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The research and analysis presented in this report includes research from the ISG Provider Lens™ program, ongoing ISG Research programs, interviews with ISG advisors, briefings with services providers and analysis of publicly available market information from multiple sources. The data collected for this report represents information that was current as of July 2nd, 2018. ISG recognizes that many mergers and acquisitions have taken place since that time but those changes are not reflected in this report.

The authors for this report are Pedro Luís Bicudo Maschio, from TGT Consult, a consultant to ISG, and Kenn Walters. The editor is Jan Erik Aase.

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EXECUTIVE SUMMARY

Digital Business Transformation

There is no clear definition of digital business. Hype is everywhere. Expressions such as “digital disruption,” “sharing economy” and “uberization” are commonly quoted for multiple purposes. During the research for this study, we observed that software vendors and service providers share their clients’ uncertainty and speculation around the future and what is necessary to become a leader or protect their leadership position. In this report, we apply a reality lens to clarify what is indeed possible and tangible for real people and real businesses to accomplish nowadays.

Taking stock market capitalization as a measuring rule, the top five most valuable companies in the world are digital: Apple, Microsoft, Amazon, Alphabet and Facebook. One might say Apple sells products and so it is not a digital company. However, the iPhone profit margin can be as high as 60 percent, which makes Apple such a valuable company. The iPhone success comes from design and the convenient Internet access and apps it provides. Think about how much someone would pay for an iPhone without Internet access and no apps. Perhaps Apple sells the Internet with a design. Another relevant example is Amazon; it is a retailer, however, its digital platform provides the logistics to deliver products faster and algorithms to increase sales. Microsoft, Alphabet and Facebook have almost no physical product, what they sell is intangible by nature.

Digital companies add abstraction to their matter. In the digital era, customers buy experiences, feelings, well-being, comfort, convenience, and so forth. In one example, a service provider was hired to increase tractor sales, a legitimate target. It used design thinking involving farmers to discuss their real needs to develop a mobile app. The app does not have a “buy button” for new tractors; instead, it has farming apps, services, parts and used tractors marketplace that, in the end, increased 27 percent sales of new tractors. It adds software (the app) on top of matter (the tractor).

“There is no abstract art. You must always start with something. Afterward you can remove all traces of reality.” — Pablo Picasso.

Digital is permeating all aspects of the traditional business. The above example touches the sales process. Other cases change trading, production, supply chain, product design, human resource management and all processes required to run a business. The digital business value chain has three imperatives: experience (abstraction above products), in the cloud (an abstraction from infrastructure) and agility (software changing products).

Bots impact service providers

Robotic process automation (RPA), automation and AI are impacting all players. Service providers are reorganizing their workforces by reskilling, training and moving headcount to closer to clients. Cognitive computing is not replacing humans, as we saw an increase in headcount for almost all the service providers we examined. While repetitive tasks are being replaced with RPA and AI bots, cognitive computing is pushing reskilling and expanding service coverage, thereby requiring more people.
Disruption of the labor-intensive market

Leading service providers are developing intellectual property (IP) in the form of tools, service platforms, frameworks, SaaS and PaaS, with extensive use of service data, analytics, RPA, AI and cognitive computing. Disruption is happening for service providers that were competitive by offering low prices for labor-intensive services. Digital transformation is pushing R&D budgets. Those that cannot afford to develop supporting solutions will eventually run out of business. We are seeing large R&D budgets that were not common for service companies.

The emergence of ecosystems

Ecosystems are one level up partnerships. Companies cannot survive alone and cannot afford to build everything necessary to compete. Some remarkable examples include Microsoft’s partnership with Linux, Apple and Red Hat; IBM’s partnership with AWS, Microsoft Azure, ServiceNow and VMware (which is owned by Dell). Most of the leading service providers have strong alliances with several competing cloud IaaS providers, and are even partnering with each other.

In the past these partnerships were intended to expand the sales channels, maintaining a value-chain around a product or vendor. Today, these partnerships aim to create new offerings and develop the market, improving customer experience. The co-creation and collaboration define an ecosystem, where value exists together but dilutes if separated. It is the case that Microsoft and IBM have more value each if they work together, and value less if broken apart.

Two provider strategies to digital transformation

Some service providers position themselves as the protagonists of the digital transformation, while others are enablers. The protagonists propose to guide the transformation, through intense consulting around organizational change management, business consulting and digital product creation. Lean is the most common methodology offered to manage the digital business; these service providers presume that Lean is the best management tool ever.

Enablers position themselves as “tools” for the digital transformation. These service providers have plenty of options in their portfolio and expect the enterprise client to pick and choose the best arrangement, without a clear proposed amalgam. Enablers presume the enterprise client knows how to conduct a digital transformation.

Hackathons for hiring

It has been frequent to hear management people express that hiring the right people is key to business success. It seems that digital transformation boosts that belief. Especially for agility, when practitioners must synchronize their work, collaborate and commit to a single goal, the behavior is more important than technology. However, hiring on profession, certification and education is pragmatic, while hiring on behavior is challenging.

Almost all participants in this study conduct hackathons on a regular basis. Several have reported that during hackathons they observe behavior for later hiring the best individuals, and sometimes hiring an entire team. Winning the hackathon is not part of the criteria;
however, problem-solving, reaction to stress, collaboration, team spirit and commitment are some of the behaviors observed.

The segments of the digital transformation services market that are profiled in this report are identified and described below.

Enabling the Digital Customer Journey

Customer journey is transforming how companies organize marketing, sales, delivery and post-sales processes. Most service providers use design thinking as the core method to uncover the customer journey. Variations occur regarding facilitation and outcomes, with some players focusing on application development while others look at a broader customer experience.

A major differentiator among service providers is how design is included in the customer journey assessment. Some of the assessed providers focus on acquiring digital agencies and have a great focus on design over the customer experience on functions and product options. Others prioritize the user experience, features and functions over traditional design and branding. The design focus was not used to rank providers, as we have not identified a reference, or benchmark, for which approach is better. It seems that there is market for both approaches.

Technology enablement seems to be prized by all participants. During customer journey, design seems to be the best time to experiment innovation and introduce new technologies. The design process includes technology experts, sales, marketing, designers and clients in a collaborative process.

One example of technology experimentation is how mobile has impacted traditional business and changed the sales process for cars. Renault Kwid is an entry-level car in Brazil. Renault used agile development to deliver an e-commerce site in 44 days. From January to July 2018 it sold 11,000 cars over its e-commerce platform, which was accessed from phones and tablets in almost 70 percent of the cases.

Digital Enterprise Operations

Digital business positions software at the core, it is the center of a business operation. The software has moved up, from business support to business enablement and as such, it cannot fail. Digital enterprise operations must be agile, stable, secure and reliable. To deliver on these expectations, leading service providers have invested heavily in automation.

A typical digital business runs in the cloud. Although certain legacy businesses such as Brazilian banks have not migrated to the cloud, in particular, because their data centers are larger than the cloud providers’ data centers, their competitors that are small and offer disruptive solutions, were born in the cloud. These banks are pushing the traditional business to rethink the need for concentrating processing capacity. For large data centers, service providers are offering a cloud-like experience on top of VMware, simulating IaaS on-premises.

The need to move to the cloud is to enable serverless computing, infrastructure as code, microservices, Kubernetes and containers. These are crucial elements to enable agility, advanced DevOps and continuous delivery, allowing for a digital enterprise to reduce time to market and keep up with startups and new entrants in the market.
A key enabler is Cloud Foundry or its competitor OpenShift; these platforms allow applications to be seamlessly deployed in multiple clouds. The consistency of one application running in multiple clouds elevates the availability, security and business continuity, at lower costs as compared to deprecated clustering and disaster recovery methods.

Leaders in this market comply with zero outage targets. They use highly automated management platforms with autonomous, AI-based self-healing, provisioning, auto-scale and performance optimization. Services such as CDN are included.

**Digital Transformational Platforms (PaaS)**

Platforms provide integrated processes to rapidly deliver end-to-end business solutions. Platforms have the architectures and workflows to provide services. Insurance, lending, human resources management, ERP, CRM and many others platforms were identified in this study. Service providers load enterprise data into the platform, for immediate use after business configuration. Platforms run in the cloud as a service (PaaS). Some service providers partner with PaaS vendors, others are developing their own PaaS, leveraging their market specialization.

The ideal PaaS has all the core functionality, APIs and microservices to integrate with other systems, clouds, suppliers and clients. Service providers customize apps that connect to PaaS to provide unique user experiences and business differentiation.

Another relevant trend is the emergence of Cloud Foundry and OpenShift as application development platforms. There are competitors in the market; however, these two are the most common options among the participants in this study. The development platform as a service (DPaaS) allows clients to speed the digital transformation. DPaaS compiles cloud-native applications, leveraging the advanced resources from cloud providers.

Service providers can also use DPaaS to convert legacy applications to the cloud.

**Digital Transformational Services (aaS)**

The as-a-service model is imperative in the digital economy. Software as a service eliminates the capital investment to acquire costly software solutions. Some service providers have specialized in converting legacy applications to run in the cloud under the as-a-service payment model, while some others specialized in extracting data from legacy applications to migrate to SaaS offerings.

The limitations to customizing the software are not relevant to a typical SaaS enterprise client. The benefits of high availability and lower costs outpace the desire to customize. Usually, APIs are available to extract data and integrate peripheral apps that perform custom tasks or provide data views. SaaS responds to the business pressure to have an asset-free organization, reducing the need for financial provisioning. SaaS typically implies no long-term obligations.
Digital Product Creation & Customization

Todays’ buyers are different from past generations. The average buyer is older, better informed and concerned with continuous learning. Information is readily available. Social media has a significant influence on buying patterns. Preferences change fast and customers have many options to choose. Products need reinvention to incorporate interaction and new information. Digital products need variations for different groups of interest. Products and services are no longer merely segmented by gender, age, country, city or language. Personas and customer journeys feed the product creation.

Service providers offer stable product development professionals organized in squads with multi-functional teams that use design thinking, real-time analytics, product and service performance data, benchmarking, social network feedback, agile development and many specialized tools to change products and offerings in short time for nearly immediate deployment. Two-to-four week release cycles are frequent targets.

Digital Continuous Delivery – Increasing Enterprise Agility

Continuous delivery complements and extends the customer journey and product development; however, it is the bottleneck for the digital enterprise.

Continuous integration, continuous testing and DevOps enable continuous delivery. The first, continuous integration is the process of merging the various applications under development, to assure consistency of different code versions. Continuous testing requires automation, scripts, data sets and testing scenarios that change every time the product changes. DevOps requires quality assurance before deploying into production while assuring that rollback is possible if problems occur. All these processes need discipline, governance and much automation; otherwise, the delivery process becomes costly, ineffective and slow.

If continuous delivery is not set up properly, it puts the digital transformation in jeopardy. Leading service providers have invested in automating DevOps, which includes all the above-mentioned processes. Clients are advised to check the service provider references in detail.

Blockchain as a Service

Blockchain projects are a reality and several service providers have proven this technology viability. Market expectations are still high; however, service providers are finding use-cases that make sense. In Brazil, R3 Corda is being pushed and tested by Itaú Unibanco and Bradesco, both partners of the global R3 consortium. Banco do Brasil, Caixa Econômica Federal, Santander Brasil, Banrisul and Sicoob (credit cooperative) are leading another project using IBM-Hyperledger. Besides the banking sector interest in blockchain, viable use-cases are commonly found in supply chain, tracking, payment services and document and contract processing.

This study found that service providers are ready to deploy and operate blockchain at scale. There are solutions in production and an important number of use cases that work, perform and are cost-efficient but lack business interest in adoption. Perhaps blockchain is not going to be as disruptive as promoted, or it needs demystification to be better accepted by regular enterprises.
Introduction

The digital transformation megatrend is a top priority on corporate agendas. The delivery of digital transformational solutions coupled with corporate agility is fully supported by advisors and researchers that are concentrating upon future-oriented business models. The focus is on enabling businesses to efficiently address individual customer expectations and requirements, rapidly, with minimal unplanned cost, effort or disruption for the enterprise, thus increasing the corporation’s competitiveness. This requires companies to move to a digital transformational technology and process level as soon as possible and then strive for continuous change – both internally and externally. This study covers three overriding aspects of digital transformation. The general aspects and the specific quadrants covered within each one are presented below:

- Realizing the digital ambition comprised of two quadrants: Enabling the Customer Journey, Digital Enterprise Operations.
- Disruptive services: Blockchain.

Definition

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- Realizing the digital ambition comprised of two quadrants: Enabling the Customer Journey, Digital Enterprise Operations.
- Disruptive services: Blockchain.
Definition (cont.)

Scope of the Report

This report analyses companies that provide transformation and operations for the digital enterprise in Brazil. Some of the participating companies may have small operations when compared to their major markets, or can be local niche players by nature. The intent of this report is to rank companies by their ability to perform digital services, regardless of the service provider size in revenue or headcount. The purpose is to assist Brazilian organizations in selecting providers based on their experience, vision, technology, understanding of the local market and the ability to bring the best global expertise on board to take the Brazilian digital enterprise to a global level.

All the participating companies have operations in Brazil and can provide digital transformation and operations services. Service providers are positioned in seven quadrants as illustrated.

Enabling the Digital Customer Journey

A customer journey comprises the individual cycles people experience before and during the decision-making process for buying or using a product or service, and their product or service experience after making the purchase. Digital technologies can be used to allow for a completely new customer experience. This category comprises agencies and service providers that have specialized in developing comprehensive portfolios of digital go-to-market and business strategies, brand communications, creative services, design and experience offerings. The providers understand, but are not limited to, their own underlying technology and solutions, ensuring an integrated strategy to roadmap the digital customer journey offering to the enterprise client.

IT vendors, strategy advisors and service providers such as IBM, Accenture and Deloitte continue to take over marketing agencies and are raising their internal competencies to strengthen their presence in marketing departments, while marketing agencies are strongly enhancing their digital and IT technology competencies.
Definition (cont.)

Digital Enterprise Operations

This segment covers the digitization of the processes of a typical large-scale organization. Digitization is accomplished using an ecosystem of components, tech platforms, processes and system integration. It may either use PaaS, or in-house operations and data centers, or as-a-service (aaS) operations and main data center functions in a managed and integrated (end to end) manner. It includes DevOps tools and improvement to all operational and rapid provisioning processes.

Digital Enterprise Operations providers help customers operate smart, IT-based infrastructures, platforms and networks that connect sales, service and partners across the whole value chain. This market segment combines traditional operational excellence, including highly sophisticated technology, with managed services know-how and an in-depth understanding of customers’ business and industry-specific challenges.

These implementations are often considered “initial” or “starter” steps in the journey from traditional or current operations towards cloud-based operations that map to the inspirational enterprise “customer journey” plans. They are in many cases considered initial iterations that are replaceable by more customized and comprehensive PaaS and/or XaaS offerings. The transition occurs as the enterprise becomes more mature in its aspirations and further along its strategic roadmap of the overall digital transformation process, tempered by business and customer feedback, usage patterns and new requirements based on the initial operating offering.
Definition (cont.)

Digital Transformational Platforms PaaS

This segment lists and grades all the PaaS multi-tenant platform solutions, which can be integrated together and offered to enterprise by system integrators (and potentially by vendors acting in a SI role). It focuses upon solutions with a high degree of automation that are ready to use out of the box (pre-built), and those which need customization by the SI (and partners) but are designed for ease of customer tailoring and modification (via open, modular and customizable components). Data center managed service, IaaS and hybrid cloud management are optional, because a client may have another provider for infrastructure management. Cloud computing is the foundation and the philosophy behind these platforms, which can be enhanced and refined based on an expansive partner ecosystem.

