Use Cases of Blockchain in Real Estate Industry

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Genesis Convergence is Subject Matter Expert in Blockchain and Cryptocurrency.

We offer Crypto Development/Consulting services covering solution architecture refinement, customization, integration, transformation, visualization, and analytics to uncover insights hidden within data and enhance data exploration.

CONTENT

OBJECTIVE

The procedure of moving to a new house is never easy, whether you're moving out for the first time, thirty-first time, renting, or purchasing, there are many requirements, guidelines, and logistical applications to consider. Even the highly organized people have a tough time managing their surveyors, valuers, and transportations, plus multiple estate agents.

Blockchain technology can be used to rationalize the process of buying and selling property, at the same time reducing administrative interruptions and errors when purchasing real estate.

BLOCKCHAIN – MAKING THE WORLD A BETTER PLACE

In simple terms, a blockchain is a peer-to-peer distributed ledger that stores information and keeps track of transactions.

- Every member of the blockchain community has its own copy of the information.
- The information is recorded subsequently into units called blocks and protected by strong cryptography, creating a chain of data.
- Changes to blocks are not permitted by the blockchain system architecture, so every action and event could be traced to its origins.
- A blockchain could store data on agreements between the parties, their credentials, transactions, and any other information presented in a digital form.
- Since this information is distributed and highly secured, any attempt at a fraudulent activity can be seen by the members of the blockchain community.
- This creates trust and transparency for any type of ecosystem that the blockchain is integrated into.

Unlocking Blockchain functioning

Blockchain is a platform that ensures the integrity of the information stored and maintains interactions between the members of the ecosystem. Here's a high-level overview of the way it works:

- Each member maintains their own blockchain node with the full history of all the events and data appended to the network, including credentials, identities, certificates, etc.
- Every update to the network entails the creation of a new block at the end of the chain. A blockchain protocol dictates how these blocks are recorded, validated, and distributed.
- A consensus mechanism is employed to verify each created block where members of the blockchain network decide if it's valid to be added to the chain.

- Once a block is created and confirmed, it cannot be revoked. All entries on the blockchain are permanent and securely stored. This allows for members of the community to trace the full history of transactions and any other modifications in the7i blockchain.
- Smart contracts are a special type of agreement between the members of the network that have the conditions programmed into them, making sure that they are met before each party receives what was agreed upon. Smart contracts eliminate the need for third parties and middlemen to be involved in agreement resolution.
- Transactions in cryptocurrency play a very important part in the blockchain ecosystem, providing the incentive for all members of the community to make valuable contributions and participate in the development of the system as a whole.

These key pillars of blockchain technology lay the foundation for its uses throughout different industries, including in education. It has the potential to create a global environment where learning materials, publications, student credits, and transcripts are easily accessible. It can also introduce new and innovative ways for accountability, incentivization, and communication between teachers, students, and other participants.

THE BLOCKCHAIN – THE NEW INDUSTRIAL REVOLUTION

Real estate is real property that consists of land and improvements, which include buildings, fixtures, roads, structures, and utility systems. Property rights give a title of ownership to the land, improvements, and natural resources such as minerals, plants, animals, water, etc.

USE CASES OF BLOCKCHAIN IN REAL ESTATE

- There are energy certificates that need to be provided, solicitor contracts that need to be signed, maintenance contractors to be arranged, mortgage advisors, and banks to deal with. This is all just for the one party that is selling the house – the buyer of the said house will often also be dealing with multiple third parties as well for their mortgage loans and legal transfers to be arranged.

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- As such, this long, winding, back-and-forth process of documents between parties exposes potential vulnerabilities of documents, with the possibility of human error, manipulation, damage to physical documents, or loss of digital documents over time.

- Also, with so many parties involved it is often difficult for parties to coordinate on time, thus creating unnecessary time delays and inefficiency of labor due to a lack of consensus.
- These issues highlight how blockchain in the real estate industry can be of extreme advantage to all parties involved. The technology can be used to streamline the process of buying and selling property, simultaneously reducing administrative delays and errors when purchasing real estate.

