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Lite-paper

# Calaswap

CONTENTS

# 01 INTRODUCTION

The virtual asset industry is currently the source of considerable attention, and it began with Bitcoin which proved the possibility of electronic payment without third-party intervention. The virtual asset industry started with payment and expanded to various fields such as NFT and Defi, and Defi is the most notable field among them.

In particular, AMM(Automated Market Maker) is the DEX Protocol that played a major role in bringing Defi to its current status. With AMM, not only can anyone trade in a trustless way that conforms to the decentralization philosophy, but they can also be the main source of liquidity to the liquidity pool. It allows anyone to become a market maker of decentralized exchanges, provide liquidity, and earn their own fees. P2P occurs between the individual and another individual, which requires someone for the transaction, such as the exchange. Whereas AMM is a new method that does not require a counterparty because the transaction is completed by a defined contract, Peer to Contract (P2C).

Instead of a buy/sell orderbook, DEX traders can trade based on a liquidity pool created by liquidity providers who receive the transaction fees according to their contribution. And it never requires additional screening or qualification to participate as a trader or liquidity provider.

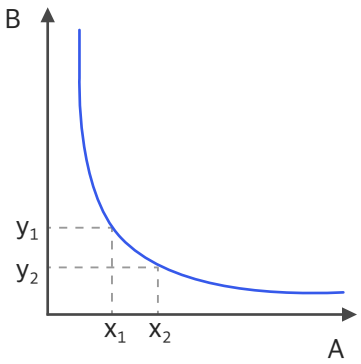
However, sufficient liquidity must be provided for AMM to operate smoothly. As Defi does not have any administrator managing transactions such as exchange operators, AMM transactions can be distorted if liquidity is not sufficiently provided.

Uniswap, a leading Ethereum-based Defi protocol, operates successfully via liquidity pools of approximately $788B.

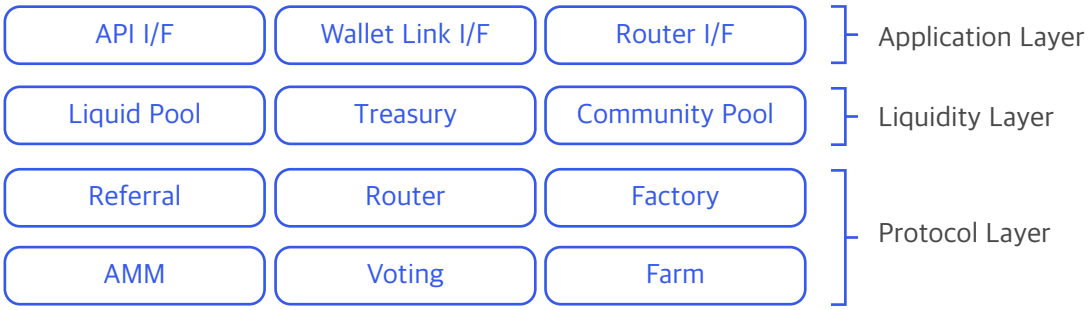
# 02 PROTOCOL OVERVIEW

AMM is an innovative trading mechanism that has evolved further from the existing orderbook-based DEX and transformed the on-chain cryptocurrency transaction. Instead of Buy/Sell orderbook, liquidity pools created by liquidity providers allow traders to swap between currencies. Also, liquidity providers share the transaction fees arising from the liquidity pool as revenue according to their liquidity contribution.

Calaswap's AMM mechanism is based on the x*y=k formula. When creating liquidity pools, each price range depends on the quantity of each token. For example, if the liquidity supply of x tokens increased, then the number of y tokens would be decreased for swap transactions to maintain the constant function k. It is designed to decide the price according to the change of supply per token in the liquidity pool.




## I. Layered Architecture




Calaswap's structure is designed to enable users to achieve comprehensive and secure transactions through market liquidity. However, there is a variety of uncertain risks in liquidity supply, and the asymmetry of time, information, and subject should be eliminated to meet the user's requirements.

The layered Architecture of Calaswap is suggested to fulfill the requirements above.

## i . Protocol Layer

In Calaswap, every transaction is completed by smart contracts based on digital signatures without connecting participants of each transaction. Transactions are handled based on a predefined strategy with liquid pools and agreed fees.

