



Why Executives Should Care About Blockchain

Executives who equate blockchain technology with cryptocurrencies like bitcoin risk missing a strategic opportunity. Blockchain technology can make key business processes transparent, faster and more secure. Like the internet in the 90s, it will unleash a productivity boom that reorganizes the competitive dynamics of every industry. Enterprises that lead with a defined blockchain strategy will lower their operating costs, extract more value from their assets and shift to more profitable business models. Enterprises that take a wait-and-see approach will scramble to keep their market share, shareholders and talent.



For the past 12 months, corporate executives have been struggling to make sense of blockchain technology. The confusion is understandable. Bitcoin, the best known application of blockchain, has suddenly emerged from the depths of the Darknet and landed in the portfolios of leading hedge funds. Few understand the forces behind its wild price swings, yet investors of every stripe have been eager to turn Bitcoin's volatility to their advantage — much to the chagrin of regulators.

Executives are right to cast recent events as speculative mania. However, those who look beyond headlines and price charts will recognize the beginnings of a transformative technology.

The application of cryptography has brought an unprecedented level of security. Modern protocols have made it prohibitively expensive for any party to subvert the integrity of a blockchain. Public blockchains fully expose the actions of networked participants, which makes it easier to trace malicious behavior. These improvements allow business transactions to be executed faster and with greater transparency and trust.

Before diving into the commercial potential of blockchain, it's worth highlighting the differences between cryptocurrencies and a blockchain.

A blockchain is a database structure that links blocks of data in such a way that modifying or reordering the blocks is practically impossible. Generally, any party that is allowed to interact with the database has full access to all the blocks in the chain, as well as the data within them. Bitcoin is digital money secured by a blockchain, as well as cryptographic protocols and a network of computers. The Ethereum blockchain — which hosts the second most popular cryptocurrency — extended Bitcoin's original design by making it possible to run small, event-triggered programs ("smart contracts") on a blockchain.

Ethereum's innovation represents several leaps forward for blockchains and the enterprises that use them.



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First, it lowers the cost of operation. Businesses can now send and receive payments through a programmatic set of rules that are both transparent and inviolable. This can reduce (or even eliminate) reliance on brokers, escrow agents and other financial intermediaries. Because all actions related to a particular smart contract are recorded on a blockchain, it's also possible to reduce the cost of tracking and reconciliation. This holds significant promise for large, multinational enterprises. Basic administrative functions like payroll management could be executed seamlessly across different geographies and jurisdictions. Records management, a mission critical function for heavily regulated industries like healthcare and shipping, can be managed through one blockchain instead of multiple disparate systems.



Second, enterprises can use smart contracts to extract more value from existing assets. Consider data generated from IoT devices. Spending on IoT technology and services is expected to reach \$800 billion this year.¹ Blockchain’s advantages in programmatic transactions and micropayments mean that businesses can effectively sell streams of their underutilized IoT data in an open market. Business can also protect the value of their assets by representing assets as tokens on a blockchain. Tokenization would allow managers to track the supply chain path of assets through a blockchain’s transaction history and rest assured that they are sourcing authentic materials and working with compliant supply chain partners.

Third, smart contracts are paving the way for new business models. A fascinating possibility is user- controlled data monetization. Today, tech companies collect, package and sell user information to third parties with the consent - but not the explicit knowledge - of users. This paradigm has fueled private sector growth at the expense of personal privacy and public trust. An alternative model would allow users to sell specific personal information directly to soliciting enterprises. Smart contracts can specify the data available for purchase, set expiration dates for data access or usage and even allow users to grant and revoke businesses’ purchase rights.

Originally envisioned for financial contracts, Ethereum has since spawned a wide range of business applications. It’s true that not all of these are ready for prime time, but entrepreneurs around the world are developing new blockchain designs that improve speed, privacy and security. Companies that wait on the sidelines will inevitably cede market share to innovators. Companies that begin mapping their transition to blockchain-based systems will zoom to the top of their industries. Executives today must reflect carefully on what kind of enterprise they will be leading through the next decade.

¹ <https://www.idc.com/getdoc.jsp?containerId=prUS43295217>