

How Blockchain Could Streamline Real Estate Transactions

By **Jesse Snyder and David Stone** (February 20, 2026, 5:24 PM EST)

Despite decades of digitization, U.S. real estate transactions remain tethered to paper-era workflows. Each real estate closing still generates a stack of deeds, notes, affidavits and acknowledgments that must be signed, notarized and routed through a patchwork of county recording offices.

Even in so-called e-closings, data is reentered into separate systems, PDFs are circulated repeatedly by email and post-closing curative work can linger for weeks.

Blockchain technology — long discussed in financial markets — now offers a credible path to unify execution, payment and recording within a single, verifiable record.

The urgency of modernizing U.S. conveyancing infrastructure has intensified sharply in recent weeks. In January, the New York Stock Exchange announced plans to develop a regulated platform for trading tokenized securities with on-chain settlement, marking a turning point in the institutional adoption of blockchain-based market infrastructure.

As capital markets standardize around interoperable on-chain workflows, asset classes that rely on sequenced verification, settlement finality and authoritative records — most notably real estate — face immediate pressure to adopt compatible digital frameworks.

At the same time, federal housing policy has sharpened its focus on affordability and market access for individual Americans, not only through executive action but also through multiple legislative proposals currently under consideration in Congress.

On Jan. 20, President Donald Trump issued Executive Order No. 14376 directing federal agencies to curtail government support for large institutional purchases of single-family homes that could otherwise be purchased by owner-occupants.

The order reflects a broader policy objective: reinforcing pathways to homeownership by reducing structural barriers that inflate costs and disadvantage retail buyers.

While the executive order addresses supply-side competitive pressures, transaction costs remain a significant — yet often underexamined — component of housing affordability.



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Title premiums, settlement expenses, recording delays and post-closing corrections impose thousands of dollars of friction on a typical home purchase, disproportionately affecting first-time and single-family buyers.

Modernizing conveyancing infrastructure through blockchain-enabled execution and recording directly advances the order's affordability goals by compressing timelines, reducing duplicative verification, and lowering professional and administrative costs embedded in the closing process.

These affordability objectives also align with Trump's broader digital finance strategy. The earlier Executive Order No. 14178 articulates a federal policy of supporting the responsible growth and use of blockchain technology across sectors of the economy, while promoting U.S. leadership in digital market infrastructure.

The order emphasizes regulatory clarity, lawful innovation and the use of distributed-ledger technology to modernize core economic systems.

Applying blockchain to real estate conveyancing fits squarely within that mandate: It does not disrupt property law or displace public land records, but rather upgrades the transactional plumbing that connects private agreements to authoritative public records.

In this sense, blockchain-enabled real estate execution is not merely a private sector efficiency play — it is part of a broader effort to ensure that American property markets, like American capital markets, evolve in step with the digital backbone of global finance.

The Persistent Paper Chase

Real estate conveyancing is built around documentation. The statute of frauds and centuries of recording statutes require written instruments and formal acknowledgment to establish ownership and priority.

Electronic signature laws have reduced friction but have not fundamentally altered the structure of the process. The Electronic Signatures in Global and National Commerce Act and the Uniform Electronic Transactions Act confirm that electronic records and signatures carry legal force, yet they largely replicate paper workflows in digital form: static documents, duplicative data entry and manual verification.

Industry efforts to modernize — such as data standards developed by the Mortgage Industry Standards Maintenance Organization, e-recording protocols promulgated by the Property Records Industry Association, and widespread adoption of remote online notarization — have digitized individual steps.

What they have not done is integrate those steps into a shared system. Each participant — lender, title company, escrow agent, notary and county recorder — maintains its own ledger of the transaction. Blockchain proposes a single one.

What Blockchain Actually Adds

A blockchain is a distributed, append-only ledger that records transactions chronologically and immutably across multiple nodes. Each block contains a cryptographic hash of the previous block, creating an auditable chain of verified events.

Applied to real estate, a permissioned blockchain could connect all parties to a transaction on a shared platform.

Smart contracts — self-executing code triggered by predefined conditions — could automate closing instructions, releasing escrowed funds only after all documents are signed, notarized and accepted for recording.

