Blockchain 101

What it is and How it May Impact the Multifamily Industry
BLOCKCHAIN & REAL ESTATE

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A CASE FOR BLOCKCHAIN

CENTRALIZED

DECENTRALIZED

DISTRIBUTED

@ApartmentWire  #NMHCspring
A CASE FOR BLOCKCHAIN

• Blockchain is **bleeding edge technology**, still high on the ‘hype cycle’

• Blockchain is the technology used to power Bitcoin

• Digital information is **distributed but not copied**

• Blockchain enables **standardization** and **process integration** in business networks

• Blockchain fits to the **digital transformation paradigm**; technological means to redesign business models and processes
PUBLIC BLOCKCHAIN & CRYPTOCURRENCY

Public Blockchains:

- **Anonymous**
- Peer to Peer
- **High Immutability**
- Trustless Environment
- Access to cryptocurrency controlled by private keys
ENTERPRISE & DISTRIBUTED TECHNOLOGY

Blockchains for business are generally permissioned and private, and prioritize:

- **Identity** over anonymity
- **Selective endorsement** over proof of work
- **Assets** over cryptocurrency

An integrated network, updated in real-time with always-consistent data

Ability to set rules for each blockchain enforces compliance

Tracing data from provenance to present to reduce disputes or discourage fraudulent activity

Increased efficiency of industry processes, reduced auditing costs

Consent, protection, and control of consumer/customer data

High level of trust in repository of transactional data
DISINTERMEDIATION OPPORTUNITY

1. Property search - blockchain-enabled MLS
2. Agentless Property Tour Capabilities
3. Pricing, Availability & Unit Selection
4. Identity Screening & Online Leasing
5. Lease Execution & Document Storage
6. Lease agreement using smart contracts
7. Automated payments and cash flow management using smart contracts
8. Real-time data analysis
9. Connected Building Centric
GEOPOLITICAL ECONOMIC LANDSCAPE

- **Buyer**
  - Payment
  - Ownership Verification
  - Title Deed

- **Seller**
  - Payment
  - Ownership Recording
  - Title Deed

- **Buyers’ Banks**
- **Sellers’ Banks**
- **Propy**
- **Unified distributed Ledger with Smart Contracts**
- **Current Title / Land Registry**

Flow: Buyer → Payment → Ownership Verification → Title Deed → Seller → Payment → Ownership Recording → Title Deed → Buyers’ Banks → Approval → Sellers’ Banks → Propy → Unified distributed Ledger with Smart Contracts → Current Title / Land Registry
DISINTERMEDIATION OPPORTUNITY - OUTCOMES

- Instant settlement and management of cash flows
- Simplified property management
- Legally enforceable contracts
- Faster reconciliation of payments
- Immutable record of land titles
- Reduced transaction times
- Increased security and transparency
- Lower costs and less title fraud
SUMMARY

BLOCKCHAIN IS A DISTRIBUTED LEDGER THAT CREATES A PERMANENT AND SHARED RECORD OF TRANSACTIONS ... WITH CONSENSUS, PROVENANCE, IMMUTABILITY AND FINALITY.

“At its core, blockchain is a shared ledger that allows participants in a business network to transact assets where everyone has control but no one person is in control.”

Efficient search process due to fragmented listings & sales data

Real-time rich data affects management decision making

Streamlines global management of lease agreements, contracts and PSA’s

Source: IBV C-Suite study – Three ways blockchain Explorers chart a new direction – May 2017