

Market Guide for Blockchain Consulting and Proof-of-Concept Development Services

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Many organizations are looking to consultants for help in understanding the applicability and impact of blockchain for their business. Qualified resources are scarce. Sourcing and vendor management leaders can use this research to identify potential partners.

Key Findings

- Service providers are in the early stages of developing blockchain-specific strategies and business frameworks, so most lack the maturity to fully address strategic, financial and operational aspects of blockchain projects.
- Lack of industry standards and platforms will require reworking of current blockchain initiatives to be successful in a business environment.
- The pool of experienced service providers for blockchain initiatives is small; it is particularly difficult to find service providers with experience in applying blockchain outside of financial services. Eighty percent of enterprise blockchain initiatives referred to this research are in the banking and insurance service industry.
- While there are hundreds of blockchain proof of concept (POC) initiatives in progress, only a few have advanced to "live" production.

Recommendations

To optimize business value when using blockchain consultancies:

- Do not assume that large consulting firms are your only option in this market, and keep your assessment, specialist consultants as well, as they might have depth of capabilities. Resources are scarce, and no provider has yet established a scaled and mature practice.
- Evaluate service providers based on their ability to demonstrate the unique benefits and challenges of blockchain using business scenarios and referring to our recommendations to help you navigate through consultants' marketing noise.

- Recognize and be aware of the risks that blockchain solutions are still immature and not fully built and operational; solutions implemented today will be reworked and reimplemented within the next one to three years, Hence, be part of a blockchain community to keep in touch with changes in the technology and relevant issues.

Strategic Planning Assumptions

Eighty percent of blockchain initiatives will not reach live production by 2018; most will be terminated prematurely.

Nine out of 10 blockchain initiatives will fail because the business case is not identified at the start.

Market Definition

Blockchain consulting and POC development services are professional services to help clients ideate, assess and exploit the business possibilities of blockchain (and other distributed ledger) technologies, and implement new business strategies that use blockchain technologies to achieve business goals. These business goals include cost reduction, process optimization and new revenue streams. For an introduction to blockchain, see "The Bitcoin Blockchain: The Magic and the Myths" and "Toolkit: Overview of Blockchain Use Cases."

Actual Market — The market includes emerging advisory services related to ideating, assessing, strategizing and exploring new business models to apply blockchain technologies to derive new revenue streams or significant business process improvements for enterprises.

Typical Buyers — These include business executives, IT leaders, sourcing and vendor management leaders, CxOs, IT leaders, business process innovators, digital innovators, or business innovators.

Typical Business Outcomes — These include development of new products or services, cost optimization on existing processes, disruptive new business models or business and IT operational models.

Actual Deliverables — Depending on the nature of the services provided, deliverables may include the desired future state of strategy and architecture, gap analysis, roadmap for implementation, and small-scale POCs, while not include large-scale deployment through 2018.

How Buyers Shape Their Buying Decision — Buyers use the ideation process and techniques to identify blockchain initiatives. Organizations seek the following characteristics in service providers to support their blockchain initiatives:

- Clear, usable business framework(s) and roadmap(s), which are vertical-specific, for blockchain technologies applications to meet the client's business objectives and requirements
- Capabilities to support the identification of blockchain opportunities and create the business case with or on behalf of the buyer

- Demonstrable track record of blockchain POCs or a few blockchain projects for comparable buyer organizations and requirements
- Established partnerships or participation in a consortium focused on blockchain solutions and competencies
- Bench strength, with a range of skills in distributed computing, cryptography, business model analysis, game theory and behavioral economics

How Providers Package, Market and Deliver — This includes time-and-materials-based projects involving ideation, strategy, roadmap, business cases, and POC development and integration, for example. It also includes joint partnership delivery with blockchain technology vendors, startups and Internet of Things (IoT) niche providers, for example.

Service providers package their blockchain capabilities in two main propositions:

- Ideation processes specifically to develop blockchain initiatives, coupled with deep understanding of one or more blockchain technologies, in combination with business model analysis
- Blockchain operations support, focused on either business process operations or blockchain technology and technology operation, or a combination of business and technology operation support

Market Direction

Blockchain has become one of the top searched terms on Gartner.com. In Gartner's "Hype Cycle for Blockchain Technologies and the Programmable Economy, 2016," blockchain is climbing the Peak of Inflated Expectations. Gartner views the term "blockchain" as a loosely used terminology that describes a combined set of technologies and processes that variously spans middleware, database, security, analytics/artificial intelligence, monetary and identity management concepts and technologies. Blockchain is also becoming the common shorthand for a diverse collection of distributed ledger products, with more than 70 offerings in the market.

This new Market Guide report provides a perspective on the group of service providers that assists organizations in their journey to understand and work with blockchain technologies. For this first Market Guide, Gartner interviewed 19 service providers that, between them, had participated in a total of 129 POCs, with some interesting findings.

Currently, there are no geographical barriers in use-case development. Indeed, Gartner has seen innovation and POCs developed around the world, such as in Italy, France, Netherlands, Finland, Germany, China, Japan, India, Australia, South Africa, Singapore, United Arab Emirates, the U.S. and the U.K. (see "Toolkit: Overview of Blockchain Use Cases" and "Blockchain Trials in Every Industry Show the Pulse of a Rapidly Moving Professional Services Market").

- According to this Market Guide research of the 129 blockchain POCs, the top three regions with developed POCs are EMEA (40%), Asia/Pacific and Japan (30%), and North America (23%). The U.S., as a single country, had the most POCs.
- Service providers will gain the most valuable experience when a POC moves to live production use. However, examples of this in the blockchain world are still nonexistent. Therefore, one of the most important characteristics of blockchain consultancy is the ability to identify a compelling business case that will encourage production use. In conjunction with this, a consultancy should have the technical depth with a specific blockchain platform in order to scale a system from small initial release to large-scale production.
- Blockchain projects are often misconceived and misaligned by both the vendor and the customer.
- Currently, large consulting firms do not possess an advantage in this market. The size of the consultants' blockchain practice matters less than their competence in industry/use cases, specialized expertise in the new technology, and the strategy expertise to grasp and extend existing business models in new ways.
- Some of the consultancies have built a dedicated blockchain consultancy consisting of strategy, vertical and blockchain technical skills, often led by their financial services industry experts. Others organize a distributed network of blockchain experts that pool expert resources as needed. All firms recognize a need to invest in education and training to meet the rising demand for blockchain knowledge.

