Almanak Token Economy: Designing Resource Markets for Financial Agents

Version: 1.0

Abstract

The Almanak Ecosystem democratizes access to AI Agents-driven financial strategies through a permissionless platform that leverages AI capabilities and blockchain based financial markets. Almanak enables users to build, train, and deploy AI Agents for crypto markets. The ecosystem is built on three foundational roles—Strategy Contributors, Agent Managers, and Liquidity Providers—ensuring quality strategy development, efficient asset management, and access to liquidity. Inspired by proven practices in traditional hedge funds and battle-tested blockchain protocols such as Bittensor and Curve Finance, Almanak's key features include a merit-based emission allocation, customizable privacy setups for strategy development, sharing, and deployment, and a veToken governance model leveraging "bribes-based" decentralized decision-making. As the future of finance becomes increasingly agent-centric, Almanak creates a market to incentivize agent-driven traffic in crypto.

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1. Almanak Token Ecosystem

1.1. Introduction

Almanak is an agent-centric platform empowering users to navigate the complexities of the evolving AI-driven financial ecosystem. It addresses challenges such as DeFi fragmentation, information overload, and inefficient market participation with cutting-edge solutions. By leveraging AI-powered strategy design, autonomous optimization, and automated execution, Almanak enables users to <u>build, train, and manage</u> financial strategies using AI Agents. Leveraging blockchain technology, Almanak fosters the development of the Almanak Ecosystem. Its goal is to establish an efficient and attractive network for value exchange among key participants, ensuring a seamless and attractive environment for all stakeholders. For more information on the Almanak Platform, see Almanak's Litepaper¹.

Almanak Token Ecosystem

The primary mission of Almanak is to onboard the next billion financial AI agents on-chain. To achieve this, the Almanak Token Economy has been designed to meet the demands of protocols for AI-driven agent traffic. A key challenge in building such an ecosystem lies in incentivizing network participants to share high-quality strategy code with other users. This creates a conflict of interest, as genuinely high-performing, alpha-generating strategies are unlikely to be willingly shared with the broader network.

To address these challenges, the ecosystem distinguishes three key roles, each with distinct incentives to ensure high-quality contributions while collectively driving the development and deployment of performant AI agents and stimulating the growth of the Almanak ecosystem. These roles include Strategy Contributors², Agent Managers³, and Liquidity Provider⁴.

¹ Almanak: Democratizing Access to Financial Intelligence, https://almanak.co

² Strategy Contributors: See Glossary, page 15.

³ Agent Managers: See Glossary, page 15.

⁴ Liquidity Provider: See Glossary, page 15.

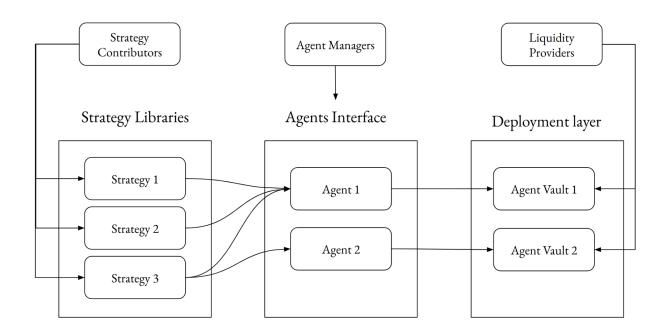


Figure 1: Network Participant and Almanak Ecosystem Architecture

Strategy Contributors

Strategy Contributors are the primary developers of Strategy⁵ code for the platform. Similar to the role of contributors in Bittensor Subnets⁶, they are rewarded with Almanak Tokens for delivering high-quality Strategies. Their main objective is to create Strategies that are widely utilized by Agents⁷ (Agent Managers⁸). Strategy Contributors can either keep their Strategy fully private, or grant access to the Strategy by deploying it into the Strategy Libraries⁹, where Agents can get access to them. Making the Strategy accessible for Agents to utilize and deploy allows Strategy Contributors to earn emission rewards whenever their Strategy is matched with Agent Vault¹⁰ (AUM) and produces returns. By keeping the Strategy private, the Strategy Contributor forgoes the potential emission rewards in favor of keeping the strategy capacity for his/her own funds.

