Kadena Token Economics

Kadena has designed a token economic system that aligns the incentives of all participants. As Kadena is a public blockchain platform, the main allocation of coins are distributed through mining. There will be a genesis block with allocations to investors, contributors, and the platform reserve. The rest of the coins are created as mining rewards.

Some projects sacrifice security when using Layer Two solutions, while others sacrifice business adoption when using Layer One protocols. Short term functionality becomes an obstacle to long term growth. Kadena is specifically structured with longevity, stability, and functionality from the start.

Coins from allocations become available gradually, creating stability. The network and token schedules are designed for sustainability, with an adoption curve to ensure that the economy will scale instead of spiking. For this reason, there is a balance between the coins coming from mining and those which are allocated in the genesis block. Staggering the release schedules ensures that proportions remain equitable.

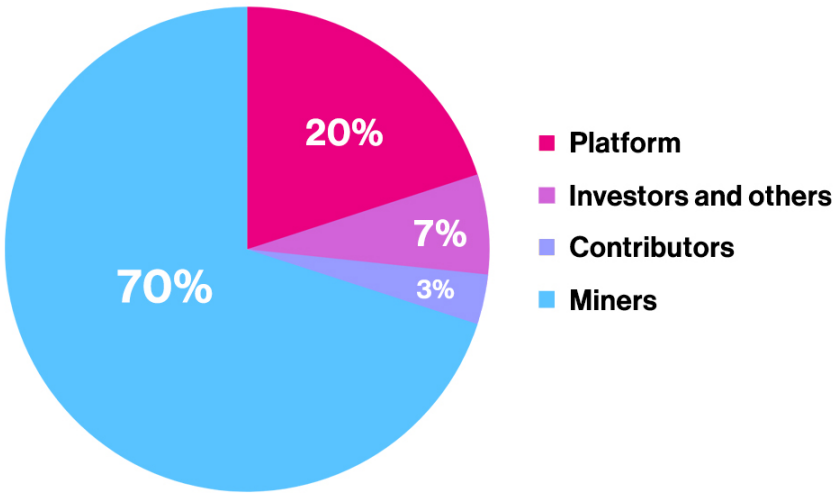
Network Overview

Tokens in Kadena are as simple as, and function in an identical way to, Ethereum. Coins are generated through mining. Existing coins may be:

- directly transferred between users
- used for creating new smart contracts
- used for paying the gas cost of executing smart contracts

Kadena's smart contracts are written in Pact, an open source, formally verifiable, human readable, and Turing incomplete language. Pact is designed for ease of use and adoption by developers and non-technical professionals alike. Gas is paid to the network for the execution of Pact smart contracts on the Kadena blockchain.

Kadena Token Allocations

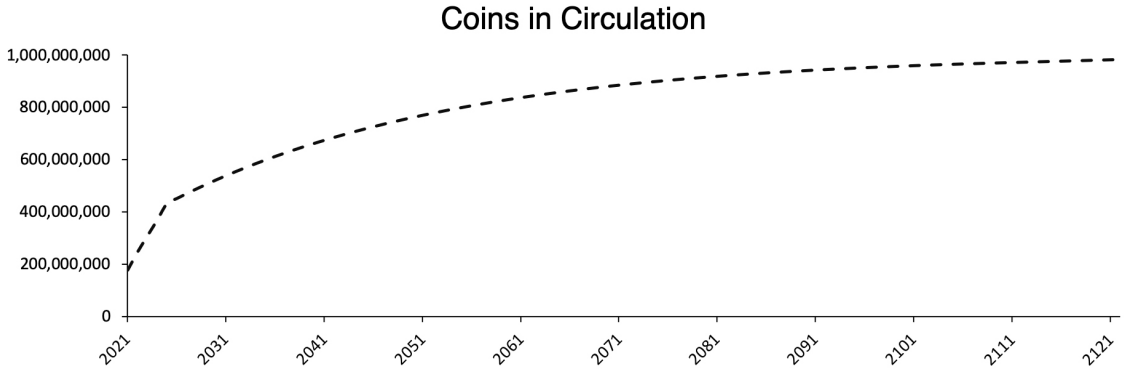


1. Mining

The majority of the coins in the Kadena economy are mining rewards. As Kadena is a Proof of Work network, it relies on decentralized mining for the network's function and growth. Miners receive block rewards for validation/production of blocks. The block reward will be in the platform's native cryptocurrency, Kadena (KDA). Miners will also be able to receive KDA as transaction fees or gas payments for the execution of smart contracts. The minimum fractional unit of KDA is a "Hop", a trillionth, named after Grace Hopper.

Block rewards are readjusted against a set schedule every six months, with roughly half of the remaining minable coins issued as block rewards every 20 years. Since Kadena has a fixed quantity of tokens, Kadena is mineable for a period of approximately 120 years. In practice, this makes the economic model fall between a strictly inflationary (Ethereum) system and a capped/deflationary (Bitcoin) system.

