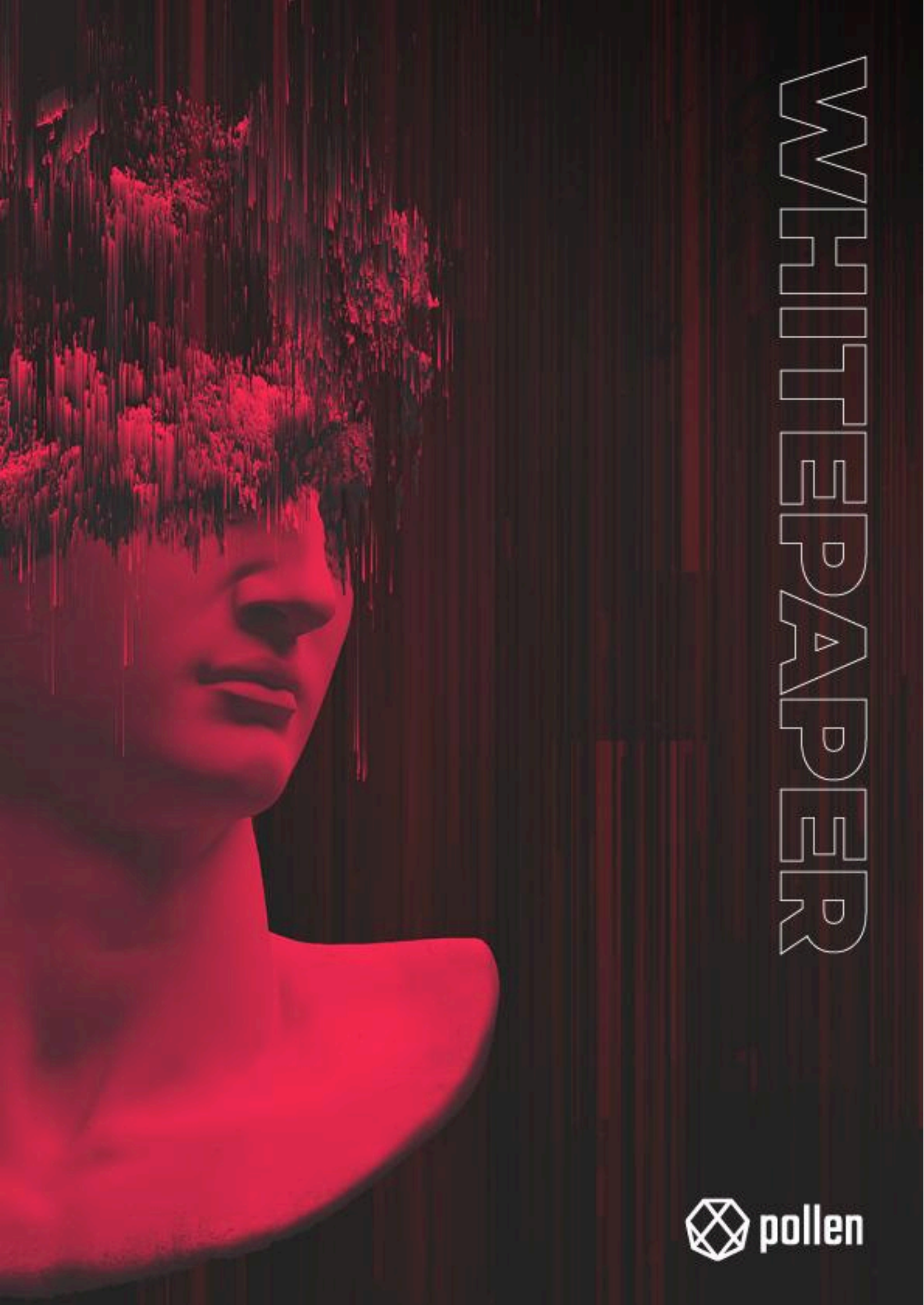

WHITEPAPER
pollen

Abstract

This whitepaper will provide insight into how the Pollen protocol functions on a technical level while introducing new features unique to the Pollen governance model. We aim to showcase the Pollen governance model, protocol, its design function, and the mathematics employed. We introduce new concepts and incentive layers for both investors and liquidity providers (LP's).

Disclaimer

All of the information presented in this whitepaper is tentative and is subject to change at any time. None of the information herein should be construed as legal, accounting, or investment advice of any kind. This document does not represent a solicitation for investment, nor does it represent an offering or sale, public or private, of any kind of financial instrument, security or otherwise, in any jurisdiction. This whitepaper is provided for informational purposes only, with the intention to describe Pollen’s prospective protocol and governance model.

Introduction

Pollen is a decentralized prediction market and DAO that includes the Pollen Virtual Trading Arena and CryptoBowl Trading Tournaments platform. As part of its ecosystem on Avalanche, Base, and Polygon, Pollen introduces two key assets: the PLN utility token and the vote-escrowed vePLN governance token.

Pollen Virtual enables a risk-free environment for honing trading skills, joining communities through Leagues PRO, and competing in CryptoBowl tournaments. Here, users build virtual portfolios that generate signals to inform Pollen's prediction market and reward top contributors through reputation and rebalancing algorithms

PLN token holders can manage or delegate virtual portfolios, earning rewards and participating in Pollen DAO governance. By locking PLN in exchange for vePLN, users access boosted rewards from a 20 million PLN reward pool over the first 1406 days, encouraging long-term holding and engagement.

Pollen introduces a competitive edge to prediction markets with Pollen Leagues PRO which is a tailored solution for organizations & businesses, enabling them to set up and manage their own communities on the Pollen platform.

Pollen's open protocol combines a merit-based system and decentralized governance to reward community-driven insights and top performers. This system uses the crowd's intelligence to drive asset management and inform prediction market data.

Virtual portfolios represent a collection of 'virtual allocations. That is, a user decides what assets should be included in their virtual portfolios and their corresponding allocation weights. These provide signals to inform our prediction market via reward, reputation, and rebalancing algorithms.

The protocol's reputation algorithm identifies the best performers and uses this information to award PLN governance tokens and inform delegation decisions.

By fully decentralising governance and introducing a merit-based reputation and rewards system, the platform crowdsources market intelligence to produce open prediction market data.

PLN Token Dynamics: Governance and Rewards

PLN token holders have extensive privileges within the Pollen ecosystem, allowing them to create, manage, and delegate virtual portfolios while actively participating in the governance of the Pollen DAO. Locking PLN tokens in exchange for vePLN tokens enables users to earn enhanced rewards and access a 20 million PLN reward pool over the first 1406 days. This approach incentivizes long-term commitment while promoting sustainable growth within the ecosystem.