Agents Manager

Agent Managers are the primary users of the Almanak platform that use the Agents Interface to train and manage Agents. They leverage the Almanak platform and its Strategy Libraries—a repository of strategies provided by Strategy Contributors—to discover, optimize, and deploy the most effective Strategies using AI Agents as the main generative interface. Agent Managers can manage multiple Agents with different risk profiles. Each Agent can utilize multiple different Strategies simultaneously or alternately. Agents can deploy assets using

⁵ Strategy: See Glossary, page 15.

⁶ Bittensor Subnets: See References, page 15.

⁷ Agents: See Glossary, page 15.

⁸Agent Managers: See Glossary, page 15.

⁹ Strategy Libraries: See Glossary, page 15.

¹⁰ Agent Vault: See Glossary, page 15.

Agent Vaults, and accept capital from ¹¹Liquidity Providers in exchange for fees. Agent Manager can also deploy private Agents that would deploy assets using private Agent Vaults, without granting access to external Liquidity Providers.

Liquidity Providers

A passive user of the platform. Liquidity Providers can deposit capital directly into the Agents' Vaults in exchange for a fee paid to the Agent Manager. In this way, Liquidity Providers can become passive investors in the sophisticated Strategies managed by Agents and their Managers.

<u> Agents Manager + Strategy Contributor + Liquidity Providers</u>

In the Almanak Ecosystem, the roles can be combined in different configurations and operated by one person or entity. In some cases, an Agent Manager may choose to connect their Agents exclusively to their own Strategy Libraries, effectively taking on the role of a Strategy Contributor as well. By keeping their Strategies private, these Agent Managers ensure that the capacity of their Strategies is reserved for their own private Agent Vaults. In such a case, technically, they can also become a Liquidity Provider. Alternatively, the Agent Manager can make the Agent Vault available to others in exchange for fees, thus allowing external Liquidity Providers to enter and scale the AUM.

1.2. Strategy Library Privacy Setups

Since Strategy Contributors are sharing valuable intelligence with other network participants, we equip Strategies with 3 different possible privacy setups, thus allowing the users to share their Strategy while keeping the IP and the monetization benefits for themselves.

- 1. Fully private setup no one but the Strategy Contributor has full access to the Strategy. The Strategy is closed source and unlisted effectively no one else knows of its existence.
- 2. Private but shared The Strategy source code is closed, but the Strategy is listed and public in the Strategy Library, where Agent Managers can access it to train Agents. Any Agents, even the ones that are not controlled by the particular Strategy Contributor, can deploy this Strategy (all without having access to the Strategy code base). In such a case, in order for the Agent to know the Strategy's expected output, the Agent would simulate the Strategy on Almanak's infrastructure prior to deploying it on-chain.
- 3. Fully public Strategies Strategy code is open source and publicly listed in the Strategy Library any Almanak Platform user can get access to it and its code.

¹¹ Liquidity Providers: See Glossary page 15.

1.3. Inspired by Battle-Tested Practices

In designing the Almanak Token Economy, we drew inspiration from the proven practices of leading hedge fund trading desks. These entities excel in capturing market opportunities by continuously backtesting and simulating thousands of Strategies from libraries available in the fund arsenal, to ultimately identify those with the highest potential for returns under current market conditions. Strategies with the highest expected performance are allocated with greater weights and, subsequently, higher assets under management (AUM) for trading. This approach proved highly effective and battle-tested in closed-source systems, where a single entity oversees the curation and deployment of the Strategies.

At Almanak, we adapted this model to align with the decentralized and permissionless nature of the crypto space. This required the creation of a fully market-driven and open network, while preserving the efficiency of Strategy optimization and deployment. We believe that this market-based framework can drive even greater efficiency and innovation than the traditional closed-source models, and foster a much more dynamic and competitive ecosystem.

