

HFS Top 10: Enterprise Blockchain Service Providers, 2021

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Excerpt for EY



The pandemic may have forced enterprises to temporarily reduce their blockchain investments, but as we move deeper into 2021, the enterprise blockchain services market is growing exponentially. However, there's one key difference: the proof-of-concept game is well and truly dead. Enterprises are looking toward production-grade initiatives that can provide genuine business value, be it helping achieve their ESG goals, driving efficiency in existing processes, or underpinning critical ecosystems.

As enterprises move away from the beautiful “white elephant,” a useless proof-of-concept that provides no value. It's an exciting time to be involved in enterprise blockchain services.

- Sam Duncan, Associate Practice Leader, HFS

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Introduction

Introduction

- The pandemic meant enterprises adjusted their spending to ensure they survived this period of uncertainty. As we we entered the pandemic, blockchain was merely an experiment to many enterprises. Engagements rarely made it beyond the proof-of-concept phase—making it an obvious place to reduce spending. However, as the pandemic pressures ease, the enterprise blockchain market is exploding. Enterprises are looking toward production-build initiatives to drive value throughout their business and move beyond useless proofs-of-concept.
- The *HFS Top 10: Enterprise Blockchain Service Providers, 2021* report investigates the blockchain space to provide a comprehensive and foundational analysis of the blockchain services market for enterprises.
- From an enterprise or B2B adoption perspective, HFS assessed 12 leading blockchain services providers based on detailed discussions with their leadership teams, inputs from their enterprise clients, and analysis of thousands of blockchain engagements across industries worldwide.

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Executive summary

Summary points

- 1 Enterprise blockchain service winners**

The enterprise blockchain space continues to grow; however, the leading three service providers—Accenture, IBM and EY—remain the same, although not in that order. These leaders are differentiated by their size, scale experience, and ability to innovate in the enterprise blockchain market.
- 2 Industry expansion**

Blockchain is well established in banking and financial services (BFS), even more so after the explosion of decentralized finance. However, we're beginning to see blockchain gain significant traction in a growing number of industries, particularly insurance, healthcare, and the public sector.
- 3 Demystifying blockchain**

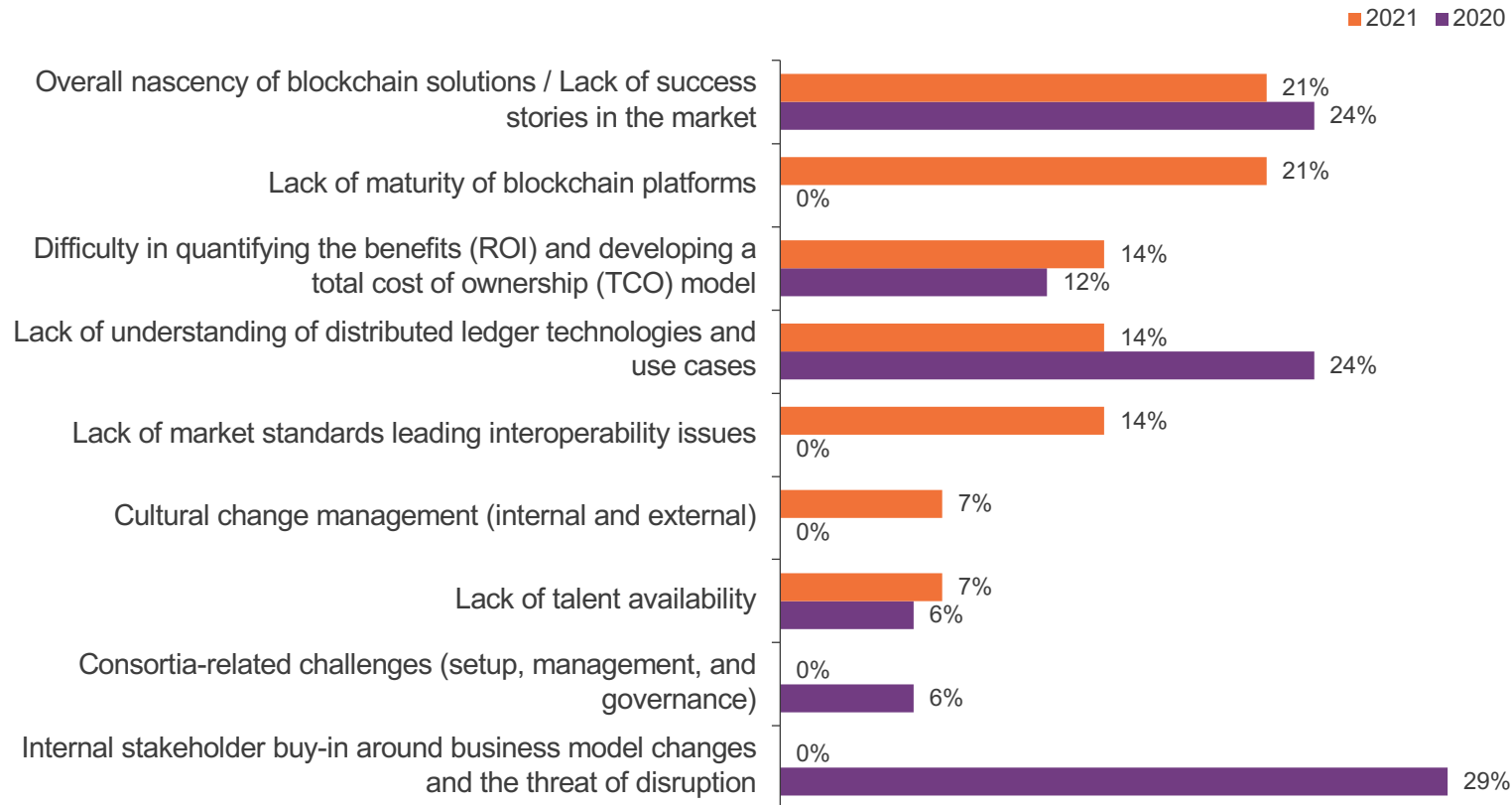
Enterprises and service providers alike still struggle to demystify blockchain, but more enterprises are slowly moving further and asking their partners how they can get started with distributed ledger technologies.
- 4 Voice of the customer**

