Data Center Managed Services 2023-2024 RadarView

Revolutionizing data center operations with generative AI

November 2023

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About the Data Center Managed Services 2023–2024 RadarView

1   There is a growing demand for service providers to develop green data center initiatives, enabling enterprises to reduce carbon emissions and optimize energy utilization. Service providers are also embracing the integration of generative AI into data centers to automate observability and improve the efficacy of data center monitoring.

2   Avasant evaluated 38 providers using a rigorous methodology across the key dimensions of practice maturity, partner ecosystem, and investments and innovation. Through its analysis, Avasant recognized 23 providers that brought the most value to the market over the past 12 months.

3   The *Data Center Managed Services 2023–2024 RadarView* aims to provide a view into the leading service providers for data center managed services. Based on our methodology, these service providers are categorized into four broad segments: leaders, innovators, disruptors, and challengers.

4   To enable decision-making for enterprises, Avasant has provided an overview of the industry's major data center managed service providers. This includes a list of their top enterprise clients, customer success stories, key IP assets/solutions and partnerships, and major industry verticals they serve. This is supported by an analyst's perspective on the providers across the three key dimensions defined in the second point above.

Note: Please refer to Avasant's *Data Center Managed Services 2023–2024 Market Insights* for demand-side trends.

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Defining data center managed services

Key definitions

Data center management
Avasant defines data center management as various responsibilities and tasks that revolve around infrastructure maintenance, private or public cloud management, operational efficiency, and the application of DevOps principles.

Data center managed services
Data center managed services include a range of offerings such as managed hosting and colocation, storage and backup transformation, server consolidation and virtualization, business continuity and disaster recovery, and the creation of secure and energy-efficient infrastructure environments.

These services cover the entire value chain, from consulting and design to implementation, configuration, migration, and ongoing maintenance. They are designed to meet specific needs and ensure that SLAs are upheld.

The services can be delivered through various models, including on-premises, colocation, managed services, cloud, or hybrid support.

Key components

	Data center infrastructure	Managing physical components of the data center, such as servers, storage devices, networking equipment, and firewall
	Private/public cloud	Infrastructure provisioning, resource allocation and optimization, and security and compliance
	Data center operations	Equipment monitoring, maintenance, troubleshooting, environmental controls, and asset and change management
	DevOps	Automating, standardizing, and optimizing the management and operations of data center infrastructure

