V0.2

Open-Source Economy

Make OSS Finally Work

TABLE OF CONTENTS

ABSTRACT

Background

The open-source (OSS) landscape, while fostering collaboration, openness and transparency, faces significant challenges. Traditional reliance on donations and consulting frequently results in inadequate financial support, inequitable contributors' compensation, and diminished project competitiveness. Consequently, efforts have been made to strike a balance by integrating aspects of conventional business models or seeking backing from private entities. However, these approaches frequently compromise the core values of open-source and may potentially result in conflicts of interest.

Objective

This paper introduces a new open-source economic model. The primary objective of this model is to create a self-sustaining ecosystem that remains faithful to the principles of open-source, obviating the requirement for concessions.

We aim to:

- Provide **viable funding sources** to projects
- **Reward contributors** to enable them to sustain their livelihoods
- Attract **more donors and financial backers**
- **Empower** the community to influence projects
- Promote increased **decentralization and democratization** (with the extent determined by the project)

Our aim is to establish open-source as a viable business alternative, readily embraced by projects and startups as a feasible means to build a sustainable enterprise. Moreover, this model holds the potential to be embraced by fully decentralized and democratic organizations that strive to create viable common good products.

Open-Source Economy

Methods

The proposed "Open-Source Economic Model" introduces mechanisms to:

- Offer bounties for issue-solving.
- Offer bounties to speed up the Pull Request review process.
- Allocate a portion of bounty rewards to projects that benefit the community, even if they might not typically attract bounties on their own.
- A customizable and tailored way of sharing incomes among all project stakeholders.
- Allow backers, whether through financial means or dedicated time and expertise, (like donors or contributors), to get rewarded for their early-stage project support.
- Grant backers voting rights for a decentralized governance.

Expected Results

The "Open-Source Economy Model" presents a paradigm shift in the open-source ecosystem. This model holds the potential to revolutionize the OSS landscape, allowing projects to thrive without compromising their core values. Our aim is to position open-source projects on equal footing with their closed-source counterparts across all aspects of competition.

Note

The "Open-Source Economy Model" will undergo development through its own framework, adopting a fully decentralized and democratic approach. This model is crafted by the open-source community, for the open-source community, and naturally, it will be open-sourced.

INTRODUCTION

"Open-Source Economy" is a model designed to unleash the true potential of open-source. We aim to transform its development, attract investors, and enable it to rival closed-source alternatives.

Our project holds the potential to revolutionize the open-source (OSS) landscape, ensuring the success and competitiveness of projects like never before.

Our model addresses the challenges that open-source initiatives face while upholding the core values of openness, transparency, collaboration, and decentralization. We have a dual mission: enabling financial backers to support open-source projects and empowering these projects to overcome obstacles.

In the current landscape, ***projects face difficulties relying solely on fully open-source ideals***, such as donations or consulting. Consequently, they are forced to adopt compromised business models that balance OSS values with the need for funding. On the other hand, projects that adhere strictly to open-source values often receive support from private companies or institutions. While these contributions are admirable, as we will see later, they also introduce challenges that stray from the core ethics of OSS.

The purpose of this paper is to ***explore viable solutions and strategies for establishing a self-sustaining OSS ecosystem***. The goal is to eliminate the need for compromises with open-source values and view assistance from private institutions as a valuable bonus to the ecosystem rather than a survival necessity.

We provide tools to address the pressing challenges faced by projects, including understaffing, lack of funding, unresolved bugs, stagnant reviews, and centralized governance. These challenges have impeded the progress of projects for far too long. It is time to usher in a new era where open-source projects can flourish and even surpass their closed-source counterparts.

Open-Source Economy

Our vision for resolving the mentioned issues is as follows:

- ***Open-Source Economic Model:***
  - Rewarding contributors
  - Empowering users and contributors to influence project development
  - Attracting financial backers
  - Providing significant funding while upholding OSS values

- ***Sustainability:*** Real revenue, driven by genuine user demand. Embrace sustainable growth, leaving speculative hype behind.

- ***Democracy and Decentralization:*** We offer a variety of tools to enable democratic governance in a decentralized manner. Like all democracies, governance can vary in its level of democracy and decentralization, based on the project's preferences.

- ***Freedom is key:*** All the proposals in this paper offer high customization. Actions are autonomous, requiring no explicit permissions.

With this proposal, we aim to establish open-source as the foundational pillar of our industry, allowing it to rival closed-source solutions on every level.

