



TAIKAI

Whitepaper

The Web3 Innovation Economy

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DISCLAIMER

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LayerX Corporate Details

TAIKAI, S.A., a limited company by shares incorporated under the laws of Portugal on 14 of August 2018, with registered office at Travessa José Maria Alves, no. 138 Hab05, 4400-483 Vila Nova de Gaia, registered with the Portuguese Commercial Registry Office under the number (NIPC) 515012718 and with a share capital of €55,723.85.

Corporate purpose: research, design, development, distribution, marketing, representation and operation of projects, concepts, solutions, platforms, products, and services in the area of information technology, communications and retail, as well as promotional activities, investment, exploration related to the development of new business of distributed information systems.

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Glossary

\$TKAI = TKAI's market price in US Dollars.

Accelerator - In a business context, it is a program or organization that provides support, resources and mentorship to early-stage startups to help them rapidly grow and develop their businesses.

Angel Investment - Financial support provided by typically high-net-worth individuals known as "angels" to early-stage startups in exchange for equity ownership or convertible debt in the company.

Assessing Farmer – a Farmer that validates or invalidates an Update Assessment, as described in Chapter 3.4.5. (Assessments and Consensus).

Blockchain - A distributed digital ledger technology that records transactions across multiple computers in a way that secures security, transparency and immutability of the data.

Burning - In the context of blockchain technology, it is the process of permanently removing cryptocurrencies or tokens from circulation by sending them to an address from which they cannot be spent or accessed, increasing scarcity of the remaining ones.

CIV - a collaborative innovation volume representing the number of validate updates a Project has during an Innovation Farming Sprint.

Crowdfunding - A fundraising method that involves raising small amounts of money from a large number of people, typically via the Internet, to finance a project, business venture, or charitable cause.

dApp - Stands for *Decentralized Application* and it is a type of software application that operates on a blockchain and carries characteristics that come from the use of that technology.

DAO - Stands for *Decentralized Autonomous Organization* and is a type of organization or entity that operates through rules encoded as computer programs on a blockchain.

ERC-20 Token - A standard for fungible tokens created and managed on the Ethereum blockchain.

ERC-721 Token - A standard for non-fungible tokens created and managed on the Ethereum blockchain.

Ethereum - An open-source blockchain platform that was created to enable the development of dApps and smart contracts.

Farmers – Participants holding the Validation Threshold and can vote on Projects and Projects Updates and other assessments.

Farming Project - a Project participating in the Innovation Farming Program.

Farming Sprint - A microcycle of the Innovation Farming Program with a predetermined time frame.

Governance - Within the context of web3, it represents the structures that enable decentralized networks to make collective decisions, manage resources, and govern the rules that underpin blockchain-based platforms.

Graduated Project - In the TAIKAI Garden context, it is a project that has completed its participation in the Innovation Farming Program.

Grants - Financial awards or funds provided by organizations, foundations or individuals to support specific projects, activities, research, or initiatives.

Hackathon - A collaborative and time-bound event in which individuals or teams come together to work intensively on creative and innovative projects.

Igniters - Programs or initiatives designed to kickstart and accelerate the growth and development of projects.

Incubators - Programs that provide support, resources and guidance to early-stage startups and entrepreneurs to help them develop and grow their businesses.

Innovation Farming Program - the incentivization program that funds the best performing projects and rewards the community for contributing to their development.

Innovation Farming Batch - a macrocycle in the Innovation Farming Program that lasts for 6 (six) Innovation Farming Sprints, as described in Figure 8 (Duration of cycles in the ecosystem).

Innovation Farming Rewards - TKAI distributed to both Project Owners and Farmers according to their respective ranking and votes within the Innovation Farming Sprint.

Innovation Farming Sprint - a microcycle in Innovation Farming Program that lasts for 2 (two) weeks, as described in Figure 8 (Duration of cycles in the ecosystem).

Innovation Farming Threshold - the minimum amount of 10.000 (ten thousand) TKAI a Project NFT Owner must lock from the moment Innovation Farming Sprints or Innovation Farming Batches are determined until the end of the Innovation Farming Program participation.

LayerX - the company responsible for developing the TAIKAI Platform and TAIKAI Garden.

Mentor(s) - knowledgeable Participants who share insights with the community in an on-demand manner.

Mentors Profile - the profile created by a Mentor on the TAIKAI Platform.

Mentors Sandbox - a dedicated space for Mentors to showcase themselves, share their insights and make themselves available for mentoring.

Mentorship Threshold - a minimum of 5.000 TKAI a Participant's wallet must have staked to apply, and act as a Mentor in TAIKAI Garden and to have the Mentors Profile visible to the Participants.

Network Revenue – the total amount of TKAI generated by the acquisition of features and services of the users in TAIKAI Garden and TAIKAI Platform.

Participants – all users of TAIKAI Garden.

Project (s)- the work created and developed by a Project Owner(s) in the form of a public page on TAIKAI Platform. This work can be the result of an existing Hackathon in the TAIKAI Platform or newly created within TAIKAI Garden.

Project NFT - the native ERC-721 token that provides ownership and rights over a Project and which is required to access the Innovation Farming Program.

Project NFT Owners – Project Owners that have minted a Project NFT.

Project Owners - individual Participants that have initiated a Project.

Projects' Sandbox - a dedicated space to showcase Projects and its updates.

Quadratic Dispute - the process by which Project Updates are reviewed by the Participants.

Score Function - the algorithm that ranks Farm Projects in the Innovation Farming Program.

Seed Project - the default Project state upon minting a Project NFT.

Smart Contract - a self-executing blockchain-based contract that automatically enforces and executes the terms when predetermined conditions are met.

Staking - locking TKAI to support the network's operations, and in return, earning veTKAI.

Staking Period - the amount of time for TKAI Staking that is considered when calculating the Farmers voting powers, as established in Chapter 3.4.4.

TAIKAI Platform - a digital platform originally created for the purpose of launching and managing Hackathons, which includes TAIKAI Garden.

TKAI – a utility Token created by LayerX in the form of an ERC-20 Token, that can be exclusively used on TAIKAI Platform and TAIKAI Garden.

Token - a digital or cryptographic representation of an asset or utility.

Token Economics – a field of study and design that focuses on the economic principles and mechanisms governing the creation, distribution, and use of blockchain-based tokens within a digital ecosystem or network.

Token Economy – a system of incentives and rewards that uses blockchain-based tokens to drive the behavior and participation in the network.

Treasury - In the context of web3, it is a pool of digital assets or cryptocurrencies that are controlled by a DAO, a smart contract, or a similar mechanism.

TGE - means TKAI's generation event.

Validation Threshold - a minimum amount of 3000 veTKAI owned by a Farmer to participate in the Assessment process described in Chapter 3.4.5..

Venture Capital - a form of private equity financing provided to startups, emerging companies, or small businesses with high growth potential.

veTKAI - the TAIKAI Garden vote escrowed native token that grants voting powers in relation to Projects and Updates within TAIKAI Garden.

Voting Farmer(s) – a Farmer that votes in Projects during an Innovation Farming Sprint.

Wallet - a digital tool that allows management, storage, and interaction with cryptocurrencies, digital assets, and tokens on a blockchain network.

Web3 - a new paradigm for the internet that is more decentralized, user-centric and enables trustless peer-to-peer interactions based on blockchain technology.

Whitepaper – this document.

1. Executive Summary

TAIKAI Garden is a product extension of [TAIKAI](#), a hackathon platform that connects organizations with innovators to create solutions, acting as a means to provide continuous resources to projects under development.

The birth of the ecosystem answers the need for sustained and democratized access to support in the post-hackathon phase of a traditional open-hackathon model. Whereas in the short-lived event there is complete access to funding, networking and mentorship, the same doesn't hold true in later stages. As a scarce number of projects continue their development, innovation throughput and its respective documentation is minimal if not non-existent, avoiding retention or even incrementality.

TAIKAI Garden redefines the innovation landscape's *status quo* by connecting innovators to an inclusive and collaborative environment. Through an incentive substrate, Project Owners are empowered to transform their ideas into impactful businesses. By rewarding both innovators and other participants that collaborate in project developments, opportunities are equalized for leveraging innovation throughput within the ecosystem.

Hence, this Whitepaper introduces a new paradigm for decentralized development: a permissionless Web3 innovation economy. Through a blockchain-based token economy, TAIKAI Garden aligns the interests of all Participants and benefit from the already existing network of TAIKAI. Interactions within TAIKAI Garden are fueled by the native ERC-20 token, **TKAI**, creating a symbiotic relationship between innovation and incentives.

Participants can assume several roles at the same time, distinguished between:

- **Project Owners:** entrepreneurial individuals that have initiated a project within the ecosystem and are responsible for developing it.
- **Mentors:** knowledgeable peers who share insights with Participants in an on-demand manner.

- **Farmers:** community members who are incentivized to both vote on the most promising projects and validate/invalidate updates or other assessments.

The ideal vision for which the ecosystem will take shape is one in which it is fully decentralized and fully autonomous. The reasons behind this are plenty, from Web3 values compatibility to scalability and capital efficiency. Achieving this desired state is one that only comes from empirical experimentation given the system's complexities. Therefore, until that desired state is achievable, the ecosystem will be managed in its entirety by **LayerX's** team and will eventually transition into a DAO for proper community-based management.

2. Business Use Case

2.1. Challenges faced by innovators

In the dynamic landscape of innovation, many disruptive ideas will emerge, but most of them will perish. For instance, in hackathons, one of the most recognized initiatives to promote innovation, a mere 5% of the projects will have continuation 6 months after the end of the event.

Similarly, 20% of startups fail within their first year of existence and up to 75% end up failing (Nolte, Chouta & Herbsleb, 2020).

Several factors may contribute to the low survival rate of these projects, as innovators need to face different hurdles to be able to materialize their ideas. Besides having a strong idea – one that is aligned with market needs – we argue that two main resources are key to promoting success: access to funding and to a network of mentors and other innovators.



Figure 1. Key resources that lead to a successful project.

2.1.1. Developing a strong idea

An innovation journey typically starts with one idea. While hackathons and ideation sessions are fertile ground for innovation, a new idea may spark anywhere, anytime. However, not all ideas are worth pursuing.

What makes an idea strong?

- **Relevance:** An idea that addresses a genuine need of a community.
- **Uniqueness:** An idea that stands out for bringing new approaches to existing problems, offering advantages over existing solutions.
- **Feasibility and viability:** An idea that is practical and achievable, financially sustainable and has a coherent business plan.
- **Value alignment:** An idea that resonates with the values of the community that it targets.

2.1.2. Securing funding

After the idea is validated and deemed valuable, it might be challenging to access financial resources to develop it. At an early stage, innovators typically lack tangible results, making the funding of such ideas risky investments and less attractive to venture capital funds. Thus, early-stage innovators are often trapped between the need to access financial resources to develop their ideas and the need to develop their ideas to access financial resources.

2.1.3. Networking

Because networking addresses many of the problems early-stage innovators face, it is one of the most important factors behind the success of new and disruptive ideas.

Through networking, innovators may:

- Connect with mentors who are experts in their innovation field, improving their business models and market strategies.
- Learn about the experiences, failures, and successes of founders who have already navigated the innovation path.
- Share difficulties, strategies, and solutions with peers at the same stage of the innovation journey.
- Recruit new members for their team, including co-founders and technical experts.
- Learn about the market and potential customers for their projects.
- Meet potential investors, who may be more likely to take a chance in ventures endorsed by trusted connections.

Given the importance of networking, it comes as no surprise that it is a key aspect of some initiatives aiming to support innovators, such as incubators. Indeed, incubators of early-stage (pre-seed and seed) startups often list mentorship, talks, and seminars with previous founders, support from a cohort of peers, and meetings with potential investors as their main source of added value.

2.2. Market Analysis

In 2022 and in the first quarter of 2023, 315 major brands launched a total of 526 web3 projects (De Cata, 2023). With such a thriving market, it is no surprise that many different types of initiatives have been created to support ideas, projects, and early-stage projects to develop and thrive. From angel investors and venture capital firms, focused on providing funding and expecting a return on their investments, to incubators and accelerators offering safe environments and expertise for startups to thrive, they aim to meet the needs of every innovator.

Some of them are closer to what is proposed by TAIKAI Garden: support of early-stage ideas with a strong focus on both networking and funding.

