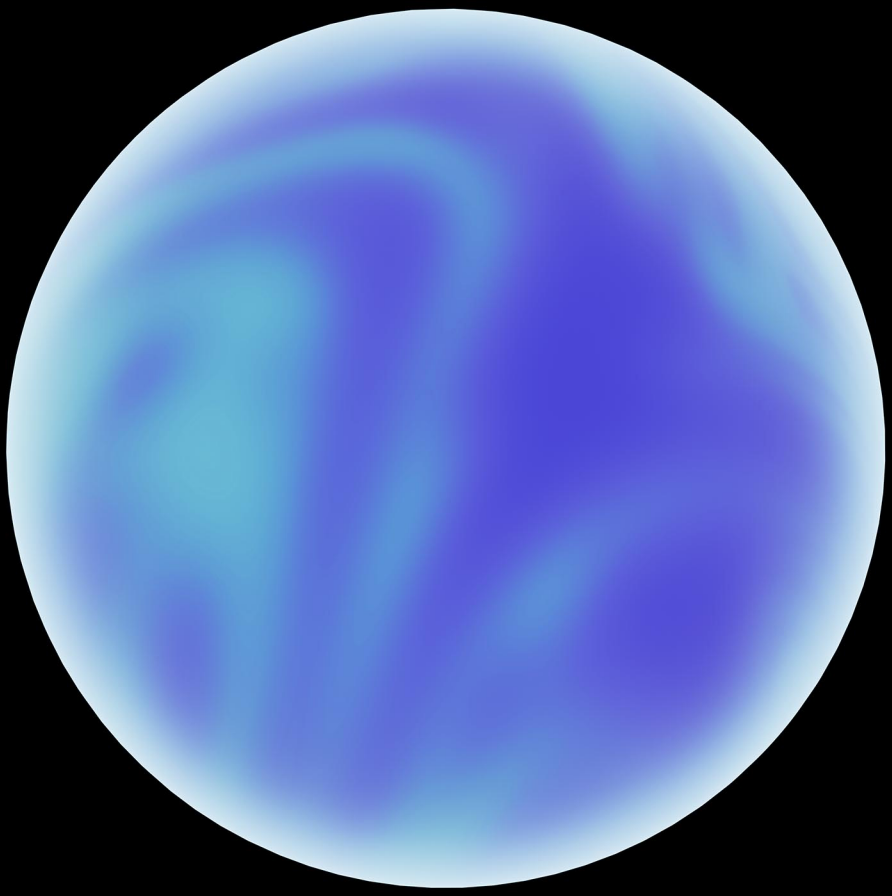

WHAT C-LEVEL EXECUTIVES NEED TO KNOW ABOUT ENTERPRISE BLOCKCHAIN?

KEY INSIGHTS FROM 15 REPORTS IN 1

QAN

"The current excitement about blockchain is more than a reflection of speculative excess; in the business world, it is also a reflection of the intense interest in what some call the "architecture" of trust—how trust is designed into counterparty relationships."

Boston Consulting Group report

In the ever-evolving landscape of technology, understanding blockchain and its potential benefits is crucial for businesses. As the MIT Technology Review summarizes, "a distributed ledger technology underlies cryptocurrencies like bitcoin and could be the future of money, security, and online privacy". However, amidst the buzz and hype surrounding blockchain, opinions on its true value have varied greatly.

While some proclaim blockchain as the most significant technological revolution, others predict the imminent burst of the "crypto bubble." As the QANplatform's analysis highlights, there are contrasting perspectives on the matter. This divergence in opinions presents a challenge for businesses seeking to make well-founded decisions regarding the adoption of blockchain technology and harnessing its potential benefits in 2023.

To address this pressing concern, QANplatform conducted an extensive analysis of blockchain reports from 15 leading analytical companies worldwide. By leveraging their wealth of data, expertise, and knowledge, QANplatform aims to provide decision-makers with the answers they seek. Through this research, businesses can gain valuable insights and make solid, fact-based decisions regarding the adoption of blockchain technology and its potential impact on their operations.

What is enterprise blockchain?

At the core of the enterprise blockchain is a distributed ledger — an append-only, tamperproof distributed system of record accessible to the participating nodes. Business logic necessary to map the data and enforce agreed business rules is provided by application components known as smart contracts or chaincodes — these are executed on the nodes and provide multi-party endorsements. The resultant transactions are digitally signed and provably endorsed by relevant participants for non-repudiation, which can be verified via transaction history in the cryptographically-secured ledger.