A BRIEF TOUR OF OPEN-SOURCE

Before diving deep into the "Open-Source Economic Model", it's essential to first understand the fundamentals: what defines a project, who are the key players involved, and the typical workflow in an open-source setting, especially for those new to the concept.

What is a Project?

In the context of open source, a "project" typically refers to a collaborative endeavor that involves creating, maintaining, or enhancing software or documentation, where the resulting work is made available to the public under an open source license. This license allows users to freely access, modify, and distribute the software or content, often with certain conditions.

An open-source project can have various characteristics:

- ***Repository***
  Almost all open-source projects have a code repository (like: GitHub or GitLab). This repository contains the source code, documentation, and often other resources related to the project.

- ***License***
  A defining feature of open source projects is their license. Licenses such as the GNU General Public License (GPL), MIT License, or Apache License dictate how the software can be used, modified, and redistributed.

- ***Governance Model***
  Some open-source projects, especially larger ones, have a formal governance model which dictates how decisions are made, how contributors can become maintainers, etc. This governance can vary in its structure, being more or less decentralized and more or less democratic.

- ***Ownership***
  While many open-source projects are started by individuals or loosely organized groups, they can also be owned or sponsored by private companies.

- ***Contributors***
  An open-source project can have a single contributor or thousands of them. These individuals contribute code, documentation, design, or other resources to the project.

- ***Community***
  Larger open-source projects often have a supporting community of users and developers. This community may communicate through mailing lists, forums, chat platforms, or other mediums.

Examples of open-source projects include the Linux kernel, Google's Android OSS, Microsoft's Visual Studio Code, and countless libraries and tools available for various programming languages and purposes.

Key Players Involved

Within the landscape of open-source projects, three main groups play pivotal roles in the project's journey and success: owners, teams, and users.

- ***Project Owners***
  A person or group of people or a legal entities (like a private company) who have the ultimate authority over the direction, management, and decision-making processes of the project.

- ***Project Team***
  An open-source project can have a single contributor or thousands of them. These are individuals who contribute code, documentation, design, or other resources to the project.

They can be further categorized based on their privileges within the project:

- ***Maintainers*** *(or core contributor)*
  They are the "gatekeepers" of a project. They are responsible for overseeing, managing, and guiding the development of. Maintainers review and merge contributions, ensure the project's quality and direction, and often make important decisions about its future.
  It's worth noting that the roles of maintainer and owner can sometimes overlap.

- ***Contributors***
  They are individuals who voluntarily offer code, documentation, design, or other forms of assistance to an open-source project. They submit their contributions, often in the form of "pull requests," for review and potential inclusion into the project (decided by maintainers). Therefor they don't have the same decision-making power as maintainers

- ***Users***
  Individuals or entities that utilize an open-source project without necessarily contributing, which can be divided into:

  - ***Commercial Users***
    Businesses or organizations using the software for profit.

  - ***Non-commercial Users***
    Individuals or entities using it for personal or non-profit purposes.

As we'll explore further in this document, each stakeholder has distinct motivations. These can sometimes create tension, potentially leading to broader challenges within the open-source ecosystem.

Typical Workflow

There are three main concepts to grasp to understand a typical open-source workflow:

- ***Issue***

  An issue refers to a problem, bug, enhancement request, or proposal of a new feature within a project. Anyone can open an issue, whether it's the project's community identifying a task, a user reporting a bug, or someone suggesting an improvement. Issues serve as a means of communication and collaboration between contributors and users, facilitating discussions on whether to address the problem and determining the approach to solve it.

- ***Pull Request (PR)***

  A pull request involves a developer proposing a code change or contribution to an open-source project. It can be a response to solving a documented issue or a direct code change proposed to the community without prior discussion in an issue. Initiating a pull request triggers a review process, inviting maintainers and other contributors to assess the proposed changes, provide feedback, and engage in discussions for necessary adjustments.

- ***PR review***

  Review is a critical step in the open-source development workflow. It entails the thorough examination and evaluation of a PR's code changes, documentation, and overall quality. During the review process, reviewers carefully analyze the proposed modifications, offer constructive feedback, and suggest improvements or alternative approaches. The objective is to ensure that the changes align with the project's guidelines, coding standards, and overall objectives. Reviewers may request clarifications, suggest additional tests, or highlight potential issues before approving the pull request for merging into the main codebase.

Armed with these three concepts, we are now prepared to explore the ideas presented in this paper.

