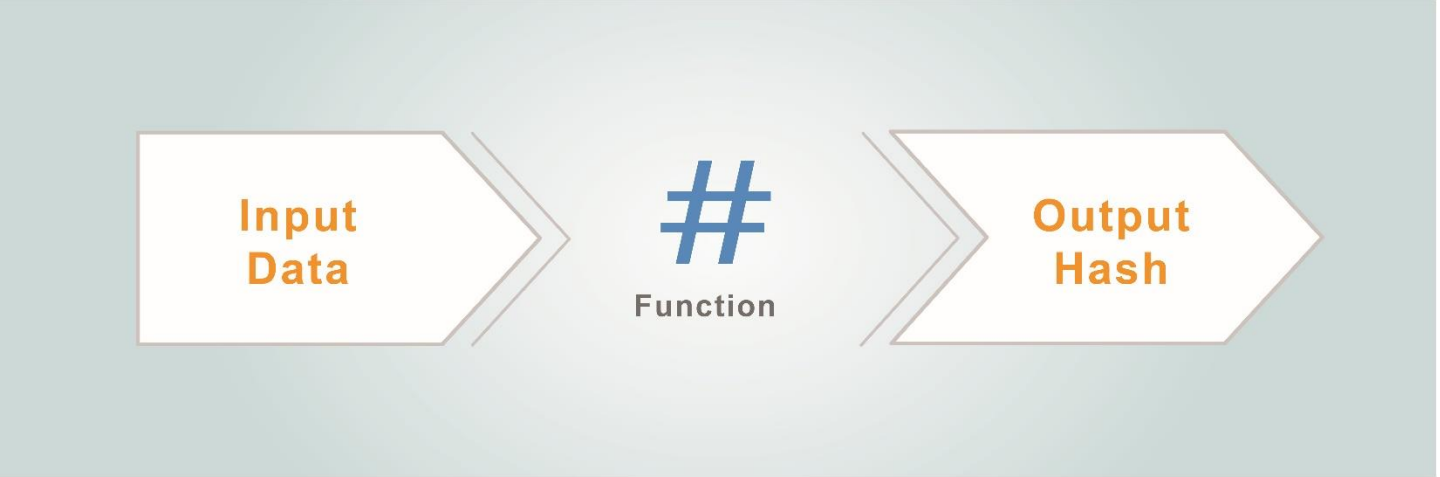


Managing Contracts on the Blockchain is a Winning Strategy

In our introductory blockchain series, we examined the transformations that blockchain will bring to the enterprise. In this final part we focus on one practical and powerful application of blockchain: managing contracts.

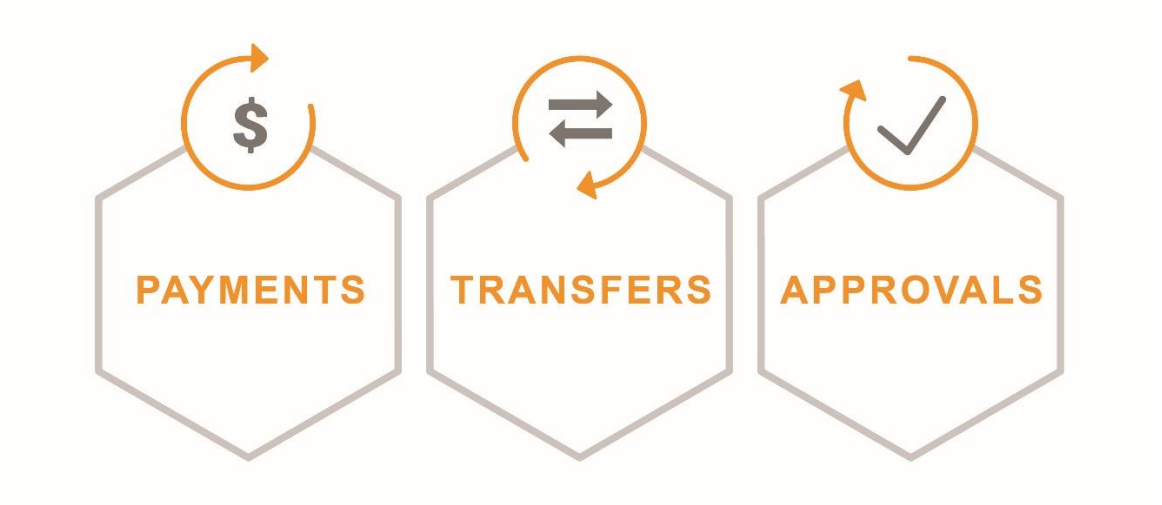
Blockchain technology is uniquely suited to improve how companies manage contracts. Distributed ledgers have always been able to store information indefinitely. When bitcoin introduced the innovation of linking blocks of data by cryptographic hashes, it became easy to detect and trace attempts to tamper with data. Ethereum further extended the power of blockchains by making it possible to host ‘smart contracts’. Smart contracts represent codified rules of engagement between parties that cannot be changed once committed to a blockchain. Taken together, these incremental improvements have made it possible for organizations to create contracts that are resistant to tampering, easily accessible and securely stored.