Solutions may consist of a technological mix, including hybrids of in-house developments and best-of-breed solutions by leading product and platform-as-a-service providers. They are embedded in web platforms and cloud marketplaces, which provide networking effects and integrate and distribute products or services from the platform provider and third parties.

Many systems integrators are established players in this segment. Their entry may have resulted from prior histories of being involved with integrating cloud management and orchestration technological advances and event processing services, coupled with their ecosystems of internal and partner offerings and adaptation capabilities.
Definition (cont.)

Digital Transformational Services aaS

This segment evaluates and grades “cloud first” aaS service providers that are focused on digital transformation with out-of-the-box solutions or solutions (often open or modular) that are easy to customize for specific enterprise needs. The provider can manage the solution or service end to end if required. This may be individually focused part areas of the entire digital transformation enterprise service chain (for example CRM or mobile apps and IoT integration, microservice and API integration and provisioning, ERP, etc.) or may be complete solutions based upon the overall design and transformational roadmap for the enterprise, as delivered by strategic planning.

Solutions may consist of a technological mix, including hybrids of in-house developments and best-of-breed solutions by leading product and platform-as-a-service providers. They are embedded in web platforms and cloud marketplaces, which provide networking effects and integrate and distribute products or services from the platform provider and third parties.

Many systems integrators are established players in this segment. Their entry may have resulted from prior histories of being involved with integrating cloud management and orchestration technological advances and event processing services, coupled with their ecosystems of internal and partner offerings and adaptation capabilities.
Definition (cont.)

Digital Product Creation and Customization

This segment covers the creation of new digital products from ground up for enterprise, either as new service components for the business, or by adapting existing but outmoded service components. These developments and customizations may be offered as a service but fall short of the full continuous delivery paradigm. Monetization of these products should be built in and part of the development process. Some examples of digital transformational products include application accelerators, browse-and-buy capability for mobile end users, hotspot marketing, try-before-buying/demo subscriptions and digital mirroring that simulates trying a product and provides stats and customer acceptance feedback.

Accelerating innovation for using digital transformational products and methods to translate information into revenues is based on lean, flexible and customer-centric business processes. The processes should be supported with inclusive agile development that is highly mapped to the goals. The current mantra focused on “information excellence” urges enterprises to scrutinize and improve all of their processes related to creating products and services. Major challenges for companies include developing the functionality and processes to evaluate and support ideas within the context of current digitalization trends.
Definition (cont.)

**Digital Continuous Delivery – Increasing Enterprise Agility**

Digital Continuous Delivery gives organizations the ability to develop and deliver high-quality software faster and more efficiently than ever before. It allows the use of development pods, innovation labs and direct feedback from end users and customers to increase the relevance of software being released into the market as well as to shape new specific products and micro services. End user and customer feedback is often captured automatically via usage pattern analytics. Enterprises can have in-house continuous development and innovation staff, access resources jointly with in-house and external partner companies or through an as-a-service arrangement, with only the management and authorization function remaining in-house.

Providers of this set of services must be able to offer all of the benefits and practices of companies from within the Digital Product Creation & Customization space, (as described in the preceding segment), and also offer a workplace or shared workspace experience for collaboration. Under this environment, employees or user groups crowdsource to develop new products and services designed for new digital experiences. The providers have assets to support product ideation and prototype testing such as: collaboration tools, virtual reality labs, IoT platforms for prototyping, telepresence for remote team collaboration, design thinking, A/B tests and methodology experts to facilitate product creation. Prototypes can be created and tested very quickly using the agile methods described in the preceding section. Providers that compete in this market can engage by project or as a continuous permanent innovation lab and can share revenues from product monetization.
Definition (cont.)

Blockchain as a Service

Although commonly associated with Bitcoin and other cryptocurrencies, blockchain technology has many other applications. Simplistically, a blockchain is a type of distributed ledger or decentralized database that keeps continuously updated digital records of who owns what, with a network of replicated databases, synchronized via the internet and visible to anyone within the network. Blockchain networks can be private, with restricted membership like an intranet, or public. When a digital transaction is carried out, it is grouped in a cryptographically protected block with other transactions that have occurred in the last 10 minutes (or less) and the record is sent to the entire network.

Blockchain as a Service

Bitcoin is merely the first and most well-known use of distributed ledger technology. In fact, Bitcoin is only one of approximately 700 applications that use the blockchain operating system today. One example of blockchain’s evolution and broad application beyond digital currency is the development of the Ethereum public blockchain, which is providing a way to execute peer-to-peer contracts. Another example is provenance and authenticity tracking, which allows evidence based on numbers, codes, readable tags and even photographic evidence to be available in an unbroken chain from an item’s manufacturer or provider, through distributors and third parties, to the purchaser/end user. The process can provide evidence of the item and record all steps in its supply chain from origin to end user. Such distributed ledger approaches increasingly are being used for tracking art and other valuable objects, and in areas such as aircraft and vehicle maintenance part inventory supply and control. Blockchain’s decentralized, open and cryptographic nature allows people to trust each other and transact peer-to-peer, making the need for intermediaries obsolete. The technology and processes it enables also bring unprecedented security benefits. Hacking attacks that commonly impact large centralized intermediaries like banks would be virtually impossible to carry out on a blockchain, because every block ever made on a subject, across the entire internet or network, would have to be overwritten, as would the backups.

In this segment we examine service providers that can implement tests, pilot use-cases and operate blockchain.
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.
## Digital Business Transformation - Quadrant Provider Listing 1 of 3

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# Digital Business Transformation - Quadrant Provider Listing 2 of 3

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### Digital Business Transformation - Quadrant Provider Listing 3 of 3

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*ISG Provider Lens™*
Digital Business Transformation Quadrants
ENABLING THE DIGITAL CUSTOMER JOURNEY

Definition

A customer journey comprises the individual cycles clients experience before and during the decision-making process for buying or using a product or service, and their experience after the purchase. Digital technologies can be used to allow for a completely new customer experience. This quadrant covers agencies and service providers that have specialized in comprehensive portfolios of digital go-to-market and business strategies, brand communications, creative service, design and experience offerings. These providers understand, but are not limited to, applying their own underlying technology and solutions to ensure an integrated strategy to roadmap the digital customer journey offering to the enterprise.

Modern marketing, with its increasing focus on content and narratives, leverages integrated marketing suites to efficiently manage and monitor all kinds of multi-channel campaigns and to analyze results accordingly. Customers’ opinions and responses in the digital world are very valuable. They can be used to improve a product or service by directly linking the customer with the product development department. The product development organization can use intelligent
algorithms, analysis of individual customers and derivations gained from mass data to be one step ahead of the individual customer. Companies are building virtual relationships with each customer, which serves both the individual and the company. A “virtualized” customer can be supported and influenced digitally. Customers are addressed on a more direct and personal level and within the context of the respective situation, and feel better understood. By focusing on individually relevant content, activating stories or use cases, companies can address their customers even better.

This helps companies ensure higher customer retention and satisfaction, and thus, to develop positive influencers on the web (via word of mouth and social selling), generate higher revenues through cross-selling options, achieve higher conversion rates, higher profitability and lower customer churn rates.

A holistic perspective of the digital customer journey requires a new view of underlying business processes and organizational structures. Major challenges to be mastered include the required integration of digital customer journey elements into existing (legacy) systems and using the collected data. Providers’ approaches differ greatly, depending on whether their core business is that of an IT provider, a consulting house or a web agency, and the extent they contribute required competencies themselves or involve partners.

Customers must select a provider that can help them create or modify the strategy based upon their individual requirements. Leaders in the Digital Customer Journey segment are highly creative, with a focus on their target customers, while also providing extensive competencies to address various digital topics to ensure realistic strategies and roadmaps.

IT vendors, strategy advisors and service providers such as IBM, Accenture and Deloitte continue to acquire marketing agencies and are building their internal competencies to strengthen their presence in clients’ marketing departments, while marketing agencies are strongly enhancing their digital and IT technology competencies.
Observations

The digital customer journey has become a hot topic in any discussion around digital businesses.

All service providers included in this study, and others that did not qualify for this quadrant report, talk about design thinking, personas definition and customer journey, as it had been a recently discovered concept. One confusing aspect is that many providers mix client needs and customer journey in their speech. It is sometimes a consequence of the misleading knowledge of the interlocutor, and the lack of robustness of the methodology presented.

Ancient marketing talks about the product supplying a customer need (and marketing functioning to inflate the demand); however, the current trend is to use data and include customers in the conversation to understand how they use, how they select, how they behave and react to products, services, competitors, events and more. The focus is not about the need; it has expanded to be around the experience.

Customer journey involves the user, the individual experience, to design a differentiation that influences personal preferences, promotes choices and transforms customers into brand promoters. Leading companies in this quadrant understand how to create a unique customer journey.

- Accenture has invested in acquisitions, people, delivery centers and innovation labs to reinvent its business and stay ahead of the competition. It has developed unique marketing and design capabilities to enable the digital customer journey.
- CI&T has a solid vision of its digital journey. The company believes in continuous improvement through Lean practices to design consistent customer journeys.
- IBM is a thought leader in the media. It continuously showcases client’s success in its events and webinars. IBM focus and market penetration provides many alternatives to clients.
- ilegra is a niche consulting company that uses advanced methodologies to understand and improve the customer journey.
- Publicis.Sapient AG2 is a specialized digital agency that expanded into IT consulting and digital product development, with AI and an automation platform to leverage its market data analysis experience.
- Stefanini is rapidly evolving its digital business consulting practice and increasing its digital marketing capabilities. It has a pragmatic approach that delivers tangible results.
- Cognizant was identified as a Rising Star. It has robust agile capabilities and needs more client cases to expand its footprint in Brazil.
ACCENTURE

Overview

The Accenture Digital division has 85 clients and 790 consultants in Brazil to leverage its global resources from Accenture Analytics, Accenture Interactive and Accenture Mobility.

Accenture Interactive is dedicated to design customer journeys. It connects Accenture’s offerings in design, marketing, content and commerce.

Strengths

Design and innovation focus: In 2015 Accenture acquired Gapso Analytics, AD.Dialeto (a digital marketing agency), opened a FJORD (design studio) office in São Paulo and expanded its Recife delivery center to host a digital innovation center. In 2018 it acquired New Content, an independent Brazilian content marketing agency. Accenture Digital co-sponsors and participates in Cubo, the startup incubator hosted by Itaú Unibanco in partnership with Redpoint eVentures.

It goes beyond design thinking: Accenture uses design thinking methods, just like its leading competitors. However, Accenture adds diversified skills to amplify the design possibilities. With its unique acquisitions, Accenture connects consultants, advisors, marketing strategists, product designers, software developers and innovators from startups and labs to comprehend the challenges and propose digital experiences.

End-to-end service: Accenture Interactive covers all aspects of digital marketing, analytical marketing and media management. It combines marketing and IT around customer relevance. It works on brand promotion over the web, mobile, messaging and other channels. It designs consistent client experiences across all digital channels, integrated into traditional marketing. It builds analytical dashboards and manages media expenses and the aggregated effectiveness.

Caution

Acquired companies continue to operate independently. Clients should carefully structure the service contract to assure integration of the parties in the customer journey design and execution.

2019 ISG Provider Lens™ Leader

Accenture is moving into the marketing and design markets to complement its capabilities to provide robust digital business outsourcing services.

Imagine your future®
CI&T is a service provider specialized in design thinking, lean digital transformation and advanced technologies. Founded in 1995, CI&T has 2,500 employees in the U.S., Brazil, U.K., Australia, Japan and China.

CI&T works with business leaders to prepare and coach the digital business transformation. It uses Lean methodology as the foundation of its service portfolio. Customer journey and digital products are delivered from its Lean program applied to business.

**Strengths**

*Transformational lean practice:* The CI&T delivery process is based on Lean IT, design thinking, design sprints and Lean UX approaches. The company's custom digital transformation process makes the client organization rethink how the customer relationship works, before jointly developing the customer journey. CI&T has a unique approach to prepare its clients’ leadership for the customer journey design and execution.

*People development:* CI&T spends a reasonable amount of effort training its personnel and clients to achieve the desired collaborative behavior. CI&T claims to have a radically different approach to find, grow and keep staff, and states: “We develop people before we develop software.” The consequence to client organizations is an improved capacity to understand, design and operate as a digital enterprise.

*Proven agility and capacity:* CI&T can reference clients in many geographies and industry verticals. In 2017, CI&T acquired Comrade, a strategy and customer experience design agency in San Francisco. In Japan, CI&T has a joint venture with Rococo, a Japanese software development company. CI&T is a Google Premier Partner and uses open-source technologies, including Magento and Drupal. CI&T uses its agility to develop new accounts, explore new markets and partner with local experts, which has allowed the company to grow its revenue for 20 consecutive years.

**Caution**

CI&T believes in Lean Enterprise. Client organizations that do not believe in Lean as the basis for enterprise management may not align with CI&T offering.
Overview

IBM has been providing services in Brazil for more than 35 years. Its Global Business Services (GBS) unit provides clients with consulting, application management services and business process services. GBS focuses on digital reinvention, combining industry knowledge, applications and functional expertise with business design and cognitive and cloud technologies.

To enable the customer journey, IBM GBS brings in industry insights and uses design thinking to develop the business strategy. In Brazil it has recently hired additional consultants from competitors to stay ahead. IBM iX is the company's design studio for digital strategy, customer experience and digital platforms.

Strengths

**Inventive process:** The IBM Digital Reinvention™ framework positions new focus, new expertise and new ways to work around the customer experience. New focus exercises alternative business models and new ways to create value. New expertise reveals the culture of openness, innovation and collaboration. New ways to work leverages digitized operations and customer centricity. In this creation process, IBM explores the use of cognitive computing, deep learning, analytics, startup solutions and its broad product portfolio.

**Thought leadership:** IBM research and continuous product ideation is widely available for public use through media, events, hackathons, tutorials and events, such as its Think conference. IBM Think had 30,000 attendees in 2018. IBM Research Brazil was established in June 2010 and has locations in São Paulo and Rio de Janeiro. IBM’s interactions with partners, startups and clients allow it to identify and apply the best ideas.

**Idea incubation:** IBM Garagem 11.57 is a facility in São Paulo provides the resources for a client’s lab. It offers IBM expertise, coaching, training and the full IBM Garage Method to incubate a client’s idea to a proof of concept (POC), minimum viable product (MVP) or pilot project that can include IoT, cognitive technology and blockchain.

Caution

Everything IBM creates is copyrighted. Clients should negotiate upfront the rights over the intellectual property jointly created with IBM.

IBM iX has a modest presence in Brazil; it is part of IBM GBS. Clients should consider the best use IBM iX according to available resources and skills, or include a local design agency to collaborate in the process and add local marketing and design specialization.

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IBM has plenty of resources to develop a digital customer journey supported by multiple technology alternatives and use-cases to experiment.
ILEGRA

Overview

ilegra provides consulting services to develop innovative customer experiences and digital product ideation. The company has been providing consulting and design for more than 16 years with offices in Coral Gables, Florida in the U.S. and Porto Alegre and São Paulo in Brazil.

Strengths

Experience design: ilegra assesses the forces that are impacting the customer. Its tools and methodologies include competitive analysis, trend research, forecasting and futurology, competitive benchmarking, user research, focus groups, in-depth interviews, stakeholder interviews, online surveys, desk research and design thinking. These activities are used to deliver business strategy and ideation workshops, design sprints, user journeys, customer experience blueprints, wireframes, visual interfaces, clickable prototypes, style guides, usability testing reports and software development if needed.

