ISG Provider Lens™

Next-Gen Application Development & Maintenance (ADM) Services

Next-gen ADM

Global 2019-20

Quadrant Report

A research report comparing provider strengths, challenges and competitive differentiators

December 2019

Customized report courtesy of:

Capgemini

About this Report

Information Services Group, Inc. is solely responsible for the content of this report.

Unless otherwise cited, all content, including illustrations, research, conclusions, assertions and positions contained in this report were developed by and are the sole property of Information Services Group, Inc.

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 ISG believes to be current as of July 2019 for providers who actively participated as well as for providers who did not. ISG recognizes that many mergers and acquisitions have taken place since that time, but those changes are not reflected in this report.

The lead author for this report is Kartik Subramaniam. The editor is Jan Erik Aase. The research analyst is ArulManoj M and the data analyst is Kankaiah Yasareni. The Quality and Consistency Advisor are Steven Hall and Prashant Kelker.

ISG Provider Lens™

ISG Provider Lens™

ISG Provider Lens™ delivers leading-edge and actionable research studies, reports and consulting services focused on technology and service providers' strengths and weaknesses and how they are positioned relative to their peers in the market. These reports provide influential insights accessed by our large pool of advisors who are actively advising outsourcing deals as well as large numbers of ISG enterprise clients who are potential outsourcers.

For more information about our studies, please email ISGLens@isg-one.com, call +49 (0) 561-50697537, or visit ISG Provider Lens™ under ISG Provider Lens™.

ISG Research™

ISG Research™ provides subscription research, advisory consulting and executive event services focused on market trends and disruptive technologies driving change in business computing. ISG Research™ delivers guidance that helps businesses accelerate growth and create more value.

For more information about ISG Research™ subscriptions, please email contact@isg-one.com, call +49 (0) 561-50697537 or visit research.isg-one.com.

EXECUTIVE SUMMARY

Next-Gen ADM

Customer preferences and demand patterns are evolving and shifting toward rich user interfaces, dynamic (applications), responsive features, speedy updates and releases and responsiveness. As a result, the outlook of next-generation application development and maintenance (ADM) is undergoing a gradual transformation and aligning to accommodate the requirements of enterprise clients. The ADM practices of service providers are aimed at addressing these requirements by leveraging artificial intelligence (AI), automation, agile and innovation as the key tenets.

One of the aspects that facilitate this change is the increased usage of automation, AI, machine learning (ML) algorithms and bots/assistants in the development lifecycle. This helps in simplifying and minimizing the coding efforts, leading to a faster application development release. It also enables error detection, code refactoring and interpretation of business rules (written in arcane coding languages), bugs fixes and other functions in the lifecycle. Agility is another factor that has become a cornerstone in ADM and is finding tighter integration with the development and testing functions of ADM. The emergence of low-code development is also gaining prominence and contributes to agility. This is driven by the need to produce codes at a rapid rate by eliminating the need for coding expertise, thus resulting in faster turnaround time. Security has found tighter integration, both from the points of view of protecting intellectual property and of applicability in the testing value chain across areas such as non-functional tests.

Agile Development

Service providers are expanding the base of their trained resources on methodologies such as scrum, Kanban and extreme programming to accelerate agile maturity and shift away from traditional application delivery to inculcate an agile mindset. There is a certain degree of similarity among services providers regarding the approach to agile in terms of offering proprietary frameworks and use of tools. They are partnering with bodies such as Scaled Agile Framework (SAFe), automation tool providers such as Docker, Ansible and Jenkins and getting certifications on Scrum Alliance, Scrum.org, SAFe and Disciplined Agile Delivery (DaD) to create an agile workforce base. However, managing the change from an organization change management perspective is an area that needs greater focus as providers face the task of delivering services and managing scale across geographies and teams. Facilitating the creation of an agile mindset across the growing resource base, combined with skills management and standardization of agile delivery, are the areas that will take time to mature.

Continuous Testing

Continuous testing has become a mainstream practice of service providers to entrench it as an integral part of their agile and DevOps delivery. Its importance can be gauged by the popularity of the shift left practice that is becoming a norm in the continuous testing domain. Some of the leading services delivered by providers as a part of continuous testing include functional tests, TDD, BDD and performance testing (left-shifted). Automation is finding an increased adoption within the continuous testing lifecycle across test case management, automation engineering services and proprietary tools and intellectual property as providers seek to embed it within testing practices to accelerate application release. AI is also being used in testing platforms to improve agility and predictability across various phases.