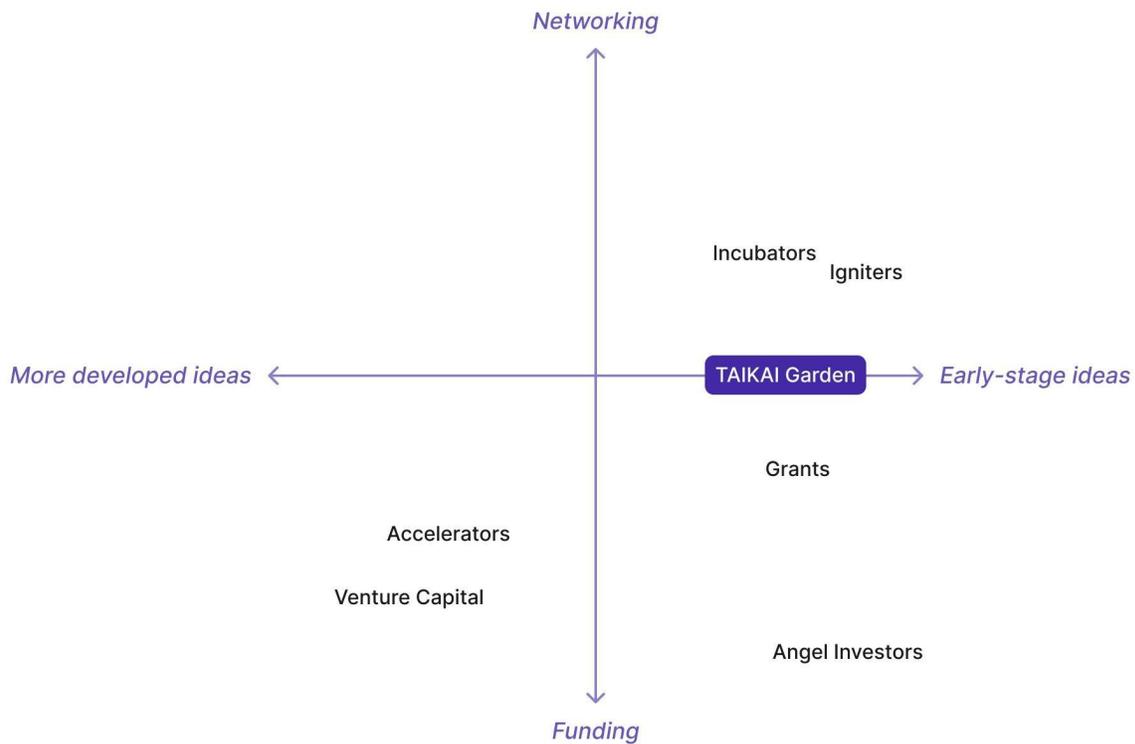


Figure 2. Comparison of different initiatives for early-stage support.

In the above matrix, grants are the closest initiatives to the TAIKAI Garden, due to their focus on early-stage ideas and potential community involvement. Incubators and igniters, with their focus on networking and mentorship, are the second closest initiative.

The next sections present a deep dive into grants and incubators, with a crucial emphasis on Web3 initiatives.

2.2.1. Grants

Grants aim to support innovators in raising funds for their projects and ideas, frequently at a very early stage of development. They tend to offer visibility to the projects they fund, by displaying the project on the platform.

More specifically, Web3 grant programs play a crucial role in fostering decentralized innovation and accelerating the growth of blockchain-based projects. Often, **grants focus on projects developed within a given ecosystem**, promoting its growth and innovation.

A benchmarking analysis of six Web3 grant programs with some degree of community involvement suggests that there are different strategies to promote such involvement. **Some organizations reserve the selection of the projects to their staff while others engage in specific community voting processes.**

Most grant programs focus on the development of Web3 projects, **either ecosystem-agnostic (3 grant programs) or ecosystem-specific (3 grant programs).** However, some grant programs accept on or off-chain projects, as long as they align with the grant's purpose and values. Being ecosystem agnostic, and even Web3 agnostic, brings flexibility and diversity to the candidate projects pool.

2.2.2. Incubators

Incubators stand as pivotal players in shaping the trajectory of startups: **they provide a structured environment that fosters growth, establishes key connections with other individuals, and offers crucial support during the early stages of a startup's journey.**

A benchmarking analysis of five Web3 incubators reveals that they recognize the unique challenges and opportunities presented by this rapidly evolving landscape. These specialized programs **offer guidance on token economics, smart contract development, dApps and navigating the intricacies of blockchain ecosystems.** By doing so, they position startups to harness the transformative potential of Web3 and redefine industries from finance to supply chain. All the programs evaluated had a structured program with a fixed duration, **that varied from 8 weeks to, most commonly, 3 months.**

The focus on **a structured program may curb the startups' freedom and self-determination, and a one-size-fits-all program may not be able to meet the disparate needs of different projects.** As mentioned previously, networking is one of the main needs of startups, playing a pivotal role in their development.

These incubators leverage the value of mentorship, offering access to a substantial network of mentors, alumni, and a vast community of founders and builders. However, the diversity of approaches to networking and mentorship suggests the need to tailor the mentorship and networking programs to the nature of the incubator and the needs of the incubated startups. **Mentors in these programs are often rewarded through visibility and recognition of their expertise, without a formal incentive system, which may impact the mentors' motivation and their relationship with the startup founders.**

The financing system may also be very important for some projects and startups whereas others may not be willing to dilute the company's ownership. Other types of funding such as crowdfunding and grants may be more suitable for some innovators.

2.2.3. Different types of funding

Different types of funding initiatives have been created to help early-stage innovators in this matter. Below, we present these initiatives, ordered by their level of community involvement.



Figure 3. Level of Community Involvement for the different funding structures.

On the opposite side of angel investors, who are typically individuals looking for promising investments, we have entire communities of people looking for supporting ideas that resonate with them. Grants lay towards the middle: oftentimes awarded by a small group of people and sometimes awarded by an entire voting community.

2.2.4. TAIKAI Garden

From the previous analysis, most initiatives aim to either help projects secure funding or provide a structured path to becoming a business. **Few effectively focus on community contribution as a pathway to innovation.** Thus, there is room for an initiative that aims to **cater to all the innovators' needs within an incentivized network.**

Characteristic / Organization	Grants	Incubators	TAIKAI Garden
Focus	Fund early-stage projects.	Provide structured support to established early-stage startups.	Incentivize the development of early-stage projects through a token economy.
Program Structure	Financial support application.	Usually strictly scheduled and one-size fits-all.	Autonomous and flexible participation in the ecosystem.
Cost of participation	Usually free of charge.	Fixed entry price. Service fees. Equity ownership exchange.	Service fees (Chapter 3.5.2. Token Utility).
Funding Mechanism	Match Funding. Quadratic Funding. Donations. ...	Scheduled meetings with potential investors.	Innovation Farming (Chapter 3.4. TAIKAI Innovation Farming). Donations.
Time-to-Funding	Range from one time-payment to periodic.	Highly variable according to the program.	Periodic (Chapter 3.4. TAIKAI Innovation Farming).
Mentorship Access	None or scarce.	Usually scheduled with the program.	Peer-to-peer and on-demand (Chapter 3.3.2. Mentors Sandbox).
Community Involvement	Usually high.	Scarce or none.	High and crucial.

Figure 4. Key distinctive factors between grants, incubators and TAIKAI Garden.

On the contrary to both types of programs mentioned, **TAIKAI Garden incentivizes ad-hoc development that meets the project's needs.** Whereas in the previous ones, there may be very clear milestones and success metrics, it is intended for the ecosystem to serve as **a space for creativity flourishing and to provide freedom for innovators to adapt to community input.**

On the other hand, the usual focus on building Web3 often means that grants and incubators focus on the development of a specific ecosystem. This potentially risks reducing the diversity of projects, overlooking those that may have the potential to make critical contributions

to the development of Web3 or the creation of public goods. Instead, **TAIKAI Garden is ecosystem / Web3 agnostic and inclusive**, thus enriching community diversification.

While innovators' participation in these programs is typically temporary, a **fundamental characteristic of TAIKAI Garden is its role as a development repository**. As projects come and go, **the ecosystem naturally and transparently documents their history, making it available for new innovators seeking inspiration**. This accessibility to past projects can potentially foster incremental progress and innovation.

On top of this, the opportunity for **early community engagement** highly benefits new-born projects. Establishing a Web3 community is often a challenging, resource-intensive and time-consuming endeavor. However, Project Owners can **leverage their projects' through TAIKAI Garden and accelerate the growth of their community by actively involving participants in the projects development**, discovery and meeting potential customer needs.

To conclude, while the previous programs require an exhaustive assessment from an innovator application, the long-term view for TAIKAI Garden is that **it will become permissionless and decentralized by nature**. This means that any innovator will be able to create a project, develop it within a community, and potentially participate in the Innovation Farming Program.

The next chapter further develops the TAIKAI Garden.

3. Ecosystem Design

3.1. Ecosystem Goals

The top-level goal is to democratize the access to resources that make projects thrive: **funding and a valuable network**. At a low level, particular relevance is given to:

1. **economic goals** that support value generation and the flow of resources.
2. **decentralization goals** aimed towards the empowerment of participants.
3. **strategic goals** that are aligned with the long-term vision & mission of LayerX.

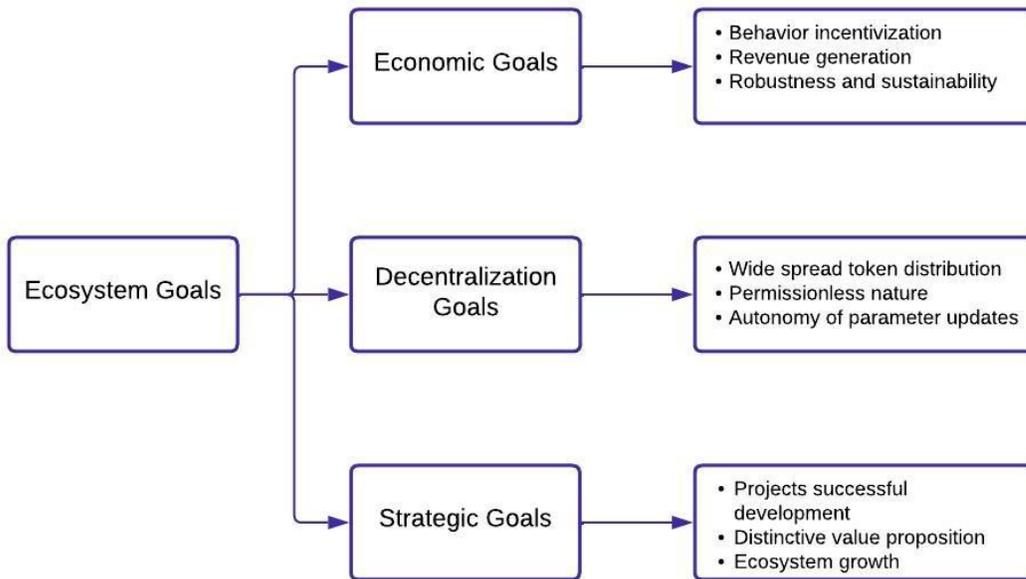


Figure 5. Ecosystem goals tree.

Since all goals are being pursued simultaneously, prioritization is required when looking at the bigger picture and a longer timeframe (Osolnik, 2022). Inherent trade-offs will be made upon LayerX’s decision-making.

3.2. High-Level Design

The figure 6 below represents the TAIKAI Garden’s high-level design, inspired on **the Web3 Sustainability Loop**¹. At its core it is a loop designed to foster a “snowball effect” growth within the ecosystem by **rewarding Participants who consistently add value to it**, and it can describe as follows:

¹ The Web3 Sustainability Loop created and design by McConaghy, T and available at <https://blog.oceanprotocol.com/the-web3-sustainability-loop-b2a4097a36e>

1. The Participants at the center perform work/tasks that add value to the projects, directly, and to the ecosystem, indirectly.
2. Features and services within TAIKAI Garden and TAIKAI Platform generate revenue to TAIKAI (“Network Revenue”);
3. The Network Revenue is looped back to the community.

The last step creates a positive feedback loop such that, over time, more and more projects get funded. In the context of TAIKAI Garden, “**\$TOKEN**” refers to the native utility token **\$TKAI**, and “**Web3 Project Ecosystem**” refers to the **TAIKAI Platform as a whole**.

The TAIKAI Garden and TAIKAI Platform was designed to allow the innovation economy to grow and to ensure the ecosystem’s self-sustainability. TKAI is the token accepted in TAIKAI Garden and TAIKAI Platform and can be used for the following purposes:

- To access TAIKAI tools and services.
- For staking in TAIKAI Garden’s innovation ecosystem.
- To obtain veTKAI to allow Participants to vote on how rewards are allocated to TAIKAI Garden projects.
- Some TKAI is staked by the Treasury as a function of network revenue.