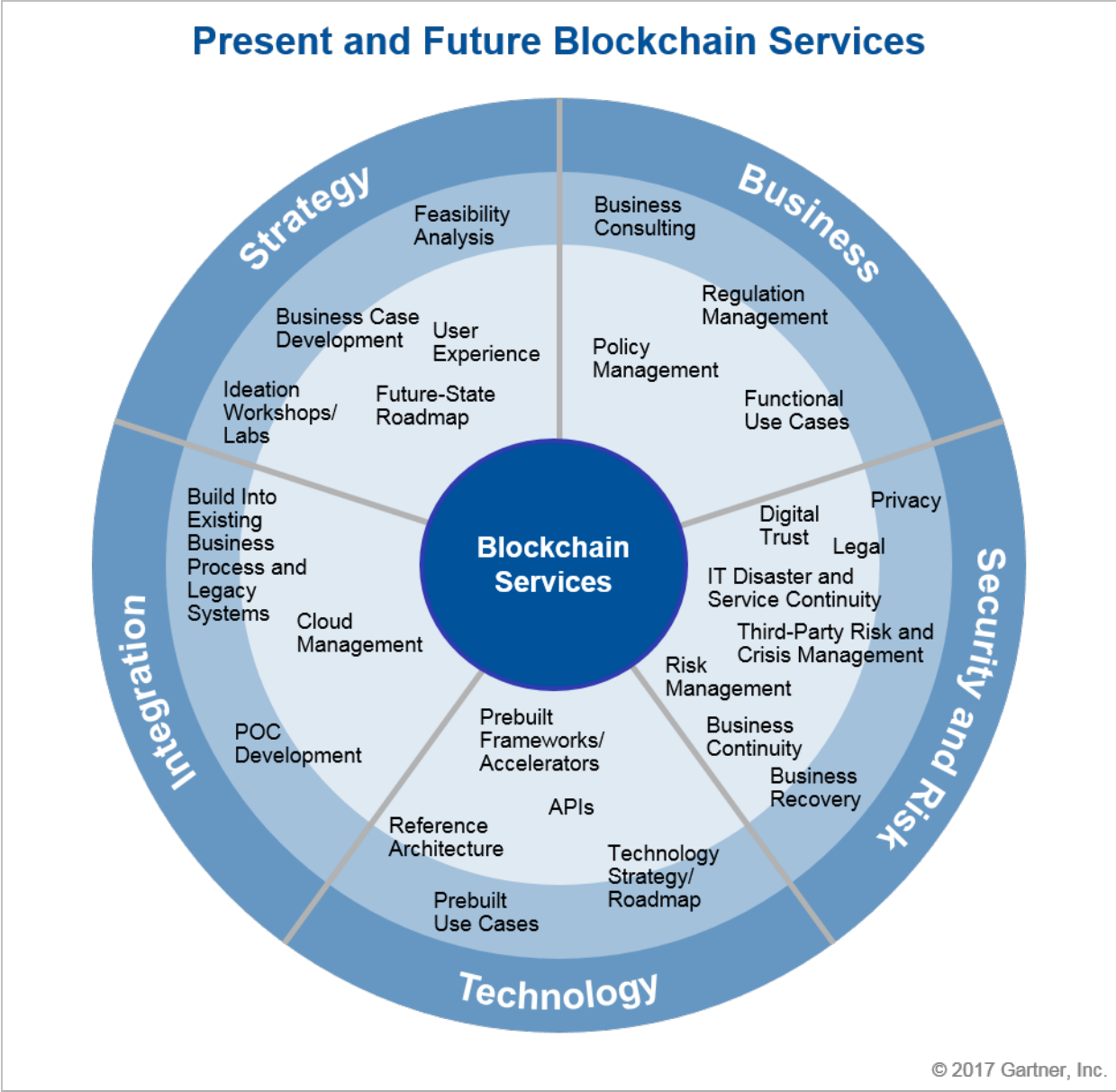
There are many blockchain providers in the marketplace, ranging from business consultants to technology specialists. This Market Guide covers service providers that are able to support clients in solving business problems and creating new business value, in order to integrate the solutions into the organization and sustain the new business venture. It is important to note that, due to the emerging nature of blockchain initiatives and the technologies, in addition to the fact that there are so few (if any) live production of blockchain initiatives, the value derived from the blockchain initiative is not technical in nature, but is the creation of a new business revenue generator or a model for business efficiency for the organization. Hence, business acumen and business strategy ideation capabilities are more important than technology skills to help clients navigate through the business environment uncertainties.

Gartner is expecting changes in the market and service offerings as the market evolves to the maturity stage, which Gartner believes is in three to five years. Therefore, sourcing and vendor relationship leaders should read the more detailed documents in this Market Guide's Gartner Recommended Reading section to help them navigate through service providers' marketing hype and noise.

The Five Foundational Components Needed to Ensure a Successful Blockchain Initiative

Figure 1 represents a visual representation of current and future blockchain services.

Figure 1. Five Components Needed for a Successful Blockchain Initiative



Source: Gartner (February 2017)

The service offerings will continue to evolve and grow as blockchain services begin to integrate further into the enterprise and the services mature. Gartner believes that these five components of blockchain services are fundamental and critical to ensure success for blockchain initiatives. These services must develop further to provide a better future for blockchain technologies and projects.

As blockchain consulting initiatives are still at the POC development stage, sourcing and vendor relationship leaders should consider one of two approaches:

- Work with a single broad-scope source (consultancy), a firm that has a wide range of skills and that also might use third parties to supplement technical skills.
- Cultivate an internal team that can collaborate with a narrow-focus consultancy that can contribute its in-depth understanding of technology, possibly in relation to specific market segments or vertical sectors.

Once the industry matures with more POCs in production, then the buyer might like to consider multiple sourcing or an ecosystem approach:

- **Strategy.** Service providers must have the ability to build, create, assess and lead their clients through ideating, strategy and planning at the start, either to decide if blockchain is conducive for solving the business problem, or helping to set up standards and the business requirements needed for the initiative.
- **Business.** Service providers must have the ability to guide clients through the business roadmap once blockchain is feasible for their organization. This includes assessing and providing frameworks needed for standards, governance, privacy management, building up trust among the stakeholders and regulatory policy, for example.
- **Security and Risk.** Security and risk issues pertaining to business models, blockchain technologies and processes are currently undeveloped and immature; there is a misconception that blockchain is inherently safe, records are immutable and follow the latest cryptographic standards. Instead, vulnerabilities and threats are not examined and tested enough. The attention paid to developing and evolving the security and risk issues currently is overshadowed by rapid development of the POCs. Expect to see more development in this space as service providers work out the security postures, and expect to see specialists' security service providers moving into this space to help blockchain service providers build this out.
- **Technology.** Service providers will have prebuilt frameworks, especially since the technology is immature, and accelerators will be on-hand to help in rapid development, to reduce the time to market for the client. However, it is important that the service providers update and reconcile the changes to the codes on the framework from the core community of developers. Additionally, a lot of blockchain technology currently is open source, so it's more important for a consultancy to know what's out there and track the startup community, than to bring their own intellectual property (IP).
- **Integration.** Service providers must have the capability to implement blockchain technologies, reinforcing the open-source mantra, and integrate the new technology and platform into existing business processes and legacy systems using open APIs, and to maintain these integration points, despite rapid evolution of technology on both sides of the integration.

As technology matures, enterprises should focus on goals beyond the POC, which are to achieve business value through outcomes that include business process acceleration, operational cost reduction (when replacing a legacy system) and new sources of revenue through business model innovation. Therefore, prospective vendors should be evaluated according to these criterion:

- **Real-world deployment:** Does the vendor have blockchain systems in production at scale? How many systems? For how long?

- Cost reduction: Has the vendor been able to reduce costs for its clients via use of blockchain technology? If so, how much of a reduction was achieved? Over what time period? What level of investment was required to achieve this cost reduction?
- Business process acceleration: Has the vendor been able to accelerate business processes for its customers? If so, to what degree? Did these accelerated processes result in increased business value; if so, according to what metrics?
- Business model innovation: Has the vendor been able to innovate with new business models and new sources of revenue? If so, what impact have these models had? Which metrics (such as increased revenue, new customers, new markets or other metric) were used?
- Knowledge transfer: Has the vendor been able to transfer skills and knowledge about blockchain technology and business models to its customers? If so, how has this been measured, and how does it compare to past projects?

Spend the Time Developing a Strong Business Strategy to Sustain the Blockchain Business Model

Eighty percent of blockchain initiatives will not kick off to reach live production by 2018; instead, most will be terminated prematurely.

