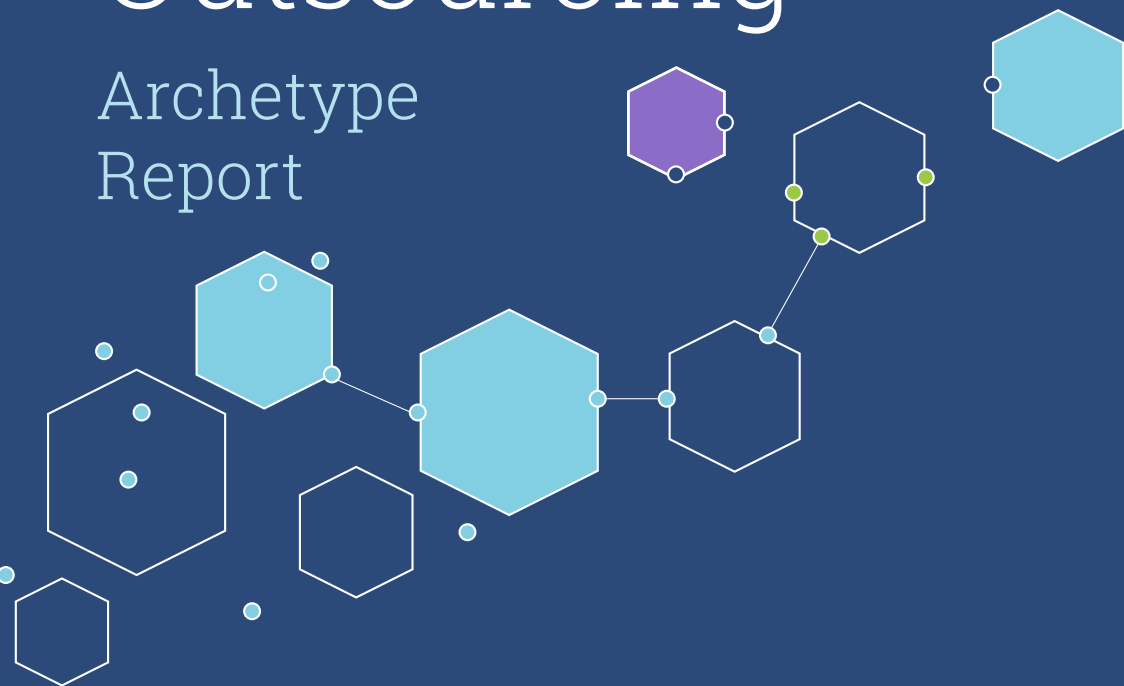


***ISG** Provider Lens™

Data Center Outsourcing

Archetype
Report



A research report
aligning enterprise
requirements and
provider capabilities

March 2018

Customized reprint courtesy of:



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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 December 15, 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. Yearly revenue and year-on-year increase figures (expressed as percentage) over the previous year, refer to the most recent financial year for each of the participants in this report.

The lead author for this report is Pankaj Kulkarni. The editors are Jan Erik Aase and Namratha Dharshan. The research analyst is Shashank Rajmane and the data analyst is Vijayakumar Goud.



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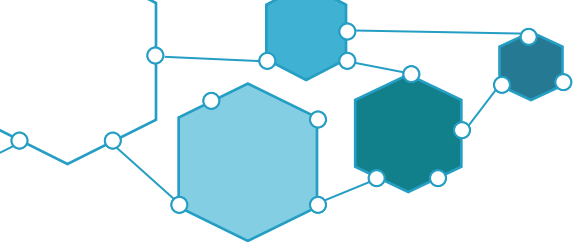
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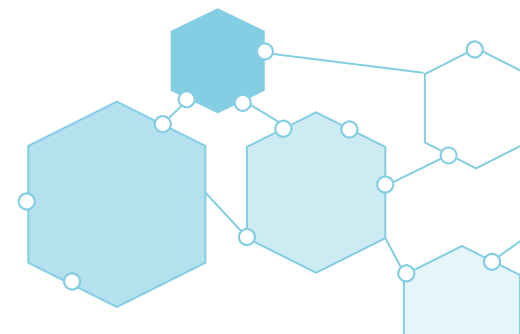
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EXECUTIVE SUMMARY

Data Center Outsourcing – Managed Services and Transformation

It is now common knowledge that the disruptive nature of new technologies is forcing organizations to adapt themselves as digital businesses. All businesses, regardless of industry, realize that they are not immune to this disruption and must have a strategy to compete in the modern marketplace that is driven by tech-savvy consumers. To deliver on this requirement, businesses need an infrastructure base that is adaptive to changing market conditions, easily manageable and always available. Over the last few years, the changing nature of business has dictated a fresh approach towards how infrastructure is managed and consumed. From an infrastructure services perspective, this report on services for data center management and transformation provides our view on how typical businesses are at different stages of outsourcing, technology adoption and maturity, and how the stages translate into different requirements. It explores how service providers are adapting their portfolios and developing new competencies that appeal to different clients across this spectrum.



Our research found that the data center managed services market is increasingly moving towards an industrialized service delivery and consumption-based pricing model. Industrialized services drive cost and efficiency improvements through a set of repeatable and scalable processes that are applicable across several buyer organizations. Industrialization has moved up from basic monitoring and management services to include cloud deployment services, such as using bots to determine workload placement, and mass migration of applications to the cloud using a factory-based approach. Consumption-based services are delivered mostly through managed private cloud deployments, either hosted or on-premises, which give enterprise clients an opportunity to offload assets and convert capital expenses to operating expenses. Certain service providers also provided examples of gainsharing contract models wherein they receive a percentage of their fee contingent on achieving or exceeding IT output targets. Other service providers had examples wherein a percentage of their fee was linked to business outcomes.

Ongoing monitoring and management services are growing at a slower pace while transformational services are growing rapidly. The data center transformation journey usually starts with consolidation and standardization, then moves towards activities such as increasing the virtualization footprint, establishing private clouds with self-service and chargeback mechanisms and connecting these on-premises environments to public clouds, thus achieving a hybrid environment. In aggregate, most vendors report growth rates between 10 and 15 percent for the overall portfolio of data center managed and transformation services.