To ensure the long-term sustainability of the ecosystem, the underlying price of TKAI shall, in principle, encompass the TKAI usage volume, which depends on (i) the number of TKAI utilities available within TAIKAI Garden and TAIKAI Platform; and, consequently, (ii) the amount of Network Revenue to be looped in into the ecosystem, namely into (a) **Treasury staking and (b) Innovation Farming Rewards**.

Instead of buying back and burning a part of the Network Revenue like it is mentioned in the figure 6 bellow, Treasury staking increases the token value in the short-mid-term through scarcity without compromising the network’s ability to grow fundamental value in the long term².

² As explained by Monegro, J, in the article “Stop Burning Tokens - Buyback and Make Instead”, available at <https://www.placeholder.vc/blog/2020/9/17/stop-burning-tokens-buyback-and-make-instead>.

Innovation Farming Rewards drive TKAI to Participants who grow the usage of TAIKAI features and services and act as a distribution method.

To precisely address the **near-term** growth of the ecosystem, **the Innovation Farming Program was designed to drive the supply of projects in TAIKAI Garden**. Here is how:

- First, **40% of TKAI is intended to be distributed across the community through the program** via TAIKAI Treasury to ensure a baseline of funding regardless of usage volume (please refer to Chapter 3.5.3. (Token Distribution) for more details).
- Second, **more TKAI will be distributed in the earlier days than the later days** since Network Revenue will become the primary mean of TKAI distribution within the ecosystem.

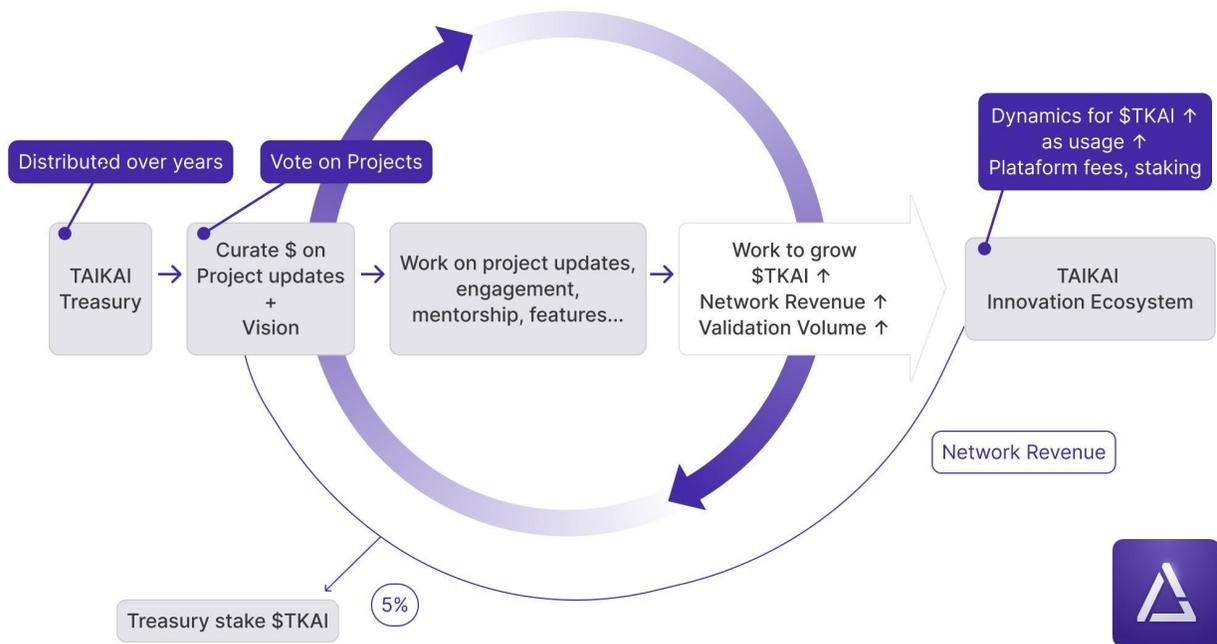


Figure 6. The Web3 Sustainability Loop applied to TAIKAI Garden.

Hence, TKAI's core dynamics are those of a **work token**, embedded within a loop for growth and sustainability (Samani, 2018). We elaborate the previous information further in the document.

3.3. TAIKAI Garden Tools

The ecosystem has 2 (two) main tools:

- Project Sandbox
- Mentor' Sandbox

3.3.1. Project Sandbox

The Project Sandbox is dedicated to **showcasing projects within the ecosystem** and thus stands as a fertile ground for innovation, experimentation, and collaboration. It is the space where aspiring entrepreneurs, developers, and visionaries are empowered to shape their ideas into fully-fledged projects with the participation of a supportive community.

While participation in TAIKAI Garden through a project is intended to fulfill innovators' needs, **participation is not expected to be permanent**. Those who develop Projects are expected to **transition out of the ecosystem once their needs are satisfied, making room for new projects**. Hence, a Project lifecycle within TAIKAI Garden should be:

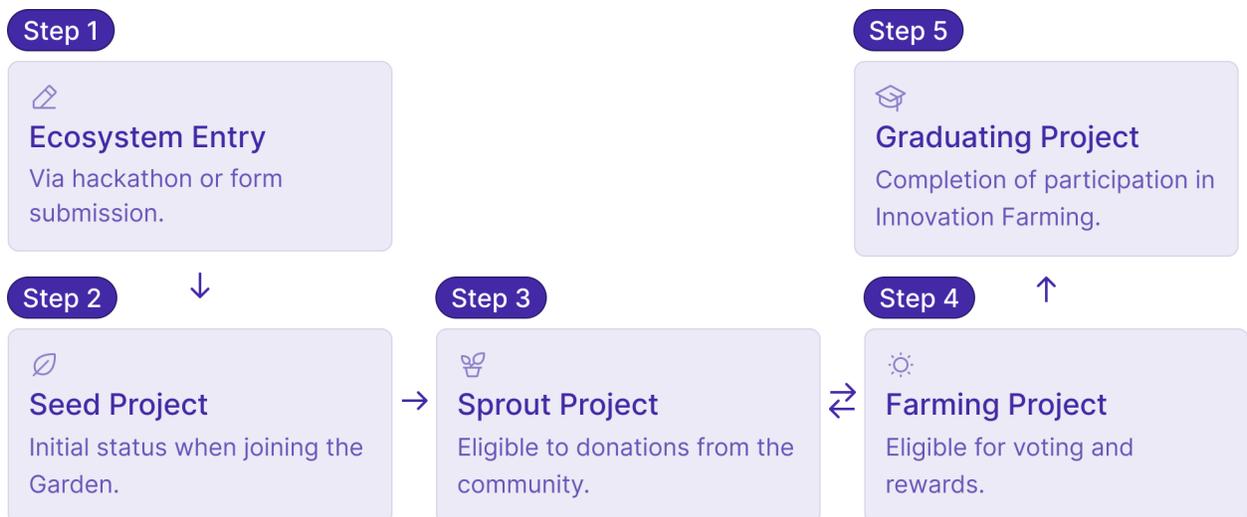


Figure 7. Project's life cycle in the ecosystem.

1) Ecosystem Entry

The entry in the Project Sandbox can be done in two ways:

(i) After participation in a TAIKAI Hackathon, the innovator is able to “add project to Garden” which will automatically fork/clone the project into TAIKAI Garden for further development, with no associated costs.

(ii) By creating a project from scratch directly within TAIKAI Garden. This option is better suited for external projects aiming to showcase their work on TAIKAI Garden, utilize its features, and eventually transition into the Innovation Farming stage.

There is no associated cost in creating a Project in Project Sandbox, regardless of the entry path chosen, as the main purpose of it is to foster innovation and the creation of new projects.

2) Seed Project

By default, every project that enters TAIKAI Garden is initially set as a **Seed Project**. This allows the community and the Project Owner to perform most of the possible interactions with the project.

Such possibilities include:

- Posting project updates, a roadmap, etc. Example: “Build a feature to automatically post updates from external platforms, such as GitHub and social media”.
- Community Participant following/unfollowing project activity.
- Community Participant interacting with a project update.

After the Seed Project phase, the project may qualify for the next phase: the **Innovation Farming Program**. For that to happen, the below requirements will need to be met by the Project Owner:

Innovation Farming Program Entry – Prerequisites

The first essential step for a project to qualify for the **Innovation Farming Program** involves minting a Project NFT and setting up a Project wallet, which can be overseen either by the Project Owner or by project members once permissions are established. The Project NFT is built upon the Ethereum ERC-721 token standard and serves as a non-fungible digital certificate that titles the ownership of a Project within the TAIKAI Garden, designating the wallet assigned as the Project's primary main authority. This extends to encompass editing rights, updates, and entitlement to potential rewards. A detailed profile in the Project Sandbox is added and will serve as the online representation of the project in the platform (the "**Profile**"). The Profile should include:

1. The concept's description
2. The business model.
3. The current stage of development.
4. The team behind the Project.
5. Intended goals from TAIKAI Garden participation.
6. Project's ethereum compatible wallet address.

The Project NFT is minted, including also the previous information for external consultation and verification. The Project NFT shall not be interpreted as confirmation or approval by LayerX of any Project or of the ownership of the intellectual property rights by the Project Owner.

Since it is intended to provide space and freedom for experimentation, **Projects that enter the Project Sandbox should put more effort into the vision (concept) instead of a business plan.** This is due to the fact that success metrics could be hard to measure at an early stage of development and roadmaps could change dynamically due to community contribution. Thus, **the emphasis of participation should be on nurturing creativity and adaptability that make projects evolve into potential businesses** rather than starting as one.

3) Sprout Project

By minting a Project NFT, the project moves from Seed to Sprout, maintaining the same level of interaction permissions, but also, allowing:

- a) to promote project developments in TAIKAI Garden
- b) to receive donations from the community

These actions allow the Project Owner to immediately engage with the community and leverage its project exposure to further develop. While Sprout Projects are not yet eligible for Network Rewards, as they have not yet qualified for the Innovation Farming Program, they can work towards obtaining such qualification (please refer to [Chapter 3.4.2. Innovation Farming Program Qualification](#) for more details).

4) Farming Project

For a Sprout Project to become a Farming Project needs to **qualify for the Innovation Farming Program** ([Chapter 3.4.2. Innovation Farming Program Qualification](#)). Once participating in the program, the actions permitted in this stage include:

- All the actions/permissions referenced above in point 2 (Seed Project) and point 3 (Sprout Project).
- Farmer voting with veTKAI on the Project.
- Farmer assessing project update.
- Project qualification for rewards.

Throughout the Innovation Farming Program, Projects should prioritize sharing legitimate project updates to enhance their prospects of being featured in a Farming Sprint.

A legitimate Project update can be either:

- Product progression (e.g. GitHub repository, design, ideation...).
- User metrics (Social media engagement, product growth...).

- Addition of a new team member.
- Partnerships and collaborations (enrollment in an accelerator program, participation in an industry event, etc.).
- Obtaining external funding (through grants, investment, crowdfunding or any other means of financing the Project through third-party sponsors or investors).

Each sprint of the Innovation Farming Program will feature a selection of Projects chosen through an algorithm that considers various factors, namely: the Project's history of sprint participation, its relevance based on the number of page views, other interactions on the TAIKAI Platform, the frequency of legitimate Updates made, and the overall quality of the Project considering all aspects mentioned above.. When a Project is selected to be part of a Farming Sprint, the Farmers will conduct a vote to choose the best Projects, resulting in those that receive the highest Rewards.

5) Graduating Project

Upon completion of the Innovation Farming Program, **the Project will transition from Farming to *Graduating*.**

Graduating is the final stage of the Project within the ecosystem and will only serve to:

- Project Owner(s) posting Project Updates.
- Participants following/unfollowing Project activity.
- Participants interacting with a Project Update.
- Participants making donations of TKAI as rewards to the Project.

Most actions are restricted to encourage Projects to gradually transition out of the ecosystem, making room for new ones.

3.3.2. Mentors Sandbox

The Mentors Sandbox showcases the Participants that were qualified as Mentors in the ecosystem and provide insights, knowledge, and help the Projects. A Participant can apply to become a Mentor as long as the Participant:

- meet the **Mentorship Threshold**.
- completes an application form containing the information stated below (the “**Mentorship Application**”), and such application is validated by the Farmers:
 - a) Professional name.
 - b) Description of the activity performed.
 - c) List of any external media pages.
 - d) Description of the mentorship services to be offered in TAIKAI Garden and its conditions.

