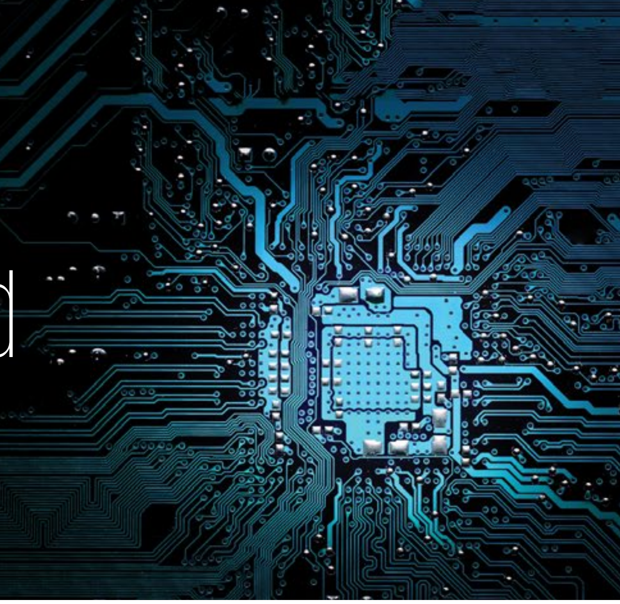

Blockchain: Where the board should start

Board perspectives

The hype around blockchain, the shared ledger at the core of Bitcoin digital currency, became a groundswell in 2016 as total venture capital funding for blockchain-related companies surpassed $1 billion and many major banks, securities exchanges, and governments doubled down on plans to explore opportunities around blockchain.

The potential impact of blockchain—on how business transactions and legal contracts are executed and recorded, IP/data protection and privacy, fraud prevention, voting, auditing, and more—is so fundamental and wide-reaching that observers and early adopters are comparing the current blockchain ecosystem to the early days of the Internet.

"If you had understood in 1995 the opportunities and threats [the Internet] would ultimately present to your company or industry, what would you have done differently? That is where we are with blockchain today," wrote IBM CEO Ginni Romety in *The Wall Street Journal*.

Indeed, experts agree that mainstream use of blockchain is still years away. But executive teams and boards of directors across industries are increasingly adding blockchain as a major game-changer that stands to upend business models and the competitive landscape.

Blockchain defined

A blockchain is a digitally linked chain of transaction records that together form a shared-ledger of account, recording transactions or a sequence of transactions between counterparties. Bitcoin—which represent the most common use of blockchain today—is open and accessible to all, much like the public Internet.

Most corporate and governmental consideration and use of blockchain, however, exists and will exist on a closed or permissioned systems, whereby participants or owners of the network determine who else can participate, observe or initiate transactions.

In addition to facilitating and verifying financial transactions, blockchain technology is being considered and applied in a number of ways. A few examples:

— **Execution of "smart contracts"** – the entirety of a purchase order—from product selection, to multiple approvals, to payment, to shipping and receipt—can cascade automatically without a manual process of communication and confirmation between each step and without complex reconciliation.

— **Validation and compliance** – whereby a third-party (a doctor, attorney, auditor, or regulator) is able to track and confirm a business process, such as a transfer of medical records, payment, securities trade, or even a vote, in real time.

— **Digital identity** – to secure and validate citizenship, birth certificates, education, addresses, relationships and more for use by trusted contacts, financial institutions, schools, and even electronic devices.

"The technology and operating model behind blockchain is interesting, but for companies this is fundamentally a business question," said Phillip Lageschulte, KPMG U.S. network leader for Emerging Technology Risk. "Companies have to evaluate which of their business issues blockchain can help solve, and how it may impact strategic decisions and residual risk." He cautions that companies must begin now to develop a clear understanding of the opportunity and challenges presented by blockchain for their existing or emerging business models and operating platforms, and that understanding of risk and reward ultimately has to reach the board.

"Of course, the other side of these blockchain-related opportunities are the benefits and the competitive risks," said Eamonn Maguire, KPMG's Global Financial Services lead for Digital Ledger Services. "If blockchain hasn't made it into the company's boardroom conversation yet, it needs to be on the agenda as both a strategic matter and a competitive risk."

With start-ups and established companies rapidly innovating around blockchain, directors and executives can start with the following actions:

1. Educate yourself about the disruptive potential and threat posed by blockchain, and ensure that the executive team is doing the same.
2. Determine whether the company needs to develop a strategy and roadmap for implementing blockchain within the enterprise and with other third parties.
3. Understand how the company intends to nurture, foster, incubate, partner, invest or acquire blockchain and digital ledger skills and capabilities.
4. Seek out industry blockchain and digital ledger partnerships, consortia, standard-setting bodies and other collaborations as early as possible.
5. Expect management to work toward identifying and qualifying use cases, based on both return on investment and a robust business case.

For more in-depth analysis, read ***Missing Link: Navigating the disruption risks of blockchain*** and ***Consensus: Immutable agreement for the Internet of value***.

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