A key factor distinguishing enterprise blockchain from public blockchains is the membership governance that makes this a permissioned network of invited or authorized participants. This avoids the use of compute- and energy-expensive Proof of Work or Proof-of-Stake algorithms making enterprise blockchains much faster than their public counterparts and drastically reducing energy consumption and CO2 emissions. It also enables privacy and confidentiality by securing transactions via access control policies. - summarizes Oracle.

How can a business benefit from adopting blockchain technology?

Regarding Deloitte's survey-based blockchain report, which surveyed a sample of 1,280 senior executives and practitioners in 10 countries worldwide, a significant 80% of the respondents anticipate new revenue streams within their respective industries through the adoption of blockchain and digital assets solutions. Additionally, a notable 75% of the respondents are confident that "respective organizations will lose an opportunity for competitive advantage if they don't adopt blockchain and digital assets".

Supporting these findings, KPMG report data suggests that companies developing blockchain infrastructure can expect not only increased revenues but also enhanced customer loyalty. Furthermore, the report by PwC highlights the potential benefits of blockchain, stating that "using blockchain, organizations can build greater trust and transparency in areas such as certification, recruitment, commercial transactions, and the way they secure, share, and use data".

BCG's report further emphasizes the significance of trust in the success and scalability of markets, organizations, and ecosystems, stating that "the economics of trust increasingly determine the boundaries between these alternative modes of economic organization". Moreover, blockchain technology has the potential to revolutionize supply chain operations. Sudhir Pai, CTO of Capgemini Financial Services, explains that blockchain provides a shared and dependable platform for the trusted exchange and referencing of information among active supply chain organizations.

Lastly, Accenture reports a concerning statistic that "poor data security could cost companies $5.2 trillion over the next five years — yet only 30% of organizations are confident in their data security". Blockchain, with its military-level cryptography, significantly reduces the risk of data breaches and limits potential damage, providing enhanced security measures.

Is blockchain technology truly poised for significant growth? Does it warrant the attention of businesses?

Both Deloitte and PWC's analytical teams unequivocally concur on this matter. They firmly believe that digital assets, which have already initiated a "seismic shift" in the industry, represent the future of currencies and are expected to replace fiat within the next 5-10 years. This paradigm shift reinforces the "imperative" of digital payments. Supporting this perspective, Markets and Markets-provided data reveals that the global blockchain market is projected to generate revenue exceeding $94.0 billion by the end of 2027, with a remarkable compound annual growth rate (CAGR) of approximately 66.2% from 2022 to 2027.

Let's dive deeper into the details!

Accenture and Deloitte provide valuable insights into the operational and financial benefits that companies can access by adopting blockchain technologies.

Data confidence (and cost-cutting!): Blockchain's shared ledger of transactions allows for complete traceability of assets and company activities, enabling organizations to reduce auditing costs and "raise levels of confidence in the data they are producing without having to manually validate the data". Furthermore, blockchain can mitigate risks and damages associated with compliance mismanagement. The implementation of blockchain cryptography technology also enhances data security by creating a more secure environment for data sharing and storage.

Compliance: A reliable data source can save companies considerable time (and once again reduce costs). For instance, manual compliance checks that typically take weeks can be automated through the distributed ledger of the blockchain.

Addressing consumer needs: Customers increasingly prioritize product origin and quality, desiring prompt delivery and immediate availability. The COVID-19 crisis has further underscored this concern. For example, customers sought timely delivery of facemasks while wanting assurance of their origin and fitness for purpose. Blockchain technology facilitates full visibility, transparency, and continuous monitoring of the supply chain.

Integrating AI and IoT with blockchain infrastructure enables real-time data gathering and streamlines overall business processes through rules-based algorithms. This can eventually lead to "shifting the focus of the workforce to one of the jobs with higher engagement and satisfaction".

Payments. "Blockchain technology can ... ensure payments are accurate and remove the need to manually audit and track down payments". By implementing smart contracts, payments can be automated, resulting in cost reduction.

Blockchain significantly reduces the costs associated with reconciliation while minimizing errors and the accumulation of unreconciled items.

Greater efficiency and ROI: Distributed ledgers will provide quick ROI by helping businesses create leaner, more efficient, and more profitable processes according to SAP.

Overall, the inherent nature of blockchain technology - being open, distributed, efficient, and providing permanent records for every transaction - empowers organizations to exercise greater control over processes with heightened confidence. It enables transparency for customers and stakeholders, fostering trust while simultaneously reducing manual labor, time, and costs through automation.

As Tata aptly summarized in 2017, "Blockchain can bring significant advantages through its basic functionalities like a shared ledger, consensus, smart contract, and cryptography. All these functionalities help make Blockchain stronger and sharper compared to other traditional decentralized applications".

