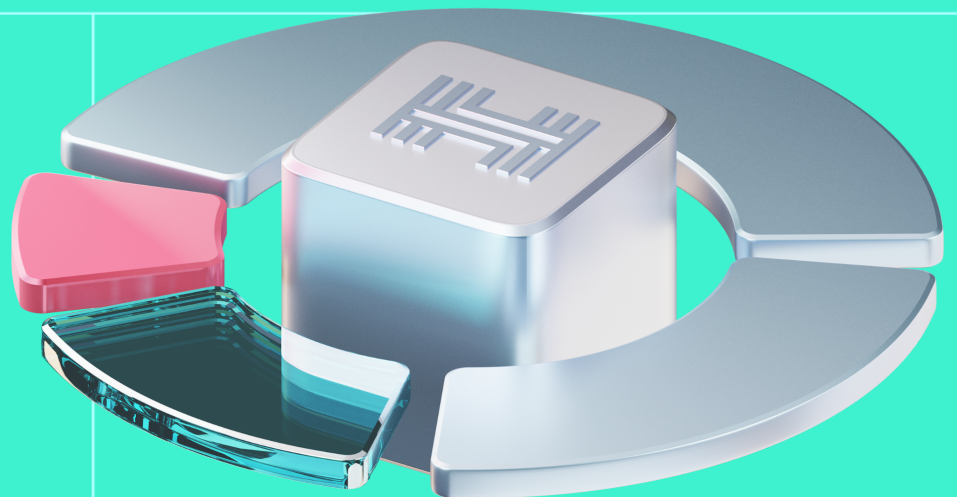




# Apiz Tokenomics Report V1.0



**Release:** Version 2.0

## Summary

1. APIZ is using the tokens as a funding mechanism.
2. In order for APIZ to work as a token ecosystem, we need to establish the following:
  - a. The core business is based upon the hives, not the token.
  - b. The token's price can be sustained only through the following:
    - i. Expectations about further growth.
    - ii. Buybacks
    - iii. Utility around special bonuses (e.g. the virtual hive).

### **Therefore, we propose the following:**

1. The project issues a limited number of staking slots. The number of staking slots is determined by the growth rate of the project, and the size of the treasury (which would be used to support buybacks).
2. Reward rates and bonuses will be determined based on the hive planning cycle.

In the Appendix, we show some basic simulations (Simulation 1) we did. The simulations assume that:

1. The proposed crowd-sale schedule is used.
2. A slot costs 50k.
3. No emissions are currently modeled.

Based on that, we see that there needs to be a demand of at least 300k APIZ per month for the token price to be sustainable.

### **This suggests certain options:**

If we add emission rates to this simulation, then we easily see that the monthly APIZ sold needs to raise up to 400k-500k.

1. The rewards might change over time, depending on the project's ability to do buybacks.
2. The guarantee that a buyback provides 110% return might have to be loosened to 100%+X% where X% is determined when the staking takes place.
3. We confirm that only up to 30% of the project's revenue should be related.

## **Introduction**

APIZ represents a fusion of beekeeping and blockchain technology. It is the first-ever industrial apiary managed entirely by token holders.

APIZ is rooted in the recognition of bees as some of the most rational and hardworking organisms on our planet. Their capacity to generate a diverse range of valuable commodities, including honey, beeswax, propolis, and royal jelly, among others, is unmatched.

The project aims to tap into this remarkable potential by establishing an effective system for industrial apiary management, drawing upon advancements in multiple fields such as agriculture, livestock, IT technologies, and blockchain.

The objective of the project is to establish a symbiotic relationship where humans offer a comfortable environment and consistent workflow for bees, and in exchange, the bees share their ample products.

Moreover, the project aims to ensure complete transparency throughout the entire process of bee product manufacturing. To accomplish this, APIZ will employ blockchain technology to document and monitor various aspects including production and logistics procedures, output quantity, geographical location, weather conditions, quality control, and consumption statistics.

The APIZ venture of tokenizing bees and their products is deeply rooted in an existing apiculture project, demonstrating a close interconnection between the two. The fixed-supply utility token \$APIZ serves as a critical component in the

protocol, creating a link between traditional business operations and blockchain technology. Staking and NFTs will be significant elements in the project, offering tangible returns, ownership rights, and influence over apiary management decisions.

## \$APIZ Snapshot

### Token Objectives

1. Yield Generation
2. Price Appreciation

### Project Usage

Users will mainly use the APIZ project for yield opportunities and to have the chance to exert influence on decisions related to apiary management. In reality, the majority of users are likely to prioritize immediate financial returns over the project's long-term sustainable development. This understanding gives APIZ a clear perspective on what to anticipate and how to mitigate it effectively.

### Token Utility

1. Staking for real yield based on offline business income.
2. Vote and influence decisions related to apiary business.
3. Token buybacks & liquidity provision.

Token enhances the current project by providing users the chance to profit from bee-derived products and also to engage in business management procedures through token-gated governance.

## Current Challenges & Potential Issues

- The protocol fundamentally involves staking for dividend payments, and this independent mechanism may categorize \$APIZ under security laws.
- The system's structure tends to draw a higher number of financial speculators and extractors.
- The current staking model does not yield any advantages for the business.
- As a blockchain business, APIZ is entirely reliant on a single offline revenue stream, which compromises its resilience due to limited financial adaptability. Furthermore, the existence of basic blockchain features may lead potential crypto power users to question if these are merely used to attract capital for offline business, rather than for the expansion of the ecosystem.
- The processes of token distribution, emissions, and liquidity setup contain numerous shortcomings that could negatively impact price appreciation.

## Mechanisms and Personas

### Tasks They Perform

**Speculators:** buying tokens, buying tokens, holding tokens for speculation.

**Yield farmers:** locking the tokens for the yield.

**DAO contributors:** voting, proposing ideas, advocating for the project

### Why Do They Use The Platform?

**Investors:** for speculation and financial gain.

**Yield farmers:** for passive financial gain.

**DAO contributors:** for self-interest, to be part of the community and business management, want to become part of the APIZ team and mission.

## How Do They Create Value?

**Investors:** buying tokens and this provides liquidity.

**Yield farmers:** locking the tokens and providing financial capital for APIZ. Staking doesn't create any value, it just dilutes the supply.

**DAO contributors:** voting, proposing ideas, and advocating for the project.

## What Do We Want Them to Do/Not to Do?

**Investors:** hold tokens as long as possible / speculate

**Yield farmers:** lock the tokens as long as possible / to stake for the short-term and sell the tokens

**DAO contributors:** vote & propose beneficial ideas / be apathetic & propose toxic ideas focused on self-interest.

## Incentives for Desired Behaviors

**Investors:** a promise to return high ROI.

**Yield farmers:** real yield based on offline business activities.

**DAO contributors:** token rewards.

## Disincentive for Undesired Behavior

**Investors:** vesting schedule, fee for selling too early.

**Yield farmers:** penalties for unstaking and fees for selling too early.

**DAO contributors:** slash token rewards for being inactive & toxic.

## Side Effects of Incentives & Disincentives

**Investors:** it can be harder to attract investors with restrictive rules for token selling & holding.

**Yield farmers:** can attract fewer yield farmers due to the harsh rules.

**DAO contributors:** could promote spammy and low-quality engagement.

## Risks

The project is intensely centered around staking and financial rewards, potentially attracting those interested primarily in immediate profits who may not be genuinely invested in the project's long-term vision. Although it's quite challenging to devise strategies that counter speculation and mercenary capital, APIZ can still develop solutions to alleviate its impacts.

The project should aim to captivate a community that is deeply intrigued by the business aspect and wishes to contribute to the beekeeping industry. It should target those who are eager to initially serve as early evangelists and advocates, and potentially transition to becoming contributors and possibly even team members in the future. Even though that is more of a marketing concern it is still highly associated with the business model and tokenomics.

## Tips

- The current framework is quite simple and straightforward at present, but it needs to evolve in tandem with the increasing complexity of the APIZ protocol. This framework can be utilized for various incentive strategies, always taking into account the potential functionality, unintended consequences, and any harmful behaviors it might promote.

## Staking

**Condition:** Profitability from beekeeping is a seasonal business that generates income in the summer, so the staking mechanism motivates to make deposits for a period of 1 year or more, which will allow even distribution of dividends among token holders throughout the year, thus avoiding excessive pressure on the value of the token in disadvantaged periods of the year.

