A research report comparing provider strengths, challenges and competitive differentiators

Next-Gen Application Development & Maintenance (ADM) Services
UK 2019

Quadrant Report

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Cognizant

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About this Report

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The research and analysis presented in this report includes findings from the ISG Provider Lens™ program and 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 was current as of March 2018. ISG recognizes that many mergers and acquisitions have taken place since that time, but those changes are not reflected in this report.

All revenue references are in U.S. dollars ($US) unless noted.

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EXECUTIVE SUMMARY
Next-Gen ADM

- **Hybrid cloud environments a must:** Enterprises are seeking providers able to accomplish migration and maintenance across multiple and hybrid cloud environments. Besides the creation of cloud-native applications that can be deployed where needed, solving security and regulatory issues that come with cloud deployment are a must.

- **Higher productivity, business-based metrics and decision-making:** Enterprises are looking for methods to quantify next-gen services. Their modern, digital labor goes far beyond the realms of bot-based automation. It includes diagnostic, predictive and remediating capabilities — using intelligence acquired over time — to solve non-linear problems and enables the current ADM workforce to focus on higher-value work. The decision about ADM services is increasingly in the hands of business units — with a stronger focus on digital transformation and a measurable and direct impact on digital labor and respective business outcomes. Commercial contracting structures and preferences are shifting from traditional input-based transactional models to ones built on business-based metrics.

- **Rising automation by AI:** With artificial intelligence (AI) and machine-learning algorithms feeding cognitive and predictive analytics comes new means of automation and factorization of ADM. This already includes aspects of automated business modelling and business process migration. Large providers are well ahead of the curve but have to prove local presence and understanding of local market specifics to be successful in Europe.

- **Uncertainty from pending Brexit:** The pending Brexit — due to take effect in 2019, but with limited to no information of extent — brings huge uncertainties for customers and providers alike. Multinational providers might have to adapt to new rules and tariffs affecting their ongoing contracts or contract renewals. Customers in the U.K. might face extensive requirements for application maintenance to adopt to new regulations in a very short timeframe. At present, there is no clear answer to what exactly will happen and what agreement the U.K. will come to with the E.U. The majority of companies in the U.K. has not yet started any emergency planning at all. Large providers are already preparing to cover any situation that might arise, and most of them are capable of handling even extreme critical situations. The market situation for smaller U.K. providers covering the European market might shift enormously though.
Agile Development

- **DevSecOps becomes the new normal**: Enterprises and providers alike are realizing that security cannot be an afterthought. DevSecOps has replaced DevOps across the board. Thus, during early DevOps implementation phases, security principles are being incorporated as a default feature. Some companies already provide access to quantum computers to ensure security and proper cryptography.

- **Rapid application development is on the rise**: As enterprises transform to agile enterprises, there is a growing necessity for tight integration among their business, engineering and operations organizations. These organizations are required to maintain rapid development cycles to quickly add features to existing offerings and release new ones in the market. Such enterprises prefer to partner with service providers able to offer a globally distributed agile organization that balances the cost dynamics with the need for speed. New ways to integrate on-, near- and offshoring capabilities into local agile development projects are underway. Some providers developed agile factory approaches to solve this very issue.

- **Agile business process design remains crucial**: Legacy systems seem to be the biggest hurdle for enterprise agility, as they often hinder agile development and block extreme agile business processes development. Companies therefore seek ways to overcome the blockage of their legacy systems, demanding consulting that integrates agile elements into all aspects of a digital transformation. Deep knowledge of key legacy systems will continue to be a crucial aspect for agile development in many industries.

Continuous Testing

- **Testing as a technology enabler**: With emerging technologies like IoT, edge/fog computing, blockchain and more, testing is viewed as an enabler to implementing these technologies. Therefore, the demand for testing automation methods and tools for emerging technologies is rising strongly, including very industry-specific tools, e.g., to cover dedicated security or regulatory aspects.

- **Domain and vertical integration**: A wide range of testing services is being mapped with industry-specific tools, reusable scripts and accelerators. The services being mapped include test consulting, application testing, application security testing, enterprise solution testing and IoT testing. Moreover, service providers are creating specialized vertical solutions for testing clients. All these integration activities are working on a global scale with minimal localization, except for some areas of the public sector or very specific local business requirements.

- **Test automation by AI**: Machine-learning and cognitive analytics are the basics for test automation, often offered within an as-a-service contract. Test automation as-a-service is being advocated as a differentiator to win testing contracts with dominant digital scope. AI-driven test automation often comes within complete software development factory platforms covering legacy systems and hybrid cloud environments.
**Executive Summary**

- **Demand for full-stack testing engineers:** The desire to achieve continuous testing capability has led to greater demand for full-stack testing engineers in most European countries. Such resources are expected to have knowledge across test phases. For example, a full-stack engineer might be required to perform test execution automation on Selenium, integrate it with Jenkins for continuous integration, and then provision the test environments in public cloud and virtual environments. Europe as a whole seems to face an overall shortage in application development and testing capabilities and needs to rely on offshoring capabilities for many large projects.

**Next-Gen ADM – Banking, Financial Services and Insurances**

- **Agile development vs. the legacy:** Legacy systems remain the biggest obstacle in the BFSI industry for rapid changes and agile business process development. Companies therefore seek consulting that brings agile elements into all aspects of a digital transformation and that will move legacy applications onto a modern infrastructure, such as code re-utilization, cloud integration and containerization. This will continue to be a crucial aspect for agile development in the BFSI industry. Also, upcoming Brexit could have a strong effect on the BFSI industry and create an explosively rising demand in agile development.

- **Public cloud as the default services model:** Non-core functions like CRM, HR and F&A already are being delivered through a cloud-based SaaS model. Gradually, as the CXO organization becomes more comfortable, core functions such as payments, billing and credit scoring are being moved to the public cloud. The E.U.-wide harmonization of financial regulations will support this trend in Europe.

- **The promise of Robotic Process Automation (RPA):** RPA gets included in the applications service portfolio by most of the competitors serving the BFSI market. Clients can consume RPA inside application development projects. It can be a backlog item in an agile project sprint or even an improvement under an application maintenance contract. RPA has become pervasive and low cost and can be implemented quickly without the need for additional contracting terms.

- **Blockchain technology in the financial industry:** Interbank use cases are still rare; however, banks are making use of the technology to simplify their existing systems and removing process bottlenecks. Several application service providers report having consultants and developers prepared for the delivery of blockchain applications, and providers reported cases and experiments.
Executive Summary

- **Brexit impact on BFSI:** With London as one of the largest financial marketplaces in the world, upcoming Brexit will certainly have an effect on the next-gen ADM market, with banks already moving headcounts out of the U.K. and building new centers of competence in other E.U. countries. At present, how the effect will look in detail, is unclear, but much higher adoption, testing and maintenance workloads in extremely short periods of time will certainly be one of the outcomes. It is unclear how IT departments will cope with it, even with support of their ADM providers.

Next-Gen ADM – Health Care and Life Sciences

- **Data-driven initiatives come of age:** Healthcare and life sciences (HCLS) clients are adopting an analytics-driven approach to transformation projects to harness data and generate insights, thereby becoming more customer-centric and optimizing the entire value chain. The sector is also stepping into newer technology areas like industrial machine-learning (IML), which uses big data to improve health-care standards. Such applications could lead to better clinical decisions, lower readmission rates and fewer adverse events.

- **Cloud adoption accelerates:** Cloud resources are addressing process inefficiencies, enabling end-to-end visibility and streamlining commercial operations for various life sciences companies. In the payer and provider segments, cloud adoption is boosting connectedness and information accessibility among practitioners, payers and patients.

- **Brexit impacts security and regulations:** Regulations and security issues are still on high standards in the HCLS industry, especially in the areas of customer data processing and analytics. Upcoming Brexit will certainly complicate the situation, and no enterprise wants to expose itself to security issues. We have seen many indications that customers require very high levels of local knowledge in this area, especially within the next 12 to 18 months. This creates sudden limitations for globally organized companies with limited local presence and knowledge of local market specifics to join the market, and this will lead to shortages of available workforces at the local level very quickly.
Next-Gen ADM - Manufacturing

- **Agility in all areas of business:** Manufacturing companies are seeking ways to improve agility in terms of business processes and to reduce costs. In parallel, they need to stay competitive in their respective areas as well as drive business in new areas, e.g., automotive companies developing in-car communication systems and autonomous technologies together with Apple or Google and setting foot in the areas of car-sharing models, selling cars as-a-service and in new transportation applications. This requires next-gen ADM services integrating business process consulting and design thinking as well as agile development methodologies on a broader scale, with a deep multi-industry BPM knowledge and some automation capabilities.

- **Omni-chain disrupting supply chain:** Although in its infancy, manufacturers are using a blockchain-based “omni-chain” model in certain instances to connect different processes in the ecosystem. Omni-chain is a cloud model that unifies both internal and external processes across extended networks.

- **New technology in business processes and products:** Manufacturing enterprises can achieve significant efficiency improvements with cloud, IoT, Industry 4.0 and supply chain integration. The scaled adoption of IoT is enabling predictive maintenance, self-optimizing production and automated inventory management, resulting in lower maintenance, maximized equipment life and uninterrupted production cycles. Most service providers evaluated in this quadrant have these technologies and competencies, and clients have started using advanced technology both in manufacturing and supply chain optimization, as well as integrated in their products.

- **Smart factories transforming production:** IoT and smart factories are not just making the shop floor more agile and efficient, they are leading to higher process compliance and better quality management. Given just-in-sequence manufacturing processes that increasingly perform within a global supply chain, requirements in the areas of industry knowledge, automation and industry-specific tools have risen extraordinarily.