Automation is a key theme across all service providers. In fact, almost all service providers already have an automation strategy in place which either revolves around tools developed in-house or an integrated set of best-of-breed third-party technologies that are branded under the company's portfolio of infrastructure services. At a minimum, most of these tools have capabilities such as event correlation that aim to reduce the number of incidents. Other higher-end capabilities such as machine learning and self-healing systems are also increasingly visible across service provider offerings.

In terms of long-term strategy, most service providers follow a “hybrid cloud is the norm” approach. However, hybrid cloud models with bidirectional workload portability are still emerging. While most workloads continue to run on-premise, a few service providers believe that the public cloud component of the hybrid mix will experience a rapid uptick in adoption over the next few years and may well flip the ratio of on-premises environments to public cloud environments.

Forward-looking service providers are investing in software-defined capabilities that provide an abstraction layer over and above the data center. These providers are enabling further advancements in data center transformation services. This is in response to demand from some enterprises that already have highly virtualized server footprints. These enterprises are experimenting with network virtualization followed by storage virtualization in their quest to achieve an infrastructure that is completely controlled by software and that delivers superior agility. Such software-defined setups are aimed at supporting DevOps practices such as continuous integration and continuous delivery (CI/CD). The ultimate goal is a faster time-to-market, particularly for client-facing, web-based applications.

Service providers have invested heavily in state-of-the-art labs and centers of excellence (COEs) to demonstrate proprietary and open source software-defined solutions to potential clients by simulating real-world use cases. A few service providers are differentiating themselves through technology vendor certifications for software-defined data center (SDDC) designs. Many of these providers also have established partnerships with vendors that provide enabling components for SDDC, such as VMware, or hyperconverged technology vendors, such as Cisco and Nutanix.

In the future, the service provider ecosystem is likely to experience some consolidation, especially in the mid-tier segment. The mid-sized service providers that made a late entry into the infrastructure management services business missed out on the 20 to 25 percent growth rates with high margins that their larger rivals enjoyed not too long ago. Without the scale comparable to these larger rivals, it may be difficult for them to win large deals. At the moment, they are attempting to differentiate themselves through a combination of end-to-end service portfolios, flexibility and customization, narrowed industry focus and a broad partner ecosystem.

Introduction

This ISG Provider Lens™ report summarizes the relative capabilities of 25 data center outsourcing services providers and their abilities to address the requirements of four typical, frequently encountered categories of enterprise buyers (“archetypes”). Each archetype represents a unique set of business and technological needs and challenges.

Our research found that there are several service providers with varying capabilities that are adequate to satisfy the managed services and transformation requirements of most enterprises. However, it is rare to find one managed and transformation services provider than can address all data center managed services and transformation needs across a majority of user archetypes. This is due in large part to two core realities regarding the archetypes:

- 1 The characteristics of each archetype are moving targets because, while the core requirements rarely change, the relative importance of different requirements can vary based on business and/or technological environment changes.
- 2 Most enterprises, especially larger firms, tend to include multiple archetypes. As each archetype's requirements evolve and adapt based on business and technological

changes, so too does the influence and value of each archetype within the enterprise. Therefore, enterprise IT leaders, service owners, procurement managers and others involved in a data center management and transformation initiatives have an ongoing series of choices when it comes to services provider selection. They will need to 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 variables will continually add to and subtract from user needs.

The assumption that an organization fits solely within a single archetype will limit the value received over time from data center managed and transformation services. For providers, slotting customers into a single archetype and failing to anticipate that their needs will change can prevent effective value from being delivered, leading to customer frustration and dissatisfaction.

About This Research

This report uses research and analysis from ISG's long-running work with enterprise clients and ITO services providers to identify and examine key changes in, approaches for and buyers of data center managed and transformation services. We map the user-side requirements to provider-side offerings and capabilities. Not every user enterprise has the same requirements. In this report, we use four buyer archetypes – detailed in the following sections – to identify and assess buy-side requirements for business value relative to provider-side offerings and capabilities. All revenue references are in U.S. dollars (\$US) unless otherwise noted.

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

This report assesses the capabilities of 25 providers. Some service providers that are typically included in our work are not included in this report because they were unable to or declined to participate. They may be included in future versions of this report, based on merit and on the services providers' willingness to provide current and relevant materials. Readers should not make any inferences based on a service provider's absence from this report.



How to Use This Report

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

This report is organized into the following major sections.

Client Archetype Descriptions. This section identifies and describes the most common user-side archetypes that we have identified in our ongoing research and analysis.

Assessments by Archetype. These sections first detail each of the client archetypes, along with the types of service offerings they require to realize the most business value. Every archetype section includes our assessment of the relevant capabilities and positioning of the services providers surveyed and interviewed. It covers the relative suitability of the providers for each archetype based on the information 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 we developed and applied the data, analysis and insights provided in this report.

Please note: *This report presents service providers' known capabilities in the context of user enterprises' typical project needs (which are categorized as specific archetypes). This report is not meant to rank providers or to assert that there is one top provider with capabilities that can meet the requirements of all clients that identify themselves as a particular archetype.*



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. 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 considering outsourcing one or more processes or functions. Using archetypes enables us to develop sets of characteristics and needs that can be applied uniformly and repeatedly across multiple environments, industries, provider types and elements 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 we can assess a similarly simple, relevant set of provider capabilities.

The archetypes included in our report 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, IT service providers and our global business IT market research and advisory programs.

Note: None of the service providers that have participated in this study are confined to a particular archetype in terms of their portfolio of services. While each service provider is best suited to a particular archetype based on its strengths and other characteristics, they all have some elements of services that is applicable across all of the archetypes.

A large, stylized 'A1' icon. The 'A' is dark blue and the '1' is light blue.

TRADITIONAL ARCHETYPE

These clients have limited outsourcing experience and engage with service providers through selective outsourcing. They only outsource a fraction of their data center operations. This is done through one of or a mix of the following options – staff augmentation, project based work or partial outsourcing of ongoing infrastructure management. Cost optimization is the primary driver for such engagements. Project work typically includes standardization, consolidation and expanding virtualization. Infrastructure automation and cloud enablement efforts are still evolving. While these clients are receptive to the benefits offered by public clouds, mid- to large-scale hybrid cloud deployment initiatives are in a rudimentary stage. Outsourcing contract sizes are not large.

