ISG Provider Lens™

Next-Gen Application Development & Maintenance (ADM) Services

Next-gen ADM

USA 2019-20

Quadrant Report

A research report comparing provider strengths, challenges and competitive differentiators

December 2019

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Capgemini

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The research and analysis presented in this report includes research from the ISG Provider Lens™ program, ongoing ISG Research programs, interviews with ISG advisors, briefings with services providers and analysis of publicly available market information from multiple sources. The data collected for this report represents information that ISG believes to be current as of September 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 Arul Manoj M and the data analyst is Kankaiah Yasareni. The Quality and Consistency Advisors are Steven Hall and Prashant Kelker.

ISG Provider Lens™

ISG Provider Lens™

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1 Executive Summary

3 Introduction

12 Next-gen ADM

16 Methodology

EXECUTIVE SUMMARY

Next-Gen ADM

Modern-day applications within enterprises are a mix of applications that have been developed in traditional modes and are part of monolithic architectures as well as those that serve the digital requirements of customers. The application development approach of service providers begins with an assessment of the enterprise application landscape, and a typical ADM engagement involves optimization of applications at the core, management/modernization of legacy applications, and creation/designing of digital applications. As a part of the core optimization phase, providers shortlist applications that should be retained and retired based on their value for the overall enterprise. In the legacy modernization phase, providers manage applications carrying a legacy footprint and technical debt by re-writing and re-wrapping them with a modern code to streamline them with applications serving the digital requirements. In the digital design phase, providers create dynamic, nimble, responsive and adaptive applications.

Assisting providers in this ADM journey are proprietary frameworks, automation and artificial intelligence (AI) that has gained prominence in the last couple of years across the application development lifecycle. Most of the service providers have adopted AI and machine learning (ML) capabilities for their predictive as and cognitive insights that help in reducing defects, offer dynamic resource management and enhance their state of preparedness. Automation is gaining traction in the areas of operations and service management where repetitive functions such as monitoring, patching and ticket management are being streamlined through its use.

Attaining an optimal stage of "defect free" and automated application development remains to be a vision for service providers that are leveraging emerging technologies such as AL, ML to manage the application landscape of enterprises and accelerate their digital transformation.

Agile Developement

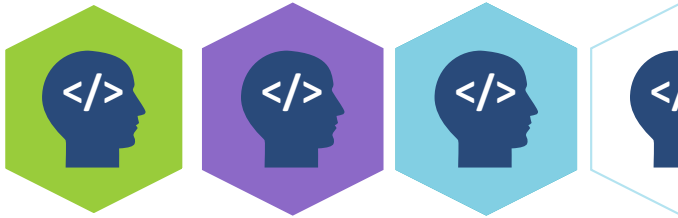
Service providers are accelerating the application development lifecycle by integrating agile methodologies such as scrum, Kanban and extreme programming as well as best practices in their offerings for inculcating an agile mindset in their workforce. They are working on different vectors to introduce elements of agility in their services for enterprises. Some of them include the adoption of frameworks, partnerships with tool vendors, and proximity to customers by setting up co-located teams (with scrum masters and agile coaches) that are equipped with facilities to enable agile development. Organization change management is an area where providers are focusing their efforts as large-scale cross geography deployments bring in challenges. The best practices for agile to meet enterprises' need for scale will be the future focus area.

Continuous Testing

With continuous testing gaining momentum and becoming a mainstream practice, the role of test automation is gaining prominence. This is primarily driven by service providers that are trying to achieve agility as a part of their agile and DevOps service delivery. The advantages of this approach, such as regular speedy feedback on defects/risks and improved quality levels on applications, reflect its growing adoption. Some of the leading services delivered by providers as a part of their continuous testing practice include functional tests, TDD, BDD, shift-left and performance testing. AI and automation are two key elements that have a large role in continuous testing deployments. Providers are using automation in testing to derive numerous benefits such as early feedback and generation of automation scripts. It is also used in areas such as automation engineering, functional regression, test case management and proprietary tools and intellectual property (IP). AI is used for cost optimization as well as for functions such as self-healing of defects, dash-board/visualization of testing functions and metrics, and to improve predictability.