**Core:** Opening a deposit involves depositing APIZ amounts that are multiples of 50K tokens (50K tokens is the minimum to start staking), which corresponds to 50K bees in 1 hive.

In addition, for each deposit made, the user receives ERC 721 NFT. NFT flow in staking is as follows:

1. The user staked APIZ and received NFT.
2. If they want to get a reward - the contract checks for the presence of NFT, and issues a reward.
3. When exiting staking, the logic is the same but NFT is burned.

**Dividends Calculation:** Dividends are paid in USDT. Dividends are paid based on APIZ token price when opening staking. An example of dividend calculation is given in the document [📄 APIZ Dividends](#). Users can receive dividends not more often than once a month.

The problem of the possibility of price manipulation is solved by using the arithmetic mean. At the beginning of staking, the backend will provide the contract with the average price of the token for the week/month /another period (we need to make it configurable). But this will only be possible after token listing.

Interest rates can be changed by the owner of the contract after 1 year from the start of staking, the change in rates will only apply to deposits opened after the date of the rate change.



**Add Tokens to Staking:** Deposit replenishment is not possible, but users can make as many new deposits as they want.

**Early Unstake Penalty:** In case of early termination of staking (but only after one year) the user will receive dividends based on the % and amount of the reward for the previous full month.

**Prolong Staking:** At the end of the staking period, the user can:

1. Close staking and receive a deposit with dividends.
2. Receive only dividends. In this case, the % accrued on the deposit will remain.
3. Extend staking. In this case, the % accrued on the deposit will remain, and the staking amount will take into account the accumulated dividends.

## Buyback

A user who is disappointed in the project can sell APIZ tokens purchased on Crowdsale, and the company guarantees the redemption of tokens after 18 months with 110% payment based on the price of tokens at the time of purchase (the price will be set on the contract with the ability to change it for new buybacks).

The buyback percentage can be changed by the owner of the contract, but the changes will only affect deposits created after the change in interest rate return.

To receive a refund, the user:

1. places its tokens in a separate contract,
2. they are frozen for 18 months,
3. after which they become the property of the company,

4. the user receives NFT for his buyback deposit
5. the company undertakes to replenish the USDT contract by 110% of the value of the tokens, after which the owner of the NFT will be able to claim them. The NFT itself is burned

## Weak Points

- The existing staking model does not offer any tangible financial advantage to the project and lacks integration with the core business. Stakeholders simply freeze their tokens, receiving returns derived from the beekeeping venture's net profits, while APIZ does not reap any financial benefits. So instead of fair economic exchange APIZ just uses profits and token reward allocations to make yield farmers richer and encourages them to sell later on potentially inflicting huge supply shocks.
- It's still not clear if the proposed buyback return on investment is sustainable and healthy. Also, certain jurisdictions regard buybacks as a component that is subject to securities regulations.
- It's crucial to consult with legal professionals regarding the staking structure. Staking is primarily utilized to distribute dividends to investors, which could potentially classify \$APIZ as security, particularly considering the current regulatory environment of the market.
- Lacking element that would add economic benefit to the project:
  - Provide a continuous funding stream for the beekeeping
  - Ensure a thicker liquidity pillow to withstand supply shocks
  - Ensure token price appreciation

# Recommendations for Staking & Buyback

## Staking

1. Should create an economic benefit for the system e.g. continuous funding, liquidity provision, etc.
2. Should work more as a zero-coupon/standard bond so the system can capture financial value i.e. invest in offline business and protocol operations.
  - a. Standard bond - a type of debt security in which an investor lends money to an entity that borrows the funds for a specific period of time at a variable or fixed interest rate.
  - b. Zero-coupon bonds - are sold at a discount and don't pay periodic interest. Instead, they mature at face value. The difference between the purchase price and the face value represents the interest earned.
3. Have dynamic APY based on system parameters:
  - a. APIZ gross income.
  - b. Rewards pool size.
  - c. Staking time.
  - d. The number of users staking.
  - e. Hives staked.
4. The number of staking slots is determined by the growth rate of the project, and the size of the treasury (which would be used to support buybacks). The dynamic nature of rewards would increase the demand for the initial staking slots and hence would provide additional capital to invest in the offline business.
5. Have clear penalties and additional rewards that would incentivize stakers to hold positions longer.
6. The specific number of hive NFTs can provide additional benefits e.g. telemetry, ownership, etc.

## Buyback

1. The approach should be sustainable and beneficial, ensuring that it does not introduce disruptive effects for the protocol, such as causing significant expenses & supply shocks.
2. The potential strength of future buybacks should be linked to the liquid treasury assets allocated for this purpose. It's substantially risky to base buyback guarantees on future token prices, which typically hold speculative value.
3. The protocol should proceed to repurchase tokens from the market when their value falls below their fair worth, which will be determined in the forthcoming sections using the quantity theory of money. The repurchased tokens should be harnessed to promote the protocol's overall benefits, such as providing liquidity to pools, burning, and encouraging desirable behaviors. Nonetheless, it's essential to ensure that these buybacks are conducted in accordance with the jurisdictional regulations of the company's incorporation. This is particularly crucial given that certain European countries regard buybacks as components subject to securities laws.

## Cash-flow

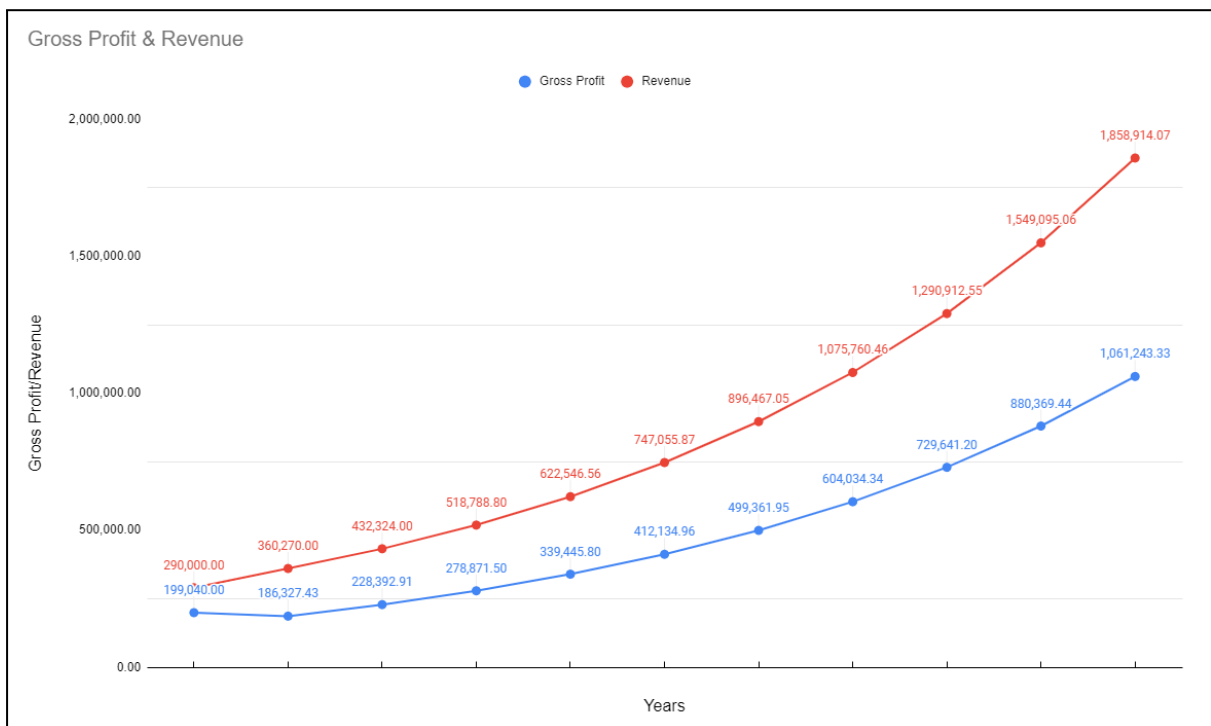
It looks that the project will earn its cash flows from one source:

1. Beekeeping business

The business anticipates achieving an annual revenue of 1,858,914.07 USD and an annual gross profit of 1,061,243.33 USD after a period of 11 years. A growth rate of 20% has been selected for this projection. The achievement of these targets is contingent on several assumptions:

1. An initial investment of 500,000 USD will be the sole source for generating the projected revenue and gross profit.

2. The projected revenue and gross profit are strictly derived from the company's offline beekeeping business.
3. The calculated gross profit does not yet include the portion designated for token allocations.
4. Profits are not being reinvested into the business.