Once a recorder's office confirms acceptance, the ledger would permanently reflect the completed transaction.

Legal Foundations

Contrary to conventional wisdom, blockchain-based real estate transactions do not require new federal legislation. The Electronic Signatures in Global and National Commerce Act and the Uniform Electronic Transactions Act already validate electronic signatures executed by automated or electronic agents.

Cryptographic signatures and document hashes generated by a blockchain system can perform the same evidentiary function as conventional electronic signatures.

Some states have gone further. Vermont law provides that blockchain-verified records may be admitted as evidence and are presumed authentic as to the data they contain, including associated time stamps. Arizona statutes similarly recognize the enforceability of smart contracts and the admissibility of blockchain records as business records.

These provisions quietly establish that blockchain-verified deeds or mortgages could be introduced in court without extraordinary authentication measures.

Meanwhile, the 2022 amendments to the Uniform Commercial Code introduce the concept of controllable electronic records, creating a clear framework for taking and perfecting security interests in certain digital assets.

While these amendments do not directly govern real property, they pave the way for blockchain-based promissory notes, payment rights or rent streams to circulate with commercial law certainty.

Smart-Contract Closing

In a blockchain-enabled closing, documentation events would hypothetically occur within a single secured ledger:

- The buyer and seller execute the purchase agreement electronically, with signature hashes recorded on-chain.
- The lender issues a digital note and escrow instructions.
- A remote online notary verifies identities, with credential checks and audiovisual records cryptographically hashed.

- A smart contract releases funds once the recorder's office returns an acceptance confirmation compliant with the Property Records Industry Association.
- The ledger records each event in sequence, creating an immutable audit trail.

This approach collapses what are now sequential, error-prone steps — execution, notarization, recording and funding — into one synchronized transaction.

Evidence, Privacy and Error Correction

Concerns about blockchain's immutability often focus on error correction. But immutability does not preclude correction; it requires transparency.

Blockchain systems can append corrective entries that preserve the historical record while reflecting judicially ordered changes, much like corrective deeds or re-recordings today.

From an evidentiary standpoint, blockchain records readily satisfy Federal Rule of Evidence 901's requirement of authenticity. Vermont's statute goes further, granting a rebuttable presumption of authenticity for qualifying blockchain records.

Compliance Overlay

Blockchain platforms are well-suited to automate identity verification, maintain immutable compliance records and reduce reporting friction.

What is more, blockchain is unlikely to replace county recorders. The more realistic model is hybrid: Private participants and public offices share a permissioned ledger that supplements, rather than supplants, statutory land records.

Submissions compliant with the Property Records Industry Association would continue, but each filing would generate a blockchain record capturing execution, submission and acceptance.

Such a system preserves public notice while providing cryptographic certainty. Title insurers could underwrite risk using verifiable transaction histories. Courts could admit ledger records as self-authenticating business evidence. Regulators would gain transparency without additional paperwork.

How Blockchain Lowers Costs and Improves Affordability

Housing affordability in the U.S. is increasingly constrained not only by construction and financing costs, but also by the transaction and frictional costs embedded in the conveyancing system.

A blockchain-enabled closing framework directly targets these frictions, offering meaningful affordability gains — especially for buyers of single-family homes.

Reducing Title Insurance Costs

Title insurance premiums in the U.S. are among the highest in the developed world, driven largely by manual title searches, document reconciliation and the need to insure against recording errors. A permissioned, shared ledger changes that risk calculus.

Over time, this would drive measurable reductions in both title premiums and endorsement costs — savings that would benefit first-time and single-family homebuyers.

Lowering Transaction Costs

Every stage of the transaction — from drafting to notarization to recording — introduces professional fees, courier charges and delay-related costs. By collapsing sequential steps into a synchronized, validated process:

- Document prep and review costs decline because parties interact with standardized, machine-readable instruments rather than bespoke PDFs;
- Escrow and settlement costs drop as smart contracts automate funding conditions;
- Recording delays shrink, reducing interest carry, bridge financing and temporary housing costs that commonly burden real estate owners during extended closing periods; and
- Commercial real estate transactions benefit from reduced reconciliation work, faster loan modifications, and improved auditability, lowering legal and administrative overhead.