- **Brexit’s impact on manufacturing:** Most manufacturing industry companies are integrative parts of worldwide just-in-time production sequences, and parts of the British automotive industry are owned by German car companies (Mini, Rolls-Royce, Bentley). Upcoming Brexit will certainly have an effect on the next-gen ADM market, with automotive companies already planning to move production lines and administration headcount out of the U.K. At present, the details of what the effect will look like are unclear, but much higher adoption, testing and maintenance workloads in extremely short periods of time will certainly be one of the outcomes.
Introduction

Service providers are augmenting their traditional ADM offerings with emerging technologies and collaborative frameworks to meet their enterprise clients' objectives. ISG defines such contract types as Next-Gen ADM contracts. This study explores client objectives and assesses provider capabilities to deliver on Next-Gen ADM contracts.

Definition

Service providers are augmenting their traditional ADM offerings with emerging technologies and collaborative frameworks to meet their enterprise clients' objectives. ISG defines such contract types as Next-Gen ADM contracts. This study explores client objectives and assesses provider capabilities to deliver on Next-Gen ADM contracts.
Introduction

Definition (cont.)

Scope of the Report

The following areas associated with next-gen ADM are included in this study:

Next-Gen ADM

Like traditional application services, next-gen ADM includes consulting, design, custom development, packaged software integration, operations and testing. However, the scope, delivery mechanism and outcome for such contracts pivot around a value-based approach that focuses on achieving enterprise agility and solving business problems.

This quadrant assesses vendors based on their capability to augment traditional ADM services with emerging technologies and methodologies like agile, DevOps, automation, digital and modernization techniques to deliver application outsourcing projects. It also assesses provider capabilities in incorporating new approaches to develop and deliver applications that focus on business outcomes.

Agile Development

Agile development is an incremental and iterative approach to application development. Because it encompasses frequent and early releases of the working software, the agile methodology is being viewed by enterprise as a medium for attaining enterprise agility.

This quadrant assesses provider capabilities in delivering tangible results through use of various agile methodologies. It looks at how providers use agile development with respect to their overall application development practice.

Continuous Testing

Continuous testing focuses on delivering quality assurance at speed. In terms of technology, it encompasses various aspects of automated testing such as shift-left, end-to-end automation across testing phases. However, in terms of people and processes, it goes a step beyond automation testing to accomplish higher collaboration among QA and development teams so they
Definition (cont.)

can sync with sprint cycles and promote feature-driven testing, responsiveness to change, feedback loops and greater client involvement. Continuous testing is gaining momentum, especially to help enterprises keep pace with their agile and DevOps initiatives.

Service providers in this quadrant are assessed on their progress made and capabilities developed for creating a continuous testing environment with measurable outcomes for their clients.

Next-Gen ADM – BFSI

This quadrant assesses the strength of providers that provide next-gen ADM services to the BFSI industry, which is comprised of banking, diversified financial and insurance companies.

Next-Gen ADM – HCLS

This quadrant assesses the strength of providers that provide next-gen ADM services to the HCLS industry, including healthcare institutions, payers, pharmaceutical, biotech and medical device companies.

Next-Gen ADM – Manufacturing

This quadrant assesses the strength of providers that provide next-gen ADM services to the manufacturing industry, which includes conglomerates, capital goods, construction, consumer durables (like automotive, household appliances), aerospace and defense, materials, semiconductor, technology hardware and equipment companies.
Provider Classifications

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

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

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

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

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

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

Not In

This service provider or vendor was not included in this quadrant as ISG could not obtain enough information to position them. This omission does not imply that the service provider or vendor does not provide this service.
# Next-Gen Application Development & Maintenance (ADM) Services Cross-Quadrant Provider Listing 1 of 3

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

Like traditional application services, next-gen ADM includes consulting, design, custom development, packaged software integration, operations and testing. However, the scope, delivery mechanism and outcome for such contracts pivot on 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 or methodologies like agile, DevOps, automation, digital and modernization techniques to deliver application outsourcing projects. It will also assess provider capabilities in incorporating new approaches to develop and deliver applications that focus on business outcomes.
Observations

- Capgemini is the clear leader in Europe, leveraging its rich consulting and transformation experience, comprehensive and modern services portfolio, continuous development of innovative technologies and broad presence in the U.K.

- Accenture banks on its rich technology consulting legacy and transition experience to offer next-gen services to large organizations, combining deep BPM consulting and the latest technology skills with an excellent presence in the U.K. market.

- Cognizant leverages a domain-plus-technology strategy coupled with its depth and breadth of services to win large next-gen ADM deals.

- HCL has gained momentum in the next-gen application development because of its strong product portfolio, sharp vision and expanding delivery reach.

- Some of the Indian-heritage service providers, e.g., Cognizant and HCL, provide excellent solutions but — despite a very good presence in the U.K. — lack dedicated presence in other European markets. This might become an issue with upcoming Brexit. Cognizant and TCS continue to grow by relying on their breadth and depth of services and their exceptionally high offshoring capabilities.

- Infosys continues to impress with its end-to-end transformation offerings, resource pool and pursuit of next-gen ADM deals.

- With Watson AI, IBM is farthest ahead in integrating AI technology and cognitive analytics capabilities into the next-gen ADM product and service offerings.
Accenture is among the world's leading next-gen ADM providers with global ADM services revenue estimated to be approximately $17 billion in 2017, from which Europe has a share of about 40 percent, with more than 150 active clients. In recent years, Accenture has made a series of acquisitions in the areas of analytics, cloud, application design and automation.

Accenture offers its customers a worldwide network of delivery centers, including approximately 20 in Europe and seven in the U.K. Accenture can thus offer high capacities either locally or near- and offshore.

Accenture clients get early access to new technologies via its wide range of more than 150 alliances with universities, start-ups and top technology vendors. Its technology labs incubate and prototype new concepts through applied R&D projects for clients' businesses. Accenture also offers a wide range of more than 150 alliances with universities, start-ups and leading technology providers, including SAP, Oracle, Microsoft, Pega and emerging companies.

Accenture runs R&D projects for client companies in seven technology laboratories. Accenture has invested globally more than $500 million to develop cloud-related capabilities. It also has invested in a SaaS application-testing environment plus cloud migration, cloud brokerage and augmentation capabilities.

Accenture provides end-to-end digital portfolio services in the ADM environment, including strategy, design, implementation and execution of operations. It has a network of digital design studios that complement the development of industry-specific solutions. Also, Accenture has more than 10 years of agile development experience with 1,600 agile-certified FTEs globally.

Accenture's premium price strategy could have an impact on financial performance as the market looks more closely at the cost-benefit ratio of ADM services.
Overview

French-based Capgemini is very well positioned in the next-gen ADM market globally and is one of the largest providers in this segment in the U.K. Approximately 60 percent of the company's turnover comes from ADM projects, with 13 percent in the U.K. from more than 200 customers in all industries. Capgemini proves its strength with a wide range of customer references.

Strengths

Capgemini's Rightshore® approach industrializes delivery and enables customers to combine local and offshore resources into a unified and globally managed delivery network. It is a dynamic and flexible model that accommodates delivery location changes according to the changes in the client's business and demand, including quality, availability and cost considerations.

Capgemini’s functional capabilities and capacities are vast and cover all customer ADM requirements — up to the implementation of entire application landscapes. Its ADMnext services offers clients to excel at the fundamentals of ADM; enhance the core; and innovate to achieve sustainable competitive advantages. In Europe, the focus lies on business intelligence, SCM, cloud integration, BPM and mobility platforms. ERP/BPM capacities are also broadly defined, with a clear focus on Microsoft, SAP and Oracle.

Capgemini is moving forward with several acquisitions, some of them from industry-specific suppliers. Topics such as data science, RPA, cognitive technologies, AI and DevOps automation are proactively developed and integrated. Acquisitions include Fahrenheit 212, LiquidHub, Idean and LyonsSG to augment its applied innovation exchange (AIE) initiatives and support the ADM engagements in transformative services.

Capgemini’s vertical-specific centers of excellence play a major role in marketplace differentiation. They are CALORIE for energy and utility industries, CHROME for automotive and other manufacturing, and CRESCENT for consumer products and retail.

Caution

ISG consultants rate Capgemini as average when it comes to offering low-cost ADM solutions in managed services contracts.

Revenue comes mainly from fixed-price and time/material-based contracts. Nontraditional topics such as transaction-based or outcome-based are still underrepresented.

2019 ISG Provider Lens™ Leader

With its successful strategy to industrialize the delivery of its full-stack services portfolio and to expand its capabilities in data science, cognitive and AI technologies, Capgemini is well ahead in the ADM market.
Cognizant offers a wide and deep range of ADM services in Europe. With 22 delivery centers in Europe and large near- and offshore capacities, Cognizant is one of the largest suppliers in this market.

Of late, Cognizant has been focusing on transforming its clients’ portfolios via its zero-maintenance framework to maximize value and minimize maintenance spend. The framework emphasizes reducing run cost, optimizing change cost and delivering business outcomes.

Application management automation is accomplished by using Cognizant HIVECenter™. It is an integrated portfolio of services, platforms and solutions that brings together collective automation capabilities for any given business & IT scenario.

Business value management (BVM) framework is a comprehensive blueprint that takes a holistic view of the ecosystem to create synergy across applications, infrastructure and business processes. The framework charts out a transformation roadmap to deliver business outcomes, thereby achieving improved business performance. Cognizant develops its own frameworks such as AVMPPlus and SimpliFIT for a modular and integrated approach. It aims to introduce new mechanisms and technologies faster into the customers’ environments and thus accelerate delivery.