## Capital Allocation

The collected funds will be distributed according to a 70/30 split. The larger portion, 70%, will be funneled into the offline business, while the remaining 30% will be earmarked for token development. This will be distributed based on our assumptions as follows:

1. 50% for operations,
2. 10% for marketing efforts,
3. 10% for rewards,

4. 30% for maintaining liquidity.

Following a span of 11 years, the anticipated annualized profit is expected to be divided in the manner described below:

70% (equivalent to 742,870.33 USD) should be reinvested into the offline business.

The remaining 30% (amounting to 318,373.00 USD) should be allocated towards token development and upkeep, with the distribution as follows:

1. Half of it (159,186.50 USD) is intended for operational costs.
2. 10% (amounting to 31,837.30 USD) will be set aside for marketing initiatives.
3. Another 10% (which is 31,837.30 USD) is reserved for rewards.
4. The last 30% (equivalent to 95,511.90 USD) is dedicated to ensuring liquidity maintenance.

## Weak Points

- The business currently relies solely on one stream of income without incorporating any blockchain-centric revenue channels, such as protocol-owned liquidity.
- The project neglects to consider the costs associated with token development and maintenance.
- There are essential components absent in the financial projection, rendering it less appealing to potential investors. After 11 years of operation, the projected gross profit stands at a mere 742,870.33 USD. The forecast could be significantly improved by including omitted aspects such as revenue from blockchain-focused activities, business reinvestments, and additional rounds of crowdfunding.

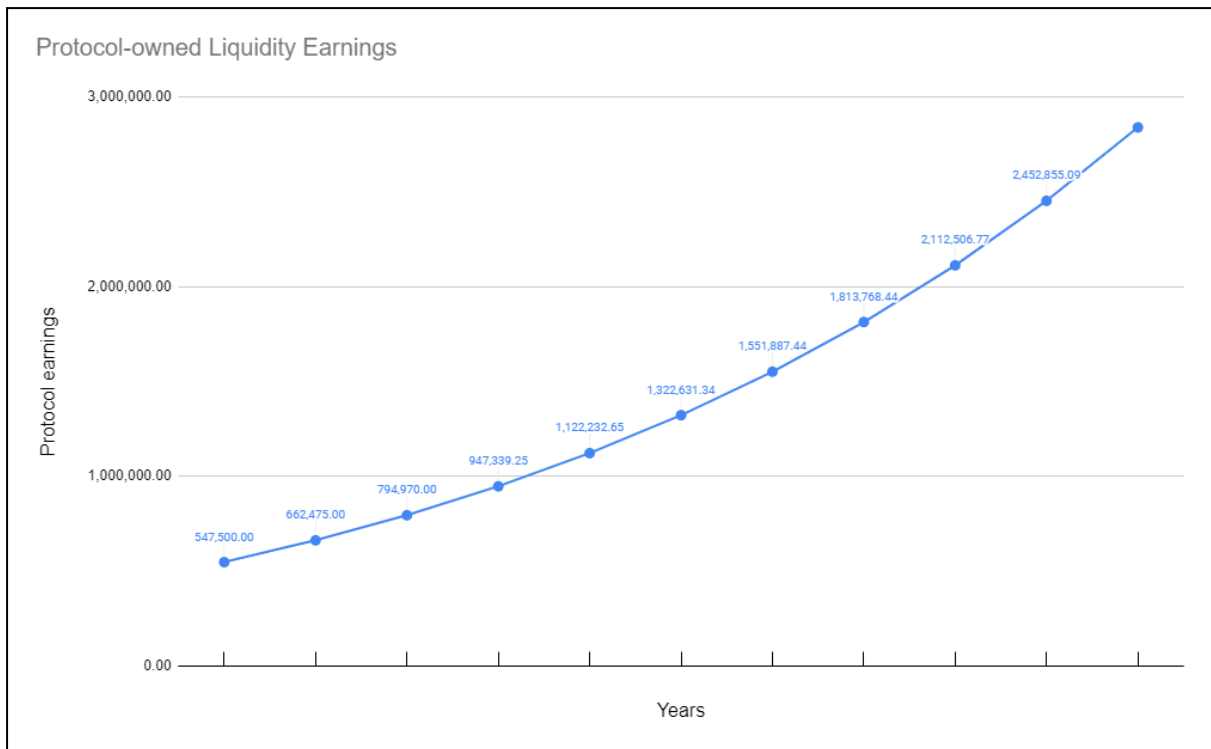
## Recommendations for Cash-flow

1. Include the profit derived from liquidity owned by the protocol.
2. Incorporate business reinvestments, along with further crowdfunding rounds.
3. Adjust the distribution of profit for the development and upkeep of tokens.

### Protocol-owned Liquidity

Let's assume that the \$APIZ DEX liquidity pool will have the following parameters:

1. The starting liquidity stands at 1M and is projected to increase by 50% annually.
2. The protocol will hold 20% of the DEX pool liquidity, with an annual increase rate of 2% in protocol-owned liquidity.
3. The yearly trading volume is set at 9,125,000.00 (equivalent to 25,000 per day, multiplied by 365) and is expected to grow by 10% each year.
4. A liquidity provider fee of 0.3% applies.
5. Note that this projection does not account for any potential impermanent loss.

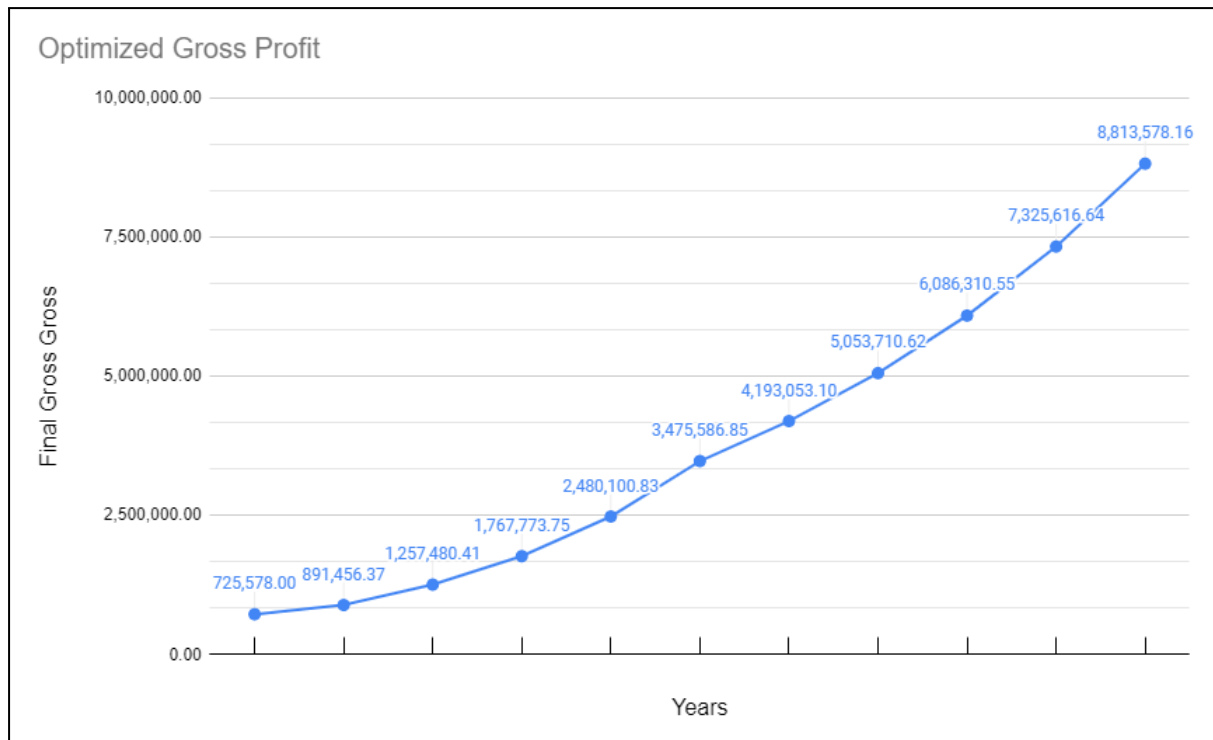


## Optimized Version

Assumptions:

1. The starting fundraising amount is set at 1M.
2. The profit from protocol-owned liquidity is factored in.
3. Each year, the rewards pool is fully expended to fundraise and purchase the maximum possible number of hives for the upcoming beekeeping season.
4. Over a period of 6 years, 80% of the profit appointed for offline business expansion is reinvested.
5. The average annual percentage yield (APY) for stakers is assumed to be 10%.





