

Real-World Assets: Building infrastructure for tokenization

Bridging physical value and digital ownership on the Cardano blockchain

Challenge

Fragmented asset markets and limited accessibility

Despite decades of digital progress, the global economy still relies on analog systems for ownership and the transfer of physical value. **Assets like diamonds, gold, copper or other metals and rare earth elements and commodities remain trapped** in closed networks defined by intermediaries, opaque valuation methods, and region-specific custody rules.

This fragmentation leaves capital underutilized and trust unevenly distributed. Institutions face persistent friction in reconciling ownership across jurisdictions, verifying authenticity, and satisfying regulatory demands that vary from one border to the next. **Transfers between parties are often slowed by settlement delays**, which can take days or even weeks—locking up capital and increasing counterparty risk.

Even where tokenization pilots exist, they often collapse under the complexity of compliance or lack a unified model for legal custody and digital issuance. **The missing piece is a standardized, regulated infrastructure** capable of linking physical assurance — valuation, insurance, and storage — with blockchain-based transparency and liquidity. Such an infrastructure would enable near-instant settlement and unlock new efficiencies across global markets.



Industry

Real-World Asset (RWA) Tokenization

Size

USD \$16.1 Trillion (2030)¹

The challenge

- Lack of liquidity
- Trust gaps
- Regulatory complexity
- Operational overhead



The solution

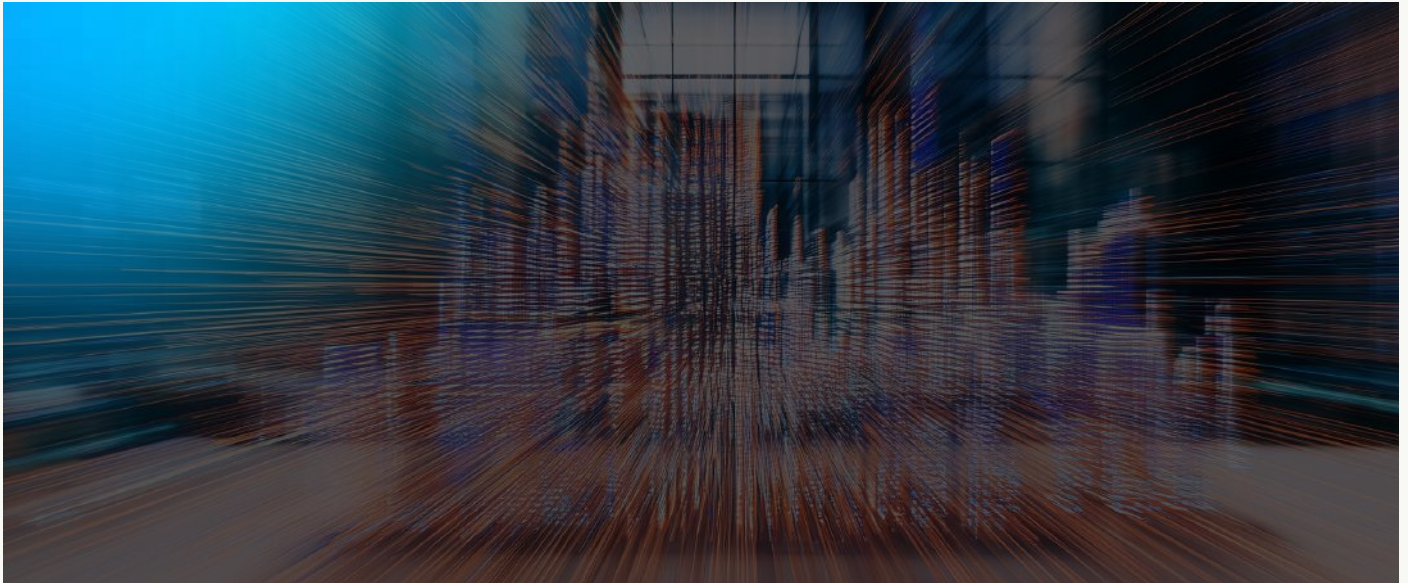
- Regulated framework
- Transaction transparency
- Direct ownership
- Cross-chain accessibility

“Tokenization of real-world assets will redefine ownership and liquidity. Platforms like Toto Finance show how enterprises can unlock tangible value while maintaining trust.”