MANAGED SERVICES ARCHETYPE (MID-SIZED DEAL FOCUS)

These clients have previously signed small outsourcing contracts with a focus on cost optimization and are now willing to transfer greater operational responsibility to an outsourcing service provider. However, budgets are constrained and deals sizes are not very large (typically ACV between \$5 million to \$15million). While the primary focus is still on tactical SLAs, these clients are willing to embrace some transformation elements, such as modest investments in automation and cloud. The outsourcing engagement scale is considerable compared to the traditional archetype, and the managed services client is willing to engage in a multi-sourcing model and also work with midsized providers because of their flexibility and responsiveness. Besides optimizing ongoing infrastructure management, the managed services archetype client also aims to achieve a moderate level of hybrid cloud adoption as a short- to mid-term goal.

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A3

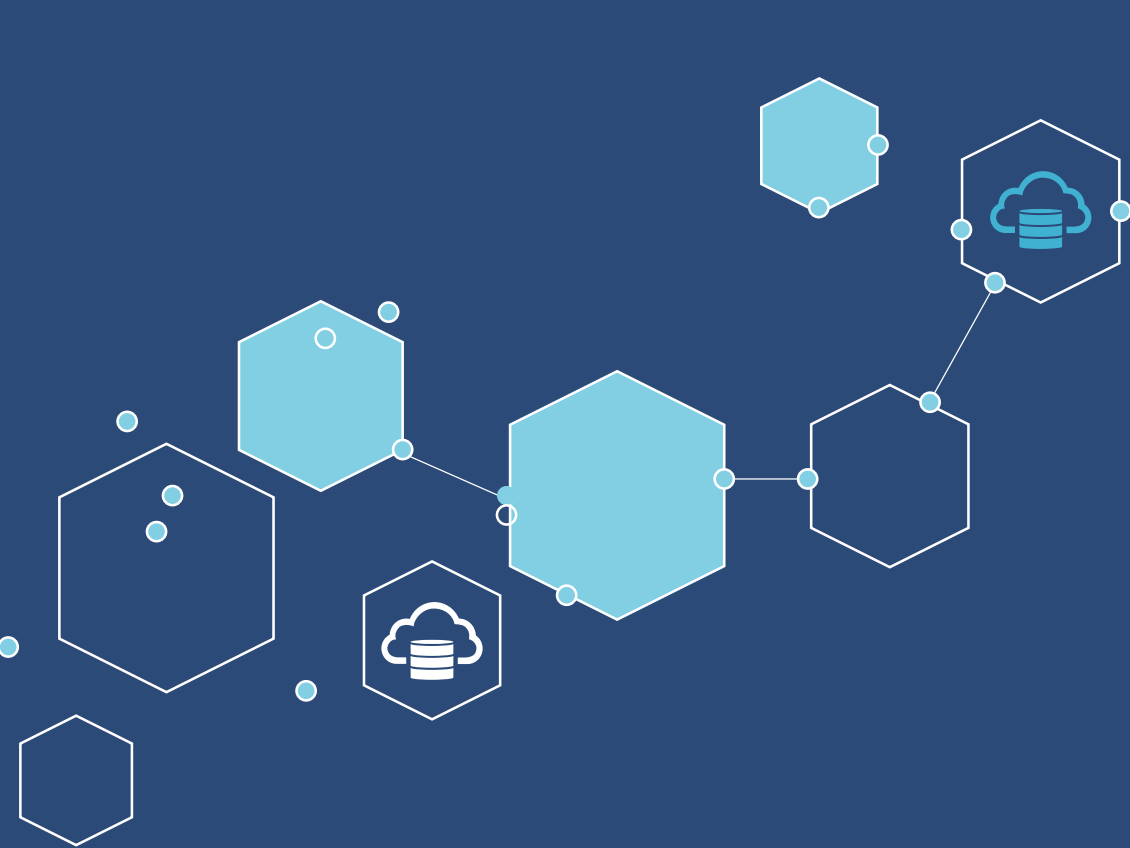
LARGE SCALE TRANSFORMATION ARCHETYPE

These clients are third-generation outsourcers with a preference for an optimized mix of onshore, nearshore and offshore delivery models. They are not severely constrained by budgets and undertake large transformation initiatives. They view service providers as strategic partners that should be willing to make a commitment to participate in gain-share deals. These clients seek to provide IT services to their business units using an as-a-service, utility-based model. Accordingly, their short- to mid-term goals include increasing adoption of private clouds that have core functionalities of self-service and high levels of automation, orchestration and chargeback. Long-term goals revolve around issues such as high availability of infrastructure resources to support business. Further, these clients seek to simplify hybrid IT management through unified monitoring and management tools. Advanced technologies such as machine learning are preferred for eliminating lower-level infrastructure management and service desk tasks. Transformational clients want service providers to adopt modern infrastructure management practices, such as the use of configuration management tools that codify and automate infrastructure management.

PIONEERING ARCHETYPE

These clients seek to extend their transformation initiatives with investments in software-defined networking and storage, in some cases, to attain an end-to-end software defined data center. They seek service providers with the knowledge and experience in software-defined enabling tools, including hyper-converged storage systems. They view service providers as strategic partners with a commitment to participate in gain-share deals that include business outcomes. These clients have already achieved a significant level of cloud adoption and now focus on further optimizing hybrid cloud management, including next gen practices such as workload portability. Pioneering archetype clients strive to improve developer productivity by providing an abstraction layer over complex infrastructure and its operations. Consequently, they prefer service providers that can manage infrastructure with a DevOps-oriented approach.

A4



Data Center Outsourcing Archetypes



TRADITIONAL ARCHETYPE

These clients prefer to keep substantial control over their IT organization. They view outsourcing as a means to fill certain skill gaps through staff augmentation or by offloading part of the management of their non-mission-critical IT assets, primarily from a cost-containment perspective. They outsource small to mid-size projects, such as standardization or incrementally increasing the virtualization footprint. Traditional archetype clients evaluate service providers primarily on their ability to deliver these services cost effectively. Ongoing

infrastructure management for some of their IT assets is primarily achieved through remote infrastructure management (RIM) services from low-cost delivery centers. Infrastructure transformation initiatives are in the nascent stages. Service quality and alignment with industry standard practices such as ITIL are still evolving.