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Avasant recognizes 23 top-tier providers supporting the enterprise adoption of data center managed services
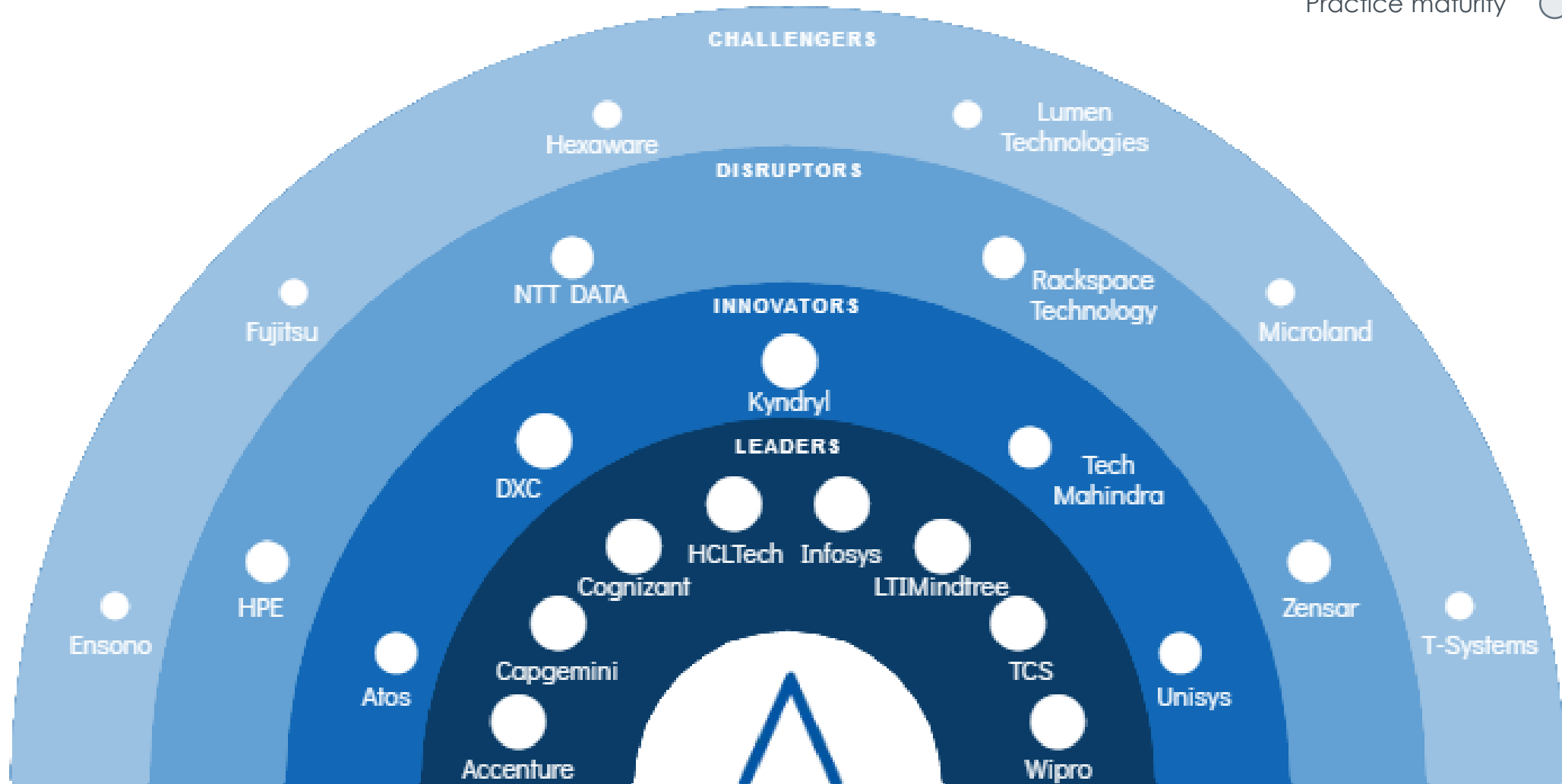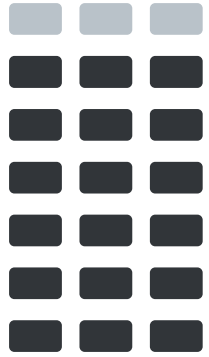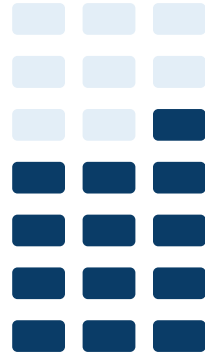
Security, compliance, and operations management are the top challenges enterprises face while managing data centers

88%
Security and compliance

- Inefficient protection against physical threats and unauthorized access
- Failure to comply with constantly changing regulatory standards for data centers

63%
Operations management

- Inability to provide a unified view of data center operations
- Complexity of managing data center operations for remote infrastructure

50%
Scalability

- Poor capacity planning leading to underutilized or overburdened infrastructure
- Failure to provision on-demand resources for the evolving needs of enterprises
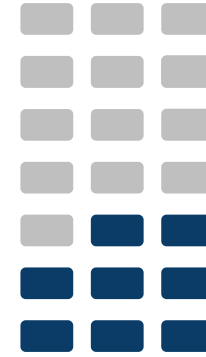
38%
Talent management

- Lack of skills and expertise to manage data centers
- Poor hiring strategies and talent retention
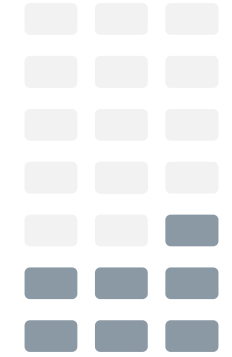
32%
Cost optimization

- High cost of infrastructure upgrades, licensing, and support
- Unexpected cloud costs resulting in budget overruns

Source: Avasant Data Center Managed Services RadarView Survey, August–October 2023

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Enterprises are adopting a hybrid delivery model to manage their data center landscape

Adoption of data center delivery models by enterprises

- On-premises 19%
- Colocation 5%
- Managed services 27%
- Cloud-based services 11%
- Hybrid 38%

Key drivers influencing the delivery models

Cloud repatriation
A few enterprises are interested in migrating their workloads from cloud environments back to data centers by leveraging on-premises delivery models to ensure better control and monitoring of the infrastructure.