Design process: ilegra has created a design process that evolves in four stages that engage clients in co-design and co-creation processes. CALEDOS is a joined immersion to understand and discover different audiences’ hidden needs, desires and behaviors, to assist in the decision making process. SCAGIL observes the dynamics of services and business processes from a human standpoint to identify infrastructure and systems bottlenecks and offer improvements for a better flow. ORIOS executes the business vision and alternative design options to take business clients to envision a possible future. VISUS creates new concepts, design products, services or innovative business models from the captured market opportunities.

Momentum and capacity: ilegra is using appealing, modern methodologies for design and organizational change. It has successful implementations that produced increases in brand value and sales. One of ilegra’s strengths in this creative process is to have professionals with business, communication and design skills working together with IT professionals, creating highly differentiated, complete and feasible solutions to be implemented.

Caution

ilegra is not a digital marketing agency. Although it uses analytics and understands the marketing language, it does not develop marketing campaigns.

2019 ISG Provider Lens™ Leader

ilegra uses the most advanced tools and methods to engage clients in the co-design and co-creation of the digital customer journey.
Publicis Sapient AG2’s robust digital marketing portfolio can deliver a differentiated digital journey to large enterprise clients.

Overview

Publicis Groupe is a global marketing, communication and digital transformation service provider. The company is organized across four solutions hubs: Publicis Communications, Publicis Media, Publicis.Sapient (which includes SapientRazorfish, DigitasLBi, Sapient Consulting) and Publicis Health. Present in more than 100 countries, it employs nearly 80,000 professionals.

Publicis Communications is the holding company in Brazil; with 1,700 professionals it is responsible for Publicis, DPZ&T, Talent Marcel, Leo Burnett Tailor Made, Sapient AG2, Prodigious, Deepline, F/Nazca Saatchi & Saatchi, Arc, Vivid Brand, MSL and recently acquired One Digital, a data-driven agency.

Strengths

“The alchemy of creativity and technology” is how Publicis describes its differential. Publicis offers its clients seamless access to its tools and expertise through modular offerings, from web design to sophisticated customer AI analytics. Its Brazilian portfolio includes all required capabilities for data collection, market analysis and understanding of the customer experience to design a digital journey that merges technology, design and marketing.

A digital vision of the future: While several IT service providers have acquired digital agencies to enter into digital marketing, Publicis is a leader in the opposite direction; it is acquiring IT capabilities to stay ahead of the traditional marketing agencies. It is a digital marketing agency that conquered its space in the IT services market.

Strategic partnerships: In 2015, Publicis invested in Lucid, the company that developed the Cyc enterprise AI platform, to create a strategic alliance and independent AI capability. In 2017, Publicis set a strategic partnership with Microsoft to combine its robust marketing and data capabilities with Azure and the Cortana Intelligence Suite to leverage the power of online and offline data. In 2018 it launched Marcel, its internal collaboration and AI tool to integrate its 80,000 employees.

Caution

Publicis acquired Razorfish from Microsoft in 2009 and made heavy investments in Sapient in 2015, later combining both companies to form SapientRazorfish in 2016. It then acquired more companies. In Brazil Razorfish was merged into SapientNitro in 2016. In 2017, SapientNitro merged with AG2 Nurun to form Sapient AG2. The company has continued its restructuring and businesses consolidation. Although we see no risk of discontinuity, clients should monitor how the ongoing transformation affects Publicis’ talent retention.
Stefanini operates in 40 countries on four continents with 24,000 employees. Stefanini has strong partnerships with leading technology vendors.

Stefanini's digital strategy services are focused on innovation and marketing. In 2017 it acquired Brazilian Gauge, a digital marketing agency focused on social media monitoring. Stefanini's digital transformation offering includes marketing, design, digital product development and social media monitoring.

Stefanini Digital Studio: Stefanini has created a proprietary agile methodology for large enterprises. Digital Studio has three stages. Stefanini Dive instigates ideas to deliver prototypes after five business days. Deep Dive takes prototypes and transforms them into viable products. Submarine builds the integrations and improvements to scale the application. The implementation of the Digital Studio includes change agents, partners, accelerators and client workshops to transform the organization. Stefanini develops a new client's structure based on Scaled Agile Framework (SAFe).

Pragmatic enablement: Stefanini digital strategy starts small, through micro-battles. Each micro-battle delivers a MVP very fast, which sparks the client interest to go for another MVP. In one example, Stefanini helped increase its client's sales by 27 percent by redesigning the customer experience. In another case, it launched a pay-as-you-go insurance solution in less than three months. Stefanini's pragmatic approach delivers tangible results in very little time.

Tooling: Perceptool is a useful tool developed by Gauge. Perceptool has a team of developers dedicated to improving its functionality and creating new features to match enterprise client needs. It has developed solutions such as customizable dashboards, automatic social mentions classification via machine learning and georeferencing searches. Social media monitoring is the basis for crisis management, brand health diagnosis, user perception and campaign tracking. Furthermore, this business unit provides insights for content creation, campaigns, products, interface design and media.
Cognizant is a $14.8 billion revenue company with 260,000 employees. Its consulting business unit has more than 6,000 professionals. Cognizant has operated in Brazil since 2009, primarily providing applications development and maintenance services. It is gradually growing its consulting business in Brazil.

Cognizant describes its Cognizant Interactive digital consulting division as a digital boutique that is focused on experience design. It promotes innovation inspired by human insights that are platform-enabled and AI-driven. Cognizant Interactive was created through many acquisitions in the last five years.

Robust delivery: Five companies deliver Cognizant’s portfolio. Idea Couture is an innovation and experience design firm based in San Francisco and Toronto, with additional offices in London, Mexico, Shanghai and São Paulo. Cadient has digital marketing experts to create and build effective content programs. Zone brings together strategy, technology, marketing and content to create digital experiences. Mirabeau provides design research, experience visualization and product realization to define and deliver compelling experiences. Netcentric has experts in the Adobe Experience Cloud solutions.

Research for effective design: Cognizant owns 49 percent of ReD Associates, which studies human behavior and their interaction with technology. Cognizant uses ReD knowledge to accelerate the design process. Cognizant develops a deep understanding of the customer, the industry and the domain capability. Cognizant uses ethnographic research and design thinking, together with AI, RPA and advanced technology to transform.

Focus on growing in Brazil: In July 2018, Cognizant opened a new delivery center in São Paulo, to host its Digital Business, Digital Operations and Digital Systems and Technologies service lines. The new delivery center adds 400 practitioners to local operations and illustrates its commitment to increasing its competitive position in the country.
Definition

This segment covers the digitization of the processes of a typical large-scale organization. Digitization is accomplished using an ecosystem of components, tech platforms, processes and system integration. It may either use PaaS, or in-house operations and data centers, or as-a-service (aaS) operations and main data center functions in a managed and integrated (end to end) manner. It includes DevOps tools and improvement to all operational and rapid provisioning processes.

Digital Enterprise operations providers help customers operate smart, IT-based infrastructures, platforms and networks that connect sales, service and partners across the whole value chain. This market segment combines traditional operational excellence, including highly sophisticated technology, with managed services know-how and an in-depth understanding of customers' business and industry-specific challenges.

Contract and billing models can be customized to provide specific service level agreements (SLAs) and customer service and support, while also being highly standardized, based on on-demand and
Definition (cont.)

pay-as-you-use principles. Customers are completely relieved from tasks related to operating highly complex infrastructures, service and integration platforms. Solutions are mostly based on multi-cloud and software-defined approaches, as well as underlying networks and carrier relationships. IT service providers within this market segment are facing the challenge to combine information technology and operations technology (OT) competencies to deliver added value for their customers.

These implementations are often considered "initial" or "starter" steps in the journey from traditional or current operations towards cloud-based operations that map to the inspirational enterprise customer journey plans. They are often considered initial iterations that are replaceable by more customized and comprehensive PaaS and/or XaaS offerings. The transition occurs as the enterprise becomes more mature in its aspirations and further along its strategic roadmap of the overall digital transformation process, tempered by business and customer feedback, usage patterns and new requirements based on the initial operating offering.

Observations

Digital enterprise operations differ from traditional, legacy business operations, in the sense that they operate services and not physical assets (things).

Digital transformation means moving digital assets to the cloud, such as data centers, applications and databases. Workstations, desktops and smartphones become provided through device-as-a-service or bring your own device (BYOD). Business processes for human resource management, payroll, sales, marketing, procurement, resource planning and many other functions should be replaced by as-a-service solutions (XaaS). A neat digital business has few physical assets, avoiding the expense in favor of investing in digital product IP. This scenario is a reality today.

Digital enterprise operations service providers have software-defined data centers (SDDC) and software-defined networks (SDN), which sometimes are called software-defined everything. The software-defined tools provide a complete abstraction from hardware assets. This technology allow for agility in configuring, deploying, connecting and disconnecting services. Digital enterprise operations include IaaS, PaaS and XaaS management and integration.
Observations (cont.)

- Accenture leverages its global practice to deliver local enterprise operations based on automation and proprietary tools.
- DXC Technology has advanced software-defined tools and robust service management processes to operate complex environments.
- IBM uses artificial intelligence and advanced tools to handle diverse technologies and digital assets.
- Stefanini customizes its service offerings around digital operations to meet specific client requirements and vertical market needs.
- TIVIT has a large data center and cloud operations footprint in Brazil. It uses advanced SDDC tools and leverages a robust partner ecosystem.
- Wipro uses robust automation and AI to achieve high levels of infrastructure abstraction that provide agile digital operations.
- Rising Star: Tech Mahindra uses robust automation tools to manage the digital platform. It is gradually gaining market share in Brazil to enter into the Leaders’ quadrant.
Accenture provides consulting and outsourcing services in more than 200 cities of 53 countries. It has a priority focus on digital, cloud and security services. In 2017, these three areas grew to $18 billion, accounting for 50 percent of the company revenue for the first time.

Accenture Cloud Platform (ACP) is a vendor neutral multi-cloud platform that provides access to both private and public cloud services. Cloud management is delivered as a consumption-based service to enterprises via a fully automated, self-service model.

Strengths

**End-to-end management solution:** Accenture can provide a full stack service for digital enterprises. It uses real-time analytics to feed management dashboards that can go up to business management levels. It can operate from the business standpoint as it does in BPO assignments. Accenture consultants can help improve the digital solution architecture for a better business outcome.

**Automation and AI in a cloud-first mentality:** ACP leverages automation, AI and machine learning that integrate to hybrid clouds via Accenture’s APIs. It has a strong focus on analytics to manage application performance, and uses AI and bots to automate deploy, rollback and patches. Accenture has client references to demonstrate incident reduction through automation and agile continuous delivery with automated DevOps.

**Accreditations:** Accenture is a major partner of the most relevant digital service providers. It is an AWS Premier Consulting Partner and managed services provider (MSP), Microsoft Gold partner and MSP, Google Cloud Platform Premier Partner, IBM Platinum Business Partner and Oracle Global Cloud Elite. Other relevant partnerships include Alibaba, Pegasystems, Salesforce, SAP and Workday. By having the top accreditations from top vendors, Accenture has privileged access to new releases and innovations.

Caution

Accenture does not have a sizeable cloud operation footprint in Brazil. Its solution is a better fit for companies that require multi-country operations.
DXC TECHNOLOGY

Overview

DXC Technology has more than 60 years of experience in the technology industry. The company global expertise resides in insurance, healthcare, transportation and other industries, with 170,000 professionals in more than 70 countries. In Brazil, DXC has many clients in the manufacturing and service industries.

Its digital offering is organized around five fundamentals of a digital platform: leverage agile applications and digital experiences; operate the enterprise in the cloud; enable secure, productive mobile employees; operate an information-driven digital business; manage the complexity of operational risk.

Strengths

Digital enablement: DXC’s vast experience in infrastructure management is the basis for its digital platform proposition. It has many data centers, strong IaaS, PaaS and SaaS partnerships with all the leading vendors, robust management processes and an extensive as-a-service portfolio for operations, storage, analytics, mobility, security, ERP and other services.

Large Brazilian operations and knowledge: DXC’s large footprint in Brazil and its experienced professional team hold its position in the Leaders’ quadrant. These two factors give the company the capacity to execute complex projects and operations that require project team maturity.

Hybrid cloud capabilities: DXC operates large hybrid clouds under a unified view of operations. The company seeks to differentiate itself through solutions that identify the best workloads to migrate and by providing a set of services to operate a hybrid infrastructure.

Automation tools: Bionix is the platform DXC created to combine data analytics, machine learning and automation tools to reduce interruptions, self-heal incidents and support DevOps practices such as continuous integration and continuous delivery (CI/CD). Bionix uses APIs to consume artificial intelligence and cognitive services from various vendors to provide flexibility.

Caution

DXC Brazil does not have a strong presence in the government market.
IBM

Overview

IBM has been providing outsourcing services in Brazil for more than 35 years. Its Global Business Services (GBS) unit provides clients with consulting, application management services and business process services. IBM GBS designs the operation model. IBM Global Technology Services (GTS) is the service execution division. IBM GTS uses robust management tools and the experience accumulated in years of outsourcing practice to provide end-to-end digital enterprise operations.

Strengths

Industry-leading intelligent automation capabilities: IBM has robust software-defined data center capabilities and is one of the few service providers to have a global VMware certification for SDDC designs. IBM already uses Watson artificial intelligence to handle all aspects of managing a multi-cloud infrastructure and to make autonomous decisions. IBM automation reduces incidents and improves DevOps and service scheduling. It is going in the direction of a fully automated infrastructure with almost zero human intervention.

Digital architecture: IBM has a full stack of options in its portfolio, ranging from a single virtual machine at IBM Cloud to a large in-house managed data center, including proprietary and open-source solutions that scale across managed services, data center transformation and cloud enablement services. Applications are redesigned using its Cloud Foundry platform that leverages Kubernetes and containers in production environments to improve business agility and continuity.

Focus and commitment to the cloud: IBM's annual report states "IBM is now a cognitive solutions and cloud platform company." In 2017, IBM's cloud revenue grew 24 percent, to $17 billion. The company is investing in integrating public, private and managed cloud environments through a single architecture. It had more than 1,900 cloud-technology patents awarded in 2017.

Caution

While assessing and designing the digital transformation, IBM tends to prioritize its IBM Cloud solutions. Clients should remember that IBM has partnerships with AWS and Azure to deliver multi-cloud alternatives. Consider case-by-case scope and solution negotiations.
Stefanini's large footprint in Brazil and its broad portfolio makes it an appealing provider for digital enterprise operations.

Stefanini does not have the highest AWS and Azure accreditations. It has a stronger partnership with IBM for PaaS, IaaS and SaaS.

Strengths

Sophie, the cognitive platform: Through the implementation of its Sophie cognitive intelligence platform, Stefanini can provide automation for various user requests and more than 1,000 IT tasks, helping customers achieve cost and time reductions. It uses predictive analysis to stop incidents before they occur. Sophie has a full set of APIs to connect to several vendors and platforms. One of its major implementations covers 150,000 users at one of the largest banks in Brazil.

Investments in innovation: Stefanini has four innovation centers located in the U.S., Brazil, Romania and Singapore. These centers focus on innovation to respond to client needs, including mobile solutions, IoT and wearables. Sophie, the company's artificial intelligence platform, is one example. The innovation centers are capable of developing custom solutions for enterprise mobility.

