

# Realvirm Whitepaper

## Overview

Realvirm is an RWA trading protocol aimed at increasing the liquidity of real-world assets and simplifying the process of asset delivery by converting them into on-chain assets. The protocol is built on blockchain technology and turns real-world assets such as computing power, real estate, vehicles, and bonds into dNFTs (Destroyable NFTs) to ensure data security and immutability.

The goal of Realvirm is to provide a secure, efficient, and fair platform for trading real-world assets, creating more liquidity and convenience for investors and asset holders. By converting physical items and commodities into on-chain assets and leveraging smart contracts and blockchain technology, Realvirm aims to drive the development of real asset trading, supporting economic growth and financial innovation.

## Function

1. **Asset Digitization:** Utilizing blockchain technology to convert real-world assets into dNFTs, ensuring their security and traceability on the blockchain.
2. **Destroyable NFTs:** Using the ERC-721 extension protocol, dNFTs are forcibly destroyed when a third-party institution or department detects a change in ownership or collateralization of the real-world asset, ensuring the legitimacy and transparency of ownership. dNFTs represent only the economic rights of the real-world assets and do not possess other rights associated with real-world assets, such as stock voting or decision-making rights.
3. **Ownership Proof:** Realvirm collaborates with qualified issuers based on the type of real-world asset to complete the digitization, securitization, and compliance of assets, including but not limited to ownership, legality of ownership, physical condition of assets, collateralization, and legal guarantees of asset rights. Realvirm writes ownership information into dNFTs, thereby holding the economic rights to the asset.
4. **Compliance Requirements on the Blockchain:** Depending on the regulatory requirements of asset categories, Realvirm relies on partners to assist users in fulfilling regulatory requirements such as KYC/AML/CTF to facilitate on-chain asset transfers, redemptions, and other functions.

5. Smart Delivery: Realvirm generates corresponding buy-sell agreements and delivery contracts based on the type of asset and the legal terms of delivery locations, helping both buyers and sellers to quickly complete asset delivery.
6. Collateralized Lending: Realvirm determines the value of real-world assets through collateralized lending oracles to provide collateral asset value data to DeFi collateralized lending protocols.

## **Computing Power Trading**

1. Compliance institutions package computing power assets to safeguard their value, ownership rights, and legal entitlements.
2. Realvirm converts the acquired computing power into two types of dNFTs: tradable dNFTs and lease-only dNFTs.
3. Holding dNFTs entitles the holder to regular mining rewards.
4. Tradable dNFTs can be traded on the platform, while lease-only dNFTs are destroyed after the lease period expires.
5. Realvirm collaborates with third-party DeFi institutions to enable dNFTs to be used as collateral for obtaining liquidity.

## **Physical Asset Trading**

### **Real Estate and Vehicles**

1. Compliance institutions package the assets to safeguard their value, ownership rights, and legal entitlements.
2. Realvirm converts the acquired assets into two types of dNFTs: ownership dNFTs representing asset ownership and lease-only income rights dNFTs.
3. When trading or redeeming ownership dNFTs, Realvirm will engage partner institutions to fulfill local regulatory requirements, such as KYC/AML/income verification.
4. The income rights dNFT will be split into pieces and sold. Users who hold income rights dNFTs receive dividends from rental income of the corresponding real estate or vehicles.
5. Realvirm will automatically generate transaction contracts based on local laws and regulations, which will be embedded in smart contracts, subject to approval by relevant authorities.

6. When there is a change in ownership of the underlying asset, the corresponding ownership dNFT will be destroyed.
7. Realvirm collaborates with third-party DeFi institutions to enable dNFTs to be used as collateral for obtaining liquidity.

### **Personal Item Trading**

1. Users can convert their personal items into dNFTs and sell them on the platform.
2. The creator of the dNFT sets parameters such as the trading period, delivery period, redemption period, appeal period, and default deposit period for the dNFT.
3. During the delivery and appeal periods, the dNFT cannot be traded, and the creator must deliver the physical asset to the dNFT holder within the delivery period.
4. If the dNFT holder has not received the physical asset during the appeal period, the creator's default deposit will be deducted and given to the dNFT holder.
5. Realvirm will collaborate with local regulatory authorities to automatically generate compliant transaction agreements based on the traded items, which will be embedded in smart contracts.
6. Realvirm will establish an appeals mechanism. In case of unresolved disputes during the appeal period, Realvirm will submit the relevant transaction details to regulatory authorities for further handling.

### **Features**

1. Convenience: All transaction rules are executed through smart contracts, eliminating the need for third-party intermediaries and simplifying the trading and delivery process of tangible assets.
2. Transparency: All asset and transaction information is stored on the blockchain, ensuring data security and immutability.
3. Fairness: Buying and selling agreements generated based on different types of assets, relevant information, and local legal provisions ensure the protection of the legal rights and interests of both buyers and sellers.
4. Compliance and Regulation: We actively cooperate with local regulatory authorities and adhere to relevant financial regulations to ensure that the protocol complies with legal and regulatory requirements.

## **Tokenomics:**

Name: Realvirm (RVM)

Total Supply: 1,000,000,000

Utility:

1. Governance Token: Holding RVM grants voting rights, allowing holders to participate in the future development of Realvirm through voting.
2. Incentive Token: Trading on the Realvirm platform can earn RVM rewards.

## **Distribution:**

Community operations: 20%

Core development: 10%

Early contributors: 10%

Ecosystem: 20%

Community treasury: 40%

## **Roadmap:**

- Official website launch
- Collaboration with mining organizations
- Asset conversion to NFT functionality
- NFT trading functionality
- Collaboration with DeFi institutions
- Collaboration with real estate (vehicle) institutions
- Collaboration with regulatory authorities
- KYC functionality
- Embedding transaction agreements in smart contracts
- Personal item conversion functionality
- Dispute resolution functionality