Cognizant integrates its client relationship team and its delivery team for specific projects. Cognizant designates a client partner (CP), which has both technical expertise and management knowledge, to head the relationship team and be present on-site. The CP works in lockstep with the delivery manager and has co-ownership of the client. The CP can make major decisions for the client related to investments, resources and timelines to avoid the typical lag associated with approvals. The arrangement offers greater customer intimacy, delivery speed, local decision-making and responsiveness.

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Caution

Cognizant’s representation concerning continuous testing is not very strong in the U.K. ADM services are mostly visible in the banking, financial services and insurance (BFSI) industries.

Cognizant does not cover smaller ERP/CRM providers that can be relevant for U.K. customers. There are also gaps in the coverage of specific software topics, e.g., in PLM, embedded software, messaging or digital asset management.

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2019 ISG Provider Lens™ Leader

Cognizant is among the few service providers able to make a leap from an efficiency play to a value play — an imperative required to succeed in the next-gen apps market.
HCL

Overview

HCL is an India-based global provider of next-gen ADM services. More than half of HCL’s European ADM business comes from the U.K. HCL provides more than 2,100 employees in seven delivery centers in the U.K.

HCL is accelerating its evolution into a next-generation technology services firm through its “Mode 1-2-3” growth strategy. The strategy is underpinned by three services groups within HCL that are running at dissimilar paces, with areas of focus ranging from traditional system integration to creating IP through the development of new products and platforms.

Strengths

Owing to HCL’s legacy as a product engineering firm, it is continuously engaged with major software companies to design and develop next products, thereby incubating those capabilities in HCL’s own digital portfolio. HCL has more than 7,000 modern application developers and consultants engaged in digital platforms and application re-engineering. It also has more than 3,000 data platform consultants, BI professionals and data scientists engaged in analytics work.

HCL has established digital experience design studios in Frisco, Texas (U.S.), Amsterdam, Noida (India) and Singapore. HCL has also established multiple co-innovation labs with customers. For example, its cXstudio in The Hague is a collaboration with a global life insurance company; the IoT incubation lab in Redmond, Wash., (U.S.) is run with one of the largest global software vendors. These innovation labs house more than 200 design resources and 50 business consultants.

HCL has a rich partnership ecosystem that includes approximately 110 vendors and holds platinum and gold partnership designations with major OEMs. HCL has strong partnerships, including joint ventures and joint IP models with companies including IBM, DXC Technology and CA Technologies.

Caution

HCL should further invest in building domain-specific industry solutions. Domain expertise is an important consideration by clients while selecting partners for innovation and next-gen initiatives.

2019 ISG Provider Lens™ Leader

Riding a design-first modern application development mindset complemented by a well-thought-out go-to-market strategy, HCL has been able to successfully demystify and break through the enterprise digital space.
IBM

Overview

In IBM offers highly innovative next-gen solutions in ADM, including AI, analytics, automation, cloud, mobility and security. Many competitors use IBM solutions to create their own offers, e.g., several service providers use IBM Watson as the basis for their own AI offerings.

Strengths

ADM is part of IBM Global Business Services (GBS) and is closely integrated with other technical and strategic consulting units. IBM serves a large number of customers from all industrial sectors in the U.K. and offers a complete and wide range of partnerships, even with smaller providers.

IBM is organized within a globally integrated capabilities (GIC) network. Service integration hubs (SIH) in Dublin and Singapore concentrate the business and ensure global integration and standardization of services provided to customers in global delivery centers and local IBM service centers.

IBM has been a U.S. technology patent leader for 25 consecutive years, providing technology labs worldwide. Through a series of acquisitions (24 in the ADM environment between 2015 and 2017 alone), IBM is continuously expanding its own strong technology portfolio. IBM’s cognitive process transformation helps clients define, implement and operate new business processes enabled by digitalization, advanced analytics, big data, modern process re-engineering with design thinking, Watson technology and data platforms such as Watson IoT, blockchain, cognitive process automation and Watson health.

Caution

Recently, the company has been fighting for sustainable profitability in the IT service business. IBM’s premium service positioning is repeatedly challenged by cost-effective offerings from competitors, especially India’s leading providers.

Although GBS is completely responsible for consulting, IBM is often not effective enough in bringing all areas of GBS together at the customer’s site to provide a powerful unit. Internal processes and responsibilities are a frequent obstacle.

2019 ISG Provider Lens™ Leader

IBM’s extreme internationally organized service and vast technological leadership — especially in cognitive analytics and AI — clearly make it the leading provider for large and strategically designed (architectural) projects.
INFOSYS

Overview

Infosys is a widely positioned, globally active IT service provider. More than 300 FTEs in three local delivery centers plus 1,900 FTEs offshore serve approximately 78 customers in the U.K. in ADM. ADM plays a key role at Infosys and accounts for 51 percent of consolidated revenues, with another 35 percent coming from maintenance services. Infosys is expanding its business worldwide and is strengthening strategically important markets on a local level.

Strengths

Infosys' global delivery model (GDM) goes beyond multiple teams in different locations — it is about services delivered by teams that are integrated by established processes and infrastructure. Some attributes include virtual teams connected by information, intelligent work distribution and integration; an extended workday for faster project completion; access to experts and knowledge; and choices of various iterative and waterfall models.

Infosys offers a comprehensive range of ERP/CRM knowledge and covers smaller providers. In the enterprise software environment, the focus in the U.K. is on big data, CRM and SCM.

The proportion of projects based on outcome or application-based pricing is quite high compared to the competition. This demonstrates a high level of successfully proven self-confidence in being able to implement the defined goals within the projects.

In Europe, ISG rates Infosys as a leader in the field of agile development and in the manufacturing industry. Infosys is quite active on a global level in the more recent topics such as data science and embedded software. In Europe, the focus is clearly on DevOps automation and narrow AI.

Caution

Compared to other companies, the proportion of employees with many years of experience is lower — more than 40 percent of employees in the ADM environment have less than 3 years of experience.

Most of the services are provided offshore in India. Infosys offers only a few and rather small nearshore delivery centers.

2019 ISG Provider Lens™ Leader

Infosys pursues a business approach strongly focused on offshore business and accelerates its move to strengthen local markets through expansion of its own presence.
TCS

Overview

ADM accounts for about 70 percent of TCS' sales, with 65,000 employees locally and 200,000 employees in 164 centers worldwide, including 11 in Europe, eight of which are located in the U.K. In 2018, TCS for the first time achieved a market capitalization of more than $100 billion.

Strengths

TCS has defined a goal of becoming 100 percent agile by 2020. TCS aggressively retrained employees and redesigned processes and structures to achieve this goal. TCS has understood the diversity of the European market and is strengthening its regional structures based on local requirements. On a European level, TCS relies on the adaptation of agile and DevOps and primarily supports the financial services, health-care and manufacturing industries.

TCS receives very high ratings for customer satisfaction. TCS consistently adapts its offers and market entry strategies to changing customer needs. TCS addresses the customers' need to reshape IT requirements in order to realize a truly digital business. TCS has been strengthening its focus on domain specialization and helping clients accelerate time-to-value using vertical-specific tools and accelerators for all major industries.

TCS is continuously investing in deep-learning platforms by researching and piloting email mining, voice analytics, natural language processing, robotics and services automation. TCS's own analytics platform, Customer Intelligence and Insights, collects and analyzes large volumes of structured and unstructured customer and operational data in real time. After the success of its automation and financial services platforms Ignio and BaNCS, the company is dedicating non-billable teams to work in its R&D centers to develop intellectual property that can be monetized through additional offerings. To maximize innovation potential, TCS offers an environment that encourages collaboration through the TCS Co-Innovation Network (COIN™), which provides access to an ecosystem of various TCS customers, entrepreneurs and experts from industry and academia.

Caution

TCS could improve its position by acquiring companies that bring completely new capabilities, not just those that enhance its existing strengths — especially in the areas of mobility, AI and cognitive analytics.

This market has become highly commoditized, with incumbents losing some or all of their scope to new competitors more than half the time when contracts are put up for competitive rebid, according to ISG Research. Because TCS is one of the biggest players, it needs to continuously evolve to win new business and retain existing clients.
AGILE DEVELOPMENT

Definition

Agile development focuses on an incremental and iterative approach to application development. As agile encompasses frequent and early releases of the working software, it is being viewed by enterprise as a medium of attaining enterprise agility.

This quadrant will assess capabilities of a provider in being able to deliver tangible results through use of various agile methodologies. It will also look at the focus a provider has toward using agile development with respect to its overall application development practice.
Social Enterprise Networking Suites

**Observations**

HCL and Infosys are the clear leaders in the market, followed by Capgemini and IBM for their functionality and technical capabilities. DXC Technology and Cognizant persuade with their individual strengths.

- HCL offers comprehensive support in all project stages and has good onshore and offshore capacities. HCL’s growth is also the result of several targeted acquisitions in Europe in recent years.

- Infosys is a broad-based, globally active IT service provider, growing at a very fast pace and expanding its 27 delivery centers in Europe on a local level with local innovation hubs.

- Capgemini offers the widest scope of tools and accelerators to support agile development, continuous integration and automated application delivery. Its workforce and project definition reflect a deep knowledge of agile ADM.

- IBM takes a strategic perspective and understands agile ADM as part of an agile business process design. Accordingly, its consulting offering integrates agile elements into all aspects of a digital transformation.

- DXC’s development of new service delivery platforms that leverage agile principles is its core differentiator.