## ii . Liquidity Layer

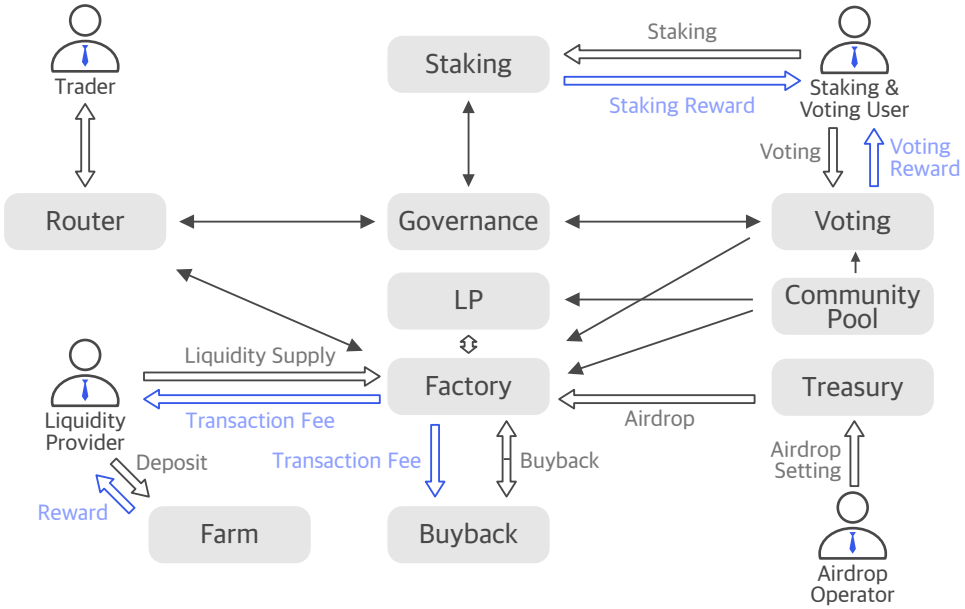
Rules of payment for various liquidity sources will be defined with smart contracts. By combining various liquidity sources through smart contracts, the best exchange rate can be calculated, and risks caused by trustless counterparties can be solved. Atomic swap with smart contract does not require trust between two trading parties.

## iii. Application Layer

Calaswap supports the expansion of service through application layers. We increase the convenience of participants of the ecosystem with supporting API, I/F for wallet services, and routing I/F, and these are key elements to guarantee the expansion of the ecosystem by enlarging exchanges with external projects.

Slippage may occur in swap transactions via AMM. In addition, liquidity providers may experience a non-permanent loss in the process of adjusting the pool's token price by the automated market mechanism due to the gap in the price of a pool's tokens and external tokens.

## Ⅱ. System Design




### Router Smart Contract

Routers using the library fully support all the basic requirements of the front-end that provide transaction service and liquidity management. Furthermore, the router does not manage the token balance so that it can be replaced stably without the need for trust.

This is a policy in case a more efficient smart contract pattern requires replacement or additional features are in need. The router is given a specific release number, and the protocol website and Git of the project team release the recommended information.

The published governance contract allows users to propose a vote on Calaswap's key policies. However, to propose a vote, users must have a governance token that can be obtained as a Staking reward for the $CLS token.

### Governance Smart Contract

Registration, enforcement of votes, and aggregation of voting results of Calaswap are administrated by the governance smart contract. The published governance contract allows users to vote on Calaswap's key policies. However, voters need to hold a governance token that can be obtained as a Staking reward for $CLS token.

### Staking Smart Contract

Staking offer interest rates on token deposit. In particular, governance token which allow users to vote on key decisions can be earned for staking $CLS token, the fiat currency of Calaswap in addition to the interest compensation.

### Factory Smart Contract

Factory Smart Contracts governs entire Calaswap's token pair registration and

transaction-related features. Also, it governs all the features related to the contract of $CLS token, the fiat currency in Calaswap, and governance token mining.

### Farm Smart Contract

Calaswap's Farm offers users opportunities for Yield Farming. You can stock LP tokens and acquire $CLS tokens in return. In addition, Calaswap will provide incentives for more liquidity pairs by offering liquidity providers the opportunity to stake their LP tokens to Farm.

### Voting Smart Contract

Voting represents the voice of the Calaswap community so that the community can participate in the decision of Calaswap's future development. Holding a governance token is essential to vote. Governance token holders can vote on the submitted proposal through Governance Smart Contract.

### Treasury Smart Contract

Treasury Contract manages the Airdrop Operation. Operators with authority can set and proceed with the Airdrop.

# 03 SECURITY

## Ⅰ. Transaction Atomicity

Smart contract design ensures the atomicity of the transaction in a user's on-chain transaction. All transactions conducted by Calaswap's Smart Contracts are completed with the terms of the transaction being met, or, if unsuccessful, the user's assets are kept in wallets under the user's control.

## Ⅱ. Trustless

Transaction in Calaswap is performed through smart contracts without third-party involvement. The project team will open the smart contract to Github to enable people to audit. Trustiness of the project will be built based on secured transparency.

