

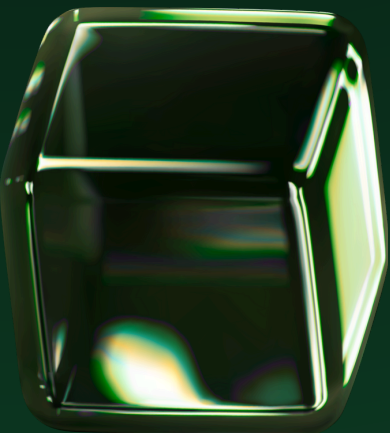


HEDGEX DAO

WHITE PAPER

Version 2.0

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HEDGEX 2.0

Decentralized Finance Platform & BTC Hedging Protocol

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1 Introduction

1.1 Motivation

Traditional DeFi platforms focus on spot trading or lending pools, leaving BTC exposure management to third-party derivatives. Hedge Dao addresses this gap by offering built-in BTC/ETH hedging contracts that automatically rebalance positions, enabling users to capture BTC/ETH price movements without the complexity of self-custody or manual trading. **Hedgex DAO** solves this by introducing **built-in BTC and ETH hedging contracts** directly within its DeFi ecosystem. By combining decentralization, automation, and a user-governed model, **Hedgex DAO** makes advanced risk management simple, accessible, and trustless for every DeFi user.

1.2 Hedgex DAO Mission

HedgexDAO governs protocol upgrades, parameter tuning, and treasury allocation through a transparent, token-weighted voting system. Our mission is to empower stakeholders to co-create a resilient DeFi infrastructure that mitigates volatility risk and fosters community-driven growth. “Hedgex DAO is where community, automation, and financial resilience meet.”

1.3 HGXD: BTC-Backed Governance & Exposure Token

The Hedgex DAO Token (**HGXD**) is a fully decentralized governance and utility token **backed by BTC exposure**. Community members holding HGXD drive platform evolution through on-chain voting. HGXD also serves as an indirect BTC exposure vehicle:

- **BTC-Backed Liquidity:** HGXD–BTC LP on Uniswap V2 pairs HGXD directly with BTC, so LP providers earn trading fees and **capture BTC price gains**.
- **Passive BTC Exposure:** Simply holding HGXD or HGXD–BTC LP positions grants automatic exposure to BTC’s market moves and **no need for direct BTC custody**.
- **3× BTC Hedging Leverage:** Integrating with Hedgex’s rebalancing contracts, HGXD holders can amplify BTC exposure up to 3× through programmed rebalances.
- **DAO Governance:** Every HGXD token equals one vote on proposals (lock-based multipliers apply), giving holders full control over protocol upgrades, parameter tuning, and treasury allocations.

HGXD combines governance, indirect BTC bagging, and leveraged hedging in a single token, aligning incentives between token utility and BTC price growth.

2. Hedgex DAO Protocol Overview

Hedgex Dao comprises four core layers:

- **DEX Engine:** Interfaces with 1inch Aggregation API and Router v5 for optimized swap execution, gas savings, and multi-path liquidity routing.
- **Hedging Module:** Manages BTC/ETH-tracking contracts with algorithmic rebalancing. Enables both **individual hedging contracts** and a **public hedging pool**
- **Reward & Referral System:** Distributes profit-sharing payouts and multi-level referral bonuses in HGXD. Built-in **multi-level referral engine**
- **Profit-sharing :** Distributed in HGXD tokens based on user activity and DAO-defined rules
- **Backend Services:** Node.js (v18.x) using Express and Web3.js for on-chain interactions, MongoDB for state persistence, and updates real-time notifications.

3. Hedgex DAO System Architecture

- **Frontend:** ReactJs, NextJs with Tailwind CSS and Web3Modal for wallet connectivity.
- **Smart Contracts:** Written in Solidity 0.8.19, audited, and deployed via proxy patterns for upgradability.
- **Off-Chain:** Node.js services handle user sessions, order tracking, and reward calculations.

4 Hedgex DAO Functions

4.1 Spot & Swap Trading

- **Swap:** Users submit a swap request via the DEX UI; the front end calls the 1inch Aggregation API, estimates gas and slippage, then executes `aggregate()` on the 1inch router contract.
- **Spot:** Market orders use 1inch SDK to fetch quotes; trades are settled on-chain and recorded off-chain for analytics.