Gartner believes that a sustainable blockchain initiative is simply not about installing a blockchain technology or platform:

- It is significantly important that the journey for the client must start at the industry and then business strategy to ideate a blockchain initiative.
- Then, the client must build business requirements and plan for buy-in from stakeholders to ensure a blockchain initiative's viability and free up funds to invest in a blockchain POC.
- Initially, organizations should accept that a blockchain initiative can fail, even with deep industry vertical knowledge and expertise.

Moreover, industry standards around blockchain implementations have yet to emerge and, currently, regulations are still ambiguous, as blockchain platforms have yet to emerge. The platforms and solutions that will eventually lead the market are not yet clear. Hence, it is very important that the service providers that are used understand the implications and have the experience working on emerging regulations and standards. Initiatives based on today's solutions will have to be reworked or fully reimplemented onto the eventual leading platforms within a few years. Additionally, blockchain technologies are still immature (at times, not yet audited and the security features not fully developed), and the risks and vulnerabilities are still being realized. Hence, service providers with regulatory and policy management can be in a position to help buyers navigate the uncertainties with future-state frameworks and roadmaps.

Ensure That the Consultant Has Deep Business and Vertical Expertise to Implement Blockchain Initiatives

Nine out of 10 blockchain initiatives will fail because the business problem is not identified at the start.

Currently, there are no live-production instances of blockchain. Therefore, it is essential that the selected consultant not only is deeply experienced in blockchain technologies, but also understands the business and vertical aspects and its implications applicable to blockchain into and between organizations/ecosystems. Further, the service provider ideally should be able to integrate blockchain into existing business processes, architecture and legacy systems, for example.

During the vendor selection phase, the consultant must be able to discuss, and have had experience in, ideating and building POCs for its clients, as well as show the clients how it applies these to the business. Client references to POCs might be confidential, in some cases, but experienced service providers will have use cases to show what can and has been developed.

At times, blockchain is not necessarily the answer to a business problem. Many client organizations approach a service provider hoping to implement the latest "shiny object" into their organization when it is not necessary to invest the time, effort and money needed from blockchain projects.

Market Analysis

The blockchain consulting and implementation marketplace is still immature, and service providers are learning as the market evolves. Currently, there are few barriers to enter, as this is an emerging area.

Gartner is expecting more service providers to enter this emerging marketplace:

- Business consulting firms that will help you solve a business problem, create a new business value and help implement the vision (which this Market Guide is about)
- Technical specialists and technology consulting firms that have a blockchain solution

The low barrier to entry will allow for many new and existing business consulting firms that are in this space already, providing feasibility studies, education and training for their clients on blockchain initiatives such as BCG, McKinsey & Company, Protiviti and Atos, and technology niche providers such as, Bloq, Fintricity, ChainThat, AlphaPoint, String Labs, IOHK, Encrypted Labs, Chainvine, Chaincode Labs and B9lab, which we did not include in the Representative Vendors section.

Sourcing and vendor management leaders must sort through the marketing hype and noise created by the service providers, as well as discern and understand the value these service providers will provide to a blockchain project to match the business needs.

Table 1. Summary of the Blockchain Consulting and Implementation Providers

	Blockchain FTEs	Top Three Blockchain Consulting and Implementation Services, Country/Region Focus	Top Three Blockchain Consulting and Implementation Services, Vertical Focus
Accenture	Prefers not to disclose	U.S., U.K., Australia	Capital Markets, Banking, Healthcare
Applied Blockchain	20 or fewer	U.K., U.S., China	Financial Services, Cross-Industry Business Administration
brainbot technologies	20 or fewer	Germany, U.S., Switzerland	Capital Markets, Energy
Capgemini	61-100	France, U.K., U.S.	Banking, Insurance, Public Sector
Chainsmiths	20 or fewer	Switzerland, Ireland, U.S.	Security/Authentication, Banking, Identity
Cognizant	Prefers not to disclose	U.S., U.K., Japan	Utilities, trade finance, capital markets
Deloitte	100-200	U.K., Ireland, U.S.	Banking, capital markets, insurance
EY	200-310	Australia, U.K., U.S.	Financial services, health, automotive
Fujitsu	21-60	Japan	Retail banking, insurance
IBM	Prefers not to disclose	Europe, North America, Japan	Financial services, public sector
Infosys	61-100	Asia/Pacific, Middle East, U.S.	Retail banking, corporate banking, supply chain management
KPMG	200-310	Asia/Pacific, EMEA, the Americas	Cross sectors: Capital markets, investment management, insurance
Ledger Labs	21-60	Canada, U.S.	Banking, blockchain industry, fintech
NTT Data	21-60	Japan, Italy	Banking, insurance, manufacturing
PwC	100-200	U.S., U.K., Australia	Banking, capital markets, insurance
Synechron	21-60	U.S., U.K., Netherlands	Global payments, mortgages, trade finance
Tata Consultancy Services	61-100	North America, Europe and India	Banking, financial services and; insurance; and healthcare; communications, media and information services

	Blockchain FTEs	Top Three Blockchain Consulting and Implementation Services, Country/Region Focus	Top Three Blockchain Consulting and Implementation Services, Vertical Focus
VirtusaPolaris	21-60	U.K., Australia, U.S.	Banking, financial services and insurance
Wipro	200-310	U.S., U.K. and India	Banking, financial services and insurance; healthcare; manufacturing
FTEs = full-time equivalents			

Source: Gartner (February 2017)

Representative Vendors

The vendors listed in this Market Guide do not imply an exhaustive list. This section is intended to provide more understanding of the market and its offerings.

Gartner selected the following service providers based on their development of POCs, helping clients from consulting to implementing POCs, of which we identified three types of blockchain service providers:

- Business and strategic consultants with implementation capabilities
- System integrators
- Specialist blockchain service providers

Accenture

www.accenture.com

Accenture is the world's third-largest IT services provider, with 394,000 employees in 120 countries. Its clients include 80% of the top 500 global companies and span the full range of industries. It has 189,000 employees certified with industry skills or aligned to a specific industry. It has a track record of large, complex transformational projects, a global presence and a global delivery network, with more than 50 locations worldwide (see "Vendor Rating: Accenture").

Table 2. Accenture

Key Factors	Comments
Delivery Centers/ COEs	Accenture's primary R&D blockchain lab is in Sophia Antipolis, on the south coast of France. Accenture has blockchain delivery centers in Bangalore, India; Beijing, China; San Jose, California, U.S.; Washington D.C., U.S.; New York, U.S.; and Dublin, Ireland. The lab develops technology for all industries and across all the distributed ledger technologies: public, consortium and private.
Specialized Tools, Accelerators, Solutions and Frameworks Used to Deliver	Accenture's blockchain offerings are supported by its alliance with blockchain system providers, including Digital Asset, Ripple, IBM, Microsoft, MultiChain and Monax, and makes heavy use of open-source technology components such as The Linux Foundation's Hyperledger and Ethereum. Accenture has filed nine patent applications on blockchain technology in the U.S. and EMEA, with four more expected in 2017. It has developed IP in hardware security module integration — a required security capability for financial services and most corporate/enterprise solutions, digital rights management and "redaction" (which is the ability for someone or a system to correct or remove data from blocks when required to do so by regulations) — a capability that can be useful for the practical operation of a blockchain in heavily regulated business environments or laws such as Europe's "Right to Be Forgotten."
Blockchain Key Partners and Acquisitions	Key Partners: Digital Asset, The Linux Foundation's Hyperledger Project, Ripple, Avanade, Microsoft, MultiChain, Amazon Web Services, FinTech Innovation Lab, IBM, Monax
Vertical Industries	Like most vendors, Accenture's blockchain work is furthest advanced in the financial services industry, where it sees use cases in payments, trade finance, property management, capital markets, insurance, public services and customer data. However, it has client engagements cutting across almost all industries, with particular focus in healthcare, energy, supply chain and identity management.
Service Delivery Approach	Accenture's blockchain services span the full life cycle of strategy, ideation, POC large-scale system integration, business transformation, and ongoing innovation and management.
Differentiators	Accenture intends to differentiate in blockchain through its ability to provide industry consulting knowledge to the application of distributed ledgers, advising customers on how to scale the technology up to production volumes, and providing integration and business transformation services.
COEs = centers of excellence	

