

**\*ISG** Provider Lens™

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

Next-gen ADM

UK 2019-20  
Quadrant  
Report



A research report  
comparing provider  
strengths, challenges  
and competitive  
differentiators

Customized report courtesy of:



December 2019

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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 and the Co-Author is Arul Manoj M. 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.



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## EXECUTIVE SUMMARY

### General Trends

Next-generation application development is finding an increased usage of automation in the development lifecycle. The market is gradually maturing with the usage of machine learning (ML), which can identify and predict incidents in application service management. With the reduction in incidents, service providers are transferring the benefits to enterprise clients by optimizing costs and ensuring commitment to continuous quality improvements.

**Low code gaining popularity:** Low-code development has been in the market for a short time but has grown significantly, driven by factors such as faster prototyping and rapid deployment. It allows developers to build software in a simplified manner without the need for expertise. Many service providers are partnering with or acquiring niche low-code vendors to further enhance their agile capabilities.

**AI-ready application development:** Artificial intelligence (AI) and ML algorithms are generating cognitive and predictive analytics insights such as automated business modeling and business process migration. This has resulting in new forms of automation and factorization of application development & maintenance (ADM). Large service providers are well ahead in the technical curve, but to be successful in market they need to showcase leadership by exhibiting a specific regional understanding.

### Agile Development Trends

With the adoption of agile methodologies gradually reaching maturity, service providers should exhibit differentiated capabilities. Processes, customized practices and business needs are some of the key tenets that drive agile development, and the maturity of agile application development practices of service providers can be viewed through this prism. Service providers are scaling their agile practice to facilitate an organization-wide agile transformation for their clients. An approach that is gaining considerable popularity is the creation of an agile mindset across teams in various business units led by scrum masters.

**Distributed agile teams:** Distributed agile teams are becoming immensely popular, and the differences in time zones and physically distributed teams are two reasons for this trend. When compared to colocated teams, these teams have higher productivity and levels of commitment to the team goals and demonstrate more ownership and responsibility. Additionally, tools such as the agile board are being used to visualize the tasks and further enhance the management and progress in their agile development.

**Cloud-based solutions on the rise:** ISG is witnessing strong traction in cloud-based agile development owing to factors such as a reduction in time to code, test and deploy software. Other than the advantages, cloud-based tools provide the flexibility to the agile team in terms of scalability. The use of cloud-based agile solutions provides the competitive advantage of integrating newer technologies.

## Continuous Testing Trends

The adoption of continuous testing is increasing as agile, DevOps and automation are emerging as the new norms of the IT industry. The rising demand for quicker delivery of applications also contributes to the adoption. The deployment of test automation in various quality assurance (QA) tasks using data and test automation tools is becoming one of the key components in continuous testing. Concurrently, enterprises are seeking service providers that provide end-to-end continuous testing as a service, including design, functional testing, data management and environment management. To meet the requirements of enterprise clients, most service providers are investing in integrating new technologies like AI and ML and adopting new methodologies to further enhance continuous delivery.

**“Shift left” in testing lifecycle:** Digital transformation calls for modernizing the testing strategy by conducting tests earlier in the development pipeline (referred to as shift left). This methodology facilitates an increase in productivity and helps avoid delays that would further reduce the time-to-market. It also ensures speed and efficiency in the overall testing practice.

**Headless testing:** This form of testing is performed on a browser without any graphical user interface. Owing to the rapid development in this segment, developers and organizations will soon embrace headless testing in the continuous testing practice. This method typically leverages containers and involves running tests without any interface, thereby enabling rapid and cost-effective deployment.

**Model-based testing on the rise:** Model-based testing is based on visual representations and the automatic generation of test artifacts such as test cases and test automation scripts. The model provides the flexibility to adapt to the rapidly changing requirements.