4.2 BTC Hedging Contracts

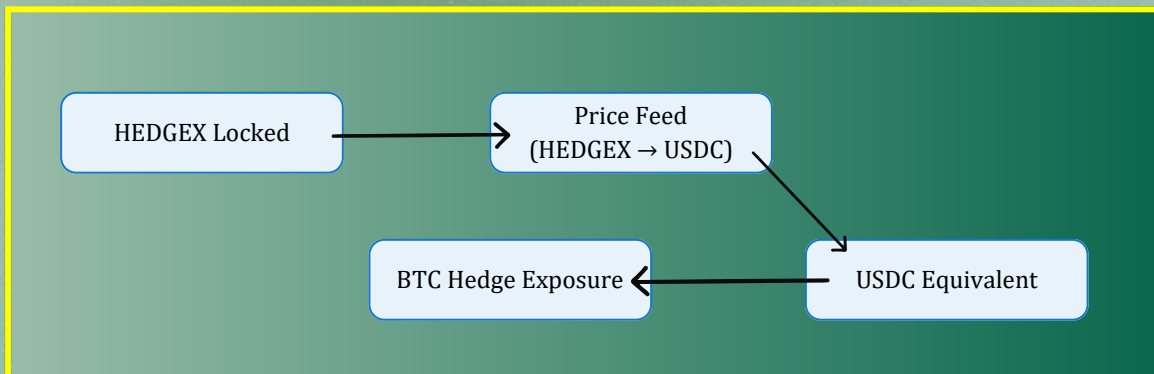
- **Contract Creation:** Requires minimum HGXD to create hedging contract based on DAO-defined rules and lock for hedging to earn hedging reward.
- **Auto-Close:** Hedge contracts automatically close when the user's accumulated profit reaches 3× with original principal amount, locking in gains and releasing all collateral.

- **Early Break Criteria:**

- After 1 year, users are allowed to terminate (break) their hedge contract early, but must pay a penalty of X% of the principal, where:
- X% is determined by DAO governance through voting and can change over time.

- **Important Protocol Safeguard:**

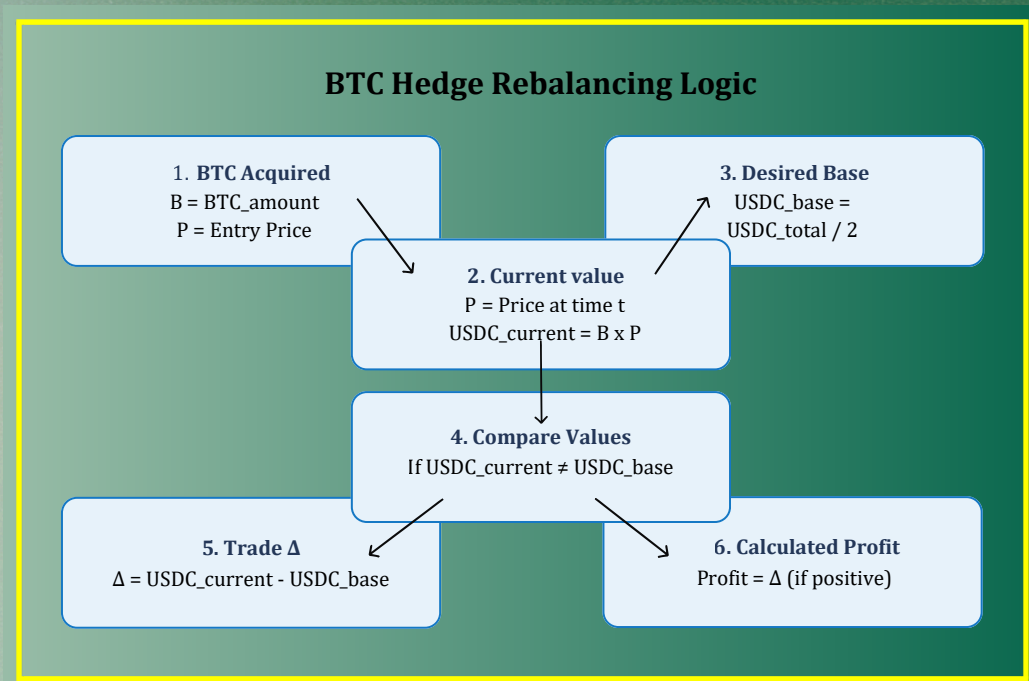
- If a user has **already claimed rewards equal to or exceeding their original principal**, early break is **disallowed**.
 - This rule is in place to **protect the solvency of the hedge pool** and maintain fairness across all participants.
- **Allocation:** $\text{Amount_locked_} \times \text{Price_HGXD_USDC} \rightarrow \text{USDC_total}$.



- **Rebalancing Logic:**

- - Let B_t = BTC_amount acquired, P_0 = entry price, P_t = price at time t .
 - - Desired base = $\text{USDC_total} / 2$.

- $\text{Current USDC_value} = _B_ \times _P_.$
- If $\text{Current USDC_value} \neq \text{Desired base},$
trade $\Delta = \text{Current} - \text{Desired base back to USDC}.$
- $\text{Profit_USDC} = \text{Current USDC_value} - \text{Desired base}.$



4.3 Profit Sharing

Total profit in USDC is converted to HGXD using real-time uniswap v2 price feeds.

❖ **Distribution:** Portion of profit (X%, defined by the DAO) shared among stakers proportionally to their Bitorio token holdings.

❖ Distribution Model

- A configurable portion of profit (X%, defined by the DAO) is distributed to stakers.
- Distribution is **proportional to each user's stake** in the form of **Bitorio token holdings**, which represent their staking tier and share in rewards.

