BLACKCHAIN CONSULTING

# 2020

# BLOCKCHAIN ENTERPRISE ADOPTION :

## SURVEY HIGHLIGHTS

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# EXECUTIVE SUMMARY

Distributed ledger technologies, including blockchain, are potentially as significant as the impact of the internet and are changing business models fundamentally. After the rise and fall of Bitcoin in 2017, we saw enterprises betting big on Blockchain in 2018. In 2019, we witnessed pioneering blockchain initiatives succeed and proceed from proofs of concepts to pilots to ''live, in-production'' while several other efforts failed to move beyond laboratories. We will see enterprise adoption in 2020, and it will be fascinating to see big giants solve real-world business problems leveraging blockchain.

*HFS and Wipro surveyed 318 senior executives (including 111 C-level executives) intending to understand the current state of enterprise blockchain adoption. These executives are closely associated with their organisation›s blockchain initiatives. HFS and Wipro also reviewed 940 blockchain initiatives across the globe and industries.*

**Key findings:**

• 75% of enterprise surveyed consider blockchain a strategic priority.

• Not only financial services but other industries are joining blockchain as well. More than 95% of enterprise blockchain initiatives focus on seven broad areas; these include:

*1. Identity*
*2. Crypto and digital currencies*
*3. Trade*
*4. Payments*
*5. Supply chain*
*6. Fraud and compliance*
*7. Finance*

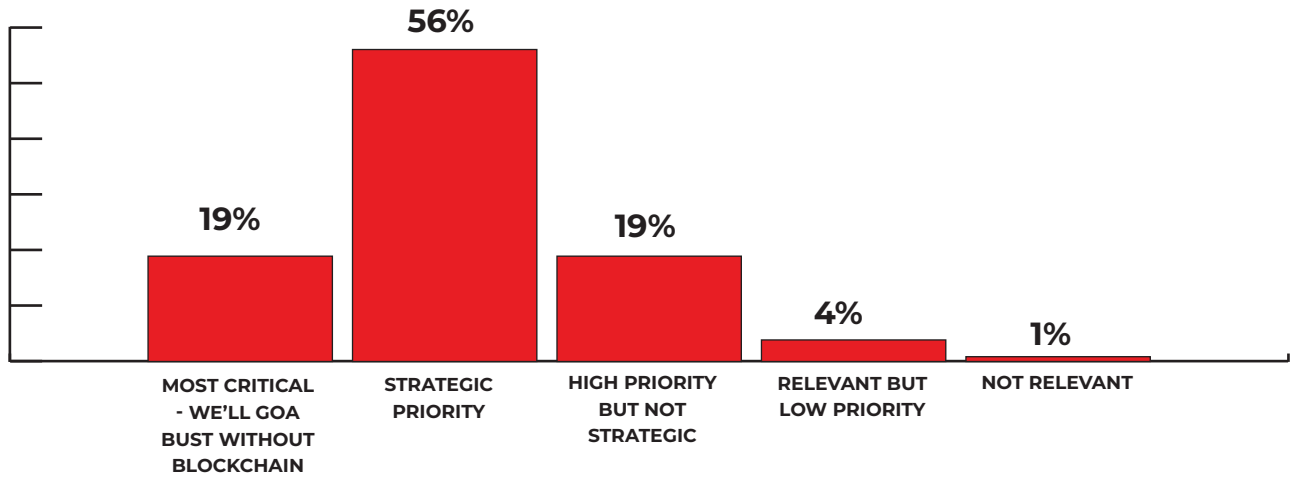
Only 14% of these blockchain initiatives have been fruitful and have entered the production stage, while the rest are aiming to get there within the next 2 years.
Enterprise blockchain adoption is coming out of the closet.

• 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!

# CREATING NEW SOURCES OF VALUE WITH BLOCKCHAIN

The majority (75%) of respondents find blockchain as the most critical element for strategic advancement. Only 1% dismiss it as not relevant. Senior executives value blockchain the most, as 90% of the surveyed C-level executives consider blockchain as a strategic priority compared to 69% of mid-senior management.

**Question. How big of a strategic imperative is blockchain? Consider how important Blockchain is in achieving its business goals**




These six built-in features of blockchain help enterprises to significantly transform their business and growth when leveraged intelligently in relevant business use-cases.

1. ***Distributed data share over peer-to-peer (P2P) networks*** reduces single points of failure. When we store data over client servers, we give the rights to a central administrator to manage our data, but data stored on the distributed do not have a central administrator. A distributed ledger is replicated, shared, and synchronised digital data geographically spread across multiple sites, countries, or institutions. 64% of the executives surveyed anticipate that with the introduction of blockchain, there will be no single points of failure and the collaboration between participants will be much effective.