Devops Consulting

DevOps has gained substantial traction in recent years, and this is evident in the thin boundaries it shares with agile development, which has become a norm for application development. The growth of DevOps services is being led by the need to deliver agility in business. Service providers are basing their DevOps services on the key tenets of people over process over tools, amplified feedback, lean management, auto gating, chaos re-engineering, continuous integration and continuous delivery. Culture (to adopt DevOps practices), automation (for code generation), AI and ML practices for visibility and usage of tools (open source and proprietary) are some of the other key drivers that have an impact on the delivery of DevOps by service providers.



ISG Provider Lens™

Introduction

Simplified illustration

Source: ISG 2019

Definition

Application outsourcing in the recent years has evolved from being led by a waterfall-based traditional development approach into one that has incorporated disruptive agile-based operating models, making the core development model a direct competitive advantage for many enterprises. Enterprise client requirements are currently led by mobile and other emerging technologies which, in turn, are fueling the transformation of the application services landscape.

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 aims to understand 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 Nordics.

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.

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.

Definition (cont.)

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.

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	Not In	Not In	Not In
Atos	Leader	Product Challenger	Contender	Product Challenger
Birlasoft	Contender	Leader	Contender	Not In
Capgemini	Leader	Rising Star	Leader	Leader
CGI	Product 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

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

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

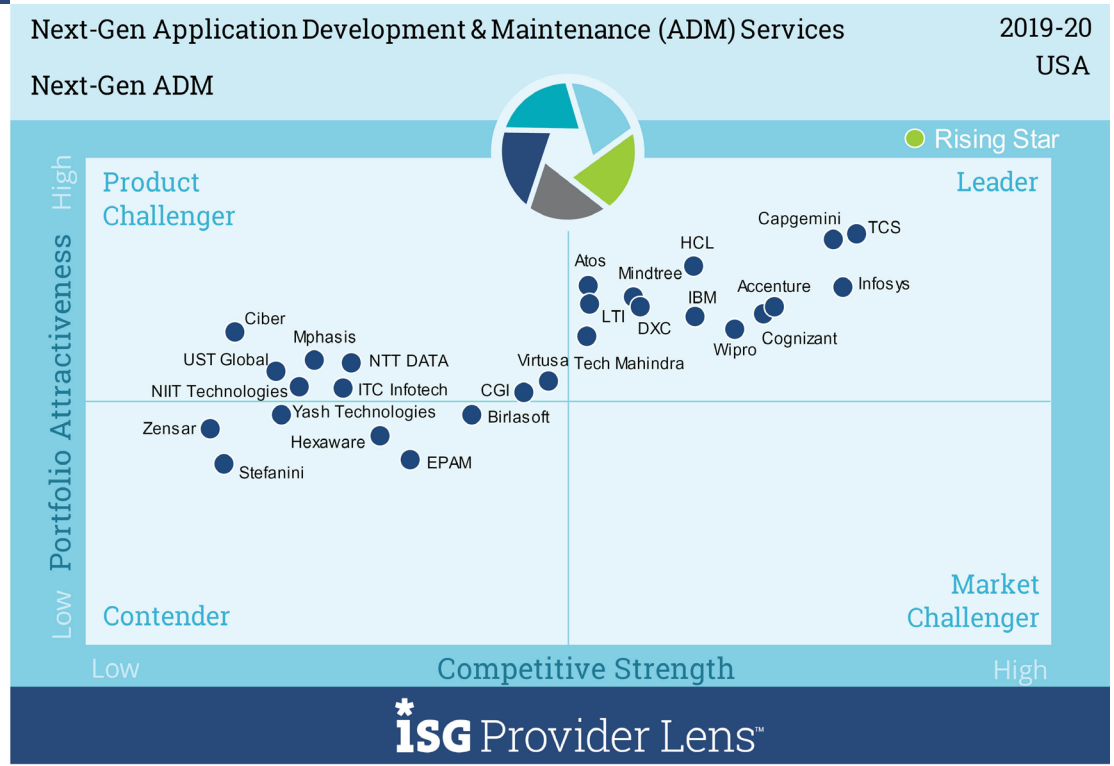
	Next-Gen ADM	Agile Development	Continuous Testing	DevOps Consulting
QA Consultants	Not In	Not In	Contender	Not In
Stefanini	Contender	Not In	Not In	Not In
TCS	Leader	Leader	Leader	Leader
Tech Mahindra	Leader	Product Challenger	Market Challenger	Market Challenger
UST Global	Product Challenger	Product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