Almanak's token economy also draws inspiration from successful models like *Bittensor*¹² and *Curve Finance*¹³, integrating some key elements to cultivate a dynamic and participatory ecosystem.

Bittensor's Influence:

• Incentivized Contributions: Similar to *Bittensor*, where miners and validators are rewarded for providing AI models and computational resources, Almanak encourages the deployment of Agents and Strategies by offering token rewards.

Curve Finance's Influence

• Governance and Emissions: Almanak's future governance would adopt a mechanism akin to *Curve's* bribe system, where token holders can stake their tokens to influence emissions toward specific liquidity pools, thereby enhancing liquidity. In Almanak, this approach would be applied to direct emissions, incentivizing the deployment of Agents and Strategies, and channeling agentic traffic to protocols selected by community votes.

By merging these models, Almanak creates a token economy that rewards active participation and aligns incentives with community-driven decisions, promoting a robust and engaged ecosystem.

1.4. Autonomous Agents as Core Decision Makers.

Almank Agents provide users with access to financial intelligence that possesses both quantitative and qualitative reasoning abilities and is intimately familiar with the Almanak workflows. Almanak's agentic infrastructure allows Agents to assist users with specific steps in the financial strategy

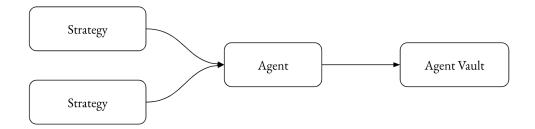
¹²Bittensor: See References, page 15.

¹³ Curve Finance: See References, page 15.

development workflow. Agent's key objective is to find, test, and deploy a Strategy with the highest expected return for the current market conditions. This creates a system similar to the one described in the chapter above, where strategies are constantly being tested, and the one with the highest expected return is given greater weight and, eventually, higher AUM. In Almanak, Agents are operated by independent users - Agent Managers - to foster market-driven competition through constant selection and deployment of strategies with the highest expected return. Post-deployment, Agents constantly report new opportunities or update the status of existing ones to Agent Managers.

1.5. Merit-based emission allocation function - the Bittensor-inspired growth model.

As mentioned before, the core resource stimulating the growth of Almanak's platform is the supply of Strategies to the Libraries. Therefore, the biggest beneficiaries of Almanak's emission would be the Strategy Contributors. Strategy Contributors would be rewarded with daily emissions of the Almanak Token, if their Strategies are being utilized by the Agents, and generate returns in the Agents Vaults these Agents manage.



The emission would be distributed to the Strategy Contributors based on the proportion of returns being made by a particular Strategy, in comparison to Almanak's Protocol overall returns. Strategies record returns if the Agent Vault that uses this Strategy records returns. <u>For example, if Agent Vault 1 generated \$100 in returns, and</u> <u>Agent Vault 2 generated \$50 in returns, and both have been using only Strategy 1, it means that Strategy 1</u> <u>generated \$150.</u>

To illustrate the example of how Almanak's emission system works, we need to remember that Agents can manage multiple Strategies, simultaneously or alternately. This means that an Agent can connect many Strategies to its Vault, or many Agents can utilize the same Strategy.

Figure 2 below illustrates a simplified example:

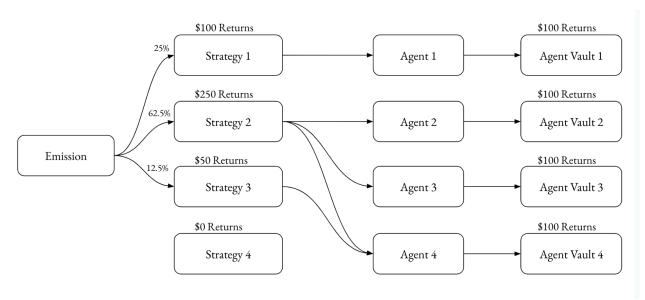


Figure 2: Emission Allocation Based on the Strategies Returns.