## Devops Trends

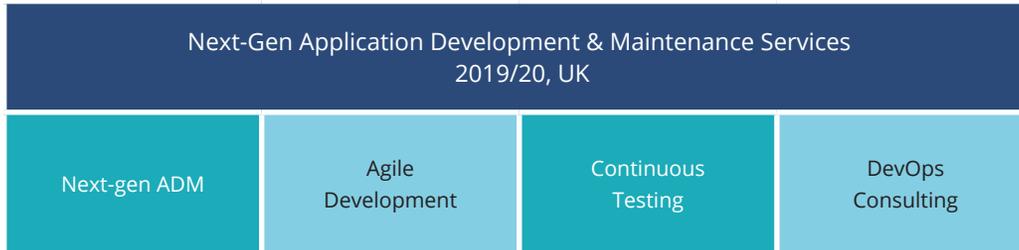
DevOps as an approach is gaining momentum across the ADM landscape. It brings development and operations together and offers various benefits such as enhanced communication and increased collaboration within teams. Many frameworks and tools are being built and used by service providers to support the transition to DevOps.

**Integration of AI/ML in DevOps:** DevOps is becoming more data-driven owing to the rise in applications delivered through cloud-based software as a service (SaaS). Through this model, organizations are collecting more data on how people interact with applications and deliver them. These data points give key insights to an organization's delivery throughput and stability, which is measured by deployment frequency, lead time for changes, and change failure rate, thus raising the need for AI and ML in DevOps. The use of such technologies allows enterprises to analyze and understand the bottlenecks that are likely to occur in the future. Providing predictive suggestions will help streamline and optimize application delivery standards.

**DevSecOps becoming the new norm:** The growing shift-left mindset is replacing DevOps with DevSecOps across the board. Enterprises and service providers are realizing that security cannot be an afterthought in the application development lifecycle. Thus, security principles are being incorporated much earlier as a default feature in the DevOps implementation phases.

# Introduction

Simplified illustration



Source: ISG 2019

## Definition

In recent years, application outsourcing has evolved from being led by a waterfall-based traditional development approach into one that has incorporated disruptive agile-based operating models, thereby 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 environment through faster releases and deployments of application services. Application outsourcing models are not always the same because buyers and users have different needs. Typical application development & 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 in which 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-gen 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 UK, Brazil and the Nordic.

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-gen ADM Services

Like traditional application services, next-generation ADM services cover consulting, design, customized development, packaged software integration, DevOps, agile, operations, testing and security (including application security, governance and other related areas). However, the scope, delivery mechanism and outcome for 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, 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 agile methodologies such as Scrum, extreme programming, 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 examine 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 are 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
Atos	● Product Challenger	● Product Challenger	● Product Challenger	● Product Challenger
a1qa	● Not In	● Not In	● Contender	● Not In
Accenture	● Leader	● Not In	● Not In	● Not In
Aveva	● Product Challenger	● Not In	● Not In	● Not In
Birlasoft	● Not In	● Not In	● Contender	● Not In
BJSS	● Not In	● Product Challenger	● Not In	● Not In
Capgemini	● Leader	● Leader	● Leader	● Leader
CGI	● Product Challenger	● Not In	● Not In	● Not In
Cigniti	● Not In	● Not In	● Contender	● Not In
Cognizant	● Leader	● Leader	● Rising Star	● Leader
DXC	● Product Challenger	● Leader	● Leader	● Product Challenger
Endava	● Contender	● Not In	● Not In	● Not In

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

	Next-Gen ADM	Agile Development	Continuous Testing	DevOps Consulting
EPAM	● Not In	● Not In	● Not In	● Not In
Fujitsu	● Product Challenger	● Not In	● Not In	● Not In
Getronics	● Product Challenger	● Not In	● Not In	● Not In
HCL	● Leader	● Leader	● Leader	● Leader
Hexaware	● Not In	● Product Challenger	● Not In	● Not In
IBM	● Leader	● Product Challenger	● Leader	● Not In
Ignitho	● Not In	● Not In	● Not In	● Contender
Infosys	● Leader	● Leader	● Leader	● Leader
ITC Infotech	● Not In	● Contender	● Not In	● Not In
LTI	● Product Challenger	● Product Challenger	● Product Challenger	● Product Challenger
Microfocus	● Not In	● Not In	● Not In	● Product Challenger
Mindtree	● Rising Star	● Product Challenger	● Leader	● Product Challenger