Strong partnerships and broad portfolio: Stefanini has strong partnerships with most relevant technology vendors. For digital operations, it partners with IBM, AWS and Azure to deliver platform services in multiple engagements. Its automation platform allows for dynamic environment provisioning. Its broad portfolio ranges from applications development, DevOps, infrastructure operations, mobility and security. Stefanini has a joint venture with Rafael, one of Israel's largest defense companies, to provide infrastructure security services.

Caution

Stefanini's large footprint in Brazil and its broad portfolio makes it an appealing provider for digital enterprise operations.
TIVIT

Overview

TIVIT is a privately held Brazilian multinational company, present in ten countries in Latin America. TIVIT supports its clients in their digital transformation and business evolution through digital solutions divided into four lines of business: digital business, cloud solutions, digital payments and infrastructure management.

Its Digital Business division has more than 1,200 practitioners and 280 digital specialists allocated in innovation projects. It focuses on analytics, IoT solutions, business integration, digital innovation consulting, content management (ECM), cybersecurity, application management, digital workplace and smart systems. TIVIT participates in InovaBra, a startup incubator, and is experimenting with Intel's AI chipset (AI ASIC, NNP-L1000).

Strengths

Digital operations management: TIVIT has developed its custom software-defined data center to run complex workloads that are distributed in a multi-cloud environment. The company is an AWS Advanced Consulting Partner and Authorized Commercial Reseller, Microsoft Gold Cloud Platform partner, Google Cloud Platform Partner and also manages IBM SoftLayer workloads. TIVIT's has nine data centers (two in Brazil) that host IaaS, SaaS and PaaS.

Security and compliance: TIVIT can design a client's digital operations solution that segregates workloads to benefit from both the lower-cost IaaS cloud region and the highest compliance requirements for privacy, data location and security. It is capable of supporting the strict regulations in the banking, insurance and health industries.

Comprehensive portfolio: TIVIT focuses on IT services. It does not compete with software vendors, which allows it to offer clients the freedom of choice. Integration services include IBM Integration Bus, Apache Kafka, Tibco and Software AG. For collaboration TIVIT supports Sharepoint, Jive, Atlassian, Liferay and IBM. Development Platform as a Service (DPaaS) choices are Cloud Foundry, Bluemix (IBM Cloud), CA Technologies, Azure and Pega 7 Platform.

Caution

TIVIT has recently created the Digital Business division and is balancing its portfolio and supporting technology. The company has demonstrated delivery capabilities; however, it needs more public showcases to change its perception in the market from an IT service provider to a digital partner thought leader.

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TIVIT has structured its capabilities to become a leading digital transformation partner that is able to support large digital enterprises.
Wipro is a global service provider with $8.4 billion in revenues. Wipro operates in 110 countries and is expanding its footprint in Brazil.

Designit is a Wipro company and strategic design firm dedicated to creating high-impact products, services, systems and spaces. Wipro Digital is a division dedicated to digital transformation. Together, Wipro Digital and Designit are an innovation-led, enterprise transformation partner that focuses insights, interactions, integrations and innovations.

Strengths

**The Wipro journey:** Wipro’s clients benefit from its impressive investments in its digital transformation. Wipro is working on two fronts. One is its HOLMES™ platform that provides automation, machine learning and cognitive AI to all of Wipro’s service lines. Another is its focus on lean and agile practices to transform all of its employees’ mindset, behavior and performance. These two programs indicate that Wipro will continually provide service improvement with cost optimization.

**Intelligent cloud management:** Wipro’s differentiation comes from its broader vision for AI and machine learning. Its single management pane enhances SDDC with the abstraction of application, data, infrastructure, users and security. Its artificial intelligence platform can automate use cases for specific industries. The platform provides anomaly detection and identifies patterns to automate operations and execute troubleshooting and security tasks. It has more than 200 HOLMES™ bots for workload assessment, resource optimization, backup and simulation.

**Amplitude and capacity:** Wipro has a wide range of clouds and technology options to support all possible needs. Its automation allows clients to dynamically move workloads between clouds or regions. It has many certified personnel and operates at global scale with seamless processes and tools.

Caution

Wipro has an attractive portfolio. However, in Brazil it is remembered as an application service provider. Wipro needs to acquire more cloud operations clients in Brazil to be recognized as a digital operations provider.

Wipro has a robust digital offering and its automation platform allows it to provide reliable digital enterprise operation services.
**RISING STAR: TECH MAHINDRA**

**Overview**
Tech Mahindra is a $4.9 billion company with more than 107,000 professionals in 90 countries, providing solutions to more than 800 customers worldwide. It is part of the $21 billion Mahindra Group that employs more than 200,000 people. Tech Mahindra is growing its operations in Brazil.

Tech Mahindra's portfolio is divided into three groups: Solutions and Services, Business Processes Services (BPS) and Platforms. Its IT Infrastructure Management Services (IMS), which belongs to its Solutions and Services division, operates in 36 countries and its cloud services practices include AWS, Azure, Google and IBM.

**Strengths**

**Investments for innovation:** Tech Mahindra envisions a future of self-managed and self-service infrastructure that can dynamically provision and de-provision infrastructure services based on user and applications demands and that can heal itself when incidents or performance deviations occur. To achieve this vision, Tech Mahindra is investing to develop the tools to enable the infrastructure of the future.

**Intelligent automation:** Tech Mahindra's mPAC platform uses application blueprints to analyze and move workloads to single-pane management with analytics, cloud cost optimization, hybrid cloud management, cloud brokering and dynamic workload management functionalities built in.

**World-class delivery capabilities:** Tech Mahindra's AQT Toolkit is an automation framework that is installed to feed its CUBES management platform for proactive event suppression, correlation and management and provide infrastructure monitoring. Fixstream Meridian, a business visualization and operations analytics platform, provides application and infrastructure dependency mapping for fault diagnosis with machine-learning capabilities for predictive analytics. Additionally, ServiceNow orchestrates automated troubleshooting. Tech Mahindra's proprietary AI platform, TACTiX, provides ticket scraping for auto ticket distribution. This set of tools allows Tech Mahindra to deliver a world-class client experience in Brazil with minimum human intervention.

**Caution**
Tech Mahindra's expansion in Brazil started in 2013, after its Complex IT acquisition. Clients should monitor how Tech Mahindra evolves its local footprint in the digital operations market.

Tech Mahindra has the tools, experience and vision to become a major provider of digital enterprise services.
Definition

This segment lists and grades providers of PaaS multi-tenant platform solutions, which can be integrated together and offered to enterprises by system integrators (and potentially by other vendors acting in a SI role). We focus upon those with a high degree of automation that are ready to use out of the box (pre-built) and those which need customization by the SI (and partners) but are designed for ease of customer tailoring and modification (via open, modular and customizable components).

PaaS can be enhanced and refined based on an expansive partner ecosystem. Solutions may consist of a technological mix, including hybrids, of in-house developments and best-of-breed solutions by leading product and platform-as-a-service providers. They are embedded in web platforms and cloud marketplaces, which provide networking effects and integrate and distribute products or services from the platform provider and third parties.

Many systems integrators are established players in this segment. Their entry may have resulted from prior histories of being involved with integrating cloud management and orchestration technological
Definition (cont.)

advances and event processing services, coupled with their ecosystems of internal and partner offerings and adaptation capabilities.

Increasingly it appears that enterprises are searching for digital platforms that offer intelligent business solutions by industry. The portfolio of providers of such platforms must therefore cover the specific areas of interest for the enterprise, as well as industry vertical and hybrid technology mixes.

Leading system integrators and service providers are those that understand a vertical market particularity and have experience and skills in place to guide clients through the digital platform adoption, abstracting from infrastructure components. The digital platform is usually global and service providers have the skills to develop the additional components (extensions, add-ons and plugins) to adapt the solution to comply with local regulations, improve customer experience, automate recurring tasks and add functionality to differentiate according to a client’s business strategy.

PaaS components are provided by AWS and Azure in their marketplaces with hundreds of options. PaaS is the intermediary layer above cloud IaaS and below SaaS. For example, a Magento e-commerce platform can be installed from AWS marketplace to be configured by a client company. The client can configure Magento to run as PaaS, hosted and billed by AWS. The service providers that install and configure such platforms are the service integrators included in this study. AWS and Azure are considered PaaS vendors in this context; however, variations exist. IBM and Oracle have marketplaces for self-service PaaS installation but also have consulting services to install, operate and support their PaaS offerings. Salesforce and Pegasystems have SaaS and PaaS and, while they offer support, they also have several system integrators partners throughout the globe.

Application development PaaS is the most common. Cloud Foundry is an open source PaaS that is gradually becoming a universal standard. Organizations can deploy Cloud Foundry and configure on their own, or opt to use Cloud Foundry-certified platforms from IBM Cloud Foundry, Pivotal Cloud Foundry, SAP Cloud Platform, Huawei FusionStage and Swisscom Application Cloud. All service providers in this quadrant have a Cloud Foundry PaaS offering.
Observations

The Cloud Foundry Foundation has more than 50 members and additional service providers can be found in its website. Some of the evaluated providers can support platforms similar to Cloud Foundry, which include Google App Engine, Heroku and OpenShift, and its alternative Red Hat OpenShift.

Cloud Foundry popularity comes from the abstraction it can provide, allowing the digital enterprise to focus on business configuration without infrastructure boundaries. Cloud Foundry has a container-based architecture that runs apps in any programming language. It is compatible with AWS, Docker, Kubernetes, Java, .NET and many others. Applications deployed to Cloud Foundry access external resources via its Open Service Broker API. Cloud Foundry BOSH deploys software to multiple clouds including AWS, Azure, Google Cloud, OpenStack, VMware vSphere, and others. With these sophisticated tools, Cloud Foundry is a robust platform for the digital enterprise.

Other platforms provided by the participants focus on customer experience, marketing, analytics, ERP, CRM, insurance, financial management, payments, procurement, human resources management, payroll and several other business management functions. All qualified as PaaS provide similar tools for infrastructure abstraction.

PaaS is essential to business agility. Only with such platforms can a client leverage microservices, serverless computing, low-code and no-code infrastructure to deliver new functionality or new digital products in hours or days.

- Atos Cloud Foundry is Atos’ certified cloud-application development platform that can be provided out of the box. Atos's experienced consultants provide a robust application PaaS for the digital enterprise.
- Cognizant has a broad PaaS portfolio, from platform development to operation services; it can provide a transparent platform for digital enterprises.
- IBM provides several platform alternatives for cloud application development and support, from a mobile SDK to a full-scale development solution.
- Rising Star: DXC Technology recently launched its platform as a service offering, starting with its SAP as a service.
Overview

Atos has been present in Brazil since 1998, with offices in São Paulo and Rio de Janeiro.

Atos offers Cloud Foundry PaaS as a standalone service and also as component of a broader digital transformation project. Certified by the Cloud Foundry Foundation, Atos Cloud Foundry is powered by the industry standard platform for cloud applications.

Strengths

**Digital transformation platform:** Atos brings its clients unparalleled expertise, founded on five years of experience and investment in PaaS services, 10 years of experience with cloud migration and more than 45 years of managing business critical applications. For example, for one manufacturer, Atos deployed PaaS on Cloud Foundry to standardize and move to the cloud all applications for Europe, North America and China. Its consulting and application development expertise accelerates PaaS adoption, with insights for application governance and cloud-native application development.

**Significant depth of industry knowledge:** Atos has expertise in IoT, manufacturing, sports, health, banking and finance and other industries. It has applied its Digital Transformation Factory, Atos Codex, Atos Digital Workplace, Atos Business Accelerators and Atos Orchestrated Hybrid Cloud to projects in various industries. Its robust consulting practice can facilitate digital transformation.

**Strong partner ecosystem:** Atos counts on a robust partner ecosystem to deliver end-to-end solutions. In 2017, Atos extended its hybrid services to cover Azure Stack implementation and management. The company has standardized its tools and processes globally, resulting in repeatable delivery of industrialized services across clients.

Caution

Atos Brazil prioritizes large multinational accounts and the banking, financial services and insurance market (BFSI).
Cognizant has a robust PaaS offering and superior experience in helping clients select and integrate digital platforms.

Not all PaaS solutions, including some of Cognizant's insurance and finance apps, comply with Brazilian regulations. Clients should compare and test before buying. However, PaaS can be extended through plugins and custom developed components. Clients should consider PaaS as digital solution accelerators that may require additional programming to fit to local requirements.

PaaS customization and automation: Cognizant’s application development practice allows for solid support for PaaS integration and functional extension. Cognizant Intelligent Process Automation can be used to automate PaaS routines, improving business processes performance. The company has a dedicated PaaS center of excellence (CoE) to disseminate best practices and support local teams.

Ample vertical offerings: Cognizant has converted its software packages into SaaS and PaaS. For banking it has Digital Finance as a Service. For healthcare it has Cognizant Core Administration Services, Cognizant Care Management Services, Cognizant Health TranZform, Cognizant Provider Data Management Services, Cognizant Trading Partner Management Services and Cognizant Trizetto Elements. Its insurance offerings are LifeAdmin Core™, OptimaMedWise™ and OptimaWrite Intake.

Solutions integration: Cognizant has a full-stack integrated portfolio. Cognizant developed frameworks like CloudFrame, a web-based tool for hybrid cloud, HiveCenter, an intelligent automation platform to run policy-based IT operations, Cloud Operate, a comprehensive framework for end-to-end cloud managed services, CloudSteps for cloud migration, OneDevOps to integrate application development and service integration. Cognizant uses robust agile methodologies. It offers SaaS and PaaS management services. Cognizant is a highly graded partner of leading platform vendors such as AWS, Azure, IBM Cloud and Oracle Cloud.
IBM development platforms provide security, consistency and speed for bringing digital products to market.

**Overview**

IBM has been providing outsourcing services in Brazil for more than 35 years. Its Global Business Services (GBS) unit provides clients with consulting, application management services and business process services. GBS focuses on digital reinvention, combining industry knowledge, applications and functional expertise with business design and cognitive and cloud technologies. IBM units, including IBM Watson, IBM Cloud, IBM Research and IBM Global Technology Services (GTS), support GBS services.

IBM GBS provides platform advisory services. IBM Cloud services offer ready-to-use development platforms.

**Strengths**

**IBM Cloud Foundry:** This platform can natively integrate with IBM Cloud services such as AI, blockchain, IoT and data tools. Cloud Foundry Enterprise Environment (CFEE) runs on a Kubernetes service, which reduces complexity by giving development teams a comprehensive set of familiar tools under one management umbrella. Although there are other Cloud Foundry alternatives in the market, the IBM version is ready to use.

**Development platform alternatives:** IBM Mobile Foundation is a platform for mobile apps. It provides cognitive APIs, microservices, features A/B testing, app lifecycle management, user analytics, push and multi-platform SDK. IBM Cloud Functions, based on Apache OpenWhisk, is a polyglot functions-as-a-service (FaaS) programming platform for developing lightweight code that executes and scales on demand. It enables serverless programming and access to IBM Watson APIs within the event-trigger-action workflow, which makes cognitive analysis of application data inherent to app workflows.

**Mature continuous delivery process:** IBM has a comprehensive portfolio to manage the entire product lifecycle. It has long experience with continuous testing and has a robust DevOps practice. Its ALM tools support continuous integration over cloud environments.

**Caution**

Clients should implement vigorous governance practices prior to adopting IBM Cloud Foundry, because developers tend to go straight to coding, rather than using a platform.