The Mentorship Application undergoes an assessment process (Chapter 3.4.5. Assessments and Consensus) performed by Farmers that own the Validation Threshold. Mentors may continue to perform their role as Mentors for as long as they meet the **Mentorship Threshold. The Mentorship Threshold is 5,000 TKAI at an initial stage, but subject to change in a later stage decided by LayerX.** If, for any reason, the Mentorship Threshold staked is no longer met, the Mentors Profile will be automatically deleted and a new Mentorship Application must be submitted in order to apply for the Mentor role again.

3.4. Innovation Farming Program

3.4.1. Overview

Innovation Farming is the program that incentivizes **the supply of Projects in TAIKAI Garden**. It consists of **sprints**, which are Innovation Farming Program **microcycles** during which *Farming* Projects (Chapter 3.3.1. Project Sandbox) develop and Participants engage with

them for Rewards. Farming Sprints are held **continuously**, which means that one sprint starts right after the previous sprint ends and has a duration of **2 weeks**.

	Sprints	Batches
Cycle	Microcycle	Macrocycle
Duration	2 Weeks	4 Sprints (8 Weeks)
Farm Projects	The same in each sprint	Different in each batch
Rewards	Distributed by the end of a sprint	Not eligible

Figure 8. Duration of cycles in the ecosystem.

During a Farming Sprint, **Farming Projects are ranked based on a scoring function**. At the conclusion of each sprint, **a snapshot of the ranking is captured and Rewards are distributed to both Project Owners and to Voting Participants that vote in the Projects, according to the rank position**. When a new sprint begins, **Projects score functions are reset, voting allocation is reset and each Participant's voting power increases** ([Chapter 3.5.2. Token Utility](#)). Besides rank rewards, **a separate Rewards Pool is destined to assessments** performed in the network by Farmers that hold the **Validation Threshold**. This pool is also distributed by the end of each sprint among Participants and Projects.

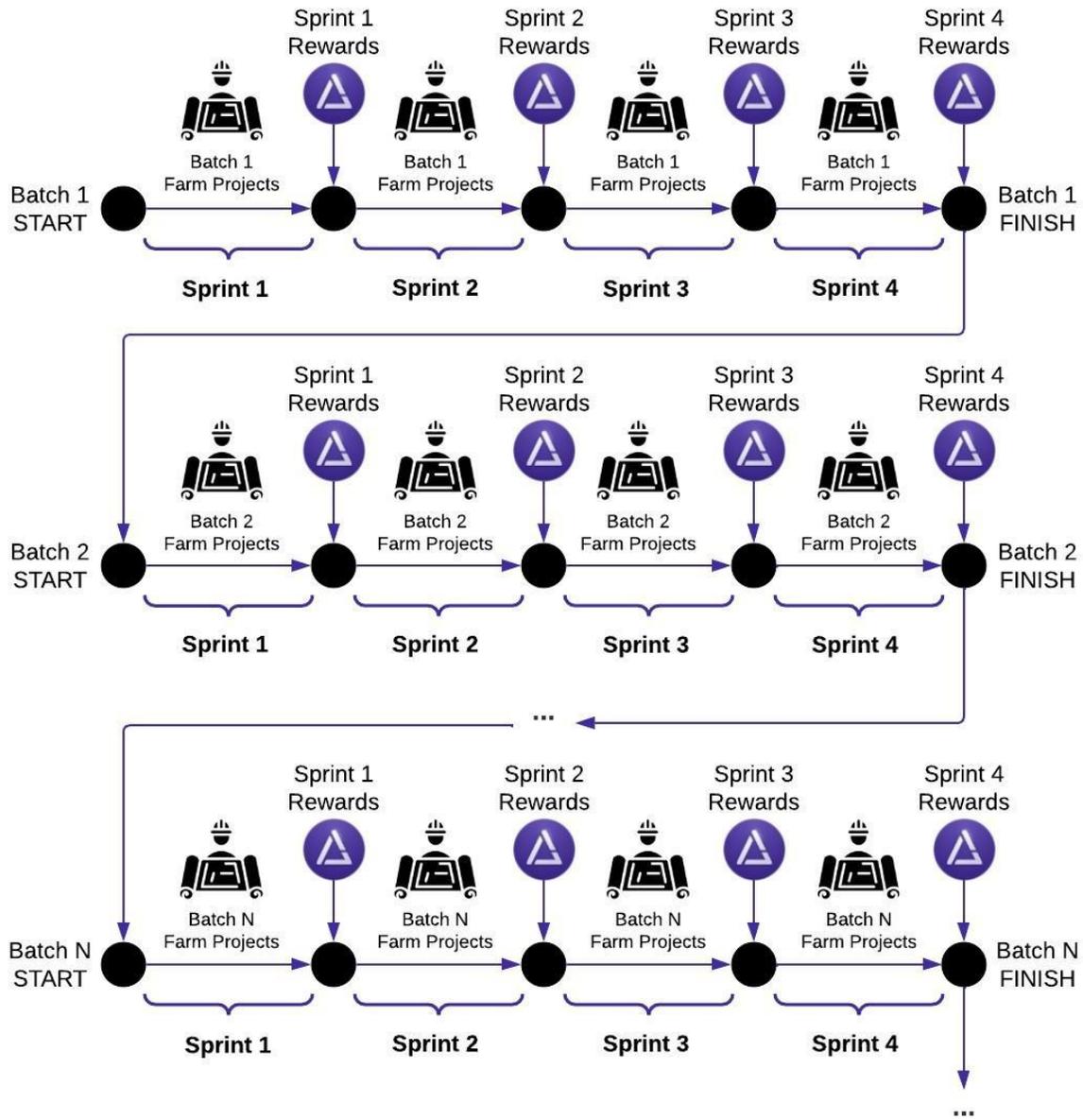


Figure 9. Distribution of rewards per sprint time-wise.

The Innovation Farming Program can be described as a network resource comprising (Frehlich & Miyazono, 2023):

1. **Funding Source** - to reward Project NFT Owners and Farmers. This Funding Source is composed of a part of the TKAI's initial token distribution (the “**Initial Funding Source**”) and of the Network Revenue. The Initial Funding Source will serve to

ensure funding to the Innovation Farming Program during its genesis, to promote the near-term growth of the ecosystem and distribute TKAI among the Participants. Over time and as the ecosystem grows, the Innovation Farming Program will be funded through Network Revenue.

2. **A Distribution Method** - that allows the community to decide how Rewards are allocated to Projects. The Distribution Method consists of (i) a quantitative assessment of a Project (number of votes) and a qualitative assessment on Project updates (assessments). The binding of both assessments sorts the best Projects according to a rank system. The higher a Project is ranked, the more Rewards the Project NFT Owner and Voting Farmers are eligible to receive.
3. A **Rewards Allocation tool** to Project NFT Owners and Farmers (vote and assessment rewards). Vote Rewards are allocated based on the Distribution Method and are aimed at Project NFT Owners and Voting Farmers. Assessment Rewards are based on the number of successful assessments performed by Farmers. The allocation of Vote Rewards and of Assessment Rewards is determined and calculated separately, meaning that the Rewards to be distributed as Vote Rewards do not directly affect the distribution of Assessment Rewards, and vice-versa.
4. **Measurable impact** influenced by Rewards Allocation. Active Participants are rewarded with the intent to grow the network to its goals. A small percentage of the Network Revenue is staked by the Treasury to accrue value on the TKAI according to its usage volume and to incentivize both its use and long-term holding. **Treasury staking will start out at a rate of 3% of the Network Revenue and the stake will last for 2 years.** Each Treasury stake will take place in the beginning of each sprint.

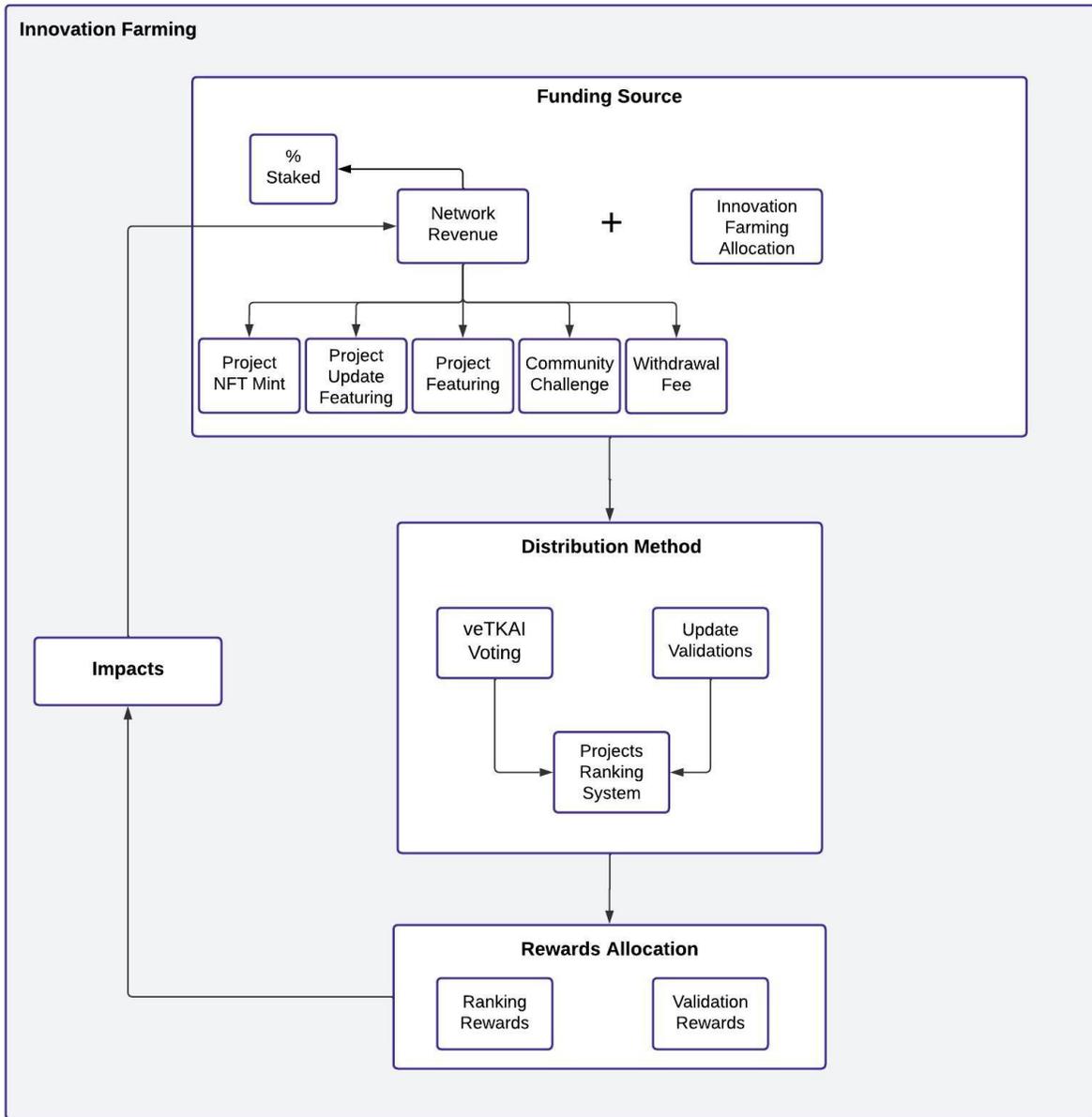


Figure 10. Innovation Farming's resource network.

3.4.2. Qualification for the Innovation Farming Program

Simultaneously with the Innovation Farming Program ranking system, a **second ranking system** will be in place to select and qualify the **Seed Projects** participating in the next **Innovation Farming Batch**. By the end of each sprint of a given batch, the **top 5 ranked**

projects are qualified, transitioning them into *Farming* Projects. Consequently, **previous Farming Projects in the same Innovation Farming Batch also transition into Graduating Projects**, therefore, ceasing their participation in the Innovation Farming Program. In essence, the system is built to periodically refresh Projects within the program.

