



HFS Top 10 Enterprise Blockchain Services 2020

Excerpt for EY

HFS Research authors:

Saurabh Gupta, Chief Research Officer
Sam Duncan, Senior Research Analyst
Tanmoy Mondal, Senior Research Analyst
Mayank Madhur, Senior Research Analyst

TOP 10
HFS

April 2020

“2019 witnessed pioneering blockchain initiatives succeed and proceed from proofs of concept to pilots to “live, in-production,” while several other efforts failed to move beyond laboratories. 2020 promises to be the most exciting blockchain year—we could see enterprise blockchain adoption come of age to solve real-world business problems.”

—*Saurabh Gupta, Chief Strategy Officer*

What you'll read

Topic	Page
Introduction	4
Research methodology	5
Executive summary	7
HFS Top 10 enterprise blockchain service providers 2020	20
Enterprise blockchain service provider profile	24
About HFS	27

Introduction

- Blockchain is emerging as a powerful architectural technology with the potential to impact enterprise and B2B ecosystems as much as the internet and cloud.
- The HFS Top 10 Enterprise Blockchain Services 2020 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 13 leading blockchain service providers based on detailed discussions with their leadership teams, inputs from their enterprise clients, and analysis of nearly 4,200 blockchain engagements across industries and around the globe.

Research methodology

HFS assessed 13 leading blockchain service providers based on detailed discussions with their leadership teams, inputs from their enterprise clients, and analysis of nearly 4,200 blockchain engagements across industries and around the globe. The research is also augmented with information from publicly available information sources.

Blockchain service providers were assessed on the following three main dimensions:



33.3%

Voice of the customer

- Clients in live production environment
- Brand recall for blockchain
- Client feedback (across reference and non-reference clients)



33.3%

Ability to execute

- Scale and growth (number of dedicated and blockchain proficient resources, YOY growth in number of engagements)
- Experience (number of engagements, practice start date)
- Value chain coverage (advisory, prototype, pilot, and in-production engagements)



33.3%

Innovation

- Vision and strategy
- Intellectual property (patents, tools, solutions accelerators)
- Ecosystem (experience with blockchain platforms, partnerships, consortium memberships)
- Investments (capability building, global delivery investments)

Blockchain service providers covered in this report



Executive summary

- **We are hurtling toward a hyperconnected economy, and blockchain will provide the way to make it happen.** Ecosystems across organizations that service the specific needs of a customer are emerging. No single organization owns the entire customer experience, and competitors and peers need to figure out how to collaborate. Blockchain in combination with other emerging technologies like IoT and artificial intelligence will provide the way to make it happen.
- **The blockchain “six-pack” is driving unprecedented interest from enterprises.** There are six built-in blockchain features with long-term potential for disruption when enterprises leverage them intelligently in relevant business use cases. The blockchain six-pack includes: 1. Distributed shared data over peer-to-peer (P2P) networks reduces single points of failure; 2. Consensus-driven trust cuts out the middle-man; 3. Immutable transactions ensure trust; 4. Hashing-based data ensures integrity and security; 5. Automated smart contracts promote touchless interactions across process chains; and 6. Permissioned and permissionless flavors give enterprise users flexibility. These six blockchain features are changing the way we think about business transactions, data storage, and even industry value chains and associated revenue models.
- **Enterprise blockchain service market witnessed a massive surge in 2019.** The number of engagements and dedicated talent pool for blockchain services nearly doubled in 2019. Despite a continuing POC fatigue, over 15% of blockchain solutions are reaching production stage, nearly a 3X increase from 2018. This is encouraging even though almost all “live engagements” represent “shadow” or “parallel” environments where the legacy solutions has not yet been replaced.
- **Enterprise blockchain adoption is a cross-industry global phenomenon.** Banking and financial services was the first mover from an enterprise blockchain adoption perspective accounting for 35%+ engagements. However, other industries are catching up fast.
- **Supply chain has emerged as the hottest use case for blockchain** followed by document management, trade management, payments, identity, and customer experience. Industry-specific use cases include insurance claims processing, re-insurance, intercompany reconciliations, settlements, lending, and several others have also emerged.

Executive summary (2)

