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ChaiDEX Team

## Abstract

**ChaiDEX** is a noncustodial P2P exchange that lies primarily on the Ethereum Virtual Machine and all chains on top of it. Chaidex achieves cross-chain asset trades, and low gas fees, and takes advantage of the High Transaction speeds of many chains. We at ChaiDEX believe the next version in DeFi will evolve when there is a scope to transfer the flow of data amongst the chains to interact, currently this is a shortcoming we have observed and have worked to evolve as a solution. EVM-based L1 and L2 can interact with each other to facilitate the flow of trade without involving bridges or third-party intervention, hence ChaiDEX is a secure, transparent DEX for the trader community.

There are plenty of issues with existing DEXes and CEXes.

To begin with DEX, it is completely dependent on its protocols that allow only the transfer of related products like Uniswap, which helps only ERC20 tokens to be traded, which again depends on the kind of liquidity provided by both ends, whereas if that same token is supposed to be traded with ETH (the native token) no liquidity is required. This makes it secure yet too funneled to be traded for profit, which is how an intrinsic value of a volatile token is calculated. Coming to CEX, they are not so secure, with no information on the tokens on-chain, but the ease to trade is very high, plus in recent times it's been observed



that these exchanges work no different than a traditional bank, as the individual funds are still very much depended on the exchange's security. These problems have already made way for a new set of solutions known as Hybrid Exchange, which again becomes an ambiguous interpreted term, as it still keeps oscillating between security and decentralization.

Realising the above problems, Chai DEX keeps the very proper balance between the security & decentralisation of a DEX plus making it as feasible as CEX. This document explores the new era of a Hybrid DEX via Chai DEX.

## Introduction

By definition, ChaiDEX is a P2P crypto assets options trading platform. It has the following helping modules enabling its functions (mention more about DEX and what the DEX does - which tokens are present, mention on which platform and why that platform, mention more about stablecoin INR

ChaiT - BRC20 - BRISE SmartContract )

Which tokens can be traded,

1. ChaiDEX - A Decentralised Trading Platform
2. INRC - an Indian National Rupee-based (not backed) Stable Currency as a liquidation solution for the ecosystem, INRC is backed by USDC
3. Chai-T - Governance token for voting, DEX fees & future add-ons for the platform
4. Chai Wallet - Multi-Chain, Non Custodial wallet

### Chai DEX

ChaiDEX introduces and explores a new-age Decentralised platform that enables decentralization, transparency, and ease of trading with different protocols in a very secure manner with the help of actual blockchain.

ChaiDEX uses the concept of Atomic Swap for a secure, faster, and reliable method for the transfer of transactions.

We have the product built on the [bitgert](#) blockchain hence gas fees involved with the transaction are very low.

***INRC and CHAI-T are deployed on Bitgert Chain to take advantage of its low gas fee and will not be limited to the network.***

**ChaiDEX** provides the following features

- **Cross-chain asset purchases and swaps** - Chaidex's main feature cross-chain interoperability makes it easy to buy and sell assets across chains and allows users to build their portfolios without hassle.
- **Native assets in all chains without having to use wrapped tokens-** Chaidex allows swaps between chains without the use of wrapped tokens and users will get the tokens in their expected chain in native form. This removes the requirement of using bridges to convert these tokens.



- **Low gas cost and high transaction speeds-** Chaidex is p2p Dex where each asset is exchanged against INRC which initially exists (and will expand) on Bitgert Chain. And hence makes use of its low gas fee and high transaction speeds.
- **Direct purchase and redemption of ChaiDex native stablecoin INRC-** Chaidex will be the primary distributor and minting platform for INRC (which will be listed in other DEX and CEXs) and will initially handle the redemption of USD stablecoins in exchange for INRC.
- **Governance and fee token Chai(ChaiT) -** ChaiT token will be used by users to pay the platform fee of 0.1% of the trade amount. Our future expansion is to create a Chai DAO where ChaiT will be an essential tool in empowering the participant by providing them with decisional power. This will ensure a smoother functioning of the DEX in a truly decentralized form
- **Chaidex will be the primary platform for liquidity providers for backing INRC(refer to INRC whitepaper for more details)**

#### a. Platform features and architecture

ChaiDEX is a fully functional DEX to trade on any type of asset, which are represented in the supported blockchains - currently, BSC, Ethereum, Matic, and Tron.