To further illustrate this example, let's assume every Agent Vault has generated \$100 of returns.

- Strategy 1, Agent 1 and Agent Vault 1 are being managed by the same user. Agent Vault 1 generated \$100 returns using exclusively its own fully private Strategy 1, therefore the returns generated by Strategy 1 equals \$100.
- Strategy 2 benefits the most from emissions since Agents 2 and 3 (and their Agent Vaults) use exclusively this Strategy. Each of these Vaults generated \$100 returns. Agent 4 (and its Vault) utilizes this Strategy only partially (50/50), therefore generating only \$50 returns from Strategy number 2. This means that Strategy 2 has generated a total of \$250 returns across 3 different Agents Vaults (2, 3 and 4).
- Strategy 3 generated \$50 returns by being used partially (50/50) by Agent 4 and its Vault.
- Strategy 4 receives no emissions whatsoever, as no Agent uses this Strategy.

Given a combined total returns of \$400 across all Agent Vaults, Almanak emissions for the season would be distributed among Strategies as follows:

- Strategy 1: 100/400=25% of the emissions
- Strategy 2: 250/400=62.5% of the emissions
- Strategy 3: 50/400=12.5% of the emissions
- Strategy 4: 0/400=0% of the emissions

This model is inspired by the Bittensor framework. Given the anticipated scale of agents' blockchain activity (projected to reach billions), the most utilized Strategies are expected to gain the lion's share of emissions. In contrast, fully private Strategies will likely receive marginal rewards.

This mechanism establishes a clear distinction in how network participants optimize their contributions and are rewarded:

- Strategy Contributors are incentivized through emissions, which increase as their Strategies are being utilized by more and more Agents that generate more returns in USD terms.
- Agent Managers, upon getting access to sophisticated Strategies, identify the one with the highest returns, and match it with liquidity by deploying publicly available Agents Vaults in exchange for a fee.
- Liquidity Providers deploy assets to successful Agents' Vaults and pay a fee to Agent Managers.

This division is important for curating a flexible and market-based contributors network. Since Agent Managers can plug into multiple different Strategies, and since one Strategy can be utilized by many different Agents, it is important to maintain the division and flexibility of these two roles within the ecosystem.

This setup encourages innovation, with new Strategies being rapidly created to seize emerging market opportunities, enabling swift emission rewards when a large number of Agents adopts this new Strategy. On the Agent side, it rewards the creation of diversified Agents that simultaneously leverage multiple Strategies, allowing them to adapt to changing market conditions and address the varied needs of Liquidity Providers.

1.6. Almanak Wars - Curve Finance Inspired Growth Management Model.

The majority of blockchain activity, including trading volumes and Total Value Locked (TVL), will increasingly be driven by AI agents. These metrics are critical for the success of DeFi protocols. We believe that securing agent-driven trading volumes and TVL will become an essential component of every future DeFi protocol. Inspired by Curve's innovative approach of creating a market for liquidity provision incentives (bribes), we aim to extend this concept by introducing a market to incentivize agent-driven traffic in crypto.

As the future of DeFi and finance becomes increasingly agent-centric, protocols will need effective mechanisms to attract agentic traffic. <u>Currently, no solution exists to enable protocols to incentivize this traffic effectively.</u>

Almanak would address this gap by allowing protocols to stake Almanak tokens. Using mechanics similar to Curve's, protocols would then vote to increase emissions to a Strategy that uses a specific set of contracts (beneficial for that particular protocol). This creates a powerful incentive system for Strategy Contributors to build successful Strategies that include a demanded set of protocol's contracts.

• Protocol contract example :

The XYZ Protocol is preparing for its launch and aims to boost AI-agent-driven traffic. To achieve this, XYZ Protocol would stake Almanak tokens and vote to apply an emission multiplier to Strategies that utilize its contracts. This increases the emissions directed toward these Strategies, thus incentivizing greater AI-driven activity on the protocol.

