Cloud Transformation/Operation Services & XaaS

Global 2019

Quadrant Report

A research report comparing provider strengths, challenges and competitive differentiators

Customized report courtesy of:

Mindtree

November 2018
About this Report

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The lead authors for this report are Douglas Pollei and Shashank Rajmane. The editor is Jan Erik Aase.

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EXECUTIVE SUMMARY

Large enterprises are quickly advancing their multi-cloud strategies with public cloud providers. To accommodate for the rapid industry growth, managed service providers (MSPs) are building their global cloud transformation advisory and managed services practices for the public cloud. ISG is seeing a growing importance of ecosystems that surround the largest public cloud hyperscale organizations. While hyperscale and enterprise cloud service providers invest billions of dollars to scale out infrastructure and services quickly, managed service providers compete to certify employees, services and specialization to gain new customers. The large growth places a heavy responsibility on the enterprise buyer to set the proper strategy for its organizations.

A recent ISG white paper entitled *Three Key Considerations for Your Public Cloud Infrastructure Strategy* discusses how organizations should think about the best way to shift workloads across their data centers and cloud providers. Related to ongoing cloud management and working with their MSP, IT leaders need to consider the following:

- **Build the cloud strategy to accommodate large variances in planned cloud resource volumes.** An enterprise’s cloud strategy, project scope and timeline should be driven by an application migration and transformation roadmap that is developed collaboratively with the IT infrastructure team and the MSP. Ongoing maintenance must be considered in the application management process.

- **Make stability and performance the top priorities for cloud application migration.** Stability is also highly important for managed applications. There is no way to avoid all surprises when moving applications to the cloud, but teams can recognize and plan for a stabilization period. Working with the MSP to ensure performance in the initial stages of cloud management is a key component to the strategy.

- **Plan to implement cloud portability in critical applications within three years of the cloud go-live date.** As organizations refine their cloud operations, asset management and development capabilities, they have the potential to enable cost savings by reducing cloud sprawl. MSPs are important to help optimize the key components of portability and cloud expense management. As applications mature, cloud portability needs to be part of application and infrastructure architecture and design. Cloud management platform offerings from MSPs are integral to helping organizations with provisioning, automation and enablement for multi-cloud strategies for application portability.

The challenges for the MSP are to build trust with its clients and to grow its cloud management practice with strong partnerships and alliances with multiple public cloud providers. Establishing cloud alliances ensures customers’ access to the latest certified expertise in integration, management and technical knowledge for the hundreds of services available from the cloud provider.

This Provider Lens report provides deeper insight into the global public cloud market. Key trends and observations in this cloud transformation report are summarized below.
Rapid growth of cloud migration in the DACH (Germany, Austria, Switzerland) region: Growth in Germany has been higher in 2018 than many other parts of the world due to the release of pent-up demand caused by delayed decisions by enterprises in previous years. Companies in the DACH region started their cloud evaluation and migration processes much earlier in comparison to other countries, including the Nordics, U.K. and the U.S.

U.K. customers are seeking MSP specialization: In the U.K., ISG observes hyperscale specialization by the MSP community is becoming more important to the customer. Large clients are turning to providers with specialized public cloud hyperscale services for legal aspects, local availability, tooling, manageability and service differentiation.

Importance of local managed service providers in Brazil: Within Brazil, ISG Research is seeing strong leadership from local regional players for the managed public cloud services quadrant.

ANZ enterprises still look to larger providers: The Australia and New Zealand (ANZ) region analysis shows large global service providers with deep hyperscale partnerships are the market leaders for public cloud infrastructure consulting.

U.S. hyperscale cloud service providers dominate globally. The U.S. hyperscale providers (most notably Amazon, Microsoft and Google) dominate global market share. A few providers control the market.

Continued global IaaS market contraction: The hyperscale IaaS public cloud market will continue to contract and be dominated by a few players. Providers are building cloud practices primarily around Amazon Web Services (AWS), Microsoft Azure and Google Cloud Platform (GCP). These hyperscale organizations are making the largest infrastructure investments globally.

Service providers with extensive hyperscale cloud partnerships are becoming more important to enterprises: Enterprises that are planning large and complex cloud transformation projects are looking beyond providers’ technical capabilities. Key factors for enterprise partner selection and service retention include depth of hyperscale joint partnerships, certifications, industry specializations and the providers’ cloud business unit growth. Technology vendors are responding and placing high emphasis on ecosystems and partner-led deals by increasing their collaborative joint ventures, business units and centers of excellence (CoEs).

Evolving hybrid infrastructure and container services: Another global trend ISG is observing is the push by hyperscale cloud providers to offer modern software-defined network (SDN) architectures, hybrid cloud offerings and container readiness in combination with Kubernetes and serverless code deployments, in addition to providing the typical IaaS resources (memory, compute, storage and networking).