These are only the most obvious advantages of shifting from paper and digital contracts to blockchain-hosted contracts. Organizations can also expect more efficient coordination among parties to a contract. Contract execution is faster, as the programs that govern execution rules process inputs in real-time. Finally, the overall cost of contract management is lower. Blockchain reduces the number of systems and people required to store and retrieve contracts. It also renders legal clauses in the clear, unambiguous language of computer code, narrowing the avenues for litigation.

The benefits of blockchain-hosted contracts can be realized as early as the due diligence stage.
While due diligence is indispensable, a protracted process can become a liability in fast-moving markets. With blockchain, it’s possible to expedite key steps. Consider a contract designed to transfer property rights. If the deed or title has been recorded on a blockchain, confirming ownership is trivial. Confirming the chain of custody will also be simpler. Companies will no longer have to trust that suppliers comply with sourcing requirements - they can simply check a supplier’s blockchain history. As more organizations use blockchain to

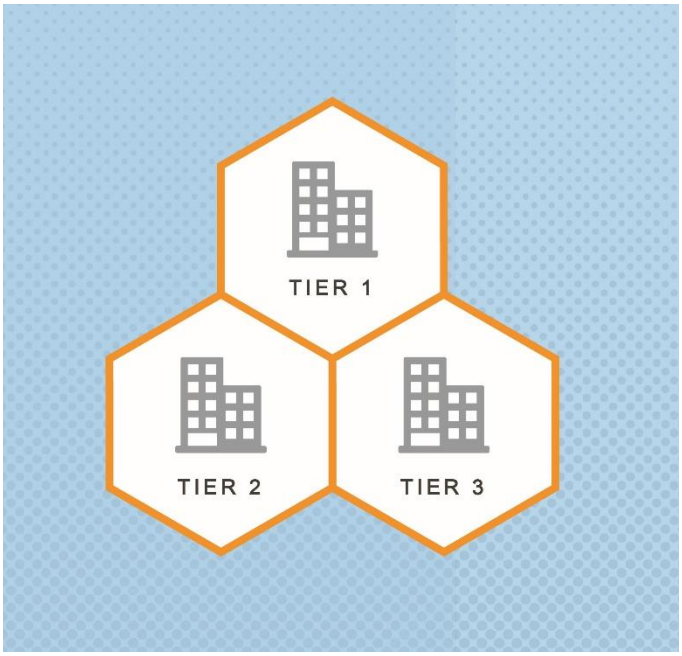
record and execute contracts, it'll also become easier to investigate a counterparty's record of contract compliance before striking a deal.

Blockchain can also help negotiations. One of the simplest ways is by making escrow cheaper and faster. Blockchain technology has already made it possible to transfer funds into escrow without the need for an expensive agent. But a more interesting application is the management of business-sensitive information. In a negotiation, it's common for one party to withhold mutually useful information for fear it will be exploited or potentially 'fall into the wrong hands'. Cryptographic protocols like zero-knowledge proofs can mitigate this problem. Zero-knowledge proofs make it possible to provide knowledge or confirmation of a fact without revealing critical information. For example, a company could confirm it has expertise in a relevant domain without disclosing its full work history or revealing the names of specific customers and partners. Zero-knowledge proofs can draw on the immutable data stored in blockchains to expedite negotiations.



Once a contract is in place, blockchain can save enterprises from unnecessary expenses and liability by automating execution. Many blockchain-hosted contracts are designed to automatically trigger payments, transfers and approvals. This is a game-changer for service contracts. Industries that rely heavily on agency vendors -- such as media and events -- will no longer suffer from invoicing and payments bottlenecks that prevent work from progressing smoothly. Being able to program progress checks also prevents contract lapses or breaches. This translates into better execution and less litigation.

Post-execution contract management will also benefit from blockchain. Distributed, permanent storage of contracts will mean key documents are not misplaced or lost. Security protocols will protect against unauthorized access. Transparency will reveal contract dependencies across a whole value chain.



Let's consider the holistic impact of blockchain-hosted contracts on a complex supply chain such as automobile assembly. The average car is assembled from over 20,000 parts[1]. Those parts are supplied by thousands of vendors divided into three tiers. Tier 1 vendors supply specialized parts directly to car makers; Tier 2 vendors supply part components; and Tier 3 vendors supply raw materials. Tier 1 vendors are responsible for managing sub-tier relationships. Without blockchain, the web of contracts that govern production and service levels is siloed in their systems. Car makers are constrained in what they can do to detect and limit the fallout from production delays. The transparency and automation that blockchain brings will change those dynamics in ways that benefit every player in the supply chain.

Businesses should look at the adoption of smart contracts as an opportunity. In many ways, it is a natural progression of the digitization and integration of business workflows. In order to take the next step with smart contracts, executives must bring key players together. That means working alongside domain experts who understand the potential and limits of smart contracts. It means collaborating with partners who can bring sourcing, contracts management, legal, product, engineering and marketing teams together to create functional and enforceable contracts. It also means leading a consortium of business partners who are committed to a vision of greater efficiency and lower costs. These steps are within the reach of every enterprise. Those that choose to take them today are bound to become market leaders.

[1] http://www.strategicsourceror.com/2013/06/sourcing-automotive-parts.html