## Tips

- The allocation for rewards is rather limited and may be altered. Should there be sufficient demand for the project, the allocation could be optimized to facilitate more staking slots, thereby enabling the purchase of additional hives for the next beekeeping season.
- The cash-flow trajectory can be adjusted to align with investor requirements and strategic outlook. For certain crypto investors, an investment duration of 4-5 years might be excessively long.



## Tokens Allocation and Emissions

<b>Token Name</b>	APIZ	Fully Diluted Value (by first-round price)	\$ 500,000,000.00
<b>Symbol</b>	APIZ	Current Raise	\$500,000.00
<b>Total Supply</b>	50,000,000,000	Total Raise	\$6,200,000.00

### CROWDSALES STAGES AND RAISE ALLOCATION

Investment round	Price Per Token	Amount of tokens	Allocation of total supply	Raise Amount
Crowdsale1	\$0.01	50,000,000	0.10%	\$500,000.00
Crowdsale2	\$0.01	90,000,000	0.18%	\$900,000.00
Crowdsale3	\$0.02	70,000,000	0.14%	\$1,400,000.00
Crowdsale4	\$0.02	80,000,000	0.16%	\$1,600,000.00
Crowdsale5	\$0.03	60,000,000	0.12%	\$1,800,000.00
<b>Total</b>	-	<b>350,000,000</b>	<b>0.70%</b>	<b>\$6,200,000.00</b>

### TOKEN ALLOCATION

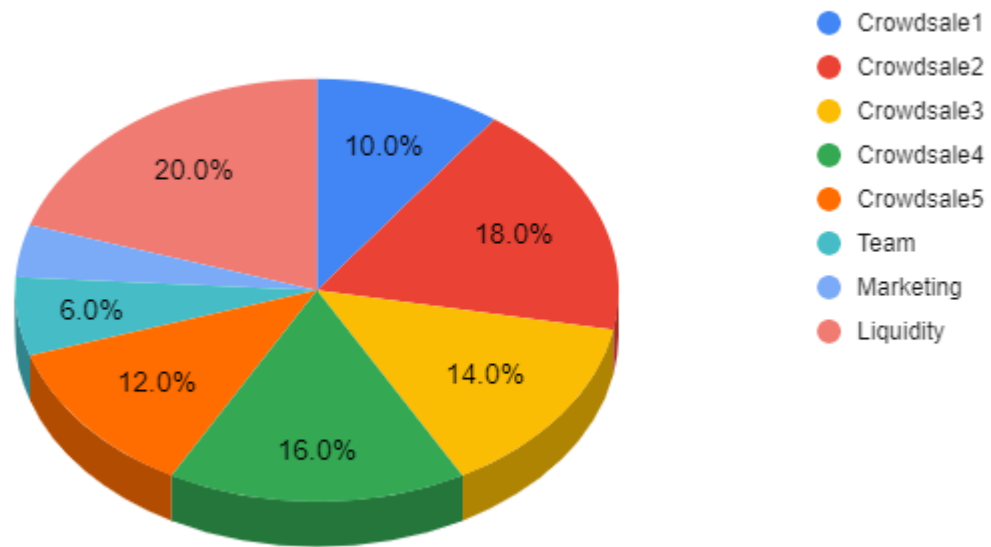
Allocation	% of Total Supply	Amount of tokens
Crowdsale1	0.10%	50,000,000
Crowdsale2	0.18%	90,000,000
Crowdsale3	0.14%	70,000,000



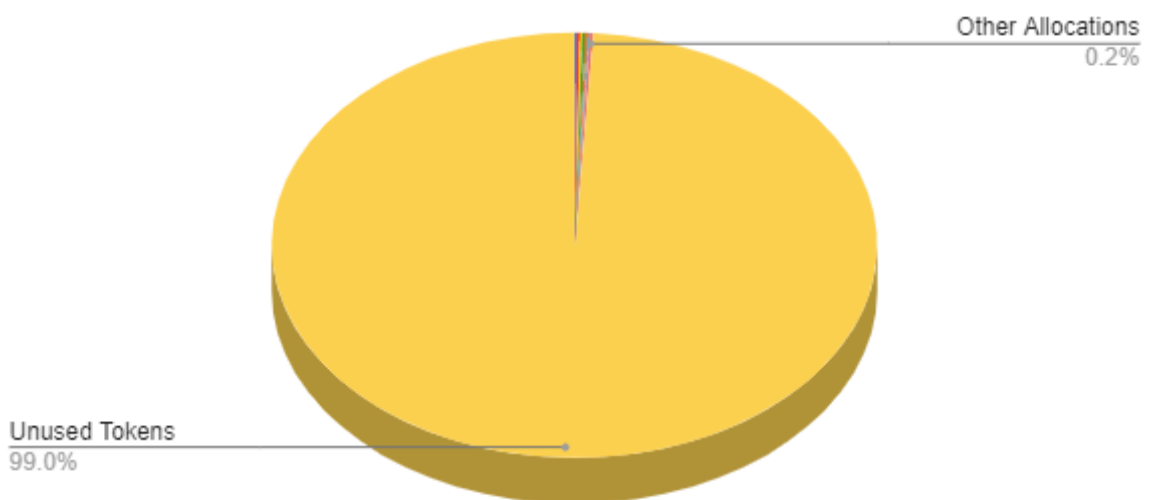
Hacken OU  
Parda 4, Kesklinn, Tallinn  
10151 Harju Maakond, Eesti  
Kesklinna, Estonia

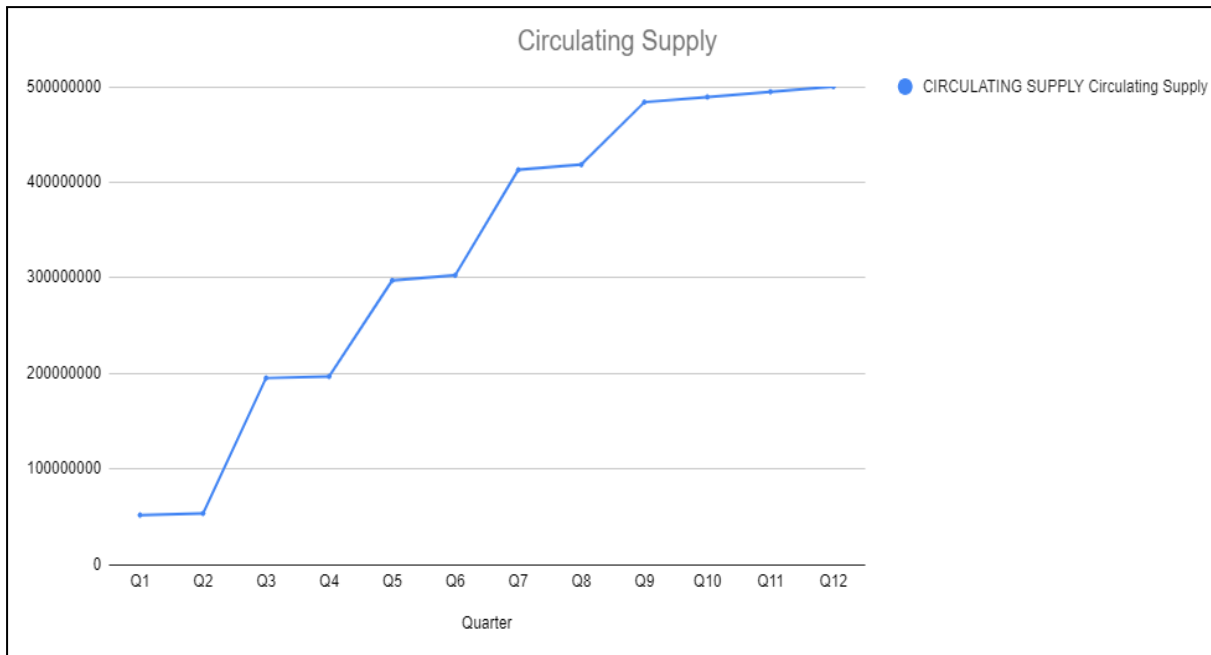
Crowdsale4	0.16%	80,000,000
Crowdsale5	0.12%	60,000,000
Team	0.06%	30,000,000
Marketing	0.04%	20,000,000
Liquidity	0.20%	100,000,000
Frozen Tokens	99.00%	49,500,000,000
<b>Total</b>	<b>100.00%</b>	<b>50,000,000,000</b>

