

PIVAH PROTOCOL

Making NFTs Trade Like Tokens

Whitepaper — Draft v0.2 · Testnet Validated, Advancing to Mainnet

Testnet phase complete on Base Sepolia — preparing for audit and mainnet deployment on Base

This is a working draft describing a protocol validated on testnet and moving toward mainnet. It is not investment advice or an offer of securities.

Abstract

Pivah Protocol gives NFT collections the same liquidity mechanics that tokens have taken for granted since Uniswap: continuous, automated, on-chain price discovery — without needing a matching buyer to show up. A creator deploys a collection, seeds a bonding-curve pool with their NFTs and WETH, and from that moment any of those NFTs can be bought or sold instantly against the pool at a price the market moves in real time. Alongside the DEX, Pivah provides a full Creator Studio for minting, a peer-to-peer Marketplace for fixed-price sales, and a staking system that rewards NFT holders — from any collection, not only Pivah's own — with PIVAH. Every mechanism described in this document has been built and exercised on testnet with real users; the protocol is now advancing toward audit and mainnet deployment.

1. The Problem

NFT liquidity today mostly means one thing: list an item and wait. A marketplace listing is a static price sitting idle until exactly one buyer decides it's worth exactly that much. There is no depth, no continuous price signal, and no way to exit a position quickly without accepting whatever the highest current bid happens to be — if there is one at all. Fungible tokens solved this problem years ago with automated market makers; NFTs, being non-fungible by definition, were structurally excluded from that solution.

Separately, launching a collection has traditionally meant choosing one narrow model: either a single generative art drop with a fixed mint price, or nothing. Founders who want a token-like supply model — pick any total supply, no fixed sale price, let the market decide value after launch — have had no clean tooling for that.

2. The Pivah Solution

Pivah treats an NFT collection the way a token launch treats a token: the founder decides supply and mints to their own wallet, then price discovery happens entirely in the open market — through a DEX pool, a marketplace listing, or both. Four components work together to make that possible:

Component	What it does
Creator Studio	Deploy an ERC-721 collection — one shared image at any supply, or unique 1-of-1 NFTs generated from layered traits with rarity weights
Pivah DEX	Bonding-curve liquidity pools per collection. Deposit NFTs + WETH, price is derived from that ratio, then every buy/sell steps price automatically — no order book, no waiting for a matching buyer
Marketplace	Peer-to-peer listings at a chosen price, with the NFT held in escrow from the moment it's listed until sold or the listing is cancelled
Staking	Stake any NFT, from any collection, and earn PIVAH continuously from a shared reward pool

3. Protocol Architecture

3.1 Creator Studio

Two paths to a collection, matched to what a creator actually has ready:

- Shared artwork — every token points at one image, any supply, zero setup. This is the model that scales cleanly to thousands of tokens with no per-item rendering cost, and matches Pivah's token-like philosophy directly.

- Generative traits — upload layered artwork (background, body, accessories) with rarity weights; Pivah composites unique combinations client-side, with a live preview of sample combinations before anything is deployed, and a visual alignment guide so accessory art lines up correctly on the base layer.

Either way, deployment writes an ERC-721 contract, stores metadata, and the founder mints their chosen supply to their own wallet at zero cost — no fixed public sale price is set at this stage.

3.2 Pivah DEX

Each collection can have one or more liquidity pools, each pairing that collection against a quote token (WETH on Base). A pool's starting price is never typed in by a founder — it is derived automatically from the ratio of the very first NFT + WETH deposit, exactly the way a Uniswap pair's price comes from its first liquidity deposit rather than an admin setting.

Two bonding curve shapes are supported:

- Linear — every trade moves price by a fixed WETH amount, in either direction. Predictable, steady steps.
- Exponential — every trade moves price by a fixed percentage. Feels more aggressive on thin pools, gentler as depth grows.