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

	Next-Gen ADM	Agile Development	Continuous Testing	DevOps Consulting
Mphasis	● Contender	● Contender	● Contender	● Contender
NIIT Technologies	● Product Challenger	● Contender	● Product Challenger	● Not In
NTT DATA	● Not In	● Not In	● Product Challenger	● Not In
Softtek	● Not In	● Product Challenger	● Not In	● Not In
TCS	● Leader	● Leader	● Leader	● Leader
Tech Mahindra	● Rising Star	● Product Challenger	● Market Challenger	● Market Challenger
UST Global	● Product Challenger	● Product Challenger	● Product Challenger	● Contender
Validata	● Not In	● Not In	● Product Challenger	● Not In
Virtusa	● Not In	● Not In	● Product Challenger	● Not In
Wipro	● Product Challenger	● Rising Star	● Leader	● Product Challenger
Yash Technologies	● Contender	● Contender	● Contender	● Contender
Zensar	● Contender	● Not In	● Not In	● Not In



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

## NEXT-GEN ADM

### Definition

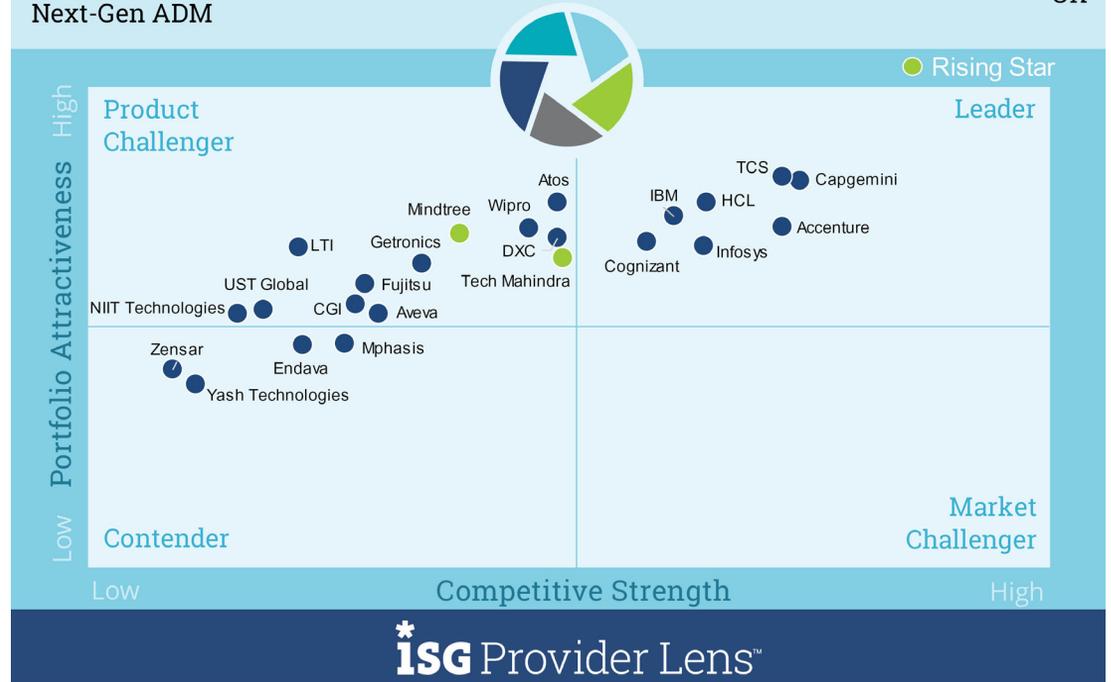
Like traditional application services, next-generation ADM covers consulting, design, custom development, packaged software integration, DevOps, agile, operations, testing and security (including application security, governance and other related areas). However, the scope, delivery mechanism and outcome for 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 service provider's capabilities in incorporating new approaches to deliberately focus on business results during the development and delivery of applications.

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

2019-20

### Next-Gen ADM

UK



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

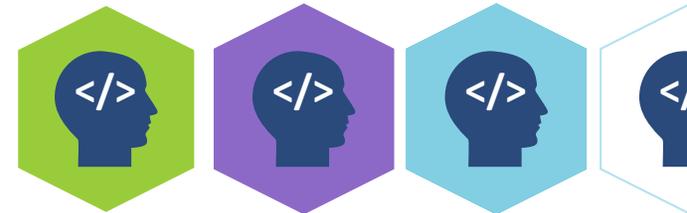
### Observations

- **Accenture's** application modernization focus, its robust management process, and its well-defined, blockchain-led, software delivery framework are some of its key differentiators.
- **Capgemini's** unique delivery strategy, full stack digital transformation capabilities and automation drive make it a leader in this segment.
- **Cognizant** offers well-defined frameworks and has made investments in building innovative intellectual property's.
- **HCL** has multiple frameworks to assess clients in their digital transformation. The firm has made investments in building modern application development platforms, keeping it ahead of the market competition.
- **IBM's** end-to-end application lifecycle management, AI-based application management and agile capabilities are its key differentiators.