Devops Consulting

The boundaries of DevOps are witnessing overlaps with agile, and intersections between the two are clearly visible in the industry. DevOps is gaining momentum among service providers that are considering it as one of their delivery pillars for application development. Leading service providers are integrating their services with key DevOps principles of people over process over tools, lean management, continuous integration and continuous delivery and feedback. Using DevOps, providers are breaking silos in communication and collaboration and delivering various functions of continuous delivery, continuous planning, continuous integration, configuration management, continuous testing, monitoring and continuous feedback as a part of their overall approach. The addition of automation and tools in the DevOps delivery ensure the availability of metrics, visibility across the pipeline and a reduction in work efforts. Service providers are also adopting and training their resources on popular open source tools for various functions to meet customer business requirements.

Introduction

Simplified illustration

Source: ISG 2019

Definition

In the recent past, application outsourcing has evolved from being led by a traditional waterfall-based development approach into one that has incorporated overtures of disruptive agile-based operating models and DevOps. The changes in this domain have been fueled by the dynamic requirements of customers seeking rich user interface and application experience, feature rich, fast and secure application updates, and multi-form factor applications.

Enterprises are adapting to this changing requirement by enabling faster releases and deployments of application services. Application outsourcing models are not always the same, as buyers and users have different needs. Typical application development and maintenance (ADM) services include application consulting, designing, custom development, packaged software integration, operations, quality assurance, security and testing. However, the elements related to speed and faster releases in this traditional approach come from DevOps and agile methodologies.

Definition (cont.)

There has been a rise in the number of contracts wherein clients want to leverage software capabilities to solve business problems and gain a competitive advantage, along with a growing need for speed-to-market. Service providers are augmenting their traditional ADM base with these emerging methodologies, technologies and collaborative frameworks to meet their clients' objectives. ISG terms such contract types as next-generation ADM contracts.

This study is aimed at understanding the client objectives and assesses provider capabilities to deliver on next-generation ADM contracts.

Scope of the Report

The ISG Provider Lens™ study offers IT decision makers:

- Transparency on the strengths and weaknesses of relevant providers;
- A differentiated positioning of providers by segments;
- Focus on different markets, including global, the U.S., Germany, the U.K., Brazil and the Nordic countries.

The study serves as an important decision-making basis for positioning, key relationships and go-to-market considerations. ISG advisors and enterprise clients also use information from these reports to evaluate their current vendor relationships and potential new engagements.

Definition (cont.)

Next-generation ADM Services

Like traditional application services, next-generation ADM services cover consulting, design, customized development, packaged software integration, DevOps, agile, operations, security (including application security, governance and other related areas) and testing. However, the scope, delivery mechanism and outcome for such contracts pivot around a value-based approach, where the focus is on achieving enterprise agility and solving business problems. This quadrant will assess vendors based on their capability to augment traditional ADM services with emerging technologies/methodologies like agile development, DevOps, automation, data analytics and artificial intelligence (AI) and digital and modernization techniques to deliver application lifecycle projects. It will also assess the provider's capabilities in incorporating new approaches to deliberately focus on business results during the development and delivery of applications.

Agile Development

Agile development is mainly focused on the frameworks and principles of agile, a collaborative way of working in uncertain circumstances. In the software development domain, it showcases an incremental and iterative approach to application development with the ability to adapt and respond to change as the key tenets. Because agile encompasses frequent, short development cycles and early releases of the software product, enterprises view it as a means to attain enterprise agility. It includes frameworks such as scrum, extreme programing, feature-driven development (FDD) and the dynamic systems development method (DSDM).

This quadrant will assess the capabilities of a provider to deliver tangible results through various agile methodologies such as scrum, Kanban, Crystal and extreme programming. It will also look examine the focus towards the use of agile development with respect to the provider's overall application development practice.

Definition (cont.)

Continuous Testing

Continuous testing is focused on delivering quality assurance quickly. In terms of technology, it encompasses various aspects of automated testing such as shift left and end-to-end automation across testing phases and at every phase of the continuous delivery process. However, in terms of people and processes, it goes beyond automation-based testing. Thus, it accomplishes higher collaboration among QA and development teams to sync with sprint cycles, feature-driven testing, responsiveness to change, creation of a feedback loop and greater client involvement. Continuous testing is gaining momentum, especially to help enterprises keep pace with their agile and DevOps initiatives.

DevOps Consulting

DevOps is a type of software development practice that combines development and technology operations to shorten the software development life cycle (SDLC). To achieve this objective, it involves three key principles: system thinking, feedback loops, and continuous experimentation and learning. Some of the methodologies involved in DevOps include lean management, continuous delivery, and people over process over tools.