Source: Gartner (February 2017)

Applied Blockchain

appliedblockchain.com

Applied Blockchain is a specialist blockchain consultancy based in London. With under 20 FTEs, it provides business-related feasibility assessments for blockchain use cases; however, its primary focus is on building full-stack blockchain applications for clients. A typical engagement would be a three-month project to produce a minimum viable product for a client that has already had exposure

to blockchain and now wants to take a defined solution forward into pilot or production. To protect clients from the risk of change in the emerging blockchain platform market, it provides a proprietary framework to abstract applications away from the underlying blockchain platform, potentially enabling portability between platforms (though with lock-in to the framework itself).

Table 3. Applied Blockchain

Key Factors	Comments
Delivery Centers/ COEs	London
Specialized Tools, Accelerators, Solutions and Frameworks Used to Deliver	Applied Blockchain has created a platform-agnostic technology framework that can be deployed over the top of blockchain platforms such as Ethereum, The Linux Foundation's Hyperledger and others, to provide an accelerator for projects. This framework supports add-on modules: <ul style="list-style-type: none"> ■ Privacy — Provides encryption of smart contract data ■ Cache — Provides performance enhancements and data analytics ■ Permissions — Provides access management controls
Blockchain Key Partners and Acquisitions	Partner: Microsoft Ventures, U .K. startup partner ventures
Vertical Industries	Focusing primarily on financial services cross-industry with business administration, supply chain, consumer identity and trade finance
Service Delivery Approach	Applied Blockchain provides consultancy to clients, providing education on blockchain, identifying use cases and establishing the technical feasibility of these. Once a use case with a clear rationale for using blockchain is agreed upon, Applied Blockchain offers technical consultancy to create appropriate architectures, develop technical roadmaps and develop production-ready solutions.
Differentiators	Applied Blockchain suggests it has two key differentiators in its offering. First, the expert nature of its development team, its knowledge of the banking industry, and its in-depth understanding of new and existing blockchain technologies ensures success of projects and protects ROI. Second, it claims that clients' use of its proprietary technology platform enables solutions to be easily moved from one blockchain platform to another, without changing the top-level application, providing clients with future-proofing as platforms evolve and leaders begin to emerge.
COEs = centers of excellence	

Source: Gartner (February 2017)

brainbot technologies

www.brainbot.com

brainbot technologies is a consultancy based in Germany that specializes in distributed ledger technology. It was founded in 2000, and was a major contributor to the Ethereum, a public

blockchain project enabling decentralized service for smart contract execution in a permissionless environment.

Table 4. brainbot technologies

Key Factors	Comments
Delivery Centers/COEs	brainbot does not operate a specific COE for blockchain: the entire company is focused on distributed ledger technology.
Specialized Tools, Accelerators, Solutions and Frameworks Used to Deliver	brainbot has developed several products that extend Ethereum. The first, HydraChain, implements a permissioned ledger for Ethereum, a public and permissionless blockchain. The second, Raiden Network, is a second-layer extension to Ethereum, scaling out transaction throughput capacity and improving confidentiality.
Blockchain Key Partners and Acquisitions	Key Partners: Ethereum Foundation, ConsenSys, Reply
Vertical Industries	Capital markets (post-trading, trade life cycle), energy (smart grid, IoT, communication energy trading)
Service Delivery Approach	brainbot provides a full life cycle of services from strategy consulting through POCs, as well as live system implementation at later stages. It has developed an ideation framework for developing and testing blockchain use cases. It also provides training and education services.
Differentiators	brainbot, with its deep expertise and fast pace of blockchain development, thinks that the most effective advice comes from small specialist consultancies.
COEs = centers of excellence	

Source: Gartner (February 2017)

Capgemini

www.capgemini.com

Capgemini is a global IT services provider, with services that span consulting, applications, infrastructure and business process outsourcing (BPO). Its services related to blockchain can be summarized into three key areas: helping clients explore the possibilities with POCs and pilots, consultation for new business or operating models, and help integrating blockchain solutions with the enterprise systems.

Table 5. Capgemini

Key Factors	Comments
Delivery Centers/COEs	Blockchain expertise is distributed through the company, with the larger group being part of the banking and capital markets.
Specialized Tools, Accelerators, Solutions and Frameworks Used to Deliver	<p>The company has a few technology-specific frameworks and accelerators for blockchain similar to its competitors. The key ones are:</p> <ul style="list-style-type: none"> ■ "Blockchain Platform Evaluation Framework," to help clients determine the suitability of various technologies. ■ Loyalty solution built on BigchainDB ■ Adapters for the Ripple platform
Blockchain Key Partners and Acquisitions	Financial services partnerships: Symbiont, BigchainDB, loyyal and Bluzelle Platform partnerships: R3, Hyperledger and Chain
Vertical Industries	Banking, payments and supply chain
Service Delivery Approach	Capgemini's approach relies on a combination of its current approach for delivery (Applied Innovation Exchange [AIE]) and its facilitation capability (through the Accelerated Solutions Environment), to plan and deliver blockchain initiatives for its clients.
Differentiators	Capgemini has large consulting, application service and infrastructure delivery capabilities globally. The company brings to bear these abilities in conjunction with the blockchain-specific assets and partnerships, for the specific focus areas identified above. Capgemini also has its AIEs, where co-innovation with clients is undertaken for leading-edge technologies, such as blockchain.
COEs = centers of excellence	

Source: Gartner (February 2017)

Chainsmiths

<https://chainsmiths.com>

Chainsmiths is a specialist blockchain-only consultancy, which provides feasibility assessment and technical consultancy for blockchain projects. Its approximately 20 FTEs are entirely drawn from prominent industry professionals who contributed to the early development of the bitcoin protocols, and who often balance their engagements with Chainsmiths against running their own blockchain-related startups. It specializes in working with committed clients to take clear blockchain use cases through to production-ready systems, and does not engage in blockchain ideation or POC work.