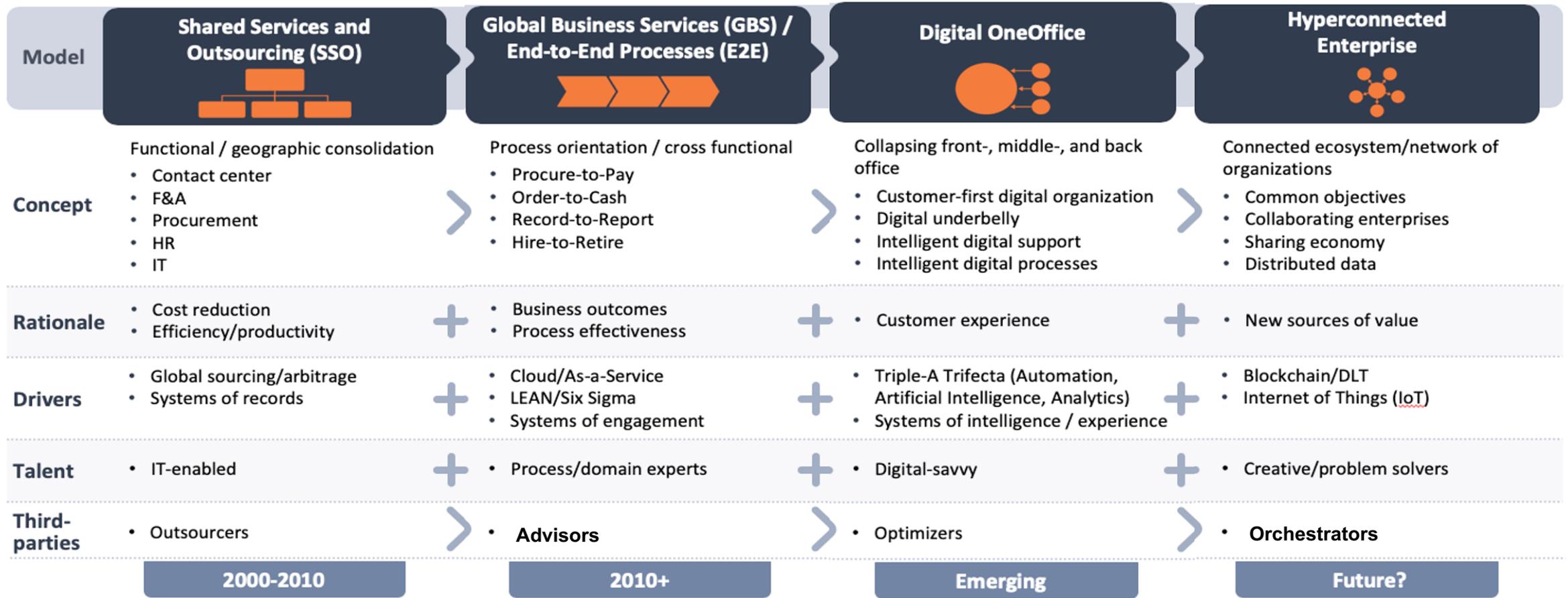
- **The blockchain platform choice for enterprises is emerging as a two-horse race.** Hyperledger Fabric and Ethereum (incl. Quorum) account for over 60% of enterprise blockchain engagements. However, the debate between permissioned (Hyperledger Fabric, and championed by IBM) and permissionless (Ethereum, and championed by EY) continues to rage on. All other service providers assessed in the report are playing it safe with a technology-agnostic approach.
- **Several service providers are doing commendable work to invest, experiment, and develop enterprise blockchain solutions.** HFS assessed 13 leading blockchain service providers based on detailed discussions with their leadership teams, inputs from their enterprise clients, and analysis of 4,000+ blockchain engagements across industries and across the globe. The HFS Top 10 enterprise blockchain service providers for 2019 are (in rank order): 1. IBM, 2. Accenture, 3. EY, 4. Deloitte, 5. TCS, 6. Wipro, 7. Infosys, 8. Cognizant, 9. NTT DATA, and 10. KPMG.
- **Real blockchain clients want real business impact.** Blockchain promises “creative destruction” through disintermediation, but that is a long-term vision. Only 6% of executives we surveyed are leveraging blockchain to remove the need for intermediaries. Enterprise blockchain clients are investing in blockchain solutions to get real business impact. Without a tangible ROI, blockchain engagements get stuck at the proof of concept (PoC) or pilot stage. No-nonsense, real business cases are a must-have to drive blockchain beyond the PoC-fatigue that we are witnessing today. Consequently, the current focus for enterprise adoption is business optimization with a tangible ROI.
- **Enterprise blockchain is going through a 60-30-10 adoption challenge.** Around 60% of enterprises are still unclear about blockchain, highlighting the nascence of the concept. Nearly 30% of enterprises are struggling with how to get started, and the remaining few with successful proofs of concept or pilots are struggling to get to production. A balanced approach to blockchain is critical to driving meaningful success—you can no longer ignore blockchain as a value creation lever, but don’t also get sucked into all the hype!
- **Enterprise clients will still demand blockchain solutions despite COVID-19.** HFS ran a survey to understand the impact of the coronavirus on the business/IT services industries, with over 600 respondents. The results showed that enterprise clients predicted a small increase in their blockchain investments following the pandemic, meaning that it must remain a strategic investment for service providers despite current uncertainty.

We are hurtling toward a hyperconnected economy, and blockchain is paving the way to make it happen

TOP 10
HFS

Converging organizational silos

Emergence of ecosystems



The Blockchain “six-pack” is driving unprecedented interest from enterprises

TOP 10
HFS

Distributed shared data over peer-to-peer (P2P) network reduces single points of failure

Consensus-driven trust cuts out the middleman

Immutable transactions ensure trust

Security driven by hashing-based data

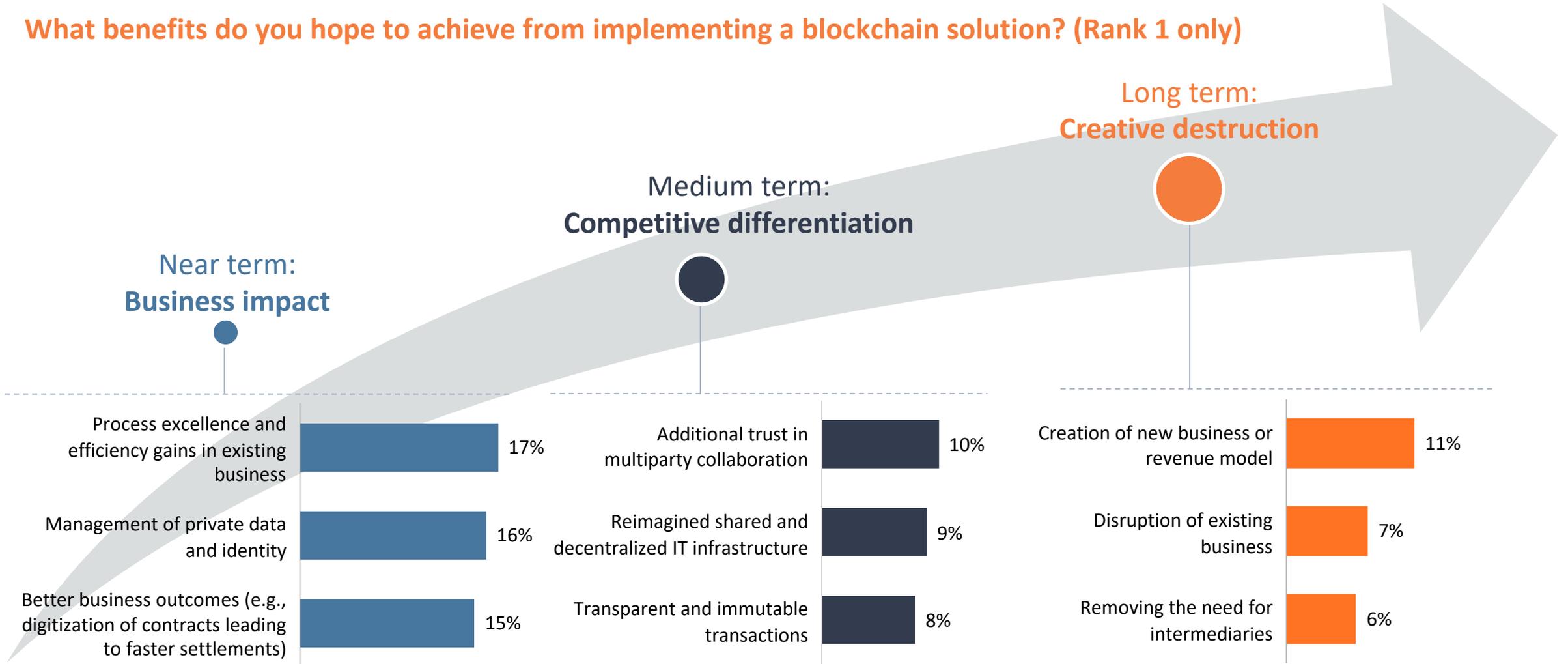
Smart contracts promote touchless interactions across process chains