For ease of trading across the DEX we have introduced our stable coin INRC, the value which is derived and equated to INR (Indian National Rupee). *Please note that the value is equated with INR and not backed. Our stablecoin is backed with USDC.*

To avoid tedious crypto conversions and keep an endless count of exchange value INRC is the solution for the trader. Following are the product features

- A. ChaiDEX Wallet
- B. INRC - Native Stable Coin
- C. ChaiT Token - Governance
- D. P2P

The tokenomics is followed after the product features with an explanation of the community on our platform



# Smart Contract & Security

## The Working and Flow

- A seller deposits a sum of token-X in chain-X in the ERC20 contract. He quotes an equivalent INRC he expects to receive per token. These details of the maximum INRC a buyer can deposit and is cloned onto the INRC chain where buyers can deposit.  
The INRC deposited is directly sent to the seller after deducting the Info update charges in cross-chain.
- Now once a buyer deposits to the INRC contract with the tradeID the amount of token-X he should receive is updated on ChainX. The trade is time limited and hence the buyer should go to chain-X and withdraw his amount before the trade is over (upon which token-X gets refunded regardless of the success of the buyer swap).
- The same goes for the other way around The seller deposits INRC in an exchange for TokenX in chain-X which is updated in ChainX where the buyer deposits TokenX for a swap and withdraws the equivalent INRC
- This involves the requirement of payment of platform fee in terms of Chai Tokens in violation of which the trade will not exist.

## Smart Contracts and involved functions

The ERC20 P2P contract -- which accepts and records all trades listed under whitelisted tokens

The Native Coin contract -- which accepts and records all trades listed with native coins as sole assets

The INRC P2P contract -- accepts and records all trades listed with INRC as sole assets.

The trades listed on CHAIDEX are with respect to INRC and others only. I.e A seller can Trade only INRC for any Coin/Token on recognized chains Or sell any tokens/coins in exchange for INRC

Similarly, a buyer can use INRC to buy other coins/tokens or buy INRC for any coin/token.

The deposit by sellers is called a Trade The amount a buyer wants to pay for and take is called a Swap.

The Swaps and trades existing in the participating chains are cloned into each other with the required details to facilitate the transfers



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## Functions and parameters (for ERC)

### 1. depositSeller

```
--address _seller, --seller address --In ERC contract /ChainX
uint256 _id, -- unique TradeID which is origin in the current
              chain
uint256 _amount, -- TradeDeposit Amount
uint8 _tokenIndex, -- Tokens are mapped to their addresses so
                    the right token for deposit is chosen
uint256 _endtime -- It is the duration for which the Trade
                  should exist starting from then
```

### 2. depositBuyer --

```
uint256 _id, // This is the ID of a TradeClone for a trade
existing on opposite chain
uint256 _amount // the amount to be deposited
```

### 3. withdrawBuyer



```
(uint256 _id)
```

#### 4. refundSeller

```
(uint256 _id)
```

Here ID is the trade ID so that after time is over the seller can take back any remaining funds.

#### 5. Only in INRC -- PayFeeCHT

```
(uint256 _trade  
uint256 _amount)
```

The buyer or seller will have to pay a fee before initiating the deposit overriding which will lose their deposit amount.

#### 6.withdrawFee

```
(uint8 _index) --only owner --transfers all fee collected all fee  
collected
```

### Events Emitted

```
event tradeCreated (uint256 _Tradeid,address Seller,uint256 _amount);
```

```
event tradeCloneCreated (uint256 _TradeCloneid,address Seller);
```

```
event BuyerDeposit(uint256 _TradeCloneID,address Buyer,uint256 _amount);
```

```
event SwapComplete(uint256 _swapID,uint256 Parent,address Buyer);
```

```
event swapCreated(uint256 _SwapID,address Buyer);
```

```
event Sellerwithdraw(uint256 _TradeCloneid,address Seller,uint256 _amount);
```

```
event refunded(uint256 _Tradeid,address Seller,uint256 _amount);
```

### Chai-T Token

#### a. Governance Overview

As ChaiDEX is decentralized & has diversified its governance it will use the ChaiDEX token (Chai-T) to grant voting power. Alignment between governance token holders and DEX stakeholders is crucial for successful decentralized governance, and Chai-T tokens are the catalyst to drive this alignment.