PROBLEMS OF OPEN-SOURCE

Open-source projects have revolutionized software development, promoting collaboration, transparency, and innovation. However, beneath the surface of these projects lie several challenges that affect the initiatives themselves, their contributors, and their users.

Ensuring the long-term sustainability of open-source projects presents a significant challenge.

Limitations of the Current Business Models

We start by exploring the different business models most open-source projects adopt and their limitations.

Most open-source projects adhering strictly to open-source's principles, like donations and voluntary contributions, often lead to financial challenges, impacting either the project maintainers or the project's sustainability. As a result, they have begun seeking compromises to maintain their OSS nature while incorporating elements of traditional business models to ensure sustainable funding. But as we will see, those compromises often create conflicts of interest and fragment the community.

Furthermore, most of those models often necessitate establishing a formal, centralized legal body to manage payments for services. This can lead to issues, especially when a major contributor to the project isn't affiliated with this centralized entity. As a result, there's a disconnect between those who contribute significantly to the project and those who receive compensation.

Let's first examine in detail financial models that align with open-source ideals.

- ***Donation***

  One common approach for projects relies on donations from individuals and organizations. While this model can provide some financial support for the more visible projects, it often fails to ensure long-term sustainability. Grants–specially those for small projects–are typically inconsistent and unpredictable, making it difficult for projects to plan and allocate resources effectively. Additionally, the majority of users benefit from the software without contributing financially, leading to a significant imbalance in the distribution of costs and benefits.

- ***Consulting***

  Many projects offer consulting services tied to their open-source software, providing expertise, customization, and support to other businesses in exchange for fees. While this can be a revenue stream, it comes with challenges. The model is dependent on continuously securing clients willing to pay for these services, which can be a demanding task. Not every project finds this approach feasible, especially smaller ones or those with limited market appeal. Furthermore, the income from consulting might not be enough to support the ongoing development and upkeep of the open-source project. And more concerning, this model might face competition from consulting firms that are not associated with the project. There's also a potential downside: some open-source projects might be tempted to limit their documentation or make their code more complex, aiming to increase the number of businesses seeking their consulting services.

In light of the limitations faced by numerous projects in sustaining themselves solely through donations or consulting services, alternative approaches have been explored. These approaches seek to find a balance between upholding open-source principles and acquiring the necessary funding. However, it introduces a new set of challenges stemming from the compromise made with the OSS philosophy. We are going to see some examples of those models.

- ***Dual-licensing***

  It is a strategy where software is available under both an open-source license and a proprietary license. While this model can generate income, it often divides the open-source community and the proprietary users, leading to conflicts and fragmentation. To avoid the risk of the software being forked and distributed under a permissive license, the OSS version is typically protected by a copyleft license (which strictly restricts commercial use), thereby mandating that any derivative work must also be non-commercial in nature. Aggressive licenses like GPL and AGPL are examples of this.

- ***Selling optional proprietary extensions***

  This model is an extension of the Dual-licensing seen above. This model offers a core version of the software as open-source while providing additional features or enterprise versions under a proprietary license. While this model allows for monetization, it can create challenges in maintaining a balance between open-source and proprietary components. There is a risk of limiting the development of the OSS version in order to drive users towards the proprietary offerings. This can hinder collaboration and restrict the benefits of open-source software to a select group of users.

- ***Selling proprietary updates***

  Another approach entails maintaining all software versions under a free and open-source license but abstaining from offering released artifacts like security updates or update scripts. In this scenario, users are presented with the option to either pay for the update software or embark on a laborious process of manually upgrading to the next version.

In summary, many projects find themselves unable to depend solely on donations and the consulting model, relegating them to a supplementary rather than primary means of support. Consequently, these projects are faced with a choice: either remain small in order to sustain themselves within these financial models, that align with open-source ideals but limit their competitiveness or reluctantly adopt compromised models out of necessity

rather than preference. Despite their dedication to OSS values, navigating these alternative models proves to be a challenging task.

Open-Source Projects Led by Private Companies

Many open-source projects owe their success to the leadership and financial support provided by private companies. In numerous cases, donations, funding, and manpower come directly from these companies, which contribute to the ecosystem of open-source software. There are two primary avenues through which this support is extended: either the projects originate from an institution and later transition to open source, or they are initially open source and receive funding from private enterprise at a later stage.