- Cognizant’s digital engineering group and its rich experience in implementing SaaS solutions makes it a worthy contender for agile projects.
Overview

Of late, Capgemini has been making a significant effort to include agile methodologies as a fundamental ethos of its delivery strategy. Agile development is integrated with business services to provide ongoing business and IT improvements; and it is integrated with infrastructure services to deliver applications and end-user services.

Strengths

Capgemini is adjusting its application delivery model to create multi-skill delivery pods to support agile delivery across the lifecycle of the program. Each pod has skills across the entire digital delivery lifecycle and is capable of providing support from design thinking to the development, testing, deployment and maintenance phases.

Capgemini is a SAFe gold partner. Its Scrum masters are trained on its proprietary Capgemini Agile Framework (CAF). CAF includes training for four agile scaling frameworks: SAFe, LeSS, Nexus and DaD. Moreover, CAF includes SAFe additions to standard LEAN, XP and Scrum practices.

Caution

The percentage of clients adopting a DevOps-led delivery model is low compared to its peers. There is enough evidence to suggest that Capgemini has multiple instances of DevOps implementation; however, the penetration seems low.

2019 ISG Provider Lens™ Leader

Capgemini’s ability to anticipate and react to the way enterprise clients consume applications is impressive. The various changes to its delivery approach are all steps in the right direction.
Approximately 20 percent of Cognizant’s application development revenue comes from agile development. Cognizant has approximately 30,000 FTEs worldwide trained on agile and 12,000 FTEs trained on DevOps-related tools such as Ansible, Puppet, Jenkins, Splunk and Chef. It is investing in developing accelerators with an endeavor to reduce digital transformation time by half for its enterprise clients.

To focus on end-to-end agility, Cognizant has formed a specialized group called digital engineering. Cognizant has an array of offerings seeking digital transformation. The four key offerings and principles are:

- **Insight to code**: Accelerates software development by helping each client unify its business and digital strategies at scale.
- **Greenfield engineering**: Cloud-native philosophy with agile practices that use iterative sprints to assure first-mover advantage by delivering production-ready, tested and secure code.
- **Value stream**: Cognizant experts examine the client’s existing application portfolio and assess its economic impact and effectiveness to help the client attain high-level, customer-focused business objectives. It then develops recommendations for maximizing the long-term economic return for the entire portfolio.
- **Application transformation**: By leveraging its labs, Cognizant delivers essential transformation components, including assessment, a prioritization framework, app redesign, restructuring and cloud-native operation via agile and DevOps practices.

Cognizant is investing heavily to enable its internal teams of developers to be transformed into full-stack engineers. Therefore, it has gotten into tie-ups with companies such as Pivotal, Red Hat and AWS.

Cognizant is particularly strong in integrated SAP, Oracle and Pega packaged software products, both on-premise and SaaS.
Agile Development

DXC TECHNOLOGY

Overview

DXC Technology has grown larger, more powerful and more local through mergers, acquisitions and strategic investments. In 2017, DXC produced approximately $750 million in ADM services revenue in the U.K. market, serving 114 enterprise clients from all industries.

Around 28 percent of DXC Technology's (DXC) application development revenue came from agile development in 2017 through a combination of industrialized services and delivery from global and regional delivery centers.

Strengths

DXC grows through acquisitions, focusing on selected but very intensive partnerships, and has established digital transformation centers in Europe. DXC is expanding its integrated offerings and advisory services of agile development and DevOps. It is actively integrating agile development with DXC Bionix™ and DXC Rapid Digital Delivery (RDD) — an offering that leverages the power of crowd to rapidly develop software modules or capabilities to fulfill a project's requirements.

DXC has signed aggressive and highly collaborative contracts with select providers and vendors, including Micro Focus, Dynatrace, CA Technologies and Mphasis. The intent is to create an environment where all walls are removed — a partnership with no barriers; one where the partners will participate in sales, solutioning and offering development. The final objective is to exploit this partnership ecosystem to create force multipliers and joint revenue channels.

Agile development is tied to DXC's value-based solution (VBS) model, which is priced and delivered from a base solution, with available options and add-on features and services. The pricing quotation is constructed to align with DXC's clients' financial needs, having options such as business outcome-based, consumption-based, unit-based payouts.

Caution

In general, the proportion of agile development projects (compared to those conducted using traditional methods) at DXC is still rather low. DXC has a good potential to grow cross skills on emerging agile methodologies.

2019 ISG Provider Lens™ Leader

DXC Technology serves clients in different stages of maturity and has service philosophies, offerings and contracts tailored to each customer, ranging from traditional staff augmentation outsourcing on the low end to application integration covering SaaS, IoT and other systems on the high end.
**Overview**

HCL is well positioned in the U.K. market with seven application development delivery centers (a total of nine in Europe) and achieves — on an expandable basis — strong growth of about 10 percent. HCL offers comprehensive support in all project stages and has good onshore and offshore capacities.

**Strengths**

Under the name "Mode 123," HCL is pursuing a strategy of reorganizing its internal teams, service areas and technology focuses. The goals are improvements in the design and user-friendliness of modern applications, consistency of connected systems — with data at the center of action— and simplified organization of increasingly complex network infrastructures.

HCL has invested in building a next-gen technology platform and is already engaging with customers on pilots. HCL CoTrust and HCL ARStudio are examples of its platforms. CoTrust is a blockchain platform that simplifies enterprise blockchain adoption by automating all the plumbing needs for setup. It supports most of the widely used blockchain implementations, including Ethereum and Hyperledger. HCL ARStudio is a platform that focuses on building cross-reality (XR) solutions leveraging various AR implementations. It simplifies augmented reality and virtual-reality technology adoption.

**Caution**

HCL is shifting its focus and wants to act as a technology provider rather than a personnel service provider. This can be problematic with customers who primarily aim to outsource their development activities.

HCL's presence in the market and its image with customers vary greatly across the European marketplace, which could cause issues with multinational clients.

**2019 ISG Provider Lens™ Leader**

HCL is one of the few providers managing to build a certain size while remaining flexible and agile enough to implement even small and innovative project approaches.
Overview
IBM provides highly innovative offerings including AI, analytics, automation, cloud, mobility and security. Many competitors use IBM solutions to create their own offers. For example, several service providers use IBM Watson as the basis for their own AI offerings.

Almost two-thirds of IBM’s engagements are agile-enabled, and roughly 90 percent of its development staff is trained on agile frameworks and key agile methodologies like Scrum and Kanban.

Strengths
ADM is part of IBM Global Business Services and is closely linked to other technical and strategic consulting units globally.

IBM always considers ADM from the perspective of business agility and acts accordingly with the customer. The focus is on a strategic consulting offering that is aligned with agile development; transformation in terms of operating model and change management; and implementation in the form of enablement, agile scaling and operational governance. IBM’s ADM-oriented methods and tools have been built to enable agile delivery. For example, Agile@Maintenance is designed for rapid deployment. It drives maturity across the portfolio and reduces application break/fix backlogs. IBM’s Lean2Agile catalyzes process improvement and increases client value through lean improvements and agile delivery.

IBM provides industrialized and flexible models for accelerated application development. Its portfolio includes IBM design thinking, the IBM Migration Factory for bringing non-IBM clients into the IBM environment, along with cloud-based development platforms, the MobileFirst development platform, the API Economy marketplace, DevOps innovation services and garage-based development.

More than two-thirds of development projects for customers are agile, while most IBM employees in the development environment are trained in agile methodologies (primarily Scrum, Kanban, XP, SAFe, MSF for Agile). IBM also uses almost all automation tools inhouse and at the customer’s site and delivers elements thereof in its own products (e.g., Docker, Puppet).

Caution
Recently, the company has been struggling for sustainable profitability in the IT service business. IBM’s premium service positioning is repeatedly challenged by cost-effective offerings from competitors, especially India’s leading providers.

2019 ISG Provider Lens™ Leader
With its impressive capabilities, its approach from the perspective of business agility and its focus on strategic agile transformation, IBM is best suited for large, global, integrated or bundled engagements in which the company can leverage its proprietary tooling, methodologies and platforms.
**Overview**

Infosys is a broad-based, globally active IT service provider, growing at a very fast pace. Infosys boasts of 20,000 FTEs trained on agile methodologies globally, 10,000 DevOps engineers, 15 vendor alliances, 20 agile training programs, a DevOps platform that supports 20 packaged technologies and more than 60 tools, plus the experience of serving more than 1,000 agile engagements in 25 countries. In the U.K., more than 1,000 FTEs onshore plus more than 3,100 FTEs offshore serve 22 enterprise clients.

**Strengths**

Infosys has established development centers in London, Edinburgh, Swindon, Amsterdam, Paris, Düsseldorf, Frankfurt and Brussels to strengthen local project teams.

Infosys has established an agile academy for training resources across its India centers and has created Web-based remote trainings for the rest of the world. It has a center of excellence for agile and DevOps to research tools, enhance IDP (the company’s CI/CD platform) and build innovative solutions (including custom, mainframe, ERP and DevOps). Infosys also has local resource pools of coaches to support the needs of the local market and to train local delivery teams on agile and DevOps principles.

To improve its expertise in high-performing process and technology areas, Infosys has strengthened its vendor partnerships with established players such as IBM, Microsoft, HP, CA and AWS. It is also working closely with a host of niche product vendors, including Atlassian, CloudBees, Tricentis, Red Hat and Xebia Labs, to provide end-to-end services. Infosys is also a gold partner with SAFe Academy.

**Caution**

Infosys can further enhance its presence and client base in the utilities industry; the company needs to be more aggressive in its go-to-market strategy to sustain growth.