ChaiT token is an investment;

Contract Address



ChaiDEX contact address

Ethereum

Binance

Polygon

Bitgert

## **b. Supply and Distribution**

When Chai-T was launched, inflation started as a constant for 1 Billion ChaiT per year. At the launch of the Chai-T system, however, a 10% burning mechanism was introduced: every year, the inflation should be adjusted to 10% by burning, with gradual steps every year starting one year after the launch of the new tokenomics system.

This means the final BAL supply will be about Chai-T 500 Million after 5 years of circulation  
Distribution

Total Supply - 1 Billion Chai T

Buy Back and Burn - 10% per annum for 5 years

Total Lifetime supply - 500 Million Chai T

For investors and team:

1. Vesting Period - 4 year

2. Cliff Period - 1 year

ICO/IDO/With Public - 60%

Investors - 21%

Marketing (Airdrops, etc.)- 10%

Team & Advisors - 4%

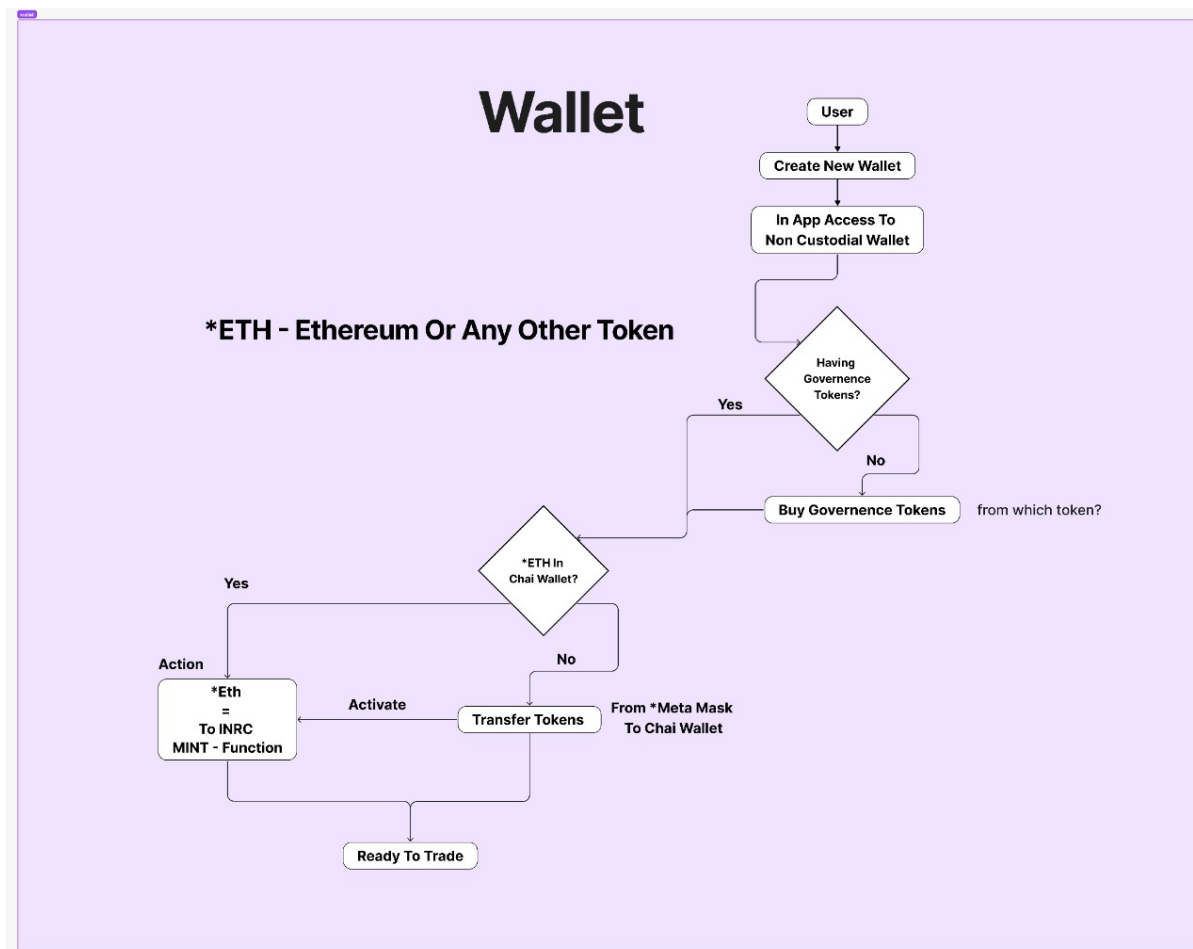
Improvement protocol - 5%

## **APY Maths**

The Liquidity pool will consist of USDC, USDT, and BUSD, but all of these will be converted to USDC which will be used to back our Stable Token INRC. Every transaction via the Chai DEX platform or using any of its Smart Contracts will attract a 0.1% gas fee. This Gas fee is further divided into two pools out of which one is the APY pool and the other is the Maintenance pool, 80% goes to APY & 20% to Maintenance.



# Chai Wallet



## Chai Wallet

With the concept of the multi-chain wallet, & non-custodial we have improved & upgraded the traditional DEX options for better security, and reliability and ensure no break of security or hacks on the platform.

Chai-wallet allows users to manage accounts and their keys in a variety of ways, *excluding hardware wallets (this feature will be released in the next update)*, while isolating them from the site context

This is a great security improvement over storing the user keys on a single central server, or even in local storage, which can allow for mass account thefts

(Under Chai Wallet) Currently, the wallet can function on Ethereum (the most trusted), Binance Smart Chain (most popular among retail users), Polygon (most popular layer 2 solutions), and Bitget Chain(developer friendly & secure blockchain)