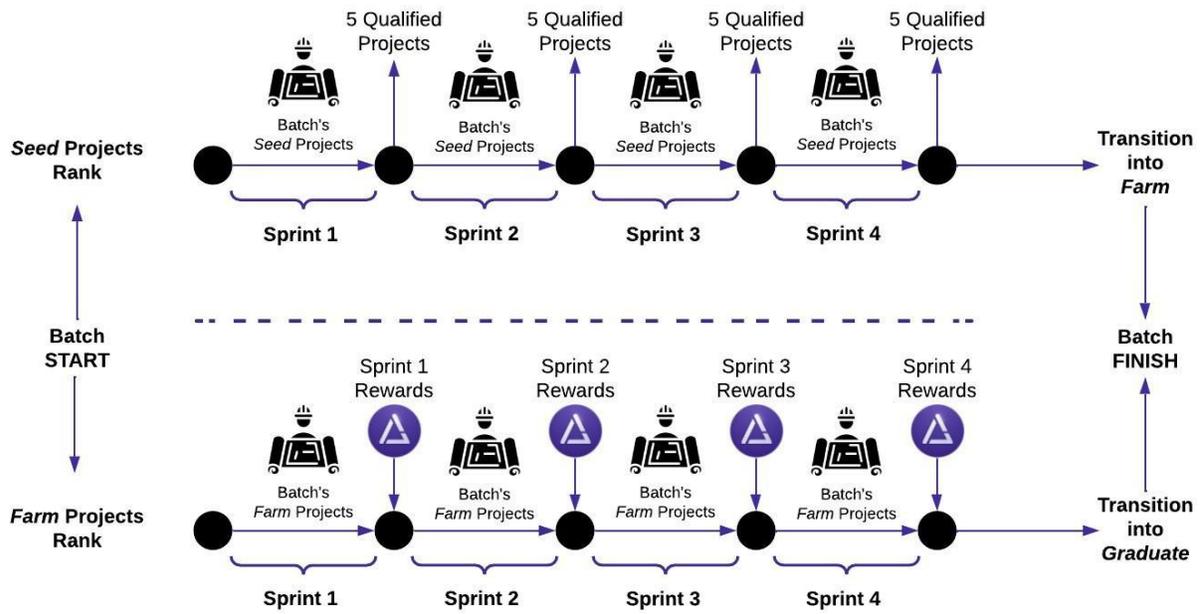


Figure 11. Innovation Farming’s resource network.

The rank position of a *Seed Project* is **higher the more validated updates one Project has provided during an Innovation Farming Sprint** ([Chapter 3.4.5. Assessments and Consensus](#)) which is accounted for in the Projects **Collaborative Innovation Volume** (“CIV”). A CIV equal to 1 means that a Project has 1 validated update. Hence, in order to qualify for the Innovation Farming Program, **there must be proof that a Project is developing it during a sprint**. At the end of a sprint, the CIV is reset, and Projects may attempt to qualify once more.

In case a Project is qualified, an amount equivalent to the Innovation Farming Threshold must be staked by the Project NFT Owner and cannot be unstaked until the end of the Innovation Farming Batch in which it is participating. The Innovation Farming Threshold will start at 10.000 TKAI. In case the Project doesn’t meet the required threshold until the next Innovation Farming Batch, such Project shall not be included in the program and must repeat the process again to have a chance to qualify. Upon completion of the Innovation Farming Program, the Project NFT Owner will be able to un stake the Innovation Farming Threshold.

3.4.3. Farming Project Ranking Score Function

During the Innovation Farming Program, the score function (“SF”) score for a Farming Project i during sprint j is:

$$SF_{i,j} = \sum_{k=1}^l (V_{i,j,k}) * CIVScaleFactor * Min(3, CIV_{i,j})$$

where:

- $V_{i,j,k}$ = Ecosystem participant k 's veTKAI votes in project i amongst a pool of l voters on sprint j .
- $CIV_{i,j}$ = Number of project i 's validated updates on sprint j . Only the first three finalized updates are going to contribute to the Score function.
- $CIVScaling Factor$ = Constant defined on the protocol that reduces or increases the CIV contribution to the project Final Score.

The first term, $\sum_{k=1}^l (V_{i,j,k})$, reflects the sum of the ecosystem's Participants belief in the relevance, quality or potential usage of the Project and thus a **subjective predictor of success**. It represents the **cumulative veTKAI votes**.

The second term, $CIV_{i,j}$, which stands for Collaborative Innovation Volume, is a direct measure for a Project's validated updates and a proxy for its relevance or quality in the ecosystem. Thus, it constitutes an **objective proof of success**. A Project with **CIV equal to 1 means that the Project had 1 update validated** in that given sprint.

Hence, this score function can be summarized as a **combination of predictive success and actual success** in terms of their orders of magnitude. The score function also implies two constraints:

1. **A Project with no votes will either have a score of 0 or will not score in the ranking.** This is to guarantee that Farmers vote on Projects that provide proof of development or there is an expectation of such.

2. **A Project with no validated updates will not have a score in the ranking system, regardless the number of votes obtained.** Therefore, only Projects that have developments get into the ranking. This creates an incentive for Project NFT Owners to continuously develop their Projects and provide proof of such.

	CIV > 0	CIV = 0
veTKAI > 0	Score > 0	Score = N/A
veTKAI = 0	Score = 0	Score = N/A

Figure 12. Potential Project's score function results.

Although this is a preliminary score function, we anticipate feedback from the community to further improve it.

3.4.4. Voting Power

Voting power is quantified by considering the **amount of veTKAI** a Farmer holds and the TKAI staking period, i.e, the longer the staking lasts, the more voting power is granted to such Farmer (full voting power will be reached after a 1 (one) year staking period) (the "Staking Period"). Voting power is exercised through **TKAI allocation across all Farming Projects by the Farmers**. The veTKAI is obtained upon Staking TKAI ([Chapter 3.5.2. Token Utility](#)). This voting process corresponds to the predictive aspect of a Project's success and is valuable to the ecosystem for signaling Projects in which the community has the most expectations. Any Farmers holding veTKAI **can vote (except for the Project NFT Owners) and votes can only be placed into Farming Projects** ([Chapter 3.3.1. Project Sandbox](#)).

Upon voting on a Project which has been granted a position in the Innovation Farming Program rank, Voting Farmers become rightful to a proportional share of the Rewards to be allocated. **If a Farmer has X% of the veTKAI votes of one Project, such Farmer will have X% of the Rewards that are destined for Voting Farmers from the Project's respective**

rank. Potential reward maximization with veTKAI voting, **may be achieved by diversifying allocations across a spectrum of different Projects instead of concentrating the votes in only one Project or in a few.** When a Farmer votes for multiple Projects, such Voting Farmers automatically become eligible for a part of the Rewards on all Project ranks where the Voting Farmer placed the vote(s). This approach may not only benefit the Farmer but also provide each Project greater visibility and exposure within the ecosystem.

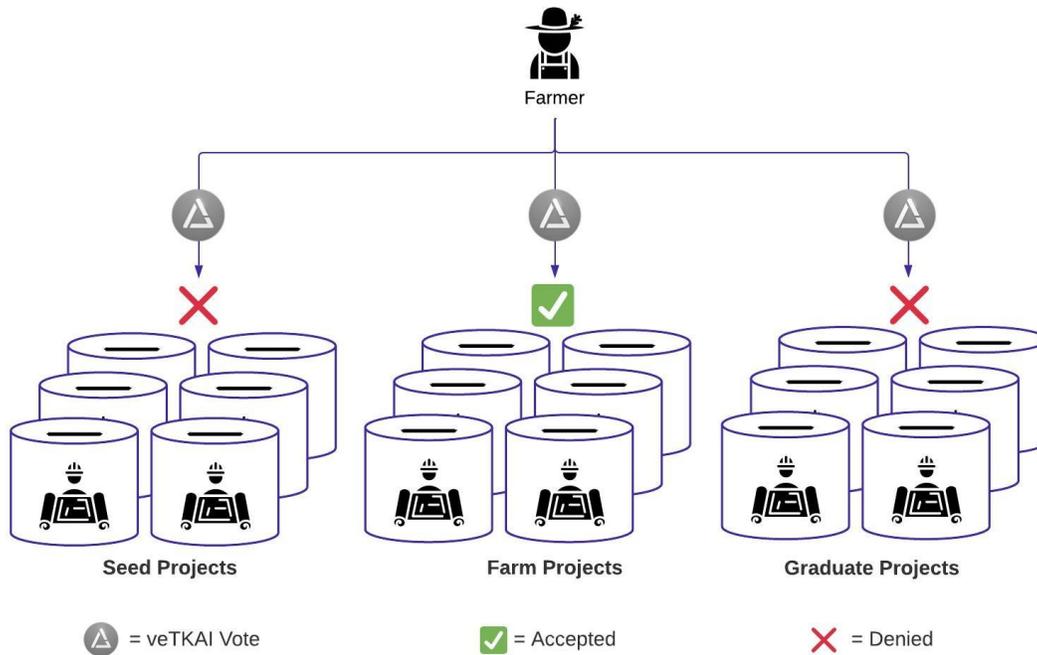


Figure 13. Possible voting across projects.

By the end of every Innovation Farming Sprint, votes are reset and returned to the Farmers. Upon transitioning to the following sprint, veTKAI holdings increase linearly ([Chapter 3.5.2 Token Utility](#)).

3.4.5. Assessments and Consensus

Assessments consist of **analyzing if either a Project update or a Mentorship Application** (an “Update”) **is legitimate** (Chapters [3.3.1. Projects Sandbox](#) and [3.3.2. Mentors Sandbox](#), respectively). In order to be able to validate/invalidate a Project update, a Farmer must meet or surpass the **Validation Threshold**.

Once holding the Validation Threshold in its Wallet, a **Farmer may either validate or invalidate** (the “**Assessing Farmer**”) an **Update** (the “**Update Assessment**”). If an Update is not validated by a Farmer, the Update will not be considered as accepted.

However, this Update Assessment may be **subject to a Farmer wrongful interference**. Farmers may be inclined to deter results for personal benefit or collusion by qualifying an Update as illegitimate.

Project Update or Mentor Application / Farmer Assessment	Legitimate Assessment	Illegitimate Assessment
Legitimate Update / Application	 Validation Intended outcome.	 Invalidation Unintended outcome.
Illegitimate Update / Application	 Invalidation Intended outcome.	 Validation Unintended outcome.

Figure 14. Potential outcomes that arise from an update and respective assessment.

When a Farmer decides to invalidate an Update, a **consensus dispute mechanism can be triggered by the Farmers within 48 (forty eight hours), as from** the invalidation time (the “**Dispute Period**”). During the Dispute Period other Participants can upvote or downvote the Updates provided in TAIKAI Garden.

At the end of the Dispute Period, if the number of positive Update Assessments (“**Upvotes**”) outnumber the number of negative Update Assessments (“**Downvotes**”), the Update is deemed as legitimate, the dispute mechanism is finalized and the Update is accepted in TAIKAI Garden. This consensus dispute mechanism only validates Updates when more than 50% of the voting validators on the system support them.

Let's consider the following example:

Bob Updated his Project at 9:30 on October 13th, 2023, saying:

“Nebula Project hired a new project manager Santal Rotko and delivered the first MVP to the public on <https://nebula.io>”

The first **Upvote** was published at 9:35 October 13th and within the next 48 hours there were 10 Upvotes and 5 Downvotes, so, at 9:35 on October 15th, 2023, the Update is considered valid and finalized on the system and contributes to the sprint rewards as a valid update.

In the meantime Alice published an update on October 14th, 2023, saying:

“Foo Project has raised a pre-seed round of 10M by a16Z”.

The first **Downvote** vote was published after 5 minutes and within the next 48 hours there were 4 Upvotes and 5 Downvotes, so, at 9:35 on October 16th, 2023, the Update was considered invalid and finalized.

This system is more equitable and resistant to wrongful interference, by granting voting powers gradually and depending on the amount of veTKAI held and the Staking Period, it prevents a small number of large veTKAI holders from disproportionately and unfairly influencing the outcome of Update Assessments.

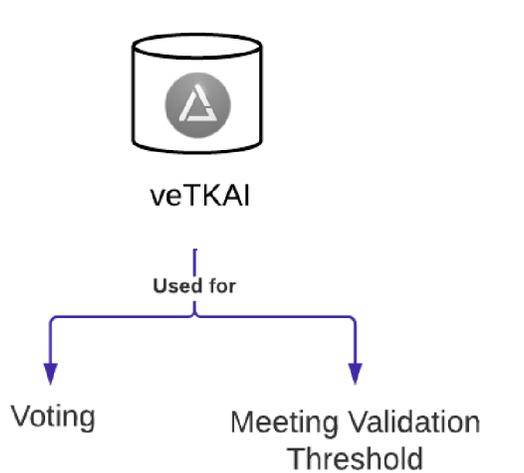


Figure 15. The use of veTKAI resources across Innovation Farming.