Traditional Archetype Client Objectives

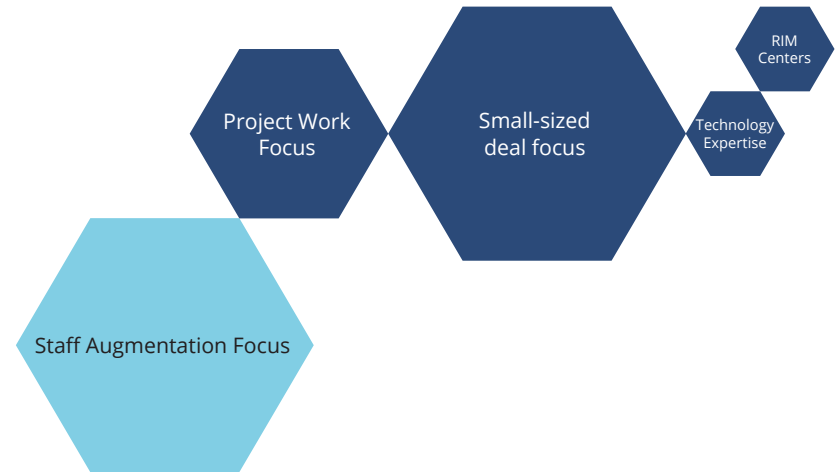
- Use infrastructure monitoring and management services to identify cost drivers and improve efficiency;
- Want project work, such as standardization and virtualization, to drive up capacity utilization and simplify the setup of infrastructure management practices; and
- Prefer service providers with strong knowledge of technology and experience in managing virtualized environments.



Fig 1

Traditional Archetype - Influence of Provider Capabilities

■ Increase in future influence ■ Decrease in future influence



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 25 services providers included in our research, we identified seven leaders that stand out above the others as matching the requirements of the traditional archetype based on our assessment of their capabilities as described in the Methodology section in the Appendix. These seven, referred to as Archetype Leaders, and their relevant capabilities are presented in Figure 2 and are briefly examined in the following sections.

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

A	Staff augmentation services focus	Project work focus	Small to mid-size deal focus	Virtualization technology expertise	RIM footprint
Ensono	◑	◑	◐	◑	◑
Microland	●	◑	●	◑	◑
NIIT Technologies	◑	◑	●	◑	◑
Softtek	◑	◑	◑	◑	●
Sungard AS	◑	◑	●	◑	◑
UST Global	●	●	◑	◑	◑
Zensar Technologies	◑	◑	●	◑	◑

OTHER NOTEWORTHY PROVIDERS – TRADITIONAL ARCHETYPE

Some other service providers scored high in one or more areas that are important for the traditional 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 clients are:

Fig 3 Other Noteworthy Service Providers – Traditional



Staff Augmentation Services Focus

Capgemini

Cognizant

Mphasis

Tata Consultancy Services (TCS)

Tech Mahindra

Project Work Focus

Logicalis

Mindtree

Tata Consultancy Services (TCS)

Wipro

Small to Mid-Size Deal Focus

Capgemini

Dimension Data

Virtualization Technology Expertise

Atos

DXC Technology

IBM

NTT DATA

Tata Consultancy Services (TCS)

RIM Footprint

Capgemini

HCL

LTI

NTT DATA

Tata Consultancy Services (TCS)

A2 MANAGED SERVICES ARCHETYPE (MID-SIZED DEAL FOCUS)

These clients have prior experience in outsourcing part of their data center operations and are willing to transfer additional responsibility to service providers. While their focus is primarily on cost reduction, they also consider it important to improve IT productivity by leveraging the expertise of an outsourcing partner. This archetype is looking for a broader suite of managed services with some transformation elements. Ongoing monitoring and management operations have evolved considerably, and the managed services archetype client is

now considering ways to introduce automation to reduce or eliminate some mundane tasks. Cloud adoption is increasing and the focus is now on gradually increasing its penetration within the organization with a mid- to long-term horizon. SLAs are still tactical, although this archetype may want to experiment with strategic, outcome-focused SLAs. Service standardization is being enabled through industry standard practices such as ITIL. Outsourcing contract sizes range from medium to large.

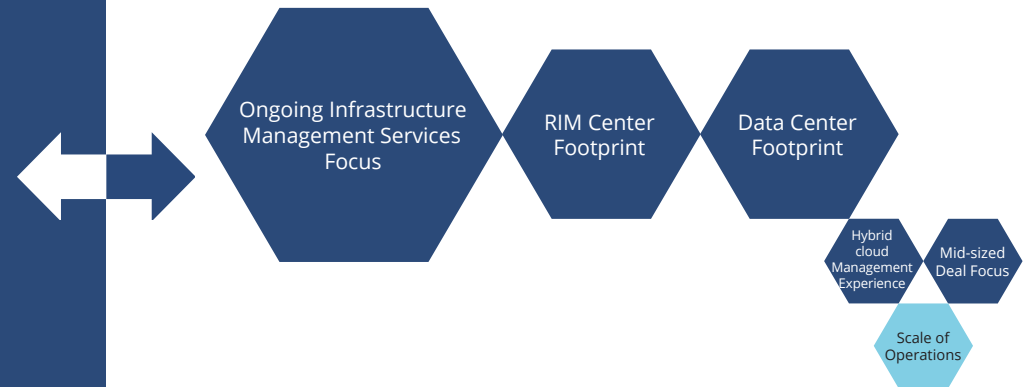
A2 Managed Services Archetype Client Objectives

- Want the ability to scale up operations;
- Require ongoing infrastructure monitoring from a mix of low-cost and nearshore locations;
- Aim to extend virtualized environment to a cloud-based environment offered internally through a service catalogue;
- Want the ability to centrally manage infrastructure resources spread across legacy, private cloud, co-location and public cloud environments; and
- Want automation tools and services to relieve L1 staff of mundane IT work and reduce costs.