Table 6. Chainsmiths

Key Factors	Comments
Delivery Centers/ COEs	Dublin, Ireland; Switzerland; Lisbon, Portugal. Hong Kong office is planned for April 2017.
Specialized Tools, Accelerators, Solutions and Frameworks Used to Deliver	Gartner is not aware of any prebuilt blockchain solutions or framework.
Blockchain Key Partners and Acquisitions	Chainsmiths consultants are drawn from multiple other blockchain startups, and work for both Chainsmiths and their own businesses.
Vertical Industries	Its key areas of focus are security and authentication, banking, and identity management, though it has also worked on projects in energy and utilities, healthcare, public sector, retail, and manufacturing.
Service Delivery Approach	Chainsmiths is very specific, in that it engages with clients that are already familiar with blockchain. Its consultancy offering is focused specifically on long-term blockchain-related projects with such clients, and it actively turns down engagements that are only aiming for short-term POC development. Chainsmiths provides executive awareness sessions, but does not perform ideation directly, instead, validating proposed use cases and advising on whether blockchain is suitable or whether alternative solutions may be more appropriate. Once a suitable use case and executive commitment are clear, Chainsmiths seeks to provide expert product-agnostic consultancy and technical services to develop scalable blockchain product architectures, with an open and realistic assessment of the benefits and limitations of blockchain throughout each engagement.
Differentiators	Chainsmiths differentiates itself from its competitors in both its resources and approach. Its consultants are all well-known blockchain specialists, many of whom helped develop the core bitcoin protocols and tools, extended its offerings with concepts such as "Colored Coins" and now run their own blockchain startups. It adopts a product-agnostic approach to consultancy, focused on producing prototype solutions for committed clients that already understand the technology and its use case for it, and will be very direct with clients about whether solutions really require blockchains.
COEs = centers of excellence	

Source: Gartner (February 2017)

Cognizant

www.cognizant.com

Cognizant partners with clients to take blockchain initiatives from the identification and prioritization stage, through business case development, to developing prototype solutions and any eventual full rollout. With a dedicated team of consultants split broadly 40-60 between business consultancy staff and technical specialists, Cognizant is also able to draw on wider resources within its consulting, infrastructure, security and other teams, as required.

Table 7. Cognizant

Key Factors	Comments
Delivery Centers/COEs	New York, Chicago, Illinois, U.S.; and Kolkata, India
Specialized Tools, Accelerators, Solutions and Frameworks Used to Deliver	To allow clients to quickly configure major blockchain technologies, Cognizant has created an integration layer, with prebuilt connectors to major blockchain platforms such as Ethereum, Monax, IPFS, BigchainDB and The Linux Foundation's Hyperledger. It has also developed a number of solution accelerators that act as building blocks for multiple blockchain use cases.
Blockchain Key Partners and Acquisitions	Partnerships: Chain, BigchainDB, Chamber of Digital Commerce, MultiChain
Vertical Industries	To date, it has focused on blockchain use cases within the utilities, commercial lending, trade finance and capital markets, but also increasingly works in other industry verticals, as more clients see the potential for blockchain in these sectors.
Service Delivery Approach	Cognizant's approach is a four-step delivery model called "Learn-Plan-Build-Grow," which takes clients from ideation to having a production-capable solution. The process focuses initially on developing the client's understanding of blockchain and possible use cases for it, followed by consultancy services to assess internal readiness and develop business cases. Once approved, Cognizant then works with clients to develop prototypes and minimum viable products, and hopes to scale these out into full production instances.
Differentiators	Cognizant's proposition builds on its experience of system integration. Using cross-functional teams with widespread geographic coverage, it uses its prebuilt solution accelerators to speed time to market. With a strong understanding of clients' verticals and their existing architectural challenges, Cognizant believes it is well-placed to integrate new blockchain solutions to existing enterprise applications, using an end-to-end consulting and product development approach.
COEs = centers of excellence	

Source: Gartner (February 2017)

Deloitte

www.deloitte.com

Deloitte is a business consulting firm with digital business capabilities and ideation techniques and labs (see "Vendor Rating: Deloitte"). The firm has a core team of 100 to 200 FTEs working on blockchain initiatives and has trained several hundreds more of its consultants worldwide to support the blockchain team and initiatives. Its business model for blockchain enables its blockchain specialists to tap into their industry and business functional experts from strategy, operations, human capital and audit to tax.

Table 8. Deloitte

Key Factors	Comments
Delivery Centers/ COEs	It has blockchain development labs in the U.S., the U.K., Canada, Ireland, Italy, China, India, Australia, Germany and Israel, with New York and Dublin being hubs for the Americas and EMEA, respectively. Deloitte will open its Asia/Pacific hub later in 2017.
Specialized Tools, Accelerators, Solutions and Frameworks Used to Deliver	Deloitte uses proprietary methodologies, frameworks, transformation roadmaps, rapid prototyping approach and accelerators and it leverages its digital labs and "Greenhouses" for ideation and strategy development.
Blockchain Key Partners and Acquisitions	It has alliances and investments with more than 29 partners in blockchain areas including Stellar, BlockCypher, Monax, SETL, World Economic Forum, Singularity University, Chamber of Digital Commerce, MIT Media Lab, incubators and blockchain technology firms.
Vertical Industries	Its blockchain capabilities span seven industries: financial services; life science and healthcare; manufacturing; energy and resources; consumer and industrial products; telecommunications, media and technology; and public sector.
Service Delivery Approach	Deloitte's approach starts with business strategy, helping a client ideate, develop a strategy and propose roadmaps, as well as build business case requirements, and regulatory, cyber and fraud assessments, and implementing through the prototyping, product development, and implications of tax and risk control assurance to the blockchain transactions.
Differentiators	Deloitte taps into its service breadth (for example, strategy, technology, tax, security and risk) and industry expertise to provide blockchain services that lead to solution implementation. The firm extends its client value proposition with existing blockchain prototype accelerators, a variety of blockchain ecosystem alliances and its global delivery presence. Additionally, with its experience helping regulators, Deloitte brings regulatory understanding to help consortia think through legal implications.
COEs = centers of excellence	

Source: Gartner (February 2017)

EY

www.ey.com

EY has about 200 to 310 FTEs, with an FTE mix of 80% business and 20% technical. These FTEs are scattered across the practices, but there are dedicated teams in certain regions to coordinate cross-sector offerings and solutions. EY is able to leverage its expertise across regulatory, operational and tax capabilities.

Table 9. EY

Key Factors	Comments
Delivery Centers/ COEs	New York; Paris; Sydney; Zurich; San Francisco; London; Trivandrum, India
Specialized Tools, Accelerators, Solutions and Frameworks Used to Deliver	EY has developed an opportunity assessment framework to work through an enterprise's considerations when developing an application on a decentralized platform that can identify blockchain applications not suitable for the enterprise. The EY blockchain administration tool (BAT) brings enterprise service management to distributed ledgers, allowing administrators to maintain nodes and enforce security.
Blockchain Key Partners and Acquisitions	Alliances with Microsoft, IBM, GE and SAP; blockchain startups, including The Bitfury Group; and academic institutions such as the Indian Institute of Science (Bangalore)
Vertical Industries	Retail banking, commercial lending, asset management, capital markets, insurance, pension funds, automotive, energy, healthcare, high tech, manufacturing, nongovernment organizations, utilities across strategy and assurance
Service Delivery Approach	For EY, the start of a blockchain initiative starts at strategy and vision of the business problem. Blockchain can be the solution. In blockchain initiatives, EY will help the client improve revenue, reduce operation expenses enabled by blockchain, with a view on the overall vision. This is in addition to creating and testing a blockchain that will benefit operations, while managing cost, risk and the impact on customer experience. After that, EY will help in the development of POCs and implementation into the existing systems and processes.
Differentiators	EY believes that a business-first approach is important to identify current business problems with the right tools and technologies. EY is developing sector-relevant, blockchain-enabled solutions across a spectrum of verticals. Although EY does not have a specific blockchain practice, it has built a Global Blockchain Network Council that globally coordinates service lines (financial service office [FSO], non-FSO and assurance, tax, and transaction advisory services, for example), geographies and technical development resources.
COEs = centers of excellence	

Source: Gartner (February 2017)

Fujitsu

www.fujitsu.com

Fujitsu has about 21 to 60 FTEs working on blockchain initiatives. Fujitsu is a global IT services provider, with expertise in solutions and platforms (see "Vendor Rating: Fujitsu"). Currently, Fujitsu is focused on working with Japanese banks in Japan for blockchain initiatives, but is keen to expand outside of Japan.