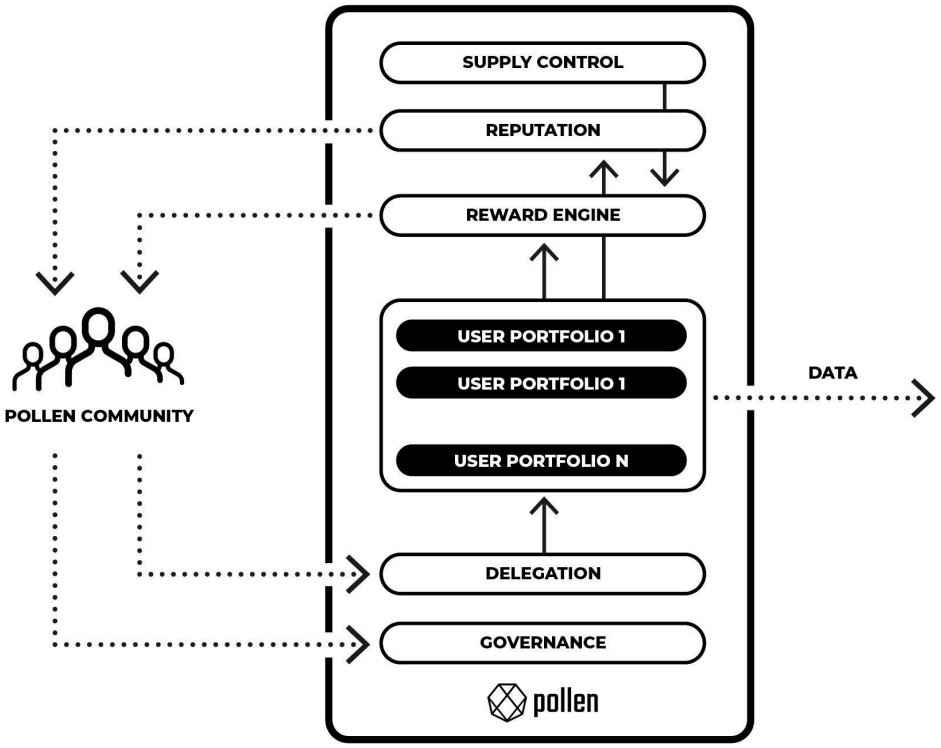


Figure 1: Pollen Virtual schematic description. The Pollen Community uses the PLN token to manage virtual portfolios, to delegate to top performers and to govern the protocol through the Pollen DAO.

Pollen's protocol harvests collective intelligence through its merit-based system, rewarding top contributors and enabling community-driven asset management. Participants use PLN tokens to create virtual portfolios exposed to real asset prices. A reputation algorithm further identifies top-performing portfolios, influencing asset pool allocations, optimizing the delegation process, and distributing PLN tokens to high-performing community members.

Product Roadmap

Pollen Virtual: A merit-based trading arena supporting long and short positions, rewarding contributors for accurate market predictions. Future improvements include expanded asset support and updated tokenomics to enhance user engagement..

Pollen Leagues PRO: Leagues PRO is tailored for organizations & businesses, and provides a customised experience and features multiple revenue-generation models. Organizations can leverage Leagues PRO to host and manage customized trading competitions directly on the Pollen platform.

CryptoBowl: The CryptoBowl introduces a competitive edge to Pollen Virtual, enabling Leagues PRO organizations to participate in fully on-chain trading tournaments. This platform supports community growth, fosters engagement, and provides multiple revenue streams for participating leagues.

Pollen DAO: Pollen operates as a DAO with a customized protocol that self-executes community-approved proposals without centralized intervention. This decentralized governance model empowers the community to shape Pollen's future, and ensures that the community remains in control.

Cross-Chain: Pollen is implementing a cross-chain Layer-Zero solution currently in Beta, supporting Avalanche and Base networks, with planned integration for Polygon in Q3 2025.

Prediction Market: Pollen is expanding its prediction market capabilities, supported by protocol updates to reduce friction and enhance incentives for both novice and experienced traders. An API will also be introduced to make prediction market data more accessible to consumers and external platforms.

Pollen Virtual

Virtual Portfolios

Users allocate PLN tokens to virtual portfolios, choosing assets and allocation weights. Portfolios can be rebalanced anytime, with rewards or penalties calculated based on portfolio performance at closing. Positive performance yields PLN rewards and reputation growth, while underperformance results in penalties and reduced reputation.

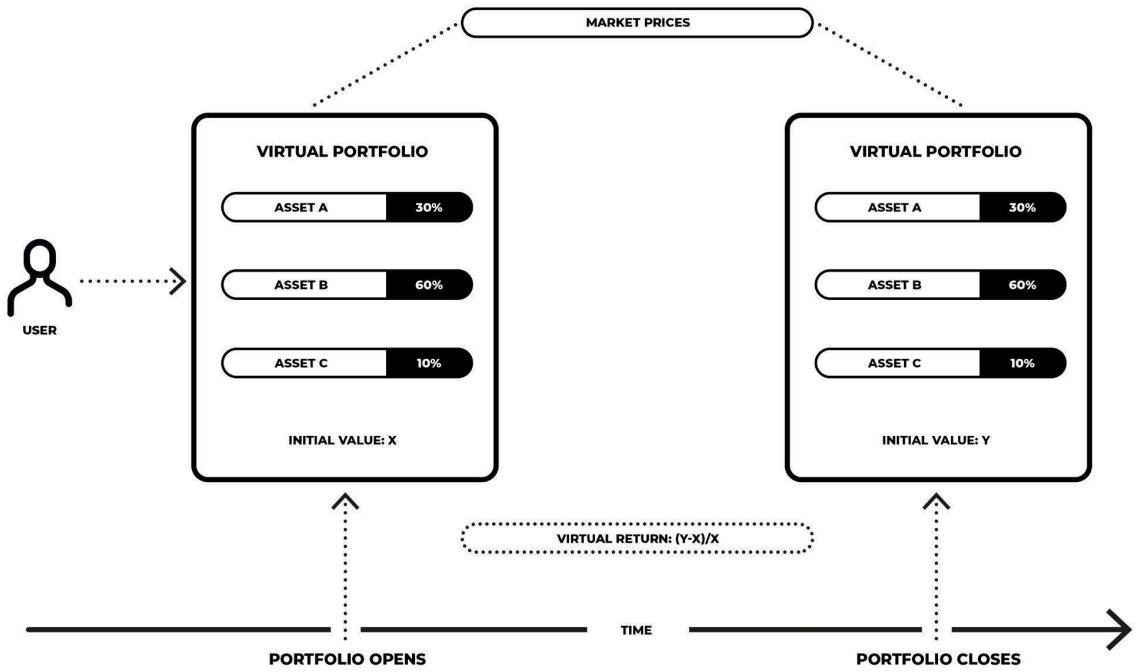


Figure 2. Dynamics of Virtual portfolios - Users open virtual portfolios by selecting a collection of tokens and their respective weights. Both long and short positions are accepted. The virtual portfolio starts with an initial value X. This changes over time as the market prices of the selected tokens change. When the User decides to rebalance or close the virtual portfolio, valued at Y, the virtual return is computed as (Y-X)/X. This is used to calculate rewards in PLN and update reputation. User skill levels are measured by returns using market prices without actually being exposed to the underlying assets.

Theoretical Description

Let $S = \{a_1, a_2, \ldots, a_N\}$ be the set of the N crypto assets supported by Pollen. The assets are represented by a_i and are fully characterised by the evolution over time of their price $P_i(t)$ and associated base currency, e.g. ETH or USD. We assume that the time-series $P_i(t)$ is known at discrete samples of time. The interval can be either 1 minute, or 1 hour, or 1 day, or 1 week, etc, but not necessarily equally spaced.

Let $R_i(t_k)$ denote the one-period return of the asset a_i between the instants t_{k-1} and t_k:

$$R_i(t_k) = \frac{P_i(t_k) - P_i(t_{k-1})}{P_i(t_{k-1})}$$

A User U is characterised by:

- an initial amount $V_U(t_0)$ PLN that they want to invest into the family of assets S.
- a set of weights $W(t) = W_U(t) = \{w_1(t), w_2(t), \ldots, w_N(t)\}$, such that , $w_i(t) \in [-1, 1]$ that distributes the amount $V_U(t_0)$ over each asset

In this context, $w_i(t_k)$ is said the *weight* of the asset a_i in the user U portfolio at time t_k. We require

$$\sum_{i=1}^{N} |w_i| = 1$$

Note that weights are allowed to take negative values. This is equivalent to entering short positions in the asset i. The condition that the sum of the absolute weights has to be 1 models a short position through collateralization.