Fig 4

Managed Services Archetype - Influence of Provider Capabilities

■ Increase in future influence ■ Decrease in future influence



Size based on relative current importance in the archetype profile

Fig 5 Managed Services Archetype (Mid-Sized Deal Focus)

● Score 4 out of 4 ◐ Score 3 out of 4 ◑ Score 2 out of 4 ◒ Score 1 out of 4

Of the 25 services providers included in our research, we found nine that stand out above the others as matching the managed services archetype needs based on our assessment of their capabilities as described in the Methodology section in the Appendix. These nine, 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.

Note: Deal sizes with ACV between \$5 million to \$15 million have been considered as mid-sized

A2	Ongoing Infrastructure Management Services Focus	RIM Center Footprint	Data Center Footprint	Hybrid Cloud Management Experience	Scale of Operations	Mid-Size Deal Focus
Cognizant Technology	◐	◑	◒	◑	◑	◑
Dimension Data	◐	◐	◑	◒	◐	●
Logicalis	◑	◑	◐	◒	◒	◒
LTI	●	◑	◒	◑	◐	◒
Mindtree	◒	◐	◑	◑	●	●
Mphasis	◑	◐	◒	◒	◐	◐
NTT Communications	◐	◐	●	◑	◐	◒
Tech Mahindra	◑	◑	◐	◒	●	◑
Unisys	◑	◑	◐	◑	◒	◑

Mindtree

Mindtree's data center outsourcing business grew approximately 20 percent over the previous year. The financial services and business services industries contribute more than half of the revenue in this service line. Compared to several peers of its size, Mindtree has considerable strengths in employee certifications for various virtualization technologies, particularly Microsoft.

Mindtree tends to prefer engagements where it can provide unified support for infrastructure and application management. Its MWatch solution provides single-pane-of-glass infrastructure management and monitoring capabilities across data centers and public clouds. Mindtree has consolidated infrastructure operations and standardized toolsets and has enabled self-healing capabilities for common incident causes for several global clients. Mindtree also has the distinction of managing the PaaS infrastructure for one of the hyperscale cloud providers.



Mindtree

OTHER NOTEWORTHY PROVIDERS – MANAGED SERVICES ARCHETYPE (MID-SIZED DEAL FOCUS)

Some other service providers scored high in one or more areas that are important for the managed services 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 managed services clients are:

Fig 6 Other Noteworthy Service Providers – Managed Services Archetype (Mid-Sized Deal Focus)



Ongoing Infrastructure Management Services Focus

Ensono
HCL
Softtek

RIM Center Footprint

Capgemini
HCL
NTT DATA
Tata Consultancy Services

Data Center Footprint

Atos
DXC Technology
HCL
IBM
NTT DATA

Hybrid Cloud Management Experience

Atos
Capgemini
DXC Technology
HCL
IBM
Tata Consultancy Services
T-Systems

Scale of Operations

DXC Technology
HCL
IBM
Wipro
Tata Consultancy Services

Mid-Size Deal Focus

HCL
T-Systems
UST Global
Wipro

A3 LARGE SCALE TRANSFORMATION ARCHETYPE

These clients have set an agenda to provide IT as a utility service across the organization. They have a respectable level of cloud adoption and a desire to go further with features such as policy-based self-service provisioning, a robust governance structure and chargeback mechanisms for metered billing by business units. They undertake massive transformational projects and prefer to work with service providers that have achieved a significant scale of operations. Transformational archetype clients want to achieve high hybrid cloud adoption levels; they prefer a multi-cloud environment that is centrally managed using sophisticated cloud management platforms. They also aspire to achieve workload portability across some of their multi-cloud components.

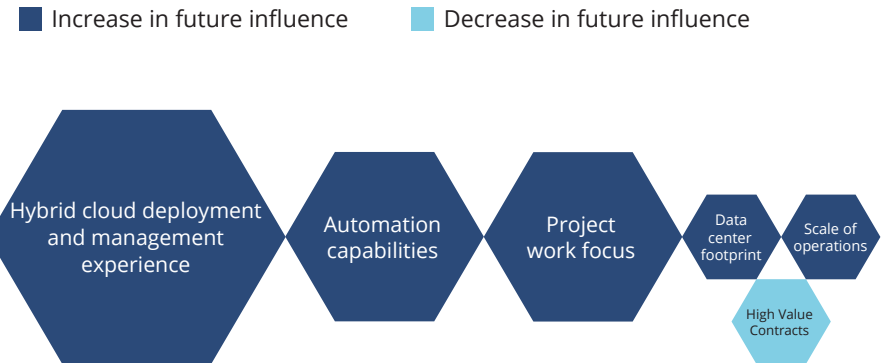
Transformational archetype clients have diverse technology requirements and prefer system integrators that can aggregate best-of-breed technologies and offer unified solutions. Considering the scale and complexity of their environments, these clients need consulting services and thus seek providers with a strong partner ecosystem to consult on a wide range on emerging technologies. The automation initiatives of these clients include adopting machine learning technologies to incorporate self-healing systems for infrastructure resiliency. In addition, they are seeking relationships with service providers who have resources trained or certified in infrastructure automation (programmable infrastructure) tools.

A3 Large Scale Transformation Archetype Client Objectives

- Drive down manual IT intervention in operations through self-service models via service catalogue;
- Adopt hybrid cloud model, including multiple public cloud providers to avoid vendor lock-in;
- Migrate mission critical workloads such as SAP from dedicated equipment to a hybrid cloud solution;
- Reduce manual infrastructure management practices through automation;
- Develop aggressive SLAs around MTTA and MTTR, as well as business outcomes; and
- Considerably reduce investments in the run part of IT management activities and redirect the savings into the change part.

Fig 7

Large Scale Transformation Archetype - Influence of Provider Capabilities



Size based on relative current importance in the archetype profile

Fig 8 Large Scale Transformation Archetype

● Score 4 out of 4 ◐ Score 3 out of 4 ◑ Score 2 out of 4 ◒ Score 1 out of 4

Of the 25 services providers included in our research, we found nine that stand out as matches for the transformational archetype based on our assessment of their capabilities as described in the Methodology section in the Appendix. These nine are referred to as Archetype Leaders. 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.