Although only the Participants holding the amount of veTKAI necessary to meet the Validation Threshold can propose an Update Assessment, **when a dispute mechanism is**

triggered, all Participants have the chance to vote and express their opinion on a Project Update Assessment, regardless of whether they meet or not the Validation Threshold.

In case the Update Assessment of either validation or invalidation is not disputed within the Dispute Period, the Update Assessment is considered final. While a validated Update increases CIV by 1, an invalidated update has no effect on it. If the validation/invalidation is disputed, a new Farmer that holds the Validation Threshold may provide a new Update Assessment - and the process repeats.

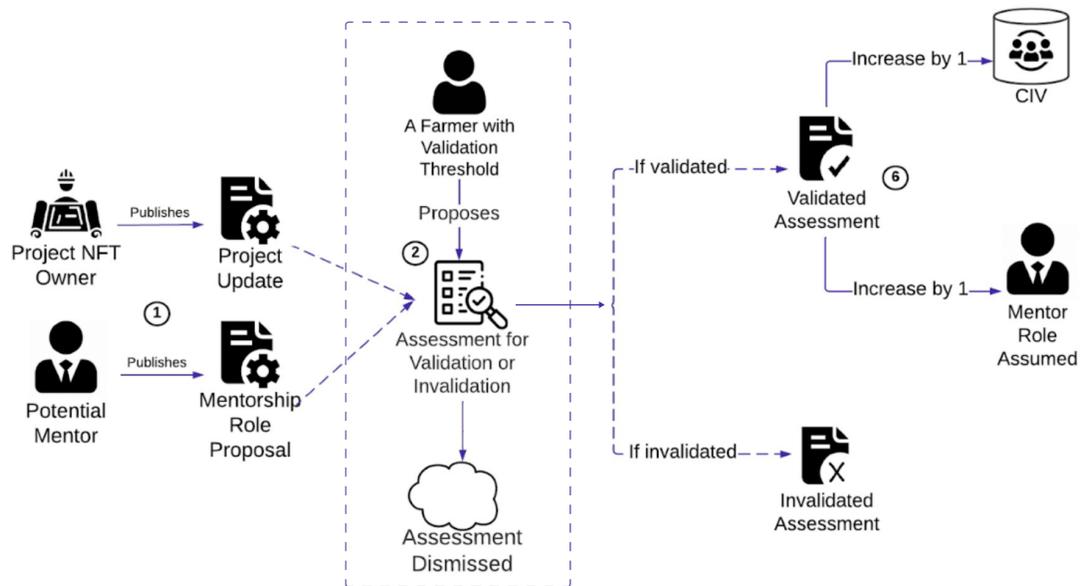


Figure 16. The process through which an assessment is made.

Farmers that successfully perform an Update Assessment, whether validating or invalidating it, are then entitled to a % (percentage) of the total rewards allocated to Update Assessments in the Innovation Farming Sprint. In contrast with voting on Projects, rewards to those who perform Update Assessments are not dependable on Projects ranking but rather on the total number of Update Assessments concluded. While the quota of a Farmer's Voting Rewards is proportional to a Project's vote sum, the quota of a Farmer's Update Assessment Rewards is proportional to the total number of successful Update Assessments concluded during a sprint. Therefore, the more successful Update

Assessments a Farmer provides, the larger the share of Rewards will be. Refer to Chapter 3.4.8. Use Case, for further examples.

3.4.6. Rewards

It is intended to reward all Projects that have a score in the ranking system. Since there is a maximum of 20 Projects that can be in the Innovation Farming Program simultaneously at the kickstart of the program, **20 ranking positions with rewards will exist.** Rewards will be distributed according to the following split:

- 70% to Project NFT Owners;
- 30% to the Participants which is then split between: 15% to project's Voting Farmers;
- 15% to Assessing Farmers.

The following table quantifies the ranking rewards at the kickstart of the program:

Project Rank	Total Rewards	Project NFT Owner (70%)	veTKAI Voters (15%)	Update Validators (15%)
1st	56.000 TKAI	39.200 TKAI	8.400 TKAI	N/A
2nd	46.00 TKAI	32.200 TKAI	6.900 TKAI	
3rd	37.000 TKAI	25.900 TKAI	5.550 TKAI	
4th	29.000 TKAI	20.300 TKAI	4.350 TKAI	
6th	16.000 TKAI	15.400 TKAI	3.300 TKAI	
5th	22.000 TKAI	11.200 TKAI	2.400 TKAI	
7th	11.000 TKAI	7.700 TKAI	1.650 TKAI	
8th	7.000 TKAI	4.900 TKAI	1.050 TKA	
9th	4.000 TKAI	2.800 TKAI	600 TKAI	
10th	2.000 TKAI	1.400 TKAI	150 TKAI	
11th-20th	1.000 TKAI	700 TKAI	Scarce or none.	
Sum	240.000 TKAI	168.000 TKAI	36.000 TKAI	36.000 TKAI

Figure 17. Rewards distribution per Innovation Farming sprint.

At the end of each sprint, LayerX will:

1. Take a snapshot of the ranking.
2. Calculate the share of rewards for each Ethereum address.
3. Distribute TKAI accordingly, the total sum being that sprint's budgeted TKAI.
4. Reset all projects' score function scores for the following sprint.
5. Declare the score function for use in the following sprint.

In cases where a rank is not assigned to a Project due to a lack of validated Updates, the corresponding rewards for that same rank will remain in the TAIKAI Treasury. The same will take place in case a Project is included in the ranking (CIV>0) but does not have votes casted. In this situation, although rewards would be distributed to the Project NFT Owner, rewards destined to Farmers would not.

While these are the first parameters to distribute rewards, we anticipate feedback from the community to further improve it.

3.4.7. Reward Output

When referring to Reward Output, we are recalling the Farmers TKAI output by participating in Innovation Farming Programs by taking both roles of Voting Farmers and Assessing Farmers. It is the income these agents are entitled to in relation to their staked assets.

Reward Output is calculated using the stake up with the sprint rewards, as follows:

$$\text{Reward Output } i = \frac{\text{VotingRewards} + \text{AssessmentRewards}}{\text{StakedTokens}}$$

$$\text{VotingRewards} = V(i, j) \times \frac{V(j)}{RV(j)}$$

$$\text{AssessmentRewards} = A(i) \times \frac{RA}{A}$$

Staked Tokens = Total TKAI staked by farmer i.

i = Farmer i.

j = Project j.

V(j) = Total veTKAI voted on project j.

V(i,j) = veTKAI voted on project j by farmer i.

RV(j) = Project j rank rewards addressable to voters.

A = Total number of successful assessments.

$A(i)$ = Number of successful assessments by farmer i .

RA = Rewards addressable to validators.

$S(i)$ = Total TKAI staked by farmer i .

The previous Reward Output function is dependent on six main variables:

- 1) Total Innovation Farming rewards.
- 2) Rate of Innovation Farming rewards addressed to votes.
- 3) Rate of Innovation Farming rewards addressed to successful assessments.
- 4) Rate of votes amongst the total number of votes on a project.
- 5) Rate of validations amongst the total amount of validations.
- 6) Total TKAI staked.

At the kickstart of each Innovation Farming Program, the **first three variables are exogenous to the Farmer and determined by LayerX**. For instance, **Innovation Farming Program Rewards are variable since they are purposely adjusted** and publicly announced to the community at the beginning of each Innovation Farming Program Sprint. On the other hand, although the total amount of Innovation Farming Program Rewards addressable to votes and successful assessments should remain fixed over the long run, **it is still subject to changes to comply with ecosystem incentives**. It is intended for changes in parameters and rewards to be decided by the community once conditions are favorable.

The last three variables are the ones Farmers can control and can build their strategies upon. The first one is regarding how Farmers allocate their veTKAI amongst the pool of projects and thus signal development expectations. **The best strategy to maximize rewards when voting is to disperse the veTKAI portfolio across a wide range of projects**. This is due to the fact that by voting on several projects a Farmer is also applying to be worthy of all the rewards across the entire pool of projects. Thus, Farmers are incentivized to distribute their holdings across a varied span of projects instead of focusing on a few, giving more exposure to each project.

The second one is based on the number of successful assessments proposed for updates. **The best strategy to maximize rewards via validations is to provide as many legitimate assessments as possible.**

The last variable is regarded as the staked assets. As a rule of thumb, **the longer TKAI is staked, the more rewards a Farmer is potentially empowered to receive.**

3.4.8. Use Case

Meet Bob, an active Farmer in the \$TKAI ecosystem. Bob stakes his TKAI tokens, votes on projects, and validates assessments to earn rewards. Let's explore how the Reward Output is applicable in his scenario using the formula above.

Bob's Activities

1. **Staking:** Bob stakes 100 TKAI tokens.
2. **Voting:** He votes on Project Alpha and earns rewards.
3. **Assessing:** He validates assessments and earns additional rewards.

Calculating Bob's Reward Output

- **Voting Rewards (P):** Bob earns 100 TKAI tokens from voting on projects.
- **Assessment Rewards (Q):** Bob earns an additional 50 TKAI tokens from validating assessments.
- **Staked Tokens (RS):** Bob has staked 1000 TKAI tokens.

Using the formula:

$$Bob's ROI = \frac{(100 TKAI + 50 TKAI)}{1000 TKAI} = \frac{150 TKAI}{1000 TKAI} = 15\%$$

Outcome

Bob's Reward Output is 15%, meaning the rewards he earned (from voting and assessments) represent a 15% return on the tokens he staked.

Key Takeaways:

- **Engagement Rewards:** Bob improves his output by actively participating in voting and assessments.

- **Balanced Approach:** By engaging in both activities, Bob ensures a balanced and optimized output.

- **Strategic Participation:** Bob can strategize his future participation based on his output and desired outcomes.

Understanding and calculating the Reward Output allows Bob to gauge the effectiveness of his participation in the \$TKAI ecosystem. It helps him make informed decisions on staking, voting, and validating assessments, ensuring a balanced and rewarding experience.

It is important to mention that since all Farmer's rewards are active - that is, they require work in the ecosystem - the Reward Output can vary in every sprint. Upon concluding the Innovation Farming sprint, the rewards are distributed to Farmers and to Project NFT owners. Score functions, including CIV and voting, are reset and a new sprint begins.

3.5. TKAI Token Model

3.5.1. Token Contract

TKAI's token contracts are:

Polygon: 0x8829d36F6680bE993f5444198E8cbFa8f02eDe96

Ethereum: 0x7C5b267ED81009aa7374B5CA7E5137Da47045bA8

3.5.2. Token Utility

a) Means of exchange

TKAI serves as payment for accessing gated services. These payments are deducted from the user's balances and contribute to the TAIKAI treasury as network revenue.

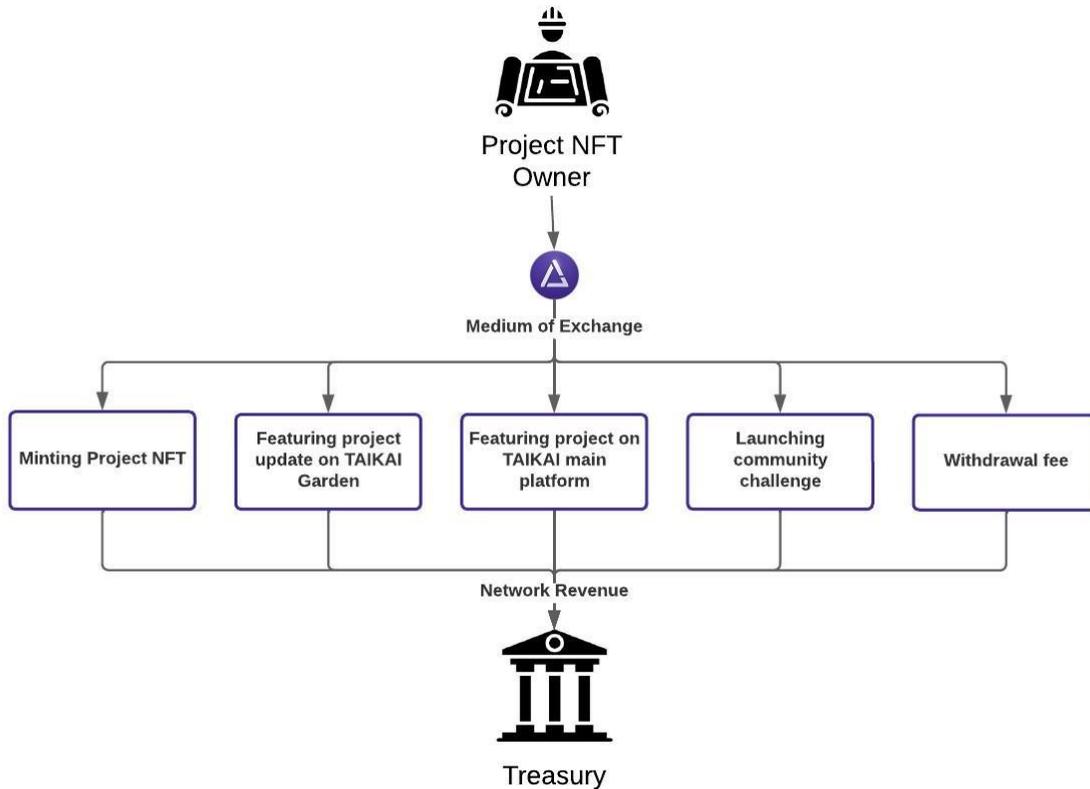


Figure 18. TKAI's use as a medium of exchange.