**2019 ISG Provider Lens™ Leader**

Infosys pursues a design-thinking approach to push agile development and DevOps customer-side. In the U.K., Infosys is particularly strong in the BFSI industry.
**CONTINUOUS TESTING**

**Definition**

Continuous testing focuses on delivering quality assurance at speed. In terms of technology, it encompasses various aspects of automated testing such as shift-left, end-to-end automation across testing phases. However, in terms of people and processes, it goes a step beyond automation testing to accomplish higher collaboration among QA and development teams to sync with sprint cycles, feature-driven testing, responsiveness to change, creating a feedback loop and greater client involvement. Continuous testing is gaining momentum, especially to help enterprises keep pace with their agile and DevOps initiatives.

Service providers for this quadrant would be assessed on their progress made and capabilities developed in terms of creating a continuous testing environment for their clients with measurable outcomes.
Observations

A high degree of automation across testing phases, supported by latest AI and machine-learning technology, and a consultative approach to testing becomes leadership standard in the market. Mindtree and IBM have impressive depth of services, offering proprietary tools and accelerators across domain and industry verticals. Capgemini and DXC Technology show strong expertise and market presence. TCS and Wipro both show highly trained resources and good alliances in the testing space.

- Capgemini shows strong capabilities in all areas of continuous testing and offers dedicated CT-frameworks for industry-specific testing environments.

- DXC has grown its testing capabilities to become larger, more powerful and more local through mergers, acquisitions and strategic investments. Especially in Europe, DXC focuses on expansion in the retail, energy, utilities and transportation sectors.

- A large portion of IBM's testing revenue is generated with CT projects, based on IBM's highly innovative developments in cognitive analytics, AI and machine-learning. IBM is the first company to offer test environments based on quantum computing.

- Mindtree is very focused on the test market. Approximately 80 percent of Mindtree's existing contracts are stand-alone wins, a number that reflects and affirms its dedicated focus on this practice.

- TCS runs an aggressive strategy to become 100 percent agile, which includes its CT offerings and tools. TCS also continues to develop a stronger regional presence in the U.K.

- Wipro’s focus on automation-led testing and its engineering approach toward newer testing techniques are its key differentiators.
French-based Capgemini is very well positioned in the next-gen ADM market globally and is one of the largest providers in this segment in the U.K. Nearly 20 percent of the company’s turnover comes from ADM testing projects, of which only 25 percent are traditional. It has more than 20 enterprise testing clients being supported by approximately 850 FTEs located in three U.K. delivery centers, and a shared pool of almost 10,000 FTEs in offshore delivery centers.

Capgemini’s technical approaches are diverse, and the ecosystem is constantly expanding. These include virtualization of data and services, self-service test data management, development of execution automation bots, and self-healing automation solutions. Topics such as AI and bots, as well as test virtualization and the specific integration solution for testing cloud environments, are being promoted.

Capgemini’s proprietary tools, including SmartQA, Intelligent Test Automation Platform (iTAP), SmartFoundry, SmartAnalytics and NFT Hub, help bring value across different testing stages by ensuring both agility and quality.

Testing SLAs are being defined jointly with development teams so that there is an end-to-end quality focus. Some of the important metrics being considered include first-time pass rate, build-failure rate and zero-touch automation thresholds.

Through use of practices like SAFe and lean, Capgemini is attempting to industrialize early testing phases across its portfolio and individual programs.

The majority of Capgemini’s testing clients belong to the BFSI industry. It does have clients in other industries like energy, telecommunication, CPG and health care but the penetration remains low.
DXC TECHNOLOGY

Overview

DXC Technology has grown larger, more powerful and more local through mergers, acquisitions and strategic investments. DXC offers its more than 75 customers 200 onshore testing specialists in five local delivery centers plus more than 2,000 employees in near- and offshore locations in 10 CT delivery centers in Europe.

After the CSC and HPE ES merger, DXC had only 5 percent account overlap. Thus, there is massive potential for cross-selling and up-selling high-value testing services to existing accounts.

Strengths

DXC packages managed testing services into its pay-as-you-go model testing-as-a-service (TaaS). Some of the services offered include functional and automation TaaS, performance TaaS and mobile TaaS.

The intelligent automation solution not only addresses testing but provides an end-to-end automation across the DevOps lifecycle. Clients can select open source and enterprise testing tools to configure an end-to-end integrated tool suite based on their preferences. The automation platform is provided in the cloud as well as on premise.

Most projects are carried out in agile mode, with greater demand for regression and performance testing in comparison. New topics also include the use of machine-learning and AI in CT. Especially in Europe, DXC focuses on expansion in the retail, energy, utilities and transportation sectors.

DXC has a wide range of testing services (including test consulting, application testing, application security testing, enterprise solution testing and emerging technology testing) that are mapped to industry-specific tools, reusable scripts and accelerators. DXC has specialized vertical solutions for the banking, insurance, health-care, manufacturing, energy, CPG and retail industries. Currently, it is working to enhance its offerings in aerospace and the telecom space.

Caution

Compared to total CT sales, Europe as a whole is rather small for DXC, with Germany and the U.K. accounting for the majority share.

2019 ISG Provider Lens™ Leader

DXC Technology provides a strong industry expertise and can be a partner of choice for testing division overhaul and cloud-based as-a-service expertise, especially in contracts requiring a dedicated industry focus.

Imagine your future®
IBM

Overview

IBM provides highly innovative offerings, including AI, analytics, automation, cloud, mobility and security. AMS comprises nearly 50 percent of IBM's Global Business Services revenue, from which testing has a significant share.

Strengths

The IBM Rational Test Workbench offers software testing tools for a DevOps environment, including API testing, functional UI testing, performance testing and service virtualization. IBM's testing portfolio includes a wide range of services, from design to run. Services extend to legacy systems, packaged applications, Web applications and mobile applications. IBM also has industry-specific testing solutions and offers an as-a-service model. IBM supports a vast variety of ERP/CRM or enterprise software systems. In niche markets, IBM covers all areas apart from low code and embedded software.

IBM has strong cloud-based testing capabilities and uses Watson's cognitive abilities for adaptive testing and decision-making. IBM combines CT with the topics cognitive analytics, microservices and API using open source (IGNITE), microservice-driven modernization and cloud migration. Further developments include the topics AI, cloud, security, blockchain, and testing in the quantum computing environment.

Caution

Although IBM has customers ranging from $1 million to over $20 million, it may not be suitable for more simple testing projects due to the higher prices.

There are only a few CT projects that run in agile mode or in DevOps mode.

2019 ISG Provider Lens™ Leader

IBM provides a comprehensive software-testing portfolio and is an excellent choice for large clients requiring support from multiple locations, across multiple technologies and capable of integrating a vast variety of future technologies into the test environment.
MINDTREE

Overview

In 2017, Mindtree’s sales with application testing amounted to approximately $27 million in the European market and are growing very strongly.

Strengths

Mindtree is very focused on the test market and effectively convinces customers of its capabilities. Approximately 80 percent of Mindtree’s existing contracts are stand-alone wins, an amount that reflects and affirms dedicated focus on this practice.

Mindtree is aggressively up-skilling resources on continuous testing concepts and tools. It is looking to train resources across the testing value chain from back-office to front-office testing. Testers are being trained on concepts like user experience, analytics and more. Testing is being executed through Mindtree’s YORBIT virtual learning platform and classroom sessions. Mindtree has growing experience in agile and DevOps environments, and 85 percent of its current test projects in the U.K. are running in agile mode. The company was able to automate around 64 percent of all tasks during test phases.

Mindtree has developed its own differentiated test offerings that are tailored to dynamic test environments. Key platforms include the Dynamic Test Engineering Platform (DTEP), a unified platform for continuous testing that provides centralized access to multiple other proprietary resources and accelerators, and a chat bot that provides automated test runs on-demand and from any location using AI. These tools are integrated into each other.

ATX is a new test-consulting offering by Mindtree. This framework helps clients in their transformation journeys by defining an operating model to suit waterfall and agile/DevOps process guidelines for continuous testing, behavior-driven development, test-driven development or acceptance test-driven development as appropriate.

Caution

Most of Mindtree’s IP is industry independent. Mindtree should invest in the development of industry-specific tools to expand its business faster.

The expansion of local locations and capacities in Europe should be pursued more strongly to expand the still small customer base.

2019 ISG Provider Lens™ Leader

Mindtree has a strong focus on next-gen testing contracts and expands its business rapidly, with a large — and growing — experience in agile test environments.
**Overview**

ADM accounts for about 70 percent of TCS's sales, with 65,000 employees locally and 200,000 employees in 164 centers worldwide, including 11 in Europe, eight of which are located in the U.K. In 2018, TCS for the first time achieved a market capitalization of more than $100 billion.

**Strengths**

TCS has a rich set of tools and frameworks to automate the test environment, resulting in accelerated delivery. Examples include: Non-Prod Environment Tracking and Release Automation (NETRA) for automating application testing, integration and deployment; OMNI, a unified test automation solution for mobile and Web services; and the eSwift reusable test automation framework that leverages HP business process testing (BPT) to automate testing of enterprise apps like Oracle ERP, SAP, Siebel, PeopleSoft and Salesforce. TCS has been able to achieve more than 60 percent automation across test phases through such tools.

TCS has defined a goal of becoming 100 percent agile by 2020. TCS has aggressively retrained employees and redesigned processes and structures to achieve this goal. In Europe, about 80 percent of TCS's continuous testing projects run in agile mode.

TCS is taking a transformational approach to testing, by which it assesses process maturity and decides on methodology through its TIARA proprietary framework. TCS commits to a desirable end-state, suggests next-gen commercial models like pay-per-use, and conducts in-depth assessments and rollouts for frameworks, tooling and automaton, test data and environment, and digital assurance services.