Multi-cloud enterprise strategies are key driver: As much as hyperscale cloud providers would like enterprises to exclusively go “all in” with one provider, clients are increasingly shifting toward multi-cloud architectures.
Introduction

Definition

Cloud computing services include the internet-based provisioning of infrastructure (compute, storage and networking), platforms (environments to build and integrate applications) and software (hosted applications). A broadly accepted set of characteristics that define a cloud has been laid out by the U.S. National Institute of Standards and Technology (NIST). These characteristics are: on-demand self-service, broad network access, resource pooling, rapid elasticity or expansion and measured service.
Definition (cont.)

A public cloud is a multi-tenant environment shared by different organizations. A private cloud is for the dedicated use of a single client. In this study, we focus primarily on the public cloud and associated services.

Our studies are intended to anticipate the investigation efforts and buying decisions of typical enterprise clients. When contemplating a significant strategy transformation, making infrastructure purchase-versus-rent decisions, implementing agile practices or incorporating automation into their environments, enterprise clients will benefit from a study that examines an entire ecosystem for a certain service line. Therefore, ISG studies are comprised of multiple quadrants covering a spectrum of services that an enterprise client would require. Our research investigates several of the service models (infrastructure, platforms and software) and the ecosystem of partners that provide consulting and managed services on top of the public cloud infrastructure.

Scope of the Report

The Cloud Transformation/Operations Services & XaaS 2019 Global report will assist buyers when reviewing a significant cloud transformation strategy and in identifying capable service providers in numerous geographies. Enterprise clients will also benefit from the study because it incorporates ISG's strengths in global sourcing advisory, contract knowledge and databases, regional research and expertise in technology ecosystems and innovations.

This study includes various reports and quadrants that cover cloud service models. Not all quadrants are covered within each geography. Coverage is dependent upon provider responses, participation and relevance. Quadrants not covered in a geographic region may be covered in future studies. Geographic report areas include the U.K., Germany, Switzerland, Australia and New Zealand, Brazil and the U.S.

ISG studies are comprised of multiple quadrants covering a spectrum of services that an enterprise client would require. The full set of quadrants covered in various geographic versions of this study are:
Definition (cont.)

- **Public Cloud Transformation – Consulting and Integration:**
  
  An assessment of providers of advisory and migration services for public cloud infrastructure, primarily Amazon Web Services, Google Cloud Platform and Microsoft Azure.

- **Public Cloud Operations – Managed Services:**
  
  An assessment of companies that provide ongoing management and support services on top of public cloud infrastructure, primarily Amazon Web Services, Google Cloud and Microsoft Azure.

- **IaaS – Enterprise IaaS:**
  
  Infrastructure-as-a-Service (IaaS) is a form of cloud computing called public cloud. The cloud compute form of IaaS called hyperscale computing is offered by the largest cloud service providers globally, sometimes referred to as hyperscalers.

- **IaaS – Public Cloud Hyperscale IaaS:**
  
  An assessment of services providers that provide on-demand infrastructure commonly referred to hosted private cloud (enterprise cloud). Enterprise cloud providers can supply multiple clouds that are customized at the customer’s request, including the use of hybrid, multiple public and multiple private cloud providers.


Relevant to additional technology reports from ISG, technology buyers looking for additional details on outsourcing the responsibility of data center related services should reference the ISG's Provider Lens Data Center Outsourcing Global Quadrant Report. Buyers looking for providers of application development and maintenance (ADM) services should reference ISG's Provider Lens Next-Gen ADM Services Global Quadrant Report. Buyers seeking SAP HANA specialization, including cloud infrastructure, should reference ISG's Provider Lens SAP HANA Quadrant Report.
Introduction

Provider Classifications

The ISG Provider Lens™ quadrants were created using an evaluation matrix containing four segments, where the providers are positioned accordingly.

Leader

The “leaders” among the vendors/providers have a highly attractive product and service offering and a very strong market and competitive position; they fulfill all requirements for successful market cultivation. They can be regarded as opinion leaders, providing strategic impulses to the market. They also ensure innovative strength and stability.

Product Challenger

The “product challengers” offer a product and service portfolio that provides an above-average coverage of corporate requirements, but are not able to provide the same resources and strengths as the leaders regarding the individual market cultivation categories. Often, this is due to the respective vendor’s size or their weak footprint within the respective target segment.

Market Challenger

“Market challengers” are also very competitive, but there is still significant portfolio potential and they clearly lag behind the “leaders”. Often, the market challengers are established vendors that are somewhat slow to address new trends, due to their size and company structure, and have therefore still some potential to optimize their portfolio and increase their attractiveness.

Contender

“Contenders” are still lacking mature products and services or sufficient depth and breadth of their offering, while also showing some strengths and improvement potentials in their market cultivation efforts. These vendors are often generalists or niche players.
Rising Star

Rising Stars are mostly product challengers with high future potential. When receiving the “Rising Star” award, such companies have a promising portfolio, including the required roadmap and an adequate focus on key market trends and customer requirements. Also, the “Rising Star” has an excellent management and understanding of the local market. This award is only given to vendors or service providers that have made extreme progress towards their goals within the last 12 months and are on a good way to reach the leader quadrant within the next 12-24 months, due to their above-average impact and innovative strength.