Permissioned and permissionless flavors give enterprise users flexibility

Refer to [“The Blockchain Reality Check: Where Are We and What Can We Expect in 2018?”](#) for more details on the blockchain “six-pack”

Real blockchain clients want real business impact

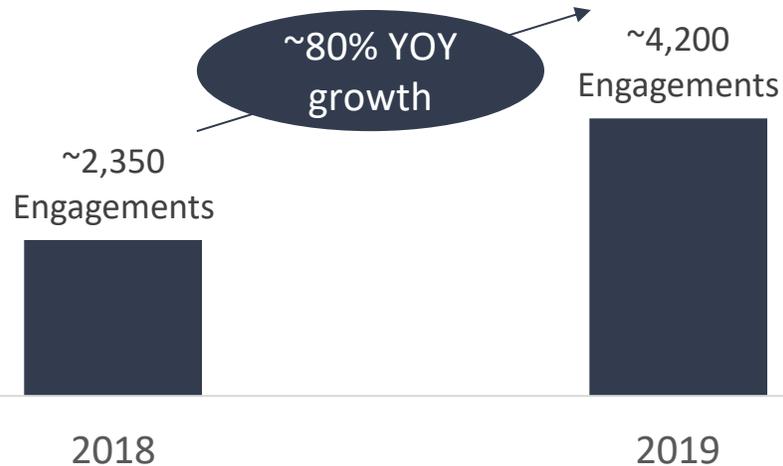
What benefits do you hope to achieve from implementing a blockchain solution? (Rank 1 only)



Enterprise blockchain service market witnessed a massive surge in 2019. Number of engagements and dedicated talent pool for blockchain services nearly doubled.

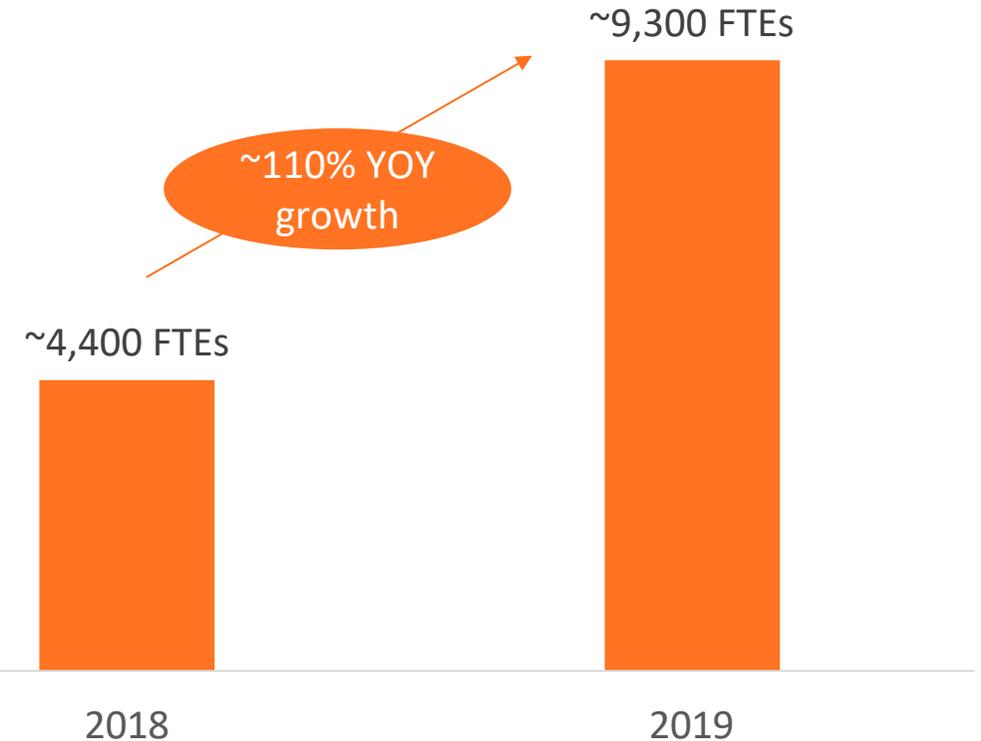
Growth of enterprise blockchain engagements