This assessment does not consider the recently announced Red Hat acquisition by IBM. The Red Hat OpenShift platform is a competitor to IBM Cloud Foundry; however, OpenShift and Cloud Foundry are open source and clients should not feel in jeopardy if using one or the other.
DXC Technology has more than 60 years of experience in the technology industry. The company’s global expertise resides in insurance, healthcare, transportation and other industries, with 170,000 professionals in more than 70 countries. In Brazil, DXC has many clients in the manufacturing and service industries.

For business DXC provides SAP-PaaS hosted on AWS or Azure. In certain markets it offers an insurance solution and a pharmaceutical documentation PaaS (eCTDXPress). For cloud application development it offers aCaaS (Applications Containerization as a Service) that can be powered by Red Hat OpenShift or Pivotal Cloud Foundry.

**Unique SAP PaaS offering:** DXC PaaS for SAP provides seamless integration of SAP landscapes and faster migration to the cloud. It is a consumption-based service that provides high scalability, flexibility and business resiliency. DXC simplifies operations across the full stack, from the cloud infrastructure through the application management layer. It supports SAP ECC, S/4HANA and non-HANA databases.

**Powerful platform:** DXC Agility Platform™ provides a cloud management solution that automates the deployment, management and governance of cloud applications and development platforms. It supports application release automation and DevOps programs to increase the speed and frequency of software releases. DXC also offers Functional and Automation Testing-as-a-Service (FTaaS), Performance Testing-as-a-Service (PTaaS), Mobile Testing-as-a-Service (MTaaS) and Automated Applications Security Testing as a Service (AASTaaS).

**Experience, capacity and accreditation:** DXC has a large footprint in Brazil and globally it has more than 16,000 SAP professionals, 9,000 accredited AWS and Azure staff members and 800 AWS and Azure certified professionals. DXC is a Microsoft Gold Partner, Azure Expert MSP, AWS Premier Partner and AWS-MSP. DXC’s Bionix™ automation platform is used to provide high availability PaaS.

Although DXC has a large footprint in Brazil, its SAP integration practice is not as intense as its cloud operation practice in the country. Clients should consider hiring, or allowing DXC to subcontract, niche SAP integrators to move SAP workloads to PaaS.
SOCIAL ENTERPRISE NETWORK

Definition

This segment evaluates and grades “cloud first” aaS service providers that are focused on digital transformation with out-of-the-box solutions or solutions that are easy to customize (often open or modular) for specific enterprise needs. The provider can manage the solution or service end to end if required. This may be individually focused areas of the entire digital transformation enterprise service chain (for example CRM or mobile apps and IoT integration, microservice and API integration and provisioning, ERP or others) or may be complete solutions based upon the overall design and transformational roadmap for the enterprise, as delivered by strategic planning.

Solutions may consist of a technological mix, including hybrids of in-house developments and best-of-breed solutions by leading product and platform-as-a-service providers. They are embedded in web platforms and cloud marketplaces, which provide networking effects and integrate and distribute products or services from the platform provider and third parties.
Many systems integrators are established players in this segment. Their entry may have resulted from prior histories of being involved with integrating cloud management and orchestration technological advances and event processing services, coupled with their ecosystems of internal and partner offerings and adaptation capabilities.

Digital transformational “as a service” offerings are increasingly comprehensive in nature. They combine various heterogeneous IT services into an intelligent solution for customers. The offerings can have very extensive scope. Individual components can be used independently and can be combined with each other. Normally, such offerings are based on self-service elements that can be bought and managed via dashboards. Payment is based on the pay-as-you-go (PAYG) model or on reserved resources within an enterprise agreement. Cloud compute capacities, neural networks and data lakes make it possible to embed analytics into practically any software and hardware segments. Embedding analytics enhances the intelligence and degree of automation of business IT systems, from repetitive robotic process automation (RPA) to self-learning and cognitive systems. Intelligent solutions, with their high degree of standardization, also allow for bidirectional data exchange, which can increase the level of collaboration within new ecosystems for customers and partners.

Increasingly it appears that enterprises are searching for XaaS solutions that offer services and solutions by industry and end user roles, such as sales, HR or human capital management, production management or marketing automation. The portfolio of providers of such platforms must therefore cover the specific areas of interest for the enterprise, as well as industry vertical and hybrid technology mixes.

Service providers support customers in the following digital transformation disciplines:

- From products and services to solutions
- From transactions to partner relationships
- From standard products to custom solutions
- From products to service solutions
- From mature proprietary products to continuously improved ecosystem solutions
Transforming to an as-a-service business model is a challenge for most outsourcing service providers and software product vendors. The traditional application development business, in which service providers develop software on demand, allows for margins and upfront cash flow estimations. The aaS business is disruptive because it includes a great deal of uncertainty and risk, because neither providers or clients can accurately predict adoption and usage. Many service providers have not reached a point where pricing for aaS matches cash flow for a balanced result. Leading service providers are packaging their service offerings into aaS models, or partnering with aaS vendors.

This quadrant ranks the aaS providers. Prominent aaS providers rely on direct sales through e-commerce. However, Brazilian regulations limit the monetary values that businesses can transaction on credit cards, or companies limit the use of credit card because of higher transaction fees when compared to the advanced direct money transfer (TED) provided by the Brazilian finance system. Another limitation is that several aaS providers are not established in Brazil and do not comply with tax regulations. These factors favor that broker partners deliver and invoice aaS in the Brazilian market, coupled with management, customization, implementation and integration services.

- Accenture has strategically embraced aaS as a business priority to take the company into the future of outsourcing.
- IBM Cloud Business Solutions targets analytics, finance and human resources as a service. It brings the industry knowledge, process expertise and technology capabilities together on the cloud to solve business challenges.
- Cognizant has a robust SaaS portfolio with many vendors and service alternatives.
- DXC Technology, the Rising Star, is gradually improving its SaaS footprint to move into the Leaders’ quadrant.
Accenture has four delivery centers in Brazil and 459,000 employees worldwide. The Accenture Digital division has 85 clients and 790 consultants in Brazil to leverage its global resources from Accenture Analytics, Accenture Interactive and Accenture Mobility. Accenture acquired several companies in Brazil in the last three years, including Concrete Solutions, which had 500 employees in 2017.

Accenture has a strong focus on developing as-a-service solutions. It states that as-a-service (aaS) comprises five components: business processes; applications and platforms; cloud; security; intelligent infrastructure.

**Overview**

Accenture focuses on aaS as a replacement to its packaged-application integration, priced by project or human resources, that currently has a robust contribution to its business margins. However, aaS requires less integration through APIs and microservices and is priced on a small fee per transaction or user. Peripheral custom services such as analytics, apps and dashboards could compensate for lower margins. To preserve aaS pricing models, clients should always evaluate the real need for customization.

**Strengths**

**Vision and thought leadership:** Accenture has a clear vision for the aaS market to amplify its client possibilities. Accenture has engaged with leading aaS providers. It can transform regular services into aaS, including the commercialization and funding aspects. Accenture can run aaS on behalf of its clients, or jointly manage and share results.

**Advanced aaS capabilities:** Accenture has 4,200 certified consultants that have deployed Salesforce at more than 1,100 enterprises. For Workday, it has 1,150 dedicated professionals who hold 3,230 Workday certifications. It has more than 6,500 practitioners for Pega in over 450 engagements. For collaboration aaS, Accenture is one of the largest Microsoft partners. Accenture clearly has extensive aaS experience, on a global scale.

**Extensive portfolio and partnerships:** Accenture's broad range of partners includes AWS, Apple, Google, Microsoft, Oracle, Pegasystems, Salesforce, SAP, Workday and others. Accenture has approximately 7,000 FTEs dedicated to developing SaaS-based software. Accenture's mature development practice allows clients from Brazil to access and use global delivery centers if critical resources are not available in its four Brazilian centers.
Cognizant has a robust SaaS portfolio, from development to management services, to provide outstanding support for large enterprises.

**Strengths**

**Vision ahead of its competitors:** Cognizant has developed a comprehensive SaaS portfolio. Its digital platform with differentiated IP provides a new revenue stream. A SaaS and PaaS digital portfolio have replaced the legacy application outsourcing. This visionary approach assures clients will continue to have a strong service provider to support their digital journey.

**Application transformation to SaaS:** Cognizant provides application transformation services and uses the Pivotal Cloud Foundry platform to re-architect legacy client applications to run in the cloud. Legacy applications can be converted to be SaaS-like and integrate with SaaS from other vendors.

**SaaS provider ecosystem:** Cognizant provides integration, management and operation for several SaaS providers, including Salesforce, Pegasystems, NetSuite, Ariba, SAP, SuccessFactors and Workday. It develops industry-specific solutions on top of a generic SaaS. For example, it has 10 vertical solutions on Salesforce, such as Mortgage 360, a digital process automation and communication solution that works across multiple channels to provide real time access to loan applications and relevant data to automatically calculate custom loan recommendations.

**Caution**

Not all SaaS solutions, including some of Cognizant’s insurance and finance apps, comply with Brazilian regulations. Clients should compare and test before buying. However, SaaS can be extended through plugins and custom developed components. Clients should consider SaaS as digital solution accelerators that may require additional programming to fit to local requirements.
IBM

Overview

IBM has been providing services in Brazil for more than 35 years. Its Global Business Services (GBS) unit provides clients with consulting, application management services and business process services. Various other IBM units, including IBM Watson, IBM Cloud, IBM Research and IBM Global Technology Services (GTS), support GBS services.

IBM offers more than 100 ready-to-use SaaS business applications for marketing, sales, HR, finance, analytics and IT management. Its offerings include Cognos Analytics, Watson Assistant, collaboration tools and an extensive marketplace with proprietary and partner SaaS offerings.

Strengths

Comprehensive portfolio: IBM has plenty of options for SaaS ranging from its legacy IP converted to SaaS to new applications created to the cloud, such as the Watson Assistant. Its application development services can convert a client’s application to SaaS. Its consulting division can customize or add apps in response to specific client needs. IBM also partners with other SaaS providers, such as Salesforce and SugarCRM, to create custom solutions with cognitive and real-time analytics capabilities.

Robust ecosystem: IBM expands its capacity through local partnerships and incentives to students and developers to adopt IBM cloud and tools, creating a robust ecosystem. IBM DeveloperWorks has more than 1 million developers. IBM Cloud marketplace includes many startups. IBM PartnerWorld has more than 4,000 partner solutions in its catalog, including more than 60 exclusive for Brazil.

User virtual assistant: IBM has many of Watson's cognitive use cases in production, in multiple languages, including Brazilian Portuguese. AI services range from a plain chatbot to a virtual assistant that interacts in an instant messaging group (Skype or Slack). Virtual assistants can automate tasks, execute processes, respond to "how-to" questions and search documents to provide a unique client experience.

Caution

IBM does not provide as detailed SaaS information about features, integration and pricing as its competitors. The absence of public information makes it difficult for clients to understand and choose a solution in the IBM SaaS portfolio.

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IBM's comprehensive SaaS portfolio, associated with its cloud cognitive capabilities, makes it an attractive provider for sophisticated SaaS solutions.
DXC Technology has more than 60 years of experience in the technology industry. The company has global expertise in insurance, healthcare, transportation and other industries, with 170,000 professionals in more than 70 countries. In Brazil, DXC has many clients in the manufacturing and service industries.

DXC is gradually transforming its entire portfolio into as-a-service (aaS) business model. It can help clients convert legacy applications to as-a-service models. DXC supports SaaS offerings from its partners, including: Salesforce (CRM); Microsoft Dynamics Business Central (CRM); Workday (HR); GraphTalk A.I.A (insurance); Premium Billing 360° (insurance); Celeriti™ (banking); EarlyResolution® (lending); eDiscovery (investigation) and ServiceNow (ITSM).

**Acceleration services:** DXC’s SaaS Accelerator delivers a complete set of services for independent software vendors seeking to migrate, transform and run their applications in the cloud or in a SaaS model. Built on DXC Managed Virtual Private Cloud, this solution offers an as-a-service storefront and a billing record generation tool, supplemented with advisory and transformation services.


**Digital enablement:** DXC’s vast experience in infrastructure management is the base for its digital platform proposition. It has data centers, virtualization technologies, strong IaaS, PaaS, SaaS partnerships with all the leading vendors, robust management processes and as-a-service solutions for operations, storage, analytics, mobility, security, ERP and other functions.

DXC demonstrates a strong commitment to SaaS and can support clients in migrating their business processes to as-a-service models.
**Definition**

This segment covers the creation of new digital products from ground up for enterprise, either as new service components for the business, or by adapting existing but outmoded service components. These developments and customizations may be offered as a service but fall short of the full continuous delivery paradigm. Monetization of these products should be built in and part of the development process. Some examples of digital transformational products include application accelerators, browse-and-buy capability for mobile end users, hotspot marketing, try-before-buying/demo subscriptions, and digital mirroring that simulates trying a product and provides stats and customer acceptance feedback.

Accelerating innovation for using digital transformational products and methods to translate information into revenues is based on lean, flexible and customer-centric business processes. The processes should be supported with inclusive agile development that is highly mapped to the goals. The current mantra focused on “information excellence” urges enterprises to scrutinize and
Definition (Cont.)

improve all of their processes related to creating products and services. Major challenges for companies include developing the functionality and processes to evaluate and support ideas within the context of current digitalization trends.

The journey from idea creation to viable commercial product is an increasingly complex one, but results are expected in ever-decreasing timescales. Change should be welcomed and an ongoing process within digitally transformed organizations, with responsive, multi-device apps with open UX design as a given. Application scalability and performance plus proven and reliable performance released in tight timeframes are critical. Customers and markets expect providers to outdo each other with their fast publication of new functionality, and perceive this contest as a kind of competitive strength.

Observations

Digital enterprises face the challenge of expanding product creation to new grounds. In the past, the traditional business had dealt with long product development cycles. The automobile industry, for example, traditionally launches new car versions every year. This market was used to development cycles of three to five years. That is to say that the “new” model was five years old at launch. Today, car development cycles have had been reduced to 12 months using digitally assisted computer design, virtual tests, AR/VR and a lot of mathematical models. Savings are evident in labor, materials and time. To illustrate these savings, consider that a car crash test destroys 30 to 60 cars per car model if all pass. Companies now use virtual crash test systems and simulators to resolve all issues before sending the prototypes for real crash tests, saving millions of dollars. The analogy applies to all product-based industries. The car testing example illustrates how technology is used to support a business process. Digital product creation is one level above.

Digital product creation involves the software that is the core of a physical product or device. It is an immature development process though. Thomas Edison invented the light bulb in 1879 and founded GE in 1890. A Boeing 777 uses GE90 engines that had accumulated 128 years of product development experience since the light bulb. A digital product does not carry that history and sophistication. Current service providers focus on the client experience. Design thinking is the most popular methodology to understand the requirements to design mockups or prototypes. Minimum
Observations (cont.)

Viable product (MVP) has been popularized as a synonym of a functional prototype (the original MVP concept was a first commercial version of a product that would then be extended and improved according to client usage and demand). An MVP then goes through A/B tests to understand which versions work better for clients. A/B tests are useful for software; however, they are expensive for car crash tests as illustrated above.

Digital product creation is on the right track to reach maturity, by developing new design methods and experimenting with collaboration. Digital product creation relies on trial and error methodologies and there is a common sense that “fail fast and fix fast” is better than long planning and development cycles. Agile and Scrum are the preferred project execution methods. Leaders in this quadrant have experience in design thinking, product ideation, prototyping labs, agile development and A/B testing or similar methodologies.

- Accenture's access to leading technologies and its market thought leadership position the company to lead the creation and customization of innovative digital products.