Voice of the customer scores across the enterprise blockchain industry were very strong, particularly for providers' innovation capabilities. However, enterprise clients advised there is room for improvement in talent and pricing models.
- 5 OneOffice alignment**

As the market matures, we see more service providers establish dedicated blockchain practices and make the technology a strategic priority. They are also embedding blockchain across the entire business, allowing them to weave in other emerging technologies and industry expertise.

Enterprises are slowly moving beyond understanding blockchain and are now asking how to get started

Q: What are the top three challenges you face in implementing blockchain? (rank 1 only)

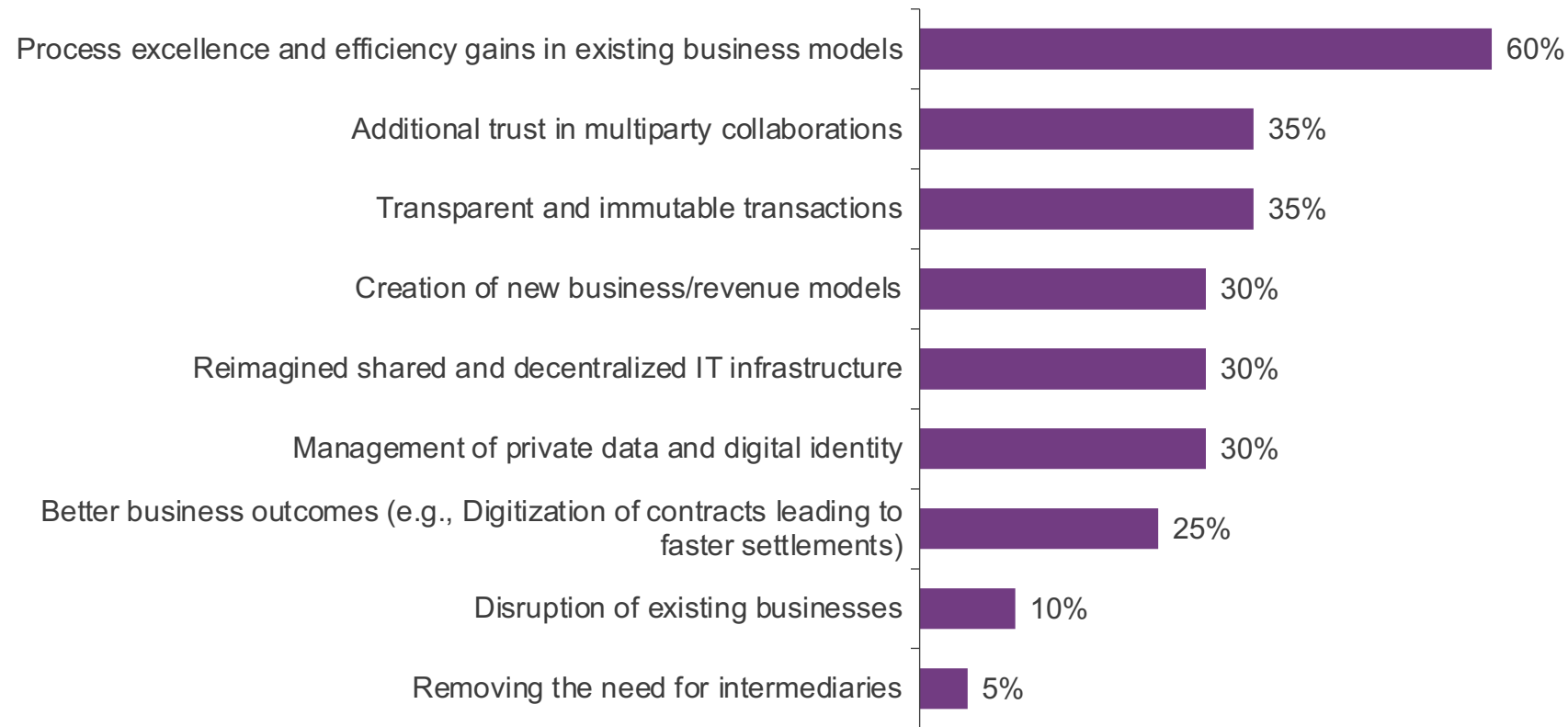


- In the past, enterprises have struggled with the overall nascence and lack of understanding of blockchain solutions, ultimately leading to difficulty achieving stakeholder buy-in.
- While these challenges still exist, we see more emphasis on challenges around getting started with blockchain.
- The data shows us that enterprises are beginning to struggle with a lack of maturity of blockchain platforms, talent availability, and market standards. This proves enterprises have moved beyond understanding blockchain to “How do we get started?”
- A lack of talent availability was a leading challenge service providers mentioned in our conversations, so it’s no surprise to see clients indicate it as a challenge. Service providers must upskill their existing employees, aggressively increase their headcount, and seek models such as crowdsourcing to address their talent challenges.