Smart Contracts Between Tenants and Landlords

- Smart contracts are pieces of code that are programmed to move money from A to B, dependent upon certain conditions being met. If you're interested in learning more about how they work, why not see our deep-dive article on smart contracts.

- In the context of the real estate industry, the conditions could be a specific date of the month e.g. on the 1st of every month, the smart contract executes X amount of money to move from the tenant's wallet to the landlord's wallet address.
- Smart contracts are also immutable, and cannot be challenged or removed once deployed. Also, as contracts can be written for personal circumstances, certain exceptions can be written into the code. This makes guarantor payments even more secure and transparent. For example, you could program a smart contract to automatically deploy rent payment from a guarantor, if the tenant's wallet didn't hold sufficient funds on the last day of the month.
- Smart contracts between tenants and landlords will be one of the main use cases of blockchain adoption in the real estate industry, offering increased trustless communication and business between strangers and valuable peace of mind knowing that, as long as the blockchain is running, (if you're unsure how long that'll be – make sure to read '*Will Bitcoin Last Forever*)' rent or mortgage payments will be paid, and on time too.
- Tenancy agreements that are created using smart contracts could reduce costs for both parties by removing the time and money spent on the process of including letting and real estate agents.

Possibilities For the Real Estate Industry

- On the other hand, this presents an interesting opportunity for agents to begin to integrate blockchain into their business models now, to get ahead of the curve and mainstream adoption, offering increased efficiency in property management.
- Businesses that are implementing blockchain will see a continued increase in usage over the years as the mass adoption of the technology is slowly preparing to take hold. Banks, real estate agents, and brokers will all see a demise as the technology replaces the need for human interaction and verification, with blockchain offering digitally verifiable identities, provenance, and scarcity.

Tokenized Houses

- Blockchain is often known for its use of cryptocurrency, *fungible* tokens that are all of equivalent value. In addition to this, the Ethereum blockchain has created non-fungible tokens, NFTs, that each represents an individual unique value – of just about anything. Including houses!

- Commercial and residential properties can be tokenized with a representation and value stored on the blockchain. These NFTs can have specified data encrypted within the token, such as with any specified contract agreements encoded, viewable, and transparent for all buyers. A buyer can sign a secure, digital signature within seconds that verifies their identity, in possession of sufficient funds, and agreement before immutably transferring ownership of the asset from one wallet address to another.

- Tokenized assets can also be split, should the seller wish, allowing for more than one person to invest in a property, with clear transparency of ownership rights. NFTs make it easier for shared-ownership contracts to be created, or for a parent wanting to financially help their children purchase their first house.

- Blockchain is a global technology, accessible to anyone, anywhere in the world with an internet connection. Tokenizing real estate on

Let us help you make real estate transactions reliable with peer-to-peer activities with blockchain-powered platforms doing most of the work

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the blockchain can save weeks or months' worth of time purchasing a property abroad. Blockchain doesn't discriminate, making it easier for anyone to purchase real estate from anywhere in the world, with legal ownership rights and financial transfers occurring in minutes.

- With the growing decentralized finance ecosystem, it is possible to create a wallet for a place as a store of wealth without any KYC sign-up processes. These services are invaluable to refugees, immigrants, or local citizens who don't have sufficient papers for identification. Blockchain technology offers the opportunity for people to securely save some wealth and purchase property locally or abroad, and the ability to take that wealth with them across borders.

Mortgages on the Blockchain

- Decentralized lending platform **Aave** has teamed up with RealT, one of the first blockchain-real estate companies to tokenize mortgages on the blockchain. It is now possible to invest and receive mortgage payments on the blockchain, straight into your wallet as stablecoins or through the RealT token.

- This allows investors to own a part of a property without the legal and regulatory burden of full ownership. What's more, these mortgage tokens could be traded just like any other digital asset on cryptocurrency exchanges and decentralized marketplaces such as Uniswap.
- Using mortgages as collateral on the blockchain makes it easy to change investment strategies, allocate liquidity, and receive dividends in a trustless, open manner without the need for third-party involvement.