Number of blockchain engagements



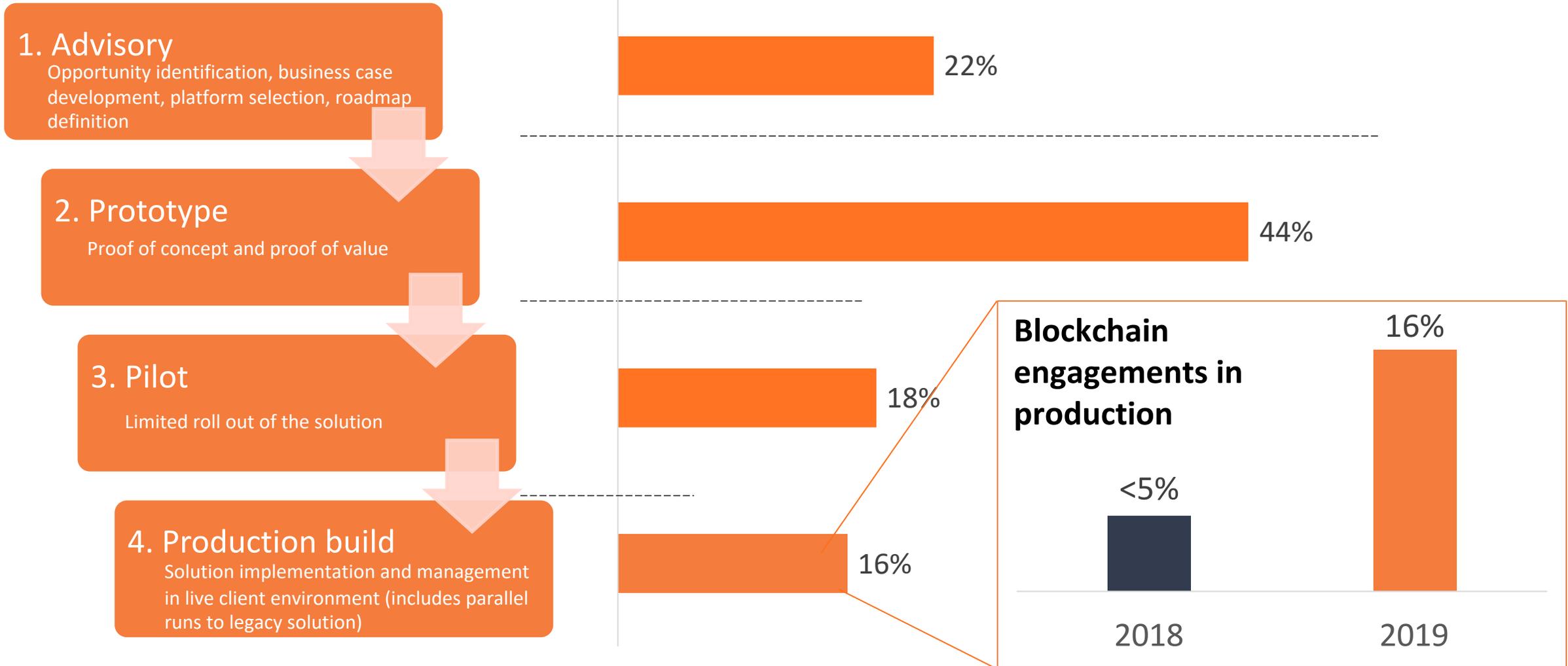
Growth of blockchain talent

Number of FTEs dedicated to the blockchain practice (does not include all blockchain proficient resources)



Sample: Based on information provided by 12 service providers (Accenture, Cognizant, DXC, EY, IBM, Infosys, KPMG, LTI, Mphasis, NTT DATA, TCS, and Wipro)

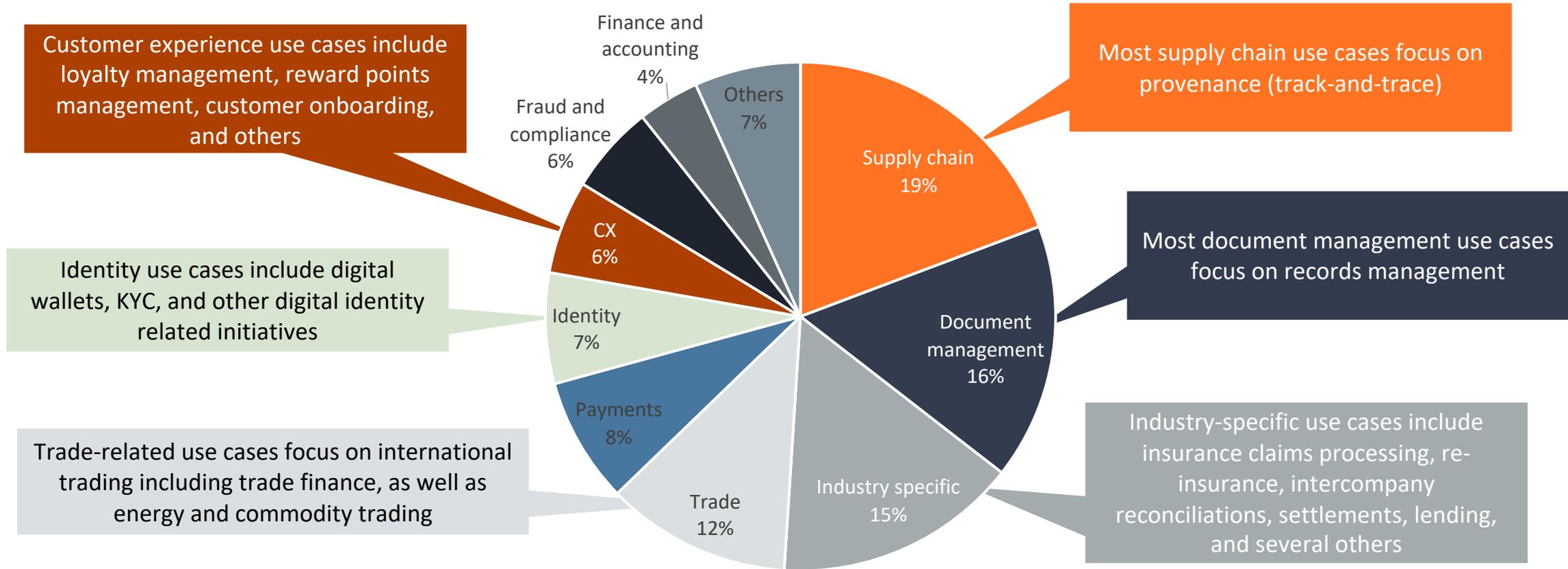
Despite a continuing POC fatigue, in 2019 there was a significant increase in credible “in-production” enterprise blockchain solutions