With its foundational features, blockchain technology offers distinct advantages that set it apart and make it a robust solution for enterprise applications.

Do other executives adopt blockchain solutions?

PWC reports that CEOs worldwide are actively seeking options to enhance their operations, with approximately 61% prioritizing the digital transformation of core business operations and processes among their top three priorities. Even prior to the COVID-19 pandemic, over 50% of CEOs believed that faltering trust in business was a significant threat to their organizations.

Deloitte shares its survey results, stating, "FSI (Financial Services Industries) Pioneers express stronger convictions about the critical importance of blockchain and digital assets than overall respondents... they are not only looking to nail down the way that these new technologies are implemented but also exploring ways to be value-add players in the new global financial infrastructure for the future of money".

Which sectors should give the highest priority to blockchain and stand to gain the most benefits?

According to PWC economists, the public administration, education, and healthcare sectors appear to be the major beneficiaries, with an expected $574 billion in benefits by 2030. These sectors are anticipated to leverage blockchain's efficiencies in identity and credentials management. Additionally, there will be widespread benefits for business services, communications, and media sectors. Wholesalers, retailers, manufacturers, and construction services will also benefit by utilizing blockchain to engage consumers and address the growing demand for provenance and traceability.

Is everything really so smooth sailing when it comes to blockchain? Are there any concerns?

According to Deloitte, regulatory barriers are one of the biggest obstacles to the acceptance of digital assets. Additionally, there is a concern surrounding unrealistic expectations among technology adopters. Deloitte's survey reports that, on average, respondents expected a 24% return on investment from their early blockchain projects, but the realized return was only 10% (still a noteworthy achievement for many).

Accenture highlights another concern, which is the lack of expertise and knowledge for implementing this new technology. Ravi Menon, Managing Director of the Monetary Authority of Singapore, emphasizes, "With blockchain technology, there is a fundamental shift from centralized to decentralized architecture, which has a wide-ranging impact from technology architecture to business processes to operating models. Such expertise cannot be developed overnight".

BlackRock mentioned the security issues of Bitcoin in its ETF filing. Although only Bitcoin was mentioned, the security issues apply to 99% of cryptocurrencies: “The cryptography underlying bitcoin could prove to be flawed or ineffective, or developments in mathematics and/or technology, including advances in digital computing, algebraic geometry and quantum computing, could result in such cryptography becoming ineffective. In any of these circumstances, a malicious actor may be able to compromise the security of the Bitcoin network or take the Trust’s bitcoin, which would adversely affect the value of the Shares.”.

Are there any successful use cases for blockchain?

As mentioned earlier, blockchain has found successful applications in various sectors. For instance, in public administration, education, and healthcare, it is used to prevent multiple claims in medical insurance from different healthcare providers. According to SAP "the public sector is looking at the potential of blockchain to serve as the official registry for government and citizen-owned assets like buildings, houses, vehicles, and patents. Blockchains could also facilitate voting, reduce fraud, and improve back-office functions like purchasing.". The technology is ideal for public sector use cases because of heavy regulations that need to be vetted and verified — and the blockchain makes these processes entirely "trustless." The banking industry is increasingly adopting blockchain for managing remittances and eliminating intermediaries. Capgemini's report highlights the benefits of using blockchain in supply chains and operations for logistics and production in almost any company.

J.P. Morgan highlights that "blockchain technology could not be considered mainstream yet, it is moving beyond experimental early stages. In 2020, J.P. Morgan launched Onyx, a new model for financial innovation that incorporates blockchain technology, becoming the first global bank to create a dedicated unit to develop and scale blockchain-based products. Onyx's mission is to reimagine business and the ways it can be transformed, with the new infrastructure, networks and services enabled by distributed ledger technology."

According to Ernst & Young "to cut through complexity and increase trust in the data, Microsoft and the EY organization partnered to co-develop the solution. The result was the first blockchain-based financial system of records for processing end-to-end royalty transactions, from contract creation through to integration with SAP for payments. The blockchain solution provides near real-time access to authentic trusted transactions data from source systems to game publishers, who can click and drill-down from transactions to source contract terms agreed with Microsoft.".

Accenture provides a use case example: "Billions of dollars a year are invoiced to organizations for freight moves by truck, train, aircraft and ship. The freight bill audit and pay (FBA&P) process involves matching invoices against the services rendered prior to payment remittance. The shipping process starts with negotiating shipping rates, completing the purchase order, tracking the shipment, calculating and auditing the invoice, and finally paying the carrier. Along this process, there are numerous pain points and potential areas for discrepancies, each of which increases the risk of mismanaging or incorrectly paying an invoice. Blockchain offers an opportunity to solve or mitigate these issues. Consider the below example, which begins with the value chain, identifies the opportunity for blockchain technology and its enabling capability, and then pinpoints the value driver. This is a real-world example of a blockchain solution for an oil-and-gas company. Upon completing this analysis, the team was able to build a business case to quantify the value of each driver, calculating an expected reduced freight spend of 5% (up to $100 million)".