Cost-effective infrastructure management
There is a growing demand among enterprises to adopt data center colocation services to enable cost-effective strategies for infrastructure management.

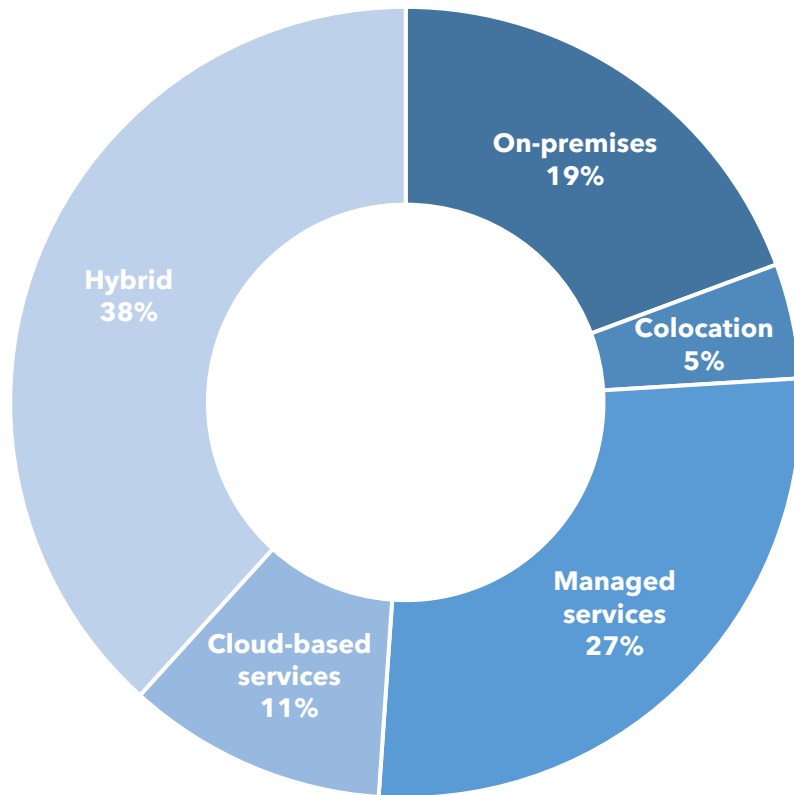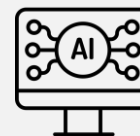**Automated monitoring**
Enterprises are leveraging intelligent automation technologies to automate repetitive monitoring activities, thus adopting managed service delivery models.

Sovereign cloud offerings
With the constantly evolving regional regulations, enterprises are looking to adopt sovereign cloud offerings as part of cloud-based service delivery models to enhance data center security and compliance requirements.

Source: Avasant Data Center Managed Services RadarView Survey, August–October 2023

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Traditional data center managed services are being disrupted and replaced by tech-enabled services

Cloud and AI are the major disruptors, creating a significant impact on data center managed services.

Artificial intelligence

Incorporating AI chips into existing data centers and building data centers from scratch by integrating generative AI helps to proactively identify anomalies and generate alerts.

Cloud

Cloud platforms offer server virtualization, which reduces the administrative effort associated with budgeting and procurement.

Blockchain

Blockchain's distributed nature enables more control over data storage, eliminating the need for centralized intermediaries, which reduces human intervention.

Intelligent automation

Intelligent automation offers workflow optimization and continuous intelligent monitoring, reducing the need for manual shift changes and ensuring uninterrupted vigilance.

Internet of Things (IoT)

IoT data can provide insights into storage usage patterns and trends for capacity planning to ensure optimal resource allocation, reducing the need for manual data collection.