Sample: 20 enterprise clients from leading blockchain providers
Source: HFS Research, 2021

Over half of enterprises choose blockchain to drive process excellence and efficiency gains

Q: What are the key traits of blockchain that make it attractive for your situation?



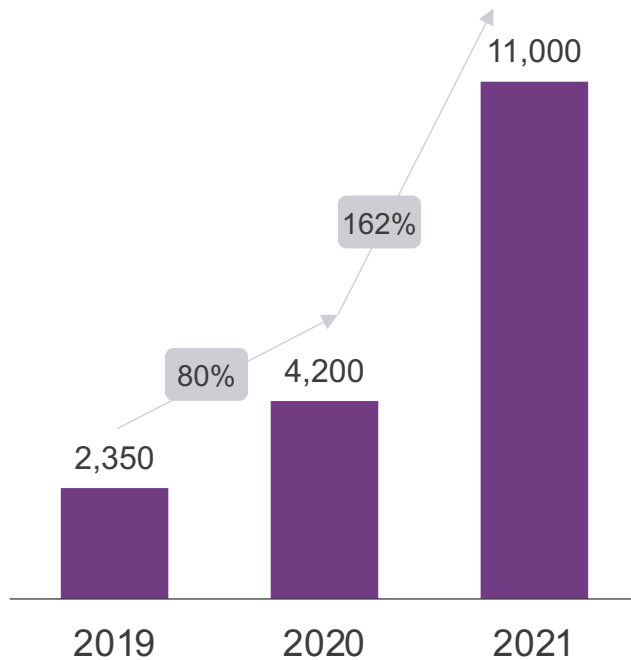
- It's no surprise that 60% of enterprises cite blockchain's ability to drive process excellence and efficiency gains as its best trait, thanks to its ability to create consensus-driven trust, immutable transactions, and smart contracts.
- The next leading traits of blockchain are additional trust and transparent transactions, both of which suggest enterprises' desire to drive ecosystem adoption.

Sample: 20 enterprise clients from leading blockchain providers
Source: HFS Research, 2021

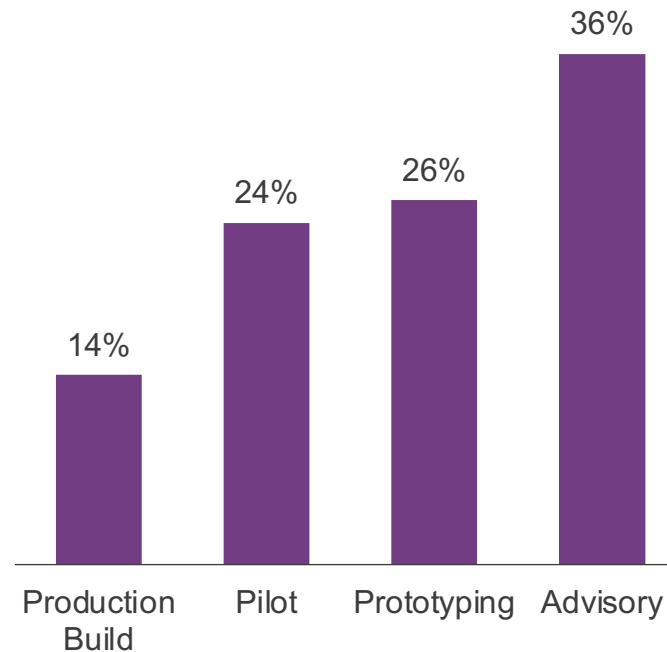
Blockchain engagements continue to grow across all stages, but more are reaching the production environment