Affordability Gains for Buyers of Single-Family Homes

For individual buyers, even modest reductions in closing expenses can meaningfully expand access to homeownership. Blockchain-enabled transaction infrastructure supports affordability by:

- Cutting several hundred to several thousand dollars in title-related and closing-table fees;
- Compressing closing timelines, reducing dual-housing costs and interest-rate exposure;
- Lowering lender origination and verification expenses, enabling more competitive loan pricing; and
- Reducing the uncertainty that discourages buyers in competitive markets.

In aggregate, a modernized, blockchain-supported conveyancing system would function like any other infrastructure upgrade: lowering frictional costs, improving market access and increasing overall system reliability.

Federal Versus State Roles

Modernizing the U.S. real estate infrastructure requires navigating one of the most complex jurisdictional landscapes in American law.

Property rights, recording systems and conveyancing procedures are overwhelmingly matters of state and local authority, yet the legal foundation for digital transactions — and the commercial framework that supports nationwide real estate finance — rests heavily on federal law.

The Federal Framework: Enabling Digital Execution and Evidence

At the federal level, Congress has already supplied the essential legal scaffolding for electronic real estate transactions.

Federal evidence rules provide the evidentiary structure for authenticating digital records — including cryptographic hashes and blockchain-anchored data — ensuring admissibility in litigation.

Federal agencies and government-sponsored enterprises (e.g., the Federal Housing Finance Agency, Fannie Mae, Freddie Mac and the Federal Housing Administration) shape nationwide mortgage market requirements. Their acceptance of digital notes, electronic closing packages or blockchain-verified audit trails has immediate systemwide effects.

Federal rulemaking — such as the Financial Crimes Enforcement Unit's beneficial ownership reporting requirements — creates compliance obligations that blockchain platforms are especially well suited to automate.

In short, the federal role is enabling, not implementing.

The State Role: Governing Property Law and Recording Statutes

States retain primary authority over the substantive law of real property. Recording statutes — race, notice and race-notice frameworks — are purely state-based, and requirements for deeds, mortgages, notarization, acknowledgments and recording vary across jurisdictions.

State versions provide uniform rules for electronic contracts and signatures. And several states have enacted statutes explicitly recognizing blockchain records as admissible business records or validating smart contracts as legally enforceable.

These state-level choices determine what a blockchain-recorded instrument must satisfy before it constitutes a legally effective conveyance. Any modernization effort must operate within these statutory frameworks, not around them.

Counties and Local Recorders: Operational Gatekeepers of the System

Even though states define recording law, counties execute it. Practical modernization depends on county recorders because they:

- Accept, index and preserve the official land records;
- Control the technical processes for e-recording, rejection notices and acceptance confirmations; and
- Determine how standards are implemented operationally.

For this reason, blockchain integration cannot bypass counties. Instead, the most workable approach is a hybrid model in which county submissions remain authoritative, while blockchain systems capture execution, submission and acceptance events in a unified, cryptographically verifiable ledger.

Why a Multilayered Approach Is Essential

Real estate modernization depends on alignment across all three layers:

- Federal law ensures electronic validity and interstate commercial enforceability.
- State law governs the substance of conveyancing and defines what constitutes a legally valid transfer of real property.
- County systems operationalize the act of recording, the event that establishes priority and legal finality.

Blockchain systems must therefore be designed to comply simultaneously with federal digital transaction law, state recording statutes and county operational practices.

The technology succeeds not by displacing any of these layers but by stitching them together.

Conclusion

Blockchain's promise in real estate is not speculative finance: It is synchronization. A unified, verifiable ledger could replace fragmented, paper-era processes with a coordinated sequence of digitally authenticated events — execution, verification, funding and recordation — captured within a single chain of trust.

By aligning private sector workflows with federal digital transaction law, state recording requirements and county operational practices, blockchain offers a practical, legally grounded path to modernize a system that has remained stubbornly analog for centuries.

The result is not disruption for its own sake, but a more reliable, efficient and affordable real estate ecosystem capable of supporting the next generation of Americans.

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