## Ⅲ. 3rd-Party Security Audit and Bug Bounty

To ensure the safety of Calaswap's smart contracts, the project team will request an audit from a trusted external security specialist. Audit reports will be available on the project team's Github, and whenever new services are added, audit reports for the smart contracts will be released without delay.

The Bug Bounty program will also help the community contribute to the stable operation of the project.

# 04 TOKENOMICS

## Ⅰ. Decentralizing Calaswap

Calaswap provides true value, fairness, and innovation to decentralized finance through high-quality products and services, and the major structural changes are decided by a vote in the community while the whole platform maintains decentralized governance of $CLS token holders.

## Ⅱ. Ecosystem Overview

Calaswap is an Automated Market-Making (AMM) swap protocol, with a Defi service where everyone can become a liquidity provider and earn transaction fee income, the ecosystem participants can be classified as follows:

- **USER**
  The tokens can be exchanged using the wallet service provided by Calaswap and the automated liquidity pools.

- **Liquidity provider**
  LP, Liquidity provider, pool their tokens in the pool they want to. LP, Liquidity provider, pool their tokens in the pool they want to. If you provide liquidity to the pool, you will receive LP (Liquidity Pool) Token as proof, where the number of LP Tokens received represents your stake (%) in the total pool, and you can receive the commission revenue generated from the pool as a liquidity supply reward based on this LP.

- **Farming & Staking**
  You may be rewarded with $CLS tokens by farming the LP tokens received as liquidity supply rewards, or you will be rewarded with $CLS tokens or non-$CLS tokens by staking $CLS tokens.

- **Community Participant**
  Community participants can influence the key decision-making of Calaswap by participating in governance. It is a structure that benefits the participants as Calaswap develops.

- **Airdrop Operator**
  For promising new projects, mutual marketing can be carried out in consultation with Calaswap, the creation of initial liquidity and the securement of suppliers can be made through effective content exposure, and the liquidity linkage is available.

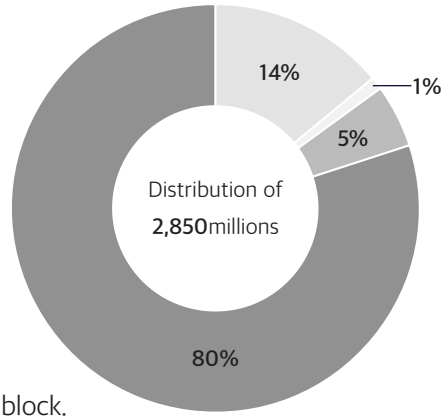
## Ⅲ. Token Distribution

| | |
|---|---|
| Name | Calaswap Token |
| Ticker Symbol | CLS |
| Chain | BEP-20 |
| Max Supply | 3,000,000,000 CLS<br>- 150 million CLS for Initial Liquidity and Treasury for Calaswap Service<br>- 2,850 million CLS will be distributed as follows* |

*

| Details | Proportion |
|---|---|
| Farm / Launchpools | 80.00% per block |
| Referral | 5.00% per block |
| SAFU | 1.00% per block |
| Team | 14.00% per block |

※ As initial conditions, 20 CLS tokens will be distributed per block.




| Distribution | Content |
|---|---|
| Initial Liquidity | Supply initial liquidity and treasury for Calaswap |
| Farm / Launchpools | Staking your liquidity provider tokens in Calaswap Farms pairs and receive $CLS tokens in return. Or stake your $CLS token in Calaswap Launchpools and earn other tokens for Free |
| Referral | Receive $CLS from your friend's earnings in Farms and Launchpools |
| SAFU | SAFU and rewards for Bug Bounties |
| Team & Advisors | Members and advisors who have led the project |

Token distribution plans contained in this paper may be changed by changes in the project roadmap, changes in technology development, and other changes of situation which can affect token issuance and distribution. If changes are required for the above reasons, Calaswap project may propose governance vote for the decision.

## Ⅳ. Lock Plan

* Initial Liquidity : Release evenly for 15 months from the issuance date.

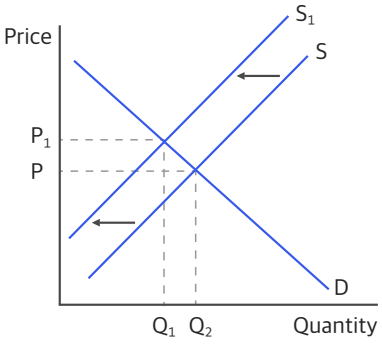
## Ⅴ. Deflation Mechanisms

20% of all transaction fees will be used to repurchase $CLS tokens from the open market and burn.

* In general, $CLS token burn occurs once a month and the information on burning will be disclosed transparently. For other products to be released in the future, the deflation mechanism can be considered.