This is somewhat similar to the mechanisms applied by established lending platforms. In our specific case, the collateralization rate is 1.

The return $R_U(t_k)$ of the portfolio U is the weighted sum of each asset return $R_i(t_k)$ scaled by their contribution $w_i(t_k)$ into the portfolio:

$$R_U(t_k) = \sum_{i=1}^{N} w_i(t_{k-1}) R_i(t_k)$$

The value of the User's portfolio at time t_k is given by

$$V_U(t_k) = V_U(t_{k-1})\left[1 + R_U(t_k)\right]$$

Users must stake PLN when creating a virtual portfolio and then can amend their staked amount each time they modify their asset allocations.

Onchain Return Calculation

In order to implement the calculation of the return on-chain, considerations on fees and efficiency should be taken into consideration:

- The initial value of the portfolio (PV_o) is equal to the number of Pollen tokens used to open the portfolio times the value of each pollen. When the portfolio is open, the number of coins of each asset is calculated and stored as:

$$C_i = \frac{w_i N_p P_p}{AP_i(t_0)}$$

  Where t_o denotes the time at which the portfolio was open. C_i is the number of coins of the asset i, $w_i N_p$ is the amount of pollen assigned to asset i, P_p is the price in USD for one Pollen and AP_i is the price of asset i in USD.

- The final value of the portfolio is calculated as:

$$PV_f = \sum_i C_i \times AP_i(t_f)$$

- Return is then calculated as:

$$\begin{aligned} R &= \frac{PV_f - PV_0}{PV_0} \\ &= \frac{1}{N_p P_p}\left[\sum_i C_i AP_i(t_f) - N_p P_p\right] \\ &= \frac{1}{N_p P_p}\left[\sum_i \frac{w_i N_p P_p}{AP_i(t_0)} AP_i(t_f) - N_p P_p\right] \\ &= \sum_i \frac{w_i}{AP_i(t_0)} AP_i(t_f) - 1 \end{aligned}$$

  This means that instead of saving the number of coins, it is enough to save the value $(w_i/AP_i(t_o)$ for each asset in the portfolio, in order to calculate the return.

Market Benchmark

The section above compares a virtual portfolio with a market benchmark, for example, a market benchmark constructed by market capitalization selects the Top 30 or Top 50 assets, and defines their weights based on their participation in the total market capitalization of selected assets (e.g., S&P 500, DJIA, CCi30, etc.).

Pollen defines a custom market benchmark because the universe of tokens in which Pollenators can express market sentiment is restricted.

Therefore, a custom benchmark that considers market capitalization, token availability (e.g., through a wrapped version), and transaction costs is defined. The latter is needed because, whenever the Pollenator rebalances, the smart-contracts need to collect and store additional information to compute the entry/exit positions in the market benchmark and provide an accurate description of a Pollenator reward and skill.

The CCi30 benchmark is used as a reference for the global cryptocurrency market benchmark. Given that Pollen's community opted for an initial deployment in the Avalanche blockchain, the following tokens satisfy the conditions mentioned above: WBTC, WETH, AVAX, BNB and LINK. The objective is to form Pollen's benchmark as a weighted average of these five tokens (or any subset of them) such that the correlation with the broader market is maximized and transaction costs are minimized.

Pollen's market benchmark will be reassessed as the platform is deployed in other blockchains or considerably changes the supported tokens. This is required to provide an accurate representation of the market and make sure the value that Pollenators are creating is being fairfully measured and rewarded.

Rewards

Rewards are shared in the protocol's native PLN token with users that have positive virtual returns. The rewards shared are proportional to the virtual returns and the staked PLN tokens in users' virtual portfolios. The amount of rewards shared will vary depending on the current state of the community market and the available funds in the protocol's rewards pool. In periods where the average performance is low, the best performers are incentivized with higher reward amounts, while in market upturns, rewards generated are more conservative.

Reputation

Reputation measures the ability of a user to make sound delegation decisions that are reflected in the returns awarded from their virtual portfolios. In order to avoid confounding variables due to differences in the amount of PLN that users stake, the reputation scores are defined as the compounded return assuming an initial stake of 1 PLN in each virtual portfolio.

This makes the score insensitive to the amount of PLN staked and provides at any point in time an indication of how much value a particular user has been able to generate by adeptly managing their virtual portfolios.

The reputation score can be expressed as:

$$RS = \prod_{i=1}^{n}\left[1 + (R(t_i) - R_m(t_i))\right]$$

Where R(t) is the portfolio's return at each event of rebalancing the portfolio, Rm(t) is the return of the market benchmark (e.g. CCi30 or CRIX), and n is the total number of rebalancing events of the user portfolio. Reputation measures, therefore, the user's ability to outperform the market. The quantity R(t)-Rm(t) is known as *excess return*. Data is emitted from smart contract events, and the calculations are executed off-chain.

Additional information regarding the average amount of PLN staked in a virtual portfolio, the amount of PLN awarded, and the amount delegated is provided to the user, enabling them to make informed delegation decisions.

As an example of how the protocol calculates reputation, assume a user joins the platform on 2021-12-28, they acquire PLN and select the following three tokens: AVAX, BTC, and ETH. The initial allocation of the virtual portfolio is 50% into AVAX, 30% into BTC, and 20% into ETH, with assets priced at approximately $107, $47588, and $3800, respectively.

The table below shows the reallocations performed by this fictitious user (who is assumed to rebalance daily) from 2021-12-28 until 2022-01-03.

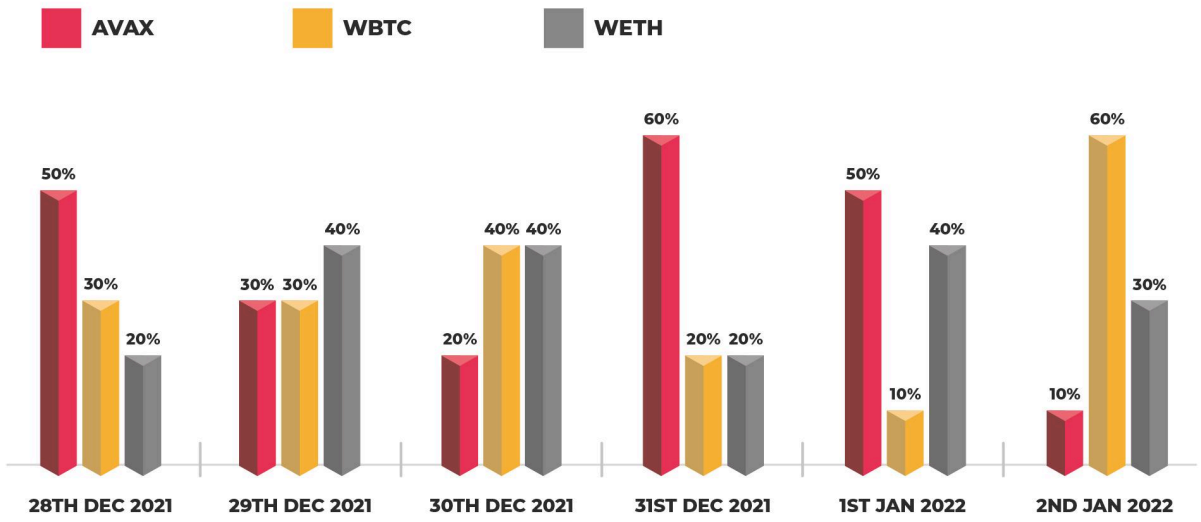


Figure 3: Rebalances of a fictitious user - This user is assumed to change its virtual allocations on a daily basis.