Unlike PoW projects that have come before Kadena, where the interests of miners are at odds with that of users and businesses, Kadena's Chainweb protocol aligns all users' interests. Kadena is built to scale from the start and initially launches with a 10-chain network that can be hard forked to add additional chains when adoption overshadows existing throughput.



2. The Platform Reserve

Kadena takes the long view on blockchain. The platform reserve is not released until years 2 through 5 after launch. The platform reserve is oriented towards the post- inflection point of smart contract adoption, as opposed to positioning for divestment.

In the next decade, business adoption of public smart contracts technology will take place. When that happens, crypto will have a cyclical problem. Widespread adoption means that business-oriented services are necessary. However, these services are often low-margin and demand large native capital reserves to function. By the time these services are required, the native currency is generally too valuable and volatile for the necessary quantity of native currency to be amassed. The platform reserve may be used to capitalize future necessary crypto-native services that our community will need. The long-term intent of the platform reserve is to act as a treasury for future operations through monetization, and not divestment. Since the platform reserve is allocated in the genesis block and vests over five years, the platform reserve is unconnected to hash power and confers no governance or control over the network. The platform reserve is an investment in the longevity and success of the network. It will enable opportunities for businesses of all sizes.

Examples of our plans for the platform reserve include:

Traditional Insurance:

Once significant business adoption of smart contracts begins, businesses will need to insure their contracts. As custody platforms, exchanges, and dApps mature, they will need some form of insurance. Security breaches such as Parity's Multi-Sig Wallet, or the DAO, or Mt Gox hacks would have been far less damaging fiscally and in terms of public trust had the underlying infrastructure included insurance in the native currency. Insurance is one of the primary holding pens for large sums of currency in existing monetary systems. This is no different with cryptocurrency except that the volatility of cryptocurrencies means insuring in the native currency carries tremendous risk. It is a natural development for the platform reserve to be partially monetized via insurance products that are capitalized in native cryptocurrency.

Smart Contract Security Audits as Due Diligence for Insurance:

Insurance is necessary but not sufficient for business to be conducted through blockchain based smart contracts and the crypto sector as a whole to grow. Users need a system for finding bugs and verifying code, known as Formal Verification. Kadena's universal smart contract language Pact supports Formal Verification. While some companies offer "smart contract audits," these audits are a best effort where vendors are selected based on reputation. In the next few years, Kadena aims to upend this model and offer audits that formally verify smart contracts and then provide insurance for the verified smart contract. As the verifier is still built by people and people are fallible, the insurance product is a safeguard. This process creates a virtuous cycle, in that novel or advanced contracts may require extending Pact's open source verifier's coverage. By offering insurance linked to the verifier's capabilities, we can fund the iterative advancement of the verifier.

Volatility Risk of Gas:

The volatility associated with the price of gas must be addressed since it poses significant risk. Kadena plans to provide products (swaps etc.) for businesses to hedge their risk. A significant sum of KDA is needed to sustainably capitalize the providers.

Community Gas Station Grants:

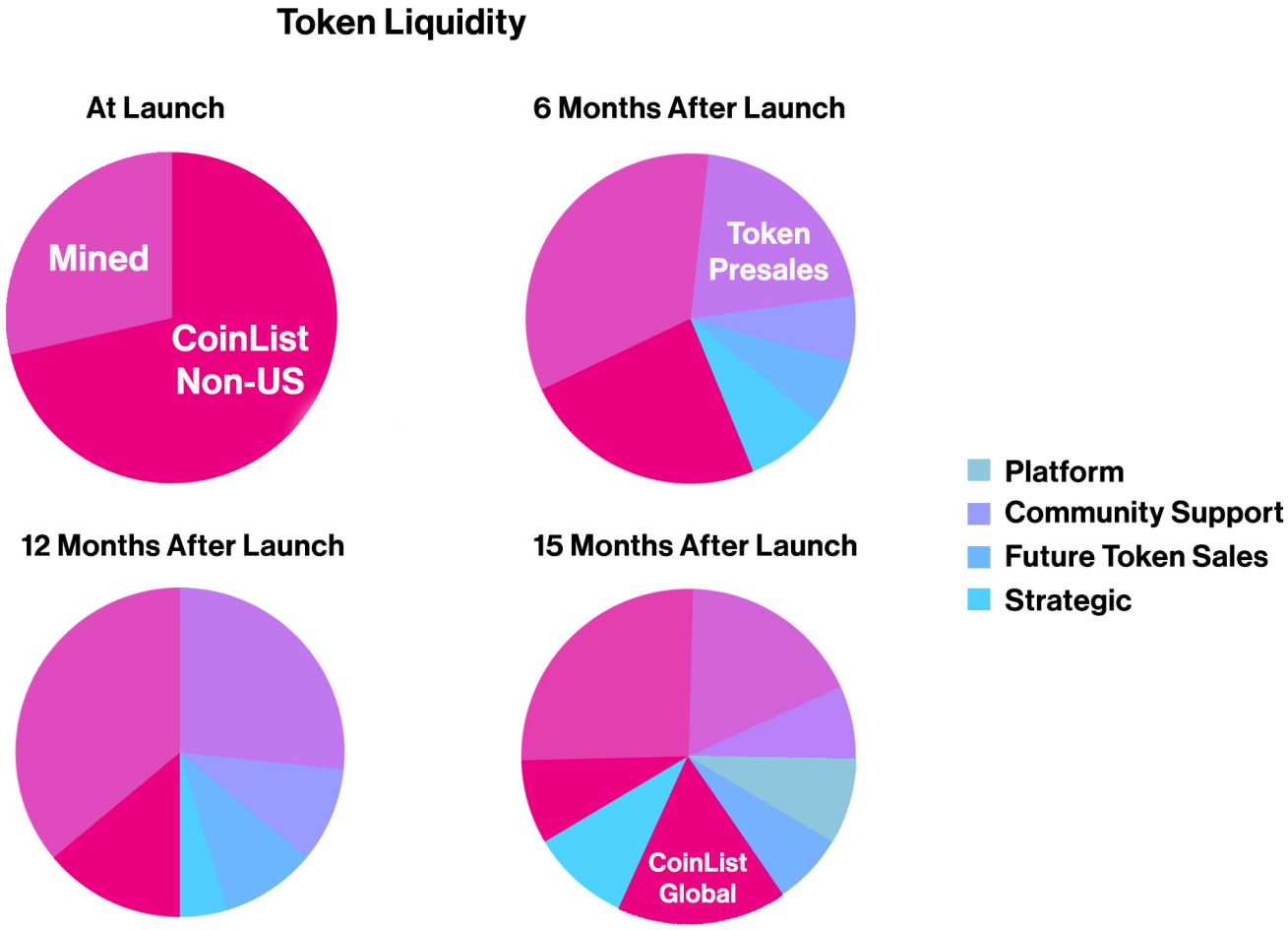
The most future-tech service that the platform reserve can offer is "gas stations". Gas stations are accounts that refund all gas utilized to execute specific smart contracts to users. When combined with Pact's ability for dApp developers to co-sign transactions and pay for a user's gas costs in using a dApp, we see gas stations as a powerful way for the platform to cover many years of gas costs. This approach solves a major user experience issue associated with dApps; new dApp users will no longer need to purchase crypto to interact with a dApp. Gas grants facilitate an accessible, easy experience for onboarding new users to the platform.

3 & 4. Key Stakeholder Allocations: Investors, Contributors and Others

Presales

To date, Kadena has completed a SAFT Round 1 and Round 2. The SAFT Round 1 sold 4.5 million coins at $0.50 per coin in Q4 2017 and the SAFT Round 2 sold 17.2 million coins at $0.75 per coin in Q1 and Q2 2018. These coins come out of lockup on a monthly basis over a one-year period, starting the month after the network's public launch.

The money raised from the Round 1 and 2 SAFTs has allowed Kadena to grow the team and sustain operating costs, hiring highly skilled people to ensure a successful network launch as well as building out business collaborations for post-launch opportunities.



CoinList Sale

In the beginning of November, we will be launching two coinciding token sales on CoinList's platform.

- **CoinList Non-US:** This offering is available to non-US buyers. Similar to an IEO, tokens purchased will be liquid exclusively on Coinlist's RFQ exchange shortly after the sale ends.
- **CoinList Global:** This offering is a SAFT available to both US and non-US accredited investors. They are locked up until December 2020 and come out of lockup in equal installments in Dec'20, Jan'21, Feb'21.

Strategic Allocations

All other allocation coins fall into this category. These coins are for employees, advisors, consultants, business partners, the community, and for funding operations. The coins come out of lockup on various schedules starting at platform launch and continuing for the following three years. The decision for a gradual vesting over a long time period is because we are committed to being a part of the longevity and health of the network. While we are excited for launch, we know that it's only the beginning. Our belief in the project is strong and the longer vesting creates aligned incentives with the community.

Timing

Mining on Kadena begins soon. Public mining goes live in advance of the fully functional public launch in December. When this launch occurs, the full functionality of the network including transfers and smart contract execution alongside the ability to create dApps on the Kadena blockchain is enabled. During this burn-in phase prior to launch, the total number of mined coins will be approximately two million.

A Brief Summary of Projected Major Token Milestones:

October 29th, 2019:	CoinList Registration begins
November 4th, 2019:	CoinList Sale begins
November 22, 2019:	CoinList Sale ends
December 6th, 2019:	Kadena transaction execution is enabled
January 1st, 2020:	SAFT Presale Round 1 and 2 begin to vest
January 2nd, 2020:	CoinList Non-US sale tokens can settle to mainnet
December 1st 2020:	SAFT Presale Round 1 and 2 finishes vesting
	CoinList Global SAFT begins vesting
January 1st, 2021:	Platform reserve begins to vest
February 1st 2021:	CoinList Global SAFT finishes vesting