YoY Growth

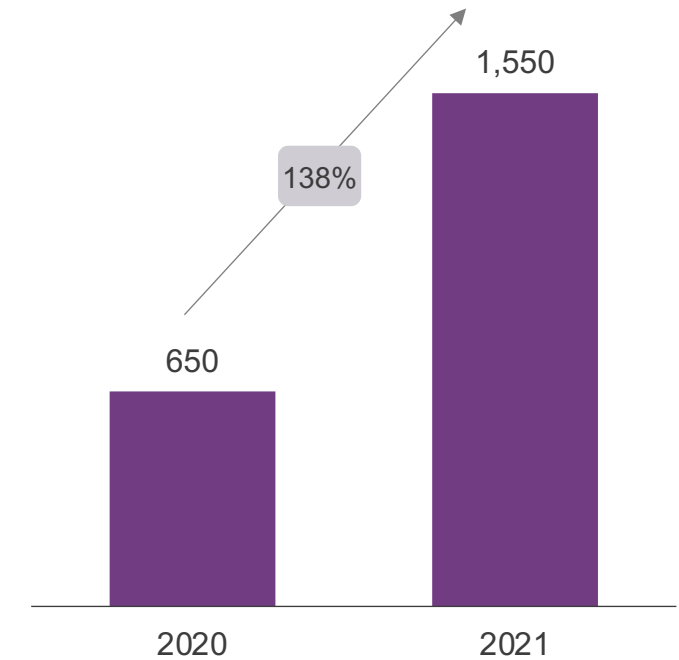
Growth in total blockchain engagements



Blockchain engagements by stage



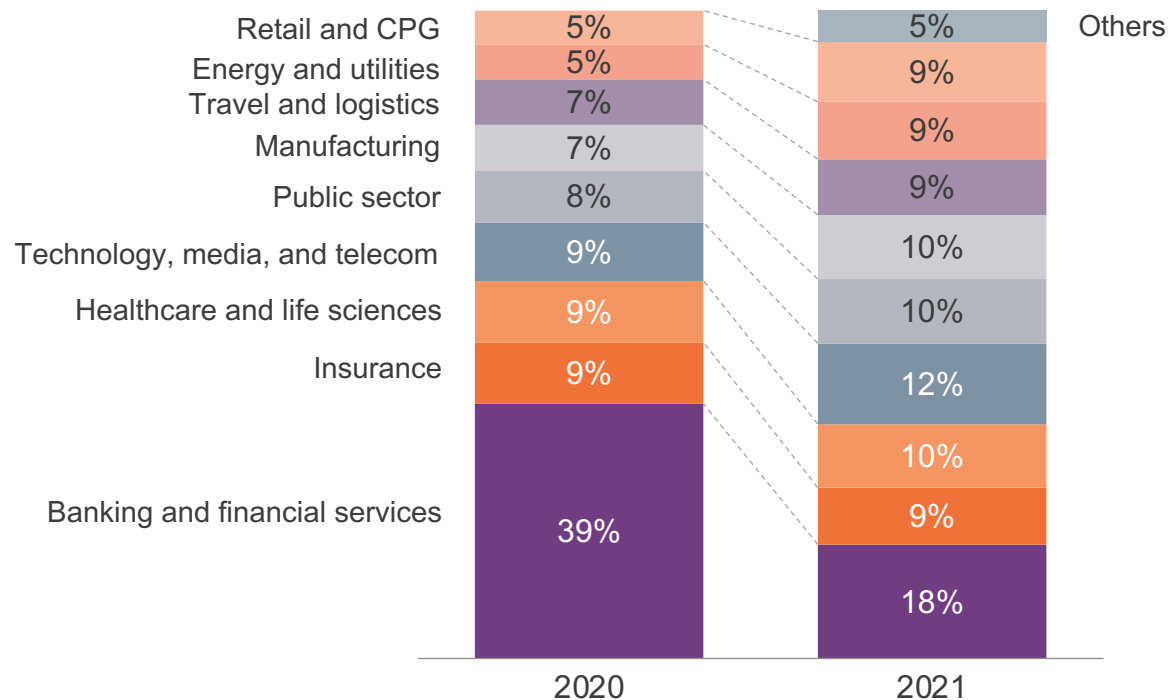
Number of production build engagements



Sample: Data from 12 providers assessed in this report.
Source: HFS Research, 2021

Blockchain is moving beyond banking and financial services into a broad range of industries