The Figure below shows the (actual) daily returns of the assets in USD over the same period. This example considers CCi30 as the market benchmark.

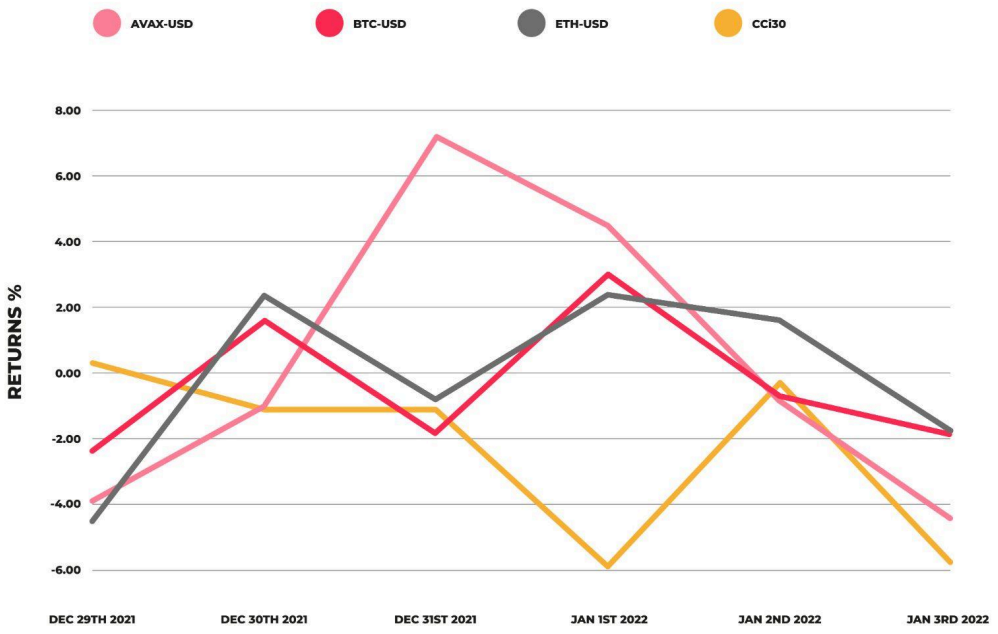


Figure 4: Performance of virtual portfolio composition and market benchmark.

User reputation is calculated using a two-step process: computation of the virtual portfolio return and the market benchmark return (both at the time of rebalancing).

The virtual portfolio return is computed by the weighted average of the assets returns (see *Virtual Portfolios* section for details).

The excess return is the difference between the virtual portfolio return and the market benchmark return.

The figure below compares the virtual portfolio return (in red) with the market benchmark return (in yellow) - each daily, which is assumed to coincide with the event of rebalancing for the sake of simplicity (see the *Onchain Return Calculation* section for details).

The dusty red areas highlight the periods when the virtual portfolio outperforms the market, and therefore the user reputation increases in this period. The user reputation decreases in the slate grey areas because the virtual portfolio return is below market benchmark return.

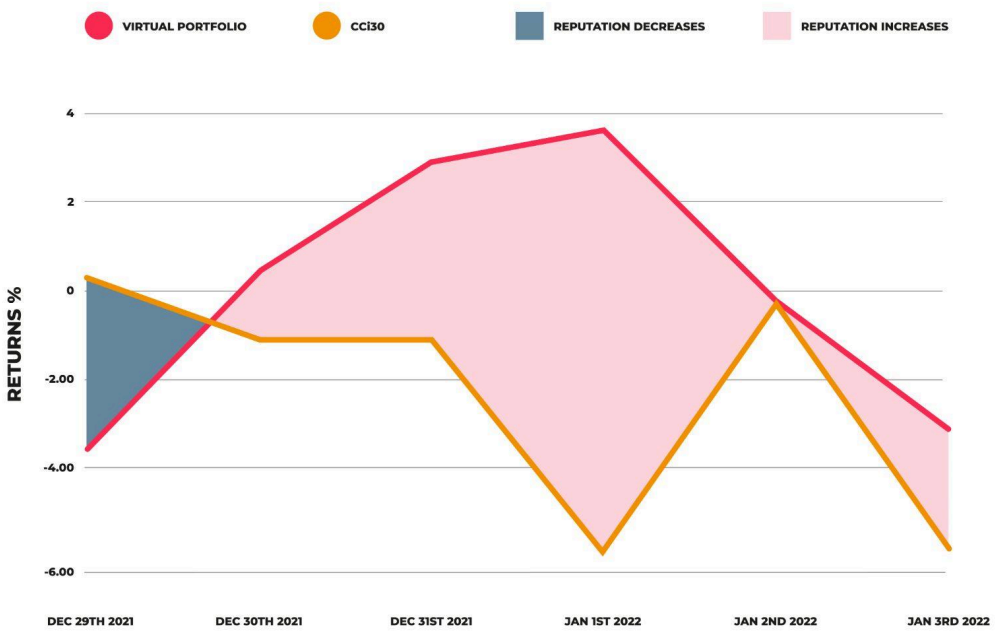


Figure 5. Performance of the aggregated virtual portfolio against the market benchmark. Dark regions depict periods in which the market benchmark performed better than the virtual portfolio. The reputation score of the user decreases in these periods. Conversely, light regions depict periods in which the virtual portfolio outperformed the market benchmark. The reputation score of the user increases in these periods.

Reputation is computed by compounding the initial amount of one PLN token by the excess return whenever the user rebalances his virtual portfolio. The table below shows the reputation per date (i.e., rebalancing events) and how it was computed.

DATE	REPUTATION	COMPOUNDING
28th DEC 2021	1.000	—
29th DEC 2021	0.992	1.000 x (1-0.794%)
30th DEC 2021	0.976	0.992 x (1-1.619%)
31st DEC 2021	1.014	0.976 x (1+3.943%)
1st JAN 2022	1.014	1.014 x (1-0.075%)
1st JAN 2022	1.007	1.014 x (1-0.621%)
2ND JAN 2022	0.987	1.007 x (1-2.030%)

Table 1. Evolution of the reputation score for a fictitious user. The percentage values in the compounding column come from the difference between the virtual portfolio performance against the market benchmark over the same period. Positive values indicate that the virtual portfolio beat the market benchmark.