Digital twin

A digital twin allows data center operators to simulate what-if scenarios for addressing outages, reducing the time and effort involved in decision-making in high-pressure situations.

Source: Avasant Partner Connect Keynote, September 2023

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Enterprises are utilizing generative AI to optimize data center operations and provide automated monitoring services

Generative AI use cases that are either integrated or in pilot stages for managing data center services

Automated data center observability	**Business logic generation and code refactoring**	**Chatbot integration**	**Incident management and log simplification**	**Quality engineering**
Enterprises are leveraging generative AI to streamline data center operations and automate observability to provide faster analysis and reveal deeper patterns and insights.	Firms are using generative AI for code generation, refactoring, and logic generation from business requirements to improve productivity and reduce the need for manual coding.	Enterprises are integrating generative AI into data center infrastructure support services to create AI-powered chatbots that offer personalized interactions and faster resolutions.	Companies are leveraging generative AI to manage incidents, ensuring automatic extraction of key details, identification of the incident's impact across the data center landscape, and generation of simplified logs.	Enterprises are utilizing generative AI to fine-tune and optimize the quality engineering aspects of data center managed services by automatically generating and running diagnostic test cases.

Source: Avasant Data Center Managed Services RadarView Survey, August–October 2023

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# Enterprises are increasingly focusing on green data center initiatives to achieve their net-zero goals

Factors influencing the adoption of green data center initiatives

Decommissioning end-of-life data centers

Enterprises are aiming to achieve net-zero goals and reduce their carbon footprint by decommissioning end-of-life data centers and consolidating multiple data centers.

Leveraging renewable energy sources

Enterprises are adopting renewable sources such as solar or wind energy and implementing proper waste management practices to minimize environmental impact.
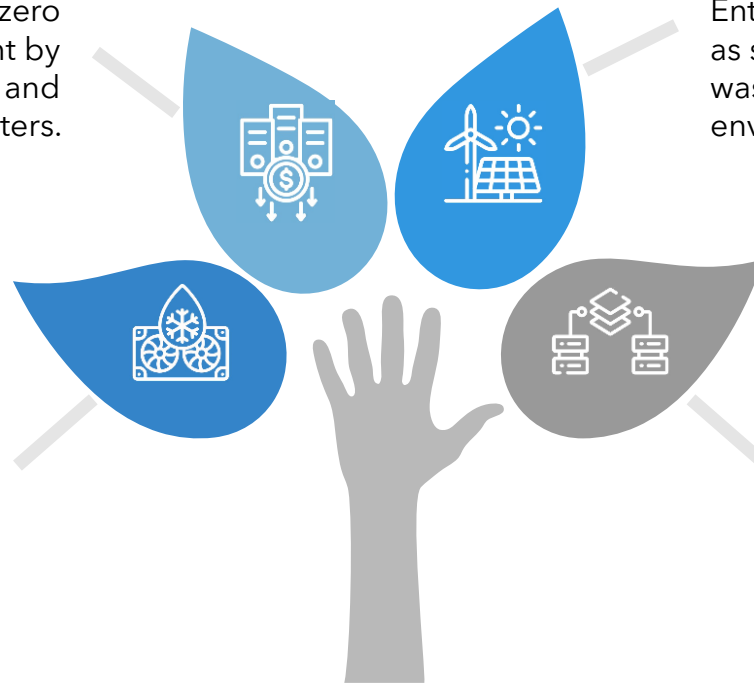
Adoption of liquid cooling technologies

By leveraging liquid cooling technologies and optimizing hardware design principles, enterprises are looking to reduce the power usage effectiveness (PUE) metric to enable energy-efficient data centers.

Server virtualization

By deploying multiple virtual machines to run on a physical server, enterprises can optimize data center infrastructure management and reduce IT resource requirements, which can reduce the environmental impact.

- Service providers have developed green data center offerings to perform data center cooling unit assessments and baseline assessments to understand the existing infrastructure landscape.
- These offerings help enterprises identify areas for improving energy efficiency, reducing carbon emissions, and implementing sustainable data center practices.