- By moving mortgages onto the blockchain, many over-complicated processes could be optimized into a frictionless, streamlined system that is transparent and tamper-proof, with fewer delays.

- According to a **report published by PWC** on blockchain for mortgages, the UK Government's Chief Scientific Adviser stated that blockchain could *"help governments to collect taxes, deliver benefits, issue passports, **record land registries**…and generally ensure the integrity of…records and services."*

Blockchain in the Energy Industry

- The rising number of "smart houses" – houses that rely on artificial intelligence and robotic functionalities are pushing architects to rethink how we live. The use of blockchain in the energy industry is transforming the way housing is designed, allowing smart devices to interact with each other within the home via the blockchain to optimize modern living.
- Blockchain-based smart meters can monitor energy consumption in real-time, allowing users to choose how much energy they consume as prices fluctuate, removing a great deal of admin and paperwork from the equation, saving time and money for the consumer and the supplier.
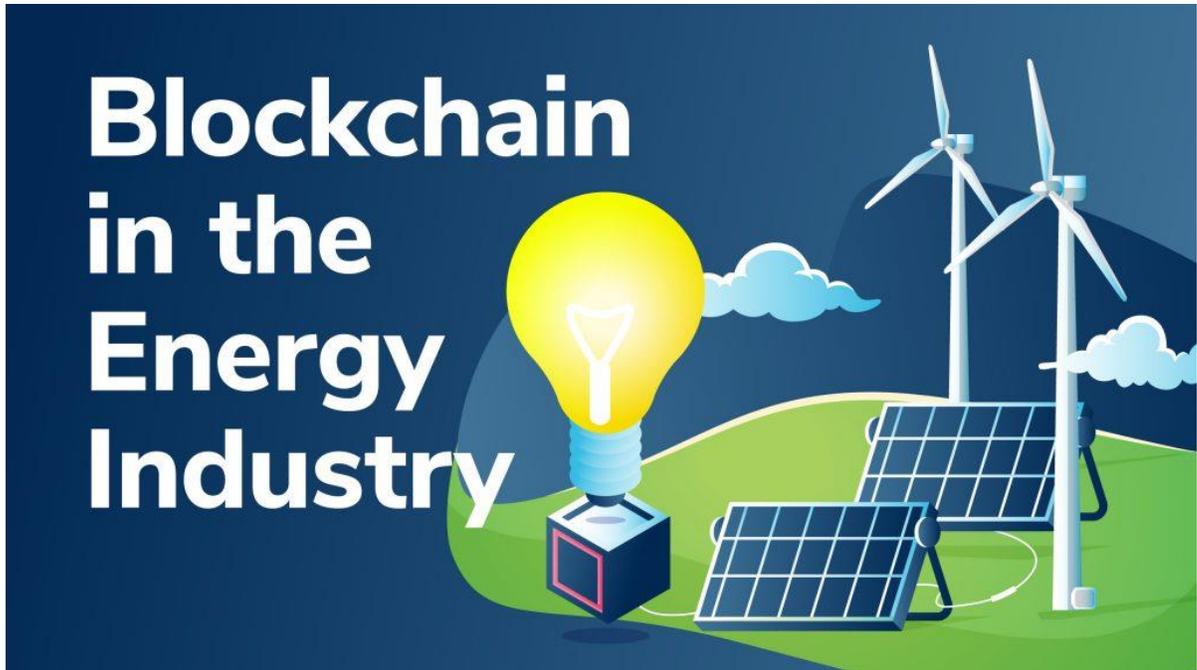
- With the use of blockchain in the home, peer-to-peer energy markets could flourish, allowing for a more equitable and sustainable future for the energy industry while laying the foundations for sustainable energy innovations. We've previously written about **blockchain in the energy sector** and potential use cases.
- The use of blockchain in house design and energy consumption can change how we view property, both from a real estate market perspective and in terms of how we spend much of our time. We could soon see houses designed with built-in cryptocurrency mining facilities, drawing from renewable energy sources shared throughout a community of smart homes.

