

Whitepaper

Ardadex

Abstract

This technical whitepaper clarifies some of the design decisions behind Ardadex Protocol and the functionality of Its contracts. Ardadex is an automated market maker (AMM) / Decentralized exchange and Non Fungible Token marketplace built on the Cardano blockchain.

Ardadex allows participants of the blockchain to add liquidity and create a market pair for other users to exchange their native Cardano tokens. In return, traders pay a small fee and the liquidity providers earn a percentage of their deposit. This whitepaper describes the mechanics of Ardadex contracts including the token pair contract that stores liquidity providers' assets. over the last decade, the decentralized Finance (DeFi) space has been forced to evolve to keep pace with the development of the digital asset market

Introduction

Ardadex is the first decentralized finance platform that provides both AMM and NFT Marketplace on Cardano blockchain network. Ardadex DeFi will power the NFT marketplace for Digital Creators, Musicians, Artistes and online creators to Mint & trade digital commodities as Non-Fungible Tokens for physically redeemable goods using our super sleek, easy to use user interface.

What are NFTs?

NFTs (non-fungible tokens) are one-of-a-kind tokens that signify a specific good or asset, such as digital trading cards. They can be sold on NFT marketplaces, minted, auctioned, or used as assets in play-to-earn games that are yet to be released.

Why did we build on the Cardano Ecosystem ?

Cardano is a smart open-source transaction platform aimed at solving the current problems of the crypto industry. We chose Cardano Ecosystem as the ideal platform for Ardadex not just for the incredible transaction speeds and low costs, but also for the ease with which tokens (both fungible and non-fungible) can be created, minted, and distributed. With a higher level of experienced developers in the Cardano ecosystem, Ardadex is looking to be one of the pioneers of the Cardano ecosystem.

Cardano offers adaptability and security beneath a layered design which gives the framework adaptability and ease of upkeep and permits overhauls through soft forks.

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Problems

There have also been many interesting innovations in decentralized finance like automated market maker and the Creative ART Industry is posed with a lot of problems as Content Creators, Musicians & Even Digital Artists get little or no value for the time, effort and, creativity invested in creating content and are constantly faced with problems like:

Too Many Middlemen: A Musician Releases a song on a streaming platform, the revenue is split between the distributor, the streaming platform and, the artiste which will result in the artiste getting less value of the revenue that he was originally supposed to earn.

High Entry Barrier: Most Creators have trouble minting their NFTs on existing marketplaces because of High Entry Barriers Like KYC and High Platform & Gas Fees a majority of top-tier marketplaces operate on the Ethereum chain at the moment.

Royalty Issues: Most marketplaces set the royalty reward and not the creator thus making the creator often mint the NFT on different Marketplaces leading to loss of authenticity of the NFT.

Lack of Exposure: Most NFT marketplaces don't have to give enough exposure to Creators & Digital Collectors.

Low Quality NFTs: Most Marketplaces Get bombarded with low-Quality & Sometimes spammy looking NFTs, making it difficult for digital collectors to find rare and valuable NFTs.

Little Utility In The Real World: Currently Most NFTs only exist in virtual digital form as there is no way to display your valuable digital collectible to prove ownership in the real world.

Our Vision on Decentralized Exchange

Ardadex mission is to make DeFi accessible and fair for all. To do this we have decided to build on the Cardano Network as it is capable of lightning fast and low cost transactions.

DEX platforms take divergent approaches to facilitate the trading of digital assets. Instead of engaging an intermediary organization to execute transactions, DEXs leverage the functionality of self-executing smart contracts.

In the absence of intermediaries, DEXs take on a non-custodial framework in which you retain control of your private keys and cryptocurrency funds.

Most DEXs have no counter-party risk, meaning they don't have a risk of credit default, and do not have to follow KYC or AML protocols.

Ardadex leverages the Cardano ecosystem to enable a fast, cheap, and intuitive trading experience for users of the platform while keeping it fully decentralized thanks to an infrastructure built on top of a number of smart contracts and blockchain oracles.

Also, Ardadex technology renders it more than capable of carrying out its mission of mass adoption.

Our Vision on NFTs

Ardadex is on a mission to create a truly decentralized yet robust NFT Platform where digital creators can turn their Photos, Ideas, Music & Paintings into Non Fungible Tokens. All of these goods can launch as tokens that can be redeemed as physical objects. By dropping it as a token, we enable goods to:

- 1) Have a dynamic price on the Blockchain
- 2) Traded In Fractions and can also be owned fractionally
- 3) Launched Even before actual good exists

With the launch of the Ardadex NFT platform, we will usher in a new paradigm of creation and exchange, enabling creators to:

1: Earn all of the value they've created by selling their goods as NFTs at a dynamic price.