A3	Hybrid Cloud Management Experience	Automation Capabilities to Support DevOps	Project Work Focus	Data Center Footprint	High Value Contracts	Scale of Operations
Atos	●	◑	◑	●	●	◑
Capgemini	●	◑	◑	◑	◑	◑
DXC Technology	●	◑	◑	●	●	●
HCL	●	●	◑	●	●	●
IBM	●	●	◑	●	●	●
NTT DATA	◑	●	◑	●	◑	◑
T-Systems	●	●	◑	◑	◑	◑
Tata Consultancy Services	●	●	●	◑	◑	●
Wipro	◑	●	●	●	●	●

OTHER NOTEWORTHY PROVIDERS – LARGE SCALE TRANSFORMATION ARCHETYPE

Some other providers scored high in one or more areas that are important for the large scale transformation 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 the transformational clients are:

Fig 9 Other Noteworthy Service Providers – Large Scale Transformation



Hybrid Cloud Management Experience	Automation Capabilities to Support DevOps	Project Work Focus	Data Center Footprint	High ACV Clients	Scale of Operations
Ensono	Cognizant	Logicalis	Dimension Data	Cognizant	Cognizant
LTI	Mindtree	Microland	Mindtree	Ensono	LTI
NTT Communications	Mphasis	Mindtree	NTT Communications	Sungard AS	Mindtree
Softtek	NTT Communications	Mphasis	Softtek	Unisys	Mphasis
Unisys	Tech Mahindra	Tech Mahindra	Zensar		Tech Mahindra
Zensar		UST Global			Zensar

A4

PIONEERING ARCHETYPE

These clients have fewer budget constraints than other archetypes and are focused on strategic initiatives aimed at business process enhancement. They are at the forefront of IT management practices among their peers. Tactical priorities, such as near-term management cost reduction, are lower on the agenda as compared to improving developer productivity by supporting a DevOps-oriented infrastructure using programmatic capabilities. Accordingly, they want to partner with service providers who have very robust automation capabilities, with trained or certified resources in infrastructure automation (programmable infrastructure) tools.

By creating an abstraction layer over the underlying infrastructure using software defined technologies, these clients seek to achieve faster time-to-market and simplified hybrid cloud management. The move towards such an environment may be done through gradual transformation of data center components or relatively quickly through the use of single-vendor solutions (for example: hyperconverged solutions). Such clients also view this, in the long term, as akin to achieving a public cloud-like experience in their own data centers with their cost per virtual machine dropping as scale and process maturity evolve.

A4 Pioneering Archetype Client Objectives

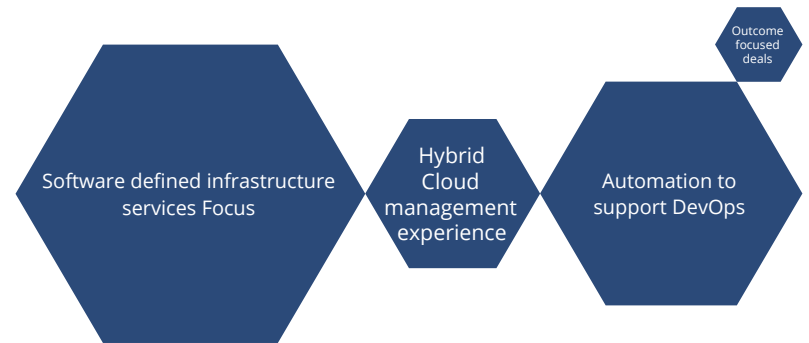
- Focus on managing application delivery and reducing effort to manage the underlying infrastructure;
- Prefer software-defined infrastructure for operational agility;
- Want significant hybrid cloud adoption, including workload portability wherever feasible;
- Require infrastructure automation capabilities to support DevOps environments; and
- View outsourcing as a strategic partnership activity and is willing to engage in outcome-based deals.



Fig10

Pioneering Archetype - Influence of Provider Capabilities

■ Increase in future influence ■ Decrease in future influence



Size based on relative current importance in the archetype profile

Fig11 Pioneering Archetype

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

Six of the 25 services providers we included in our research qualified as Archetype Leaders for the pioneering archetype based on our assessment of their capabilities as described in the Methodology section in the Appendix. These leaders are listed in Figure 11 and are briefly profiled in the following sections.

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

A4	Software-Defined Infrastructure Focus and Experience	Hybrid Cloud Experience	Automation Capabilities to Support DevOps	Outcome-Oriented Deals Experience
Atos	●	●	●	●
DXC Technology	●	●	●	●
HCL	●	●	●	●
IBM	●	●	●	●
Tata Consultancy Services	●	●	●	●
Wipro	●	●	●	●

OTHER NOTEWORTHY PROVIDERS – PIONEERING ARCHETYPE

Some other providers scored high in one or more areas that are important for the pioneering 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 pioneering clients are:

Fig12 Other Noteworthy Service Providers – Pioneering



Software-Defined Infrastructure Focus and Experience

Cognizant

Mindtree

NTT DATA

Hybrid Cloud Experience

Capgemini

Ensono

LTI

Unisys

Zensar

Automation Capabilities to Support DevOps

Cognizant

Mindtree

NTT Communications

NTT DATA

T-Systems

Outcome-Oriented Engagement Experience

Capgemini

Mphasis

NTT Communications

SERVICE PROVIDERS ACROSS ARCHETYPES

	Traditional Archetype	Managed Services Archetype (Mid-Sized Deal focus)	Large Scale Transformation Archetype	Pioneering Archetype
Atos	✓	✓✓	★	★
Capgemini	✓✓	✓✓	★	✓
Cognizant	✓	★	✓	✓
Dimension Data	✓	★	□	□
DXC Technology	✓	✓✓✓	★	★
Ensono	★	✓	□	□
HCL	✓✓	✓✓✓✓	★	★
IBM	□	✓✓✓	★	★
Logicalis	✓✓	★	✓	□

- ★ = Leaders
- ✓ = Noteworthy Providers (number of check marks indicate the degree of alignment with the capability requirements of each client archetype)
- = Not In (the Service Provider wasn't considered a leader in any of the capability requirements for this archetype)

NOTE: All Service Providers evaluated for this report have the abilities to service all four archetypes, only those with the best fit to the capability requirements were identified as Leaders or Noteworthy Providers