More Smart Contracts

- Smart contracts serve many useful functions for blockchain in the real estate industry. From contract agreements between tenant and landlord, energy companies, and smart homes, to real estate agents and contractors.

Our team of experts is determined to support your project's tokenization efforts.

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- Letting agents could soon offer a completely holistic package, with specifications for different levels of home energy usage for different sized families, maximizing savings costs for both tenants and landlords.
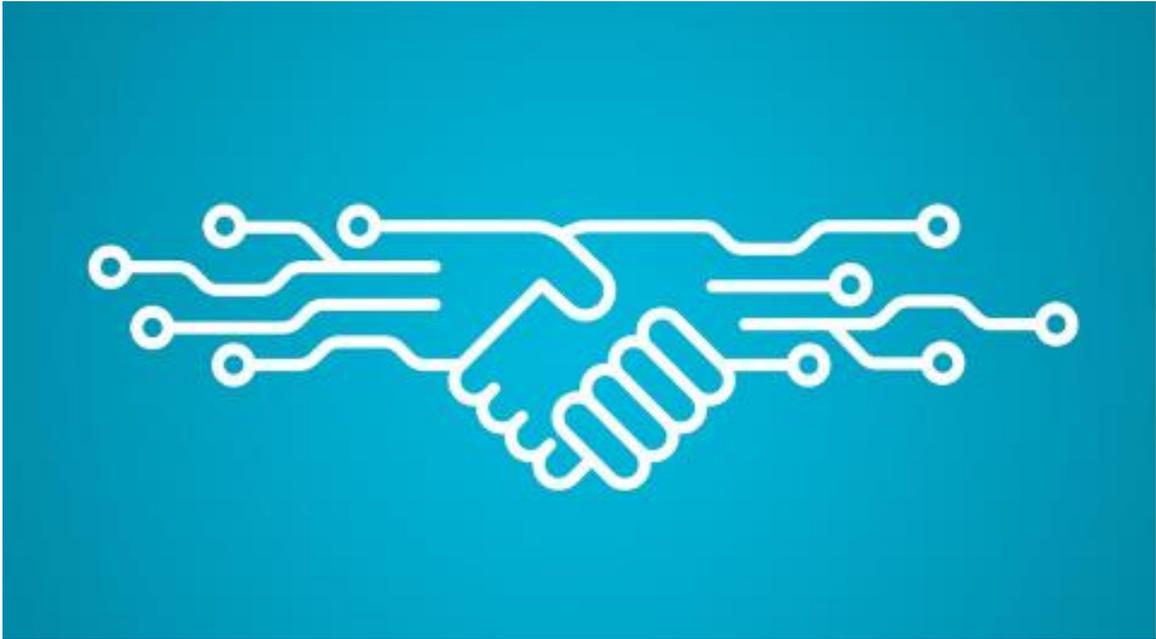
- Another administrative slog is the acquisition and verification of identification documents of prospective tenants. Blockchain technology offers the perfect platform for a verifiable digital identity stored on the chain. The referencing process for tenants and landlords would be much quicker and hassle-free; what currently takes a 5 to 7-day turnaround, can be achieved in minutes.

Maintenance

- Current systems for rented property maintenance are often unreliable for the tenant, the contractor, and the letting agent. By introducing blockchain-based systems into these processes, communication and coordination between all parties can be optimized, so that problems are fixed quickly and efficiently.
- The blockchain adds a layer of accountability that is often lacking in real estate letting companies and contractors. If tenants, landlords, letting agents, and external contractors are all held to account by an immutable distributed ledger, the entire process becomes much more transparent, fair, and cost-effective.

LEADERS IN PROVIDING BLOCKCHAIN SOLUTIONS FOR REAL ESTATE

Several projects have already implemented blockchain in the real estate industry, gaining first-mover advantages in this rapidly evolving sector. Below we have explained some of the current most popular platforms.

