



GASX

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1. Summary

Real World Assets (RWA) is a term used to refer to real world assets and includes many different types of assets, including real estate, cars, and artwork. These assets can be digitized or tokenized using blockchain technology, which improves liquidity and transparency by allowing ownership of the assets to be tracked and traded. The GASX project provides an ecosystem where various real-world assets can be tokenized and safely traded through the GASX Platform. Check out the GASX project through this white paper.



2. Introduction

What is the GASX project?

Many people want to own a famous painting, a luxury apartment, a sports team or a cryptocurrency project. However, accessing these assets faces various challenges such as high entry barriers, lack of liquidity, regulatory hurdles, geographical restrictions, etc.

GASX is a platform designed to solve these problems, allowing you to purchase a portion of exclusive and curated assets starting from as little as \$1. You can also receive additional rewards by holding and staking GASX, the native token of GAS. This allows users to access and invest in a variety of tokenized assets from around the world, ensuring accessibility and diversity to these assets.



2. Introduction

Problem

Traditional asset markets suffer from several challenges that limit investors' potential, including.

- Traditional markets require a lot of capital to invest in real assets, which makes it difficult for many investors to participate in asset ownership.
- Most real assets, such as real estate and art, are illiquid and difficult to sell quickly. This low liquidity poses a great risk.
- The transaction process of buying or selling real assets involves multiple stakeholders, including intermediaries and institutions. This is a major cause of wasted time and fees.
- The current tokenized asset market is fragmented and often incompatible. They are often limited to a single blockchain network, making them less interoperable and scalable.

2. Introduction

Solution

The GASX project seeks to solve the previously mentioned problems by providing the following alternatives.

- It lowers the barrier to entry by providing the opportunity to purchase a portion of a real-world asset for as little as \$1. You can easily own a portion of various assets with a small amount of money.
- We support the trading of tokenized assets through low fees and secure payments, and create a global market by combining various payment methods.
- We leverage blockchain technology to ensure transparency, security, and immutability for all transactions. A non-centralized system simplifies procedures.
- GASX plans to introduce a cross-chain solution that enables interoperability between different blockchains. Users can easily access various blockchain networks.

3. GASX Ecosystem

GASX Platform

The GASX platform is a blockchain-based decentralized application that tokenizes real-world assets to enable partial ownership and transactions. The platform provides a user interface that allows asset owners to tokenize their assets and leverages a network of decentralized validators to ensure the legitimacy of the assets. It also provides real-time data through the Oracle Network, providing transparency and accuracy for investors.



The main token used as a medium of exchange within the ecosystem is GASX, and RWA tokens are issued in ERC404, a new protocol that blends ERC20/ERC721. ERC404 is a protocol designed by a project called Pandora, which is open source and freely accessible to developers and creators alike. The Pandora team actively encourages diverse applications to explore early token standards and actively maintains public repositories as well as thorough documentation of the design, development, and implementation of token standards.

3. GASX Ecosystem

Component

The following is information about the important components that make up the GASX ecosystem. The GASX team recognizes that the RWA market is in its infancy and will strive to continue developing technology to become a leader.

- **GASX Token (GASX)**

GASX token is a utility token of the GASX platform built on the ERC-20 protocol of the Ethereum blockchain network. In its core role, it is used as a transaction exchange medium and is provided as rewards or events to participants in the ecosystem.

- **GASX Platform**

The GASX platform is a blockchain-based decentralized web that provides a system for users to easily participate in the ecosystem and trade RWA. It also provides important information such as creation, buying and selling of RWA tokens, asset prices and market trends.

- **Smart Contract**

A smart contract is an automated contract used in blockchain technology, and is a technology that can transparently process tasks such as issuing, transferring, and recording tokens. Tasks such as validation, oracles, and reward systems are handled on a blockchain that can be verified by anyone.

- **Validator**

Validators are used to prevent errors by checking whether entered data meets certain criteria or conditions. This is a device to maintain the accuracy and consistency of data within the GASX platform and increase system stability.

