Catapult Trade

Trade like you bet

Social trading layer | Provably fair price engine

Abstract. Catapult Trade is an iTrading platform: a dual-mode environment that fuses iGaming-style user experience with real and synthetic markets. It addresses two gaps in retail crypto, namely extractive launch mechanics and the absence of mass-consumer surfaces for real markets.

The platform offers two distinct products. **Catapult Trade Turbo** is a gamified trading environment that uses algorithmic price generation to create high-volatility markets without liquidity requirements. **Catapult Trade Hyper** is a mobile-native social trading app that routes real perps through Hyperliquid via builder codes.

Trading has entered its dopamine era, attention spans have collapsed, and the surfaces built for the previous generation of traders no longer fit. The two modes diverge in what they optimize for. Turbo strips out liquidity requirements entirely and engineers permanent volatility as the product. Hyper exposes mass-consumer audiences to real markets through a thirty-second trading loop wrapped in a feed-driven social layer, with a gamification system that turns iGaming retention primitives into structured products on top of real market exposure. Both feed into a unified token economy where fees compound back to participants rather than leaving the system.

1. Introduction

Retail trading infrastructure has stagnated in two ways. Token launches still suffer from extractive mechanics: uneven distribution, ill-timed liquidity, and fee structures that move value out of the system. Real markets, even where the underlying execution layer has matured, sit behind interfaces built for professional traders. The consumer audience that has migrated to memecoin terminals and casino apps has no surface for engaging with serious markets at consumer speed.

The dopamine era is the shared backdrop. Attention spans are measured in seconds, volatility is the product, and the surfaces that mediate market exposure have to compress to match. Catapult Trade products are built for this reality and qualify as **iTrading**: trading wrapped in the affective and behavioral patterns of iGaming. Where they diverge is in what becomes the product. In Turbo Mode, the product is permanent volatility, a mathematical engine that never runs out of motion regardless of volume.

In Hyper Mode, the product is access: Hyperliquid built the ultimate execution engine for on-chain perps, but its distribution remains bounded by the size of the audience comfortable with futures terminals. Hyper is the distribution layer for the audience that is not.

Turbo Mode replaces traditional market mechanics with **algorithmic price generation**. Tokens trade against a mathematical engine rather than an order book, eliminating liquidity requirements and the associated risks of rugpulls, sniping, and early seller extraction. The result is a pure attention market.

Hyper Mode wraps Hyperliquid's perp infrastructure in a mobile-native social surface. Real markets, real PnL, real settlement, exposed through a feed-driven app where the trading loop compresses to thirty seconds and a gamification layer adds structured products on top of the underlying market exposure.

The two modes serve different use cases but share a common economic layer built around the **$PULT** token. Together they form a trading ecosystem where value generated by activity stays within the system.

2. Catapult Trade Turbo

2.1 Thesis

Turbo Mode is built on a single inversion: rather than supplying liquidity to a market, the market supplies motion to itself. Instead of an order book backed by pooled capital, Turbo uses a mathematical engine to generate price action. Trades execute instantly at the current engine price with **zero slippage**, regardless of size.

This makes token launches accessible. There is no capital requirement for creators or liquidity for snipers to extract from. Volatility itself becomes the product, and it never runs out.

2.2 Token Creation and Trading

Launching a Turbo token takes seconds. A creator pays a flat listing fee, selects a volatility mode, and the chart goes live.

Once live, the engine streams an interactive chart. Traders buy and sell exactly as they would on a spot exchange, but every trade settles against the protocol vault rather than counterparties. When the time window expires, or when a trader exits early, positions are settled based on P/L against the engine's price path.

Public tokens appear in the discovery feed and earn creators 0.5% of all trade volume. To maintain volume density and prevent fragmentation across too many concurrent charts, the protocol caps active public sessions. **Private tokens** don't appear in feeds, carry no creator fee, and function as isolated environments for personal trading or strategy testing.

2.3 Price Engine

Turbo uses a discrete-time **Geometric Brownian Motion** model to generate price paths. GBM is a random walk process that ensures prices stay positive and follow a log-normal distribution, producing realistic volatility while remaining mathematically verifiable. The pricing algorithm is provably fair and has been audited by Hashlock.

