

Fensepedia



1. Abstract

Introduces the Dexfense Protocol, its market context, core problem statement, and key vision.

Between 2023 and 2024, meme coins emerged as a dominant subculture in the Web3 ecosystem. Tokens such as WIF, BONK achieved explosive growth and captured widespread attention. However, most of them remained short-term speculative assets due to limited utility and structural constraints. Despite Solana's fast throughput and low transaction fees, it still faces issues such as a lack of on-chain content, shallow liquidity, and a meme-token-centric speculative environment.

Dexfense Protocol offers a new approach to addressing these issues. Rather than treating meme coins as idle or speculative assets, Dexfense transforms them into **active and usable SPL token assets** through decentralized gameplay. Users transfer meme tokens into program-managed escrow accounts and participate in the game, earning rewards which are conditionally routed via CPI to DEXs like Raydium under favorable conditions via on-chain DEXs based on their performance.



Dexfense is not a typical reward-based GameFi; it allows players to **experience arbitrage intuitively and internalize the core DeFi principle of 'risk equals reward'**. Based on gameplay outcomes, users encounter differentiated swap conditions, thereby naturally **learning the mechanics of DeFi**.

By combining meme-driven sentiment, gameplay repetition, and reward mechanisms under risk, Dexfense presents a **gameplay-driven routing mechanism that interfaces with existing on-chain DEXs**. It extends beyond meme coins and leverages existing liquidity pools on platforms like Raydium to target a broader user base and more practical assets.

2. Project Overview

Outlines the problems Dexfense aims to solve and the structural approach it adopts

Dexfense Protocol gamifies on-chain liquidity and enables users to directly engage with DeFi mechanics by participating in the liquidity cycle through gameplay. It replaces static, abstract swap interactions with action-based engagement, where in-game decisions yield direct rewards tied to actual liquidity flows.

Core Objectives

- Provide **real swap opportunities through gameplay**, using meme tokens or existing Raydium liquidity pools
- Lower the **entry barrier to DeFi** and encourage active liquidity circulation
- Allow players to **intuitively and repeatedly experience the “risk = reward”** structure through game design

Key Features

1. **Token-staked entry system:** Players use real assets (meme coins or LP tokens) to enter, directly tying participation to DeFi activities.
2. **Randomized enhancement selection:** Strategic decisions are required at each wave through randomly presented power-up options, directly affecting difficulty and potential rewards.
3. **Performance-based reward structure:** Players who succeed in survival earn higher reward multipliers, while those who fail face reduced or forfeited reward—delivering the “risk equals reward” principle through gameplay.

Dexfense is not just a game—it's a form of **on-chain economic activity connecting liquidity with user participation**, aiming to expand the real use of DeFi ecosystems



3.Game Structure & Mechanics

Explains the core gameplay of Dexfense, including genre, wave system, and elemental enhancement mechanics.

Dexfense is a roguelike wave defense game. Players pay an entry fee with tokens and must survive waves of enemies over time. Random in-game choices critically influence both survival odds and final rewards.

Core Game Format

- **Genre:** Roguelike wave defense
- **Entry:** Token deposit (LP or meme tokens) to begin gameplay
- **Goal:** Survive and eliminate as many enemies as possible to maximize swap reward multipliers

Wave & Upgrade System

- 25 waves with progressively increasing difficulty
- Every 5 waves, choose 1 of 3 random power-ups
- Power-ups impact attributes like element type, area, attack speed, critical hit rate, and duration
- Strategic selections stack to determine final performance

Attribute & Affinity System

- Enemy types: Normal, Dealer, Healer, Tank, Boss
- Players can infuse arrows with elemental combinations (fire, ice, lightning, poison, physical)
- Effects: Slow, DoT, crit chance boost, AoE, etc.
- Some attributes have additional bonus effects or synergies
- See "Fensepedia" for detailed stats and matchups

Reward Formula



- Rewards are calculated based on pool exchange rate and adjusted by game performance:

$$\text{Reward} = \text{Pool exchange rate} \times (\text{Kills} / \text{Benchmark value})$$

- Benchmarks vary by difficulty and wave count

The essence of Dexfense lies in letting players manage choices and risk, **earning real rewards based on gameplay**. Thus, it operates as an **on-chain simulation of DeFi dynamics** beyond simple entertainment.



4. Liquidity Architecture & DEX Integration

Describes the reward system based on external and internal pools, swap vs. minting logic, and pool management strategies.

Dexfense is not just a token-reward game; it connects user performance directly to liquidity on existing DEXs, offering a novel play-to-swap DEX model.

Target Pools

- **Raydium-first integration:** Prioritizes Solana's leading AMM
- **Supports meme and SPL tokens:** Includes WIF, BONK, USDC, SOL, LP tokens, etc.
- **Own token pool:** Dexfense-native token pools are also available and adjust based on user actions



Reward Handling: Swap vs Mint

- **External Pools (e.g., Raydium):**
 - Rewards are swapped through DEX based on current pool rates
 - Real-time arbitrage potential based on performance and pool liquidity
- **Dexfense Pools:**
 - Rewards are minted, not swapped
 - If performance exceeds pool rate → difference covered by **treasury**
 - If less than pool rate → surplus is **re-added to the pool**
- **Distribute Treasury:**
 - A separate treasury injects **5% of its balance into pools every hour**
 - Prevents pool imbalance and stabilizes mint-based reward pools

Dexfense tokens are not freely floating assets but are **supplied via a predictable minting and settlement model**, adapting based on risk and results.