**Caution**

TCS could improve its position by acquiring companies that bring completely new capabilities, not just those that enhance its existing strengths, especially in the areas of cloud, mobility, analytics and other new technologies.

**2019 ISG Provider Lens™ Leader**

TCS offers an impressive portfolio of frameworks, tools and platforms for end-to-end transformation with assured cost savings and effort reduction and provides a European structure that takes regional diversity into account.
WIPRO

Overview

Wipro's application testing revenue was $1.8 billion in 2017, and 42 percent came from continuous testing. In the U.K., Wipro serves 17 enterprise clients with some 420 onshore and 1,700 offshore employees. Most FTEs focus on functional and exploratory testing, and 90 percent of Wipro's U.K. testing projects run in agile mode.

Wipro offers continuous testing as a comprehensive solution in association with DevOps or as a stand-alone solution, according to the customer's requirement.

Strengths

Wipro has made investments in automation to develop tools that can automate and accelerate the testing environment and maintain quality. Two of the primary tools are NXT, a next-generation QA delivery hyper-automation platform applicable across the testing lifecycle, and Assure, a next-generation IT wellness platform designed to improve predictability in application quality, reduce cost of quality and build self-healing quality processes. Wipro has been able to automate more than 60 percent of tasks across test phases.

Wipro provides assessment of current state of assurance for continuous testing transformation using continuous testing maturity model (CTMM) and developing a roadmap and strategy.

Wipro is engaged in building an engineering approach for continuous testing using behavior-driven development (BDD).

Caution

Wipro has been on the conservative side and doesn't have any outcome-based or gain-share deals with respect to its testing business.

2019 ISG Provider Lens™ Leader

Wipro's heavy investments in automation and IP development, skilled resource pool and complementary next-gen offerings make it a good fit for large customers looking to achieve enterprise agility to gain competitive advantage.
**Definition**

The BFSI industry includes ADM services provided to banking, diversified financial and insurance companies.

This quadrant will assess the strength of providers that offer next-gen ADM services to the BFSI industry vertical.
Observations

HCL, Capgemini and Infosys lead a densely packed leadership quadrant with Cognizant, Accenture, IBM and Tech Mahindra. U.K. BFSI companies seek suppliers with a strong local market presence and the capability to solve their specific issues that arise due to the share of legacy application still in use and the pending Brexit issues.

- Capgemini continues to develop very specific BFSI capabilities and offers a strong portfolio and local support in the areas of blockchain, machine-learning analytics, distributed agile and microservices.

- HCL generates strong growth of about 10 percent in the BFSI market. The customer mix strengthens HCL's position as an end-to-end ADM player in this industry.

- Accenture combines deep BPM consulting and latest technology skills with broad industry knowledge and a large presence in all major European markets.

- IBM has a long and successful history in the BFSI space and the most experience with legacy systems transformation and modernization. Its organizational structure — viewing next-gen ADM as part of its international business consultancy — is dedicated to supporting BFSI customers in modernization efforts.

- Cognizant understands the special requirements of BFSI customers in an increasingly digitized market and offers very specific, future-oriented solutions. Cognizant focuses on the customer's global business with more than 35 technology and industry partnerships to cater to BFSI clients.

- Infosys' BFSI stack, investment in fintechs and deep industry alliances are helping it create value-driven positioning.

- Tech Mahindra's new-age delivery platform coupled with industry alliances makes it a worthy option for BFSI engagements.
ACCENTURE

Overview

Accenture has approximately 70,000 application outsourcing experts worldwide, from which Europe has a share of approximately 40 percent. Accenture provides ADM services to customers through a global sales network of more than 50 centers in 35 countries, with about 20 centers in Europe.

Strengths

Accenture is one of the few providers equally capable of consolidating its customers' application landscapes on external platforms such as SAP HANA or Oracle and of building its own platforms. Accenture can do this through its partnerships with leading technology providers and industry experts.

As a leader in Business Process Management (BPM) for finance and accounting, Accenture offers comprehensive platform integration services and has been quite successful in developing complementary business services for BFSI companies.

Accenture is rapidly progressing in its ability to offer automation solutions by acquiring technology capabilities to serve its BFSI clients.

Accenture runs R&D projects for client companies in seven technology laboratories. Accenture has invested globally more than $500 million to develop cloud-related capabilities. It also has invested in a SaaS application-testing environment, plus cloud migration, cloud brokerage and augmentation capabilities.

Caution

Most of Accenture's large BSFI clients belong to the Change-the-Bank (CTB) category, which means that their projects focus on generating new revenue streams through disruptive technologies. Although CTB is a rapidly growing area, financial institutions are still spending more on run-the-bank (RTB) services that save costs and maximize efficiency.

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Accenture provides a strong industry expertise in the banking & and finance sector, an excellent long-term strategy and the ability to locally execute at scale across the business application space.

ISG Provider Lens™

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**Overview**

French-based Capgemini is very well positioned in the next-gen ADM market globally and is one of the largest providers in this segment in the U.K. Approximately 60 percent of the company's turnover comes from ADM projects, with 13 percent in the U.K., most from more than 60 enterprise BFSI clients. Almost 27 percent of Capgemini's revenue is contributed by the BFSI sector.

**Strengths**

In addition to very specific topics for banking/capital markets and insurance, Capgemini strongly develops blockchain, machine-learning analytics, distributed agile and microservices technologically and dedicated BFSI consulting practices.

Under its ADC model, Capgemini has developed more than 40 solution accelerators to address digital challenges. A few examples include BDD Swift (an automation framework to generate automation test cases based on user stories), App Swift (a code generation solution accelerator for cloud-ready apps), a continuous delivery orchestration engine to automate release pipeline implementations based on the Jenkins platform, RoboQ (to reduce technical debt using RPA) and Cloud Swift (process application code for cloud deployments).

Capgemini's key area under focus in the BFSI sector include open and connected banking, digital marketing, SMART analytics for financial services, co-innovation with fintech, claims transformation, front-office optimization, insurance all-channel experience, increased automation of processes using RPA and AI, property and casualty core policy processing, and solvency II solutions.

Capgemini has long-standing partnerships and experience with many leading software vendors in the financial sector, including FLEXCUBE (banking), Guidewire (insurance), Temenos (banking), Calypso (capital markets), EbaoTech (insurance), FirstData (cards) and Clear2Pay (payment). The partnerships allow Capgemini to work on a wide variety of engagements with a tailored approach.

Capgemini continues its growth through several acquisitions of industry-specific suppliers. Topics such as data science, RPA, cognitive technologies, AI and DevOps automation are proactively developed and integrated. In addition, Capgemini has its own framework for agile development.

**Caution**

India is currently Capgemini's most important offshore location. As Capgemini wants to expand its BFSI business locally, it must expand its delivery centers at European locations.
Cognizant offers a wide and deep range of ADM services in Europe. With 12,000 FTEs in the BFSI sector in Europe, large near- and offshore capacities, Cognizant is one of the larger suppliers in this market. The BFSI sector formed around a third of Cognizant's overall revenue in 2017.

Cognizant's 2020 strategy has been developed in line with the rise of newer digital technologies like blockchain, RPA, intelligent process automation, AI, machine-learning, predictive and prescriptive analytics, IoT and corresponding industry trends resulting from these technologies.

The go-to-market strategy for customers at BFSI is a consulting-oriented domain-plus technology game focusing on the rationalization and modernization of applications, migration through accelerators and platforms, and end-to-end transformation.

Cognizant covers all sub-segments in a complete scope. With many of its own services and tools, e.g., ADPART (models business flows and automates test design) and GRAFT (automation test suite for UFT/Selenium/CITS), as well as a very broad range of partners, Cognizant can provide customers at BFSI with the required flexibility in a rapidly changing market segment.

Cognizant understands the special requirements of BFSI customers in an increasingly digitized market and offers very specific, future-oriented solutions, e.g., branch transformation through beacons, voice banking with voice authentication, crypto-currency payment solutions, integration framework for blockchain, and cybersecurity analytics. Cognizant's focus is on the customer's global business.

Cognizant has more than 35 technology and industry partnerships to cater to BFSI clients. These cover technology areas such as digital, blockchain, analytics, cloud and industry domains such as payments, insurance, compensation management, administration management, retirement solutions, performance reporting, retail and core banking.

Caution

Because the BFSI segment makes up nearly 35 percent of Cognizant's revenue, changing market dynamics and the upcoming Brexit can have an unpredictable (positive or negative) impact on the company's financial growth and performance in the U.K.
HCL

Overview

HCL is very well positioned in the U.K. BFSI market with about 2,600 FTEs and generates strong growth of about 10 percent with 21 BFSI enterprise customers (out of 145 globally). The customer mix strengthens HCL’s position as an end-to-end ADM player in this industry.

HCL’s vision for BFSI is to be a next-generation leading technology services firm, enabling its strategic partner financial services firms in their movement first to digital, then to open and on to connected in the next three to five years with its primary focus on customer centricity.

Strengths

HCL has dedicated domain solutions covering specific areas such as cards and payments, trade finance, treasury, cash management, core banking, consumer loans and commercial and corporate loans.

HCL offers a comprehensive toolset that propagates a specific approach to ADM services. For example, FENIX is an operating model specially developed for the BFSI industry with the core objectives of cloud and digital transmission. HCL developed FinEdge (based on Microsoft Dynamics) and SFDC — Wealth CRM to improve its system integration capabilities.

HCL has formed deep strategic partnerships with multiple other providers and financial product vendors that give a massive boost to its own capabilities. HCL also has six innovation labs and agile centers globally that are dedicated to key themes like mobility, customer experience, IoT and co-innovation.