Despite this commendable support, this practice brings about its own set of challenges. These may include centralizing decision-making, limiting engagement from the community, and shifting the focus from user needs to commercial gain. There might be a misalignment between the interests of private companies and those of the pure open-source community, making the dependence on private corporations for the functioning of OSS initiatives especially concerning.

A typical example is the "**Fund, grow and abandon**" strategy (in analogy to the "*Embrace, extend, and extinguish*"), where corporates might take over an open-source project:

- ***Fund***

  A private company becomes a significant sponsor of the open-source project or funds initial development. This involves offering considerable resources and funds, along with engaging numerous contributors who align with the project's principles and culture at first.

  It's important to note that the company's contributions often come in the form of headcount rather than direct funding. This grants the company a higher degree of control over the project, as donations are subject to the community's decision.

- ***Grow***

  Initially, this contribution is welcomed by the initial members, as the company's support enhances the project's capabilities. The community embraces the private contributors, appreciating their involvement, and involving them more and more in the decision-making process. However, as the private company gains majority control, they gradually seize decision-making power and steer the project in a direction that aligns with their own needs and interests. This marginalizes the original community members and contributors, leading them to feel excluded and eventually causing them to leave. Consequently, the future of the project becomes solely dependent on the private company's decisions and actions.

- ***Abandon***

  At this stage, the project is very vulnerable to the private company withdrawing its support, whether by intention or accident. This can transpire through various means, such as the enterprise declaring bankruptcy, shifting its priorities, or even deciding to commercialize the open-source project in a manner that deviates from its original alignment, leaving the OSS version unsupported.

  The consequences of discontinuing regular support can be severe. The departure of key contributors poses significant challenges for the community, as the sudden loss of their knowledge and expertise makes it difficult to fill the gap. The remaining contributors may face an overwhelming workload, and in the worst-case scenario, the project can appear stagnant or inactive, which discourages new contributors from getting involved. This scenario can lead the project to be obsolete or even collapse.

The contribution of private companies, while initially welcomed, can pose significant risks to the open-source community. If a prominent project suddenly becomes abandoned, it diminishes trust in the open-source ecosystem. This outcome may not be intentional, as private companies are driven by their own short-term objectives and priorities. While they may initially find a project attractive, they can later pivot or withdraw their support due to their changing needs or even financial difficulties.

Misaligned Incentives

Within the open-source project landscape, three main groups stand out: owners, teams, and users. Dive deeper into the "*Key Players Involved*" section for more details. Each of the stakeholders possesses unique motivation. This often results in friction points which, can lead to larger systemic issues.

Now, let's delve into these conflicts in greater detail:

- ***Owners and Maintainers VS Contributors***
  Open-source projects greatly benefit from external contributions from a diverse range of contributors. However, the maintainers and/or owners often retain control over the direction of the project and its decision-making. This power dynamic can lead to conflicts over ownership, credit, and influence. Contributors might feel that their efforts aren't adequately recognized or rewarded, especially if the maintainers don't share financial success or maintain a clear governance structure. On the other hand, maintainers and owners may be cautious about giving up control, especially if owners are private entities or if specific maintainers played a pivotal role in the project's initial achievements.

- ***Owners VS Maintainers and Contributors***
  Almost worst case scenario - a big corporation abusing OSS spirit (while remaining legally correct) and commercializing OSS software without paying the upfront costs of creating it (e.g. Amazon productizing ELK as Open Search)

- ***Owners, Maintainers and Contributors VS Non-Commercial Users***
  Open-source projects are typically free to use, which can lead to a sense of entitlement among non-commercial users. They might demand rapid bug fixes and feature improvements without considering the limited resources of contributors. The challenge here is to manage user expectations while still delivering value.

- ***Owners, Maintainers and Contributors and Commercial Users***
  Commercial users can indeed derive significant value from open-source software without directly compensating contributors. This can create a dilemma for projects where there's a fine line between contributing back and using the software without giving back. Some open-source licenses, like the GNU General Public License (GPL), attempt to address this by requiring modifications to be open-sourced as well. Other licenses, like the Apache License, offer more flexibility. Balancing the benefits of widespread adoption with the need for contributions can be a delicate challenge.

  A significant concern arises when a large corporation takes advantage of the principles of open source (while adhering to legal norms) to monetize open-source software without contributing to its initial development costs. An illustrative example is Amazon's transformation of ELK into Open Search.