• Token contract example :

A newly launched XYZ Project seeks to bootstrap AI-agent-driven trading activity, liquidity provision,

and market-making for its token. XYZ Project would use Almanak Token to vote towards applying an emission multiplier to Strategies that integrate the XYZ token's contracts. This encourages AI agents to drive activity and liquidity for the project, thus accelerating adoption and growth.

The emission would be further increased by applying a weight multiplier on the returns that are generated by the Agent's Vaults connected to this Strategy. The maximum weight multiplier the Strategy would get is up to +3x, considering every single voter has voted on this particular Strategy. Depending on the market dynamics, the formula could change and would be a subject of the decision of the future DAO.

You can find a simplified example in Figure 3.

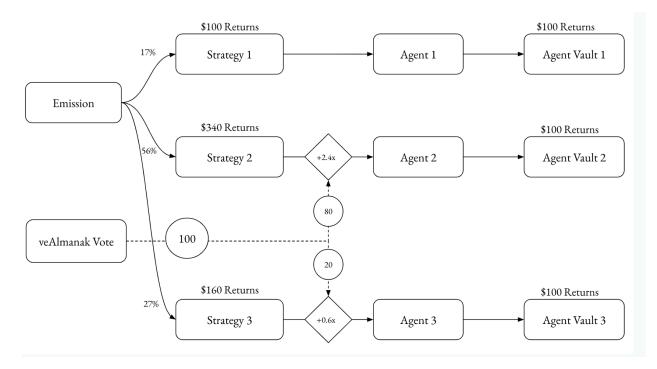


Figure 3: Emission Amplification Using Almanak Governance

To illustrate this example, let's assume every Agent Vault has generated \$100. However, 100 veAlmanak tokens have participated in voting with the collective power of adding +3x weight multiplier on the returns generated by this Strategy. The veAlmanak votes have been allocated in the following way:

- 0 on Strategy 1
- 80 on Strategy 2
- 20 on Strategy 3

This gives the following weight increase to the returns generated by each of the Strategies:

- Strategy 1: n/a
- Strategy 2: $80/100^*3 = 2.4$

• Strategy 3: $20/100^*3 = 0.6$

Following the above methodology, after applying the additional weight multiplier, the Strategies would report "returns" equal to \$600 to the emission contract. We need to remember that these are voting-weighted returns used to calculate the amplified emission. The real returns of the ecosystem in this season is still \$300. The distribution of the emission would therefore look as follows:

- Strategy 1: 100 "returns" /600 = 17% of the emission.
- Strategy 2: 340 "returns" /600 = 56% of the emission.
- Strategy 3: 16- "returns"/600 = 27& of emission.

The above model is again inspired by the Curve Wars model, which focuses on bootstrapping the liquidity for newly created protocols. Almanak model creates similar dynamics between Projects, Strategy Contributors, and Agent Managers, but focuses on bootstrapping AI agents' traffic instead.

In the models discussed above, Strategy Contributors are being rewarded for their work only if their Strategies are being chosen by Agents Managers and generate returns. In order to benefit significantly from the emission, Strategies need to generate returns, therefore Strategy Contributors are incentivized to deliver quality Strategies that would be utilized by many Agents (and Vaults).

In the long term, Agents Managers do not benefit from the emission, as they are purely motivated by generating alpha from the market. There is a potential scenario in which an Agent Manager would be using his/her own Strategies to benefit from the emission, but unless the Strategy is utilized by other Agents Managers, the emission would not be significant.

1.7. Network Development and Sustainability

1.7.1. Early Stage

In the early stage of the network development, Almanak would also incentivize deposits into the Vaults by streamlining a portion of the emissions towards Agent Managers and Vaults. Therefore, not only Strategy Contributors and their Strategies could benefit from the emission, but also Agent Managers and Liquidity Providers. This setup, however, creates a potential scenario where mercenary capital would exploit the emission, and run Strategies even when they are not profitable. In order to address that, the initial proposed split of the emission would be set as 75% to Strategies, 5% to Agent Managers, and 20% to Liquidity Providers. The split would be adjusted by the DAO after achieving the desired level of protocol adoption.