Sample: 4,200 blockchain engagements across 12 service providers (Accenture, Cognizant, DXC, EY, IBM, Infosys, KPMG, LTI, Mphasis, NTT DATA, TCS, and Wipro)

Supply chain has emerged as the hottest use case for blockchain followed by document management, industry-specific use cases, trade management, payments, identity, and customer experience

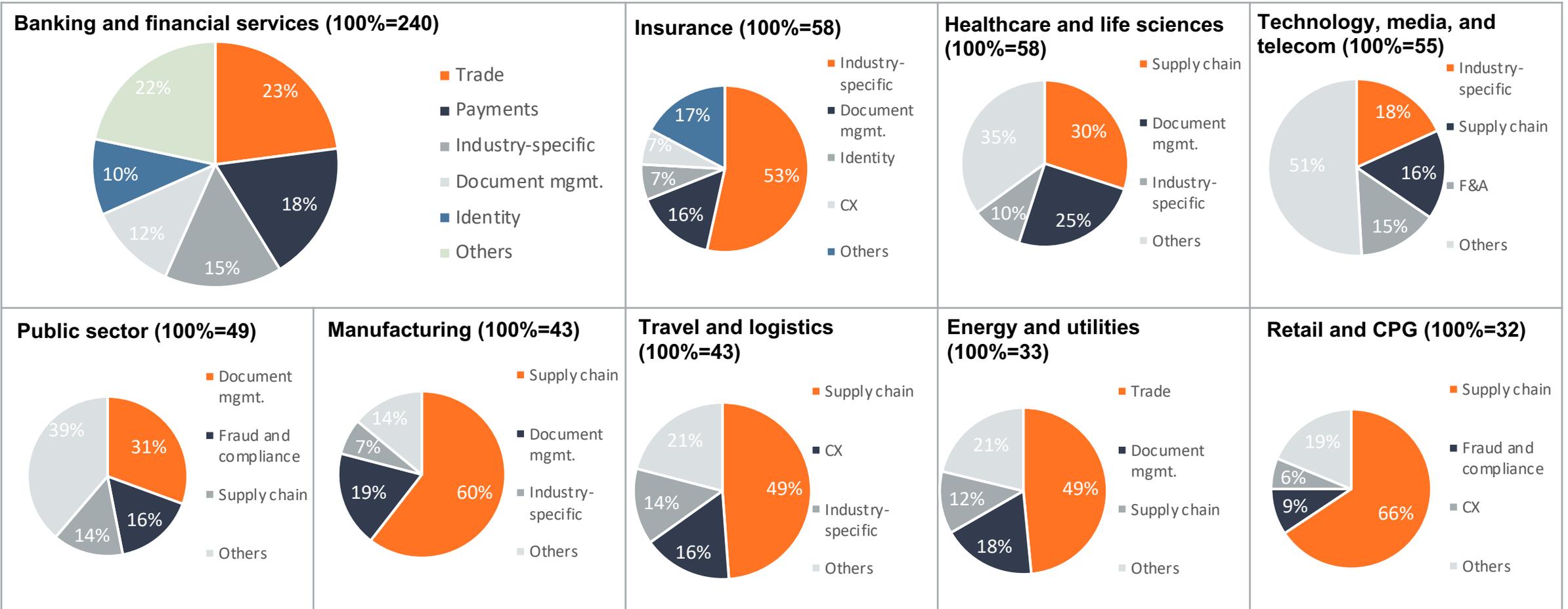
Popular use cases for enterprise blockchain adoption
Number of blockchain engagements



Sample: ~640 blockchain engagements across 12 service providers (Accenture, Cognizant, DXC, EY, IBM, Infosys, KPMG, LTI, Mphasis, NTT DATA, TCS, and Wipro)

Enterprise blockchain use cases vary significantly by industry

Major enterprise blockchain use cases by industry
Number of blockchain engagements

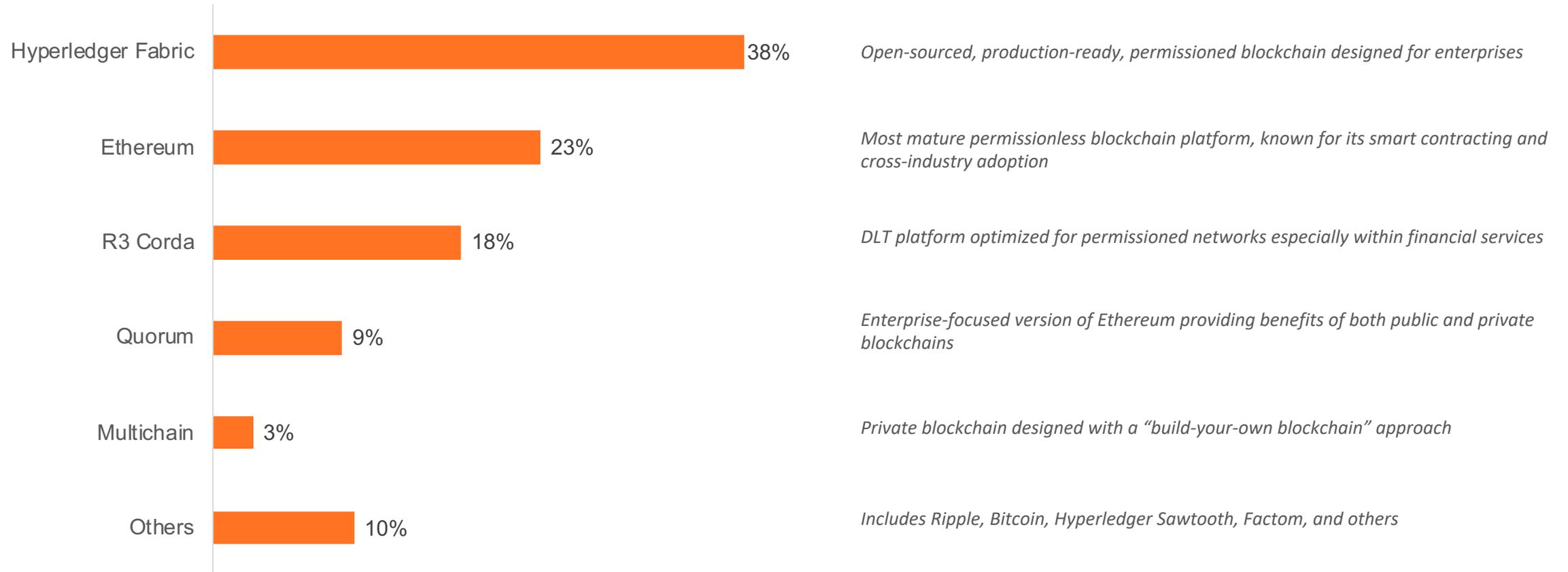


Sample: ~640 blockchain engagements across 12 service providers (Accenture, Cognizant, DXC, EY, IBM, Infosys, KPMG, LTI, Mphasis, NTT DATA, TCS, and Wipro)