- **Oracle Network**

This is a system that retrieves external data from the blockchain and provides it to smart contracts. Because data such as market conditions and prices are linked in real time on the blockchain, it helps ensure the transparency and accuracy of the platform.

3. GASX Ecosystem

Decentralized Finance (DeFi) Services

Lending

Users can engage in lending and borrowing activities using assets as collateral. Loans can be processed and managed using smart contracts and cryptocurrency, or blockchain technology, rather than the traditional banking system.

Staking

Staking is another important DeFi feature available on GASX. Users can participate in platform governance or receive rewards by staking GASX tokens (GASX), the process is as follows.

1. Lock a certain amount of GASX tokens (GASX) in a staking contract.
2. Participate in governance decisions related to the GASX platform.
3. You will receive GASX tokens (GASX) as compensation for staking.

Yield Farming

Users can provide liquidity to GASX' liquidity pool and receive compensation for providing liquidity. GASX's Yield Farming process is as follows.

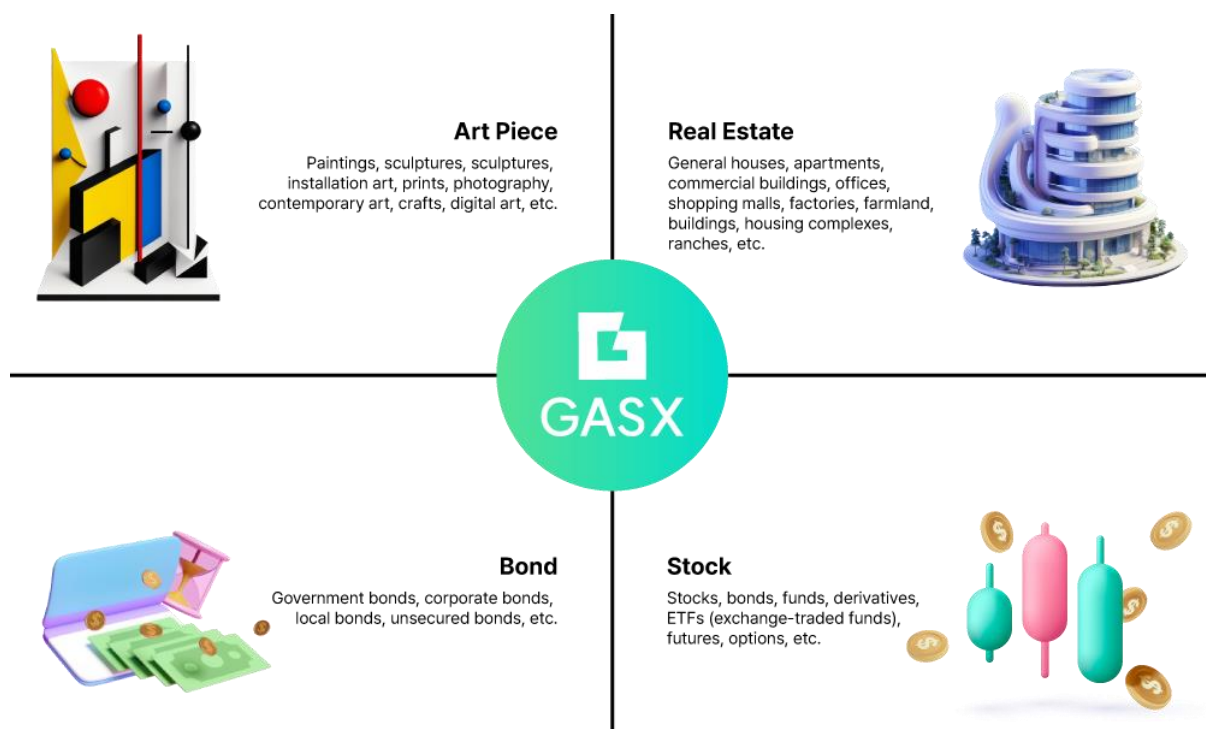
1. Add liquidity to specific token pairs on the platform.
2. Earn a portion of trading fees generated from liquidity pools.
3. Receive rewards in GASX tokens (GASX) and other tokens supported on the platform.