Not In

This service provider or vendor was not included in this quadrant as ISG could not obtain enough information to position them. This omission does not imply that the service provider or vendor does not provide this service.
## Cloud Transformation/Operation Services & XaaS - Quadrant Provider Listing 1 of 3

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<tr>
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Cloud Transformation/Operation Services & XaaS - Quadrant Provider Listing 2 of 3

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Cloud Transformation/Operation Services & XaaS Quadrants
**Definition**

Public cloud transformation consulting and migration services firms assist enterprises in navigating the complexities of adopting a public cloud computing environment. Their services typically include the following:

- **Advisory services**: creating a business case for cloud, identifying workloads for migration, assessing organizational impact, addressing risk and compliance issues and/or advising on migrating applications from the existing environment to a public cloud provider.

- **Implementation services**: configuring the cloud environment, migrating and integrating applications and/or optimizing the architecture to exploit the cloud computing features and benefits.

For this quadrant, we exclude the creation of private clouds, as they are covered in a separate study on data center outsourcing and transformation. Accordingly, the Public Cloud Transformation Consulting & Migration quadrant is confined to the adoption of public cloud services and their integration with on-premises environments, which can include private clouds.
In our U.S. study, we observed increased growth and investment by providers in their public cloud practices. Many consulting and services providers started initially scaling their AWS and Azure teams to meet growing enterprise requests for public cloud services. These providers are now starting to expand into additional hyperscale competencies as the revenue growth for other hyperscale providers increases. ISG is also seeing the emergence of smaller, specialized, cloud-native providers servicing larger global organizations. Public Cloud Infrastructure Consulting & Migration leaders in the U.S. that are also global leaders on this quadrant include Accenture, Atos, Cognizant, DXC, HCL, NTT, TCS and Wipro. View the Provider Lens Public Cloud Infrastructure Consulting & Migration U.S. report for additional details.

Enterprise organizations can't keep up with the complexity of offerings that public cloud providers are releasing. AWS alone released 1,430 new services and features in 2017. AWS also maintains overlapping products within its service offerings. ISG observes that the flood of innovation makes it very important for enterprise clients to receive provider guidance for public cloud consulting and implementation. Providers serve as an extension of the IT organization to guide it through the options, migrations and transformation process.

In Germany, Austria and Switzerland (the DACH region), ISG is seeing midmarket and large enterprises shift more mission-critical enterprise IT services to public cloud platforms with service providers. The growth in Germany is higher now due to release of demand that built up because decision delays by enterprises. Companies in the DACH region started their cloud evaluation and migration processes much earlier in comparison to other countries, including the Nordics, the U.K. and the U.S. Leaders in Germany that are also global leaders on this quadrant include Accenture, Atos, DXC and Wipro. View the Provider Lens Public Cloud Infrastructure Consulting and Migration for Large Accounts Germany report for additional details.

In the U.K., ISG observes hyperscale provider specialization is of increasing importance to the customer. Large organizations are turning to providers with specialized public cloud hyperscale services for legal aspects, local availability, tooling, manageability and service differentiation. Public Cloud Infrastructure Consulting & Migration leaders in the U.K. that are also global leaders include Atos, DXC, HCL, TCS and Wipro. View the Provider Lens Public Cloud Infrastructure Consulting & Migration U.K. report for additional details.
The Australia and New Zealand (ANZ) region analysis shows large global service providers with deep hyperscale partnerships again dominating the market for public cloud infrastructure consulting. The Public Cloud Infrastructure Consulting & Migration quadrant leaders in ANZ that are also global leaders include Accenture, DXC, HCL, TCS and Wipro. View the Provider Lens Public Cloud Infrastructure Consulting and Migration ANZ report for additional details.

Within Brazil for public cloud consulting, ISG Research is seeing enterprises turn to large providers for their strong cloud consulting experience, IT service management and partner ecosystems. Public Cloud Infrastructure Consulting & Migration leaders in Brazil that are also global leaders include Accenture, DXC and Wipro. View the Provider Lens Public Cloud Infrastructure Consulting and Migration Brazil report for additional details.

Accenture, a global leader in public cloud consulting, has created strong business units and groups with hyperscalers, including AWS and Google, to advance its public cloud consulting practice. Accenture has been recognized for additional service awards by ISG, including designation as a 2018 U.S. ADM leader for Agile Development and Continuous Testing, 2018 leader in IoT Services, 2018 global leader in Infrastructure and Managed Services and 2018 U.S. leader in S/4HANA services.

Atos continues to expand in Europe in the DACH and U.K. areas. It is also expanding globally through the recent acquisition of U.S.-headquartered Syntel, which has 23,000 full-time equivalents (FTEs). ISG expects Atos to gain market share as a result of its recent hyperscale partnerships and strategic acquisitions.