- ***Commercial VS Non-commercial Users***
  Different types of users often have varying priorities and needs. Commercial users might require enterprise features, stability, and support, while non-commercial users might focus more on accessibility and ease of use. Balancing these differing needs can be a challenge for maintainers who must decide how to allocate limited resources and development efforts.

The misalignment of incentives among participants in open-source projects gives rise to significant conflicts, which, in turn, manifest as practical and impactful challenges for these projects. These challenges can impede development, erode community trust, and hinder the long-term sustainability of open-source software initiatives.

Problems Faced by Projects

Open-source projects, their owners, their contributors, and their users face substantial obstacles that hinder their advancement. Most of these problems can be understood as outcomes stemming from the previously discussed misaligned incentives. While these challenges are more pronounced in projects that strive to strictly adhere to OSS values or lack support from private companies, it is important to acknowledge that other projects also experience them. In this section, we will examine the various obstacles that projects may encounter.

- ***Lack of funding***

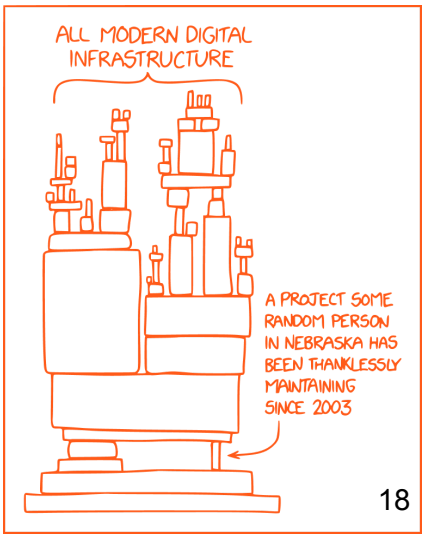
  Arguably, one of the most significant problems faced by open-source projects is insufficient financial support. The bulk of these projects are developed and maintained by volunteers in their spare time and, thus, lack the resources often associated with commercial software development. This scarcity of funding leads to numerous other problems, like contributors' precarity and burnout.

- ***Contributors' precarity***

  Contributors to open-source projects often find themselves in an unsecured position. They invest their time and expertise into these projects without any monetary compensation. While the community and personal fulfillment aspects are rewarding, they often don't contribute to the contributors' financial stability, leading to an unstable situation where talented developers might have to diverttheir efforts elsewhere to make ends meet.

- ***High turnover and burnout***

  Given the problems of lack of funding and contributors' precarity, it's not surprising that open-source projects often experience high turnover rates and burnout. The combination of intense workloads, prolonged engagement without sufficient rest, and the absence of financial rewards often leads to contributor



exhaustion. This burnout is particularly prevalent when certain contributors possess rare skills or deep knowledge of complex areas crucial to the project, placing significant demands on them and increasing their stress levels. Consequently, many of these contributors eventually opt to explore alternative, typically paid, opportunities, leaving the projects understaffed in their wake.
The situation has been discussed in a popular webcomic xkcd.

- ***Selfish contributors***
  Some contributors are primarily motivated to contribute to an open-source project because it helps them build an online reputation, which they can later leverage for better job opportunities and compensation. Having this purpose for contributing is not inherently problematic, and it is entirely legitimate to want to build a reputation. However, it becomes an issue when done in a self-interested manner.

  The process of welcoming new contributors is incredibly demanding for maintainers. It requires them to invest a significant amount of time and energy into onboarding new contributors, which includes explaining the project's structure, coding standards, and workflow processes. This investment can be quite demanding both in terms of time and energy. If a contributor joins a project with the sole intention of acquiring knowledge from community members and then leaves as soon as they have gained the required knowledge, the investment made by the maintainers and the community goes to waste. This selfish approach leads to an imbalance where the contributor gains significantly, but the community does not receive a fair return on its investment.

- ***Survivors decide everything***
  With high turnover rates and burnout, those who remain (often the project initiators or long-term contributors) are left to make all the decisions. This "survivorship bias" leads to a skewed direction of project development, where the remaining contributors' vision and preferences may not represent the broader user base or community.

- ***Contributor powerlessness***

  Regular contributors often experience a lack of decision-making authority within the project, as significant influence typically requires many years of consistent contributions. Moreover, there is often no defined timeline or specific achievement criteria for individuals to be promoted to core developers, resulting in contributors potentially remaining without voting power for an indefinite period. This can be a frustrating experience, as it means the project may evolve in a direction that does not align with their preferences, leaving them with no decisive say in the matter.