SERVICE PROVIDERS ACROSS ARCHETYPES

	Traditional Archetype	Managed Services Archetype (Mid-Sized Deal focus)	Large Scale Transformation Archetype	Pioneering Archetype
LTI	✓	★	□	□
Microland	★	□	□	✓
Mindtree	✓	★	✓✓	✓
Mphasis	□	★	□	□
NIIT Technologies	★	✓	□	□
NTT Communications	□	★	✓	□
NTT DATA	✓✓	✓✓✓	★	✓✓
Softtek	★	✓✓	✓	□
Sungard AS	★	□	□	□

- ★ = Leaders
- ✓ = Noteworthy Providers (*number of check marks indicate the degree of alignment with the capability requirements of each client archetype*)
- = Not In (*the Service Provider wasn't considered a leader in any of the capability requirements for this archetype*)

NOTE: All Service Providers evaluated for this report have the abilities to service all four archetypes, only those with the best fit to the capability requirements were identified as Leaders or Noteworthy Providers

SERVICE PROVIDERS ACROSS ARCHETYPES

	Traditional Archetype	Managed Services Archetype (Mid-Sized Deal focus)	Large Scale Transformation Archetype	Pioneering Archetype
T-Systems	✓	✓✓	★	✓
Tata Consultancy Services	✓✓✓✓	✓✓✓	★	★
Tech Mahindra	✓	★	✓✓✓	□
Unisys	□	★	✓	□
UST Global	★	□	✓	□
Wipro	✓✓	✓✓	★	★
Zensar	★	□	□	✓

- ★ = Leaders
- ✓ = Noteworthy Providers (*number of check marks indicate the degree of alignment with the capability requirements of each client archetype*)
- = Not In (*the Service Provider wasn't considered a leader in any of the capability requirements for this archetype*)

NOTE: All Service Providers evaluated for this report have the abilities to service all four archetypes, only those with the best fit to the capability requirements were identified as Leaders or Noteworthy Providers

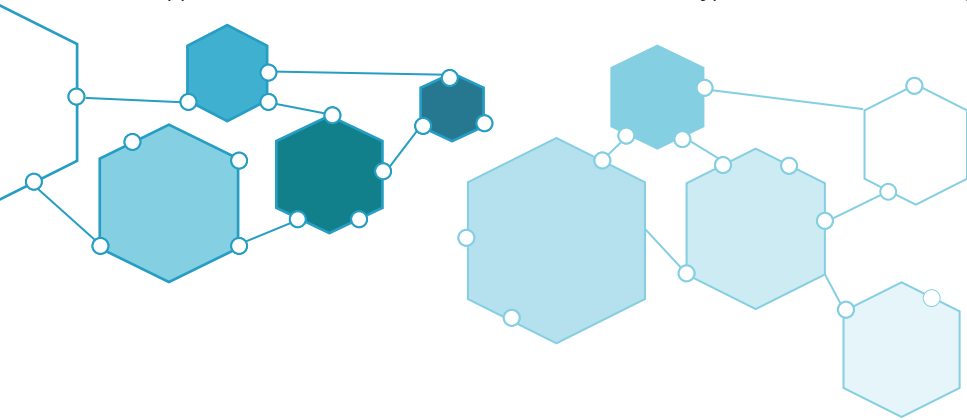
GUIDANCE

This report highlights four different client archetypes for data center managed and transformation services. The archetypes are based on the journey that a client organization takes from siloed data center components to standardization, consolidation, virtualization and cloud enablement. The associated change is not just from a technology standpoint but also encompasses infrastructure management practices that evolve along this journey.

The report also distinguishes the archetypes based on buyer objectives and constraints. For example, the traditional archetype is bound by budget constraints and views IT more as a support function than as a business enabler. This archetype has limited outsourcing

experience and prefers a phased approach to transfer responsibility to a service provider. On the other hand, the managed service archetype has prior outsourcing experience and is comfortable in offloading significant control over data center management. Transformational and Pioneering archetypes have a different mindset based on years of outsourcing experience, expertise and relatively fewer budget constraints. They view service providers as strategic partners who can innovate and participate in gain share deals based on business outcomes.

As more clients embrace infrastructure transformation initiatives, the traditional archetype may gradually become less visible. This is because quite a few organizations have already achieved a significant virtualization footprint and are now focused on achieving an agile infrastructure state through cloud enablement. Managed services clients that outsourced large portions of infrastructure monitoring and management services are now turning to automation to reduce the dependency on labor-intensive outsourcing models. Transformation projects that span cloud advisory services, private and hybrid cloud deployments, application migration and other services are becoming more mainstream. Software-defined infrastructure is still in its early stages of adoption; the next two to three years should see accelerated activity in this area.



Enterprise Leadership Actions

First steps: simplify and standardize: Enterprise clients that fit into the traditional archetype category seek service providers with a good track record in undertaking standardization and virtualization projects. This experience forms the foundation of future transformation initiatives. For ongoing infrastructure management engagements, it is imperative that clients conduct thorough due diligence work on industry-standard processes (such as ITIL) that are followed across their delivery centers. The assessment should examine how the provider specifically defines each component of the service. This will help avoid common outsourcing conflicts that arise out of vaguely-defined SLAs.

Leverage automation to reduce manual tasks: Clients in the managed services archetype typically have too many manual tasks which consume a significant amount of time to manage day-to-day operations. Such clients should seek service providers with an integrated toolset that employs analytics and predictive intelligence concepts to preemptively detect and resolve incidents. In our experience, enterprise clients report integration challenges with such tools; it is advisable to seek a few client references to gauge experience around these automation suites. In addition, clients should evaluate the processes, metrics and KPIs that service providers use to assure cost savings or productivity improvements over the length of the contract. Each of these should be clearly defined and measurable. For transformation projects, enterprise clients should look for technical proficiency and experience in providing end-to-end solutions.

Start transformation from business objectives: Clients with relatively fewer budget constraints that have transformation goals should start by developing an understanding of their business drivers. Each application should be assessed from a business and technical standpoint for where it should belong – in the data center, on the public cloud or in a hybrid environment. Transformed data centers should allow workload portability across the hybrid cloud components. Clients should look for comprehensive transformation project experience spanning virtualization, automation, orchestration, cloud enablement, public cloud consulting, managed services and in establishing overarching governance frameworks.