Cognizant's CloudSteps framework is a valuable asset for helping clients rationalize their application portfolios and migrate to the cloud. The company has strong competency with AWS and in several verticals.

DXC has restructured its organization to help with public cloud service integration, migration and transformation. DXC is a leading Microsoft advisory practice that is one of the largest globally. DXC is a 2018 recipient of ISG's award for U.S. leadership in Digital Workplace Consulting, U.S. ADM End-to-End Application Development and Maintenance, U.S. IoT Services, U.S. global leader in Infrastructure and Managed Services and U.S. S/4HANA services.
HCL’s leadership in hyperscale partnerships, certifications and migration tooling is fueling its global cloud advisory growth. HCL has been recognized for additional service awards by ISG, including as a 2018 U.S. leader for Application Testing, ADM Application Development, 2018 U.S. leader in IoT Services, 2018 global leader in Digital Workplace Consulting, 2018 Global Infrastructure and Data Center Managed Services and 2018 U.S. leader in S/4HANA services.

NTT is a global rising star following its recent combination of Dimension Data, NTT Communications, NTT Data, NTT Security and NTT’s innovation lab under one brand, NTT Inc. NTT is an AWS Managed Service Provider, AWS Channel Reseller for Commercial and Government, AWS Public Sector Partner for Government and AWS Premier Partner. NTT has been recognized for additional services awards by ISG, including designation as a 2018 Managed Hosting leader for Data Center and Private Cloud, 2018 rising star in S/4HANA Services, and leader in HANA Managed Technology Services.

TCS enters this year’s leader quadrant for cloud advisory through its strengths in application discovery, design and build processes using its 360-degree approach. TCS has also won additional service awards from ISG, including 2018 ADM U.S. 2018 leader for Application Testing, ADM Application Development, 2018 U.S. leader in IoT Services, 2018 global leader in Digital Workplace Consulting, 2018 global leader for Infrastructure and Data Center Managed Services and 2018 U.S. leader in S/4HANA services.

Wipro continues reskilling programs to carve out a well-defined competitive advantage in the cloud advisory market. The company has gained momentum for its cloud advisory and consulting practice with recent contracts and global wins. Wipro has participated in additional ISG studies. A sample of its leadership awards include the 2018 ADM U.S. 2018 Application Testing and ADM Application Development categories, 2018 U.S. leader in IoT Services, Healthcare IoT, 2018 global leader in Digital Workplace Large Enterprises (Mobile Management), Digital Workplace Consulting, 2018 Global Infrastructure and Data Center Managed Services and 2018 U.S. leader in S/4HANA services.
Mindtree continues as a rising star in the cloud advisory category. The company was recognized as a Microsoft Azure Innovation Partner and Salesforce Marketing Innovation Partner. ISG recently awarded Mindtree and its client P&G the 2018 U.S. Paragon Award for Collaboration, and Mindtree also received the Excellence Award for Delivery by a Service Provider with Cisco. Additional 2018 ISG awards for Mindtree include leadership in the U.S. for SAP HANA in SAP Cloud Platform services, Application Development and Maintenance for Next-Gen ADM Services and Agile Development and ADM Continuous Testing.
**RISING STAR: MINDTREE**

**Overview**

Co-headquartered in Warren, N.J., and Bengaluru, India, Mindtree has positioned itself as a cloud transformation and advisory services specialist. Mindtree places a high emphasis on innovation relevant to its cloud factory design, evaluation and operations delivery. Mindtree has more than 19,000 FTEs globally, and most of its revenues come from providing IT services for large enterprise IT service providers. The company has more than 1,500 certified cloud experts to support 12 specific industry domains.

**Strengths**

**Holistic approach to migration:** Mindtree's cloud migration approach is more cloud agnostic. Apart from a traditional lift-and-shift model, Mindtree has been re-architecting and/or re-factoring workloads, and delivering services in containers to several of its clients that are looking for long-term benefits.

**Excellent Azure and AWS competencies:** Mindtree has extensive experience in migrating workloads to the Azure environment. Mindtree has been recognized as a Microsoft Azure Innovation Partner. Mindtree is part of the AWS Channel Reseller Program, AWS Public Sector Partner Program, AWS Managed Service Program, and AWS Advanced Partner Program with competencies in Big data and DevOps. The company has additional depth in DevOps CI/CD automation for larger enterprise rollouts and big data applications.

**Expertise in SAP cloud advisory:** Mindtree has deep experience in SAP transformation projects with numerous hyperscale providers through its acquisition of Bluefin. Mindtree is one of Azure's internal SAP partners. It delivers SAP services to enterprises and supports hyperscalers with its SAP platforms and requirements.

**Caution**

Mindtree has strong ties with Microsoft. Relevant to their ongoing strategic alliances, Mindtree is working to achieve AWS Premier Partner certification.