Number of blockchain engagements by industry

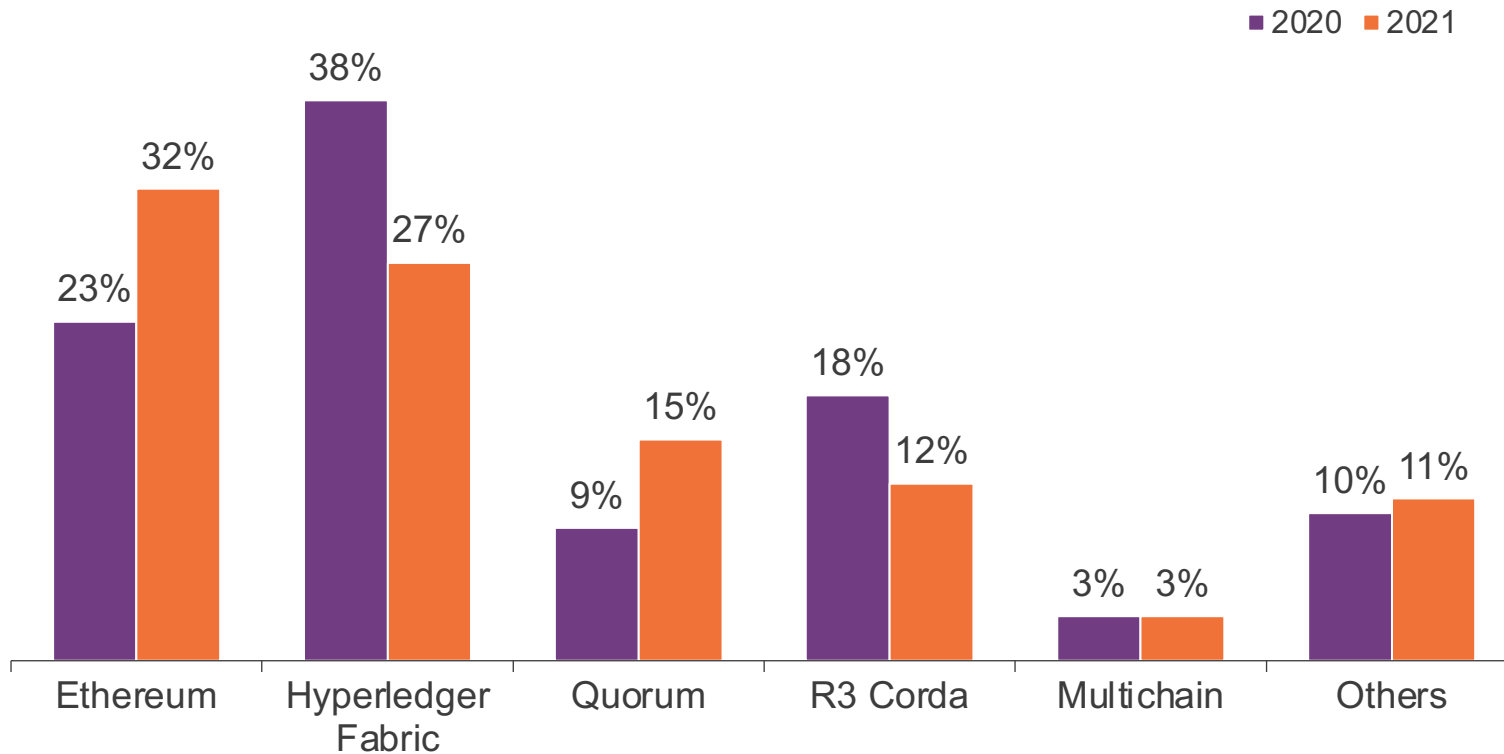


- Banking and financial services (BFS) is unsurprisingly one of the leading industries for blockchain adoption. There's a vast range of use cases including international payments, KYC (know your customer), and identity verification, plus additional use cases emerging from the decentralized finance explosion. However, over the last year there has been a surge in cases beyond BFS, reflecting the reduction from 39% to 19% of total engagements.
- There has been significant traction in the insurance sector as insurers are developing a range of industry-specific blockchain solutions, particularly the likes of B3i Services AG, which includes shareholders like Allianz, Zurich, and Deutsche Bank.
- Finally, there was a significant increase in public sector engagements, as some governments reacted to the pandemic with blockchain-driven vaccination passports, and a drive toward blockchain-fueled identity management solutions.

Sample: Engagement details of 12 providers assessed in this report.
Source: HFS Research, 2021

Adoption of public blockchains continues to rise as Ethereum emerges as the platform of choice for enterprise blockchain

Number of blockchain engagements by platform



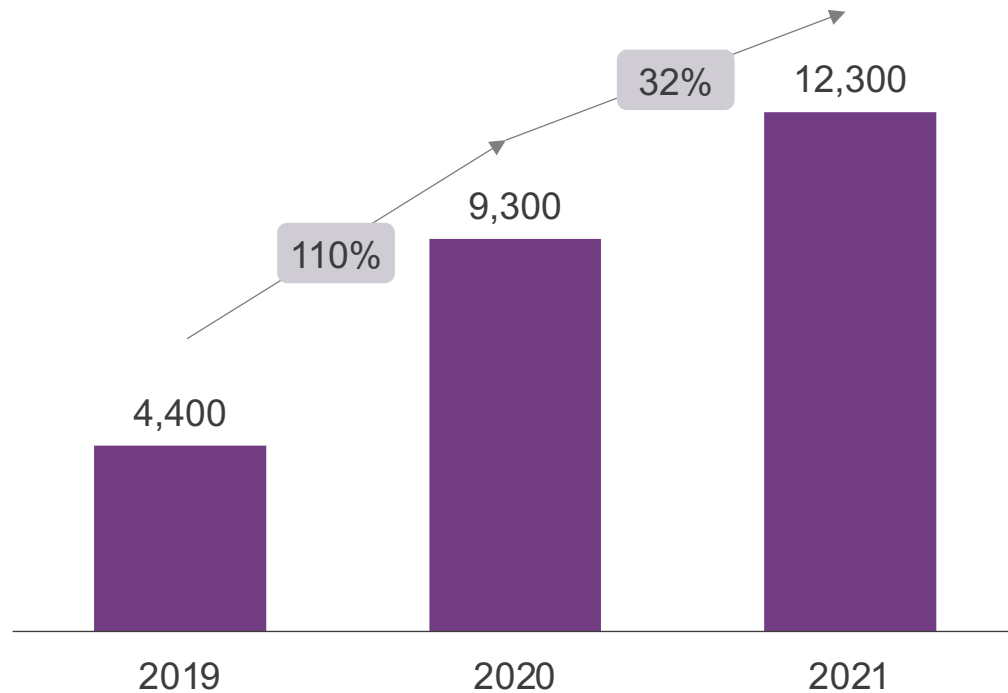
- Throughout our conversations with leading service providers, we recognized quickly that many providers were starting to favor public blockchains, particularly to underpin collaborative ecosystems. The data reflects this, too, as Ethereum leapfrogged Hyperledger Fabric to emerge as the number one platform of choice in 2021.
- Hyperledger Fabric saw the biggest drop in market share over the last year. Service providers explained that its modular architecture results in tedious deployment, configuration, and maintenance.
- While providers cited R3 Corda's ease of use and rapid deployment, it saw a reduction in market share in the last year. Providers explained that its BFS focus meant there were better options for engagements in other industries.
- An increasing number of engagements are leveraging Quorum. Providers tell us the platform's high-performance and ability to run private transactions are its key strengths.

Sample: Data from 12 providers assessed in this report
Source: HFS Research, 2021

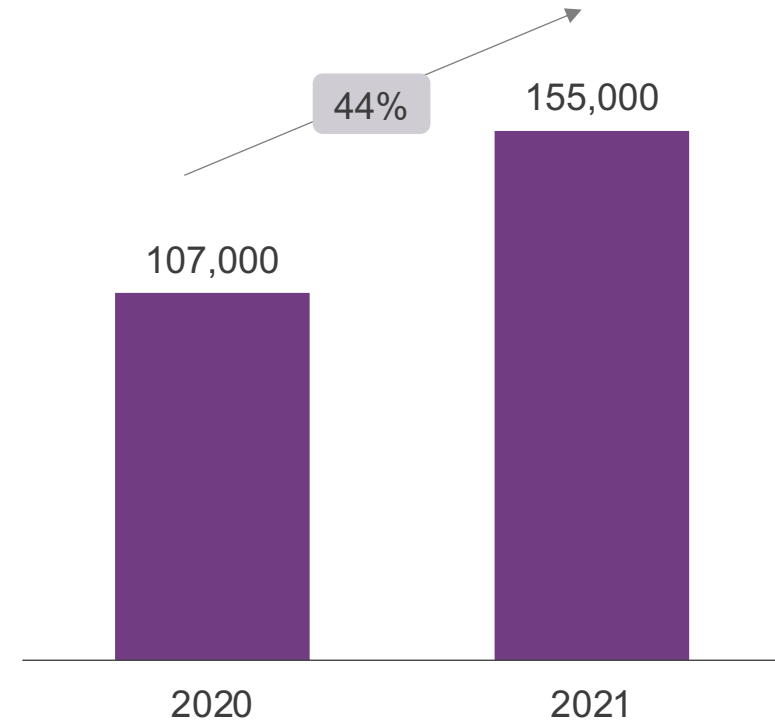
The blockchain talent war rages on as dedicated headcount grows and providers rush to upskill existing employees