The recursive pricing formula:

$$P_{t+1} = P_t \cdot \exp\left[\left(\mu - \frac{1}{2}\sigma^2\right)\Delta t + \sigma\sqrt{\Delta t} \cdot \varepsilon_t\right] \tag{1}$$

where $\varepsilon_t \sim \mathcal{N}(0,1)$, μ is the daily drift coefficient, σ is the daily volatility coefficient, and Δt is the time step rescaled for the session's compressed duration.

The drift μ is set to zero, creating a **martingale** environment with no inherent directional bias. The volatility σ controls the magnitude of price swings.

A property of GBM: the term $-\frac{1}{2}\sigma^2$ creates variance drag, meaning median price paths drift downward over time even with neutral drift. The system remains mathematically fair because the magnitude of winning paths compensates for their lower frequency.

2.4 Volatility Modes

Mode	Speed	Lifetime	Daily σ	Per-Tick Volatility
Slow	6×	4 hours	0.50	0.42%
Fast	24×	1 hour	0.75	1.25%
Flash	96×	15 min	1.00	3.33%
Crack	480×	3 min	1.25	9.32%
Mayhem	1440×	1 min	0.75	9.68%

Table 1: Turbo volatility configurations. Parameters may be adjusted based on observed market dynamics.

2.5 Fee Structure

Every trade incurs a 1% fee on notional value, split evenly between the protocol and the token creator (for public tokens). At settlement, winning positions pay an additional 4% fee on gross profit. Losing positions are exempt.

The underlying engine has neutral expected value, but fees introduce localized drag. Even so, the engine is calibrated for extreme volatility where 10x or 100x moves remain reachable.

2.6 Provable Fairness

Turbo implements a **hash-commitment scheme** ensuring every price tick is fixed before trading begins.

When a token initializes, the engine pre-computes the complete price sequence using GBM. It generates a secret salt and records the tick speed. Before the chart goes live, these elements are hashed:

```
fairHash = hashMessage(ticksString + fairSalt + speedTicksInSecond)
```

This hash is published immediately as an immutable anchor. During trading, the salt and price array remain hidden, but because the hash is public, any attempt to alter ticks would cause verification to fail.

Upon session expiration, the system discloses the salt and provides the raw price string. Anyone can verify by recalculating the hash and comparing it to the published value. Due to Keccak-256 properties, changing even a single character produces a completely different hash.

3. Catapult Trade Hyper

3.1 Thesis

Hyper Mode is a mobile-native trading app that exposes users to real perps on Hyperliquid through a social, gamified surface. The execution venue, the matching engine, and the risk system all live on Hyperliquid. Catapult Trade contributes the consumer surface, the gamification layer, and the wrapping that makes serious markets accessible to an audience that would never download a futures terminal. The full trading cycle

compresses to thirty seconds, looped continuously, with pacing closer to a short-video feed than a trading app.

3.2 The Loop

A user opens the app from a notification: a friend's ride, a market move on a followed asset, a game-state nudge such as a streak at four wins or a comeback bonus going live, or a Save alert on one of their own live positions. They ride a direction on some asset. Mid-ride, they can modulate exposure with Boost, Shield, or Insure. They cash out. The result auto-broadcasts to their feed, where friends see it, react, follow, or copy.

Each completed cycle feeds the next. Successful rides build streaks, streaks compound into multipliers, and shared wins pull the social graph back into the loop. The notification layer runs on four channels: friend activity, market events on followed assets, game-state nudges, and Save alerts on the user's own live positions. Cadence is throttled by an attention model so the loop intensifies without burning the user. The social graph bootstraps from X, phone contacts, or on-chain wallet history at signup, and broadcast on a Ride is opt-in per trade with a one-tap toggle.