Cross Chain and LayerZero

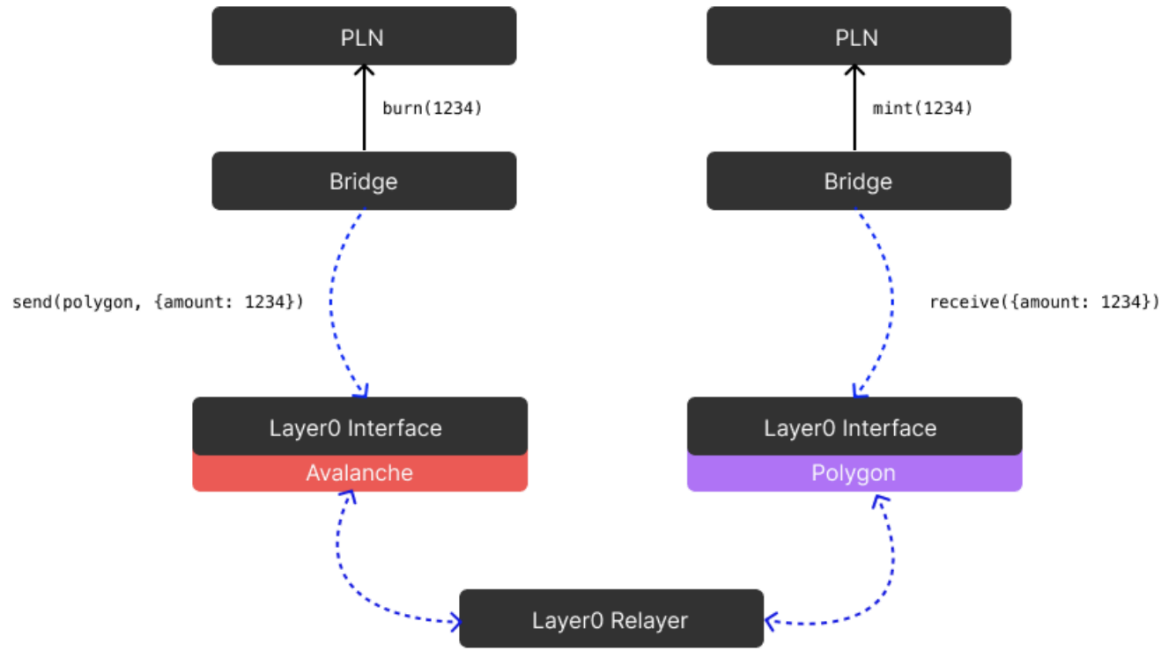


Figure 6: Diagram that shows how PLN is transferred from Avalanche to Polygon.

The Cross Chain bridge is implemented as a standard PollenDAO module. It has the ability to mint or burn Pollen tokens.

When a user signs a transaction ordering tokens to be transferred, the tokens are burnt on Avalanche, and the Bridge leveraging Layer0 infrastructure sends a message containing the amount transferred to its equivalent on the Polygon network. Upon receiving the message Polygon Bridge mints the equivalent.

PollenSkill

The PollenSkill algorithm estimates the trading skill of players through the use of Bayesian inference.

The algorithm assumes that trading skill follows a normal distribution. The skill of a user is updated whenever they rebalance. This creates an interesting dynamic, as a player's skill is described by both a mean and a variance. The more rebalancing a player is doing, the more certainty we have around estimating their skill.

The final score is measured in points that arise as a comparison of a player against all other players. This comparison is more impactful when a player's variance is lower.

Players are incentivized to rebalance when they have positive returns. Therefore, a player might forgo rebalancing when experiencing negative returns, to avoid reducing the estimation of his skill. However, other players will rebalance more, reducing the estimation error of their skill, and accruing more points, as a result. A player who doesn't rebalance often, will have his points gravitate towards 0.

Therefore, the PollenSkill algorithm creates a constant tension between determining how other players will perform and forecasting one's portfolio performance. This will lead the protocol to a dynamic adaptation, as users adjust their investment styles in order to be able to better demonstrate their trading skills.

The table below shows a high level structure (from a game theoretic perspective) of how the system works. The player can find themselves in the following matrix. The notation [x,y] means that the player can encounter any range of outcomes.

The interesting part of this matrix is that waiting yields very uncertain results, due to the volatility of the market. Performance in volatile markets is generally seen as a marker of trading skill.

	Wait	**Rebalance**
Negative returns	[-3,+1]	-1
Positive returns	[-1,+3]	+1

In-depth look and methodology

PollenSkill follows the conjugate Normal-Inverse Gamma model, which estimates the mean and the precision (inverse of variance) of the user's returns simultaneously.

The new model has the following parameters:

μ_0: The prior mean (expected returns)

ν: The number of pseudo-observations. This variable represents the number of observations that we assume we have seen before the user actually experiences returns.

α: This is one of the two parameters required by the Gamma distribution

β: The second parameter of the gamma distribution

The posterior of the model is defined as the NormalGamma distribution. So, we assume that

$$skill \sim NormalGamma(\mu_0, \nu, \alpha, \beta)$$

The final points are calculated as

$points = \mu - \sigma$

Where $\sigma = \frac{\beta}{\nu(a-1)}$

The update equations are the following:

$\mu' = \frac{\nu\mu_0 + n\mu}{\nu+\mu}$

$\nu = n + \nu$

$a = \alpha + \frac{n}{2}$

$\beta = \beta + \frac{1}{2}\Sigma(x - \mu)^2 + \frac{n\nu}{n+\nu}\frac{(x-\mu)^2}{2}$

And we define as n the new number of observations (real observations, not pseudo-observations), as μ we define the mean of the data (in this case the returns of a player).

The initial parameters of the model are:

$\mu_0 = 0$, we assume that a random user (without knowing anything about them) will have 0% return

ν = 15, this parameter is set to 15 to factor in user portfolio rebalancing into the prediction

$\alpha = 2$, parameter set based on observations

$\beta = 5$, parameter set based on observations

The final interpretation of skill under this model is that it's the minimum expected return for a user with more than 85% probability.

Delegation

In addition to users creating their own virtual portfolios, they also have the option to delegate a portion of their PLN tokens to other members of the community (i.e., delegates). Users that delegate (i.e., delegators) are then awarded or must forfeit PLN tokens depending on the performance of the delegate's virtual portfolio.

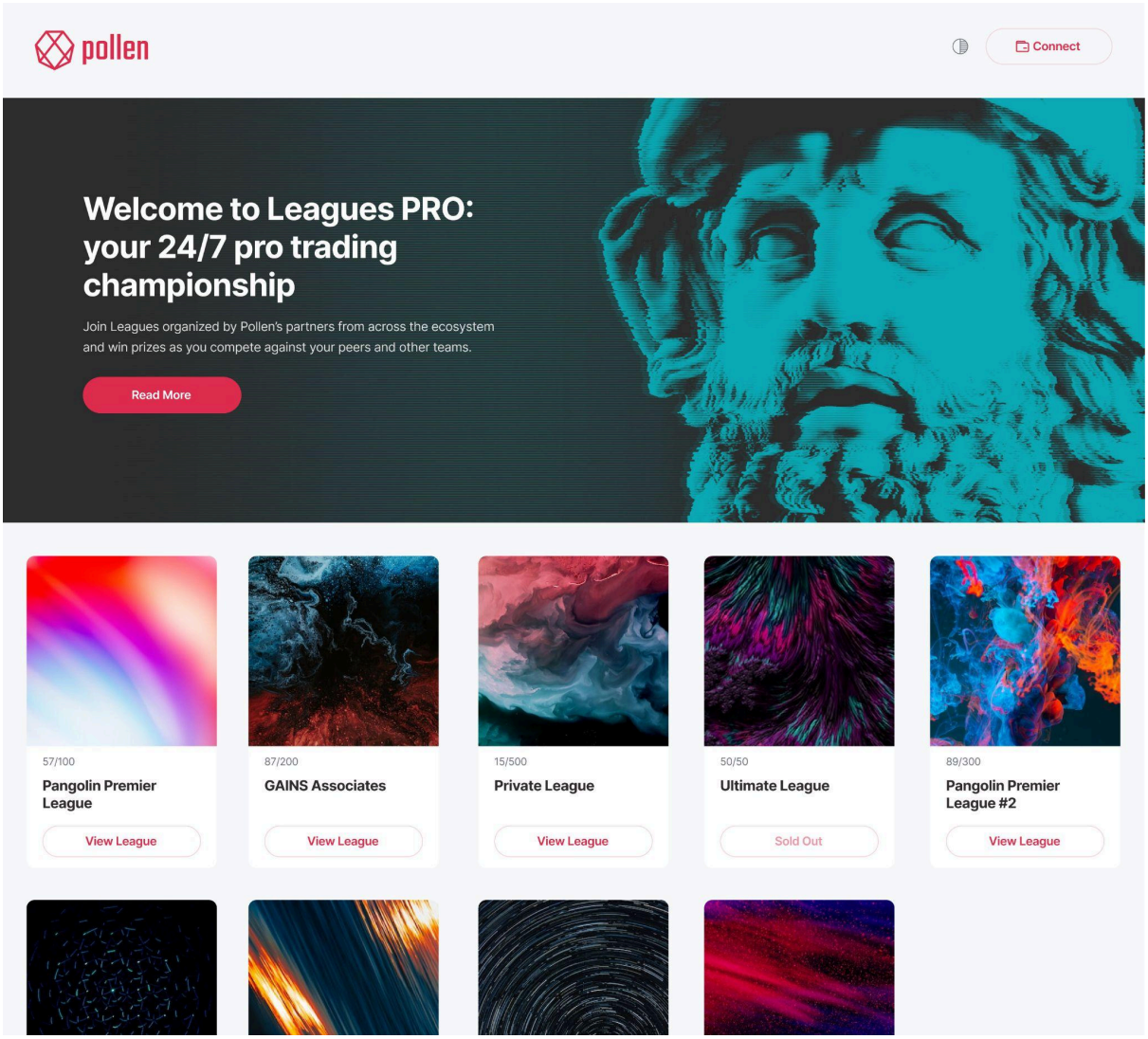
Delegates receive 20% of the returns generated (subject to change via governance voting), providing delegators with a passive yield. Delegators earn rewards when their chosen delegates are profitable and forfeit PLN tokens when they perform poorly