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.

Provider Classifications (cont.)

Each ISG Provider Lens™ quadrant may include a service provider(s) who ISG believes has a strong potential to move into the leader's quadrant.

Rising Star

Rising stars are mostly product challengers with high future potential. When receiving the "rising stars" 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 stars" 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.

Next-gen Application Development & Maintenance (ADM) Services - Quadrant Provider Listing 1 of 3

	Next-Gen ADM	Agile Development	Continuous Testing	DevOps Consulting
Accenture	Leader	Leader	Not In	Leader
Atos	Leader	Product Challenger	Product Challenger	Product Challenger
Birlasoft	Contender	Market Challenger	Contender	Not In
Capgemini	Leader	Leader	Leader	Leader
CGI	Market Challenger	Not In	Not In	Not In
Ciber	Product Challenger	Not In	Not In	Not In
Cigniti	Not In	Not In	Contender	Not In
Cognizant	Leader	Leader	Leader	Leader
DXC	Leader	Leader	Leader	Rising Star
EPAM	Contender	Product Challenger	Not In	Not In
Fujitsu	Product Challenger	Not In	Not In	Not In

Next-gen Application Development & Maintenance (ADM) Services - Quadrant Provider Listing 2 of 3

	Next-Gen ADM	Agile Development	Continuous Testing	DevOps Consulting
HCL	Leader	Leader	Leader	Leader
Hexaware	Contender	Product Challenger	Leader	Not In
IBM	Leader	Leader	Leader	Not In
Infosys	Leader	Leader	Leader	Leader
ITC Infotech	Product Challenger	Product Challenger	Contender	Not In
LTI	Leader	Product Challenger	Rising Star	Product Challenger
Mindtree	Leader	Leader	Leader	Product Challenger
Mphasis	Product Challenger	Contender	Contender	Contender
NIIT Technologies	Product Challenger	Contender	Product Challenger	Not In
NTT DATA	Product Challenger	Not In	Product Challenger	Not In
Persistent Systems	Contender	Not In	Not In	Not In

Next-gen Application Development & Maintenance (ADM) Services - Quadrant Provider Listing 3 of 3

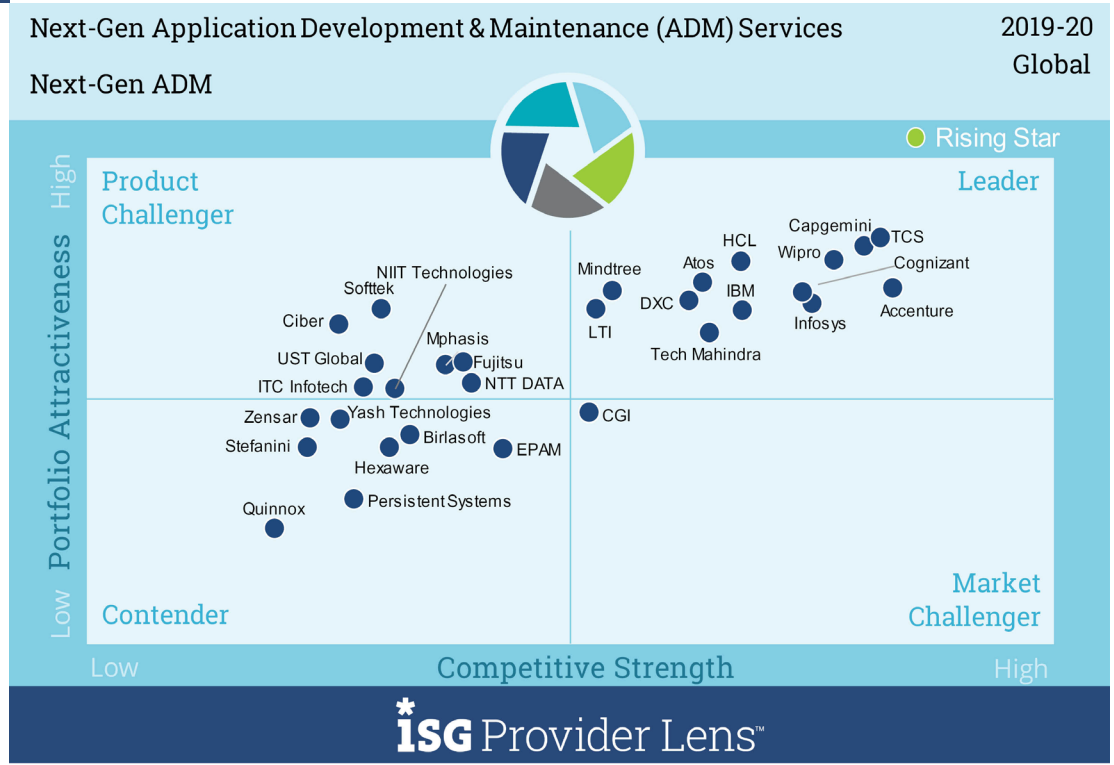
	Next-Gen ADM	Agile Development	Continuous Testing	DevOps Consulting
QA Consultants	Not In	Not In	Contender	Not In
Quinnox	Contender	Not In	Not In	Not In
Softtek	Product Challenger	Leader	Product Challenger	Not In
Stefanini	Contender	Not In	Not In	Not In
TCS	Leader	Leader	Leader	Leader
Tech Mahindra	Leader	Rising Star	Market Challenger	Market Challenger
UST Global	Product Challenger	Product Challenger	Leader	Contender
Virtusa	Not In	Not In	Product Challenger	Not In
Wipro	Leader	Leader	Leader	Leader
Yash Technologies	Contender	Contender	Contender	Contender
Zensar	Contender	Contender	Product Challenger	Not In