YoY Growth

Growth of dedicated blockchain headcount



Growth of proficient blockchain headcount



Sample: Data from 12 providers assessed in this report.
Source: HFS Research, 2021

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Research methodology

Service providers assessed in this report



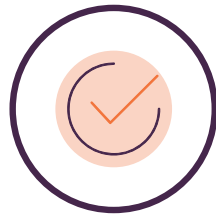
Sources of data

This Top 10 research report relies on myriad data sources to support our methodology and help HFS obtain a well-rounded perspective on the service capabilities of the participating organizations covered in our study. Sources are as follows:



RFIs and briefings

- RFIs: Each participating organization is asked to complete a detailed RFI.
- Vendor briefings: HFS conducts briefings with senior executives from each organization.



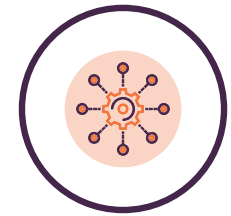
Reference checks

- HFS conducts reference checks with **active clients** of the study participants via detailed phone-based interviews.



HFS vendor ratings

- Each year, HFS fields multiple demand-side surveys in which we include detailed vendor rating questions. For this study, we leverage the HFS Pulse data featuring **400+ vendor ratings from Global 2000 enterprises**.



Other data sources

- Public information such as press releases, websites, etc.
- Ongoing interactions, briefings, virtual events, etc., with in-scope vendors and their clients and partners.

Assessment criteria

HFS assessed 12 leading blockchain service providers based on detailed discussions with their leadership teams, inputs from their enterprise clients, and analysis of thousands of blockchain engagements across industries worldwide. This information is also augmented with information from publicly available information sources.



25%

Execution

- **Scale and growth:** Number of dedicated blockchain proficient resources, and growth in number of engagements
- **Experience:** Number of engagements, practice start date
- **Value chain coverage:** Advisory, prototype, pilot, and production-build engagements
- **Industry coverage:** Number of engagements in different industries
- **Delivery footprint:** Number of FTEs and delivery centers globally



25%

Innovation

- **Vision and strategy**
- **Intellectual property:** Patents, tools, and solution accelerators
- **Ecosystem's experience:** With blockchain platforms, partnerships, and consortium memberships
- **Investments:** Capability building and global delivery investments



25%

OneOffice alignment

- **Alignment with the HFS OneOffice model:** Ability to help blockchain clients connect the front, middle, and back offices and realize transformation potential
- **Internal OneOffice alignment:** Vendor's internal alignment with OneOffice
- **One face to the customer:** Vendor's ability to represent its full capabilities to its clients
- **Change management and digital fluency:** Formal approach to change management, ability to drive digital fluency internally and externally



25%

Voice of the customer

- **Reference checks:** Direct feedback from enterprise clients via interviews and surveys
- **HFS voice of the customer vendor rating data:** Ratings by active blockchain clients of in-scope service providers
- **Referenceability:** Provision of references and reference responsiveness

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Top 10 results: Enterprise blockchain services

Leading enterprise blockchain services providers—a summary of providers assessed in this report













Providers (alphabetical order)	HFS point of view
Accenture	A priority business leveraging its full breadth and depth to deliver blockchain solutions at scale
Atos	Razor-like focus on identity, traceability, and tokenization, driven by a business-centric approach
Cognizant	Real world blockchain expertise complemented by Digital Engineer expertise and a broad ecosystem of partners
EY	Strong public blockchain vision, expertise, and investments
FPT	APAC-focused, security-driven blockchain provider
IBM	Market-making blockchain provider with extensive expertise launching production-ready ecosystems
Infosys	A vertical-driven blockchain strategy complemented by deep technical expertise
Mphasis	Deep BFSI and blockchain expertise with mid-tier flexibility
NTT Data	APAC powerhouse with deep blockchain expertise and consortium experience
TCS	Consulting-driven blockchain services with a clear ecosystem vision and expertise
Tech Mahindra	Leveraging its Block Ecosystem framework to supplement its tools and deliver blockchain solutions at scale
Wipro	An industry-focused go-to-market supported by significant size and scale

Notable performances in Top 10 rankings

HFS Podium Winners

Top five providers overall across execution, innovation, OneOffice alignment, and voice of the customer criteria

#1 	#2 	#3 	#4 	#5 
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Execution powerhouses Top three providers on execution criteria			Innovation champions Top three providers on innovation criteria			OneOffice alignment Top three providers aligned to OneOffice			Outstanding voice of the customer Top three providers on voice of the customer criteria		
#1	#2	#3	#1	#2	#3	#1	#2	#3	#1	#2	#3
											

Other notable performances

- TCS ranked #2 for delivery footprint, thanks to its extensive, dedicated blockchain headcount, and geographic spread.
- Tech Mahindra ranked #3 in intellectual property as a result of its range of platforms and tools, including the latest Stablecoin-as-a-Service offering.
- Infosys' vertical-based strategy, alongside significant number of blockchain engagements across different stages of production, helped it rank #4 for value chain coverage.