Table 10. Fujitsu

Key Factors	Comments
Delivery Centers/COEs	Japan
Specialized Tools, Accelerators, Solutions and Frameworks Used to Deliver	Fujitsu Japan is planning to launch its "Manipulated Architecture of Blockchain," a Fujitsu-developed architecture of applying blockchain to the business that will be provided with Fujitsu Cloud Service K5. The architecture is based on The Linux Foundation's Hyperledger on open-source software.
Blockchain Key Partners and Acquisitions	None
Service Delivery Approach	Fujitsu's industry consultants will work with its clients to co-create ideas and feasibility, and build business requirements. After that, they will help the clients through development.
Differentiators	Fujitsu has experience in Japan and with Japanese enterprises globally. Japanese financial services clients approach Fujitsu to ideate blockchain initiatives, for example, in their organizations. Its consulting capability to build feasibility by industry is part and parcel of its overall business consulting capability.
COEs = centers of excellence	

Source: Gartner (February 2017)

IBM

www.ibm.com

IBM has undertaken more than 300 customer engagements on blockchain (as of February 2017). It uses an engagement model that allows clients to experiment with blockchain technologies to understand its potential before committing to a wider project. With its breadth of consultancy and technology offerings, IBM is able to support all aspects of blockchain ideation, including feasibility study, use-case development, system design and business consultancy. As interest in blockchain expands, IBM is seeking to extend its offerings into the media and entertainment, utilities, retail, and education sectors.

Table 11. IBM

Key Factors	Comments
Delivery Centers/COEs	New York, London, Singapore and Tokyo are dedicated centers for blockchain ideation via IBM's "IBM Bluemix Garage" for blockchain initiatives. IBM also offers "popup" centers
Specialized Tools, Accelerators, Solutions and Frameworks Used to Deliver	IBM's focus is leveraging the Hyperledger Fabric v1.0, an openly governed blockchain offering of the Linux Foundation.
Blockchain Key Partners and Acquisitions	IBM is a founding and premier member of the Linux Foundation Hyperledger Project, a cross-industry effort started by the Linux Foundation to produce open-source blockchain software.
Vertical Industries	IBM's key verticals' focus on POCs is on financial services, manufacturing, retail, trade financing, logistics (supply chain and provenance projects) and public sector.
Service Delivery Approach	IBM's approach uses four steps, initially with a session to raise awareness of the potential for blockchain within a customer's business, followed by hands-on access to preconfigured blockchain solutions, allowing clients to explore the potential of the technology. If sufficient opportunity is identified, next will be the "First Project" phase, with design workshops, followed by iterative development. Finally, any solution implemented into pilot or production is supported with business change and system integration activities.
Differentiators	IBM believes that its blockchain proposition is uniquely strong, combining executive support at all levels, from the CEO downward, with demonstrable blockchain thought leadership in its Hyperledger involvement. Moreover, its long-term system expertise within major banks and its ability to provide strategic consultancy set it up strongly to support clients in exploiting blockchain.
COEs = centers of excellence	

Source: Gartner (February 2017)

Infosys

www.infosys.com

Infosys offers consulting, system integration, application and infrastructure services. The company has a product subsidiary, EdgeVerve Systems, and a leading product in the portfolio is Finacle — a universal banking solution suite. EdgeVerve has developed a blockchain technology framework and integrated its Finacle suite. In addition, EdgeVerve also offers consulting, implementation, maintenance and user education services in this area.

Table 12. Infosys

Key Factors	Comments
Delivery Centers/COEs	EdgeVerve Systems (Finacle solution suite)
Specialized Tools, Accelerators, Solutions and Frameworks Used to Deliver	EdgeVerve Blockchain Framework for Financial Services Accelerators for specific financial services use cases
Blockchain Key Partners and Acquisitions	The company has a platform-agnostic approach, but engages with World Wide Web Consortium Interledger and other major players in this area.
Service Delivery Approach	The key elements of Infosys's approach involve its blockchain framework, co-creation with the client and design thinking. The company leverages these facets, in addition to its consulting, functional and technology expertise, to build business cases, prototypes and pilots to lead to implementations. EdgeVerve Blockchain Framework is offered for not only Finacle users, but others as well. EdgeVerve has recently announced a pilot project on the Blockchain Framework with its clients ICICI Bank and Emirates NBD. The project focuses on international remittances and trade finance use cases.
Differentiators	The company offers a specific blockchain framework as a foundational solution through EdgeVerve and its Finacle solution suite. In addition, the company has predesigned accelerators for certain use cases. The company aims to differentiate itself through these, in conjunction with design thinking and its delivery approach.
COEs = centers of excellence	

Source: Gartner (February 2017)

KPMG

www.kpmg.com

KPMG is a business consulting firm with digital business capabilities. In blockchain, it has about 200 to 310 FTEs focusing on blockchain initiatives across more than 30 countries, with a 40-60 FTE proportion for business to technical. KPMG is able to draw upon its depth of experience and capabilities from verticals such as banking and insurance, healthcare and government, in addition to its functional practices (for example, in strategy, regulatory, audit, risk consulting, cyber, digital labor and tax) to provide a wide perspective of the impact of blockchain to the enterprise.

Table 13. KPMG

Key Factors	Comments
Delivery Centers/COEs	The KPMG Lighthouse COE is made up of more than 200 technical specialists, including data scientists, software engineers, data engineers, architects and visualization specialists, for example, globally across seven capability group areas. They have expertise in big data, predictive analytics and optimization modeling, for example.
Specialized Tools, Accelerators, Solutions and Frameworks Used to Deliver	KPMG has developed proprietary blockchain frameworks, including KPMG's Digital Ledger Services to optimize use of blockchain technologies.
Blockchain Key Partners and Acquisitions	KPMG has alliances with technology providers and innovative startups. These include IBM, IBM Bluemix, Microsoft Azure, D-Pactum, Cegeka, Bluzelle, Nimbrix, ConsenSys, Tradle, Moneycatcha and various open-source blockchain technologies.
Vertical Industries	KPMG's blockchain POCs are from capital markets, investment management, insurance, retail banking, wealth, healthcare, logistics, real estate and government.
Service Delivery Approach	KPMG applies a business consulting lens to blockchain initiatives, combined with its technical developers, to help clients prioritize, build and industrialize POCs with the intention to drive ROI.
Differentiators	KPMG believes that blockchain implementation should be treated as a life-cycle-based service, blending ROI-focused business consulting services with technical developers. KPMG, with its expertise working with regulators, is in a position to help navigate the regulatory environment when implementing blockchain initiatives.
COEs = centers of excellence	

Source: Gartner (February 2017)

Ledger Labs

<https://ledgerlabs.com>

Ledger Labs is a boutique consulting firm focused on technology strategy and development for blockchain-based systems. The company focuses on two areas: enabling its clients to understand the potential and challenges of using blockchain technologies, and helping those clients with issues related to security for blockchain initiatives. The company serves clients in Canada, but is open to serving other geographies. It primarily serves traditional financial services, fintech and cryptocurrency exchanges.