Source: Avasant Data Center Managed Services RadarView Survey, August–October 2023

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Capgemini profile

Capgemini: RadarView profile

Practice maturity ★★★★★

Partner ecosystem ★★★★★

Investments & innovation ★★★★

Has acquired BTC to strengthen its cloud capabilities in Japan. Has partnered with Microsoft and Google to launch generative AI offerings.

Practice overview

- Practice size: 33,000+
- Certified/trained resources: 49,000+
- Active clients: 3,868+
- Delivery highlights: Delivery centers across 50+ countries

€22B	10
Overall revenue, FY 2022	Global command center facilities

Client case studies

- Performed data center and workload migration to Capgemini Cloud platform and set up a private cloud for a multinational construction and real estate company in partnership with Oracle and IBM. This led to a 25% reduction in delivery efforts and significant cost savings.
- Enabled the migration of over 1,000 virtual servers for an electricity transmission service provider in Canada through collaboration with VMware, Oracle, and HPE. It also provided a single pane of glass to monitor the new data center, which increased reliability and lowered operational costs.
- Developed a cloud migration model for a Dutch international consumer products company and migrated its entire production environment from private cloud to public with Microsoft Azure. This improved scalability and cost efficiency for the client.
- Provisioned a cloud-based infrastructure on GCP and delivered data protection services for a payment technology and software solutions provider. This led to a reduction in licensing and capital expenses.

Key IP and assets

- CAP360: A suite of solutions that enables mainframe modernization with the support of DevOps tools
- Enterprise Automation Fabric: A service offering that provides infrastructure management through insights-driven automation
- Adaptive Cloud Operations: A service offering that enables operations management for multicloud environments

Partnerships/alliances

Cloud platform providers

aws   Microsoft   Google

Technology partners

Red Hat   snowflake

CISCO   DELL Technologies   servicenow

IBM   NetApp   vmware

Sample clients

- A multinational construction and real estate company
- An electricity transmission service provider in Canada
- A Dutch international consumer products company
- A payment technology and software solutions provider
- An American multinational conglomerate
- A European multinational aerospace corporation

Industry coverage

| Aerospace & defense |
| Banking |
| Financial services |
| Government |
| Healthcare & life sciences |
| High-tech |
| Insurance |
| Manufacturing |
| Nonprofits |
| Retail & CPG |
| Telecom, media & entertainment |
| Travel & transportation |
| Utilities & resources |

Darker color indicates higher industry concentration: ●●●●

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Capgemini: RadarView profile

Analyst insights

Practice maturity	★★★★★

- Capgemini adopts a five-phased methodology to provide data center migration services to customers: advisory and analysis, assessment and design, planning and preparation, migration and execution, and adaptive cloud-managed services. It has also transitioned 14 data centers to colocation facilities as part of its asset-light strategy.
- Its Cloud Platform offering is a portfolio of cloud services and accelerators in a single cloud management platform. This platform offers hybrid- and multicloud services, cloud-native support, cloud optimization, and cloud operations that facilitate workload management.
- Its data center strategy enables sustainable data centers through transformation, workload migrations to hybrid cloud, and re-platforming using a cloud-native approach. It has also launched an internal carbon calculator to help understand the carbon impact on client environments.
- Its Enterprise Automation Fabric service offering provides insights-driven automation for customers to accelerate their automation journey and unlock value across cloud operations. It also delivers integrated infrastructure, applications, and business operations services that improve customer experiences.

Partner ecosystem	★★★★★

- Capgemini has launched a global data center migration program in collaboration with Microsoft. This enables customer data center transformation and workload migration to Microsoft Azure.
- It has collaborated with VMware to provide cloud infrastructure solutions that help customers in their digital transformation journeys. This partnership also offers global consulting, managed services, and multicloud virtualization platforms to enhance business outcomes for customers.
- It has partnered with IBM to create mainframe modernization solutions for customers in the financial services industry. It has also created an Experience Zone where customers can experience and jointly develop modernization use cases with Capgemini's in-house experts.