Minting Project NFT: A Project Owner may mint the ERC-721 token that provides ownership and publishing rights on TAIKAI Garden on behalf of the project developed. Once the Project NFT is minted, the wallet to which it is allocated is the wallet that can perform the actions within the ecosystem and potentially claim rewards. Minting the Project NFT may involve the payment of gas fees and other costs.

Featuring a project on TAIKAI's main platform: The Project Owner may increase the Project's exposure by highlighting it to the whole ecosystem, that is, both TAIKAI Garden and the hackathon platform, and capture the attention of both general users and potential customers.

Featuring a Project update on TAIKAI Garden: The Project Owner may increase the Project Update's exposure by highlighting it on TAIKAI Garden in order to capture the attention from Farmers. This mechanism encourages continuous interaction, feedback, and collaboration, strengthening the overall fabric of TAIKAI Garden's interconnected network.

Solutions, ideas, or contributions based on the challenge's guidelines. As the ecosystem scales, further services provided by TAIKAI will be added.

b) Feeless peer-to-peer interactions

Users will have the freedom to engage in peer-to-peer transactions such as mentorship and donations without any fees charged.

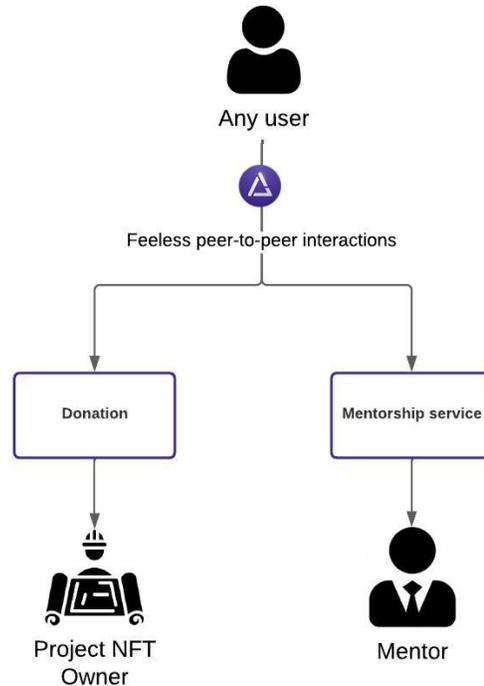


Figure 19. TKAI's use towards feeless peer-to-peer interactions.

Mentorship: TAIKAI Garden embraces on-demand mentorship as a cornerstone of its ecosystem, offering a robust and dynamic platform for knowledge exchange and guidance. Experts, industry veterans, and skilled practitioners have the opportunity to share their wisdom with project owners and the general community members one-on-one without the need for a direct intermediary in these interactions.

Donation: Participants have the opportunity to contribute to a Project in the ecosystem. By donating TKAI to Project Owners, active Farmers, and valuable Mentors directly, individuals amplify the collective impact of the ecosystem. It's a way for Participants to actively shape the development of TAIKAI Garden, enticing community-driven spirit by the shared goal of fostering innovation and entrepreneurship.

c) Staking

TKAI can be staked to access several rights while at the same time incentivizing long-term holding and commitment to TAIKAI Platform's goals.

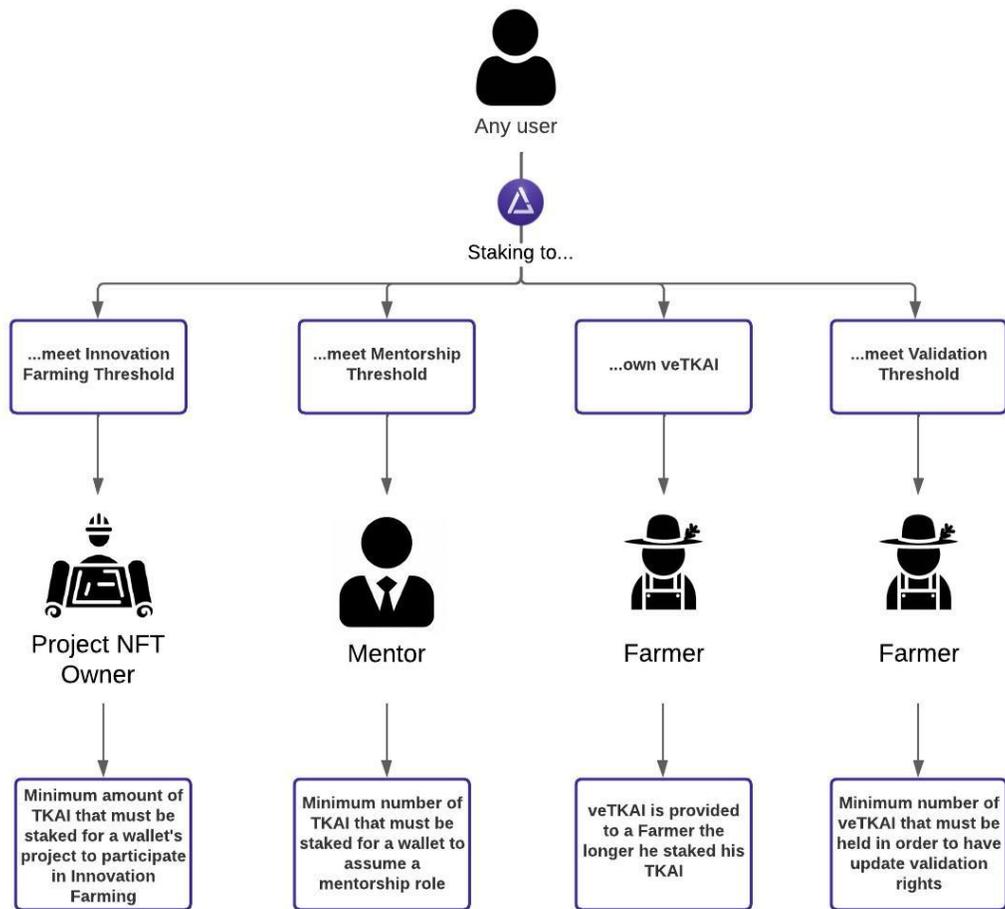


Figure 20. TKAI's use towards staking.

Although TKAI can be unstaked at any moment in time, Participants should be aware of a few constraints that may arise from doing so:

- In case a *Farm* project unstakes below the Innovation Farming threshold, the participation in the program comes to an end and it turns its status to *Graduate* project. Therefore, in order for a project to fully reap the most benefits out of Innovation Farming, the Innovation Farming Threshold should be kept.
- In case Mentors un stake below the Mentorship Threshold, their role as Mentor in the ecosystem is disabled. In order to become a Mentor once again, the application should be undertaken.
- In case a Participant unstakes any amount of TKAI, the entirety of veTKAI holdings is revoked.

d) Access to Voting Power

Upon staking TKAI, a Wallet is eligible to receive veTKAI and the Farmer will be granted with powers to **vote and validate Projects**. The TKAI is neither transferable nor tradable since they are locked in the Farmer's private Wallet.

veTKAI increases over time: **the longer TKAI is staked, the more voting power is owned. veTKAI holdings increase per sprint and are totally reset whenever any amount of TKAI is unstaked.**

The maximum amount of veTKAI a holder can own is **the same amount of TKAI staked**, which can be achieved after **52 Innovation Farming Program Sprints**, at a rate of approximately 1,96% per sprint (1/51), which is equivalent to 104 weeks or 2 years. During the first sprint in which TKAI is staked, **a wallet's veTKAI holdings are null and from the second sprint onwards, it increases linearly every sprint.**

Sprint	TKAI Staked	veTKAI Holdings
1st Sprint	<input checked="" type="checkbox"/>	$0 * 1,96\% * X = 0$
2nd Sprint	<input checked="" type="checkbox"/>	$1 * 1,96\% * X$
3rd Sprint	<input checked="" type="checkbox"/>	$2 * 1,96\% * X$
...
51st Sprint	<input checked="" type="checkbox"/>	$50 * 1,96\% * X$
52nd Sprint	<input checked="" type="checkbox"/>	$51 * 1,96\% * X = X$
53rd Sprint	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
54th Sprint	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
...
Nth Sprint	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Figure 21. Table of a wallet's veTKAI holdings per sprint with 100 TKAI staked.

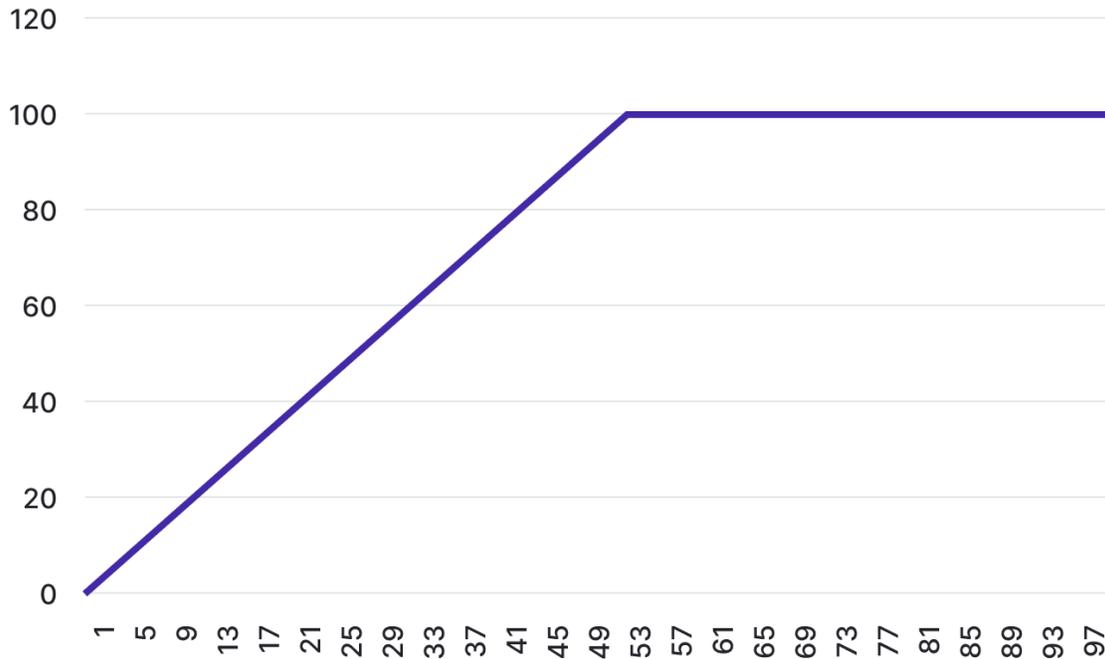


Figure 22. Plot of a wallet's veTKAI holdings per sprint with 100 TKAI staked.

3.5.3. Token Distribution

TKAI's total supply of 300M (three hundred million) premined Tokens will be initially allocated to TAIKAI Treasury and will be fully distributed over the course of 120 (one hundred and twenty) months to the ecosystem. Below is a detailed description of the different categories for the token allocation and the respective vesting.

a) Hackathon Rewards

Rewards allocation towards TAIKAI hackathon participants from previous and future editions, including hackers, juries, and mentors, in an approximately linear vesting schedule over the next 120 months. Monthly allocation volume will be highly dependent on hackathons frequency and personalization. On launch, approximately 15% of the supply will be distributed amongst previous hackathon participants, dating from 2019.

b) Innovation Farming

Rewards towards highly rated Projects and their respective Farmers in TAIKAI Garden in each Innovation Farming Program Batch. This is to ensure an adequate reserve for rewards distribution over the following 120 months and for product market fit iteration. Rewards volume will always be set prior to the batch's period and LayerX will always inform the community of any changes.