Table 14. Ledger Labs

Key Factors	Comments
Delivery Centers/COEs	The pure-play blockchain company is based in Toronto, Canada.
Specialized Tools, Accelerators, Solutions and Frameworks Used to Deliver	While building reusable components is in discussion for certain areas, it does not have such accelerators and frameworks just yet.
Blockchain Key Partners and Acquisitions	Ledger Labs is agnostic to blockchain technology providers as it wants to retain an independent voice when advising its clients on technology choices.
Vertical Industries	Financial services, fintech and nonprofit
Service Delivery Approach	The firm's engagement model starts with educational sessions with clients that lead to deeper engagement in helping a client build its strategy. This is followed by developing POCs with the clients, either by themselves or working with the clients' technology teams. Projects often involve other service providers and client teams to plan, design and build all aspects of a complete system that uses blockchain. In addition, Ledger Labs offers services to help clients prepare for governance of blockchain initiatives, security consulting and security audits.
Differentiators	The company's solution expertise that has been honed by working with fintech companies and cryptocurrency exchanges. Further, the company has chosen to remain technology-neutral to help give unbiased advice to clients for their technology selections.
COEs = centers of excellence	

Source: Gartner (February 2017)

NTT Data

www.nttdata.com

NTT Data has about 21 to 60 FTEs working on blockchain initiatives and are part of the digital business team (consisting of both strategy and technical skills), Blockchain Champions Team (cross service line) and financial services vertical practice. NTT Data's overall blockchain vision is to act and think like a fintech company, and its program is structured as building upon a fintech startup characteristic such as partnering, co-building a business, coaching and building competencies.

Table 15. NTT Data

Key Factors	Comments
Delivery Centers/COEs	NTT Data's blockchain R&D is in Japan; Palo Alto, California, U.S.; and Italy.
Specialized Tools, Accelerators, Solutions and Frameworks Used to Deliver	NTT Data has built blockchain solutions on a distributed security exchange system, letter of credit transaction system, point management system, medication management system, Ethereum mobile wallet and blockchain cloud nodes (blockchain as a service), time-stamping service, supply chain on Hyperledger and marketplace platform on Ethereum
Blockchain Key Partners and Acquisitions	NTT Data is part of the Linux Foundation Hyperledger consortium.
Vertical Industries	Banking, insurance, manufacturing on warranty management for smart devices and nongovernment offices, and energy and utilities
Service Delivery Approach	NTT Data recognizes that regulations represent a key constraint to defining new business models and targeting operating models. Hence, for the consulting stage of blockchain initiatives, it leverages its global risk and compliance practice. Additionally, it helps its clients define a technology framework and value propositions, and provides use cases. In the development phase, it offers POCs, pilots and integration capabilities.
Differentiators	NTT Data will continue to develop new blockchain solutions such as the ones stated in "Accelerators" above.
COEs = centers of excellence	

Source: Gartner (February 2017)

PwC

www.pwc.com

PwC is a business consulting firm and has a digital business practice with digital labs. PwC has 100 to 200 FTEs globally, focused on blockchain initiatives across the different practices. Another few hundred multidisciplinary resources globally are cross-trained to support broader transformation initiatives that include elements of blockchain-related technology. The core blockchain team has a mix of business and technical expertise to support the transformation.

Table 16. PwC

Key Factors	Comments
Delivery Centers/COEs	A dedicated Blockchain Delivery Lab in Belfast, U.K.
Specialized Tools, Accelerators, Solutions and Frameworks Used to Deliver	Vulcan Digital Asset Services was built and launched in November 2016 in Australia by PwC, with blockchain solution provider Bloq; blockchain integration, reporting, compliance and analytics provider Libra; and digital identity provider Netki. Vulcan platform will provide digital currency wallets, international payment processing, and investment and trading services. It aims to offer point-of-sale and merchant services, and the ability to create and support native digital currencies and reward-based systems. PwC's blockchain labs use an agile methodology to work with clients to develop blockchain POCs.
Blockchain Key Partners and Acquisitions	Strategic alliances/joint business relationships: Amazon, Google, Microsoft, Libra, Blockstream Acquisitions: oneUp blockchain (Netherlands).
Vertical Industries	Banking, capital markets, insurance
Service Delivery Approach	PwC views blockchain technologies as an innovative technology for business transformation. The start is always at strategy to address the business problem and assess the current opportunity for digitization of the business process. Blockchain may not necessarily be the end solution. A business transformation team will address the target-state operating model, and a blockchain transformation team will build POCs.
Differentiators	To help clients on their blockchain journey, PwC's Vulcan platform adds digital asset capabilities to PwC's business transformation capabilities. PwC is focused on helping clients integrate blockchain technologies into their overall enterprise environment. Moreover, PwC, with its experience working with regulators, is helping clients navigate regulatory and governance aspects of blockchain.
COEs = centers of excellence	

Source: Gartner (February 2017)

Synechron

www.synechron.com

Synechron is a IT consulting and system integration firm that serves primarily financial services clients in the U.S. The firm's approach combines building blockchain technical expertise and financial services knowledge to provide consulting, business case development and implementation services around blockchain.

Table 17. Synechron

Key Factors	Comments
Delivery Centers/COEs	Its COEs are staffed with blockchain and financial services experts, and based in New York; London; Amsterdam; Dubai, United Arab Emirates; and Bangalore and Pune, India.
Specialized Tools, Accelerators, Solutions and Frameworks Used to Deliver	Six software accelerators are specific to use cases in banking, securities and insurance. Blockchain technologies used include Ethereum, Hyperledger and Ripple.
Blockchain Key Partners and Acquisitions	Partners: ConsenSys and BlockApps
Vertical Industries	Banking, securities and insurance
Service Delivery Approach	The company's approach has two elements — one, where it works with clients to determine if a blockchain solution is appropriate for a business problem, and two, help them plan and implement that based on offering clients a set of blockchain and smart contract accelerators for specific business areas built on via a lab for hire model.
Differentiators	The company's exclusive focus on financial services leads to solutions, approaches and accelerators that are very specific to that industry. This includes consulting, use-case development custom development and software accelerators for business problems.
COEs = centers of excellence	

Source: Gartner (February 2017)

Tata Consultancy Services

www.tcs.com

Tata Consultancy Services (TCS) is a global leader in IT services, digital and business solutions. TCS partners with clients to simplify, strengthen and transform their business.

Table 18. TCS

Key Factors	Comments
Delivery Centers/ COEs	TCS's blockchain expertise is not located in a single delivery center, but dispersed into a community of blockchain practices. To date, about 500 employees have been trained in blockchain.
Specialized Tools, Accelerators, Solutions and Frameworks Used to Deliver	TCS's strategy is to assemble blockchain solutions from an ecosystem of technology components, many of which are open-sourced. It specializes in engineering knowledge on how to assemble systems, rather than specific code or algorithms. It strongly believes its business transformation methodology, TCS Transformation Delivery Methods, to be very applicable to blockchain projects. TCS has built an in-house blockchain platform as a reference implementation and built several POCs, with a roadmap to making it enterprise-ready.
Blockchain Key Partners and Acquisitions	Partners: Ericsson-Guardtime, IBM, Microsoft. Member of MIT Media Lab Digital Currency Initiative. TCS COIN Partners: Monax, BigchainDB, ConsenSys, Zcash, Airbitz, Factom, ENT
Vertical Industries	In financial services, TCS has blockchain initiatives in retail banking, investment banking, capital markets, commercial lending, pensions and insurance. TCS has done several POCs for customers in payments, securities settlement, trade finance, "know your customer" and supply chain finance. Beyond financial services, its most active industry sectors for blockchain work are the healthcare; and communications, media and information service sectors.
Service Delivery Approach	TCS often begins a blockchain engagement with educational sessions to brief customers on the technology and its business potential. This identifies use cases that can be prioritized, the most important advancing to the POC or pilot stage. TCS aims to be involved through the implementation and go-live, and position itself as a technology-agnostic consulting and implementation service provider. TCS has experience in POCs on products such as Hyperledger, R3 Corda and Ripple.
Differentiators	TCS helps clients reimagine their business models and how they could be disrupted by blockchain. It has invested in training engineers and contributing to initiatives to set industry standards. It offers consulting-led and technology blockchain services, along with a widespread ecosystem of partners.
COEs = centers of excellence	

Source: Gartner (February 2017)

VirtusaPolaris

www.virtusapolaris.com

VirtusaPolaris is the market-facing brand of Virtusa and Polaris Consulting & Services, with 17,000 employees, many based in software development centers in India. VirtusaPolaris services vertical sectors such as financial services (both banking and insurance), healthcare, telecommunications, technology, media and education.