## NEXT-GEN ADM

### Observations (cont.)

- **Infosys** offers a strong ADM strategy, automation-first approach, and value-added deal structures, making it a dominant player in this segment.
- **TCS** stands out in the market with its extensive technology capabilities, customer-centric focus and unique delivery models.
- **Mindtree's** platform-led approach and comprehensive set of capabilities have earned it a Rising Star position in this quadrant.
- **Tech Mahindra's** recent expansion of capabilities and footprint through M&As and multiple engagement models make it a Rising Star in this segment.



## CAPGEMINI

### Overview

Capgemini categorizes its next-gen ADM services as ADMnext, which is focused on accelerating the client's journey with continuous evolution. With this service, clients can leverage the full potential of their application portfolio through Capgemini's continuum of "excel, enhance and innovate." Apart from its large product portfolio, Capgemini has a strong presence in the UK with more than 100 clients spread across multiple industries, five delivery centers and 12,000 employees.

### Strengths

**Automation Drive:** Capgemini has made significant investments in leveraging automation tools and platforms through its Automation Drive. It brings a unified, open and dynamic suite of automation tools, services and knowledge that are integrated across process and applications to serve clients' business as a continuously evolving source of innovation and value. Capgemini's automation strategy is to deliver impact at three levels: IT input (fewer human resources and more robots), IT output (focus on improving the IT landscape to lower cost), and business outcomes (automation that positively affects business outcome).

**Unique delivery strategy:** Capgemini has built a delivery strategy that leverages emerging technologies, especially automation and AI tools, and is focused on business outcomes. The Moving to Agile delivery model is being adjusted to create multi-skill delivery pods to support agile delivery across the lifecycle of the program. Automation and the Artificial Intelligent First leverage built-in accelerators and market-leading products to develop services/use cases for automation. Moving to Assemble to Order includes AI agents that further support and help choose the right API/asset for delivery, thus enabling speed-to-market. Aligning to Business and Customers, support clients in progressively reimagining customer journeys/business processes based on low-touch, high enhancements.

**Full-stack digital transformation:** Capgemini's next-gen services portfolio covers all the facets of a large digital transformation project. Some of the components are the Accelerated Solutions Environment (ASE) model, Applied Innovation Exchange (AIE) platform, agile delivery and DevOps, platform-as-a-service capabilities and cloud management services.

### Caution

Capgemini's ADM revenue mainly comes from fixed-price and time-and-materials pricing models. The company could expand its revenue concentration across pricing models to win more deals.



## 2019 ISG Provider Lens™ Leader

Capgemini has a strong go-to-market strategy to industrialize the delivery of its full-stack digital service portfolio. It has also made investments in cloud and emerging technologies such as AI and data science to address various client requirements.



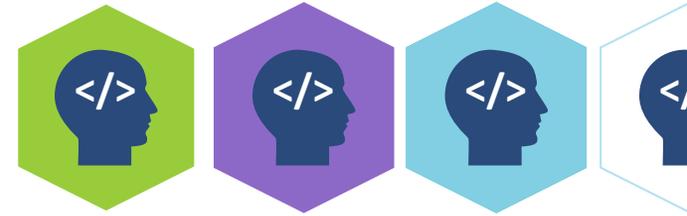
# Methodology

## 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 UK 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.



**Arul Manoj M, Co-Author**  
Senior Analyst

Arul Manoj is a Senior Analyst in ISG; in this role, he is responsible for supporting IPL studies on Next-gen Application Development & Maintenance (ADM) and SAP HANA & Leonardo Ecosystem. During his tenure, he has developed content for ISG Provider Lens™ in the areas of Next-gen Application Development & Maintenance (ADM), SAP HANA and Leonardo Ecosystem and Data Analytics Services & Solutions. As part of ISG Provider Lens™, Arul is responsible for supporting research authors and authoring blogs about niche technologies, market trends and insights.

# Authors and Editors



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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