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**2019 ISG Provider Lens™ Rising Star**

Mindtree markets itself as a cloud-first company and is emphasizing its innovation approach to clients looking for industry-specific cloud migration and advisory services, especially for big data, SAP and analytics on public cloud. Mindtree also has significant experience in developing, managing and supporting the underlying infrastructure for multiple public cloud providers.
**Definition**

Managed public cloud services (MSPs) providers provide managed services on top of third-party public cloud IaaS platforms. At a broad level, these services include proactive monitoring, automation and management of the customer’s cloud environment, aiming to maximize the performance of the workloads in the cloud, reduce costs and ensure compliance and security. Services provided typically include:

- Monitoring of CPU, storage, memory, databases, operating systems and more.
- Upgrades and patching.
- Expense management.
- Governance, security and compliance management.
- Cloud management platforms (CMPs).
- Support service such as incident management, configuration, security services and automation setup.
- Deep knowledge and service practices with public cloud providers.

**Cloud Transformation/Operation Services & XaaS**

**Managed Public Cloud Services**

**Source:** ISG Research 2018
Observations

Enterprises are migrating applications to various platforms as part of a multi-cloud strategy. Companies are looking to managed service providers (MSPs) to help them solve the complexity of ongoing cloud management, consumption, cost transparency, compliance management, security and automation. ISG observes the largest global public cloud managed service providers are capturing the widest market share within the geographies covered in this report.

As more applications move to public clouds, enterprises will rely heavily on MSPs to manage their global compliance and application requirements. There is a trend among MSPs toward greater specialization and certifications with multiple hyperscale providers.

- In Germany, ISG identified a trend of major MSPs offering artificial intelligence (AI) and robotic process automation (RPA) enhancements within their cloud management platforms, tools and frameworks. Leaders in Germany that are also global leaders in this quadrant are Accenture, Atos, DXC, Rackspace and Wipro. View the Provider Lens Managed Public Cloud Services for Large Accounts Germany report for additional details.

- To compete in the U.K., IT service providers must have several public cloud certifications and a broad service portfolio that begins with their own innovative IP. The U.K. managed public cloud leaders that are also global leaders are Atos, DXC, HCL, Rackspace, TCS and Wipro. View the Provider Lens Managed Public Cloud Services U.K. report for additional details.

- The Australia and New Zealand (ANZ) region analysis shows large global service providers with deep hyperscale partnerships dominating the market for managed public cloud services. Smaller regional providers benefit through partnerships with established providers. The managed public cloud leaders in ANZ that are also global leaders are Accenture, DXC, HCL, Rackspace and Wipro. View the Provider Lens Managed Public Cloud Services ANZ report for additional details.

- Within Brazil, ISG Research is seeing strong leadership from local regional players. Accenture and Capgemini are managed public cloud leaders in Brazil and also global leaders on this quadrant. View the Provider Lens Managed Public Cloud Services Brazil report for additional details.
The U.S. produces the highest enterprise cloud revenue for many providers surveyed for this study. There has been a large consolidation of the secondary providers within this category during the last two years. Managed Public Cloud Services quadrant leaders in the U.S. that are also global leaders are Accenture, Capgemini, DXC, HCL, IBM, Rackspace and TCS. View the Provider Lens Managed Public Cloud U.S. report for additional details.

Accenture is a global leader in managed services for public cloud. The company offers multiple cloud management services through its unique Accenture Cloud Platform (ACP) portal. ACP is one of the most mature management platforms in the industry. Accenture has also created two specialized business groups with AWS and Google.

Atos is the leading European-based managed service provider for public cloud services. Atos continued to expand globally through the recent acquisition of Syntel in the U.S. to increase its public cloud managed service capabilities and enterprise cloud services.

Capgemini is expanding beyond its European presence through its efforts in the U.S. market for public cloud consulting. Capgemini has also been recognized by ISG in 2018 for ADM End-to-End Application Development & Maintenance and Agile Application Testing, as a 2018 leader in IoT Services, a 2018 global leader in Infrastructure and Managed Services and a 2018 U.S. leader in BW/4HANA services.

DXC has solid global experience and resources for the Azure environment and also has considerable staff focused on AWS.

HCL is expanding globally in Europe with acquisitions to further its service capabilities with Nordic enterprises. HCL spotlighted its suite of offerings under the HCL DRYICE™ platform.

Rackspace is a solid leader in U.K. for its next-gen managed service portfolio and can apply its well-regarded “Fanatical Support” customer service to all major public cloud services. Rackspace recently acquired managed cloud competitor Datapipe to expand into new geographies, enterprise clients and government services.
Tata Consultancy Services (TCS) is growing fast within Europe and the U.S. The company has extensive public cloud managed services that use its Machine First Delivery Model approach. TCS is increasing its hyperscale partnerships and large customer engagements.

Wipro has built a large footprint in Germany and the U.K. Wipro also is making significant investments in its U.S. operations and staff to support its large push toward public cloud managed services, including opening an innovation facility in Plano, Texas, in March 2018.