❖ Example:

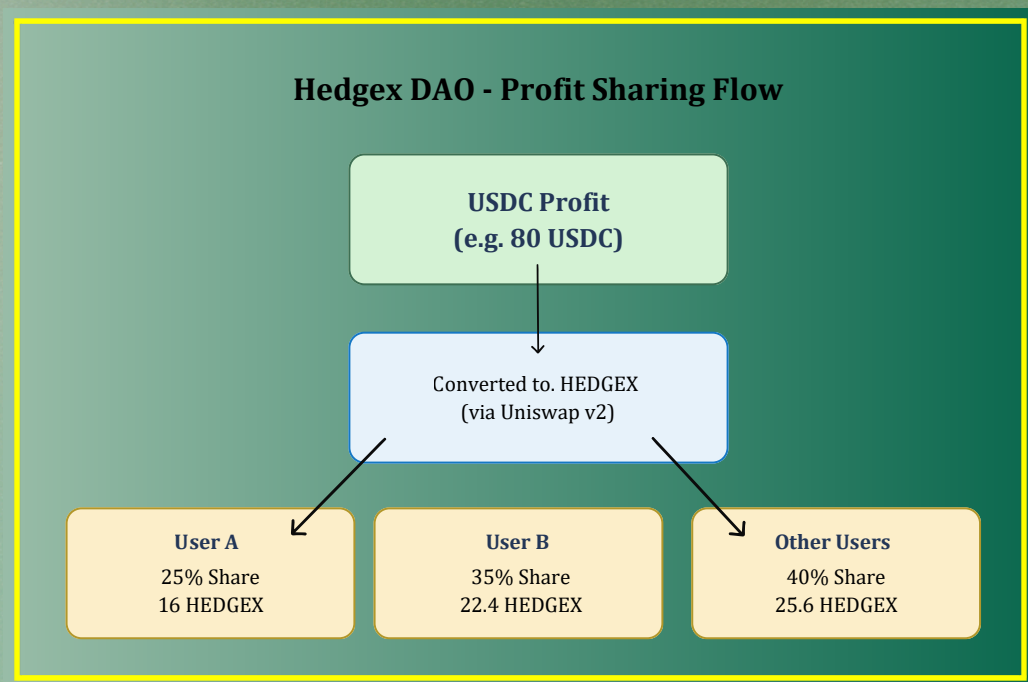
Total Profit: 80 USDC

Conversion Rate: 1 HGXD = 1.25 USDC

HGXD Distributed:

$$80\text{USDC} \div 1.25 = 64 \text{ HGXD}$$

User	Staking Share	HEDGEX Received
A	25%	16 HGXD
B	35%	22.4 HGXD
Others	40%	25.6 HGXD



4.4 Bitorio Stakeholders

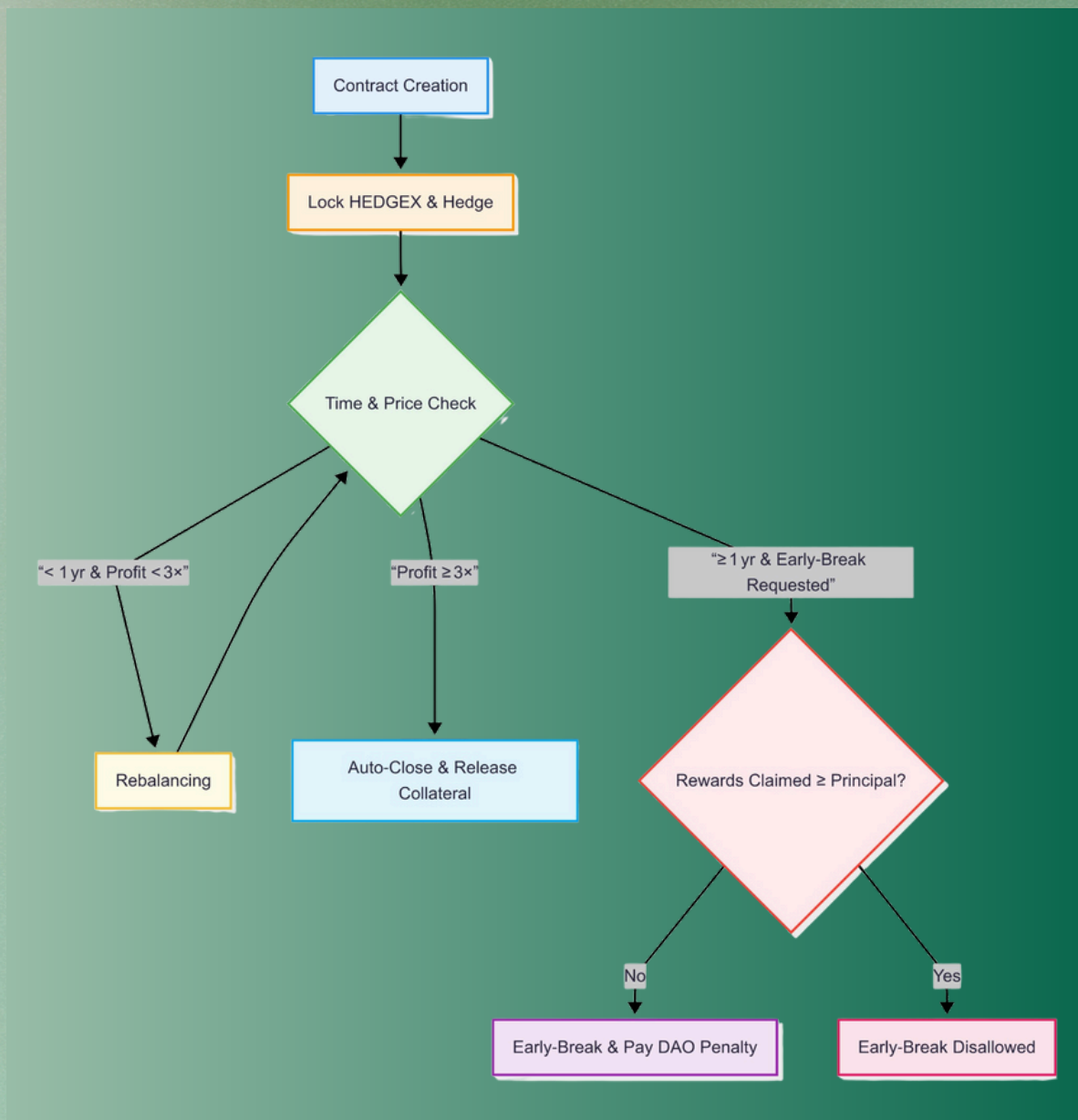
To incentivize long-term alignment and boost community earnings, Hedgex DAO offers **tiered reward multipliers** based on users' Bitorio token staking.