Next-Gen Application Development & Maintenance (ADM) Services Quadrants

NEXT-GEN ADM

Definition

Like traditional application services, next-generation ADM covers consulting, design, custom development, packaged software integration, DevOps, agile, operations, security (including application security, governance and other related areas) and testing. However, the scope, delivery mechanism and outcome for such contracts pivot around a value-based approach, where the focus is on achieving enterprise agility and solving business problems. This quadrant assesses vendors based on their capability to augment traditional ADM services with emerging technologies/methodologies like agile development, DevOps, automation, data analytics, artificial intelligence (AI) and digital and modernization techniques to deliver application lifecycle projects. It also evaluates the provider's capabilities in incorporating new approaches towards business results during the development and delivery of applications.



Source: ISG Research 2019

NEXT-GEN ADM

Eligibility Criteria

- Ability to offer the lifecycle of ADM services, which includes design, development, integration security and testing along with consulting;
- Ability to showcase the execution and use of emerging technologies/methodologies like agile, DevOps, chaos re-engineering and automation in their ADM processes;
- Capability to offer digital and modernization techniques for legacy application modernization and replacement.

Observations

- Some of **Accenture's** key differentiators include its strong digital-focused approach, industry-specific tooling capabilities for development, technology-aligned delivery, and partnerships with industry players such as SAP.
- **Atos' Syntel** acquisition and partnerships with Google and CloudBees focus on building industry expertise, and emerging capabilities in data science, AI, DevOps, RPA and low-code platforms make it a leader in the next-generation ADM domain.
- **Capgemini's** large next-generation ADM practice, well-defined ADMnext delivery framework, new ADM automation and design components, network of delivery centers for emerging capabilities have made the company one of the leading providers of next-generation ADM services.
- **Cognizant** has a well-formulated ADM strategy that is supported by proprietary frameworks and models that span service management, system management and business management. These aspects make the company a leader in the next- generation ADM domain.
- **DXC's** proprietary Bionix™ platform and the Luxoft acquisition have given the company a good mix of services delivery platform and execution capabilities at scale across the application services portfolio.

NEXT-GEN ADM

Observations (cont.)

- **HCL's** unified story for digital and agility, delivered through proprietary frameworks, and acquisition-led progression make it a good choice for large scale agile-led digital transformation services.
- **IBM's** deep-seated expertise in next-generation ADM, combined with a strong skilled workforce, network of innovation centers, consulting expertise and delivery capabilities, makes the company a strong player in this domain.
- **Infosys** offers a strong ADM portfolio that is comprised of frameworks, tools, accelerators. It also has strong consulting expertise and innovative pricing models, making it a leader in this domain.
- **LTI's** new NWOW practice, focused on the banking financial services and insurance and manufacturing sectors, and its accelerators, platforms and acquisitions make it an emerging leader.
- **Mindtree's** integrated operating model for agile, DevOps and automation in one integrated framework along with agile delivery for industry-specific, cloud-based business applications make the company a leader.
- **TCS'** investments in developing digital, new products, platforms and models, coupled with its focus on process digitization and advanced analytics make the firm a leader in the domain.
- **Tech Mahindra** has a broad ADM portfolio and offers industry standards-based methodology along with tools and accelerators, making it a leading service provider.
- **Wipro** has strong ADM expertise, focused investments in AI, a clear strategy for DevOps, merit-based top talent mobilization by leveraging Topcoder, and an emphasis on being cloud native.