Cognizant is recognized as a global rising star and has invested heavily in its leading AWS advisory practice. The company has also expanded its DevOps advisory and application lifecycle management abilities. Cognizant won ISG's Special Award for Paragon Provider of the Year for significant contribution to the sourcing industry. ISG also recognized Cognizant as leader for ADM Services in Agile Development & Continuous Testing and as a 2018 U.S. leader in Managed Digital Workplace Services.

NTT Inc. is a global rising star whose brand is being formed through the recent combination of Dimension Data, NTT Communications, NTT Data, NTT Security and NTT’s innovation lab. NTT Inc. NTT is an AWS Managed Service Provider, AWS Channel Reseller for Commercial and Government, AWS Public Sector Partner for Government and AWS Premier Partner.
Definition

Regions covered in this global quadrant include U.S. Germany, and the U.K. Infrastructure-as-a-Service (IaaS) is a form of cloud computing sometimes referred to as public cloud. In this quadrant, we are focusing on the cloud compute form of IaaS called hyperscale computing that is offered by the largest global cloud service providers, sometimes referred to as hyperscalers. Hyperscale is cloud architecture that can scale on demand and provision multiple resources including memory, compute, storage and networking services. Hyperscale computing is usually required by large distributed cloud services and applications requiring scalable and distributed services.

ISG defines IaaS as a highly automated offering wherein IT infrastructure resources are owned by a provider and offered for use by each customer on demand, typically in a self-service mode. The infrastructure resources can be rapidly provisioned to a user. They are rapidly scalable (both up and down) and usage is metered and charged based on a pricing structure. The customer has a self-service interface for requesting resources from the Provider Lens™ Quadrant Report  |  November 2018

isg.png

IAAS — PUBLIC CLOUD HYPERSCALER

Source: ISG Research 2018
Definition (cont.)

multitenant pool of resources hosted by the service provider. An IaaS offering enables customers to obtain a virtual image, server or machine (VM) and load it with operating system, middleware and applications that are selected by the customer. In IaaS, the customer typically retains most of the responsibility for IT operations.

This quadrant covers the largest hyperscale cloud providers and their global offerings. The hyperscale IaaS quadrant does not include companies that provide the hardware and software that may be used to build an IaaS offering. The coverage includes an evaluation of the IaaS providers' overall cloud computing investments and scale.

This quadrant includes evaluation of the cloud IaaS environment, including the infrastructure resources and the automated management of those resources. However, this quadrant does not include professional or managed services offered directly by some IaaS providers. Such services include managed hosting and data center outsourcing.

IaaS offerings are considered from the perspective of requirements of typical ISG clients. We have attempted to include our perspective on the common IaaS uses, including operating production application workloads (from legacy applications to web-serving applications), application development and testing and disaster recovery. Analysis covers not only the hosting of single-application workloads, but also replacing traditional enterprise data centers with cloud environments that can support a highly diverse range of workloads.

This quadrant also considers typical enterprise buyers and their motivations or objectives for using IaaS. These range from IT organizations seeking reduced infrastructure cost, to business departments that are trying to increase agility and accelerate response to business requirements.
Observations

Global hyperscale cloud leaders are the key components to ISG's cloud transformation report. As ecosystems around global hyperscale cloud leaders grow, ISG observes the hyperscalers' ecosystems will be the key predictors to regional market share increases and dominance. These ecosystems include ISV marketplaces, managed cloud providers, consulting providers, professional services firms and systems integrators (SIs).

The number of providers in this category was significantly reduced in the last year. We observe that trend is the direct result of only a select number of companies capable of scaling, innovating and investing globally at the highest level, which eliminated lower-level IaaS public cloud competitors in the process.

Contraction will continue, and the market for large global hyperscale IaaS public cloud providers will be dominated by a small selection of players. ISG also sees the importance of regional hyperscale IaaS public cloud leaders to innovate to compete for local contracts, but their advantages are shrinking over time. Previously ranked hyperscale cloud companies that are not able to keep up with the frantic pace of investment, infrastructure services, and innovation are now included as part of ISG's IaaS – Enterprise Cloud quadrant. These providers have shifted to competing on their regional niche strengths, enterprise customization, hybrid services, multi-cloud services and hyperscale partnerships.

Another global trend ISG is observing is the push by hyperscale cloud providers to offer modern software-defined network (SDN) architectures, hybrid cloud offerings and container readiness in combination with Kubernetes and serverless code deployments, in addition to providing the typical IaaS resources (memory, compute, storage and networking).