2. There is no need for a middle-man that you must trust. ***Trust is driven by consensus algorithms such as proof-of-work (PoW), proof-of-stake (PoS), proof-of-authority (PoA), Byzantine fault tolerance (BFT), and crash fault tolerant (CFT)***. Nearly 60% of the C-level executives anticipate that consensus-driven trust allows them to plan properly entirely new business models that were not possible before blockchain.

3. ***Immutable transactions drive auditability***. Every block is interconnected and lay on a series basis, these blockchains are timestamped.

Once recorded, the data given in any block cannot be altered without altering the preceding block and vice versa, making it impossible to alter the whole chain. This makes it attractive to finance executives in search of an auditable trail.

4. ***Hashing-based data ensures integrity and security***. More than 60% of technology, risk, and compliance executives find this inherent data integrity and security feature of blockchains especially attractive.

*Case study 1. Using zero-knowledge proof to manage the menace of unsolicited telecommunications*

*Zero-knowledge proof (ZKP) is a technique by which a prover can convince the verifier of a fact without revealing the actual content; for instance, proving one's age without sharing their date of birth. Wipro built a blockchain solution that leverages ZKP to manage the menace of unsolicited commercial communication (text messages and voice calls). Telecom regulatory bodies have now mandated that this kind of communication should be filtered based on subscriber's preferences and consent. Exposing this data would result in the subscriber being subjected to more spam, targeted advertising, etc. The telecom service provider (TSP) needs to provide evidence that messages are segregated based on subscriber's preferences so that a level playing field is maintained. Wipro's ZKP solution enables the TSP to construct a proof that can be used by the verifier (auditor) to validate the proof of delivery or exclusion.*

5. ***Automated smart contracts promote touchless interactions across process chains***. These contracts are auto-executable based on pre-set conditions or triggers and allow for much higher levels of straight-through processing. With smart contracts, millions of internet of things devices can collaborate and work together. Nearly 65% of the 940 blockchain projects that we reviewed as a part of this research are using smart contract functionality.

*Case study 2. The smart contract-based renewable energy platform*

*A Europe-based oil and gas company is leveraging blockchain to be a market maker for renewable energy trading and empower end users (prosumers) to sell directly, in a peer-to-peer fashion, excess (non-consumed) energy to consumers. It partnered with Wipro to create a smart contract-based renewable energy trading platform. The solution allows for the recognition, tokenization, and exchange of prosumer generated energy on a peer-to-peer blockchain network. Individual tariff plans are maintained, and smart contracts exercise the change of ownership and payments for the energy transactions. Blockchain is enabling this oil and gas company to diversify into a renewables future and contribute toward reducing the overall carbon footprint.*

6. ***Permissioned and permissionless flavours give enterprise users flexibility***. As per the survey, 80% of the current solutions are running on private - permissioned or private - permissionless blockchains, though we expect more hybrid (both public and private) blockchains to emerge.

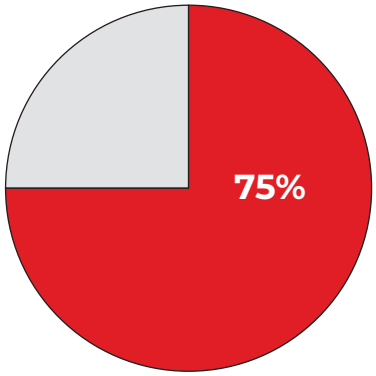
# BLOCKCHAIN VALUE PROPOSITION FOR ENTERPRISES.

The current focus for enterprise adoption is business optimization with a tangible ROI. (see Case study 3)

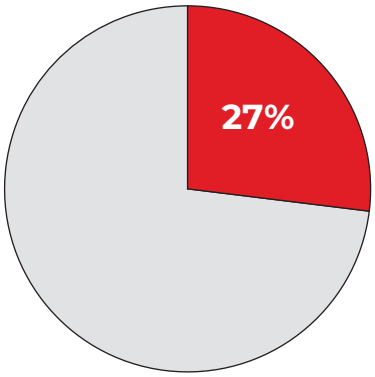
*Case study 3. Driving a tangible ROI using blockchain by creating a "just-in-time" automotive supply chain*

*Inbound logistics in the automotive sector accounts for 10% of manufacturing costs. Incoming flows to automotive manufacturers are mostly delivered just in time (JIT). This amounts to 40% of the average parts volume of a car. Everyday manufacturing flow interruptions caused by problems in the supply chain management affects the overall productivity due to micro-stops and macro-stops, accounting for 2% to 4% of overall equipment effectiveness (OEE). Wipro partnered with a logistics provider to create a just-in-time or zero-inventory for the entire automotive supply chain.*

