers advocating and selling their cloud offerings.

The responsibility of a provider is to assist the IT leadership of an enterprise in navigating through this quagmire. The provider must take a long-term view of the customer plans. It may include short-term investments to attain long-term gains. In the archetype jargon of this report, consulting services are needed through the entire continuum. A Traditional client requirement may be limited to getting educated on cloud, a Deliberate client needs assistance with their business case, cost justification and cloud pilot projects. As a client moves up the continuum (Pragmatic, Transformative and Next-Gen archetypes), the requirements advance to a higher order of consulting services such as: transformation, migration, and management of the cloud services. An ideal provider will assist a client through all of these phases, making certain that the value of cloud (i.e.: cost control, agility and flexibility) are fully realized.

It is also imperative that the cloud provider educate the client on changes needed in their IT organizational structure, governance, budgeting, and other processes for a successful implementation of a cloud environment. It is important to emphasize to the client that cloud is not just a technical IT solution and that its effects are multi-dimensional, affecting all facets of the organization.

Appendix



APPENDIX

Methodology

As noted above, this report uses five archetypes of buy-side client requirements to assess the relative suitability of 18 contact center services providers. Data regarding the providers' capabilities and positioning was provided to ISG via briefings, ISG advisor interviews and surveys of service providers, including client references if appropriate.

Contact center services providers shared their data across different contact center service dimensions through the research initiatives noted above. These dimensions cover their technological competency, preferred engagement models, scope of work performed, service capability, functional expertise and industry and regional presence.

Overview of Methodology

Categorize and assess provider data

Weight Importance of capability requirement

Determine provider position in quadrant

Create cumulative score

Categorize providers in archetypes



Methodology Details

1 Categorize and assess provider data.

The data provided by services providers was categorized and assessed according to the work-place services requirements described for each of the five client archetypes. If the provider descriptions and data were not worded or structured as precisely as our archetype requirements, our workplace analysts relied on their expertise and experience to classify the provider capabilities.

Create cumulative score.

We then multiplied the provider capability scores from Step 3 by the weightings developed for each client archetype requirement in Step 2. We totaled the results for each provider to develop a cumulative score. These cumulative scores are not disclosed in this report.

2 Weight importance of capability requirement.

We used the insight and expertise of our advisors and analysts to weight each archetype capability requirement based on its relative importance to that archetype's typical requirements. Weightings for each archetype's requirements add up to a total of 100 percent. Specific weightings are not disclosed in this report. The relative importance of each capability requirement is depicted in illustrations at the beginning of each archetype section using differently sized hexagon icons.

5 Categorize providers in archetypes.

We used the cumulative scores to identify the providers most well-suited for each archetype's requirements. These providers are listed alphabetically and are briefly profiled in each archetype section. Where relevant, additional providers with noteworthy capabilities also are mentioned (for example, providers that may have scored well on a specific requirement but not across all the requirements for that archetype).

3 Determine provider position in quadrant.

Once we assessed a provider's relative ability for each of the archetype requirements, we then positioned that provider in a relevant quartile (e.g., top 25 percent, second 25 percent, and so on). Those in the top quartile were awarded a numerical "capability score" of 4/4; the second quartile earned a score of 3/4, the third quartile earned a score of 2/4, and the fourth quartile earned a score of 1/4.

Please note: This report presents service providers' known capabilities in the context of user enterprises' typical project needs. This report is not meant to rank providers or to assert that there is one top provider with abilities that meet the requirements of all clients that identify themselves with a particular archetype.

Figl6 Provider Capability Scores as Harvey Balls

Score	Harvey Ball representation
Score 4 out of 4	
Score 3 out of 4	•
Score 2 out of 4	•
Score 1 out of 4	•

The cumulative score for each of the selected service providers against each archetype requirement is represented using Harvey Balls. For example: if a provider is assessed with a score of 4 out of 4, then a full Harvey Ball is utilized to represent their capability against that requirement. Similarly, if a provider is assessed a score of 1 out of 4, then a one-quarter Harvey Ball is utilized, so on and so forth. Figure 16 illustrates this.

Additional Relevant Cloud Service Providers

The capabilities of 21 providers were assessed in this report. Some service providers that are typically included in our work are not included in this report. Some of the companies that were not included were not able to participate and others declined. Providers that do not offer a full portfolio of public cloud services have not been included in the study. They may be included in future versions of this report, based on merit and on the service providers' willingness to provide current and relevant materials. Readers should not make any inferences about a service provider's absence from this report.

Other Relevant Service Providers	Headquartered Country	
Accenture	United States	
Adobe	United States	
Amazon Web Services	United States	
DXC	United States	
Google Cloud Platform	United States	
Microsoft Azure	United States	
Oracle	United States	
Rackspace	United States	
Salesforce	United States	
SAP	Germany	
TCS	India	
Verizon Cloud	United States	
VMware	United States	
Wipro	India	

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