3.3 Action Vocabulary

The atomic action is **Ride**, a directional bet on any asset. Mid-ride, a user can **Boost** to scale leverage, **Shield** to halve position size without exiting, or **Insure** to cap loss in exchange for a premium with a partial refund on trigger. **Cash out** closes. **Follow** tracks another trader passively, surfacing their activity in the feed and serving as the free social primitive that bootstraps the graph. **Copy** copytrades a friend or top performer, sizing follower positions against the leader's flow.

Boost itself runs through named temperatures rather than raw multipliers. Chill, Hot, Wild and beyond each map to a leverage tier ($1\times$, $2\times$, $3\times$ and onwards), giving the user a felt sense of risk rather than a numerical abstraction.

3.4 Gamification Layer

Base trading inherits Hyperliquid liquidity, so counterparties are other Hyperliquid traders and base flow carries no edge for Catapult Trade beyond the UI builder fee. Edge lives one layer up, in the gamification mechanics.

The current design space spans five tiers, each conveying a different shape of risk. **Insurance** caps the downside of a single ride against a premium, bounding the outcome

before the ride opens. **Streak Shield** protects a run that is already accumulating, keeping a winning streak alive through a single losing trade. The **Daily Shield Pass** provides predictable baseline safety as a subscription product rather than a per-ride decision. The **Comeback Bonus** handles the aftermath of a loss, distributing recovery value to traders who took a hit. **Revive** allows reentry on favorable terms after a liquidation, recovering the position rather than the user. These are illustrative of the layer rather than an exhaustive menu.

These mechanics produce structured math outcomes with house edge, using the same primitives that drive iGaming retention, but the underlying PnL exposure is real. The insurance pool itself is held on-chain in $PULT and stable assets, with a target reserve ratio set against expected weekly drawdown across all live insured positions. Surplus above target feeds the $PULT burn flow described in the token economy section, and reserves below an inner threshold pause new issuance until they rebuild. Sybil and abuse vectors are addressed through device fingerprinting and phone verification, with bonus eligibility scaled to verified trading history so fresh accounts cannot farm comeback flow.

3.5 Architecture

Hyper Mode sits as a social layer on top of Hyperliquid. The single structural choice that defines the product is how orders route: Catapult Trade uses Hyperliquid **builder codes**, which means order flow routes natively through Hyperliquid, builder fees are attributed on-chain, and funds never touch Catapult Trade infrastructure at any point in the lifecycle. The execution venue, matching engine, risk system, and asset listings all live on Hyperliquid. Catapult Trade contributes the client surface, the gamification layer, and the $PULT economy.

User funds sit in embedded wallets provisioned by Privy, secured by passkey or social login, and signatures flow from the client straight to Hyperliquid for settlement. The Catapult Trade backend handles everything that doesn't need to be on-chain (the feed, the social graph, the notification engine, the leaderboards, the asset surfacing logic), while the pieces that need trust-minimization live in contracts: the insurance pool with its reserve accounting, the $PULT buyback and burn flows, builder code fee attribution, and the comeback bonus distribution mechanism. The trust assumption a user makes is narrow. Hyperliquid is trusted for execution and custody, the contracts are trusted for pool and token math, and Catapult Trade is trusted only for the surface. There is no point in the system where Catapult Trade can move user funds or interfere with a position once it is open.

3.6 Assets

Every Hyperliquid market above approximately 100k daily volume surfaces in the consumer feed, with the long tail reachable through search. TradFi coverage including equities, indices, commodities, and FX expands automatically as Hyperliquid lists new synthetic perps.

3.7 Onboarding

Users fund their embedded wallet either through a partner fiat onramp (card, bank transfer, Apple Pay) or by transferring crypto directly from an existing wallet. KYC sits behind a deposit threshold rather than at signup, so browsing the feed, watching friends ride, and placing small first trades require none.

3.8 Fee Structure

Base Ride flow earns UI fees from the Hyperliquid builder code program. These are small per-trade and compound with volume, with no edge against the user. The gamification layer carries the house edge through insurance pools, subscription products, and structured loss caps.

For Copytrade specifically, the leader takes a 1% volume fee on the follower's flow and the platform takes 0.5% volume on top. Only the platform charges a profit fee, set at 1% on positive follower PnL. Leaders never charge profit fees, which keeps the leader incentive tied to follower activity rather than follower outcomes.