Shelter Zoom

- ShelterZoom, based in New York, is the first real estate technology startup to incorporate blockchain technology within the industry's infrastructure. The ShelterZoom website, widget, and mobile app offer a full end-to-end service for consumers to buy and sell their real estate in a super-easy, transparent, and secure format, incomparable to the legacy real estate industry.
- The platform is available to listing agents, brokers, and sellers parties, in addition to buyers and buyers' agents/services. Available with Docuwalk, a blockchain-based platform that transforms documents and contracts into immutable, interoperable tokenized assets on the blockchain. Docuwalk streamlines the real estate admin process by offering an all-in-one solution from contract creation to negotiation and signing.

Propy

- Backed by Silicon Valley giants and the National Association of Realtors, **Propy** is a successful start-up whose mission is to revolutionize the real estate industry with the integration of blockchain technology.

- Propy stores all documents, records, and contracts on the blockchain, the most secure form of data storage. Testimonials on the website claim introducing Propy has saved brokers and agents up to 10 hours per week per listing.
- Propy is another example of how successful integration of blockchain in the real estate industry can be and presents a model future letting and estate agents must adapt to, to not become irrelevant, as the technology reputably removes the 'middlemen' and third parties between exchanges and transactions, thereby additionally reducing the costs involved.

Atlant.io

- Another way of investing in real estate via the blockchain is through a trading exchange. Atlant.io offers its exchange through the UVAS trading app, which includes the opportunity to trade tokenized real estate assets, private equity, unlisted commodities, and otc derivatives among other assets.
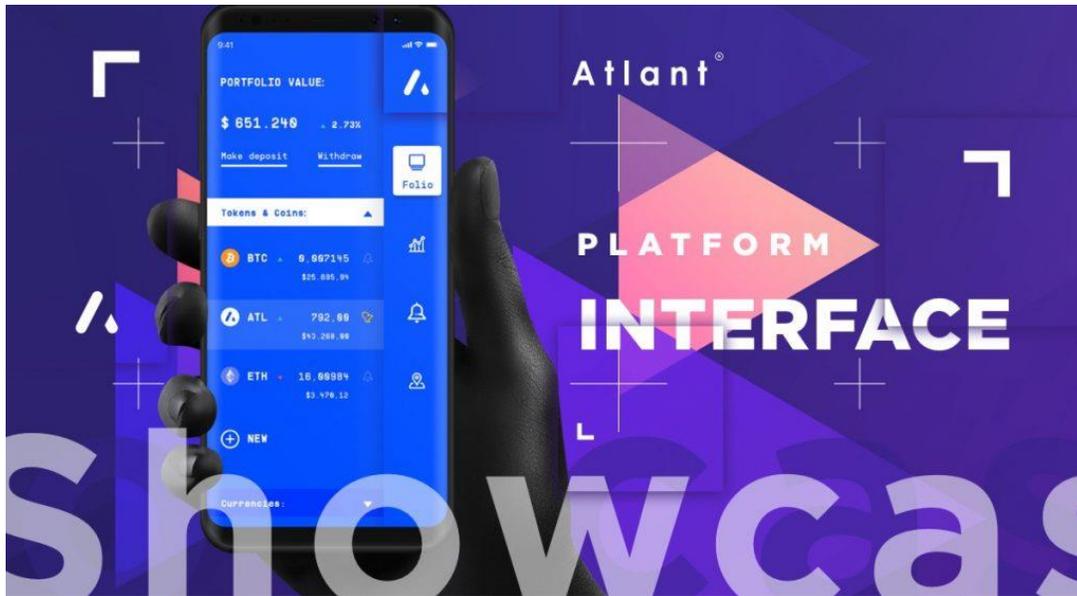
CONCLUSION

The use of blockchain in the real estate industry could radically improve the way homes and property are built, bought, and sold. The implications of this breakthrough could also have an effect on the construction industry as the use of blockchain in supply chain management continues to rise.

Just as we see the **fashion industry** and **healthcare** sector embrace blockchain technology, the real estate industry is replacing outdated infrastructure with smart contracts and tokenized assets to bootstrap an evolving marketplace.

Blockchain brings flexibility and opportunity to an industry that is impeded by red tape, inefficient third-party communications, and market volatility. Housing applications on the blockchain will make it faster and easier to access all records needed to get a roof over people's heads, from state-funded housing to private islands.

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