### Distribution Without Frozen Tokens



### Distribution With Frozen Tokens





## Weak Points

- The schedule for initial allocation emissions appears to be sub-optimal. Evidence for this can be seen in the circulating supply graph, where sharp supply shocks are clearly visualized.
- Over 99% of tokens slated for issuance lack a clear emission schedule. This lack of clarity generates significant uncertainty around their allocation, as the purpose remains undefined. Additionally, it poses a substantial risk of centralization, with the potential for internal stakeholders to arbitrarily unfreeze the allocation and sell it on the market in a predatory manner.
- The sheer volume of tokens, even at the lowest round price, results in an initial Fully Diluted Valuation (FDV) of 500 million. Moreover, the remaining tokens could potentially trigger a hyperinflation spiral, destabilizing the \$APIZ price and leading to the eventual collapse of the protocol.
- Given the existing distribution and emissions framework, investors are unlikely to achieve their desired return on investment. The overwhelming

factor - the token supply, stands as a significant obstacle in reaching their ROI goals.

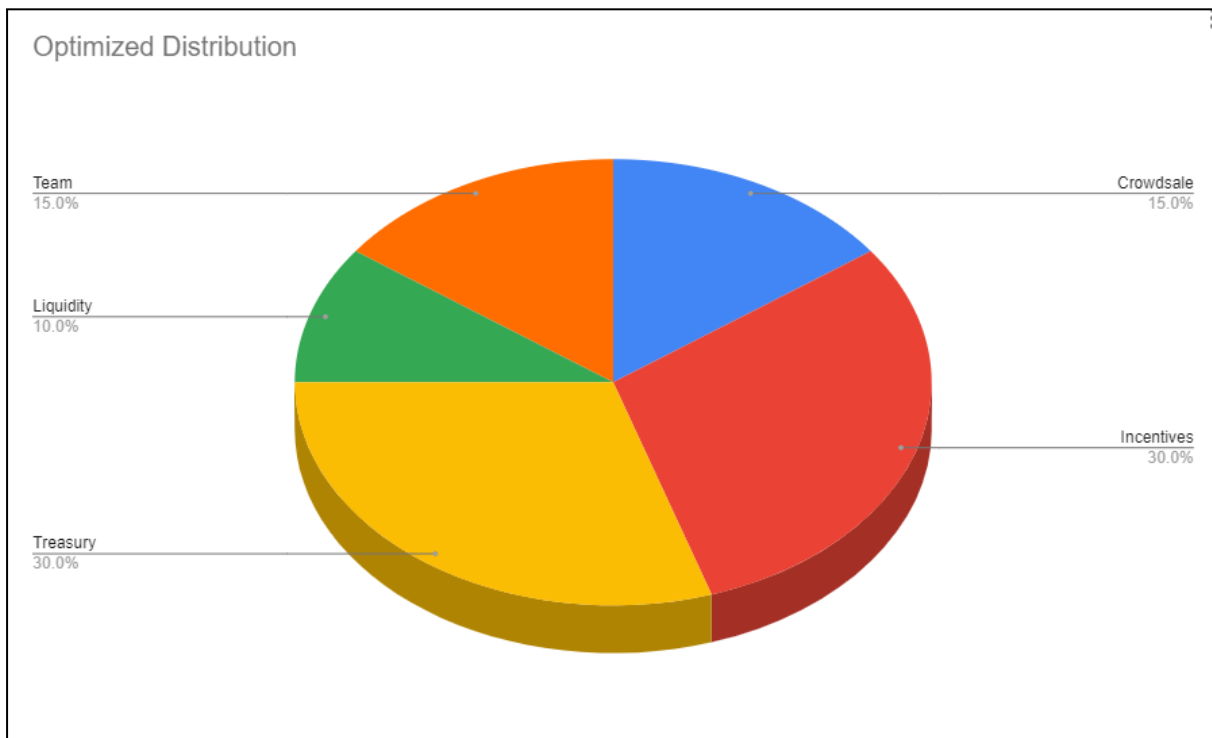
## Recommendations for Tokens Allocation and Emissions

### Token Allocation

1. We suggest eliminating the issue of a large allocation of frozen tokens, which has been causing significant problems related to centralization and transparency.
2. We recommend substantially decreasing the token supply.
3. To adjust the project's valuation based on current market conditions and investor expectations. The initial market cap is set at \$650K, and the fully diluted valuation (FDV) is reduced to \$10M from the previous \$500M, still leaving ample room for growth.
4. We also intend to minimize the number of crowdfunding rounds. A \$1M is more than sufficient to launch the business, while \$500K will be allocated for initial DEX liquidity.
5. We have revised token allocation to include new categories: Incentives and Treasury. The Incentives allocation will primarily be used to encourage participation in ecosystem activities such as voting and bonding/lending. Meanwhile, the Treasury allocation will be predominantly used for buybacks.

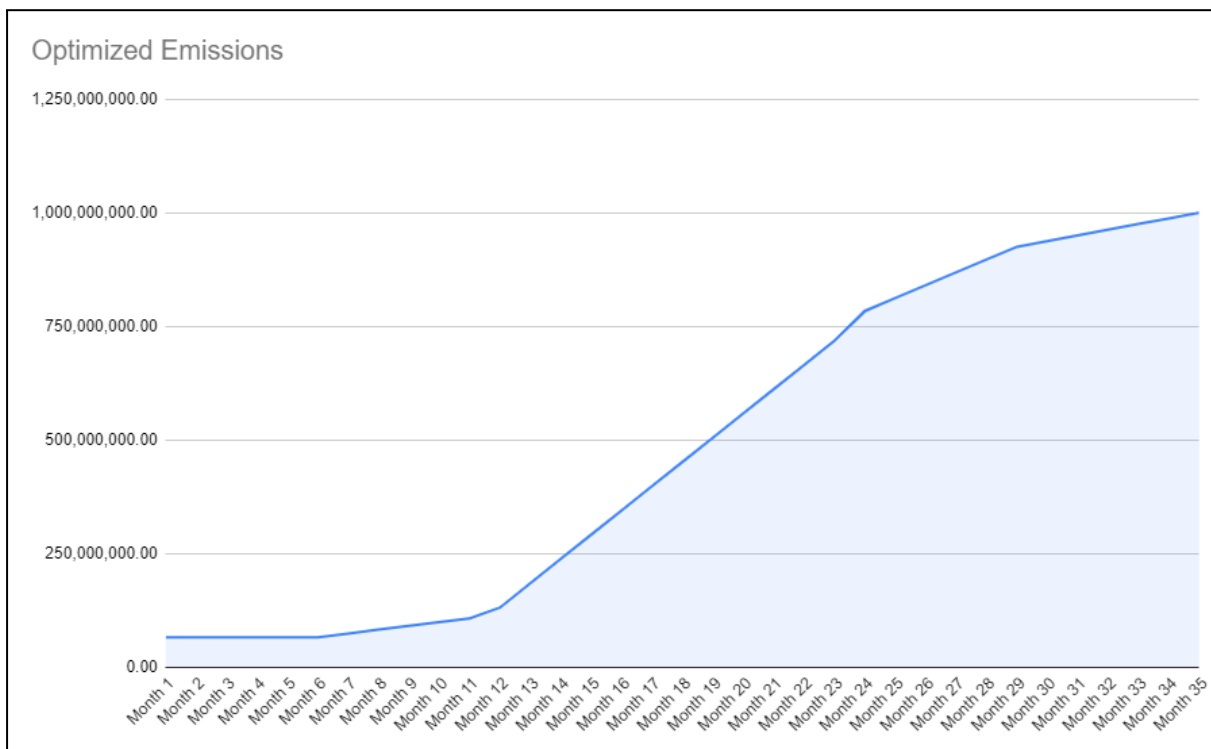


Description of Token Use	Percent	Total supply		
Crowdsale	15.00%	150,000,000.00	Price Per Token	\$0.01
Incentives	30.00%	300,000,000.00	Valuation	\$10,000,000.00
Treasury	30.00%	300,000,000.00	Collected USD	\$1,500,000.00
Liquidity	10.00%	100,000,000.00		
Team	15.00%	150,000,000.00		
Total	100.000%	1,000,000,000.00		



## Emissions

1. The emission schedule has been optimized to ensure a gradual release of tokens over a span of 35 months, avoiding any abrupt shocks to the supply. Only a portion of the allocations for liquidity and incentives will be unlocked initially.