- Major providers evaluated in this quadrant offer public cloud IaaS (compute, storage and networking infrastructure resources) that are secondary to core company offerings and revenue. Only providers of size and scale can participate in this capital-intensive cloud market.
- In 2018, German companies will invest about €1.4 billion in the hyperscale public cloud market, which is expected to grow by 30 percent. Growth there is slightly above the international average due to the delayed start and general data privacy concerns for large enterprises. Nearly two thirds of the German hyperscale public cloud market is held by three providers. Amazon Web Services (AWS) controls 40 percent market share in Germany, Microsoft 20 percent and Google 5 percent. The remaining third is shared by IBM, Oracle and several local IaaS public cloud providers. View the Provider Lens Public Cloud Hyperscale IaaS Germany report for additional details.
In the U.K., ISG observes the largest hyperscale IaaS public cloud leaders eroding the advantages held by local cloud providers through regional data center expansion, business operations and customized services. Local providers are more challenged to support customized data protections and operations out of the U.K. Global hyperscale providers are improving in these areas to provide 24x7 support in local languages and compliance with the latest General Data Protection Regulation (GDPR) within the EU. AWS has gone one step further and recently founded a new European entity to reduce the advantages of local suppliers. View the Provider Lens Public Cloud Hyperscale IaaS U.K. report for additional details.

The U.S. hyperscale providers dominate global and U.S. market share. The U.S. market is largely controlled by four providers and will continue to consolidate. All four U.S. hyperscale cloud quadrant Leaders are also global leaders: AWS, Google, Microsoft and IBM. View the Provider Lens Public Cloud Hyperscale IaaS U.S. report for additional details.

AWS continues to dominate the IaaS market globally and is estimated to control close to 40 percent of the global market share. In 2017, its global revenue was $17.2 billion and 2018 revenue is estimated at $21.7 billion. AWS maintained an extreme pace of innovation and released 1,430 new services and features in 2017. AWS has the largest ISV marketplace within the industry (4,200 software listings from 1,400 ISVs). AWS holds approximately 30 percent market share in U.K, 40 percent in Germany and 40 percent in the U.S. The company's global and local partner ecosystems offer deep knowledge on how to utilize AWS for competitive advantages.

Google's global infrastructure and cloud services investment strategy is paying off. Google's massive IaaS global scale and technology services are now being complemented by new internal competencies to service large enterprise accounts. ISG sees Google strengthening its global systems integrator partnerships and investing in business groups with several providers. Although Google Cloud Platform (GCP) is smaller in market share relative to other hyperscalers, ISG anticipates growth in 2019, driven by Google's strong competencies in artificial intelligence (AI) and machine learning (ML). ISG's contract database also shows a significant increase in contracts signed for GCP services globally in many forms, especially in the U.S.
Observations (Cont.)

- **IBM** continues upward global growth in the public cloud space. The company now has 60 data centers in 19 countries, including multiple data centers in the U.S. IBM has spent the past year consolidating all cloud services (including SoftLayer and Bluemix) under the IBM Cloud name to simplify complex brands and offerings. To create differentiation, IBM is placing high emphasis on global compliance and certification standards for its country-specific services. IBM now offers GDPR compliance. IBM plays strongest in the EMEA market.

- **Microsoft Azure** is growing globally in the hyperscale IaaS market and is currently the second-largest global IaaS provider. Azure Intelligent Cloud revenues were $9.6 billion in 2017, up 89 percent from the previous year. Microsoft is working well with EMEA and U.S. partners to help link customers familiar on-premises products to Azure cloud services. From our research within the Azure provider community, ISG sees a recent trend of top managed service providers (MSPs) placing additional emphasis on their Azure program growth and investment. Azure Stack hybrid services appeal to enterprises familiar with existing Microsoft’s services, teams and contract process.

- **Oracle** is a rising star for the regions ISG covers. The company is traditionally known as a dominant provider of IT software and database products. Oracle has improved its cloud offering with a competitive and well-integrated hybrid cloud ready approach. Besides gaining wider adoption outside its current client base, Oracle faces challenges to engage partners within its ecosystem to drive consumption. Oracle’s current IaaS strategy is focused on existing users of Oracle software as well as midsized organizations that can utilize Oracle’s cloud for services beyond its database and software businesses.
Definition

Enterprise cloud providers offer on-demand infrastructure, which is commonly referred to as enterprise cloud, including specialized services customized to enterprise specifications. The infrastructure offerings typically include user-specifiable quantities of server, memory, storage and network capacity. Some offerings may include optional software management (for the operating systems, databases and other software) and optional functionality to ensure availability (for example, data redundancy). There are various pricing and contracting options for these offerings, such as on-demand, reserved resources and others.

Workloads in this category are not enabled within hyperscale public cloud services. This allows for increased enterprise flexibility with contracts, security, regulatory compliance, pricing, location, hardware choice and other options not potentially available with hyperscale services. The IaaS – Enterprise Cloud quadrant does not include services provided for on-premises data centers owned by the customer, but may include a combination of hybrid cloud connection capabilities with private and public cloud offerings. The majority of niche IaaS providers within the Enterprise Cloud...
category do not compete directly with hyperscale providers on
global infrastructure, innovation investments, product scale and
marketplace ecosystems.

Enterprise cloud providers are increasingly becoming more specialized.
Types of specialization can include regional data center and cloud
specialization, with higher market share and brand recognition,
industry specialization (for example financial services, healthcare,
consumer packaged goods), certifications for specialized industries
and regions, and technology and services specialization to meet
enterprise requirements (security, firewall, VPN, interconnections).