Liquidity Flow

- Tokens used for entry are deposited into target pools via smart contracts
- Reward settlement contracts handle performance-based swaps/minting
- Gameplay repetition and volatility generate natural liquidity flow and volume



5. Tokenomics

Details token issuance, distribution ratios, utility of the native token, fee model, and burn conditions.

Dexfense uses **multi-pool tokenomics**, spanning external pools like Raydium and internal mint-based pools. Users participate with diverse tokens, and reward settlements follow either swap or mint paths.

Initial Supply & Allocation

- **Total Supply:** 100,000,000 DFNS
- **Initial Allocation:**
 - Community/Events/Airdrop: 20%
 - Liquidity Support (LP incentives & Dexfense pools): 20%
 - Treasury: 15%
 - Team & Early Contributors: 20% (1-year lock, 2-year linear vesting)
 - Strategic Partners & DAO Reserve: 15%
 - **Investors:** 10% (6-month lock, 18-month linear vesting)



Revenue Model & Fees

- Dexfense charges a **base 0.5% fee** from gameplay-driven liquidity circulation
- Collected during entry or reward swaps
- Fees fund:
 - Treasury & staking rewards
 - Incentives for partner pools
 - Community rewards and growth campaigns

Native Token Utility

- **Core Principle:** Utility token for unlocking game modes and system features
- **Minting:** Based on performance-based calculations

- **Usage:** Unlock special modes, items, community voting, etc.

Usage Expansion

- Beyond gameplay, tokens unlock:
 - Characters
 - Upgrade systems
 - DAO voting and proposals
 - Community-based staking rewards

Burn Conditions

- Token burn occurs when:
 - Purchasing/unlocking characters, skins, or modes
 - Paying DAO proposal/voting fees
 - Entering special modes like Hard Mode
 - Protocol buyback burns a portion of fees

This structure keeps circulation under control and links user actions with a **deflationary incentive model**.



6. Technical Architecture & Scalability

Covers the hybrid on-chain/off-chain structure, data flow, and future scalability plans.

Dexfense adopts a hybrid structure combining on-chain settlement with off-chain gameplay logic to maximize scalability and user experience.

On-chain vs Off-chain

- **Off-chain:** Game logic and validation occur on client/server
- **On-chain:** Post-game results (kills, survival, etc.) are verified and recorded on-chain
- **Reward Settlement:** Contracts handle DEX swaps or minting based on verified performance

This minimizes on-chain cost while ensuring transparency and tamper-resistance.



Data Flow

1. User connects wallet and pays entry fee
2. Client runs Phaser-based game locally or synced with server
3. Upon game end, server cross-validates logs with client
4. Validated result is sent on-chain to trigger reward contract
5. Contract executes settlement via external DEX or internal pool

Scalability Features


- **Multi-pool support:** Expandable to DEXs beyond Raydium
- **Seasonal modes:** Rules, wave count, attributes can vary by season
- **NFT integration:** Link player-owned NFTs to buffs, appearances, effects

Although minimal-cost at launch, Dexfense is structured for **future expansion and onboarding** via this hybrid design.

7. Roadmap

Presents the phased rollout plan, key development milestones, and ecosystem expansion roadmap.

Dexfense follows a staged release strategy based on user feedback and data. Each phase prioritizes game refinement, on-chain stability, and community growth.

Phase	Period	Key Activities
Closed Beta	May–June 2025	<ul style="list-style-type: none"> - Core gameplay testing- - Collect balance/feedback- - Closed user feedback
Open Beta	July–August 2025	<ul style="list-style-type: none"> - Public launch- - Pool integrations- - Token infra testing- - Rebalancing & bug fixes
Main Launch	Sept–Oct 2025	<ul style="list-style-type: none"> - Full game release- - On-chain swap/mint comp.  - Launch native token pool- - Unlock content & DAO v1
Post-Launch	Q1 2026+	<ul style="list-style-type: none"> - Seasonal modes- - NFT & UGC integration- - EVM expansion- - DAO-based governance

This roadmap may adapt to ecosystem feedback and aims to verify Dexfense's liquidity model and scalability.

8. Community Participation

Dexfense sees its user base not just as players, but as **co-designers and propagators of the ecosystem**. The structure encourages active community involvement—from gameplay and proposals to meme-making and DAO governance.