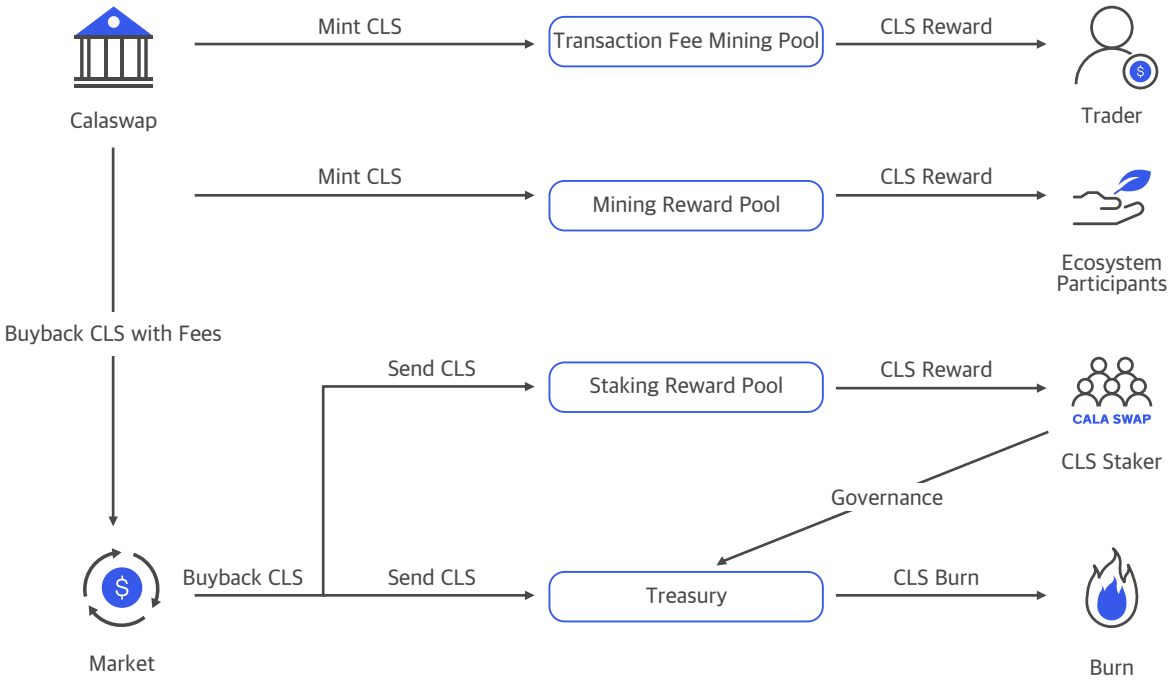
**Coin burn has several advantages as below:**

To use the cryptocurrency sent to the wallet address, you need the private key that can open the wallet. In other words, without the private key, you cannot use any of it. Since wallet addresses without private keys can only receive coins and cannot be taken out again, sending coins to these wallets will have the same effect as coin burn.




The biggest reason for a token burn is to increase value. The figure above supply decreases.

Token burn also reduces the number of tokens in use. Continuous token burn helps maintain the stable value of tokens, which not only provides a high APR for the liquidity supplied by Staking participants but also creates a more robust and sustainable ecosystem where the scarcity of CLS tokens increases as more users participate and become active. It could potentially make the holder's token more valuable than before burning.




Economic Mechanisms

## VI. Governance

Calaswap DAO is a decentralized autonomous organization that governs Calaswap. DAO governance decisions range from allocating Treasury funds for specific proposals to deploying new protocols to Calaswap, and everything in between.

The creation of Calaswap DAO offers direct control of the community about extended governance mechanism by indicating movement to completed DAO features. The entire participants of DAO will be committed to achieving the common purpose which Calaswap DAO and $CLS token to be fully decentralized, owned, and managed by DAO.

* The entire explanation about Calaswap will be disclosed transparently through Gitbook before launching the service.

# 05 ROADMAP

**2022 Q2**

Calaswap Service POC Release

**2022 Q3**

Calaswap Beta Version Disclosure

**2022 Q4**

Calaswap Launch

Farms Feature Open

Beta Tester Airdrop Distribution

**2023 Q4**

Pool Feature Open

Calaswap DAO Feature Open

# 06 RISKS

## Ⅰ. Investment Risk

CLS is a utility token issued by Calaswap, not an investment product. Before making a purchase decision, carefully consider the purchase objective, previous experience, financial situation, acknowledgeable risks and other relevant situations, and fully understand the risks associated with the CLS purchase.

## Ⅱ. System Risk

Security is the priority in Calaswap. So Calaswap's core team and external security audit team invested a lot of resources to make sure the protocol was secure and reliable.

The smart contract code associated with Calaswap is not only public but verifiable, it also, participates in the Bug Bounty program through an external security audit team to find vulnerabilities.