The blockchain platform choice for enterprises is emerging as a two-horse race (Hyperledger Fabric vs. Ethereum)

TOP 10
HFS

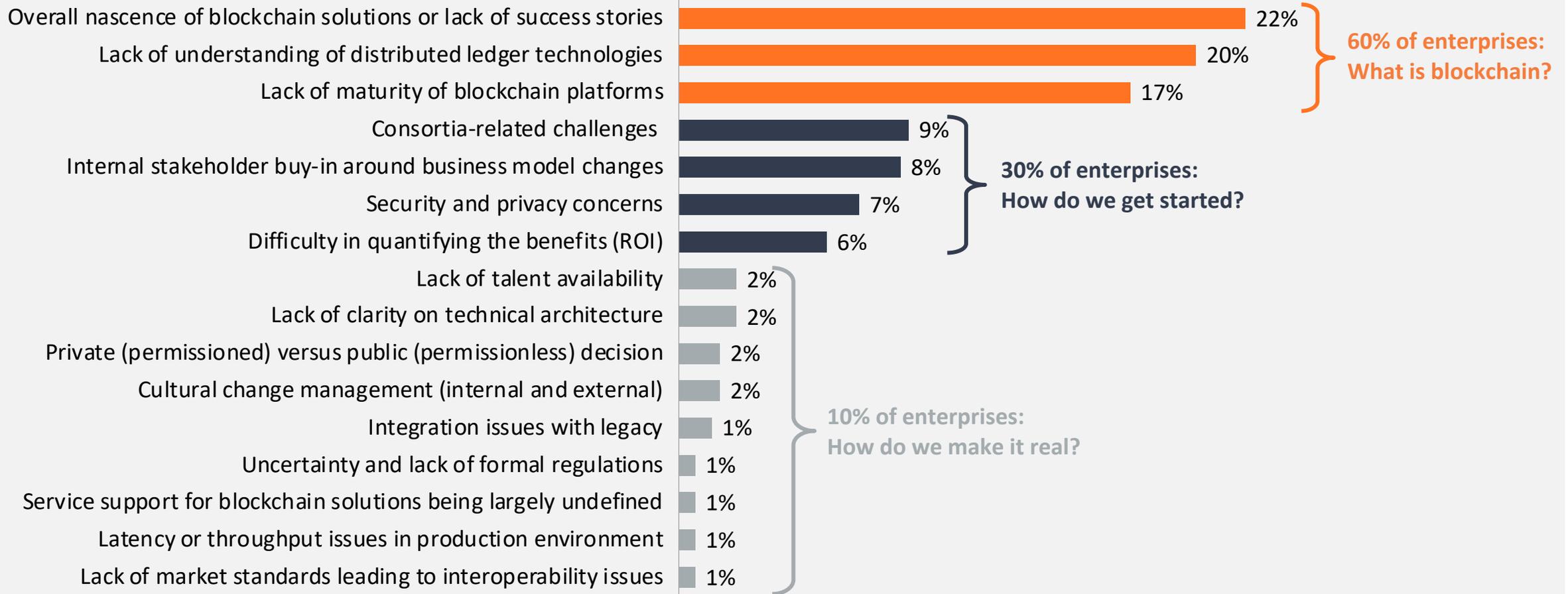
Major enterprise blockchain platforms Number of blockchain engagements



Sample: ~425 blockchain engagements across 12 service providers (Accenture, Cognizant, DXC, EY, IBM, Infosys, KPMG, LTI, Mphasis, NTT DATA, TCS, and Wipro)

Enterprise blockchain is going through a 60-30-10 adoption challenge

What is your single biggest challenge in adopting blockchain?



HFS' Top 10 recommendations to drive meaningful success from blockchain

TOP 10

1

Investigate blockchain today, and avoid the "oh crap" moment down the line.

74%

of respondents agree that blockchain will become mainstream in the next five years.

2

Beware the blockchain hype.

45%

of respondents agree that blockchain is hyped, compared to 27% who disagree.

3

Blockchain is not the answer to everything.

Only 50%

of blockchain projects reported made business sense and created meaningful value for the respondents.

4

Keep blockchain investments real.

High

correlation coefficient between blockchain project satisfaction and compelling business case and stakeholder alignment.

5

Blockchain alone will not solve business problems. Integrated solutions will.

90%+

of blockchain projects are weaving in other emerging technologies, especially IoT and machine learning.

6

Blockchain initiatives will not succeed with just a technology focus.

<45%

of respondents are investing in blockchain talent, consortium building, or IP creation, while most are focusing on technical solutions.

7

Create a business buy-in for the blockchain initiative to succeed.

Only 7%

of business unit heads are allocating budget for blockchain initiatives.

8

Blockchain requires competitors to come together.

54%

of blockchain initiatives require competitive organizations to be a part of the ecosystem to be successful.

9

Do not try and do everything on your own.

70%

of organizations with blockchain initiatives are partnering with external service providers that they can trust.

10

Keep an eye on future technology advancements.

45%

of respondents perceive that quantum computing might kill blockchain. Over a third don't have a perspective!