Caution

HCL can further enhance its as-a-service offerings, grow partnerships with next-gen (mode 2) technology firms and expand its services portfolio in key areas such as wealth, risk and compliance, payments, fintech, insurtech and regulatory technology.
IBM

Overview

IBM offers highly innovative offerings including AI, analytics, automation, cloud, mobility and security. Many competitors use IBM solutions to create their own offers. For example, several service providers use IBM Watson as the basis for their own AI offerings. Traditionally, IBM has very strong positioning and deep industry knowledge in the BFSI market.

Strengths

IBM is uniquely qualified to provide a breadth of services across various financial platform implementations. IBM offers services for financial and business process transformation, change management, organizational design, application development and consulting integration, managed services — both for support and cloud infrastructure — and business process outsourcing.

IBM has several successful implementations of digital native systems that are based on integrated processes, run on cloud platforms and provide deep business insight through analytics. Implementations often rely on a wide range of proprietary tools: Bluemix Cloud, WebSphere, API Economy, MobileFirst and Watson.

IBM can add value to the entire modernization process through industry-specific tools, proven methods and a pool of experienced industry consultants and engineers.

Caution

Recently, the company has been fighting for sustainable profitability in the IT service business. IBM’s premium service positioning is repeatedly challenged by cost-effective offerings from competitors, especially India’s leading providers.

2019 ISG Provider Lens™ Leader

IBM has deep domain and technical expertise across the banking, financial markets and insurance industries and leads the industry into new fields with its AI, analytics, cloud and cognitive initiatives.
Infosys generated revenue of nearly $400 million from approximately 53 ADM U.K. BFSI clients in 2017, which are served by 3,800 employees.

Infosys’ BFSI offerings span ADM, testing, automation, AI, and application modernization and simplification by adopting DevOps practices, digital, data and analytics, cloud and cyber security. Infosys is also focusing on AI, machine-learning, cloud, data and analytics, its AssistEdge RPA offering, agile/DevOps and legacy modernization services.

Considering the emerging technology needs of BFSI clients, Infosys is investing heavily in new technology-led services. Infosys’ DevOps team is engaged with several clients to build innovative solutions to bring developers and operations together. The key technologies of microservices and Docker are being leveraged to help clients save technology infrastructure maintenance and deployment costs. Infosys’ UX and API Services team is engaged with several clients to build complete user experiences and integrate them with services enabled by integration technologies like Camel and Spring Integration.

Infosys is working toward creating functional offerings and BFSI industry use cases based on new innovations using blockchain, open banking, API, core banking transformation and NIA, its AI and machine-learning solution. It is developing proofs of concept so clients can automate and digitize many of their industry processes and unlock potential to reassign staff for higher-end work. Infosys has also partnered with fintech enterprises such as Waterline Data Science (which has an impressive data governance and data discovery software), Cloud Endure (a cloud migration and disaster recovery product) and Trifacta (data wrangling solutions).

Infosys has deep alliances with D+H, Misys, Smart Stream, SAS and Atomize. It has created centers of excellence for a complete suite of services around Misys-LoanIQ, Smart Stream TLM and SAS Financial Crime. It has set up a dedicated insurance product lab to build and augment competencies on COTS products and partnerships, including Fadata, Vermeg, OneShield, Sapiens, Oracle, Procentia, Itello, Opentext Exstream, GMC Inspire, Papyrus and Thunderhead to meet insurers’ geography-specific needs.

Caution

Infosys can further enhance its platform and cloud based-offerings. Infosys’ insurance practice is small compared to other global players. However, it has won some key accounts in the last year.
TECH MAHINDRA

Overview

Tech Mahindra has generated revenue of around $380 million by providing ADM services to the BFSI industry in 2017. It has nearly 7,000 resources aligned to this industry and more than 110 BFSI clients in Europe, of which 75 are in the U.K. and are served by nine delivery centers and 1,000 FTEs.

Tech Mahindra’s key focus areas include core banking, lending, payments and wealth management.

Strengths

The platform transforms the current software delivery lifecycle process and improves all-around productivity and predictability. It encompasses various aspects such as software architecture and design, implementation and testing, modularity and reuse, and resource planning and skill development. The platform is designed with six independent pods that interact with each other using AI and analytics. The six pods are: microservices-enabled portfolio services (MePS); crowdsourcing as-a-service (CaaS); digital inside continuous delivery (DiCD); up-skilling as-a-service (UaaS), active program workplace (APW) and design thinking as-a-service (DTaS).

Formation of core alliances and platform strategy: For the banking vertical, Tech Mahindra has relied on alliances with Temenos, Actimize and OFSAA for growing its business. For the financial services vertical, Tech Mahindra has focused on wealth management with capabilities around Temenos and Avaloq. It also has SURE, which is a platform for retirement and wealth administration, and MDS, which is a platform for managed data services. For example, SURE focuses on developing platforms to drive business from the insurance sector. For the Insurance vertical, Tech Mahindra is driving its business by relying on platform alliances, such as OneShield, Britecore and OIPA. Internally, Tech Mahindra is focusing on platforms for straight-through processing, such as IntelliClaims, Zero Touch Underwriting (ZTU) and SENTINEL.

Caution

Tech Mahindra can further enhance its BFSI offering in areas like cybersecurity, fintech collaboration, IoT, open banking and microservices.
Definition

The HCLS industry includes ADM services provided to health-care institutions, health payers, pharma, biotech and medical devices companies.

This quadrant will assess the strength of providers that offer next-gen ADM services to the HCLS industry vertical.
Next-Gen ADM Health-care / Life Sciences Industry

Observations

The nature of the market and its very specific requirements limit the number of next-gen ADM providers to be mentioned in the quadrant for the U.K. HCLS market. Capgemini and Accenture lead, together with Tech Mahindra.

- Capgemini leads the market, functionally as well as from a perspective of industry-specific solutions and its exceptional presence in Europe.

- Accenture’s consultancy approach, flanked by impressive industry knowledge and technical capabilities, seems to be the right approach to address HCLS requirements to change the ADM landscape.

- Tech Mahindra provides a strong enterprise architects practice and could address larger customers. Tech Mahindra’s technology partnerships, open-source capabilities and managed services toolkit are some of its key differentiators.
Accenture is among the world’s leading next-gen providers with global ADM services revenue estimated to be approximately $17 billion in 2017, from which Europe has a share of about 40 percent, with more than 150 active clients. In recent years, Accenture has made a series of acquisitions in the areas of analytics, cloud, application design and automation.

Strengths

Accenture successfully bundles the capabilities of different business units in customer projects, e.g., Accenture Research, Accenture Ventures, Accenture Labs, Accenture Studios, Accenture Innovation Centers and Accenture Delivery Centers, and thus delivers strong innovation and design-thinking methods.

Over the years, Accenture has invested heavily in the development of applications, analysis, accelerators, platforms and methods. Accenture also has a strong suite of constantly evolving, problem-specific technology solutions.

Accenture wins many large digital contracts due to its strong portfolio of mobility services, cloud capabilities, technology stacks, automation approaches and consulting experience.

Caution

Accenture is a supplier in the high-price segment because of its capabilities. For customers looking for simple solutions, Accenture is not always the best partner.

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Accenture’s current investments in analytics tools and platform standardization are an excellent addition to its deep industry expertise and ability to execute locally in the HCLS.
**Overview**

French-based Capgemini is very well positioned in the next-gen ADM market globally and is one of the largest providers in this segment in the U.K. Approximately 60 percent of the company’s turnover comes from ADM projects, with 13 percent in the U.K. Globally, the U.K. provides 10 percent of Capgemini’s HCLS client base.

**Strengths**

Capgemini’s health-care practice is part of financial services (FS), which accounted for 27 percent of the group revenue in 2017, and life sciences is part of MALS (Manufacturing, Automotive and Life Sciences), which accounted for 21 percent of the group revenue in 2017.

Through the ADMnext suite, Capgemini is able to provide multiple benefits and services to HCLS companies, including regulatory- and compliance-specific expertise, a unified delivery platform, access to a diverse workforce with domain and technical expertise and flexible pricing based on business outcomes.

Capgemini has developed various solutions and accelerators catering to various segments under the HCLS sector. For example: LS Path is an end-to-end preconfigured digital transformation platform for life sciences companies; Digicare is a patient engagement platform; and fraud analytics analyze a payer’s data to identify and flag potential fraudulent claims.

**Caution**

ISG consultants rate Capgemini as average when it comes to offering low-cost ADM solutions in managed services contracts.

The number of specific and identifiable customer references in Europe is relatively small and should be expanded.

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2019 ISG Provider Lens™ Leader

Capgemini has a strong position in the overall next-gen ADM market and a promising portfolio in the European HCLS industry, with some impressive use cases.
TECH MAHINDRA

Overview
Approximately 8,600 Tech Mahindra employees provide ADM services to customers in Europe, including 1,100 in HCLS, through a network of 18 delivery centers in Europe and 61 worldwide.

Strengths
Tech Mahindra has partnerships with key technology vendors, including IBM, Oracle, Microsoft, Red Hat JBoss and Spring Source for building competency in new and emerging Java technologies.

The SureSmart Toolkit provides a set of Tech Mahindra -developed tools that incorporate RPA, self-learning, self-healing and AI. The tools can be integrated with third-party products to achieve high-end automation beyond just task or process automation. The Tech Mahindra SureSmart Toolkit for Managed Services is powered by three main tools: CUBES, which provides application, infrastructure and network support automation; UNO, a set of RPA solutions; and TACTiX, a set of industry-specific AI applications for business and IT operations.