Table 19. VirtusaPolaris

Key Factors	Comments
Delivery Centers/COEs	VirtusaPolaris has a blockchain COE as part of its fintech lab in Hyderabad (Advanced Technology Center). The firm has established a blockchain academy to train its staff on blockchain technologies, with a capacity to train 20 employees at a time for rapid scale up.
Specialized Tools, Accelerators, Solutions and Frameworks Used to Deliver	VirtusaPolaris's approach is to build blockchain solutions from existing technology components. Its POC experience includes Ethereum, Quorum, Corda, Linux Foundation Hyperledger, Chain, Monax and Ripple. It actively tracks startups such as Distributed ID and coins.ph as well as partners that can fill gaps that are not met by the more widely established blockchain products, especially in scalability and privacy.
Blockchain Key Partners and Acquisitions	Partners: Chain, Token, ChromaWay, SIGNiX, MultiChain, coins.ph
Vertical Industries	VirtusaPolaris's focus industries for blockchain work are investment service/capital markets, payments, retail banking, and insurance.
Service Delivery Approach	The VirtusaPolaris blockchain "casebook" is a repository of potential business use cases where blockchain technology (both distributed ledger technology and smart contracts) can be leveraged. VirtusaPolaris's approach starts with identifying relevant use cases for its customers. It provides preconfigured sandbox environments and accelerators enabling customers to explore the technology. Often, an initial prototype can be demonstrated in a few weeks, followed by a production-level pilot.
Differentiators	VirtusaPolaris has developed a casebook of 100 banking use cases and 60 cross-industry use cases for blockchain, which helps customers quickly identify which business processes can benefit from blockchain. Its blockchain sandbox provides a prebuilt, yet customizable, platform for rapid POCs.
COEs = centers of excellence	

Source: Gartner (February 2017)

Wipro

www.wipro.com

Wipro is a global IT services firm, with services that span consulting, application services, infrastructure services and BPO. The firm's services in blockchain are oriented toward helping customers through all stages, from initial strategy, ideation, development, integration and rollout. The firm's strategic priorities and unified agenda for blockchain initiatives are provided through a Blockchain Council, which has participation from different horizontal and vertical teams within Wipro.

Table 20. Wipro

Key Factors	Comments
Delivery Centers/COEs	The blockchain COE is supported by the cross-segment council for leadership and an internal academy for blockchain training to scale competency development.
Specialized Tools, Accelerators, Solutions and Frameworks Used to Deliver	Assets span three areas — upfront strategy work (use-case prioritization, platform evaluation and business case assessment), industry solutions specific to banking, financial services and insurance, and technology assets to help build a blockchain solution.
Blockchain Key Partners and Acquisitions	Partnerships include Linux Foundation Hyperledger, IBM, Microsoft and niche vendor relationships such as ConsenSys, loyyal, Gem and Digital Asset Holdings; blockchain is among the six areas for consideration in the \$100 million investment fund.
Vertical Industry Focus	Banking, financial services and insurance; healthcare; manufacturing; energy; utilities and supply chain; and other verticals per market need.
Service Delivery Approach	Wipro's approach for blockchain is to address aspects from initial strategy definition until implementation. It offers business advisory that covers business case development, co-innovation, with customers supported by accelerators, partnerships and active engagement with emerging blockchain networks and consortiums.
Differentiators	Wipro co-innovates with customers and plans investments to build or acquire blockchain expertise. The company has a repository of assets specific to blockchain that spans strategy, technology and functional areas.
COEs = centers of excellence	

Source: Gartner (February 2017)

Market Recommendations

Ensuring the Sustainability of Blockchain Initiatives Is Fundamental to Avoid Wasting Time and Resources When Developing POCs

In this nascent market, where consultants are still exploring blockchain initiatives with clients, it is important that sourcing and vendor management leaders seeking to optimize business value from blockchain consultancy engagements should assess the consultant's ability to do the following in a blockchain-specific context:

- Demonstrate the ability to develop relevant business cases for the business stakeholders, and create, scenario plans, strategy roadmaps and risk management plans that go beyond the POC and extend to potential full rollouts of blockchain solutions.
- The business case development must demonstrate, at the very least, cost reduction, business process acceleration, business model innovation and knowledge transfer. Although this will be

difficult as there are no real production examples, it is important to look at how the consultants have demonstrated similar examples for IoT and digital business deployments as a reference.

- Have the credibility and experience to educate all stakeholders (the board, business executives, legal and compliance, for example) on the potential and risk of blockchain, and build propositions around its ability to address business opportunities rather than technology issues.
- Have deep knowledge (relationships and investments can help) of the blockchain solutions and of blockchain technologies, as it will continue to evolve quickly and consultants must ensure the solutions they propose take account of future changes.
- Understand the client's industry vertical. Seek customer references to ensure the consultant has deep vertical understanding, preferably for comparable blockchain projects but, where these are not available, for other digital initiatives such as IoT or digital business. This is to ensure the consultant has led other clients through a project from ideation to execution stage.
- Have deep regulatory understanding, especially in the client's vertical industry. In an emerging technology that will be evolving rapidly, the consultant must be able to advise you on what pitfalls to watch out for.

Additional research for this Market Guide was provided by Claudio Da Rold, Ray Valdes, David Furlonger.

Gartner Recommended Reading

Some documents may not be available as part of your current Gartner subscription.

"Blockchain Trials in Every Industry Show the Pulse of a Rapidly Moving Professional Services Market"

"Five Essential Actions to Prepare TSPs for Enterprise Blockchain Market"

"How to Develop a Business Case for Blockchain Projects"

"How to Determine If You Need a Blockchain Project, and If So, What Kind?"

"The Bitcoin Blockchain: The Magic and the Myths"

"Toolkit: Government Use Cases for Blockchain"

"Hype Cycle for Blockchain Technologies and the Programmable Economy, 2016"

Evidence

Gartner used secondary research to investigate the potential of the marketplace, from which a list of 36 consulting and implementation blockchain providers with POCs was produced. For this Market Guide, Gartner filtered the list to ensure that the POCs contained the strategy and consulting element of the initiatives, including building out the vision into a POC. Additionally, Gartner sent out a screener questionnaire to the possible vendors to ensure the capabilities, service offerings and

POC descriptors fit the Market Guide's definition. Gartner also ensured that we had a mix of providers that had developed many POCs and providers that had developed few POCs to extract the emerging nature of blockchain initiatives. This resulted in Gartner interviewing 19 service providers, with a total of 129 POCs across the consultants.

Gartner's interaction with clients also showed more than 1,000 inquiries on blockchain to date. Specific to services, questions are asked about use cases, trends, and how they impact certain verticals and investment strategy.

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