HFS Top 10 rankings—Enterprise blockchain services, 2021

Rank	Overall HFS Top 10 position	Execution						Innovation					OneOffice alignment	Voice of the customer
		Scale and growth	Experience	Value chain coverage	Industry coverage	Delivery footprint	Overall execution	Vision and strategy	Intellectual property	Investments	Ecosystems	Overall innovation		
#1	accenture	accenture	EY	IBM	EY	accenture	EY	IBM	IBM	EY	accenture	IBM	accenture	IBM
#2	IBM	IBM	IBM	EY	IBM	tcs TATA CONSULTANCY SERVICES	IBM	EY	EY	IBM	NTT DATA	EY	IBM	accenture
#3	EY	EY	Infosys® Navigate your next	accenture	accenture	IBM	accenture	tcs TATA CONSULTANCY SERVICES	Tech Mahindra	NTT DATA	EY	accenture	EY	EY
#4	Infosys® Navigate your next	Infosys® Navigate your next	tcs TATA CONSULTANCY SERVICES	Infosys® Navigate your next	tcs TATA CONSULTANCY SERVICES	EY	Infosys® Navigate your next	accenture	wipro	Tech Mahindra	wipro	Tech Mahindra	Infosys® Navigate your next	Infosys® Navigate your next
#5	tcs TATA CONSULTANCY SERVICES	tcs TATA CONSULTANCY SERVICES	accenture	tcs TATA CONSULTANCY SERVICES	wipro	Cognizant	tcs TATA CONSULTANCY SERVICES	Infosys® Navigate your next	Cognizant	wipro	IBM	NTT DATA	Tech Mahindra	NTT DATA
#6	Tech Mahindra	wipro	NTT DATA	Atos	Infosys® Navigate your next	Infosys® Navigate your next	wipro	NTT DATA	accenture	accenture	Infosys® Navigate your next	tcs TATA CONSULTANCY SERVICES	tcs TATA CONSULTANCY SERVICES	tcs TATA CONSULTANCY SERVICES
#7	NTT DATA	FPT Software	wipro	wipro	Tech Mahindra	wipro	Cognizant	Tech Mahindra	Infosys® Navigate your next	tcs TATA CONSULTANCY SERVICES	tcs TATA CONSULTANCY SERVICES	Infosys® Navigate your next	wipro	Tech Mahindra
#8	Cognizant	Cognizant	Tech Mahindra	NTT DATA	Atos	NTT DATA	NTT DATA	Cognizant	tcs TATA CONSULTANCY SERVICES	Infosys® Navigate your next	Cognizant	Cognizant	Cognizant	Cognizant
#9	wipro	NTT DATA	Cognizant	Cognizant	NTT DATA	Tech Mahindra	Tech Mahindra	wipro	NTT DATA	Cognizant	Tech Mahindra	wipro	NTT DATA	Mphasis The Next Applied
#10	Mphasis The Next Applied	Tech Mahindra	Atos	Tech Mahindra	Cognizant	FPT Software	Atos	Mphasis The Next Applied	Atos	Mphasis The Next Applied	Atos	Atos	Mphasis The Next Applied	wipro

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EY profile: Enterprise blockchain services

How to read our summary statements regarding each providers' enterprise blockchain services capabilities



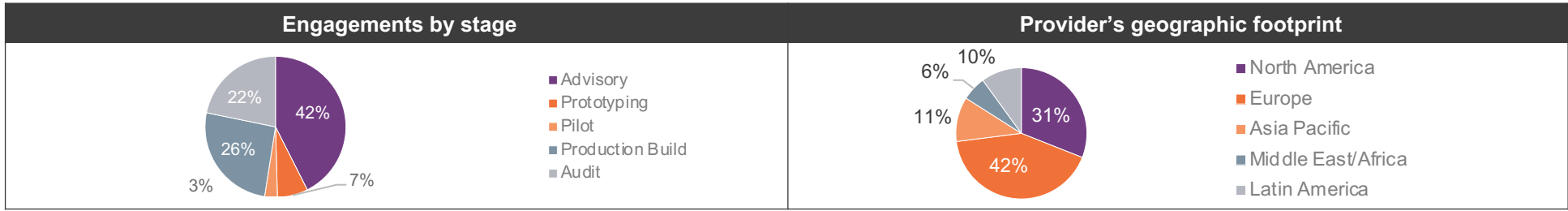
Dimension	Rank	Strengths		Development opportunities	
HFS Top 10 position	#				
Ability to execute					
Scale and growth	#				
Experience	#				
Value chain coverage	#				
Industry coverage	#				
Delivery footprint	#				
Innovation capability	#				
Vision and strategy	#				
Intellectual property	#				
Investments	#				
Ecosystems	#				
OneOffice alignment	#				
Voice of the customer	#				
		Engagements by stage		Provider's geographic footprint	
		Includes a pie chart outlining the provider's blockchain engagements by stage.		Includes a pie chart outlining the provider's geographic footprint.	
		Key blockchain clients	Delivery capabilities	Ecosystems	Investments
		Number of blockchain engagements	Dedicated blockchain headcount	Partnerships	Platforms and tools
		Key clients	Blockchain proficient headcount	Consortium memberships	Solution accelerators
			Delivery locations		Patents

Strong public blockchain vision, expertise, and investments



Dimension	Rank
HFS Top 10 position	3
Ability to execute	1
Scale and growth	3
Experience	1
Value chain coverage	2
Industry coverage	1
Delivery footprint	4
Innovation capability	2
Vision and strategy	2
Intellectual property	2
Investments	1
Ecosystems	3
OneOffice alignment	3
Voice of the customer	3