## Token Launch and Liquidity

### APIZ Liquidity Emissions (0.2% token supply)

Liquidity	Time
0	Q1
0	Q2
50,000,000	Q3
50,000,000	Q4
75,000,000	Q5
75,000,000	Q6
100,000,000	Q7
100,000,000	Q8
100,000,000	Q9
100,000,000	Q10
100,000,000	Q11
100,000,000	Q12

The initial launch price of the token is set at \$0.01, with a fully diluted valuation (FDV) of \$500 million.

## Weak Points

- There was no token liquidity to pair with. As you can see liquidity emissions start off only from Q3.
- Due to inflated FDV even if all liquidity would be released and launched there would be needed insane number of funds to pair with:

To achieve a valuation of \$500 million, you would need to pair 1 million ETH with just 0.2% of the token supply for liquidity. Meanwhile, 98.8% of the tokens would remain as inflationary emissions. Such a scenario is unhealthy for early purchasers due to the constraints of limited liquidity, and a high inflation rate would result to their detriment.

## Recommendations for Token Launch and Liquidity

1. To increase the crowd sale amount by an additional \$500K and unlock 50M tokens at the launch. A robust 5% of the token supply could be added to the pool, requiring only \$500K in funds for pairing.
2. To adjust diluted valuation (FDV) to \$10MI leaving ample room for the project's growth.

## Governance

### DAO Contributor's Funnel<sup>1</sup>

#### LEVEL 1: Users

It encompasses anyone who uses the products or services of your community. There are no gates to enter, and all are encouraged to participate. This level also includes anyone who owns any amount of the community token.

#### Level 2: Community Members

The second level and first gate introduce official community members. In this scheme, users and community members are not the same. While public users benefit from the community's products, community members influence how those products and services are created and disseminated. They are the community's explorers, advocates, and evangelists. Many digital communities already employ these terms to describe similar programs. Community members are bullish on the products and vision of the brand and want to contribute. They are eager to participate and collaborate with other members to test and promote new ideas and opportunities for the community.

#### Level 3: Contributors

The next level comprises contributors. These individuals have moved beyond just membership to become productive assets of the community. And because the people closest to work should be the ones making the decisions of what gets done, I argue this level is also the domain of governance. Being a community member is distinct from being a voting member of its governing body. The incentives, concerns, and responsibilities are just not the same. Issues of tokenomics, vision, and sustainability, are suddenly more relevant than before. Individuals at this level have shown an investment in the community, and their purview has grown more holistic and macro-oriented.

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<sup>1</sup> <https://operator.mirror.xyz/iWSuHkhJt2M9W0rAzBwfUoyrYRtcJ6v7QI3SnHBIVvc>

## Level 4: Teams

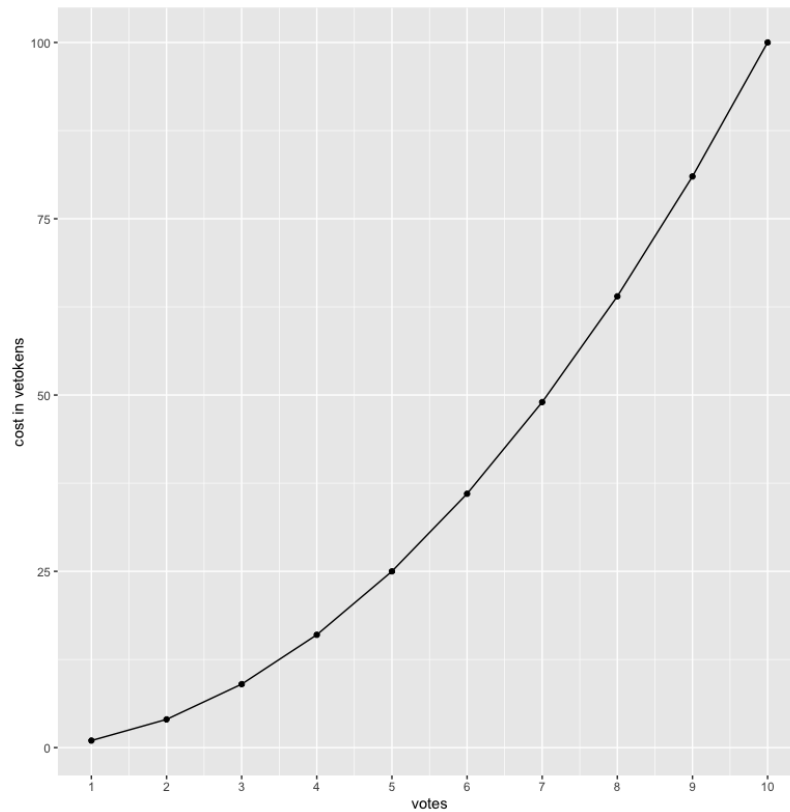
Lastly, we arrive at teams which is the level of execution. Teams are a communities' engine, and their ongoing development will define the efficacy and sustainability of a community's product offering. A DAO can not produce sustainable revenue without them. Communities gather around successful products, and vibrant communities make successful products possible. This symbiotic relationship is the lifeblood of Web3.

## Voting

In terms of voting we propose a combination of the veToken model and quadratic voting. The users will be able to vote on various topics, such as emission rates, rewards pool utilization, or how many new hives will be built.

The users acquired veTokens by locking up their regular tokens. This creates additional utility on top of staking.

Quadratic voting places a quadratic weight on the cost of votes. Therefore, a user can place an unlimited number of votes, but the cost of a vote in veTokens is  $x^2$ . This is shown in the graph below.



This mechanism has arisen as a useful governance method to enable users more freedom over their preferences.

Once a vote takes place, then there is a “cool-off” period during which the users can’t use their veTokens to vote. The cooling-off period depends upon the frequency of new topics to vote on. We propose that a veToken shouldn’t be reusable for at least 2 weeks, independent of the frequency of new issues to vote on.

## Audit

In terms of audit, we will proceed with the questionnaire published by the JBBA.

### Business-Token interaction (2)

1. Do tokens improve the current business model? **Yes:1, No:0**

Integrating tokens can potentially elevate the existing business structure, though initial stages might prove challenging. The protocol's foundation primarily enables a fundraising mechanism through financial incentives, which could draw a significant number of speculators seeking to derive value from the protocol. Consequently, genuine participation and voting might become a behavior limited to a small segment.

2. Is the token nice to have, or an essential part of the business model?  
Essential: 1, Nice-to-have: 0

Definitely, only nice to have. The business could sustain itself even without a token that is primarily utilized for fundraising purposes.

3. Can the project gain value (not the token) in fiat terms? **Yes:1, No: -1**

Yes, the business can generate cash flows from their beekeeping business.

### Structural Analysis (1.5)

Break down explaining main system mechanisms and interactions:

1. Cash-flows:
  - a. Does the token economy have an influx of value (e.g. in fiat) coming in? **Yes:0, No: -1**

At present, the project isn't experiencing any value inflow and is only expected to generate it in the future.

- b. Does money stay in the token economy, or is there pressure to immediately sell? **Stay: 1, Sell-pressure: -1**

The protocol fundamentally attracts financial speculators who, over time, are likely to sell and contribute to downward price pressure.

- c. Are there Ponzi-like elements? **Yes: 0, No: 1**

No, however, the project heavily relies on a single revenue stream. If the beekeeping business underperforms or encounters unforeseen circumstances, it could potentially collapse, particularly during its pursuit of stability.

- d. Mechanisms and all economic agents involved  
e. Do interactions generate additional value expressed in fiat? **Yes: 1, No: 0**

Currently, no but if the project will switch from staking to lending/bonding the situation will change.

- f. Does the project require a critical mass in order to be able to provide value? E.g. social networks are a good example of this.  
**Yes: 0, No: 0.5**

No, the beekeeping enterprise generates a range of products that can be marketed independently, without the necessity for specific network effects.