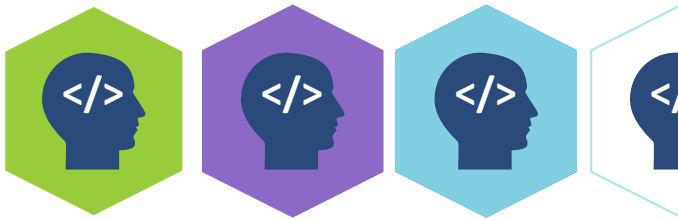
Observations

- **Accenture's** focus on innovation, thought leadership papers, use of blockchain in software delivery frameworks, and partnerships with industry players make the company a leader in the next-generation ADM domain in the U.S.
- **Atos's** Syntel acquisition, partnership with Google and CloudBees and continued investments in knowledge management and emerging technologies make it a leader in this domain.
- **Capgemini** has an established practice led by its ADMnext framework, strong focus on automation and AI, and a well laid out go-to-market and delivery strategy to industrialize its full-stack digital service portfolio.
- **Cognizant's** proprietary framework, assets for service management, system management and business management as well as its innovation-led investments have propelled the firm to a leading position in this segment.
- **DXC Technology's** detailed approach to ADM, along with its proprietary Bionix™ platform and automation and analytics-led focus, make it a strong player in the next-generation ADM domain.
- **HCL's** broad range of ADM services, network of delivery centers, delivery frameworks, usage of tools in the application lifecycle management and acquisitions make the company a compelling choice for next-generation ADM.
- **IBM** has an established Garage methodology, industry-led expertise, integration framework and network of innovation centers, making it a strong player this domain.

NEXT-GEN ADM

Observations (cont)

- **Infosys'** framework-led approach, tools and proprietary assets, and integration of automation and AI in the ADM lifecycle give it a leading position in the next-generation ADM space.
- **LTI** has a strong focus on standardization through NWOW and II-BA-led frameworks to deliver greater value to enterprise customers.
- **Mindtree** offers an integrated operating model, platforms such as CAPE, agile delivery in building industry-specific, cloud-based business applications and speed through MVP.
- **TCS** has made investments in digital, new products development, platforms and models to deliver personalized experiences to customers, making it a leader in the next-generation ADM.
- **Tech Mahindra** offers digital consulting and a roadmap to next-generation application maintenance and support, delivered through a combination of platforms, tools and accelerators.
- **Wipro** has extended its investments in AI and bots under its ADM practice. The firm has a clear strategy roadmap along with mer-it-based top talent mobilization by leveraging Topcoder.



CAPGEMINI

Overview

Capgemini is a global IT service provider based in France. The firm categorizes its next-generation ADM services as ADMnext, which is focused toward accelerating the client's journey to continuous evolution and helps them to leverage the full potential of their application portfolio through the "Excel, Enhance and Innovate" approach. ADMnext is also a critical strategic pillar along with other areas such as AI, digital manufacturing, intelligent enterprise, cloud and cybersecurity. The ADM practice in the U.S. contributes 32 percent to the company's revenue and serves more than 1,000 clients around the world.

Strengths

AI led delivery strategy: Capgemini has leveraged emerging technologies such automation and AI tools and a unique delivery strategy that is focused on generating business outcomes to addresses client needs. Some of the key points of this strategy include "moving to agile." The delivery model is adjusted to create multi-skill delivery PODs to support agile delivery across the life cycle of the program. "Automation and AI-first' leverages in-built accelerators to develop services/use-cases for automation.

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 get a competitive advantage, enhanced business outcomes, accelerated innovation, faster time to market, operational efficiency, and simplification.

Automation-focused drive: Capgemini is making significant investments in leveraging automation tools and platforms as an outcome of the company's "automation drive" approach. This brings a unified, open and dynamic suite of automation tools, services and knowledge to help serve their clients' business.

Caution

Capgemini has a lesser revenue contribution for ADM from the U.S. compared to other geographies, such as Europe. The company could focus on increasing this footprint to expand its base globally.

2019 ISG Provider Lens™ Leader

Capgemini has an established next-generation ADM practice, led by its ADMnext framework. It also has a strong focus on automation and AI-led initiatives that are integrated with the company's ADM practice. It has a well laid out go-to-market and delivery strategy to industrialize the delivery of its full-stack digital service portfolio.

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 Nordics 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. Use of ISG's internal databases and advisor knowledge and 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.

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