2: Call on their huge following (those with a substantial amount of followers) to participate and buy into the ideas and the products they love early in the process of creation.

3: Still earn as their works are being resold in the secondary markets as they are still part of the game. People love them and patronize them but creators often try to shut them down because they are not making any gains from the resale.

Ardadex will enable both worlds as creators and traders get to play the ownership and trading game, and creators not only get their fair share, they get to play along with their community as they earn as their items are being resold.

4: Giving the power back to the creators and the community as dropping an item via a token means that creators will be able to eventually enable community ownership, funding and, participation in their brands with Ardadex NFT Platform creators.

Automated market Maker

Automated market makers (AMMs) are a decentralized exchange protocol that determines the price of a token through algorithmic mathematical calculations. This protocol works by utilizing the liquidity provided in liquidity pools. Anyone can be a market maker by providing liquidity to decentralized exchanges through liquidity pools. AMMs can be likened to order books in CEXs.

In CEXs, prices are determined by buy and sell orders in the order books. These buy and sell orders determine the current price and trend of a particular asset. DEXs don't use these order books rather, AMM protocols are utilized to make exchange/swaps possible as long as liquidity is available.

Contrary to the Peer-to-peer networks where users through their wallets, interact with each other on a platform, AMMs can be referred to as a peer-to-contract network.

When the user initiates a transaction, there is no user at the other end, rather a smart contract through a liquidity pool.

Liquidity Pool

In a centralized exchange setting, an exchange like Binance acts as a central authority, maintaining an order book and matching buyers with sellers to facilitate the exchange of tokens or Crypto Assets. Because of the incredible potential, this entity has for

manipulating the market for further profit, there is an immense amount of existing regulation in place to forestall the above-mentioned problems.

Initially, Ardadex will provide an automated market maker that is an adaptation of the model popularized by Uniswap. In such a model, the pricing and distribution of assets are satisfied by a mathematical formula or algorithm. This section, then, will take some time to describe the Uniswap model. In this model, liquidity providers (LP) deposit equal values of two crypto assets in a smart contract, and receive tracking tokens (LP Tokens) each representing their portion of the pool of assets.

How Do We Implement This On The Cardano Blockchain

Unlike the Ethereum Virtual Machine (EVM), The Cardano Blockchain, however, uses a novel approach to its accounting and execution model that is known as “Extended Unspent Transaction Outputs” (EUTXOs) which makes it not as straightforward as you might expect. The Extended Unspent Transaction Outputs model implements smart contracts more “passively” than an explicit function call, which heavily discourages the use of the global state.

The Cardano Blockchain Model extends this in the following ways:

- The UTXO is equipped with an arbitrary datum
- The script/Contract locking the funds has access to input data which is also known as the “redeemer,” as well as the entire transaction.

To Implement this, we will be utilizing a global “Ardadex Pool Factory” with unique tokens which will be locked via a script that allows users to create specific “Asset Pair Liquidity Pool” unique tokens, ensuring that the asset pairs stay unique. Then, these unique tokens are always locked in an EUTXO alongside the liquidity stored in the pool, using a validator script that enforces the constraints of the pool.

Liquidity Incentives

Liquidity pools are referred to as the powerhouse of every decentralized exchange.

Liquidity pools are a huge pile of funds that traders can trade against. They are funded by liquidity providers (regular users who provide their funds for a slight profit).

Liquidity is provided to a pool in pairs. When users eventually make transactions, This fee is then paid to the liquidity providers as a profit from the liquidity pool based on their provided liquidity. When a user provides liquidity, his actual tokens are placed in a liquidity pool through a smart contract and a token that represents the value of the pair will in turn be given to the user. This token can be redeemed anytime for the initial deposit. The plus side of liquidity pools is that when the value of your tokens increases, so does the value of the liquidity you’ve provided. This incentivised mode attracts millions of users to provide liquidity in different pairs. When the liquidity in a certain pair reduces, the set slippage will have to be increased in order to have the transaction completed.