Users who lock Bitorio tokens alongside their hedge contracts can move into higher reward tiers and receive additional profit share bonuses.

- **Basic** (default): No additional stake; receives the baseline profit share.
- **Premium**: Stake 40%–60% of your hedged value in Bitorio; earns +10% reward on profit shares over Basic.

- **Premium Pro Plus:** Stake >60% of your hedged value in Bitorio; earns +20% reward on profit shares over Basic and Premium.
- **Stakeholder Tiers**

Tier	Bitorio Staked Relative to Hedge	Profit Share Bonus
Basic	No staking	Standard reward only
Premium	40%–60% of hedge value	+10% bonus on profit share
Premium Pro Plus	More than 60% of hedge value	+20% bonus on top of Premium



4.5 Affiliation System

❖ **Levels:** 25 levels of referrals, unlocked based on self-hedge and direct-hedge thresholds.

❖ **Qualification:**

- Levels 1–5: Self \geq \$1 000 Worth of HGXD; Direct \geq \$5 000 Worth of HGXD.

- Levels 6–10: Self \geq \$2 000 Worth of HGXD; Direct \geq \$10 000 Worth of HGXD, etc.

❖ **Dynamic Updates:** If direct referral closes a contract, amounts are deducted from qualification metrics.

Simple Numeric Example

- **A's Qualification**

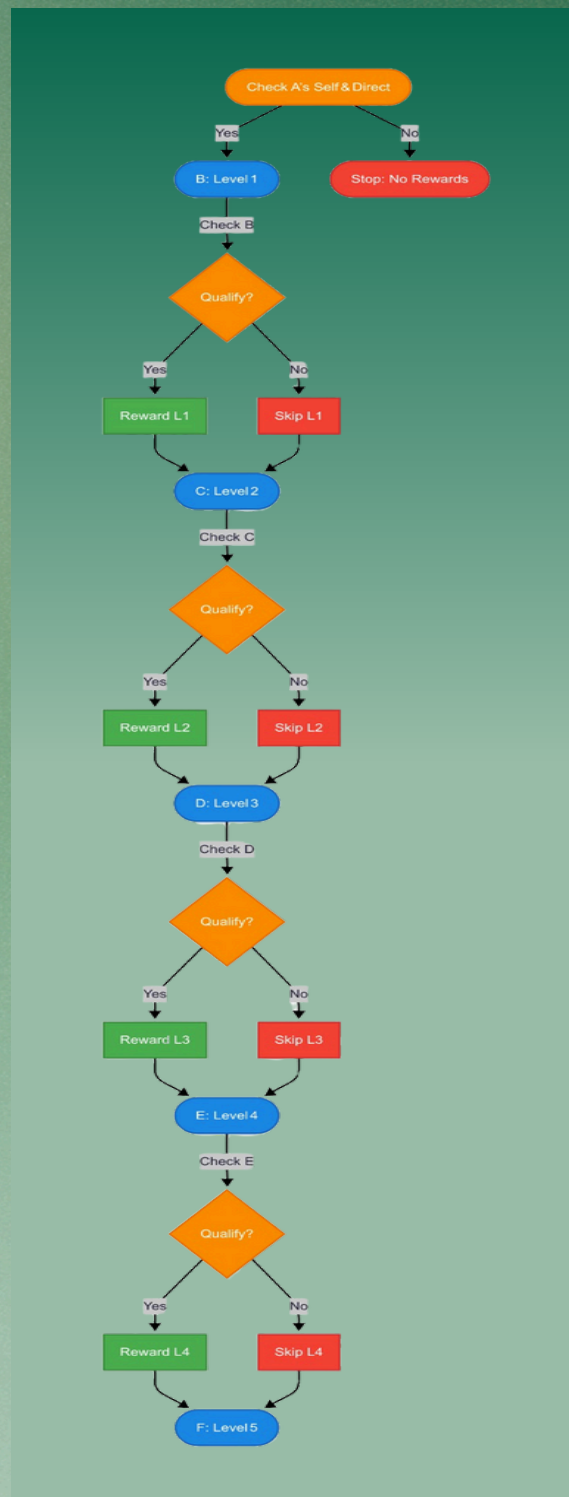
- Self-hedge: \$1,200 (\geq \$1,000 ✓)
- Direct-hedge: \$6,000 (**sum of B's hedge**; \geq \$5,000 ✓)
→ **A qualifies** and can earn referral rewards at levels 1–5.