## Brief about Non custodial nature of Chai Wallet & its Multi Chain Functionality / Blockchain Connection

Non-custodial crypto wallets give you complete control of your keys and therefore your funds, removing the involvement of third parties to manage your funds which adds more





security options for your funds.

Users can generate key pairs with the Chai wallet, as our wallets are integrated with other chains such as Ethereum, Binance, Polygon, and Tron, and in the future, we will be present on all EVM-enabled chains, this eliminates the need for the bridging solution.

### **How to buy governance - USDT Can be imported from metamask wallet to our wallet**

1. Chai T is the governance token for the DEX, ChaiT can be bought using USDT.

As we are a multi-chain & non-custodial wallet, USDT can be imported from Metamask wallet to Chai wallet to purchase the governance token, this provides ease for users for trading.

2. ChaiT token is the essential token as it will allow users to trade and all gas fees on the network will be paid using the Chait

2. New Users can download/ create the wallet, which provides non-custodial in-app access.

#### **Case 1: A user has a governance token and eth in the Chai Wallet**

A. The trader uses pairing available INRC/ ETH; INRC/ BNB; INRC/MATIC, INRC/TRON

B. Pairing allows minting an equivalent amount of INRC against the used crypto.

C. Trading begins

#### **Case 2: A user doesn't have a governance token but has .eth in the Chai Wallet**

A. USDT can be imported from Metamask wallet to Chai wallet to purchase the governance token

B. The trader uses pairing available INRC/ ETH; INRC/ BNB; INRC/MATIC, INRC/TRON

C. Pairing allows minting an equivalent amount of INRC against the used crypto.

D. Trading begins

### **Wallet Tech Overview**

React is used to develop the wallet and Redux is used for the state management

### **Why we are the solution -**

It's an EVM-enabled Wallet that allows access to multiple chains, this ends the need to transfer wrapped tokens. Though ERC 20-enabled wrapped tokens can still be purchased/traded using Chai Wallet.

The tokens can be purchased straight away from the respective chains and traded on the ChaiDEX platform.

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