Pollen Leagues PRO

Pollen Leagues PRO allows organizations & businesses to create specialized virtual leagues with custom token sets and revenue opportunities. Leagues PRO users can build portfolios for each league, with the top 10 performers' reputations determining league standings and fostering inter- and intra-league competition.

Leagues PRO creation is permissioned for quality control, and provides insights on niche markets through a diverse asset portfolio, supporting both long and short positions. Delegation functionality facilitates knowledge sharing, allowing top performers to mentor followers and foster collective intelligence.

Leagues PRO serves as an accessible revenue-generation and marketing tool, allowing projects to harness collective trading intelligence, generate revenue, and reward participants. Additionally, communities can incorporate custom branding and advertising space on the league homepage, enhancing visibility and providing extra revenue streams.



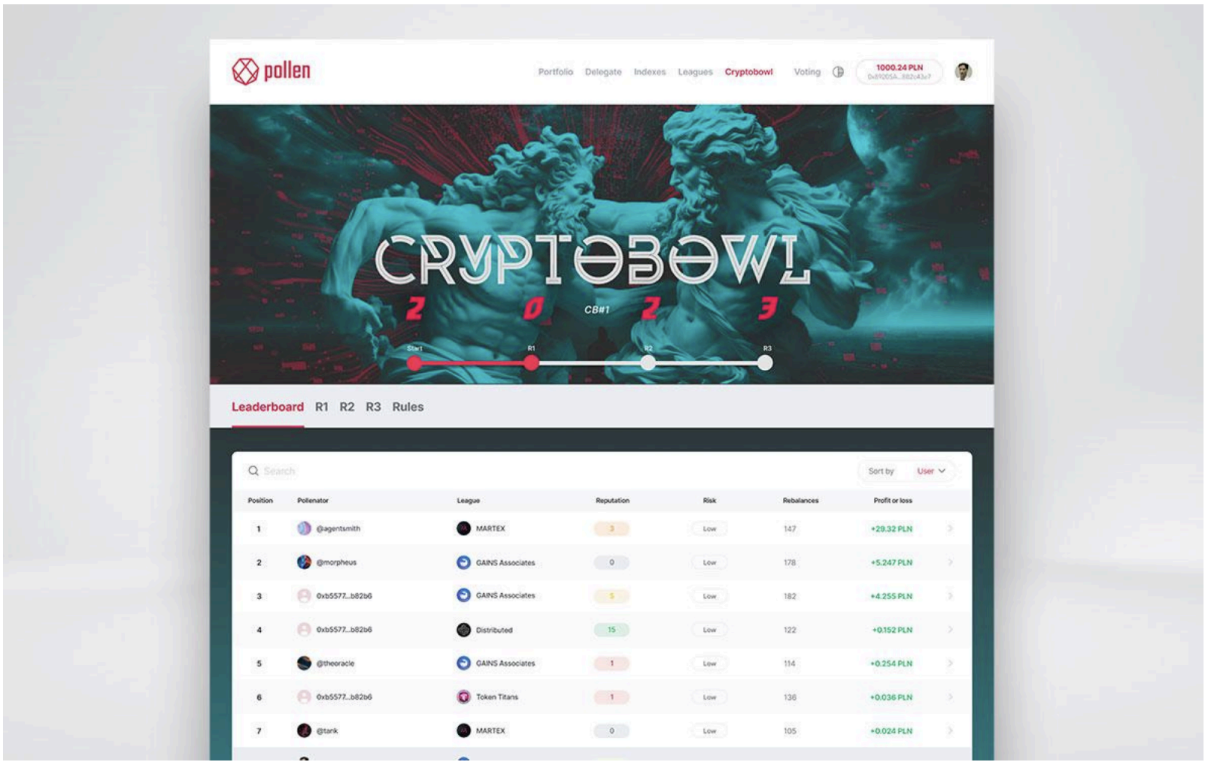
With Leagues PRO, organizations & businesses have exclusive access to the league's rankings, market predictions, and top traders, and the ability to purchase top-performing assets directly via Pollen and compete against in CryptoBowl Trading tournaments.

Moreover, they have ongoing rev-gen opportunities from NFT membership sales, and have the ability to mint NFT prizes within the platform to engage and reward their communities.

Pollen CryptoBowl

The CryptoBowl is a fully on-chain trading competition platform that can be used standalone or within Leagues PRO offering where trading communities can compete head-to-head in a showcase of skill, strategy, and performance. Leagues benefit from a community-building platform that encourages growth and unlocks multiple revenue streams. With all aspects transparent and on-chain—including winner selection—CryptoBowl participants enjoy full visibility as they test their skills against opponents.

CryptoBowl tournaments run in ticketed, three-day cycles, each with a dedicated prize pool, ensuring consistent competition entry opportunities. Designed to add a competitive edge, CryptoBowl empowers Leagues PRO communities to compete directly, providing dynamic ways to interact with the Pollen protocol.



PLN Tokenomics

Supply control

Supply control is achieved by an algorithmically defined tracking and virtual issuance schedule.

In periods where rewards minted are low, rewards issuance increases, recalibrating with the theoretical issuance schedule. In periods where rewards minted are high, rewards issuance decreases to stay in sync with the theoretical issuance schedule.