Is blockchain suitable for your business needs?

The World Economic Forum White Papers of 2018 outline the requirements for implementing blockchain with the greatest benefits:

- Digital assets: Blockchain is most effective when working with "digitally native" assets that can be represented in a digital format.
- Shared repository: Multiple parties utilize a shared repository of information.
- Multiple writes: More than one entity generates transactions that require modifications to the shared repository.
- Minimal trust. A level of mistrust exists between entities that generate transactions.
- Intermediaries. One or multiple intermediaries or a central gatekeeper are present to enforce a trust.
- Transaction dependencies: Interaction or dependency between transactions is created by different entities.

Blockchain also offers benefits in sectors such as:

- Retail & eCommerce
- Property & Real Estate
- Media
- Art Market
- Heavy Industry & Manufacturing
- Music
- Cross-border Payments
- Internet of Things
- Gaming
- Personal Identity Security
- Government & Voting
- Anti-money Laundering
- Advertising
- Original content creation
- Automotive, and many others

It is not currently advisable to store non-transactional data on a blockchain.

If an industry has specific requirements regarding the use of intermediaries or trusted partners, it adds a layer of complexity to deploying blockchain, even if other benefits of its use are readily apparent.

QANPLATFORM, THE ENTERPRISE BLOCKCHAIN PLATFORM FOR RAPID PROCESS IMPROVEMENTS IN THE WEB3 ERA.

QANplatform is the quantum-resistant Layer 1 hybrid blockchain platform that will allow developers and enterprises to build quantum-resistant blockchain solutions on top of the QAN blockchain platform in any programming language.

A Layer 1 blockchain platform, like Ethereum or QANplatform, is the basic infrastructure of all blockchain projects and applications. It is comparable to the operating system of a computer. It is the fundamental base layer on top of which the ecosystem can build endless solutions.

Why QANplatform is your best choice?

Time to market and software lifecycle are the new ROIs of an IT project especially with a new technology like blockchain. We build our hybrid blockchain platform to adapt easily to all business models and processes so you can rapidly build a proof-of-concept (POC) and scale it.

Hybrid blockchain for all needs:

Most blockchains are either public or private. There is currently a lack of hybrid blockchain solutions, which is a must for facilitating enterprise mass adoption. QANplatform can be used as a private blockchain like Corda or Hyperledger, and also as a public blockchain like Solana, Cardano, and Polkadot.

Transparency and data security are high priorities for modern businesses. Enterprises using QANplatform can define which of their information (data transactions) shall be posted from private blockchain to public blockchain.

Rapid cloud platform deployment:

Thanks to the automated Rapid Cloud Platform Deployment feature developed by QANplatform, developers can deploy the QAN private blockchain in less than 5 minutes to major cloud platforms like Amazon AWS, Microsoft Azure, Google Cloud Platform, DigitalOcean, Linode, etc. Smart contract developers can cut the deployment time by 80% compared to installing other blockchains like Ethereum

Code in any programming language:

The QAN Virtual Machine (QVM) allows developers to write smart contracts in any Linux-Kernel-compatible programming language (like: JavaScript, Java, Python, TypeScript, C, C++, C#, Go, Rust, Kotlin, PHP, etc.). This is a breakthrough for the whole blockchain ecosystem since most blockchain platforms are only compatible with the Ethereum smart contract language, Solidity. No need to hire or train Solidity programmers, since you can already use your in-house development team or your current IT partner. It makes talent acquisitions, development, and codebase maintenance easier and cost-efficient for enterprises

Quantum-resistant security:

Quantum computers will be able to break 99% of today's blockchain platforms. Upgrading cryptography primitives in existing public blockchain implementations won't save them from the quantum threat. NIST recommends CRYSTALS-Dilithium as the primary algorithm for quantum-resistant signatures - the one QANplatform has chosen before and is using through QAN XLINK, an EVM-compatible cross-signer for post- quantum transactions.

Share this report with your team and

GET IN TOUCH WITH AN ENTERPRISE BLOCKCHAIN EXPERT TO LEARN MORE ABOUT QANPLATFORM!

QANplatform is the Official Blockchain Partner of the Group Renault brand, Alpine Esports.

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