In this way, GASX aims to reduce the gap between existing assets and the blockchain ecosystem by combining it with the tokenized asset exchange platform and DeFi (decentralized finance) ecosystem. Users can directly access various DeFi services and receive rewards through the GASX platform.

3. GASX Ecosystem

Curated RWAs

GASX carefully selects only valuable assets through a curating process that collects and selects various information about assets. You can find various types of tokenized assets as follows.



4. Blockchain Technology

Introduction to ERC-404

Features/Compatibility	ERC-20	ERC-721	ERC-404
Differentiation	✓	✗	✓
NFT Protocol Interoperability	✗	✓	✓
Basic Liquidity	✓	✗	✓
ERC20 Protocol Interoperability	✓	✗	✓
Irreplaceable Attribute	✗	✓	✓

ERC-404 is an experimental mixed ERC-20/ERC-721 implementation with basic liquidity and splitting capabilities. The ERC404 protocol is designed to minimize the pros and cons of ERC20 and ERC721 and combine them in as robust a way as possible, with current implementations effectively isolating the ERC-20/ERC-721 standard logic or introducing routing where possible.

The routing adopts a lossy encoding scheme where the token amount of data and the ID occupy a shared space to ensure that no or negligible token transfer occurs that occupies the ID space. Additionally, ERC-404's unified protocol verifies the ideal path by ensuring that submitted parameters are within the range of the token ID.

4. Blockchain Technology

Creating Your ERC404 Example

```
//SPDX-License-Identifier: MIT
pragma solidity ^0.8.0;

import {Ownable} from "@openzeppelin/contracts/access/Ownable.sol";
import {Strings} from "@openzeppelin/contracts/utils/Strings.sol";
import {ERC404} from "erc404/ERC404.sol";

contract ExampleERC404 is Ownable, ERC404 {
    constructor(
        string memory name_,
        string memory symbol_,
        uint8 decimals_,
        uint256 maxTotalSupplyERC721_,
        address initialOwner_
    ) ERC404(name_, symbol_, decimals_) Ownable(initialOwner_) {
        _setERC721TransferExempt(initialOwner_, true);
        _mintERC20(initialOwner_, maxTotalSupplyERC721_ * units, false);
    }

    function tokenURI(uint256 id_) public pure override returns (string memory) {
        return string.concat("https://example.com/token/", Strings.toString(id_));
    }

    function setERC721TransferExempt(address account_, bool value_) external
    onlyOwner {
        _setERC721TransferExempt(account_, value_);
    }
}
```

4. Blockchain Technology

Deploying Example

```
contract Deploy is Script {
    string memory name = "Example";
    string memory symbol = "EXMPL";
    uint8 decimals = 18;
    uint256 maxTotalSupplyERC721 = 10000;

    modifier broadcast(address deployer) {
        vm.startBroadcast(deployer);
        _;
        vm.stopBroadcast();
    }

    function run() external override {
        deploy(<Your Deployer Address>);
    }

    function deploy(address deployer) public broadcast(deployer) {
        new ExampleERC404(name, symbol, decimals, maxTotalSupplyERC721, deployer);
    }
}
```

Afterwards, define the deployer private key and rpc endpoint in your local environment, then run the script using the following command to complete the task.