Strengths	Development opportunities
<ul style="list-style-type: none"> Public blockchain expertise: EY has long bet on public blockchains, believing that they will do for networks of companies what ERP did for the single enterprise. EY as a result has a wealth of expertise and experience developing solutions that drive business value and achieve impressive network effects. At the same time, enterprises and vendors alike are increasing their investment in public blockchains; EY is ahead of its competition. In fact, one of EY's clients explained that its vision around the network effect of blockchain and public blockchains was the key driver for choosing EY over its competitors. Blockchain investments: EY has invested heavily in its own blockchain IP, including EY OpsChain, EY Blockchain Analyzer, and Blockchain.EY.com, all of which help it create genuine value for its blockchain clients. Beyond this, it contributes heavily to the wider blockchain community, particularly in maturing the public blockchain ecosystem, which includes filing 17 blockchain-specific patents. EY's market contribution include being one of the first vendors to implement zero-knowledge proofs on public Ethereum, releasing Nightfall, and collaborating with ConsenSys and Microsoft to develop the Baseline Protocol. Partnership ecosystem: EY has a strict "quality over quantity" approach with its partnerships, and it is selective of the partners it works with. The same ethos extends to its blockchain business, too. Microsoft and SAP remain EY Blockchain's most strategic partnerships, alongside ConsenSys, Polygon Technologies, and a selection of smaller technology companies, and these rich partnerships facilitate true product integration and deliver complete solutions to their clients. Change management: EY's Change Experience is its new approach to change management, underpinned by its insights tool EY Change Insights, which it hopes will help clients adapt to the challenges of continuous change, a crucial component of any blockchain engagement thanks to its complex nature. Practice structure: EY remains different from other consulting-led firms by having one clear global leader for blockchain, with dedicated geographical leaders alongside a supporting team of developers, consultants, and product-specific teams. 	<ul style="list-style-type: none"> Growing its talent base: EY's blockchain-proficient headcount has increase significantly in the last year, but it is still behind other leaders in this study for dedicated blockchain headcount, which the team is actively trying to increase.



Key blockchain clients	Delivery capabilities	Ecosystems	Investments
<p>Number of blockchain engagements: EY has over 120 active blockchain engagements, and over 1,000 historic engagements.</p> <p>Key clients:</p> <ul style="list-style-type: none"> H Source City of Toronto ANSA Nacha BIL Microsoft SAKE Peroni Microsoft 	<p>Dedicated blockchain headcount: 250</p> <p>Blockchain proficient headcount: 1,500+</p> <p>Delivery locations: EY has research sites in London, Paris, and Tel Aviv as well as development centers and client-facing locations worldwide in key cities such as New Delhi, Trivandrum, Rome, Shanghai, Toronto, New York, and Madrid.</p>	<p>Partnerships: EY's leading partners are Microsoft and SAP, alongside partnerships with ConsenSys, Polygon Technologies, and five early-stage technology companies.</p> <p>Consortium memberships: EY is an active sponsor and participant in the Enterprise Ethereum Alliance, initiator of Baseline Protocol, a member of the Global Blockchain Business Council, and it recently announced that EY OpsChain and EY Blockchain Analyzer will be compatible with Ethereum and the FISCO BCOS consortium initiative in China.</p>	<p>Platforms and tools: EY has two flagship platforms, the EY OpsChain suite of business applications and EY Blockchain Analyzer suite of analytics tools.</p> <p>Solution accelerators: EY has a range of accelerators including Nightfall, ERC-20, ERC-731, and Wallet Management for enterprise users.</p> <p>Patents: EY has filed 17 blockchain patents relating to privacy protocols for public blockchains, tokenization, testing of smart contracts and tokens and identity validation.</p>

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About the authors

HFS Research authors



Saurabh Gupta

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Saurabh oversees HFS' global research function, managing the global team of analysts across US, Europe, and Asia-Pac. He works closely with the CEO to set the strategic research focus and agenda for HFS Research, understanding and predicting the needs of the industry, and ensuring that HFS maintains its position as the strongest impact thought leader for business operations and services research.

As an analyst, Saurabh leads the coverage for horizon 3 change agents such as blockchain, business services (such as finance and accounting, sourcing and procurement, and supply chain), as well as overarching and cross-cutting themes under the OneOffice concept and Hyperconnected Enterprise.



Sam Duncan

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Sam Duncan is Associate Director of Research at HFS, based in Cambridge UK. He graduated from Bournemouth University with a degree in economics, throughout which he took a particular interest in macroeconomics, mainly how the evolution of technology accelerated globalization. Throughout his education he also spent some time studying law, accounting, and investment management.

Since joining HFS, Sam has developed his understanding of blockchain and continues to explore the latest applications of the technology across a range of industries. He has applied his economics background to keep on top of the latest trends on the banking and financial services industry, and has taken a keen interest in insurance. On top of this, he contributes to the HFS Market Index, a quarterly report breaking down the performance and key events of the leading service providers throughout the previous quarter.

About HFS



Insight. Inspiration. Impact.

HFS is a unique analyst organization that combines deep visionary expertise with rapid demand side analysis of the Global 2000. Its outlook for the future is admired across the global technology and business operations industries. Its analysts are respected for their no-nonsense insights based on demand side data and engagements with industry practitioners.

HFS Research introduced the world to terms such as "RPA" (Robotic Process Automation) in 2012 and more recently, the HFS OneOffice™. The HFS mission is to provide visionary insight into the major innovations impacting business operations such as Automation, Artificial Intelligence, Blockchain, Internet of Things, Digital Business Models and Smart Analytics.

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