- CI&T is a longtime competitor in the digital product creation market. It is a pioneer in agile product development in Brazil and applies global best practices.

- IBM’s consulting and app development capabilities, plus its tools, frameworks and PaaS, form an attractive offering for digital products development.

- ilegra has a unique market positioning that bridges digital marketing and IT, providing a common language to leverage digital product creation and customization.

- Stefanini has developed a robust agile practice that, coupled with its large app delivery capacity, offers a solid case for digital product creation.

- Wipro bases the product creation on hard data from a digital product’s performance, using analytics and cognitive computing to supplement its design thinking process.

- The Rising Star Cognizant has all the methods and tools required for product creation and is gradually increasing its resource pool in Brazil to gain scale in the local market.
Overview

Accenture has four delivery centers in Brazil and 459,000 employees worldwide. Accenture’s Digital division has 85 clients and 790 consultants in Brazil to leverage its global resources from Accenture Analytics, Accenture Interactive and Accenture Mobility. Accenture acquired several companies in Brazil in the last three years, including Concrete Solutions, which had 500 employees in 2017, and adds to Accenture’s product creation capabilities.

Strengths

**Business focus:** Accenture leverages its business consulting expertise to propose digital innovation that adds value to traditional businesses. Its competence to conceive new business models helps it guide its clients through hype and distraction to find sustainable business growth opportunities from applying leading-edge technology to digital products.

**Robust application lifecycle management services:** Accenture’s Liquid Application Management service consists of end-to-end, cross-functional agile product teams and DevOps for applications across multiple lines of business. Accenture can modernize and move its client’s application portfolio to any platform, including its preferred Accenture Cloud Platform (ACP). The modernization includes Lean practices, robotic process automation (RPA), artificial intelligence (AI) and the use of cloud-based components to leverage IaaS and PaaS benefits.

**Extensive portfolio and partnerships:** Accenture’s broad range of partners includes AWS, Apple, Google, Microsoft, Oracle, Pegasystems, Salesforce, SAP, Workday and others. Accenture has approximately 7,000 FTEs dedicated to SaaS-based development. Accenture’s mature development practice allows clients from Brazil to access and use global delivery centers if critical resources are not available in its four Brazilian centers.

Caution

Accenture has a large installed base and has not been keen on disrupting its existing business. Current application development customers should not expect Accenture to proactively change its service contracts. In general, Accenture expects innovation and product creation to be additional engagements.
CI&T

Overview

CI&T is a service provider specialized in design thinking, lean digital transformation and advanced technologies. Founded in 1995, CI&T has 2,500 employees in the U.S., Brazil, U.K., Australia, Japan and China.

CI&T works with business leaders to prepare and coach the digital business transformation. It uses Lean methodology as the foundation of its service portfolio. Customer journey and digital products are delivered from its Lean program applied to business.

Stable methodology: CI&T developed a proprietary process called Lean Pod™ that is inspired by Scaled Agile Framework (SAFe®), Lean IT, design thinking, design sprints and Lean UX approaches. Lean Pod™ uses a small team of digital practitioners (strategists, engineers and designers) working together to capture ideas for rapid prototyping and to accelerate the delivery of large and complex digital products.

Digital product lifecycle management: CI&T works integrated with its clients' product owners and business strategists to continuously improve the customer journey, product design and business performance. It monitors usage, UX, client feedback and product performance. It fixes software code and manages the continuous delivery process, from creation to replacement.

Proven agility and capacity: CI&T can reference clients in many geographies and industry verticals. In 2017, CI&T acquired Comrade, a strategy and customer experience design agency in San Francisco. In Japan, CI&T has a joint venture with Rococo, a Japanese software development company. CI&T is a Google Premier Partner and uses open-source technologies, including Magento and Drupal. CI&T uses its agility to develop new accounts, explore new markets and partner with local experts, which has allowed the company to grow its revenue for 20 consecutive years.

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CI&T Lean Pod™ is a far-reaching service solution to the digital product lifecycle management outsourcing.

Caution

Although CI&T applies the most modern digital products design practices, it is a software engineering company. Clients that require brand development and market campaign management may find necessary to include marketing agencies to work together with CI&T.
IBM Global Business Services (GBS) provides clients with consulting, application management services and business process services. GBS focuses on digital reinvention, combining industry knowledge, applications and functional expertise with business design and cognitive and cloud technologies. Other IBM units, including IBM Watson, IBM Cloud, IBM Research and IBM Global Technology Services (GTS), support GBS services.

IBM GBS offers application management services to support the digital product lifecycle. Its robust ALM practice is the base, while agile and product design capabilities enrich its service offering.

**Product development capabilities**: IBM Garage Method explores design thinking, lean startup and agile DevOps concepts and divides development into seven phases: Culture; Discover; Envision; Build; Run; Manage; Learn. It has a collection of practices, architectures and tools that are curated to help organizations rapidly design, build, deploy and scale innovative cloud apps. IBM has a strong DevSecOps practice and a robust release management process.

**Thought leadership**: IBM’s research and continuous product ideation is widely available for public use through media, events, hackathons, tutorials and events, such as its Think conference. IBM’s ongoing interaction with partners, startups and clients allows it to identify and leverage the best ideas.

**Development platform alternatives**: IBM Mobile Foundation is a platform for mobile apps. It provides cognitive APIs, microservices, features A/B testing, app lifecycle management, user analytics, push and multi-platform SDK. IBM Cloud Functions, based on Apache OpenWhisk, is a polyglot functions-as-a-service (FaaS) programming platform for developing lightweight code that executes and scales on demand. It enables serverless programming and access to IBM Watson APIs. Alternatively, digital products can be deployed to multiple clouds with IBM Cloud Foundry using BOSH technology.

**Caution**

Everything IBM creates is copyrighted. Clients should negotiate upfront the rights over the intellectual property jointly created with IBM.

With a robust ecosystem, IBM subcontracts niche specialists when appropriate. Subcontracting is a good practice when clients transfer project risks to IBM; however, hiring niche providers directly can be more cost effective.
ilegra provides consulting services to develop innovative customer experiences and digital product ideation. The company has been providing consulting and design for more than 16 years with offices in Coral Gables, Florida in the U.S and Porto Alegre and São Paulo in Brazil.

Strengths

Focus on speed: ilegra Digital Product UX Sprint and ilegra Product UX Improvement aim for rapid execution. Digital Product UX Sprint validates new products or features ideas with fast prototyping and usability testing delivered as a minimum viable product (MVP) ready to be developed on software. It uses design sprint, wireframes and visual interfaces, clickable prototypes, usability testing and software development as needed. Product UX Improvement interprets the user experience through detailed analysis, ideas validation, collected data and lessons learned to design new experiences and interfaces.

Unique market positioning: ilegra combines business consulting, software agile teams and digital design agency expertise. Its unique business competencies allow the company to deliver unique solutions. For example, for a remote tractor manufacturer it increased route accuracy from 39 inches to 4 inches, allowing farmers to know when and where a seed was planted.

Custom design process: ilegra has created a design process that evolves in four stages that engage clients in co-design and co-creation processes. CALEDOS is a joined immersion to understand and discover different audiences’ latent needs, desires and behaviors, to assist in the decision making process. SCAGIL observes the dynamics of services and processes from a human standpoint to identify infrastructure and systems bottlenecks and offer improvements for a better flow. ORIOS executes the business vision and provides alternative design options to help business clients envision a possible future. VISUS creates new concepts, design products, services or innovative business models from the captured market opportunities.

Caution

ilegra does not offer extensive application development and maintenance services. Its expertise relies on digital product ideation, creation, testing and user experience improvement. Development at scale, continuous testing and integration, as well as DevOps, may require additional service providers to support large organizations.
Stefanini is a Brazilian multinational company founded in 1987. It operates in 40 countries and four continents with 24,000 employees. The company is investing in a wide-ranging innovation ecosystem to assist customers in the digital transformation process. Stefanini states that it is co-creating solutions for a better future.

**Strengths**

**Delivery capacity:** Since 2008, Stefanini has operated its Fábrica Contínua software continuous development factory. Fábrica Contínua has more than 8,000 developers working with a broad range of technologies, including mobile, portals, design thinking, business intelligence and cloud computing technologies. Digital Studio is Stefanini’s business unit dedicated to agile delivery for large organizations, including financial institutions.

**Flexible, pragmatic approach:** Stefanini adapts itself to clients’ demands and requirements, including its organization and contracting terms. This flexibility makes it easier for clients to adjust to digital product development, agile practices and continuous delivery.

**Stefanini Digital Studio:** Stefanini has created a proprietary agile methodology for large enterprises. Digital Studio has three stages. Stefanini Dive instigates ideas to deliver prototypes after five business days. Deep Dive takes prototypes and transform them into viable products. Submarine builds the integrations and improvements to scale the application. For each stage, Stefanini defines business indicators such as time-to-market, financial results, user adoption, utilization increases and loyalty, to measure applications by its outcomes.

**Investments in technology:** Stefanini has four innovation centers located in the U.S., Brazil, Romania and Singapore. These centers focus on innovation to respond to client needs, including mobile solutions, IoT and wearables. Sophie, the company’s artificial intelligence platform, is one example. The innovation centers are capable of developing custom solutions for enterprise mobility.

Stefanini's continuous testing practice is not as strong as its agile product development specialization, because many of its large Brazilian clients prefer to segregate testing firms from development providers.
Wipro is a global service provider with $8.4 billion in revenues. Wipro operates in 110 countries and is expanding its footprint in Brazil.

Designit is a Wipro company and strategic design firm dedicated to creating high-impact products, services, systems and spaces. Wipro Digital is a division dedicated to digital transformation. Together, Wipro Digital and Designit are an innovation-led, enterprise transformation partner that focuses insights, interactions, integrations and innovations.

**Strengths**

**Comprehensive approach:** The Designit journey includes strategy, customer journey, design, technology, insights, interaction and integration. From strategy to products, it considers the customer’s journey at the center.

**Agile transformation capabilities:** Clients in Brazil are relatively new to agile. Wipro’s focus on transitioning its clients to agile using its certified and experienced coaches helps overcome the cultural challenges and other impediments to agile adoption. Wipro offers agile applications managed services with Scrum or Scaled Agile Framework (SAFe) for development and Kanban/ScrumBan for maintenance services.

**DevOps and agile advisory for continuous delivery:** Wipro’s DevOps framework includes a continuous delivery model to provide on-demand IT delivery, including Its Global Agile Model for Enterprise (W-GAME), 3D (Discover, Develop and Deliver), as well as the CliK accelerator framework and Renaissance ecosystem.

**Tools and automation:** Wipro has the automation tools and an advanced continuous testing practice required to support agile at scale, with short release cycles to deliver business agility. Wipro has specializations to support tools like Docker, Puppet, Ansible, Jenkins, SonarSource, Chef, Splunk, SaltStack, Logstash, Automic, Artifactory and others.

Wipro’s Designit office for South America, is in Lima, Peru. It does not have a design center in Brazil.
RISING STAR: COGNIZANT

Overview

Cognizant is a $14.8 billion revenue company with 260,000 employees. It has three digital practice areas — Cognizant Digital Business, Cognizant Digital Operations and Cognizant Digital Systems & Technology. It is gradually growing its portfolio offerings in Brazil, where it operates since 2009.

Cognizant Interactive provides design, UX/UI and content, AR/VR, conversational AI and other emerging technologies. Cognizant Digital Engineering enables cloud-native application at-scale using insights about customer behavior to streamline existing portfolios and drive continuous innovation.

Strengths

**Full-stack digital portfolio management:** Cognizant Digital Engineering has four offerings. Value Stream does an application portfolio assessment to design a journey map. Greenfield Application Solution applies Lean, agile, integrated engineering, extreme programming, test-driven development and pair programming to deliver new digital products. Application Transformation converts legacy applications to cloud-native operation. Insight to Code uses software engineering and human science expertise from its partnership with ReD Associates to provide a continuous iterative process, based on a combination of ongoing human science findings, QA testing outcomes and business feedback.

**Next-gen ADM frameworks:** Cognizant has developed proprietary frameworks such as AVMPPlus, AppLens, Customer Value Management (CVM) and various others for a modular and integrated approach to shorten delivery times and introduce new delivery mechanisms and technologies into the client environment. It uses OutSystems, a leading low-code application platform, to develop mobile, web and enterprise omnichannel applications, and Pivotal Cloud Foundry platform to manage multi-cloud deployments.

**Full digital lifecycle services:** Cognizant's digital portfolio goes from strategy consulting on digital transformation to support for fully digital operations. Cognizant can transform the IT backbone, moving clients to SaaS, PaaS and cloud. These transformational capacities assure full lifecycle management of all digital products.

Caution

Not all portfolio options are readily available in Brazil. Clients should check availability to combine with local expertise, in special regarding digital marketing agencies participation in product strategy and design phases.

2019 ISG Provider Lens™ Rising Star

Cognizant delivers a solid digital product lifecycle service, including the transformation to eliminate legacy applications from a client's digital portfolio.
**Definition**

Digital Continuous Delivery gives organizations the ability to develop and deliver high-quality software faster and more efficiently than ever before. It allows the use of development pods, innovation labs and direct feedback from end users and customers to increase the relevance of software being released into the market and to shape new specific products and microservices. End user and customer feedback is often captured automatically via usage pattern analytics. Enterprises can have in-house continuous development and innovation staff, access resources jointly with in-house and external partner companies or through an as-a-service arrangement, with only the management and authorization function remaining in-house.

Providers of this set of services must be able to offer all the benefits and practices of companies from within the Digital Product Creation & Customization space, (as described in the preceding segment), and also offer a workplace or shared workspace experience for collaboration. Under this environment, employees or user groups crowdsource to develop new products.
and services designed for new digital experiences. The providers have assets to support product ideation and prototype testing. These assets include: collaboration tools, virtual reality labs, IoT platforms for prototyping, telepresence for remote team collaboration, design thinking, A/B tests and methodology experts to facilitate product creation. Prototypes can be created and tested very quickly using agile methods. Providers that compete in this market can engage by project or as a continuous permanent innovation lab, and can share revenues from product monetization.

Closely related to digital product creation, continuous delivery is a process that enables development teams to almost constantly roll out well tested code that is always in a production-ready state based upon real customer or business need. To achieve continuous delivery, required changes from the business, market or user groups (as captured via collaboration or usage tools) feed requirements that are given to application development teams. The teams then incorporate automation to produce and deliver updates more rapidly and with fewer errors. Once a new feature or update is complete, the code is immediately available for deployment to test environments, pre-staging or live production. In continuous delivery, software is continuously tested for production readiness with feedback provided automatically whenever a change is made. Building, testing and releasing software faster and more frequently reduces the cost, time and risk of deploying changes by allowing for ongoing, incremental updates to applications in production.

To achieve these goals, closed systems must be broken down and analyzed to determine their suitability and potential degree of openness towards the market. Theoretical models must be transferred into data-driven or virtual systems, and processes must be transferred from people to machines. Providers must have process competence and know about the need to tap into external networks (mostly cloud-based) as sources of information, knowledge and trends. Providers also need to have change management skills to involve employees across multiple departments and explain the benefits of changing core processes and must possess continuous agile development skills.
Definition (Cont.)

Continuous delivery automatically deploys each app or software build that passes the full-automated test cycle. Instead of waiting for a human to decide what and when to deploy to production, a continuous deployment system deploys everything that has successfully traversed the creation, testing and deployment pipeline. Although the new code now is automatically deployed, techniques exist to activate new features or applications later, or only for specific subsets users if the enterprise desires. Deploying automatically pushes applications, features and fixes to customers quickly, helps avoid version and configuration control for deployed products and applications, and delivers competitive benefits.