- **ReferralStats & Outcomes**

Level	User	Self-hedge	Direct-hedge	Meets Level N?	A Earned Reward?
1	B	\$2,000	\$7,000	Yes	Yes
2	C	\$800	\$4,000	No	No
3	D	\$3,000	\$6,000	Yes	Yes
4	E	\$1,500	\$2,000	No	No
5	F	\$2,500	\$5,500	Yes	Yes

Result:

- A meets its own thresholds, so it's "active."
- Among levels 1–5, only B, D, and F satisfy their own Self & Direct criteria.
- **A therefore receives rewards at levels 1, 3, and 5 (from B, D, and F).**



5 Governance

5.1 Proposal Lifecycle

1. Proposal Creation: Only the admin or designated governance delegates can create proposals via the **Governance Contract**.

Proposals define specific actions such as:

- Adjusting hedge parameters
- Changing profit distribution rates
- Updating smart contract permissions

2. Discussion Period: An on-chain discussion window opens for community feedback on the proposal.

Once submitted, the proposal enters a **community discussion window**.

During this phase, stakeholders can:

- Review proposal details
- Share feedback and suggest amendments
- Raise early concerns or improvements

This occurs **on-chain or via the governance dashboard**

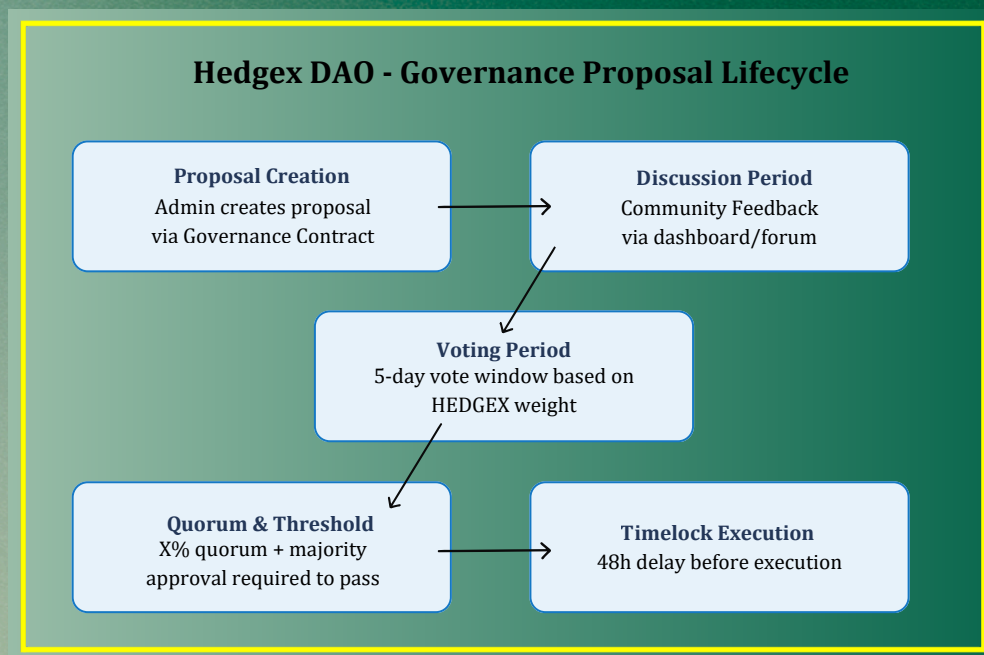
3. Voting Period: Voting runs for approx 5 days. Each voter's weight equals their locked/held HGXD amount. Voters can cast "**For**", "**Against**", or "**Abstain**".