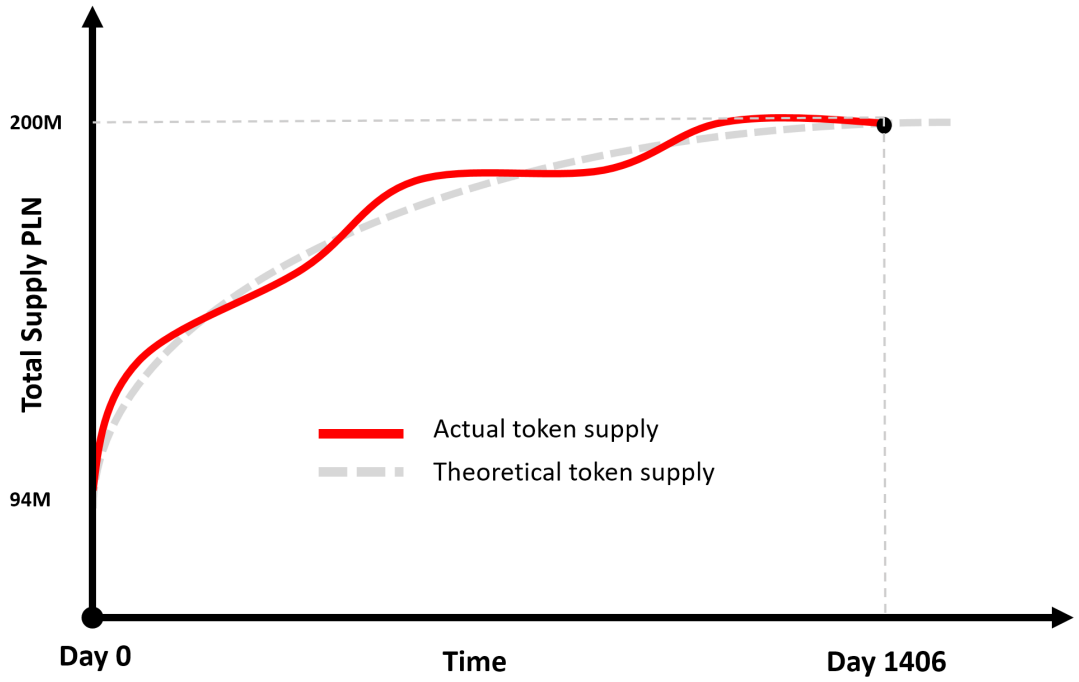


Figure 7: Theoretical token supply and expected supply controls curve. After day 1406 the issuance schedule will be decided by governance voting.

Rewards and penalties are adjusted to ensure that Pollen remains competitive within the market. For example, it issues more rewards in bullish market conditions and fewer penalties in bearish conditions.

This ensures that the total PLN token supply, capped at 200M for the first 1406 days, is never exceeded and helps create a healthy token economy for the protocol. The total supply is split into two, 180M is given as rewards to the users for their performance and 20M is reserved for locked vePLN rewards.

An algorithmic procedure that compares the “actual” rewards and penalties runs periodically. This algorithm relies on a theoretical minting curve:

$$M(t) = 94M + 2.1004 * t * I_1 + 0.44505 * t * I_2 + 0.1348 * t * I_3 + 0.055 * t * I_4$$

where, I_k is 1 for year k and 0 for the rest of the years

The minting curve affects the total rewards and the total returns through the parameters $a(t)$ and $b(t)$below, such that:

$$a(t) * Total_{Rewards} - b(t) * Total_{Penalties}$$

This ensures the PLN tokens that are awarded do not exceed the token supply.

Issuance Curve

The curve is defined as a piecewise linear function with three segments. The first segment has a higher slope to incentivize early adopters and to help bootstrap the protocol. Each segment is a linear function where a_i is the designated slope for the year i:

$$supply(t) = a_i t + b$$

Current implementation allows selecting the parameters (a dn b) for the first 1400 days in periods of 365 days by the admin or governance with the sole restriction that there should not be more than 200M tokens before 1400 days.

Given a particular boost on rewards, this implies a vertical shift in the actual supply. This is only for visualisation as different users will likely have different boost values depending on the amount of time that they lockup the tokens.

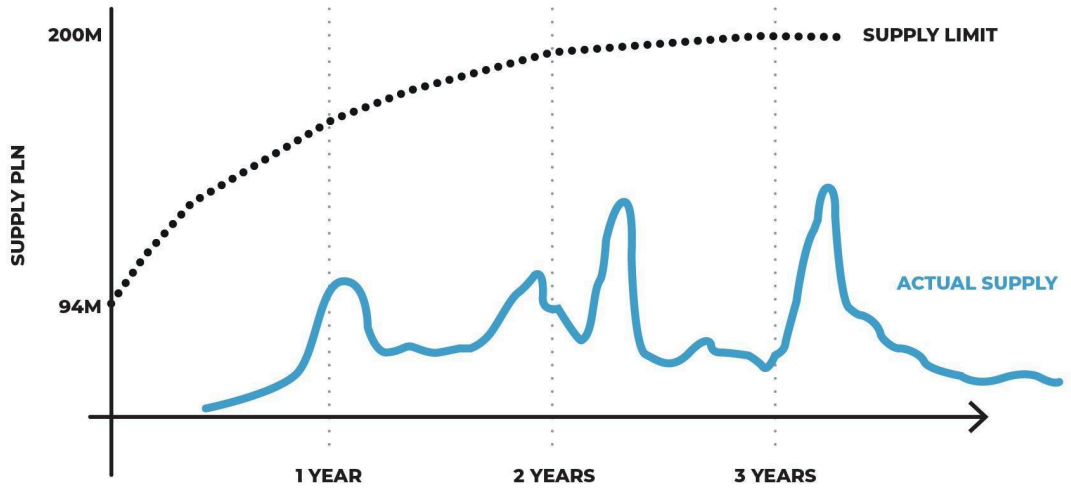


Figure 8. Expected supply curve of the PLN token, based on the usage of the protocol.

Governance

As we've discussed, PLN token holders inform the Pollen protocol by means of their virtual allocations in their virtual portfolios. Additionally, PLN token holders can lock their PLN tokens and create voter escrow PLN tokens or what we refer to as vePLN. Users that opt to lock their PLN tokens in return for vePLN tokens receive three benefits:

1. Up to 20% boosted rewards on the performance of their virtual portfolios depending on the lock period
2. A share from a pool equal to 10% of the total circulating supply as a reward for locking their PLN.
3. Governance rights in which vePLN token holders can issue and vote on Pollen Improvement Proposals (PIPs) to improve the protocol

Rewards and voting power are higher for longer locks, and they decay over the term of the lock, thereby incentivizing users to extend their lockup periods. Users have the option to relock their PLN in order to reset and again increase their boosted rewards and voting rights thereby offsetting the decay. In this way users express long-term confidence and support in the protocol and are rewarded for doing so.

Governance Architecture

Let's take a closer look at how this works in the contracts:

1. When a Pollenator locks up their PLN to create a virtual portfolio, the protocol issues them vePLN tokens that they can use to govern the Pollen DAO. They can set the lockup period for any amount of time with a minimum of one week and a current maximum of 4 years. You can learn more about the issuance schedule in the Supply Control section of this lite paper.
2. The longer a Pollenator's lockup period the larger the boost to their reward issuance while still adhering to the supply limit curve
3. The Pollenator's vePLN tokens are non-transferable ERC-20s and represent the Pollenator's voting rights. Voting rights and the boosted rewards decay over the period of the lock. I.e., users must continue to extend their lock-ups in order to maintain higher-levels of boosted rewards and increased voting power.