Investments and innovation	★★★★

- In June 2023, Capgemini signed a share purchase agreement to acquire BTC. This acquisition will enable Capgemini to strengthen its cloud and digital capabilities in Japan.
- The Azure Intelligent App Factory, codeveloped with Microsoft as part of its expanded partnership, focuses on enabling organizations to adopt sustainable generative AI capabilities and drive tangible business outcomes across various industries.
- In November 2022, it acquired 23red, a purpose-driven creative agency. This acquisition will strengthen Capgemini's sustainability and brand capabilities in the UK region.

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Appendix:
About RadarView

The Data Center Managed Services RadarView assesses service providers across three critical dimensions

Practice maturity

- This dimension considers the current state of a provider's data center managed services practice in terms of its strategic importance for the provider, the maturity of its offerings and capabilities, and client engagement.
- The crucial aspects in this dimension are the width and depth of the client base, usage of proprietary/outsourced tools and platforms, and quality of talent and execution capabilities.

Partner ecosystem

- This dimension assesses the nature of the ecosystem partnerships of the provider, the objectives of the partnerships (codevelopment and co-innovation), and its engagement with solutions providers, startup communities, and industry associations.
- Vital aspects in this dimension are the evaluation of joint development programs around offerings, go-to-market approaches, and the overall depth of partnerships.

Investments and innovation

- This dimension measures the strategic direction of investments and resultant innovations in the offerings and commercial model and how it aligns with the future direction of the industry.
- The critical aspects of this dimension include both organic and inorganic investments toward capability and offering growth, technology development, and human capital development, along with innovative solutions developed with strategic partners.

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Research methodology and coverage

Avasant based its analysis on several sources:

Public disclosures
Publicly available information from sources such as Securities and Exchange Commission (SEC) filings, annual reports, quarterly earnings calls, and executive interviews and statements

Market interactions
Discussions with enterprise executives leading digital initiatives and influencing service provider selection and engagement

Provider inputs
Inputs collected in August 2023 through an online questionnaire and structured briefings in September–October 2023

Of the 38 service providers assessed, the following are the final 23 featured in the Data Center Managed Services RadarView for 2023:

accenture   Atos   Capgemini   cognizant

DXC TECHNOLOGY   ensono   FUJITSU   HCLTech   HEXAWARE

Hewlett Packard Enterprise   Infosys   kyndryl   LTIMindtree

LUMEN   MICROLAND   NTT DaTa   rackspace technology

tcs TATA CONSULTANCY SERVICES   TECH mahindra   T Systems   unisys

wipro   zensar

Note: Assessments for Accenture, Cognizant, Fujitsu, Hexaware, HPE, Lumen Technologies, Microland, NTT Data, Tech Mahindra, Wipro, and Zensar were conducted based on public disclosures and market interactions only.

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Reading the RadarView

Avasant has recognized service providers in four classifications:

Leaders show consistent excellence across all key dimensions of the RadarView assessment (practice maturity, partner ecosystem, and investments and innovation) and have had a superior impact on the marketplace. These providers have shown true creativity and innovation and have established trends and best practices for the industry. They have proven their commitment to the industry and are recognized as thought leaders in their space, setting the standard for the rest of the industry to follow. Leaders display a superior quality of execution and a reliable depth and breadth across verticals.

Innovators show a penchant for reinventing concepts and avenues, changing the very nature of how things are done from the ground up. Unlike leaders, innovators have chosen to dominate a few select areas or industries and distinguish themselves through superior innovation. These radicals are always hungry to create pioneering advancements in the industry and are actively sought after as trailblazers, redefining the rules of the game.

Disruptors enjoy inverting established norms and developing novel approaches that invigorate the industry. These providers choose to have a razor-sharp focus on a few specific areas and address those at a high level of granularity and commitment, which results in tectonic shifts. While disruptors might not have the consistent depth and breadth across many verticals like leaders or the innovation capabilities of innovators, they exhibit superior capabilities in their areas of focus.

Challengers strive to break the mold and develop groundbreaking techniques, technologies, and methodologies on their way to establishing a unique position. While they may not have the scale of the providers in other categories, challengers are eager and nimble and use their high speed of execution to great effect as they scale heights in the industry. Challengers have a track record of delivering quality projects for their most demanding Global 2000 clients. In select areas and industries, challengers might have capabilities that match or exceed those of the providers in other categories.

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