4. Quorum & Threshold: A minimum of X% of total votes must receive (quorum), and favor cast votes must be greater than disapprove cast votes.

- A proposal is valid only if:
 - A **minimum of X%** of the total circulating voting power participates (**quorum**)
 - The number of '**For**' votes exceeds '**Against**' votes
- Thresholds (X%) can be updated by prior DAO proposals

5. Timelock Execution: Approved proposals enter a 48-hour timelock before execution by the TimelockContract, providing time for review and potential dispute.

- If approved, the proposal enters a **48-hour Timelock** before execution.
- This buffer period allows:
 - Final review
 - Community transparency
 - Emergency dispute or rollback (if future logic allows)
- After the timelock, the proposal is **executed on-chain** via the **TimelockContract**.



5.2 Voting & Delegation

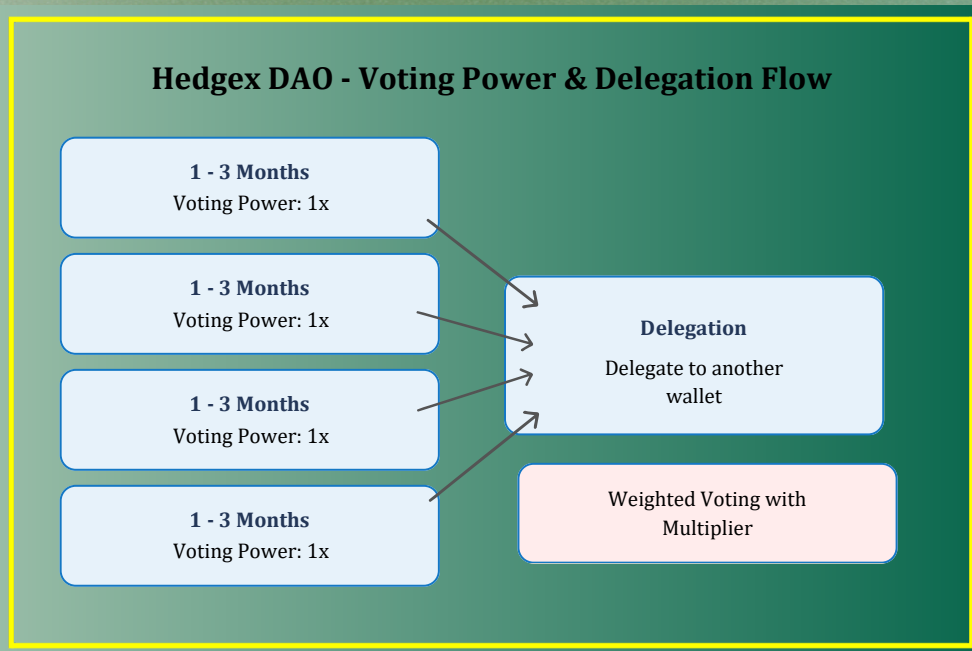
The Hedgex DAO governance system is designed to reward long-term commitment and enable representative participation through delegation.

- ❖ **Lock-Based Voting:** Users lock HGXD tokens for hedging; longer lockups yield multipliers up to 3×
- ❖ Voting power is determined by the amount of HGXD tokens locked and the duration of the lock.
- ❖ Longer lock durations provide higher **voting multipliers**, incentivizing deeper commitment to the protocol.

Lock Duration	Voting Power Multiplier
1–3 months	1×
3–6 months	1.5×
6–12 months	2×
12+ months	3×

- ❖ **Delegation:** Token holders may delegate their voting power to any address; delegated power carries the same lock characteristics as the delegator.
 - Any token holder can **delegate** their voting power to another wallet.
 - **Delegated power includes the same lock-based multiplier** as the original holder
 - Delegation is:
 - Non-transferable (only power is delegated, not tokens)
 - **Revocable at any time** by the delegator

This allows passive participants to support active contributors or trusted community leaders in governance decisions.