Participation Types

- **Players:** Enter the game with tokens and earn rewards
- **Content Creators:** Propose items, upgrades, and modes via forums or governance
- **DAO Contributors:** Use tokens or NFTs to propose/vote/manage budgets
- **Meme & Marketing Supporters:** Create/share Dexfense content and earn rewards

Community Rewards

- Token incentives for:
 - Proposal acceptance
 - Feedback/test contributions
 - Top in-game performers
- Non-financial rewards like NFTs, whitelists, exclusive characters during campaigns

DAO Governance Model

- Dexfense aims to shift **planning, operations, mode design, and partnership decisions** to the DAO
- The core team focuses on infra/dev; key decisions are made via DAO proposals and voting
- DAO manages:
 - Season/event planning



- Game designer commissioning
- Economic tuning
- Prioritizing partnerships

Dexfense experiments with a **community-led publishing model**, empowering DAO members to shape the game's direction and economic flow.



9. Appendix & References

Summarizes key terminology, reference materials, and upcoming technical documentation.

To be added: diagrams, token address, documentation links, etc.



0.Fensepedia

Objective: Survive all 25 waves by defending the Castle against incoming enemy units (Token2).



Wave System

- Game difficulty increases with each wave.
- A boss unit appears every 5 waves (Wave 5, 10, 15, 20, 25).
- After each wave, players choose 1 of 3 random upgrade cards.
- Defeating a boss grants a unique **Awaken** upgrade.
- If the total unit count reaches 35, the game ends.



Core Systems



Castle

- The structure the player must defend.
- Starts with 100 HP.
- Takes damage equal to the attack power of any enemy that reaches it.
- Game over when HP reaches 0.

Token1 (Player Arrow Launcher)

- Automatically fires arrows from the top of the castle.
- Targets the frontmost enemy.

Token2 (Enemy Units)

- **basic**: Standard enemy unit.
- **dealer**: Fast and high-damage unit.

- **healer**: Restores 1% HP to nearby allies every 0.5 seconds.
- **tank**: High HP, slow-moving unit.
- **boss**: Large unit with powerful special effects.



Combat System

- **Total Damage** = (Base + Flat) × (1 + Percentage Increase) × (Crit ? 2.5 : 1) × Amplifier
- Damage is calculated separately for each element, then summed:
Physical + Poison + Fire + Ice + Lightning
- **Poison** damage does **not** apply critical hits.



Arrows & Options

- **Base Types**:
Physical, Fire, Poison, Ice, Lightning
- **Upgrade Options**:
 - Critical Hit Chance (n% chance to deal 250% damage)
 - Attack Speed
 - Total Damage Multiplier



Status Effects

- **Physbreak**: Increases physical damage by 5% per stack.
- **Fire**: Area explosion; executes enemies below 4% HP; deals 80% AoE damage within range 100.
- **Poison**: 70% chance to apply; deals 45% damage every 0.5s for 2s.
- **Ice**: Slows movement by up to 60% (increases by 10% per selection); chance to stun.

- **Lightning:** Increases damage taken by 20%; chains to 6 enemies with 70% damage, each chain deals 25% less.

Wave Progression

- **Waves 1–24:** Spawns standard units including random healer and tank units.
- **Boss Waves:** Wave 5, 10, 15, 20, 25 feature boss units.
- **Between Waves:** 30-second countdown.
- **Boss Traits:**
 - Random resistance buffs (1–3 elements)
 - Movement speed boost
 - Grants a unique **Awaken** upgrade upon defeat.

Upgrade Card System



Regular Rewards (after each wave)

- Elemental damage boosts (Flat/% for Fire, Ice, Poison, Lightning, Physical)
- Critical Hit Chance
- Attack Speed
- Global Damage Multiplier

Awaken Upgrades (after defeating a boss)

- **Physical:** Gain extra stack on hit + increased attack speed
- **Fire:** Enemies explode on death (deals area damage)
- **Lightning:** + chain targets, 100% crit
- **Poison:** 100% poison chance, applies anti-healing, increased DoT speed
- **Ice:** Expands effect radius, amplifies damage $\times 0.5 \sim 2$, adds stun chance

Combat Scaling Parameters

- **Lightning Amp:** Bonus damage to shocked enemies
- **Ice Slow Factor:** Movement speed reduction
- **Physbreak Multiplier:** Damage scaling per stack
- **Poison Chance / Duration:** Base 70%, 2 seconds
- **Execution Cap:** Automatically kill enemies below threshold HP

Difficulty-Based Settings

Base HP Calculation:

```
originHp = (Adjust Variables) * (waveConfigFactor + 1) *
difficultyConfig * (10 + (2 + difficultyConfig) * 5 * waveConfigFactor)
* 1.4 ** (this.waveCount - 1)
```



- **Healer:** $HP \times 0.5$
- **Basic:** $HP \times 1$
- **Dealer:** $HP \times 0.9$
- **Tank:** Depends on difficulty (1: easy, 2: normal, 3: hard)

```
originHp * 1.5 * (waveFactor * (difficultyConfig - 1) + 1)
```

Additional Features

- **Time Scale Button:** Toggle game speed between 1x and 2x.
- **Hit Effect:** Enemy flashes on damage taken.
- **Damage Log:** Displays real-time damage numbers.
- **HP Bar:** Shown above all enemy units.