

## Blockchain use cases for real estate transactions - Zachary Manasia

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## What Is Blockchain?

Blockchain has recently gained notoriety for its use in the modern tech world. Blockchain is the technology that powers many of the world's cryptocurrency platforms and was the basis for the creation of Bitcoin. Blockchain technology consists of three key components:

A network of "nodes," computers or systems across the network;

The "blockchain ledger," an immutable set of numbers that stores information within the nodes; and A "consensus algorithm," which is the program that generates the information to be stored.

The network of nodes, spread around the world, creates a decentralized digital exchange, where online "ledgers" are stored with real-time information. Decentralization means that anyone can participate and transact on the ledger, as opposed to more centralized networks, where only known and identified parties can make transactions. This results in a more secure, transparent exchange of information, because the information stored on the ledger cannot be altered without the consent of those in the network. As one can imagine, this technology can play a role in transforming many types of businesses, including real estate transactions.

## Real Estate Transactions Today

Transactions of real estate interests are time-consuming, paperwork heavy, and expensive. Contract execution to closing can take up to three months. The process includes many different parties, such as attorneys for the buyer, seller, and lender, brokers, title companies, and title insurance agencies. This results in high fees and long wait times to gather and verify the requisite information. This process opens the door for various types of error and fraud. Using blockchain technology in real estate would ideally streamline these components to increase transaction speed while reducing fraud, track title records seamlessly and accurately, and enforce mortgage provisions and conditions more efficiently.

Three Areas Where Blockchain Technology Can Help

A. Tokenization of real estate ownership interests. Tokenization of real estate interests and assets could quicken transaction times and increase liquidity. Real estate interests are inherently illiquid because of the process-heavy method of transferring the interests noted above. There is an incredible amount of due diligence required to identify lien priorities, ownership interests and marketability issues for a particular property before a transaction occurs. Tokenization is the method of assigning blockchain ledgers to tokens, or coins, which can then be traded and transferred on the decentralized network. Blockchain can be utilized to assign ownership rights to tokens, which are immutable. The immutable nature of the token ensures the accuracy and trustworthiness of the information stored on the ledger, eliminating time needed for extensive due diligence and making the interests immediately transferable. Therefore, upon transferring the token, the transferor transmits all of its ownership interests in the particular real estate asset to the transferee.

B. Storage of documents on the blockchain ledger. Recording title, assignment and deed documents on a blockchain ledger can speed up transaction times and reduce fraud. Under the current system, parties are required to request title documents from recording offices in the hopes that all of the necessary documents are recorded and there has been no mismanagement in the interim between transfers. By implementing a recordation protocol of existing title, deed and assignment documents on the blockchain, an immutable trace of their ownership interests would be readily available in the decentralized network. This would yield a clearer record chain of title for a particular property, thus reducing costs and time to obtain title reports between contract and closing.

C. Enforcing mortgage and loan provisions through smart contracts. Mortgage instruments are filled with complex contingencies, covenants and conditions that trigger different default events upon their occurrence throughout the life of the loan. Upon the occurrence of an event of default, the typical penalty is an increased interest rate until the breach is cured. Generally, this requires notice between the parties that an event of default has occurred and grants the breaching party an opportunity to cure same. Smart contracts can automate and streamline this process with greater accuracy and faster notice. A smart contract is a computer code that documents and stores legally relevant events on the blockchain. In the above instance, the smart contract could be used to trigger the increased interest payment if the borrower is in default, and would create a documented and verifiable record of notice to the borrower and the imposition of the increased interest rate. Likewise, the smart contract can reverse the occurrence and the consequences when the breach is cured.

Potential Issues That Could Hinder the Progress of Implementing Blockchain Technology in Real Estate Transactions

While there are many potential solutions blockchain can bring to the real estate industry, there are some embedded drawbacks. First, it would be incredibly challenging to bring this technology to scale. As noted earlier, there are an incredible amount of stakeholders involved in real estate deals, which means that it would take some convincing and cost to get these entities on board with implementing this technology. Additionally, county and state recording offices still operate via a paper recording system, so they would likely have to be the first domino to fall.

Second, solidifying an agreement on which type of blockchain protocol to utilize is incredibly important. The two types, permissioned and permissionless, have varying implications for their potential use. Permissioned would mean that the network is private, thus resulting in only verified members being able to transact on the network and make amendments to real estate records. Permissionless, on the other hand, is a totally open-source network that would be completely open to the public. This would create the challenge of tracking changes to real estate records done by the general public. It is likely that there would need to be a compromise to create a hybrid blockchain that allows public access to conduct transactions that can only be verified by a controlling entity, such as a county clerk office for example.

Finally, there is still regulatory uncertainty surrounding blockchain and cryptocurrencies in the United States. Blockchain technology is still in its nascent stages of development, and it remains to be seen which direction US regulatory authorities will take as the technology evolves. Despite these challenges, as the legal world has certainly seen, new technology is always worth exploring, and blockchain has the potential to make real estate transactions smoother, more efficient and less costly.

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