Liquidity providers deposit NFTs and WETH together and receive LP shares representing their portion of the pool, earning a share of every trade's LP fee. A separate protocol fee routes to the treasury on every trade and every marketplace sale.

3.3 Marketplace

For sellers who want an exact price on an exact item rather than continuous pool pricing, the Marketplace offers direct peer-to-peer listings. Listing an NFT moves it into escrow immediately — the same custody model the DEX pools and staking vault already use — so a listed NFT cannot simultaneously be staked or deposited into a pool elsewhere. Cancelling a listing costs only gas and returns the NFT instantly.

Founders listing large collections can price every token identically in one transaction, or assign a distinct price per token — useful when certain trait combinations are worth more than others — using bulk pricing tools (a start price with a per-token step, or pasting a pre-computed price list) rather than typing hundreds of individual values.

Creator royalties (ERC-2981) are honoured automatically on every marketplace sale, capped at 10% to prevent a malicious royalty hook from griefing a listing.

3.4 Staking

The staking vault accepts NFTs from any ERC-721 collection — deployed through Pivah's Creator Studio or anywhere else — with no whitelist. Every staked NFT is treated as one equal share of a fixed per-second PIVAH emission, regardless of which collection it comes from. There is no lock-up: unstake any NFT at any time, and rewards keep accruing correctly for however long it was actually staked, using the same gas-efficient accumulator pattern used across the protocol's fee-sharing logic.

4. The PIVAH Token

PIVAH is Pivah Protocol's native token, with a fixed supply of 1,000,000,000 minted once at deployment — the token contract has no mint function, so supply can never expand after launch. Today, PIVAH's core utility is the staking reward described above; as governance comes online (see Roadmap), it is intended to extend to protocol parameters and treasury decisions. Full allocation, vesting and emission detail is set out in the companion Tokenomics document.

5. Security & Trust Model

- Custodial where it matters: DEX pools, staking, and marketplace listings all hold assets in the contract itself while they're active — not just an approval — so ownership state always reflects reality.

- No admin backdoors on core trading logic: pool pricing is purely a function of deposits and trades, not an owner-adjustable parameter after creation.
- Testnet-validated: every feature in this document has been built and exercised on Base Sepolia with real users and real transactions — that phase is now complete.
- Independent audit is the next step before mainnet (see Roadmap, Phase 2, currently in progress) — the protocol should not be treated as audited or production-hardened until that concludes.

6. Roadmap

Foundation and Testnet Hardening are complete. Pivah is now in Phase 2: Audit & Mainnet, followed by Ecosystem Growth and Decentralisation. Full detail, including what each phase actually delivers, is set out in the companion Roadmap document.

7. Governance

At present, Pivah Protocol's contracts are controlled by its founding team. The roadmap's final phase is an explicit, deliberate handover: a DAO framework governing treasury allocation and protocol parameters, with control progressively transferred to PIVAH holders rather than retained indefinitely by the team.

8. Risks & Disclaimers

This document describes a protocol whose testnet phase is complete; mainnet deployment is pending completion of an independent security audit (see Roadmap, Phase 2). Until that audit concludes, the protocol should not be treated as audited or production-hardened. Smart contracts — audited or not — carry inherent risk of bugs, exploits, or unexpected behaviour. Cryptocurrency and NFT markets are volatile; nothing in this document should be read as a guarantee of value, liquidity, or future price performance for PIVAH or any NFT traded through the protocol. Nothing here constitutes financial, legal, or investment advice. Participation in testnet activity carries no guarantee of any future mainnet token allocation.

9. Conclusion

Pivah's premise is simple: NFTs deserve the same liquidity infrastructure that tokens have had for years, and creators deserve tooling that doesn't force a choice between "one drop, one fixed price" and nothing. What's described in this document is not a roadmap promise — it is a protocol that has been built, tested, and proven on testnet with real users minting, trading, listing, and staking through it, now advancing toward independent audit and mainnet deployment.