Another area of specialization by enterprise cloud providers includes the ability to service
enterprises on cloud legalities. These include compliance to laws related to restrictions on data
processing and storage in countries of origin, border restrictions for application data, market
and application licensing requirements, procurement policies, specialized customer support and
language requirements and physical data center security.

Many businesses also look to enterprise cloud providers for customized SLAs and flexible pricing
that are not available from hyperscale providers. Midsized specialized organizations can also
dedicate teams to large accounts that require more full-time support for their services as an
extension of their existing IT group.
Observations

Although global hyperscale public cloud services remains dominant, ISG is seeing a slight increase in enterprise cloud adoption by large and midsized clients in the geographies covered. Enterprise cloud providers can supply multiple clouds that are customized at the customer’s request. Enterprise cloud providers exist in the marketplace to enable choice and specialization (hybrid, multiple public and multiple private cloud), and are experiencing slow and sustained growth.

ISG is observing additional growth for global enterprise cloud providers with extensive data centers and networks worldwide. These companies are increasing revenue through strategic partnerships with their hyperscale cloud provider clients. To speed the global buildout of major cloud services, hyperscale cloud companies are partnering with enterprise cloud and data center providers in selected geographic areas for cloud infrastructure, networks, undersea cable systems and compliant data centers.

- In Germany, the leading enterprise cloud providers have broad service offerings, extraordinary scalability and security features, and a high level of innovation within their distinctive solutions. Leaders in Germany that are also global leaders include Atos, IBM and DXC. View the Provider Lens Enterprise Cloud Germany report for Large Accounts for additional details.

- The U.K. enterprise cloud market, especially for midmarket and government customers, is driven by the demand for local, secure infrastructure solutions. Brexit insecurities and upcoming regulations and restrictions are also driving the future marketplace. Enterprise cloud leaders in the U.K. that are also global leaders include Atos, IBM, DXC and HCL. View the Provider Lens Enterprise Cloud U.K. report for additional details.

- Our enterprise cloud research in the Australia and New Zealand (ANZ) region shows growth of local providers as product challengers. Established providers are increasing their investments and scaling operations as demand for enterprise cloud services increases. Enterprise cloud leaders in ANZ that are also global leaders include Atos, DXC and HCL. View the Provider Lens Enterprise Cloud ANZ report for additional details.

- In Brazil, ISG Research is seeing strong leadership from local regional players. In addition to enterprise cloud infrastructure, customers are looking for additional data center services, SDDC capabilities and hyperscale partnerships. Atos is a rising star in Brazil and an overall global leader; no quadrant leaders in the Brazilian market have also attained global leadership. View the Provider Lens Enterprise Cloud Brazil report for additional details.
Observations (cont.)

- The U.S. produces the highest enterprise cloud revenue for most of the providers we surveyed. The U.S. has undergone significant consolidation among secondary providers during the last two years. Enterprise cloud leaders in the U.S. that are also global leaders include Atos, DXC, HCL and IBM. View the Provider Lens Enterprise Cloud U.S. report for additional details.

- In 2018, Atos and Google Cloud formed a global partnership to deliver secure hybrid cloud solutions to enterprises. ISG foresees additional global growth and innovation for Atos through the partnership. Atos is making progress in global service reach, global cloud offerings (Digital Private Cloud and Hybrid Azure Cloud) and strategic alliances.

- DXC's Virtual Private Cloud (VPC) is its core enterprise cloud service. DXC markets customized enterprise cloud infrastructure offerings in combination with managed services to global multinationals. DXC is improving its infrastructure automation capabilities.

- HCL Technologies is achieving strong global growth, especially in the Nordics. HCL has a data center footprint of 250 centers through a strong partner network that includes cloud exchange providers for hybrid cloud connectivity options.

- IBM's global cloud services are spread throughout 54 countries. Watch for IBM to scale its cloud management capabilities with other providers in a push to hybrid enterprise cloud management. IBM's global cloud compliance, security and machine learning capabilities stand out as key differentiators.

- TCS has been successful at developing multiple enterprise cloud offerings for large global customers across numerous vertical industries.
Methodology
The ISG Provider Lens™ 2018 – Cloud Transformation/Operation Services & XaaS research study analyses the relevant software vendors and service providers in the Global market, based on a multi-phased research and analysis process, and positions these providers based on the ISG Research methodology. The study was divided into the following steps:

1. Definition of Cloud Transformation/Operation Services & XaaS market
2. Use of questionnaire-based surveys of service providers/vendor across all trend topics
3. Interactive discussions with service providers/vendors on capabilities & use cases
4. Leverage ISG’s internal databases & advisor knowledge & experience (wherever applicable)
5. Detailed analysis & evaluation of services & service documentation based on the facts & figures received from providers & other sources.
6. Use of the following key evaluation criteria:
   - Strategy & vision
   - Innovation
   - Brand awareness and presence in the market
   - Sales and partner landscape
   - Breadth and depth of portfolio of services offered
   - Technology advancements
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