4. Blockchain Technology

ERC404 Airdrop Example

```
//SPDX-License-Identifier: MIT
pragma solidity ^0.8.0;

import {Ownable} from "@openzeppelin/contracts/access/Ownable.sol";
import {Strings} from "@openzeppelin/contracts/utils/Strings.sol";
import {ERC404} from "../ERC404.sol";
import {ERC404MerkleClaim} from "../extensions/ERC404MerkleClaim.sol";

contract ExampleERC404 is Ownable, ERC404, ERC404MerkleClaim {
    constructor(
        string memory name_,
        string memory symbol_,
        uint8 decimals_,
        uint256 maxTotalSupplyERC721_,
        address initialOwner_,
        address initialMintRecipient_
    ) ERC404(name_, symbol_, decimals_) Ownable(initialOwner_) {
        // Do not mint the ERC721s to the initial owner, as it's a waste of gas.
        _setERC721TransferExempt(initialMintRecipient_, true);
        _mintERC20(initialMintRecipient_, maxTotalSupplyERC721_ * units, false);
    }
    function tokenURI(uint256 id_) public pure override returns (string memory) {
        return string.concat("https://example.com/token/", Strings.toString(id_));
    }
    function airdropMint(
        bytes32[] memory proof_,
        uint256 value_
    ) public override whenAirdropIsOpen {
        super.airdropMint(proof_, value_);
        _mintERC20(msg.sender, value_, true);
    }
    function setAirdropMerkleRoot(bytes32 airdropMerkleRoot_) external onlyOwner {
        _setAirdropMerkleRoot(airdropMerkleRoot_);
    }
    function toggleAirdropIsOpen() external onlyOwner {
        _toggleAirdropIsOpen();
    }
    function setERC721TransferExempt(address account_, bool value_) external
    onlyOwner {
        _setERC721TransferExempt(account_, value_);
    }
}
```