- g. Are the incentives speculative? For example, rewards with no underlying value? **Yes: -1, No: 0**

At present, yes. Staking merely dilutes the token supply and temporarily wards off impending selling pressure. However, if the project alters its strategy and makes use of the capital provided, this could change.

## 2. Demand Drivers

- a. Do all the demand drivers depend on controllable factors or uncontrollable factors? An example of a controllable factor is product quality. An example of an uncontrollable factor simply conditions. **Controllable: 1, Uncontrollable: 0**

Most factors driving demand are beyond control and will hinge on how investors and speculators interpret the token's value. Nonetheless, in the future, the project has a promising chance to maintain balanced demand by allocating staking slots based on the performance of the project.

- b. Are there levers of the economy that can use to influence the demand? **Yes: 1, No: 0**

Yes, staking slots, coupled with the convergence of token rewards, can impact the overall demand for the project.

- c. Do they depend on entities that generate real economic value or more on internal or speculative factors, e.g. expected token appreciation because of rewards? **Real economic value: 1, Speculative: -1 Both**

Ultimately, it will hinge on two factors: how investors and speculators interpret the token's value, and the performance of the beekeeping business. Nonetheless, if the business proves successful, it should carry more weight in influencing the investment decisions of investors.

### 3. Governance:

- a. Can a majority take over? **Yes: -1, No: 1**

Despite the use of veTokens and quadratic funding potentially reducing the likelihood of a majority takeover, the system can still be manipulated, allowing such an event to occur.

- b. Can governance cause sticky points? For e.g. votes need to take place, but no one is voting. **Yes: 0, No: 1**

Indeed, particularly given that the project doesn't emphasize social elements as much, but rather targets its audience by enticing them with financial incentives.

### 4. Empirical proof:

- a. Has there been proof that the mechanisms used in the project can work successfully? **Yes: 2, No: 0**

Yes, staking is a well-understood and extensively studied mechanism, with its advantages and disadvantages widely recognized.

## Allocation and Distribution (-2)

- 1) Does the allocation favor pump-and-dumps? **Yes: -1, No: 0**

Yes, but if the project adheres to the recommended guidelines, this issue can be resolved effortlessly.



2) Does it provide unnecessarily large stakes to certain actors? **Yes: -1, No: 0**

Yes, but if the project adheres to the recommended guidelines, this issue can be resolved effortlessly.

3) Does the distribution avoid creating unnecessary sell pressure? An example of this can be excessive airdrops. **Yes: 1, No:0**

No, but if the project adheres to the recommended guidelines, this issue can be resolved effortlessly.

## Stability and stress tests (1)

1) How exposed to shocks is the token? Answering this requires simulations. Use a scale from -2 to 2. A 2 represents a token that can withstand huge shocks (e.g. massive bear market), and a -2 represents a token that can only appreciate when conditions are perfect. (-1)

Initially, without robust foundations such as liquidity and treasury to provide artificial support, it would be challenging to cushion the significant sell shocks that are likely to occur due to the attracted audience.

2) Does the token appreciate when simulated? If the objective of the token is to provide a peg or some other functionality, then this question can be ignored. **Yes: 1, No: -2**

Indeed, however, the project requires optimal conditions for the token to increase in value.

3) Does the system have feedback loops, which could accelerate a crash (e.g. the Terra/Luna case)? **Yes: -1, No: 1**

No, but the business is significantly reliant on a single revenue stream. As a result, underperformance could lead to substantial disruption or even collapse.

## Points Interpretation

The maximum score can be 18.5:

- Business-token interaction(3)
- Structural(10.5)
- Allocation and distribution(1)
- Stability and stress tests(4)

The lowest possible score can be -13:

- Business-token interaction(-1)
- Structural(-5)
- Allocation and distribution(-2)
- Stability and stress tests(-5)

APIZ score:

- Business-token interaction (2)
- Structural (1.5)
- Allocation and distribution (-2)
- Stability and stress tests (1)

Letter rating	Score	Percentage
AAA	16-18.5	86%+
AA	14-16	75%-86%
A	12-14	65%-75%
BBB	10-12	54%-65%
BB	8-10	43%-54%
B	6-8	32%-43%
CCC	4-6	22%-32%
<b>CC</b>	<b>2-4</b>	<b>11%-22%</b>
C	0-2	0%-11%
DDD	-4-0	-21%-0
DD	-8-4	-42%-0
D	<-8	<-42%

## Conclusion

APIZ stands as a groundbreaking fusion of beekeeping and blockchain technology, introducing the novel idea of a token-holder managed industrial apiary. The project acknowledges the extraordinary capabilities of bees, capitalizing on their capacity to generate a diverse array of valuable products. By merging advancements in fields such as agriculture, livestock, IT technologies, and blockchain, APIZ is committed to creating an efficient system for managing industrial apiaries.

Nonetheless, the project is not without its challenges. The protocol's dependence on staking for dividend payouts could potentially classify \$APIZ under security laws. The system's design may inadvertently draw a larger

number of financial speculators and extractors. The existing staking model fails to offer any tangible benefits for the business, and the company's sole reliance on a single offline income source restricts its financial adaptability. Moreover, the simplistic blockchain features could prompt potential crypto power users to question the project's genuine objectives.

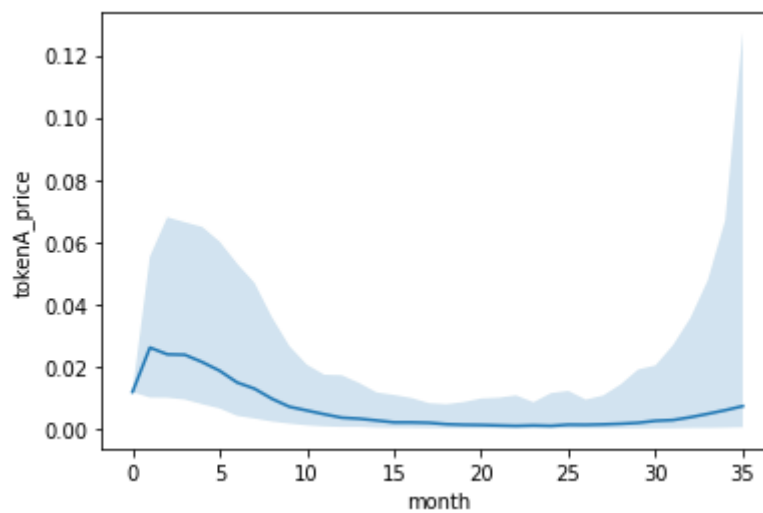
Despite these hurdles, the APIZ project presents a unique prospect for users to gain from bee-derived products and engage in business management processes through token-gated governance. The project's emphasis on efficiently addressing these challenges could pave the way for a sustainable and profitable future for all its stakeholders.

## Simulation 1

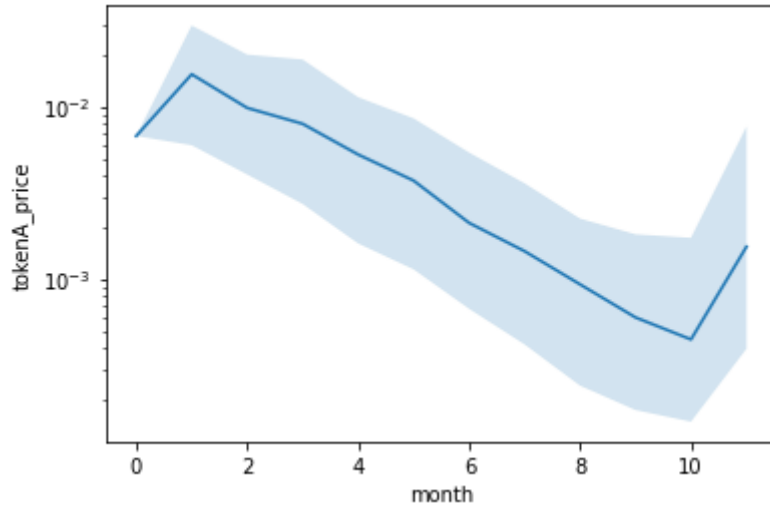
Data is provided as a separate CSV file.