Separating the deployment of code from its release to users is an extremely powerful part of continuous delivery and deployment. Code can be deployed to production without initially activating it or making it accessible to users. Then, the organization decides when to release new functionality or features independent from deployment. This gives organizations a great deal of flexibility by separating business decisions from technical processes. If the code is already on the servers, then deployment is no longer a delicate part of the release process, which minimizes the number of individuals and the amount of work involved at the time of release.

In this segment we consider those providers offering development and deployment services and those that are capturing business and user requirements or providing innovation labs or methods, workplace experiences, development pods and related services.
Observations

Leading companies in this quadrant are those that show higher product
development experience and the capacity to deliver continuous software
development, comprising continuous integration, continuous delivery,
continuous testing and continuous deployment.

For several providers, continuous integration is the major challenge.
Large enterprises, such as financial institutions, have several
application development and maintenance providers to support their
application portfolios. Continuous integration requires synchronizing
many application environments, a consistent copy of the production
environment with reduced datasets and masked data for privacy and
security. Continuous testing requires the development of subsets of
testing data, scripts, automation and AI. Advanced digital enterprise
clients use PaaS. Complexity increases as the environment grows.
In general, DevOps relies on robust testing automation to deploy
applications without errors and automation to rollback if problems occur
in production. DevOps is essential for continuous delivery. Because of
the implications of infrastructure automation, few providers can manage
the digital continuous delivery for large environments.

- Accenture’s robust software development methodology and its infrastructure managed services experience provide a consistent continuous delivery.
- Cognizant’s investments in automation and its sophisticated continuous testing service practice integrate an efficient continuous delivery capability.
- IBM has long experience in application lifecycle management, including agile, integration, testing, DevOps and PaaS, to provide a comprehensive continuous delivery solution.
- Softtek has revamped its application development and maintenance practice, including automation, AI and testing, to improve its continuous delivery service offering.
- Stefanini’s digital practice involves all components of the digital product lifecycle. It is applying leading edge methodologies in sophisticated, large enterprises.
- Wipro uses its global practice to leverage its local capabilities, with automation, testing and DevOps to provide a robust digital continuous delivery.
- A Rising Star, DXC Technology has a robust cloud management practice that includes automated testing services, DevOps and AI. It has a leading agile practice in other geographies and is gradually improving its delivery capacity in Brazil.
Accenture has four delivery centers in Brazil and 459,000 employees worldwide. The Accenture Digital division has 85 clients and 790 consultants in Brazil to leverage its global resources from Accenture Analytics, Accenture Interactive and Accenture Mobility. Accenture acquired several companies in Brazil in the last three years, including Concrete Solutions, which had 500 employees in 2017 and adds to Accenture’s agile capabilities.

Accenture Cloud Platform (ACP) is a vendor neutral cloud platform that provides access to both private and public cloud services. Cloud management is delivered as a consumption-based service to enterprises via a fully automated, self-service model.

**Strengths**

**The Accenture DevOps Platform:** This is a cloud-hosted development environment for continuous delivery. It includes preconfigured tools, test environments, automation blueprints and security features. It is used to increase the application release rates. With approximately 1,000 DevOps practitioners and 12,000 trained agile developers, Accenture can assure a consistent continuous delivery solution.

**Automation and AI in a cloud-first mentality:** ACP leverages automation, AI and machine learning that integrate to hybrid clouds via Accenture’s APIs. It has a strong focus on analytics to manage application performance, and uses AI and bots to automate deploy, rollback and patches. Accenture has client references that demonstrate incident reduction through automation and agile continuous delivery with automated DevOps.

**Robust application lifecycle management:** Liquid Application Management service consists of end-to-end, cross-functional agile product teams and DevOps for applications across multiple lines of business. Accenture can modernize and move its client's application portfolio to any platform, including its preferred Accenture Cloud Platform (ACP). The modernization resources include Lean practices, robotic process automation (RPA), artificial intelligence and the use of cloud-based components to leverage IaaS and PaaS benefits.

**Caution**

Accenture Cloud Platform does not have a large footprint in Brazil. Clients should check service availability for the digital product specific technologies.
Cognizant is a $14.8 billion revenue company with 260,000 employees. It has three digital practice areas — Cognizant Digital Business, Cognizant Digital Operations and Cognizant Digital Systems & Technology.

Cognizant HIVECenter™ is an integrated portfolio of services, platforms and solutions to bring together collective automation capabilities for any business and IT scenario. Through its automation platform, Cognizant provides continuous delivery including automated dev/QA configuration, continuous integration, continuous testing and DevOps.

**Overview**

**Strengths**

**End-to-end solution:** Cognizant provides DevOps advisory services. Cognizant's testing scope includes business process, user acceptance, application performance, security and accessibility. There are assurance services for blockchain, IoT, mobility, cloud migration, big data and digital device software. Clients also can use agile-sprint automation and bot-assisted testing.

**Extended quality services:** Cognizant's technology assurance labs provide on-demand cloud provisioning and virtualization. Cognizant offers a crowdsourcing service platform for digital product beta testing and measuring user response to apps. Cognizant Code Assessment Platform (CCAP) is a web-based service to analyze source code for potential bugs, complexity, unit tests, comments, coding rules, duplication, architecture and design.

**Continuous, integrated automation:** Cognizant's HiveCenter™ brings together licensed and open stack automation technology along with proprietary technology. Cognizant's Intelligent Quality Designer is a patented, model-based test design solution for business process assurance. Intelligent Test Scripter (CITS) is Cognizant's open source, scriptless test automation platform. The CRAFT framework is for end-to-end test automation. Quality Insight Bots analyze data captured from the software development lifecycle (SDLC). MINT provides on-demand mobile testing and device virtualization. TEBOT extends automation of digital solutions, such as home automation and wearable devices. SmartStub is a service and device virtualization platform.

**Caution**

Cognizant's digital continuous delivery is integrated into its application delivery services and is not offered as a standalone service.
Overview

IBM has been providing outsourcing services in Brazil for more than 35 years. Its Global Business Services (GBS) unit provides clients with consulting, application management services and business process services. Other IBM units, including IBM Watson, IBM Cloud, IBM Research and IBM Global Technology Services (GTS), support GBS services. IBM GBS designs the digital continuous delivery processes.

IBM GTS provides continuous services to enable digital business agility.

Strengths

Mature continuous delivery process: IBM can manage the entire product lifecycle. It has long experience with continuous testing. Its ALM tools support continuous integration over cloud environments. It has a robust DevSecOps practice. IBM has a comprehensive portfolio to support the digital product lifecycle.

Advanced agile practice. The IBM Cloud Garage Method is IBM’s approach to enable business, development and operations to continuously design, deliver and validate new functionality. The practices, architectures and tool chains cover the entire product lifecycle from idea inception through to capturing and responding to customer feedback and market changes.

Automation and virtual assistant: IBM has many of Watson's cognitive use cases in production, in multiple languages, including Brazilian Portuguese. AI services range from a plain chatbot to a virtual assistant that interacts in an instant messaging group (Skype or Slack). Watson is in use to automate tasks, execute processes, respond to “how-to” questions and search documents to provide a unique user experience. It automates provisioning, testing, continuous integration (code merges) and DevOps, while the virtual assistant improves agile practitioners performance.

Caution

While assessing and designing the digital transformation, IBM tends to prioritize IBM Cloud solutions and IBM Rational ALM toolset. Clients should remember that IBM has partnerships with AWS and Microsoft to deliver multi-cloud alternatives. Consider case-by-case scope and solution negotiations.
Softtek is a global service provider with operations in 20 countries, including 15 delivery centers. Softtek Brazil has offices in four states and two delivery centers.

Softtek's continuous delivery uses a process to implement quality assurance (QA) services, supported by its Software QA & Validation Methodology® and its Quality Assurance and Validation Maturity Model®. The methodology can be applied to a single project or to the application's lifecycle. Softtek's team has more than a decade of experience in agile methodologies. It uses automatic code generation based on functional patterns and prototyping languages.

**Overview**

Softtek's service portfolio is stronger for ERP and CRM, and includes analytics, artificial intelligence, IoT and Microsoft technology around these knowledge areas.

**Strengths**

- **Automation mindset:** Softtek's agile service has four directives: DevOps, Code, SAFe and nearshore. Projects are organized in agile pods to privilege automation of unit, functional and security testing, code analysis for quality, automated environment provisioning and continuous deployment with a DevOps-first mindset.

- **Zero-defect operation target:** Softtek is using automation and Lean to reduce defects to zero, or as close to zero as they can be. Softtek's methodology is data-driven and quality-focused, with an automation-first mentality. Softtek's strategy centers on three obsessions: transform people-driven solutions to process-driven ones; replace chaotic, ad-hoc improvement decisions with a predictive, data-driven improvement process, and reengineer manual operations to automation with digital governance.

- **FRIDA and DIEGO automation platforms:** Framework for Intelligent Digital Automation (FRIDA) is a cognitive computing platform that runs the services of Microsoft, AWS, Google and SAP and coordinates robotic process automation, chatbots, self-healing, automated testing and DevOps. Digital Enablers for Growth (DIEGO) allows the integration of several platforms and solutions, including IoT and B2C platforms, tools for smart cities, gamification, augmented reality (AR) and virtual reality (VR).

**Caution**

Softtek's service portfolio is stronger for ERP and CRM, and includes analytics, artificial intelligence, IoT and Microsoft technology around these knowledge areas.
Stefanini is a Brazilian multinational company founded in 1987. It operates in 40 countries and on four continents with 24,000 employees. Stefanini has strong partnerships with leading technology vendors. Stefanini services include digital product lifecycle management, cloud platform operations, testing and DevOps.

Stefanini does not have the highest AWS and Azure accreditations. It has a stronger partnership with IBM for PaaS, IaaS and SaaS. Stefanini's continuous testing practice is not as strong as its agile product development specialization, because many of its large Brazilian clients prefer to segregate testing firms from development providers.

Flexible approach: Stefanini adapts itself to clients’ demands and requirements, including its organization and contracting terms. This flexibility makes it easier for clients to coordinate collaboration amid several service providers for continuous delivery.

Strong partnerships and broad portfolio: Stefanini has strong partnerships with most relevant technology vendors. For digital operations, it partners with IBM, AWS and Azure to deliver platform services in multiple engagements. Its automation platform allows for dynamic environment provisioning. Its broad portfolio ranges from application development, DevOps, infrastructure operations, mobility and security.

Stefanini Submarine: Stefanini Submarine is the heart of its Digital Studio continuous delivery program. Digital Studio has three stages. Stefanini Dive instigates ideas to deliver prototypes after five business days. Deep Dive takes prototypes and transforms them into viable products. Submarine builds the integrations and improvements to scale the application, and includes release management and continuous delivery.

Delivery capacity: Stefanini's Fábrica Contínua software continuous development factory has more than 8,000 developers working with a broad range of technologies, including mobile, portal, design thinking, business intelligence and cloud computing technologies.
Wipro has a comprehensive continuous delivery solution based on automation, AI and cognitive computing to deliver digital business agility.

DevOps and agile advisory for continuous delivery: Wipro's DevOps framework includes a continuous delivery model to provide on-demand IT delivery, including its Global Agile Model for Enterprise (W-GAME), 3D (Discover, Develop and Deliver), as well as the CLiK accelerator framework and Renaissance ecosystem.

Pragmatic vision for test solutions: Wipro's perspective for the future of testing includes using robotic automation (bots and RPA) and cognitive artificial intelligence to reduce human intervention to a minimum using its IntelliAssure solution, powered by Wipro's HOLMES™ platform, to achieve accelerated speed. Wipro's tools continue to evolve to provide clients with advanced technology options to scale test.

Tools and automation: Wipro has the automation tools and an advanced continuous testing practice required to support Agile at scale, with short release cycles to deliver business agility. Wipro has specializations to support tools like Docker, Puppet, Ansible, Jenkins, SonarSource, Chef, Splunk, SaltStack, Logstash, Automic, Artifactory and others.

Robust integrated offering: Wipro's HOLMES™ platform supports its continuous delivery platform. Wipro has leading agile practices, sophisticated continuous integration automation, robust testing tools and methodologies and DevSecOps engineered on top of automation. This comprehensive automation platform allows Wipro to provide a robust integrated digital solution to deliver business agility.

Strengths

Overview

Wipro is a global service provider with $8.4 billion in revenues. Wipro operates in 110 countries and is expanding its footprint in Brazil.

Designit is a Wipro company and strategic design firm dedicated to creating high-impact products, services, systems and spaces. Wipro Digital is a division dedicated to digital transformation. Together, Wipro Digital and Designit are an innovation-led, enterprise transformation partner that focuses insights, interactions, integrations and innovations.

Caution

Wipro's strategy is based on automation and remote service delivery to gain scale. Clients in the early stages of agile and continuous integration may require more advisory and on-site engineering services to build a continuous delivery practice, and should consider specialized consulting services in addition to Wipro's automated services.

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Wipro has a comprehensive continuous delivery solution based on automation, AI and cognitive computing to deliver digital business agility.
RISING STAR: DXC TECHNOLOGY

Overview

DXC Technology has more than 60 years of experience in the technology industry. The company's global expertise resides in insurance, healthcare, transportation and other industries, with 170,000 professionals in more than 70 countries. In Brazil, DXC has many clients in the manufacturing and service industries.

DXC's reliable infrastructure, staff skills and leading use of automation and artificial intelligence puts the company in the direction of a leadership position in the continuous delivery market. It has robust testing services and is growing its footprint in the Brazilian agile service providers market.

Strengths

**Automation for integration and DevOps:** Bionix is the platform DXC created to combine data analytics, machine learning and automation tools to reduce interruptions, self-heal incidents and support DevOps practices such as continuous integration and continuous delivery. Bionix uses APIs to consume artificial intelligence and cognitive services from various vendors to provide flexibility.

**Leading testing services:** The company's security test services allow clients to reduce business risks. Comprehensive Application Threat Analysis (CATA) conducts security requirements gap analysis and architectural and design threat analysis. DXC delivers Static and Dynamic Applications Security Testing (SAST and DAST) services to identify security defect vulnerabilities in applications source code. Enhanced Applications Security Testing provides more in-depth analysis and recommendations for remediating vulnerabilities identified through application security. Vulnerability Remediation service fixes the security defects and vulnerabilities found in applications.

**Digital enablement:** Vast experience in infrastructure management is the base for DXC's digital platform proposition. It has data centers, virtualization technologies, strong IaaS, PaaS, SaaS partnerships with all the leading vendors, robust management processes and as a service solutions for operations, storage, analytics, mobility, security, ERP and other services.

Caution

DXC has all components for a digital continuous delivery in place. However, it needs more public agile case studies and effective thought leadership participation in practitioners' associations and discussion forums to be recognized as an agile expert in the Brazilian market.
Definition

Although commonly associated with Bitcoin and other cryptocurrencies, blockchain technology has many other applications. Simplistically, a blockchain is a type of distributed ledger or decentralized database that keeps continuously updated digital records of who owns what, with a network of replicated databases, synchronized via the internet and visible to anyone within the network. Blockchain networks can be private with restricted membership like an intranet, or public. When a digital transaction is carried out, it is grouped in a cryptographically protected block with other transactions that have occurred in the last 10 minutes (or less) and the record is sent to the entire network.

For service providers, blockchain puts a significant business pressure. Investors and clients expect the service provider to be well positioned to respond to demand and propose blockchain solutions that will disrupt the market. However, no organization or subject matter expert is certain of which blockchain technology will prevail or when blockchain business is going to provide reasonable returns.
Definition (Cont.)