HFS Top 10 enterprise blockchain service providers, 2020

Summary of blockchain enterprise service providers assessed in the report

TOP 10
HFS

Service providers (alphabetic order)	HFS Point of View
Accenture	Comprehensive blockchain business and technology consulting and execution services at scale
Cognizant	Full-service blockchain capability enabled by broad platform experience, robust ecosystem, and deep client relationships
Deloitte	Global, holistic, platform-agnostic, and business-centric blockchain services
DXC	Building market momentum on the back of Luxoft acquisition
EY	Bold public blockchain market vision and software development-led go-to-market strategy
IBM	The flag bearer of enterprise blockchain with a leading number of live blockchain networks
Infosys	Scaled up blockchain talent with experience of establishing live blockchain networks in BFS
KPMG	Multi-dimensional technology-agnostic blockchain approach backed by strong business relationships and public sector experience
LTI	Start-up approach to problem solving with cross-industry technical expertise
Mphasis	Technical blockchain capabilities combined with BFSI domain expertise
NTT DATA	Full-stack blockchain technical capabilities backed by strong global consortium experience
TCS	Bold vision for blockchain to create purposeful ecosystems.
Wipro	Holistic blockchain technology solution with an industry-focused go-to-market

Notable performances in the HFS Top 10 blockchain enterprise service providers

TOP 10
HFS

HFS Podium Winners

Top three providers overall across execution, innovation, and voice of the customer criteria

<p>#1.</p> 			<p>#2.</p> 			<p>#3.</p> 		
<p>Execution powerhouses Top three providers on execution criteria</p>			<p>Innovation champions Top three providers on innovation criteria</p>			<p>Outstanding Voice of the Customer Top three providers on voice of the customer criteria</p>		
#1	#2	#3	#1	#2	#3	#1	#2	#3
								

Other notable top three performances

- **TCS** emerged as a blockchain visionary, ranking #1 in vision and strategy

Notes: The HFS Top 10 Blockchain Service Providers report assessed and ranked 13 service providers across execution, innovation, and voice of the customer criteria. The inputs to this process included detailed RFI responses and structured briefings with service provider leadership as well as interviews and surveys from their clients. In order to drive objectivity to our research methodology, we interacted with reference clients provided by the service providers as well as non-reference Blockchain clients sourced through our own network for each service provider assessed

The service providers assessed in this report include (in alphabetic order) Accenture, Cognizant, Deloitte, DXC, EY, IBM, Infosys, KPMG, LTI, Mphasis, NTT DATA, TCS, and Wipro

HFS Top 10 blockchain enterprise service provider rankings

Rank	Overall HFS Top 10 position	Execution			Overall Execution	Innovation				Overall Innovation	Voice of the customer
		Scale and growth	Experience	Value chain coverage		Vision and Strategy	Intellectual property	Ecosystem	Investments		
#1											
#2											
#3											
#4											
#5											
#6											
#7											
#8											
#9											
#10											

Notes: The HFS Top 10 Blockchain Service Providers report assessed and ranked 13 service providers across execution, innovation, and voice of the customer criteria. The inputs to this process included detailed RFI responses and structured briefings with service provider leadership as well as interviews and surveys from their clients. In order to drive objectivity to our research methodology, we interacted with reference clients provided by the service providers as well as non-reference Blockchain clients sourced through our own network for each service provider assessed. The service providers assessed in this report include (in alphabetic order) Accenture, Cognizant, Deloitte, DXC, EY, IBM, Infosys, KPMG, LTI, Mphasis, NTT DATA, TCS, and Wipro.

Enterprise blockchain service provider profiles

Dimension	Rank	Strengths	Development opportunities		
HFS Top 10 position	#3	<ul style="list-style-type: none"> • Public blockchain vision. EY believes that blockchains will do for networks of companies what ERP did for the single enterprise. Consequently, it has prioritized the development of solutions that can create value for enterprises and work on public networks, where they can achieve the best network effects. • Deep integration of business process designs with audit, tax, and compliance requirements. Between EY OpsChain and EY Blockchain Analyzer, EY solutions include the capabilities that enterprises need to transact securely, safely, and in full regulatory compliance on either private or public blockchains. • Common technology and architecture. While most firms covered in this report work across multiple blockchain technologies or announced a huge diversity of partnerships, EY has focused on tight integration across its services on Ethereum with two deep partnerships (Microsoft and SAP). • Singular global team structure differentiates EY from other consulting-led firms covered in this report. EY has one clear global leader for blockchain, along with a global cross-service line supporting team. • Intellectual property investments in line with commitment to make public blockchains a reality; 14 patents filed relating to zero-knowledge proofs and other privacy protocols for public blockchains, reduced ZKP transaction costs by 90%, launched Blockchain.EY.com and blockchain Baseline protocol to expedite enterprise adoption of public blockchain. 	<ul style="list-style-type: none"> • Exclusive focus on Ethereum. EY's focus and commitment to public blockchains is both commendable and differentiated, but it does come at an opportunity cost to service clients that are looking for private and permissioned blockchains. • Scale of blockchain developers at EY will never be able to match the offshore-led system integrators covered in this report. There are potential partnership approaches that EY should evaluate, especially as the market matures. • Market perception. The market continues to perceive EY as an advisory or consulting firm and does not recognize EY's hands-on technical capability to get blockchain solutions in production. EY will need to invest in changing this market perception as it builds on its software development-focused strategy. 		
Ability to execute					
Scale and growth	#10				
Experience	#5				
Value chain coverage	#7				
Innovation capability		Blockchain engagement portfolio	Delivery capabilities	Ecosystem	Investments
Vision and strategy	#3	<p>250+ engagements (excl. tax and assurance related blockchain engagements)</p>	<p>EY's blockchain practice was founded in June, 2016, and has been set up with one global leader alongside global cross-service line supporting teams.</p> <p>Dedicated blockchain headcount: 200+</p> <p>Blockchain proficient headcount: 500+</p> <p>Delivery locations: EY's blockchain division is split across <i>research sites</i> (London, Paris, Tel Aviv), <i>development centers</i> (Trivandrum, San Jose, Madrid, Cambridge US), and <i>client-facing locations</i> (London, Paris, Munich, Rome, Manila, Tel Aviv, Singapore, Tokyo, Shanghai, Seoul, Seattle, San Francisco, New York, Toronto).</p>	<p>Partnerships: EY's most important partnerships are with Microsoft and SAP.</p> <p>EY is also an active sponsor and participant the Enterprise Ethereum Alliance and is a member of Global Blockchain Business Council.</p>	<p>Platforms and tools: EY has two main platforms: EY OpsChain (which has eight applications built) and EY Blockchain Analyzer (with three applications built).</p> <p>Solution accelerators: EY's 14 patents represent tools for emerging technologies which have reduced zero-knowledge proof transaction costs by 90%, allowing clients to manage complex contracts on a public blockchain under zero knowledge, the firm boasts its blockchain-as-a-service offering.</p> <p>Patents: EY has filed 14 patents, which include privacy protocols for public blockchains, tokenization, testing of smart contracts, and tokens and identity verifications.</p>
Intellectual property	#3	<p>Market share (based on % engagements across all providers covered in this report): 6%</p> <p>Key clients: Microsoft Corporation, NACHA, BNP Paribas, Allianz, Carrefour, European Investment Bank, Block2, MakerDAO, Maersk and Guardtime, Spinoso, Bofrost, WiV, City of Vienna, Roosevelt China Investments, H-source, Merck Animal Health, Canadian Blood Services, WIV Technology, City of Toronto, Spinoso, Infigold, The Institute of RiskBlock Alliance</p>	<p>Ecosystem</p> <p>EY is also an active sponsor and participant the Enterprise Ethereum Alliance and is a member of Global Blockchain Business Council.</p>	<p>Investments</p> <p>Platforms and tools: EY has two main platforms: EY OpsChain (which has eight applications built) and EY Blockchain Analyzer (with three applications built).</p> <p>Solution accelerators: EY's 14 patents represent tools for emerging technologies which have reduced zero-knowledge proof transaction costs by 90%, allowing clients to manage complex contracts on a public blockchain under zero knowledge, the firm boasts its blockchain-as-a-service offering.</p> <p>Patents: EY has filed 14 patents, which include privacy protocols for public blockchains, tokenization, testing of smart contracts, and tokens and identity verifications.</p>	
Ecosystem	#7				
Investments	#3				
Voice of the customer	#5				