5.3 Incentives & Penalties

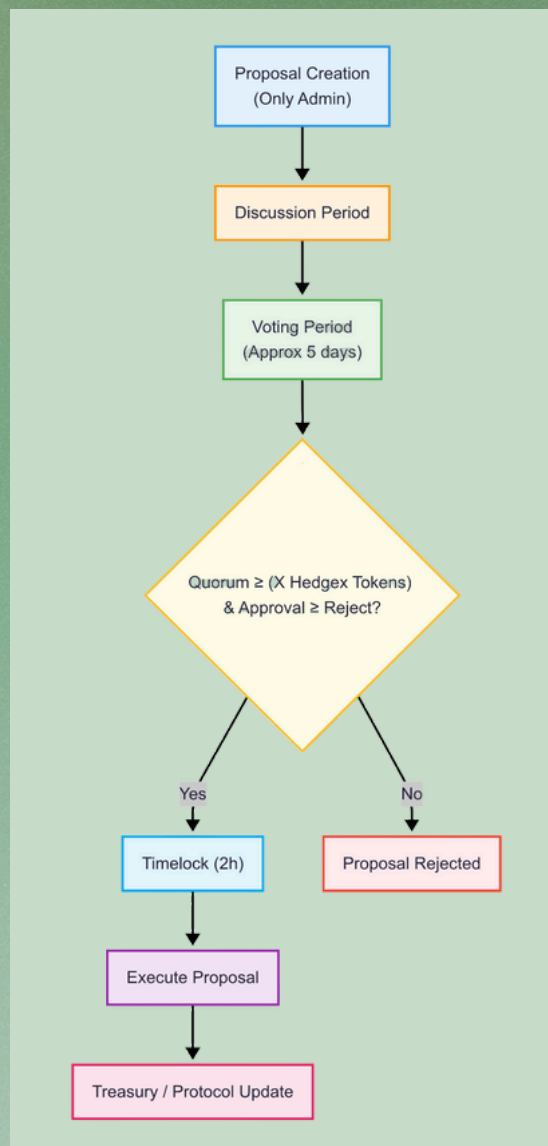
- ❖ **Incentives:** X% of tokens from treasury taken for voters and distributed proportionally to active voters based on their vote weight.
- ❖ **Penalties:** Voters who abstain on two consecutive proposals incur a 5% reduction in next voting power to encourage consistent engagement.

5.4 Treasury Management

- ❖ **Profit Accrual:** Protocol profit accumulates in the Treasury Timelock Contract.
- ❖ **Disbursement Process:** Any use of treasury funds grants, liquidity incentives, or buybacks requires a standard governance proposal and follows the same lifecycle.

5.5 Transparency & Audits

- ❖ All proposals, votes, and timelock actions are recorded on-chain and viewable via the Hedgex Dao Explorer.
- ❖ Governance contracts are audited annually by reputable third-party security firms to ensure integrity and safety.



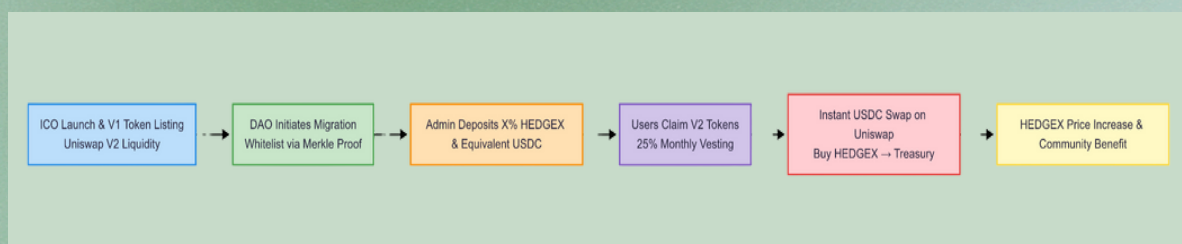
6 Migration Process (Hedgex V1 -> V2)

Hedgex V2 migration allows existing V1 holders to seamlessly upgrade their positions and realize immediate value. Using a DAO-managed **Merkle-proof whitelist** and monthly vesting, users claim fixed-price V2 tokens while corresponding wBTC liquidity is swapped on Uniswap to boost HGXD price, benefiting the entire community.

- **Timing:** Migration opens a few days post-ICO once Hedgex-wBTC liquidity is stable.
- **Security:** Merkle-proof whitelist ensures only eligible V1 holders migrate.
- **Vesting:** 25% of claimable amount per month, fixed price based on V1 listing.
- **Instant Profit:** wBTC swaps pump V2 price instantly, rewarding all community members.
- **Treasury Impact:** Purchased HGXD is funneled to DAO treasury, strengthening protocol reserves.

Example Scenario

- **User:** Holds 2 000 V1 HGXD (V1 price \$1.50).
- **Claimable:** 25% → 500 V2 tokens at \$1.50 (cost 750 USDC).
- **Swap Action:** MigrationContract swaps 750 USDC for HGXD V2 on Uniswap V2 for HGXD-wBTC-USDC, sending to the treasury.
- **Price Impact:** HGXD V2 price rises immediately.
- **User Benefit:** 500 tokens × (Current HGXD V2 Price) = X USDC unrealized gain.
- **Protocol Benefit:** Treasury's HGXD holdings increase, bolstering long-term funding.



7 Contract Structure Breakdown

Contract	Responsibility
Hedgex DAO Token (HGXD)	ERC20 with minting and DAO votes
Bitorio Token	Used to increase reward ratio for profit sharing & referrals
PoolManager	Manage Hedging Rebalancing and Funds
AffiliationContract	Referral tracking and reward calculations
Treasury Timelock	Secure DAO treasury assets
Governance DAO	Delegates calls to Collective & Steward logic

8 DAO Principles

Hedgex DAO is founded on core principles that guide its governance, sustainability, and long-term decentralization. These principles ensure that the protocol evolves transparently and remains resilient as adoption grows.