This study looks at service providers that can carry on proof-of-concept (POC) projects and those that have delivered blockchain into production.

Service providers rely on one or more of the three blockchain platforms: Ethereum; Hyperledger Fabric and R3 Corda.

Ethereum is a decentralized platform to run contracts in a shared global infrastructure. It enables developers to create markets, store registries of debts or promises, and move funds in accordance with instructions given long in the past (like a will or a futures contract). The Ethereum Foundation is responsible for the platform. It has more than 1,400 users and 19,000 repositories on GitHub. J.P. Morgan provides Quorum™, an enterprise-focused version of Ethereum, which is also available for download on GitHub.

Corda Enterprise is a commercial distribution of Corda open source, which has 138 users and 519 repositories on GitHub. Corda is a distributed ledger platform. Financial institutions prefer Corda Enterprise as it handles more complex transactions with restricted access to transaction data. R3 is the consortia behind Corda Enterprise. The company has built an ecosystem of more than 200 members and partners, of which more than 50 are financial institutions. In Brazil, the two largest banks and the B3 stock exchange are members of the consortia.

Hyperledger is an open source project hosted by The Linux Foundation that has 138 users and more than 2,900 repositories on GitHub. Hyperledger Fabric is the foundation for the IBM blockchain Platform and thus attracts many service provider partners. Hyperledger fabric is a permissioned, shared ledger. Its architecture is based on multiple ledgers whose operations are independent of one another.
Observations

All service providers participating in ISG studies consider blockchain important. However, we found few use cases in production and many POC projects that had not reached production. When a blockchain solution is intended to replace a working system it faces two restrictions. One is the speed of a transaction, which is slower than in a traditional system because it is replicated to other blockchain nodes for confirmation before a block is closed. The second obstacle is a weak business case. Bruno Barros, head of Stefanini's digital transformation practice, applies a simple rule to test the business case before starting a blockchain project. He checks that there is a real business problem to be resolved, for which no application exist or it is underperforming; that there are at least three independent parties involved; and that there is distrust between the parties.

Regardless how disruptive blockchain can be in the future, as of today we have not identified solutions that provide disintermediation to replace or disrupt existing businesses. Most use cases provide solutions for new markets, such as tracking goods or introducing control on lengthy value chains.

- Accenture provides a complete view of the blockchain technology landscape and its potential business implications, to help build strategies around effective use cases.
- Cognizant has many use cases and intense participation in global blockchain development to provide rapid, hands-on blockchain solution proofs-of-concept and deployments.
- IBM has built a robust blockchain platform and can deliver consulting and integration to scale its platform to business solutions.
- Tech Mahindra has specialized blockchain solutions for vertical markets, with reusable use cases.
- Rising Star: Stefanini has certified practitioners that have executed POCs using the IBM blockchain platform. The company is ready to incorporate blockchain in its portfolio.
- Rising Star: Wipro leverages its global practice and its blockchain lab in São Paulo to develop use-cases for vertical markets.
Overview

Accenture has 459,000 people serving clients in more than 120 countries across more than 40 industries. It participates in startup mentoring and incubation programs. In Brazil, it co-sponsors and participates in Cubo, the startup incubator hosted by Itaú Unibanco in partnership with Redpoint eVentures.

Accenture's blockchain Center of Excellence in Sophia Antipolis, France focuses on distributed ledger technologies and blockchain solutions across industries and domain specialization (including IoT, transactions, voting, messaging and other use cases).

Strengths

Alliances: Accenture entered into an alliance with Digital Asset in 2016. Digital Asset has a particular focus on post-trade processing. In 2017 Accenture entered into an alliance with R3 and is a preferred implementation provider for its Corda platform. Accenture created its alliance with Ripple in 2015. Ripple provides enterprise distributed financial technology to banks that enables cross-border payments. Accenture is a premier member of Hyperledger and sits on its board of directors.

Thought leadership: Accenture is a founding member of the Enterprise Ethereum Alliance (EEA) and has a seat on its board of directors. The EEA connects Fortune 500 enterprises, startups, academics and technology vendors with Ethereum experts to define enterprise-grade software capable of handling the complex, highly demanding applications. EEA is a global collaboration of more than 130 members and is hosted by The Linux Foundation.

Comprehensive portfolio: Accenture offers blockchain applicability studies, business impact and deployment strategy assessments, blockchain bootcamps, technology leadership workshops for hands-on, advanced training and sandboxes for rapid blockchain prototyping. It uses rapid development environments featuring a suite of blockchain toolsets, customized proofs of concept (POC) and proof of value blockchain solution design. Its holistic solution design encompasses third party vendor integration and custom coding and software add-ons, such as redaction and security-key management, including hardened security modules.

Caution

Accenture is evaluating and testing blockchain use cases for all industries; however, its main focus areas are finance and supply chain solutions for existing businesses. Clients looking for breakthrough and disruptive solutions for niche markets should compare service provider alternatives.
Cognizant is a $14.8 billion revenue company with 260,000 employees. Its consulting business unit has more than 6,000 professionals.

Cognizant participates in relevant blockchain initiatives: it is a member and contributor of the Enterprise Ethereum Alliance; executive committee member of Digital Chamber of Commerce; official partner of R3 (the Corda platform champion); member of OSCRE real estate standards organization; official partner of MultiChain, BigchainDB, Chain, Attest Inc., Digital Asset Holdings and OSCRE; partner of Deep; partner and member of the Microsoft Azure Blockchain Council; and has partnered to develop the IBM Enterprise Hyperledger Fabric innovation and co-creation lab.

**Strengths**

**Experience:** Cognizant has implemented blockchain for supply chain use cases for trading companies and the manufacturing, retail, healthcare, life sciences, energy and utility industries. It has experience with Hyperledger, Quorum and Corda in more than 20 industry prototypes. Cognizant takes a hypothesis-driven approach to rapidly build a minimum viable product (MVP) to reimagine a business process and quantify the business impact to initiate the journey toward an in-production deployment.

**Pragmatic approach:** Cognizant's blockchain practice is technology agnostic to provide an unbiased expert opinion on use case and platform selection. It combines a vision for blockchain to power new and improved business models across industries, with a strong and expansive capacity for execution. It provides tangible experiences with real, hands-on, live implementations. It can point to multiple live client implementations and consortium-based client projects to go beyond the theoretical.

**Pre-built blockchain solution accelerators:** Cognizant's industry accelerators enable it to develop disruptive applications using blockchain and other ecosystem technologies. Cognizant brings a full-service capability that goes beyond implementation to run and operate blockchain solutions in infrastructure that is hosted or cloud-provided, accelerating time to market for its clients.

**Overview**

Cognizant has many reference cases and intense participation in the global blockchain development to provide advanced consulting to Brazilian enterprises.

**Caution**

Cognizant is in the process of expanding its presence in the Brazilian market. It may need foreign consultants in certain engagements.
IBM offers a blockchain platform. Clients can use the platform as a service or contract IBM Global Business Services (GBS) to integrate the solution and IBM Global Technology Services (GTS) to operate it. IBM GBS provides consulting services to develop blockchain solutions. IBM GTS can maintain and operate blockchain on behalf of its clients, if desired.

**Thought leadership:** IBM was an early member of the Hyperledger open source initiative. Its research, technical and business experts have broken barriers in transaction processing speeds, developed advanced cryptography and are contributing to the Hyperledger Fabric open source. Since 2016, IBM has worked with clients across financial services, supply chain, government, retail, digital rights management and healthcare to implement blockchain applications and validate use cases.

**Live production cases:** The cloud-based IBM Blockchain Platform allows clients to quickly activate and develop, operate, govern and secure blockchain solutions. IBM Food Trust is a blockchain-based cloud network that offers participating retailers, suppliers, growers and food industry providers with data from across the food ecosystem to enable greater traceability, transparency and efficiency. BRF (a Brazilian processed food company) participates and now offers its retail consumers an app to check the product origin and all steps it went through before arriving at the supermarket. In another example, a consortium of five global banks use the we.trade blockchain solution on the IBM Blockchain Platform.

**Robust ecosystem:** IBM expands its capacity through local partnerships and incentives to students and developers to adopt IBM cloud and tools, thereby creating a robust ecosystem. IBM DeveloperWorks has more than 1 million developers. IBM Cloud marketplace includes many startups. IBM PartnerWorld has more than 4,000 partner solutions. This robust ecosystem can develop alternative solutions around IBM Blockchain Platform.

**Caution**

Clients should understand the limitations of each blockchain technology (Ethereum, Corda and Hyperledger) before choosing a service provider. IBM is focused on Hyperledger only.

With a robust ecosystem, IBM subcontracts niche specialists when appropriate. Subcontracting is a good practice when clients transfer project risks to IBM; however, hiring niche providers directly can be more cost-effective.
Tech Mahindra is a $4.8 billion company with more than 150,000 professionals in 90 countries. Tech Mahindra is growing its operations in Brazil.

Tech Mahindra has delivered many POCs, pilots and scaled enterprise wide blockchain solutions in multiple industries. Its strategic alliances and partnerships in blockchain technology include Ethereum, Hyperledger, MultiChain, Quantoz and ChromaWay. Tech Mahindra is in the process of expanding partnerships.

Strengths

**Programmatic approach:** Tech Mahindra has a consulting-led approach. It provides educational workshops, blockchain maturity assessments, value discovery workshops and business case development, resulting in a priority matrix. Tech Mahindra develops a roadmap and architecture, establishes a blockchain transformation office and executes proof of concept models. In the third stage of the blockchain program, it integrates the tested solution and platform in a production environment, organizes maintenance and support services, establishes a center of excellence and ensures that it gets to a blockchain business-as-usual state.

**Quality and skills programs:** The company has undertaken significant and innovative development, testing, deployment and quality assurance used within the implemented blockchain solutions. Developments are based on significant AI and robotics inclusion and automated continuous testing, utilizing its TechMNxt programs and a multitude of toolsets. Tech Mahindra also started its BlockGeeks up-skill program to facilitate blockchain competency; its target is to train approximately 3,000 BlockGeeks by 2019.

**Hands-on experience:** Tech Mahindra has blockchain in production; one example is a remittance transaction audit trail in India. It has several ongoing projects, some examples include: facilitating product recall for pharmaceuticals; spam phone call prevention for a telecom regulatory body; inter-operator settlements in telecommunications; payments (automobile); land registry; lending (for a rural finance bank); managing aerospace training certifications. The company has two use cases in Brazil.

Caution

Tech Mahindra can work with multiple blockchain platforms and solutions; however, Brazilian clients should pay attention to platform and technology support in Brazil. As of today, Tech Mahindra does not support R3 Corda, which is a popular choice in Brazil.
RISING STAR: STEFANINI

Overview

Stefanini is a Brazilian multinational company founded in 1987. It operates in 40 countries and four continents with 24,000 employees. The company is investing in a wide-ranging innovation ecosystem to assist customers in the process of digital transformation. It states that it is co-creating solutions for a better future.

Stefanini has certified practitioners that have executed POCs using IBM Blockchain Platform. The company is ready to incorporate blockchain in its portfolio.

Strengths

Pragmatic enablement: Stefanini applies a transformation strategy that starts small and gradually evolves. It calls it micro-battles. Each micro-battle delivers a MVP very fast, which sparks the client interest to go for another MVP. Stefanini uses the same approach to blockchain. It has trained personnel that have tested blockchain use-cases to enable a gradual business adoption, starting with simple applications.

Delivery capacity: Stefanini’s Fábrica Contínua software continuous development factory has more than 8,000 developers working with a broad range of technologies, including mobile, portals, design thinking, business intelligence, and cloud computing technologies. Stefanini has been steadily growing since its foundation. The company has no debts and positive cash flow; it can add resources when needed, and can support long-term projects.

Investments in technology: Stefanini has four innovation centers located in the U.S., Brazil, Romania and Singapore. These centers focus on innovation to respond to client needs, including mobile solutions, IoT and wearables. Sophie, the company’s artificial intelligence platform is one example.

Caution

Stefanini has not delivered blockchain in production environments.

2019 ISG Provider Lens™ Rising Star

Stefanini is prepared to deliver blockchain projects; interested clients can count on its robust delivery capabilities.
Wipro is a global service provider with $8.4 billion in revenues. Wipro has a blockchain lab inside the InovaBra startup incubator in São Paulo.

Wipro constructs and operates blockchain networks to solve use cases. Its membership in and affiliation to industry consortia and groups includes Hyperledger Foundation, Enterprise Ethereum Alliance (EEA), Energy Web Foundation (EWF), Blockchain in Transport Alliance (BiTA) and ASSOCHAM.

**Influence, education and experimentation:** Wipro offers advisory and consulting services to create the business strategy and the initial business value proposition, analysis for including cost-benefit, feasibility and complexity. It defines a target operating model and performs risk and compliance assessments. Wipro delivers executive workshops to educate clients on blockchain. It provides a blockchain lab-as-a-Service with hands-on working platforms.

**Experience and expertise:** Wipro has identified blockchain-based solutions for the banking, financial services and insurance (BFSI), manufacturing, retail and consumer goods industries. Solutions are defined, designed and co-developed with clients in Wipro’s Blockchain Innovation Lab. The industry solutions span across areas such as delivery versus payment (DVP), tri-party collateral management, Skip Trace Consortia, trade finance, P2P insurance for the sharing economy and loyalty rewards management in the BFSI sector. Wipro also has developed solutions that address areas like anti-counterfeiting and airworthiness certificate tracking in the manufacturing industry, and supply chain traceability across industries.

**Out-of-the-box solutions:** Wipro has nine in-depth, industry-specific blockchain solutions available with many add-on templates and fast-start options. Wipro’s Blockchain Innovation Lab enables rapid provisioning of blockchain environments to prototype and build use-case solutions. Clients can fast-track blockchain solution development by leveraging pre-defined use-case blueprints and ready-to-use solutions, including Wipro’s partner ecosystem.

Wipro has invested in blockchain R&D. However, it has not developed its business consulting capacity in Brazil.
METHODOLOGY

The ISG Provider Lens™ 2019 – Digital Business Transformation research study analyses the relevant software vendors and service providers in the Brazil 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. Definition of Digital Business Transformation market
2. Use of questionnaire-based surveys of service providers/vendor across all trend topics
3. Interactive discussions with service providers/vendors on capabilities & use cases
4. Leverage ISG’s internal databases & advisor knowledge & experience (wherever applicable)
5. Detailed analysis & evaluation of services & service documentation based on the facts & figures received from providers & other sources.
6. Use of the following key evaluation criteria:
   - Strategy & vision
   - Innovation
   - Brand awareness and presence in the market
   - Sales and partner landscape
   - Breadth and depth of portfolio of services offered
   - Technology advancements
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ISG (Information Services Group) (NASDAQ: III) is a leading global technology research and advisory firm. A trusted business partner to more than 700 clients, including 75 of the top 100 enterprises in the world, ISG is committed to helping corporations, public sector organizations, and service and technology providers achieve operational excellence and faster growth. The firm specializes in digital transformation services, including automation, cloud and data analytics; sourcing advisory; managed governance and risk services; network carrier services; technology strategy and operations design; change management; market intelligence and technology research and analysis. Founded in 2006, and based in Stamford, Conn., ISG employs more than 1,300 professionals operating in more than 20 countries—a global team known for its innovative thinking, market influence, deep industry and technology expertise, and world-class research and analytical capabilities based on the industry’s most comprehensive marketplace data.