CAPGEMINI

Overview

Capgemini is a global IT service provider based in France. The firm delivers differentiated value to its enterprise customers through a combined approach that includes a business-focused vision of ADM in digital transformation, regulatory and compliance-specific expertise, best-of-breed approach, a unified delivery platform and a well-balanced portfolio. The company delivers next-generation ADM through its ADMnext offering that forms a critical strategic pillar along with other areas such as AI, digital manufacturing, intelligent enterprise, cloud and cybersecurity. The practice contributes 64 percent to the company's revenue and has more than 4,000 clients around the world.

Strengths

Robust ADM practice: Capgemini's ADM practice has more than 60,000 FTEs. It has delivery centers spread across India, the Netherlands, Poland, Brazil, France, the U.K., Spain, Canada and Guatemala. Its ADM services include consulting, ProcessGap assessment, application development and system integration services, custom software development, package-based solution, intelligent automation and analytics services, application monitoring and operation services to name a few.

Framework led approach: Capgemini's ADMnext framework delivers an industry aligned business portfolio, full-stack ADM service (from ideation to support), intelligent automation platform and optimized IT operations to help enterprises gain a competitive advantage, enhanced business outcomes, accelerated innovation, faster time to market, operational efficiency and simplification.

New components in ADMnext framework: The company has introduced new ADMnext components such as Design Office, Decommissioning Factory and Capgemini Intelligent Automation Framework (CIAP). The Design Office offers solutions to redesign the customer journey and experiences by leveraging industry sector CoEs. It integrates the Applied Innovation Exchange Labs (AIE), while Its Intelligent Automation Platform (CIAP) provides integrated, end-to-end intelligent automation into and across applications and business and IT operations.

Caution

Capgemini is continuing to have a higher attrition rate compared to its peers in the next-generation ADM domain.

2019 ISG Provider Lens™ Leader

Capgemini's robust next-gen ADM practice has a large base of FTEs who work on multiple functional domains such as CRM, supply chain, HR, emerging capabilities such as Data Science Cloud Native Apps and technologies, a well-defined ADMnext delivery framework. It leverages new components such as Design Office, Decommissioning Factory, Intelligent Automation Platform, a network of delivery centers for emerging capabilities like data science, RPA, AI, DevOps automation and acquisitions in engineering services and digital domains. These aspects make the company a leader in next-gen ADM services.

Methodology

METHODOLOGY

The research study "ISG Provider Lens™ 2019-20 – Next-gen Application Development & Maintenance (ADM) Services" analyzes the relevant software vendors/service providers in the Global market, based on a multi-phased research and analysis process. It positions these providers based on the ISG Research methodology.

The study was divided into the following steps:

1. Definition of Next-gen Application Development & Maintenance (ADM) Services 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

Authors and Editors

Kartik Subramaniam, Author

Lead Analyst

Kartik Subramaniam is the Lead Analyst for SAP HANA and Application Development and Maintenance (ADM). He brings in close to 10 years of experience in primary as well as Secondary Research, Advisory and Consulting experience from leading IT companies such as Accenture, IBM, IDC and TNS. Kartik has worked on many Research and Advisory assignments in the areas of offering in application development and maintenance, multi layered/pace layered IT/applications, cybersecurity and infrastructure services. Apart from research, Kartik also worked closely with the strategy and sales teams providing insights on strategic planning for offerings and creating seller enablement deliverable through analytics at Accenture and IBM respectively.

Jan Erik Aase, Editor

Director

Jan Erik Aase is a director and principal analyst for ISG. He has more than 35 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 the worldwide 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.

ISG Provider Lens™ | Quadrant Report
December 2019

ISG (Information Services Group) (Nasdaq: III) is a leading global technology research and advisory firm. A trusted business partner to more than 700 clients, including more than 70 of the top 100 enterprises in the world, ISG is committed to helping corporations, public sector organizations, and service and technology providers achieve operational excellence and faster growth. The firm specializes in digital transformation services, including automation, cloud and data analytics; sourcing advisory; managed governance and risk services; network carrier services; strategy and operations design; change management; market intelligence and technology research and analysis. Founded in 2006, and based in Stamford, Conn., ISG employs more than 1,300 digital-ready professionals operating in more than 20 countries—a global team known for its innovative thinking, market influence, deep industry and technology expertise, and world-class research and analytical capabilities based on the industry's most comprehensive marketplace data. For more information, visit www.isg-one.com.