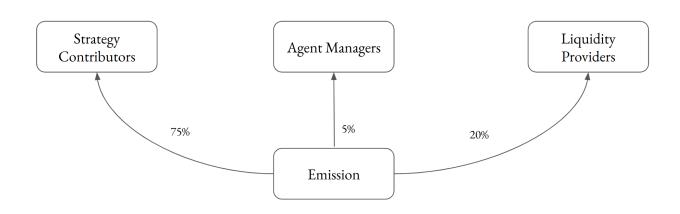


Figure 4: Growth Stage Expected Emission Split

The emissions would be assigned proportionally to each Agent Manager, based on the return denominated in USD their Agents have generated in proportion to all the returns of other Agents.

Allocation for Liquidity Providers would work in a similar manner, where each LP would be rewarded with the emission based on the returns of its position in proportion to all the returns recorded by all the LPs on the platform.

1.7.2. Sustainability

In order to maintain the long-term sustainability of the above model, similar to the Curve model, a portion of the fees would have to be redistributed back to the emission pool. That would guarantee the long-term sustainability of the ecosystem. Eventually offsetting emissions once adoption increases.

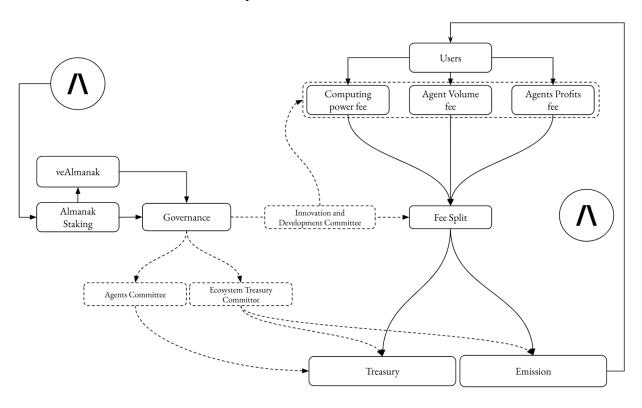
2. Ecosystem Fees Model Proposal

Almanak Ecosystem distinguishes 3 potential streams of fees that could be applied to the ecosystem:

- 1. Volume-based Revenue: Whenever an agent makes a transaction, 0.001-0.05% of the transaction value would be charged as a fee.
- 2. Computing Power Margin: Whenever a user pays for computing power to train an agent or optimize/simulate the Strategy, a 1-10% margin would be added to the cost of the cloud computation.
- 3. Margin on the value generated by the agent: Almanak would charge 1-10 % of the margin fee on top of the value generated by the agent and its wallet/vault.

Fees collected that way would be distributed back to the Treasury and/or the Emission.

3. Token Functionality



- Dotted arrow Governance Flow
- Solid Arrow Value Flow

Figure 5: Almanak Ecosystem Token Functionality and Value Flow

3.1. Almanak Staking Utility

Almanak token holders would be able to stake the Almanak token in a staking contract to:

- Get a discount on the computing power within the platform. The more tokens a user stakes, the greater the discount the user is getting on training the agents on the platform.
- Vote towards increasing the emission towards Strategies that use the address of particular contracts.
- Vote DAO and participate in manners concerning the management of the ecosystem.
- Stake the token in a veToken contract to increase the voting power.

3.2. Governance

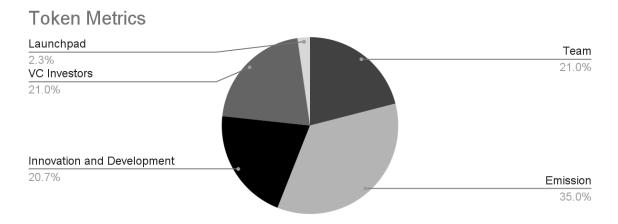
Almanak token stakers would be able to participate in voting within the Almanak Committees focused on a particular governance issue. A couple of subDAOs could be distinguished.