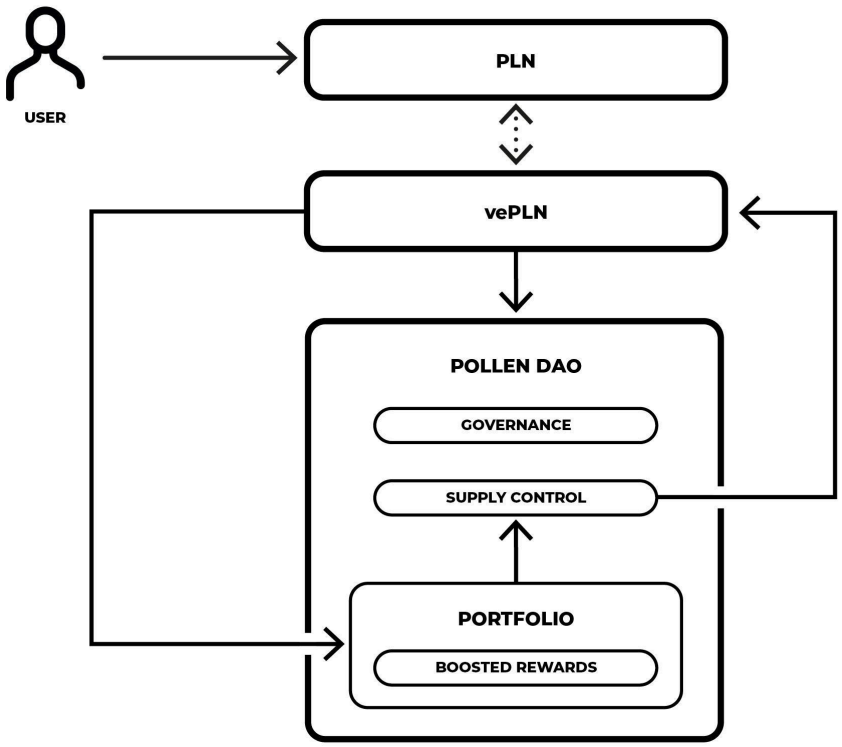


Figure 9: Architecture of the Pollen DAO and Governance modules

Rewards

Boosted rewards for Pollenators that lockup their PLN in return for vePLN, are calculated as a percentage increase to the rewards they've earned. These rewards are claimed when Pollenators rebalance or close their virtual portfolios.

Further, the rate of the boost decays inline with the decay associated with voting rights over the term of the lockup. As more PLN tokens are locked, the rate of PLN rewards that will be issued decreases.

Lastly, the protocol extends vePLN token holders to rewards similar to staking. That is, as new PLN is minted, vePLN token holders will get as a reward, a share from a pool of tokens equal to 10% of the total circulating supply. This way vePLN token holders get less diluted compared to others if the supply is inflationary and end up with an even bigger share if the supply is deflationary.

Voting Rights

The vePLN tokens empower Pollenators with voting rights. Rather than using the amount of tokens locked as voting power, the Pollen DAO assigns the voting power in relation to the amount of time that the user will be committed to the platform after voting for a proposal. That is, a user should be willing to confront the outcomes of the proposals for which they are voting.

Voting power combines both the amount of PLN tokens locked and the remaining lockup duration for those tokens. This represents and directly models the level of commitment that users with voting rights have when it comes to governing the protocol. This idea stems from the Aragon Minime Token, later modified by the Curve team for their protocol:

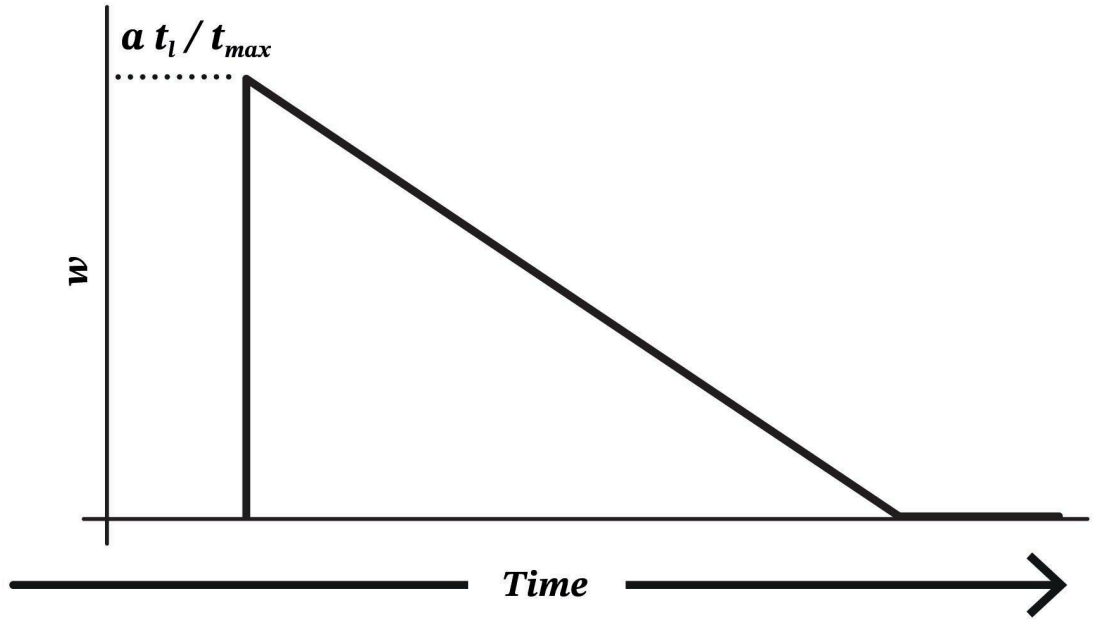


Figure 10. The curve shows the voting power (w) decreasing linearly with time such that the less time left in a Pollenator's lockup, the less voting power they have. Users have the option to extend lockup periods at any time to retain as much voting power as they can.

Conclusion

Our mission is to create new opportunities for trading communities to grow and establish a fully on-chain, decentralized prediction market.

Pollen's open protocol and merit-based system empower the community's brightest minds, while our 2025 roadmap focuses on enhanced functionality, new feature sets and protocol upgrades with improved incentives, all aimed at delivering a seamless user experience across a comprehensive product suite.

To achieve this, we're launching a cross-chain product suite on Avalanche, Base, and Polygon networks, featuring:

Pollen Virtual: A merit-based trading arena supporting long and short positions, rewarding contributors for accurate market predictions. Future improvements include expanded asset support and updated tokenomics to enhance user engagement.

CryptoBowl: Adding a competitive edge to Pollen Virtual, CryptoBowl allows Leagues PRO organizations to participate in fully on-chain trading tournaments. Designed to drive community growth, CryptoBowl serves as an engine for expanding the Pollen community while offering multiple revenue opportunities for participating leagues.

Pollen DAO: With a custom, self-executing protocol, Pollen DAO ensures that community-approved proposals are executed without centralized intervention. This decentralized governance model empowers members and ensures that the community remains in control.

Prediction Market: Pollen is expanding its prediction market capabilities through protocol updates that streamline user experiences and enhance incentives for both new and experienced traders. An API will make prediction market data more accessible for users and external platforms alike.

Pollen Leagues PRO: Leagues PRO offers tailored solutions for organizations, enabling them to host competitions with multiple revenue streams directly on Pollen.

As Pollen expands cross-chain by leveraging a Layer-Zero cross-chain architecture, its evolving prediction market capabilities and an accessible API. This roadmap reflects Pollen's commitment to democratizing DeFi, empowering its community, and setting new benchmarks for Web 3.0's prediction market and asset trading landscape.