About HFS

HFS Research authors



Saurabh Gupta
Chief Research Officer | HFS Research
saurabh.gupta@hfsresearch.com

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 our coverage for horizon 3 change agents such as blockchain, business services (such as finance & accounting and supply chain) as well as overarching and cross-cutting themes under the OneOffice concept like digital change management

He is a recognized thought leader and passionate problem solver in the global services industry. With 15+ years of experience across client, provider, advisory, and analyst roles, he brings a uniquely realistic and wide-ranging perspective to our industry's challenges and opportunities. Before joining HFS, Saurabh led strategy for Genpact's CFO and transformation services, helped shape the Business Process Services (BPS) strategy for AbbVie, managed Everest Group's global BPS practice, and worked as a techno-functional consultant at Infosys.



Sam Duncan
Senior Research Analyst | HFS Research
sam.duncan@hfsresearch.com

Sam Duncan is a Senior Research Analyst 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 which breaks down the performance and key events of the leading service providers throughout the previous quarter.

HFS Research authors



Tanmoy Mondal
Senior Research Analyst | HFS Research
tanmoy.mondal@hfsresearch.com

Tanmoy Mondal is a Senior Research Analyst at HFS Research, identifying global trends in engineering services from both industry & technology perspectives, tracking global outsourcing deals & investments including partnership agreements & R&D announcements in the sector and supporting the domain leads in secondary research, data analysis, PoVs and research writing.

Tanmoy has over 5 years of research, pre-sales and market intelligence experience in TCS, HCL and Tracxn. At his TCS and HCL role, he worked on preparing RFP responses including solution construct and commercial proposition. He was responsible for analyzing the business scenario for ERP implementation for different industry verticals and participated in several Enterprise Transformation projects across domains to optimize the IT landscape, increasing IT integration among client business verticals, improving productivity and reducing business incidents. At Tracxn, he was part of the emerging technology team that helped finding companies (start-ups) specializing in upcoming technologies (virtual and augmented reality, drone etc.) for acquisition and portfolio investments for PE and VC firms.

Tanmoy holds a Master's in Business Administration from IIFT (Indian Institute of Foreign Trade), and Bachelor of Engineering from Jadavpur University, Kolkata.



Mayank Madhur
Senior Research Analyst | HFS Research
mayank.madhur@hfsresearch.com

Mayank Madhur is a Senior Research Analyst at HFS Research, supporting different practice leads in area of Industry Research, IoT and Blockchain by working on secondary research, data analysis, PoVs and research writing.

Mayank has over 4 years of research, pre-sales and software development experience. Prior to HFS he was part of business strategy and pre sales in Altimetrik supporting vertical heads, sales and marketing team. Before it in his HCL Tech role, he worked in the delivery team of a large medical device client for R&D project.

He holds blockchain certification by IIT & IBM on "Blockchain Architecture Design and Use Cases". His other certification include certification on Google analytics, Scrum, Six Sigma etc. to name a few. He hold certificate in "Strategy Management" from IIM Bangalore.

Mayank holds Master's in Business Administration from Birla Institute of Technology and Science College, Pilani (BITS, Pilani University) and a Bachelor of Engineering in Electrical and Electronics from Jawaharlal Nehru National College of Engineering (Visvesvaraya Technological University), Karnataka.



HFS Research: Defining future business operations

- The HFS mission is to provide visionary insight into major innovations impacting business operations, including: automation, artificial intelligence, blockchain, Internet of things, digital business models, and smart analytics.
- HFS defines and visualizes the future of business operations across key industries with its OneOffice™ Framework.
- HFS influences the strategies of enterprise customers, to help them develop OneOffice backbones to be competitive and to partner with capable services providers, technology suppliers, and third-party advisors.
- Read more about HFS and our initiatives on our [website](#).

TOP 10
HFS



Defining future business operations

HFSResearch.com | [@HFSResearch](https://twitter.com/HFSResearch)