Tech Mahindra has capabilities in a wide range of open source development frameworks (GWT, JSF, SPRING, STRUTS, Hibernate, Jtrac, Wicket). It also has a strong repository of methodologies, reusable components, solution accelerators and tools to improve code quality and enhance developer productivity.

Caution
The number of enterprise customers is rather small in relation to the competition, especially relative to the extremely strong growth. Tech Mahindra should be able to attract larger customers.

There is a need to develop vertical-specific offerings for the HCLS industry. Tech Mahindra also needs to further develop offerings in the life sciences space.

2019 ISG Provider Lens™ Leader
Tech Mahindra can be a good fit for clients looking to adopt open-source technologies. Clients looking for a partner to automate processes resulting in cost savings also can consider Tech Mahindra as a strong option.
**NEXT-GEN ADM MANUFACTURING INDUSTRY**

**Definition**

The BFSI industry includes ADM services provided to banking, diversified financial and insurance companies.

This quadrant will assess the strength of providers offering next-gen ADM services to the BFSI industry vertical.

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**Next-gen Application Development & Maintenance (ADM) Services**

**Next-gen ADM - Manufacturing Industry**

Source: ISG Research 2018
IBM clearly leads the pack, followed by Capgemini, Accenture and HCL. The U.K. manufacturing industry market is characterized by a high proportion of local, midmarket companies and their close linkage and cooperation with large enterprises.

- IBM brings its own manufacturing tradition to the table. Combined with its large local team, its capabilities to quickly and effectively integrating engineers from all over the world into customer projects and its consultative approach, IBM offers effective modernization efforts in all stages of the application lifecycle.

- Capgemini’s strong position in the manufacturing industry is based on its large local presentation and digital factory-approach. Capgemini is strongly pushing its position in the manufacturing sector.

- Accenture’s consultancy approach, flanked by impressive industry knowledge and technical capabilities, seems to be the right approach to address manufacturing industry requirements to move its ADM landscape toward new business opportunities.

- HCL’s customer mix strengthens its position as an end-to-end ADM player in this industry. The manufacturing vertical covers about a quarter of HCL’s European ADM revenue.
Accenture has approximately 70,000 application outsourcing experts worldwide, providing ADM services to customers through a global sales network of more than 50 centers in 35 countries, of which about 20 are in Europe.

**Strengths**

Accenture is one of the few providers equally able to consolidate its customers’ application landscapes on external platforms such as SAP HANA or Oracle and build its own platforms. Accenture can do this through its partnerships with leading technology providers and its industry expertise.

As a leader in BPM for finance and accounting, Accenture offers comprehensive platform integration services and has been quite successful in developing complementary business services for manufacturing companies.

Accenture clients get early access to new technologies via its wide range of more than 150 alliances with universities, start-ups and top technology vendors, including SAP, Oracle, Microsoft, Pega and emerging players. Its seven technology labs (including two in the U.S.) incubate and prototype new concepts through applied R&D projects for clients’ businesses.

Accenture wins many large digital contracts due to its strong portfolio of mobility services, cloud capabilities, technology stacks, automation approaches and consulting experience.

**Caution**

Accenture's premium price tag could affect its financial performance as the market becomes more cost competitive. In stand-alone development contracts, it faces stiff competition from both midsize and large providers.

Accenture has a comprehensive portfolio of development services, joint research and industry-specific tooling capabilities and a technology-aligned delivery.
Overview

French-based Capgemini is very well positioned in the next-gen ADM market globally and is one of the largest providers in this segment in the U.K. Approximately 60 percent of the company's turnover comes from ADM projects, with 13 percent in the U.K.

Strengths

Capgemini is present in all sub-segments of the manufacturing industry and shows interesting and successful customer projects. A wide range of its own solutions and tools demonstrates a deep understanding of the industry and is used successfully by many customers. These include solutions for Industry 4.0 Data Analytics Platform, 3D Visualization, AR/VR-based process digitization and automotive cyber security.

With a strategic focus on intelligent automation, cloud/SaaS adoption, cognitive computing/AI, analytics — Big Data Lake as a Service (BDLaas) and “digital factory” concepts, Capgemini continues to develop intensively in the industry.

CHROME is the manufacturing and automotive domain center of excellence (CoE). It leverages domain subject matter specialists (SMSs) and assets for digital manufacturing excellence to help deliver innovative solutions. It also acts as a source of in-depth knowledge for new-age technologies such as IoT, AR, VR, blockchain, machine-learning and drones supported by analytics, as well as more traditional technologies of ERP, MES, PLM and asset-management platforms. It also features excellence platform factory of the Future (FotF), focused on Industry 4.0.

Caution

Capgemini's automation drive suite, comprising a unified, open and dynamic set of automation tools, is impressive. However, its peers have been able to develop equally or more effective platforms with use cases yielding a high percentage of task automation and incident elimination.

2019 ISG Provider Lens™ Leader

Capgemini’s offerings span the manufacturing delivery chain and are coupled with an impressive approach to modernize and transform the core along with ensuring business continuity.
HCL

Overview
HCL is very well positioned in the European manufacturing market with about 1,900 employees and revenue of $130 million from 18 enterprise clients. The customer mix strengthens HCL's position as an end-to-end ADM player in this industry.

Strengths
HCL offers several comprehensive toolsets that take a 360-degree perspective on the tasks. These include operations and supply chain management, partner networks of suppliers, dealers and distributors, customer services and customer communications. Furthermore, topics such as maintenance, DryIce and Autonomics (AI-enabled Automation) and orchestration are provided.

HCL's tools and accelerators, including ADPaas and Code Generator, provide a low-code environment for developers to automate application development. HCL's Advantage ALM framework can be used with third-party tools and the existing technology stack of health-care organizations to build, deploy and test applications on-premise and in the cloud. Moreover, HCL's platform-as-a-service (PaaS) offerings are capable of moving a health-care organizations' IT capabilities to the cloud, the adoption of which is increasing at a healthy pace.

Innovation around the patient is the focal point of HCL's comprehensive framework, which was guided by "the four I's" — intelligence, interaction, integration and insight. The framework contains a strong intelligence layer, comprising patient segmentation, benchmarking, analysis, simulation and more. The interaction layer is multi-channel and includes social media, mobile, in-person and Web support. The integration layer collects and organizes information from multiple sources, including from pharmaceutical companies, labs, providers and others. For example, through a partner, HCL has built a platform that can integrate data from more than 160 medical devices in real time. Finally, the insight layer provides actionable care and business recommendations.

Caution
HCL can further strengthen its offerings in the following areas: advanced analytics and AI, enterprise security, patient engagement solutions and biotechnology.

2019 ISG Provider Lens™ Leader
HCL's modernization and transformation-based approach leveraging an agile POD-based delivery model has been a key strength to meet the growing manufacturing industry needs for ADM services.
IBM

Overview

IBM provides highly innovative offerings including AI, analytics, automation, cloud, mobility and security. Many competitors use IBM solutions to create their own offerings. For example, several service providers use IBM Watson as the basis for their own AI offerings.

Approximately 15 percent of IBM's ADM workforce caters to the manufacturing industry. It is among the top five industries by revenue for IBM.

Strengths

IBM strongly focuses on cognitive analytics in manufacturing and provides this in various areas of the supply chain. With the Watson IoT Platform, IBM offers a development platform for integrative IoT solutions. IBM has the tools, best practices from its own factories, and a pool of experienced industry consultants and engineers to add value to the entire manufacturing modernization process.

IBM provides industrialized and flexible models for accelerated application development. Its portfolio includes IBM design-thinking, the IBM Migration Factory for bringing non-IBM clients into the IBM environment, cloud-based development platforms, the MobileFirst development platform, the API Economy marketplace, DevOps innovation services and garage-based development.

IBM has several successful implementations of digital native systems that are based on integrated processes, run on cloud platforms and provide deep business insight through analytics. Implementations often rely on a wide range of proprietary tools: Bluemix Cloud, WebSphere, API Economy, MobileFirst and Watson.

IBM has been a U.S. technology patent leader for 25 consecutive years, providing technology labs worldwide. Through a series of acquisitions (24 in the ADM environment between 2015 and 2017 alone), IBM is continuously expanding its own strong technology portfolio.

Caution

Recently, the company has been struggling for sustainable profitability in the IT service business. IBM's premium service positioning is repeatedly challenged by cost-effective offerings from competitors, especially India's leading providers.
Methodology
METHODOLOGY

The research study “ISG Provider Lens™ 2019 – 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 and positions these providers based on the ISG Research methodology. The study was divided into the following steps:

1. Define the “Next-Gen Application Development & Maintenance (ADM) Services” market
2. Conduct questionnaire-based surveys with service providers/vendor across all trend topics
3. Hold interactive discussions with service providers/vendors on capabilities and use cases
4. Leverage ISG’s internal databases and advisor knowledge and experience (wherever applicable)
5. Analyze and evaluate services and service documentation based on the facts and figures received from providers and other sources.
6. Evaluate based on the following key criteria:
   - Strategy and vision
   - Innovation
   - Brand awareness and presence in the market
   - Sales and partner landscape
   - Breadth and depth of portfolio of services offered
   - Technology advancements
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Ashish Chaturvedi is a DIGITAL XPERT and Principal Analyst at ISG with over 8 years of experience spanning IT sourcing, technology and industry research. In his current role, Ashish is responsible for authoring thought leadership papers and provider intelligence reports (i.e. Archetypes and Quadrants) in areas of Next-gen ADM and Data Analytics. He has authored several research papers in the realm of Enterprise applications, Cognitive technologies, and Big Data. He is also a member of IDG influencer network (CIO.com).
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