Across Hyper-side revenue, the platform share splits 50% to treasury, 25% to the insurance pool, and 25% to $PULT buyback and burn.

4. Token Economy

$PULT is the native token of the Catapult Trade ecosystem. It serves as the utility layer for active product use and as the primary value capture mechanism through systematic buyback and burn.

4.1 Utilities

Stakers trade fee-free across both Turbo Mode and Hyper Mode, with a tier structure that scales fee discounts and unlocks platform features at higher commitment levels.

$PULT is also the reward currency across the loop. Streak completion, comeback events, referral rewards, and leaderboard payouts all distribute in $PULT, creating an organic recirculation between platform activity and token demand.

4.2 Buy Pressure

Three independent flows generate buy pressure on $PULT.

Explicit buyback and burn. 25% of all fees, across whatever assets the protocol takes in, is allocated to open-market purchases of $PULT that are then permanently burned. This creates a direct link between platform activity and supply contraction.

Insurance pool surplus burn. The insurance pool runs against a target reserve ratio set against expected weekly drawdown. When the pool sits above target, the surplus auto-converts to $PULT and burns. This creates a structural feedback loop where consistent house edge translates into supply destruction.

Comeback bonus distribution. The comeback bonus mechanism buys $PULT on the open market and distributes it to losing traders as a recovery gift. This functions as a recurring, organic demand sink, since the flow is driven by actual platform losses rather than discretionary treasury action.

The three flows are independent in their inputs. Buyback-and-burn scales with total revenue, surplus burn scales with realized house edge on insurance products, and comeback distribution scales with the trader recovery cadence. Each operates regardless of the state of the others, which gives $PULT more independent demand sinks than most launchpad tokens have utilities.

4.3 Revenue Distribution

Fee revenue flows across four destinations.

Creators receive 50% of Turbo Mode notional trading fees on their public tokens, aligning creator incentives with sustained chart activity rather than launch-and-abandon dynamics. Hyper Mode does not currently feature a creator program, though copytrade leaders effectively occupy a parallel role with their 1% volume share.

Treasury receives the platform share of fees across both modes, funding ongoing development, security work, and ecosystem growth.

Insurance Pool receives a 25% allocation from Hyper-side platform revenue, accumulating reserves against insured ride drawdown and feeding the surplus-burn flow when reserves sit above target.

Buyback & Burn receives 25% of all fees across the protocol, purchasing $PULT on the open market and permanently destroying the supply.

4.4 Fee Summary

Source	Creator	Treasury	Buyback & Burn	Insurance Pool
Turbo notional fee (1%)	50%	25%	25%	0%
Turbo profit fee (4%)	0%	75%	25%	0%
Hyper builder code UI fee	0%	50%	25%	25%
Hyper insurance premiums	0%	*	*	*
Hyper subscription products	0%	50%	25%	25%
Copytrade platform fee (0.5% volume + 1% profit)	0%	50%	25%	25%

Table 2: Revenue distribution across fee categories.

Insurance premiums retain reserves against the pool's target ratio. Surplus above target flows directly to $PULT burn; the pool itself receives 100% until it stabilizes at target.

Copytrade leaders take a separate 1% volume fee on follower flow, paid directly and outside the platform split above.

5. Conclusion

Catapult Trade addresses two gaps in retail trading infrastructure through two independent products with a shared economic layer.

Turbo Mode removes liquidity requirements entirely, replacing order books with algorithmic price generation. Volatility itself becomes the product, accessible to creators without capital and traders without exposure to snipers or insider extraction.

Hyper Mode wraps Hyperliquid's perp infrastructure in a mobile-native social surface, compressing the trading loop and building a gamification layer where structured house-edge products sit on top of real market exposure. Real markets reach an audience they could not have reached through a traditional terminal.

$PULT connects both modes as the utility and value capture layer. Staking unlocks fee-free trading and the token serves as reward currency across the loop, while three independent buyback flows tie supply contraction to platform revenue.