- Ecosystem Parameters Committee managing the protocol parameters such as:
 - Margin on the computing power (1-10%)
 - Margin on the value generated by Agents on the platform (1-10%)
 - Emission schedule and function shape default 35% of tokens distributed with a halving event every year.
 - Split of revenues between the DAO treasury (10-20%) and the Emission (80-90%),
- Innovation and Development Committee handles financial matters related to the DAO, including items such as treasury management, grants management, and emission management.
- Agents Committee manages and decides on the deployment of Agents owned by the Almanak DAO. These Agents can also manage assets in the Almanak Treasury.

The potential path toward decentralization

As of the time of writing this document, there is still no decentralized and technically feasible solution available that would meet the privacy, latency, and up-time requirements of the Almanak infrastructure. Once this technology matures and becomes competitive with centralized solutions, Almanak would be open to decentralizing the GPU providers' network. This GPU provider would have to stake Almanak Tokens in order to be the selected GPU provider, and would be subject to slashing whenever, privacy, latency, or up-time quality is compromised.

4. Token Metrics





- Team Almanak Team.
- VC Investors Institutional Investors.
- Innovation and Development Liquidity, Exchange Listings, Grants, Partnerships, Ecosystem Development, Future Rounds.
- Emission Almanak Ecosystem Emission for Network Participants + Early Participation Rewards.
- Launchpad Legion Community round.

Token vesting schedule

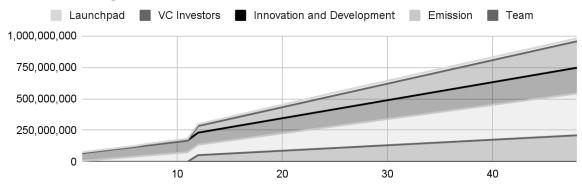


Figure 7: Token Vesting

- Team linear vesting over 48 months with 12 months cliff
- VC Investors linear vesting over 48 months with 12 months cliff
- Innovation and Development 30% at TGE, the rest 60% linearly over 48 months
- Emission 5% at TGE (Early Participation Rewards) the rest linearly over 48 months
- Launchpad Legion 30% at TGE, the rest linearly over 24 months with 6 months cliff

Glossary

Almanak Ecosystem consists of the following roles and components required to understand the value flow on the platform:

- 1. (Almanak) Agent an autonomous agent that manages assets using one or multiple Strategies. By following the objective function defined by Agent Managers, Agents constantly optimize their Strategies and react to changing market environments. Agents live off-chain and send signals to the on-chain Agent Vaults.
- 2. Agent Interface LLM layer of communication between Agents Managers and the Agents
- 3. Agent Manager an Almanak user responsible for managing agents/agents using the Almanak interface.
- 4. **Agent Vault** smart contract with assets (AUM), that can be either private and unlisted, allowing only its owner to deposit capital, or public, where any user can deposit assets into the Agent Vault.
- 5. **Deployment Infrastructure** a communication layer between the cloud environment where Agents live and financial markets.
- 6. **Liquidity Provider** a user that deploys assets into the Agent Vault to become a passive investor into the Agent and its Strategies
- 7. **Strategy** a Strategy designed by the Strategy Contributor, Strategies are used by agents to manage assets.
- 8. Strategy Contributor- the developer of the Strategies
- 9. **Strategy Libraries** part of the Strategy Development Suite, a place where Strategy Contributors can store their Strategies and securely and privately share them with Agents.

References

- 1. Bittensor Subnets: https://taostats.io/subnets
- 2. Bittensor: https://bittensor.org/wp-content/uploads/2024/02/bittensor.org-whitepaper.pdf
- 3. Curve: <u>https://resources.curve.fi/crv-token/overview/</u>