Make use of evolving software-defined capabilities: Software-defined data center services are a relatively new area. Enterprise clients should look for service providers with a broad partner ecosystem and experience in developing solutions using various SDDC building blocks, such as those from VMware and from hyperconverged technology vendors. Other capabilities to look for include infrastructure management using “infrastructure as code” concepts and certifications that validate service provider designs.

Provider Leadership Actions

Provide flexibility in contracts: Clients are increasingly seeking service providers that offer contract term flexibility and are willing to accommodate changes. Midsized providers are perceived to be nimbler in meeting these requirements. Such service providers should augment their capabilities further in meeting stringent SLA agreements. They can also increase their appeal to clients by developing niche expertise or an offering with sufficiently trained resources to back their claims.

Treat automation as table stakes: Most service providers, large and small, have an automation strategy in place and an integrated suite of technologies for driving efficiency in infrastructure operations. Further differentiation among service providers will emerge from their ability to use modern infrastructure management practices such as treating infrastructure as code and supporting DevOps practices for clients.

Demonstrate real solutions for pioneering archetype clients: Software-defined infrastructure services are evolving. Service providers are differentiating through certifications and partnerships. This service line needs significant investments to establish labs and centers of excellence to create and demonstrate innovative solutions and test them for specific client scenarios before deployment into live environments.

Showcase public cloud expertise: Service providers tend to focus heavily on the on-premises/private cloud component of hybrid infrastructure. There has been relatively less emphasis on developing public cloud infrastructure management expertise. However, clients are increasingly looking for providers that have a forward-looking approach and are establishing themselves as frontrunners in both private and public cloud environments. More importantly, service providers should not treat public cloud infrastructure as rented virtual machines. The differentiation comes through running this infrastructure in a highly automated fashion and leveraging the native capabilities and features provided by the hyperscale cloud providers.

Appendix



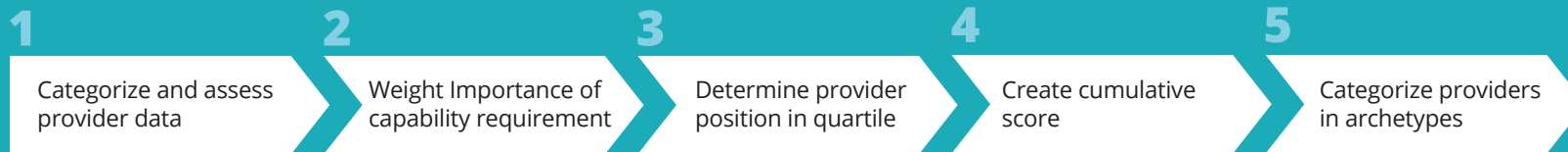
APPENDIX

Methodology

As previously noted, this report uses four archetypal sets of buy-side client requirements to assess the relative suitability of data center managed and transformation services providers. Data regarding the providers' capabilities and positioning was provided to ISG via briefings, ISG advisor interviews and service provider surveys, including client references if appropriate.

Data center managed services and transformation services providers shared their information related to different data center outsourcing 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







Methodology Details

- 1 The data provided by the service providers were categorized and assessed according to the data center managed and transformation services requirements described for each of the four client archetypes. When service provider responses and data were not worded as precisely as our archetype requirements, our data center services analysts relied on their expertise and experience to classify provider capabilities.
- 2 Each archetype capability requirement was weighted 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.
- 3 Once the relative ability of each services provider was assessed for each of the archetype requirements, each provider was then positioned in a relevant quartile (e.g., top 25 percent, second 25 percent and so on). The top quartile was 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. Those with no capabilities to meet the archetype requirements were not included in the assessment.

Please note: This report simply 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.
- 4 Provider capability scores from Step 3 were then multiplied by the weightings developed for each client archetype requirement in Step 2. The results for each provider were then totaled to develop a cumulative score for each service provider. These cumulative scores are not disclosed in this report.
- 5 The cumulative scores were then used to identify how well the service providers were suited for each archetype's requirements. The leading service providers are listed alphabetically and briefly profiled in each archetype section. Where relevant, additional service providers with noteworthy capabilities are also mentioned (e.g., providers that may have scored well on a specific requirement but not across all of the requirements for that archetype).

Fig13 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 compared 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 used to represent its capability for that requirement. Similarly, if a provider is assessed a score of 1 out of 4, then a one-quarter Harvey Ball is used. Figure 13 illustrates this.

Additional Relevant Data Center Managed and Transformation Services Providers

This report assessed the capabilities of 25 providers. Some service providers that are typically included in our work were not included in this report. Some of the companies that were not included were not able to participate and others declined. Service providers that do not offer a full portfolio of data center managed and transformation 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.

Appendix: Additional Relevant Cloud Service Providers

Other relevant service providers	Headquarters country
Accenture	Ireland
CGI	Canada
DecisionONE	United States
Fujitsu	Japan
Hexaware Technologies	India
Infosys	India
ITC Infotech	India
KPIT	India
Syntel	United States
Tieto	Finland
Virtusa	United States

Authors and Editors



Pankaj Kulkarni, Author

Lead Analyst, ISG Provider Lens™

Pankaj Kulkarni is an analyst specializing in research on IT infrastructure services. He is responsible for handling custom research assignments as well as analyst reports pertaining to his focus area. He has authored several thought leadership reports covering topics around datacenter services outsourcing, public cloud managed services and hybrid management platforms. He is also responsible for vendor capability assessments, providing ISG clients with an objective opinion of IT service providers as well as technological and competitive trends in this space.



Jan Erik Aase, Editor

Director

Jan Erik Aase is a director and principal analyst for ISG. He has more than thirty-five years of collective experience as an enterprise client, a services provider, an ISG advisor and analyst. Jan Erik has overall accountability for the ISG Provider Lens reports, including both the buyer-centric archetype reports and all international quadrant reports focused on provider strengths and portfolio attractiveness. He sets the research agenda and ensures the quality and consistency of the Provider Lens team.

Authors and Editors



Namratha Dharshan, Editor
Principal Analyst

Namratha Dharshan is a manager and principal analyst for ISG. With more than 13 years of experience working with both service providers and consultants, Namratha has developed expertise in business processing outsourcing contact centers, specializing in customer experience. Her research focuses specifically on the customer experience as it relates to digital transformation, omnichannel, analytics, AI and automation.

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