Steven Gaertner
Director of TOTO Finance

Solution

A regulated pathway to total tokenization

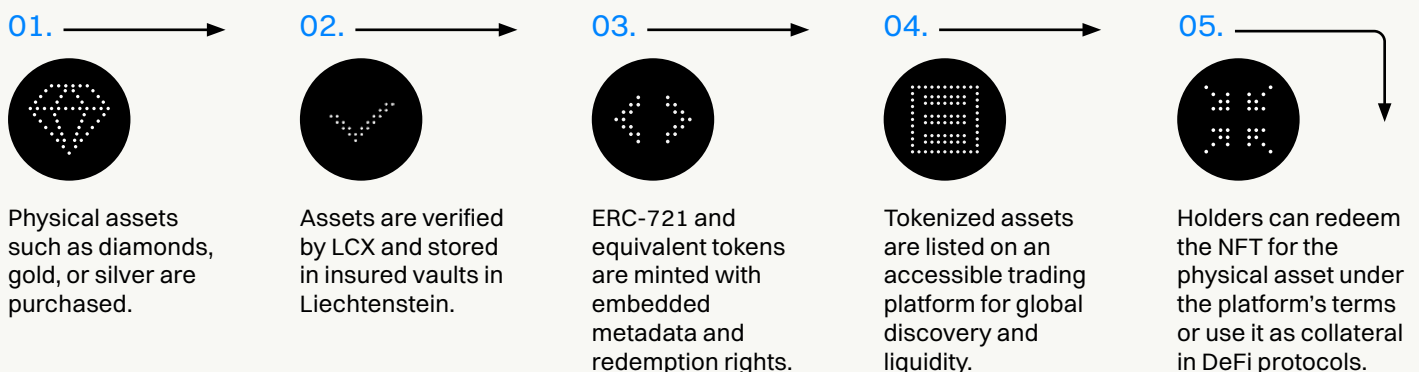


Toto Finance approached the tokenization problem as an engineering challenge, not a speculative one. **The team built a framework that integrates asset authentication, custody assurance, and blockchain interoperability** into a single, traceable system.

Each physical asset is verified through LCX, a registered Physical Validator under FMA Liechtenstein, before being secured in insured vaults under Lloyd's of London coverage. Once validated, the asset is represented on-chain as a non-fungible token (NFT), creating a permanent, transparent record that encodes provenance, valuation data, and redemption rights. As the digital twin of a physical asset, each NFT represents ownership of the asset and is legally enforceable under Liechtenstein law.

This design eliminates the artificial divide between tangible and digital markets. **Enterprises can issue, trade, or collateralize tokenized assets within a regulated, multi-chain environment** that meets institutional compliance and auditability standards. The result is a replicable model — a template for any organization seeking to integrate real-world assets into decentralized financial systems while maintaining the safeguards of traditional custody.

Solution Walkthrough



Results

Proving the future of real-world asset infrastructure

**Regulated trust framework**

First live RWA marketplace verified by LCX and insured under Lloyd's of London.

**Global Interoperability**

Integrated across five major blockchain ecosystems for frictionless access.

**User adoption**

5,000+ active users, over \$1.5 million in revenue, and 25,000+ tokenized assets.

**Proof of Scalability**

Framework adaptable to art, real estate, and financial assets, as well as commodities and renewable energy applications.

**DeFi readiness**

\$TOTO token and collateralization features unlock new liquidity models for enterprises.

**CARDANO** Advantages**Proven resilience**

Demonstrated security and reliability support continuous operation

**Scalable network**

Future-ready infrastructure supports platform growth without sacrificing performance

**Secure data**

Robust architecture protects sensitive data, minimizing the risk of breaches or fraud

**Sustainable operations**

Energy-efficient consensus and ethical governance align with sustainability efforts

Sources

¹ Boston Consulting Group (2023). The \$16 Trillion Tokenization Opportunity: How Asset Tokenization Will Transform Financial Markets.

**Cardano
Foundation**

The Cardano Foundation is an independent, Swiss-based not-for-profit advancing Cardano as a public digital infrastructure across a wide range of industries.

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