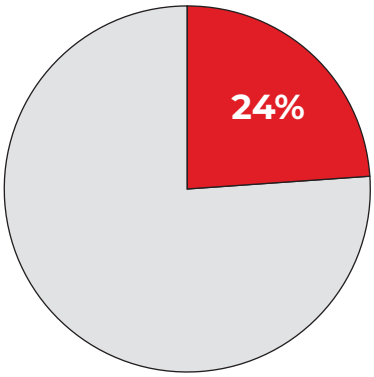
**Question. What benefits do you hope to achive from implementing a blockchain solutions?**




Leveraging blockchain for neat term business impact




In it for medium-term competitive differentiation




Leveraging blockchain for long term creative destructions.

# ENTERPRISE BLOCKCHAIN ADOPTION IS HAPPENING

From an enterprise blockchain adoption perspective, financial services were the first moves. But the enterprise blockchain has broader implications than just for financial services.

Blockchain use cases around, trade finance, payments, know your customer (KYC), and digital wallets were the first to emerge.

The other industries that are joining the game are, health industry, automotive industry, globally distributed supply chains, the Insurance industry, travel and hospitality firms etc. There are endless possibilities with blockchain.

**95% of enterprise blockchain initiatives focus on seven broad areas: identity, crypto, trade, payments, fraud and compliance, supply chain, and finance**

# HURDLES

There are three major hurdles on the blockchain adoption journey.

**1. The proper definition of Blockchain:**

Over 60% of enterprises are still unclear about the concept of blockchain. They are still assessing the meaning, use case and potential impact of the blockchain. With the recent enterprise trend of blockchain, industry leaders are being motivated to look and understand the concept of blockchain. The lack of success stories in the market also makes internal stakeholder buy-in challenging.

**2. How do we get started?**

Enterprises (30%), which have identified the use case of blockchain for their industry are still figuring out, when, where, how to start? They are struggling to decide the starting point for their PoCs and pilots. Without a proper quantitative plan, it becomes almost impossible to draw out the costs, benefits and ROI of the blockchain models. Lack of maturity of the blockchain platforms and the multitude of frameworks (such as Ethereum, Hyperledger Fabric, R3 Corda, Ripple, Quorum, and Multichain) create a lack of clarity on the required technical architecture.

**3. How do we make it real?**

The few (less than 10%) that do have successful pilots are challenged with scalability to a production-grade environment. There is a looming blockchain POC fatigue, as nearly 40% of initiatives in our research are stuck at the prototyping stage and struggling to get to production. There are uncertainty and a lack of formal regulations, as well as no market standards leading to interoperability issues. Most blockchains also are still trying to work through the latency or throughput issues in a production enterprise environment. Blockchain talent is hard to find, and last, but not the least, integration with legacy technologies and service support for blockchain solutions remains mostly undefined.

# TEAM AT BLACKCHAIN

**Giacomo Arcaro**
**Co-Founder & Growth Hacker**

He has 15 years' experience in growth hacking, digital strategy, startup and business development. He has advised over 150 startups and has 50 managed employees in a XII Century Church in Italy for the European biggest growth hacking company. He holds the title of 'Amazon Best Seller Author' and is known to be one of the 'Most Influential Blockchain Evangelist' with +200 conferences all over the world.

**Giovanni Casagrande**
**Co-Founder & ICO/IEO/STO Advisor**

A known name in the world of cryptocurrency. He has been in the marketing industry for well over 20 years and switched to the cryptocurrency industry in 2014. He's been a writer, public speaker, investor and Marketing / Growth Hacking advisor in more than 100 successful projects. His specialty was Economics in the University of Bologna and the knowledge and experience gathered from there has helped him to manage/help many businesses in the industry. 4 years ago he founded Black Marketing Guru, a successfully Growth Hacking startup in Italy.

**Eloisa Marchesoni**
**Token Architect**

Known as the youngest and most influential Blockchain expert in the field. She is an Italian-American who first started out as a startupper in the AI and IT business, while still finishing her Economics and Management studies in Bocconi. Eloisa is a renowned author, public speaker, and biz-dev, catering startups and companies wanting to innovate. Currently being the Chapter Director of Bocconi University Startup Grind Chapter, she made valuable connections and became a part of some of the main blockchain associations around the world, namely The Blockchain Council and The NYC Women in Blockchain. She will be featured in the Forbes Italy 30 Under 30 most influential entrepreneurs in 2020.