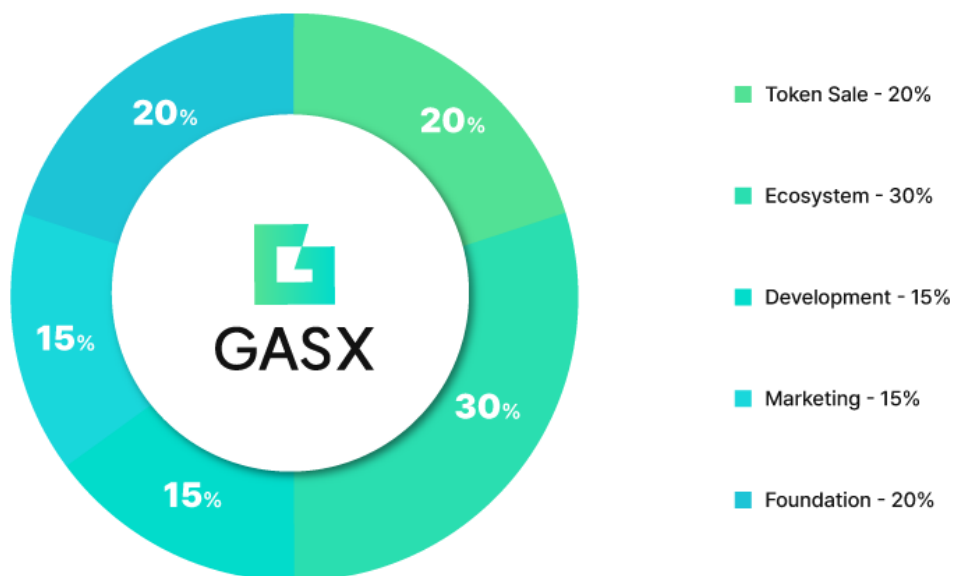

5. GAS Token

Token Issuance Information

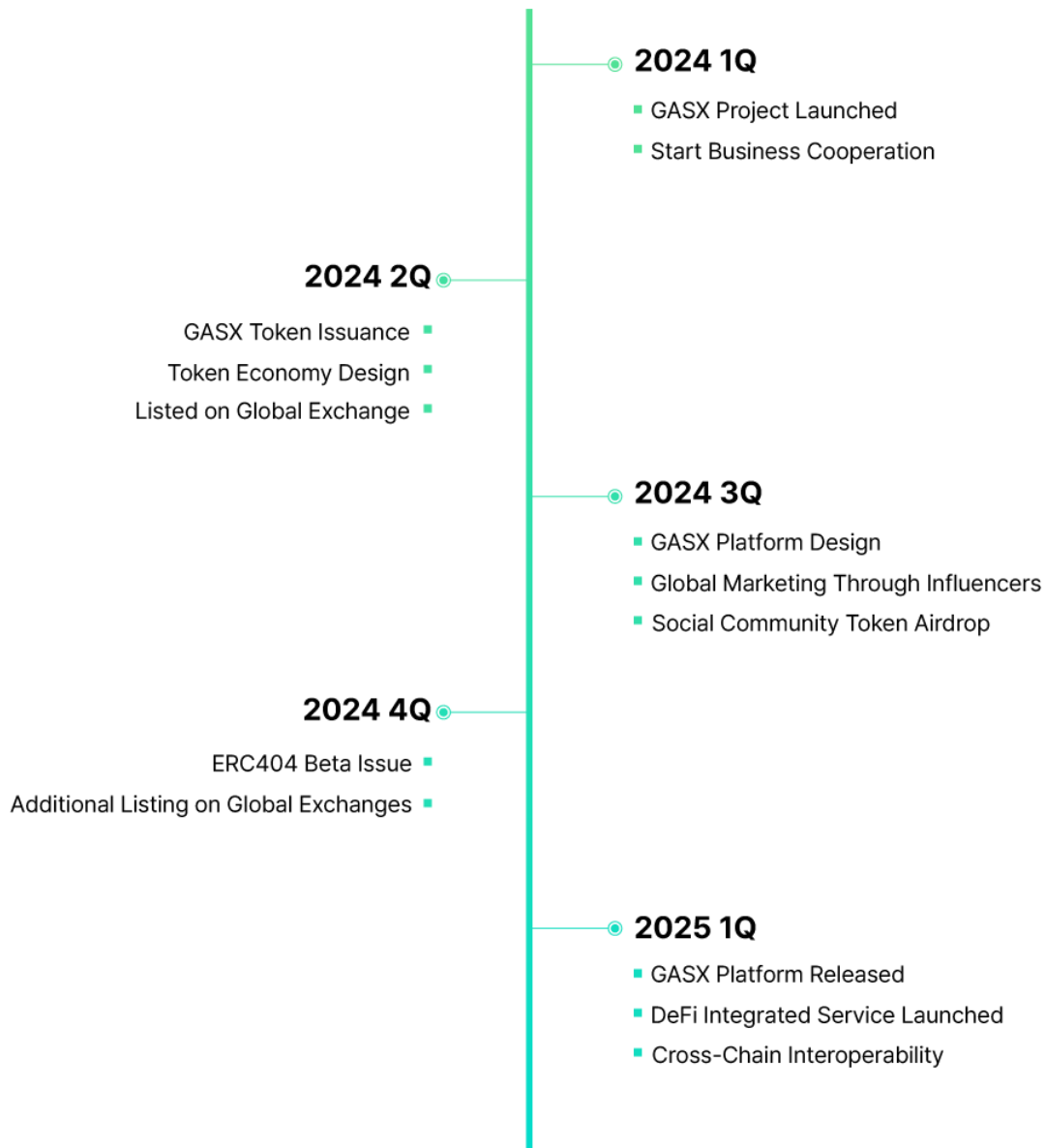
GASX tokens (GASX) are issued on the standard ERC20 protocol of the Ethereum blockchain platform. Detailed publication information is as follows.

Token Name	GASX	Token Symbol	GASX	Total Issuance	300,000,000 GASX
Token Type	ERC20	Decimal Point	18	Network	ETHEREUM

Distribution Information



6. Roadmap



7. Disclaimers

This white paper was written for the purpose of conveying information planned by GASX. The content of the white paper is an indicator and should not be regarded as any form of investment advice, recommendation, or direction. All decision-making actions made based on the information in the white paper are the responsibility of the party making the decision.

The contents of this white paper can be modified without notice, and we do not guarantee anything related to the contents and are not legally responsible for them. Depending on developments and market conditions, the roadmap schedule may change or be modified. Participation in the GASX ecosystem and issuing and holding tokens do not guarantee future profits or losses.



GASX