Assumptions:

- 1) A staking slot costs 50k \$APIZ
- 2) The core parameter is the average number of slots “sold” per month



Simulation: No rewards, and an average of 300k of APIZ per month



Simulation: Staking with 18 stakers + 5% rewards

## Simulation 2

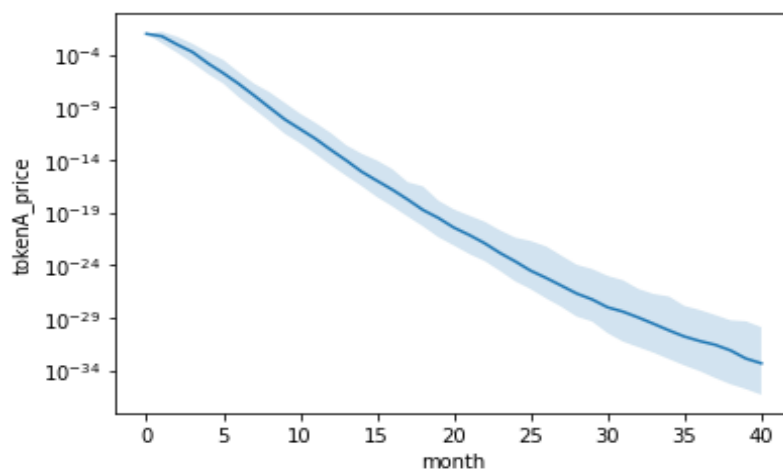
Data is provided as a separate CSV file.

Assumptions:

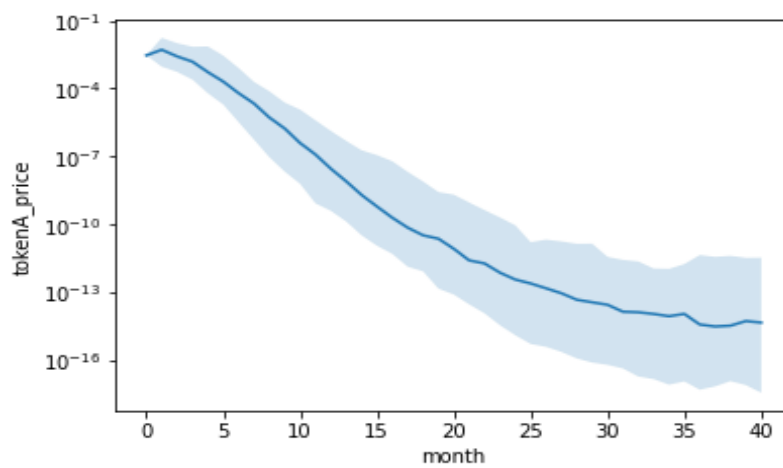
- 1) An NFT costs 50k APIS
- 2) The core parameter is the average number of NFTs sold per month

All plots are in logarithmic scale

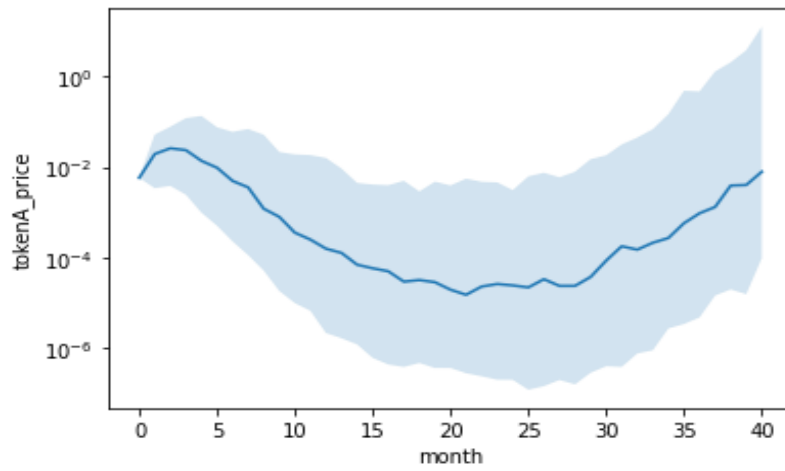
1 NFT



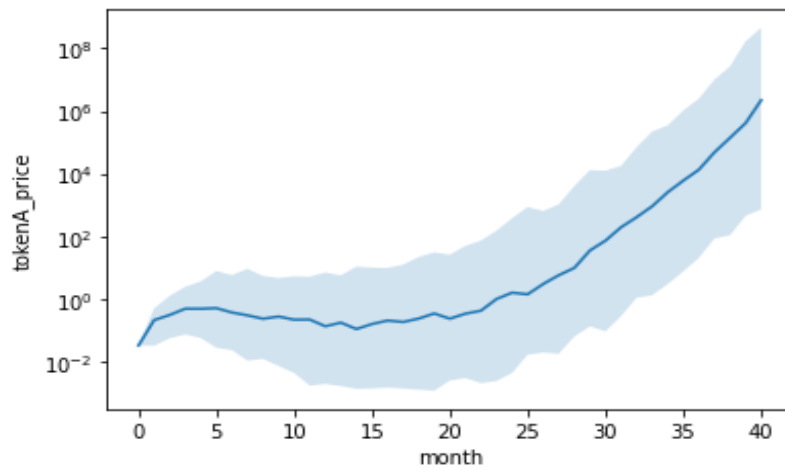
3 NFTs



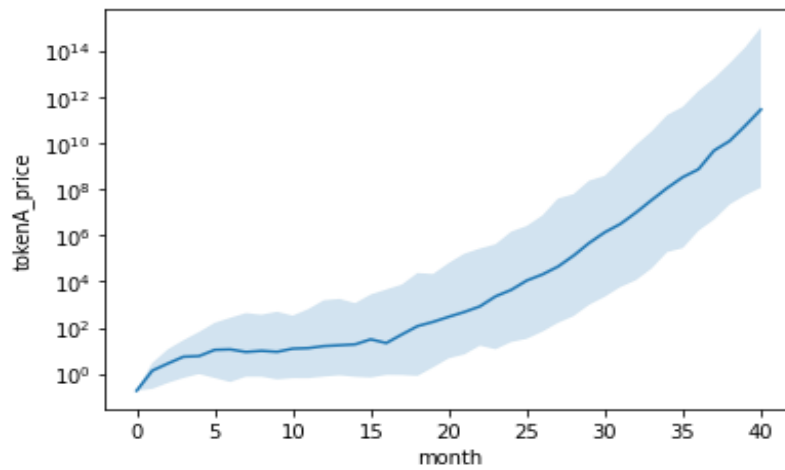
6 NFTs



9 NFTs

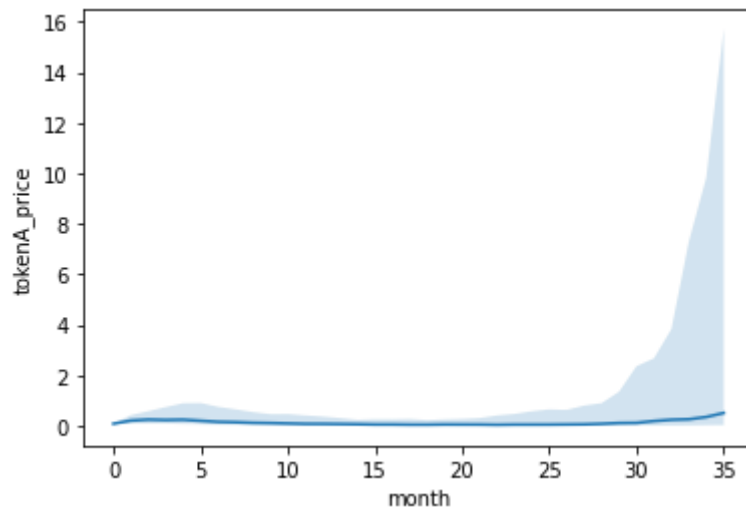


12 NFTs





The graph below is not using a log scale and is set at 6 NFTs per month on average. It's plotting over the 36-month period during which the crowd sales are taking place. We see that 6 NFTs seem to be a minimum required to sustain the price at levels close to the target price.



## Simulation 2.1

We conducted simulations using the Equation of Exchange as the basis of valuation, and the assumptions given to us by the financial projections.

The equation of exchange is a model commonly used in practice that is defined as

$$P = T * H/M$$

Where P=price, T=transaction volume (in dollars), H is the average holding time, and M is the total number of tokens.

Based on that we project different scenarios as to how the number of stakers will affect the pricing. As it stands, the fair value of the token does not seem to hold up to the crowd sale price.