❖ **Mission Alignment:** Community-driven upgrades within immutable epochs.

- All protocol upgrades must align with the **core mission** of decentralized, user-governed hedging.
- Upgrades are deployed within **immutable epochs**, preserving stability while enabling structured evolution.

❖ **Bootstrap:** Initial stewards appointed; full decentralization as community grows.

- At launch, **initial stewards** manage early governance operations and security.

- Control will **transition to full DAO governance** as the community grows and governance participation increases.
- Token-based proposals and voting progressively take over protocol control.

❖ **Immutability & Integrity:** On-chain contract upgrades cannot alter historical positions.

- **On-chain upgradeability** is enabled via proxy patterns but **historical hedge contracts and user positions are immutable**.
- This ensures backward compatibility, fairness, and auditability.

❖ **Cross-Chain:** Future deployment on L2 chains with bridged governance and timelock guardians.

- Hedex DAO is designed to deploy across multiple Layer 2 chains Arbitrum (e.g., Base, Arbitrum).
- DAO governance will remain **bridged**, with **timelock guardians** securing consistency and execution across all chains.

9 Tokenomics

❖ **Total Supply:** 30 Million HGXD.

- **Initial Supply:** 25 Million HGXD.
- **DAO Mintable:** 5 Million HGXD.(With Max Cap)

❖ **Allocation:**

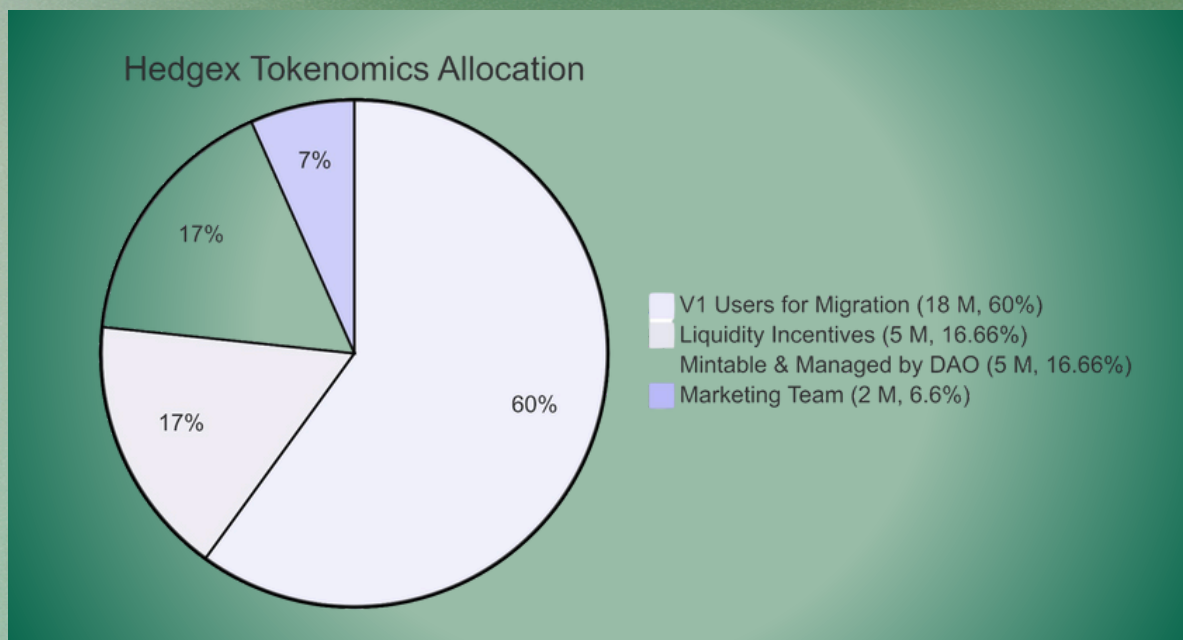
Total Supply	30 Million HEDGEX 5
Liquidity/ICO Incentives	Millions (16.66% Of Total Supply)
Marketing	2 Millions (6.6% Of Total Supply)
V1 Users for Migration	18 Millions (60% Of Total Supply)
Mintable And Manage By DAO	5 Millions(Reserve) (16.66% Of Total Supply)

❖ **Inflation:** Capped minting of total supply and minting managed through DAO.

❖ **Mintable:** The HGXD token employs a community-governed, capped minting mechanism: all new token issuance strictly limited by a predefined supply ceiling must

be proposed and approved by the DAO, ensuring that any additional tokens (for marketing initiatives or other strategic purposes) are transparently authorized by token holders.

- ❖ **Burnable:** The HGXD token features a DAO managed burn mechanism: token holders vote to permanently retire tokens, thereby reducing the circulating supply and reinforcing scarcity to support long-term market value.



10 Acknowledgments

We thank contributors to 1inch and the Arbitrum/Base community for open-source tooling.

11 Disclaimer

This document is informational only and not financial advice. Participation involves smart contract and market risks; please conduct your own due diligence.