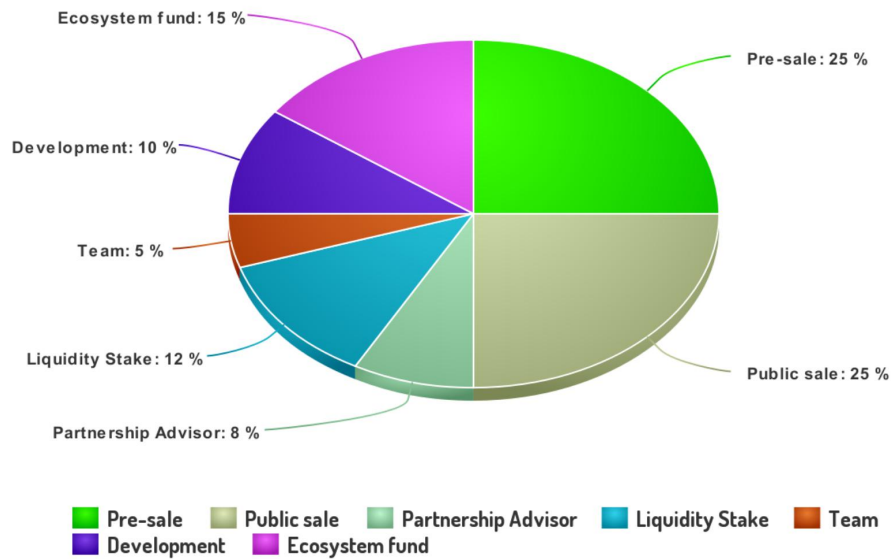
Features

- Join liquidity pools to collect fees on ADA - Cardano Native Tokens pairs
- Become a liquidity provider on the Cardano Blockchain using AMM protocol and earn passive income.
- Trade ADA for any Cardano Native Token
- Trade and transfer to a different address in a single transaction
- Buy ADA or any Cardano Native Token from Yoroi wallet
- Redistribution from every buy, sell and transfer of \$Ardan tokens
- Early Access To Exclusive NFT Drops
- Participate in a decentralized financial marketplace that is open and accessible to all
- Using Ardan token as Payment Currency For Fees & Featured Listings

Tokenomics

The distribution of Ardan tokens has been carefully designed to create a decentralized, community-driven DeFi protocol that is not controlled by a small group of actors, total

amount of one billion (1,000,000,000) Ardan tokens will be minted and will be distributed below;



Pre-sale - 25% (250,000,000 Ardan token)

Public sale - 25% (250,000,000 Ardan token)

Partnership Advisor - 8% (80,000,000 Ardan token)

Liquidity Stake - 12% (120,000,000 Ardan token)

Team - 5% (50,000,000 Ardan token)

Development - 10% (100,000,000 Ardan token)

Ecosystem fund - 15% (150,000,000 Ardan token)

Public sale round, 1 Ardan token will be sold for 0.005 ADA

Pre-sale stage

250 million Ardan Token will be sold at pre-sale stage and will be conducted in two phases.

First phase: 150 million Ardan Token will be sold at 0.001 ADA per token

Second phase: 100 million Ardan Token will be sold at 0.0015 ADA per token

Min / Max purchase - 100 USD / 5000 USD

Public sale stage

250 million Ardan Token will be sold at public sale at 0.003 ADA per token and will be conducted in one sale phase.

Min / Max purchase - 200 USD / 10000 USD

Ardadex fund utilization and Financial plan

Marketing & Sales

Data science

Product Development (blockchain, backend, Ardadex V2 & mobile app development)

Admin and Operational expenses

Legal

Governance

Grant making

Research

Project Marketing

Creative contents - In other to keep our social media platforms active, we will be employing the services of professional content creators to produce catchy contents for upload on our website, and our social media handles.

Press-release - Press releases are as important as social media posts in terms of reaching out to individuals. It is a more official way of showcasing the presence of our project.

Periodic events & Research - Constant event will keep the enthusiasm about the project very high. We need it to remain as high as possible, and for as long as possible. This will be in the best interest of the Ardadex project

Conclusion

Ardadex is a platform which will disrupt the way that everyday investors enter and participate in the DeFi ecosystem and NFT marketplace. DEXs are still in their early

years and will need further development of infrastructure, refinement of user experience, and improved scaling mechanisms to ensure future adoption. Our objectives are much broader and will involve developing additional features for the next generation of Cardano projects. The future of DeFi is Ardadex on Cardano Blockchain network.

We are excited to have you on this journey!