Team, Equity Partners and Advisors

Allocation towards the LayerX team and its shareholders & advisors (the "**LayerX Members**"), responsible for planning the strategy, execution and development of the TAIKAI Garden. The allocation will be subject to a cliff of 6 (six) months after the TGE (the "Cliff Period") and, once the Cliff Period is over, 10% will be immediately distributed to LayerX Members. Over the following 30 months, the remaining TKAI will be distributed linearly.

External Communities

Allocation towards Web3 communities that are devoted to goals that approximate those of TAIKAI. The distribution will be made linearly over the course of 36 months.

Liquidity Provision

Allocation towards enlisting the token on tradeable markets. The entirety of the supply towards this allocation will be placed in both centralized and decentralized exchanges within 24 months as from TGE.

\$TKAI Planned Allocation

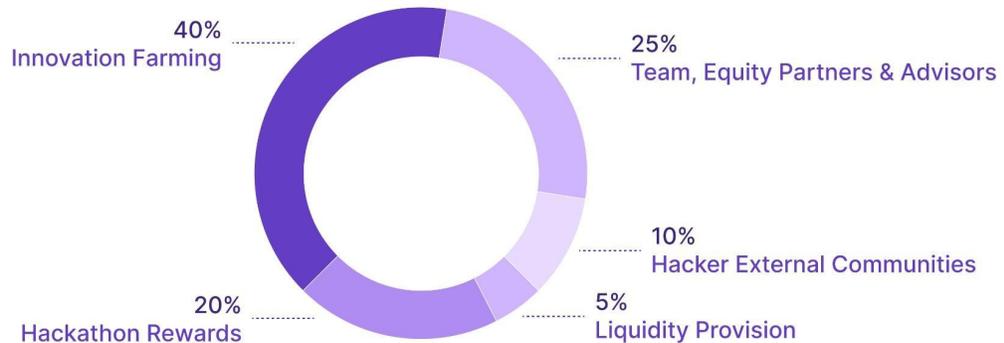


Figure 23. TKAI Allocation.

3.6. Blacklist

Blacklist is a process to handle IP violations, sensitive content, and unethical behavior in TAIKAI Garden. It can be either applied to a **Project** or a **Wallet**.

Any TAIKAI Garden Participant can report an Intellectual Property (“IP”) infringement, inappropriate content or unethical behavior (the “Infringement”), about a Project that is listed or detailed on the TAIKAI Platform or a Project’s Wallet. Once this report is submitted, the Project will be flagged and the LayerX team will analyze and initiate the process to verify the facts reported.

If LayerX considers the Infringement to exist, and at its sole discretion, the Project and/or the Project’s Wallet will enter the blacklist state and the Project Owner ability to use the TAIKAI Platform and TAIKAI Garden will be highly constrained, **temporarily** or **permanently**. All blacklisting processes will be made public to the community.

In future versions of TAIKAI protocol the analysis of the Infringement and its decision will be decentralized and taken exclusively by the Participants.

3.6.1. Blacklisting a Project

Being blacklisted as a Project has implications on how the Project is displayed in TAIKAI Garden and the span of interactions that are possible with it.

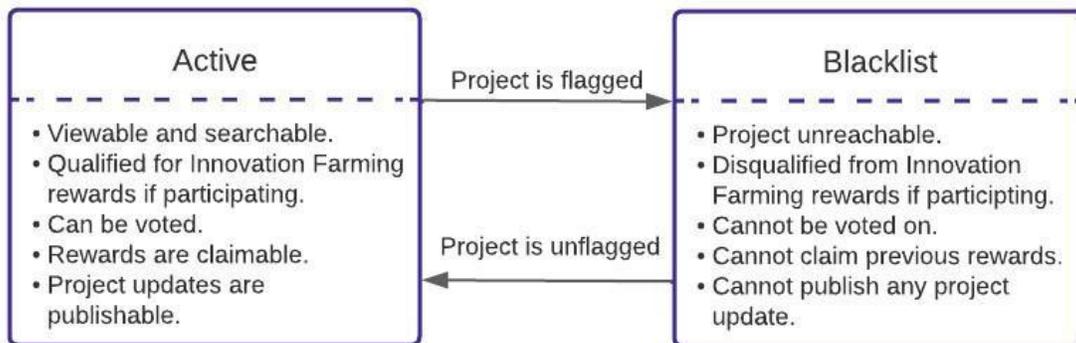


Figure 24. Span of interactions allowed by active and blacklist projects.

A Project is flagged if at least one of the following conditions is met:

- 1) **LayerX** receives a report of Infringement, including, but not limited to:
 - Trademark Violation, appropriation or misuse;
 - Copyright;
 - impersonation (e.g. posting a project under the guise of a different entity).
- 2) bribery, and false information laid out accusing Project Owners.
- 3) **LayerX** detects any Infringement.

The Project may be unflagged and removed from the blacklist, if at least one of the following conditions is met:

- The reporter submits a retraction in writing to *support@taikai.network* within 14 days after submitting the Infringement report.
- The Project Owner fully clarifies and provides evidence that no Infringement exists in writing to *support@taikai.network* within 14 days after entering the blacklist.

3.6.2. Blacklisting a Wallet

Blacklisting as a Wallet has implications on how the Participant profile is displayed in TAIKAI Garden and what actions the Participant is permitted to perform. Once blacklisted, the Participant may stay there, or leave the blacklisting status if certain conditions are met.

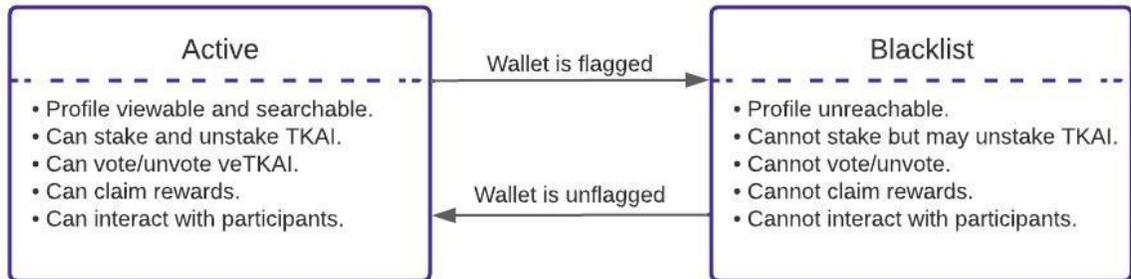


Figure 25. Span of interactions allowed by active and blacklist wallets.

A Wallet is flagged if Layer X:

- receives a report of impersonation.
- receives a report of abusive, harassing, or hate speech.
- receives a report regarding spam, unsolicited promotions, or irrelevant content to the community.
- identifies any action or behavior identified above.

The Wallet can be unflagged and removed from the blacklist if at least one of the following conditions is fulfilled:

- The reporter submits a retraction in writing to support@taikai.network, within 14 days of submission of the report.
- The Wallet's holder submits a consistent explanation in writing to support@taikai.network, and provides evidence of such to LayerX, who then decides at its discretion whether to revoke the blacklist status, or not.

3.7. Governance

Governance in TAIKAI Garden relies on four main components:

1. Flow of resources:

- veTKAI Voting;
- Validations;
- Rewards allocations;

2. Parameterization:

- Thresholds;
- Reward amounts;
- Rates;

3. Blacklisting:

- Projects;
- Wallets.

4. Features.

As mentioned in previous chapters, the **flow of resources will always be governed by the community in regard to the Innovation Farming Program**. Note that governance, in this context, is not about specific decisions for protocol or software but more directly about value creation within the ecosystem.

Regarding the topics of **parametrization**, **blacklisting**, and **features**, during the kickstart of the ecosystem, the power over them will be entirely up to LayerX's discretion, and will regularly make decisions public after each Innovation Farming Program Sprint. In the long term, LayerX's support to TAIKAI Garden will become minimal, to the point in which its operations are fully autonomous and fully decentralized.

4. Risks Associated With Crypto Assets

TKAI is a utility token that grants access to TAIKAI Platform and TAIKAI Garden, as described herein. TKAI is not intended to constitute securities of any form, units in a business trust, units in a collective investment scheme, capital markets product, or any other form of regulated product or investment in any jurisdiction. This Whitepaper or any other document available with information about TKAI does not constitute a prospectus or an offer document of any sort and is not intended to constitute an offer of securities (“TKAI”). TKAI shall only be acquired and used with the purpose of using and accessing TAIKAI Platform and TAIKAI Garden. No TKAI should be construed, interpreted, classified, or treated as enabling, or according to any opportunity for the Participants to participate in or receive profits, income, or other payments or returns arising from or in connection with the LayerX, the tokens, or the proceeds of the token sale, or to receive sums paid out of such profits, income, or other payments or returns.

4.1. RISKS RELATED TO CRYPTOCURRENCIES OR OTHER TOKENS DEVELOPED ON BLOCKCHAIN TECHNOLOGIES

Cryptoassets developed on blockchain technologies may be riskier, less liquid, more volatile and more vulnerable, in particular due to economic, macroeconomic, political, market or industry reasons that are not foreseeable or have not been considered due to the manifest impossibility of forecasting.

The price of crypto assets can be highly unpredictable and volatile when compared to other types of assets and other tradable instruments. Additionally, cryptoassets can also become illiquid at any time or circumstance. LayerX does not advise any Participant to buy, hold or use cryptocurrencies or other tokens developed on blockchain technologies, unless the Participant understands the nature and extent of the exposure to the risks this may entail.

Before acquiring or using any cryptocurrency or crypto asset, the Participant should obtain adequate and reliable information about all aspects related to it and seek legal or financial advice, if necessary.

4.2. RISKS RELATED TO THE OPERATIONS / INTERACTIONS TO BE PERFORMED ON OR THROUGH THE TAIKAI PLATFORM

LayerX does not provide any banking, financial, credit, investment, brokerage, financial intermediation, crypto asset services, nor place, hold custody, administrate, trade, exchange, facilitate or manage funds, crypto assets, or cryptocurrency wallets for the Participants or on behalf of the Participants. LayerX does not provide any other services than those mentioned in this Whitepaper or in LayerX's terms and conditions.

The Participant is the sole and exclusive responsible for any operations or interactions carried out on and through TAIKAI Platform and TAIKAI Garden. It is the Participant's responsibility to ensure the use of the correct wallet address for any interaction or operation. Any inaccuracy or error regarding the address indicated by the Participant may result in the loss, total or partial, of the respective TKAI and veTKAI.

LayerX does not have, make available or is legally obliged to have any system or scheme that guarantees the protection of crypto assets or cryptocurrencies, particularly in the event of an error in the specification of the wallet address, nor does it under any circumstances assume any compensation for damages caused as a result of such or similar error, which, in view of the above, shall always be attributable to the Participant.

5. References

1. De Cata, A. (2023, April 11). Latest Report Uncovers Trends in Web3 Adoption by Top Brands of 2022 and Q1 2023. NFT Tech. <https://www.nfttech.com/newsroom/web3-report>.
2. Frehlich, M., Miyazono, E. (2023, July 15). A case study: Network Goods in Protocol Labs. Youtube. https://www.youtube.com/watch?v=s6JI648wh_A.
3. McConaghy, T. (2020, September 1). The Web3 Sustainability Loop. Medium. <https://blog.oceanprotocol.com/the-web3-sustainability-loop-b2a4097a36e>.
4. Monegro, J. (2020, September 7). Stop Burning Tokens - Buyback and Make Instead. Placeholder. <https://www.placeholder.vc/blog/2020/9/17/stop-burning-tokens-buyback-and-make-instead>.
5. Nolte, Chouta, & Herbsleb (2020). What Happens to All These Hackathon Projects? – Identifying Factors to Promote Hackathon Project Continuation. Proc. ACM Hum.-Comput. Interact., Vol. 4, No. CSCW2, Article 145.
6. Osolnik, J. (2022, November 24). Monitoring and Mitigation of Economic Risk. Medium. <https://medium.com/block-analitica/monitoring-and-mitigation-of-economic-risk-ed342202eb95>.
7. Samani, K. (2018, February 13). New Models for Utility Tokens. Multicoon Capital. <https://multicoon.capital/2018/02/13/new-models-utility-tokens/>.