- ***User powerlessness***

  Long-time users of the project face a similar dilemma as impotent contributors. If a new version is released that disrupts their specific use case, they find themselves powerless to influence the outcome. In the worst-case scenario, developers may implement hostile changes, even in the face of community opposition during their proposal stage. Unfortunately, there is currently no mechanism in place for these users to provide input or have their concerns addressed, ultimately leaving them unable to have a meaningful impact on the project's direction.

- ***Under-prioritized bugs***

  From the user's perspective, one of the most glaring problems is the existence of bugs that disrupt their workflow. Due to the resource constraints faced by many open-source projects, bug reports may go unattended, leading to persistent issues that degrade the user experience. It is crucial to recognize that while these bugs may not be deemed critical by contributors, they can be of utmost importance to certain users, highlighting the differing perspectives and priorities involved.

- ***Pending reviews left unattended***

  The community's contributions, such as new features or patches, often encounter substantial delays in the examination process. This is primarily attributable to the insufficient allocation of dedicated resources to promptly handle these requests. Many projects experience a disparity between the demand for making changes and the availability of resources for conducting change evaluation. Consequently, the delayed assessments impede the progress of project development and can be disheartening for contributors.

- ***Dropped pull requests***

  Related to the delayed reviews, pull requests (proposals to change the codebase) can be ignored or forgotten. This is often due to the workload of the existing maintainers or centralized governance, leading to wasted effort on the part of the contributor and potential missed opportunities for improvement.

- ***Lack of development of features asked by users***

  Finally, given the challenges faced by open-source projects and their contributors, there is often a disconnect between the development of new features and the needs of the user community. While users may request certain features, the limited resources, and contributor capacity may prevent these from being developed. This can result in software that doesn't fully meet the users' needs or expectations, limiting its potential impact.

In summary, open-source projects face significant obstacles that hinder their ability to grow and compete in the market. Overcoming these challenges is not only vital for their survival but also essential for the long-term success and sustainability of the open-source community. Only by addressing these issues can open source thrive and attract new projects committed to the principles of openness and collaboration.

INTUITION: HOW DOES THAT WORK?

Let’s now have an overview of the "Open-Source Economic Model.” It operates on a project-by-project basis, independent of other projects. To better understand this concept, let's zoom in on the specific level of an individual project and explore the dynamics among various participants.

3 Fundamental Socioeconomic Pillars

We will delve into the fundamental economical and political synergies of our tokenomic model, which revolves around the following key aspects:

- ***Establishing income streams***
  To ensure the sustainability of open source, it's essential to cultivate a user base willing to invest in the project. This investment can take various forms, such as purchasing services, participating in a bounty system, or adopting a double-licensing model. Defining revenue streams is essential to secure a consistent inflow of funds.

- ***Meritocratic Compensation for Contributors***
  Once revenue is generated, it's crucial to fairly distribute funds to project contributors who have contributed to its success. Decision-making regarding fund allocation should involve the community to ensure fairness and transparency. Rather than being controlled by a few individuals, decision-making regarding fund allocation should be decentralized and meritocratic.

  Additionally, considering the interconnected nature of software dependencies, income generated by projects at higher levels of the dependency chain should be shared with the underlying software that forms the foundation.

- ***Attracting Financial Backers for a Well-Funded Project***
  Implementing this tokenomic model is not only crucial for the sustainability and growth of the project but also for its competitiveness against proprietary software

alternatives. By creating an attractive proposition for potential financial backers, we pave the way for their support through token acquisition. This support is vital for ensuring the project's sustained growth and prosperity, allowing us to compete effectively in the software market.

These core synergies serve as guiding principles for any open-source project seeking sustainability and growth. They are essential for the benefit of the global open-source community, ensuring that projects thrive and remain competitive in the software landscape. By doing so, we aim to foster a vibrant ecosystem where innovation flourishes, contributors are fairly compensated, and open-source software continues to make a meaningful impact worldwide. Moving forward, we will explore how to effectively implement these principles in the following sections.

Disclaimer

To achieve decentralization and allow widespread participation without seeking permission from others, we will utilize tools developed over the past decade, such as smart contracts and cryptocurrencies. The perception of these tools varies depending on one's standpoint. You may either fully embrace the underlying values of cryptocurrencies, such as decentralization and transparency, or you may perceive them as potential vehicles for Ponzi schemes and scams.
If you fall in the last category, we won't dispute your perspective. Cryptocurrency is a tool that can be misused - and was a lot of time misused. However, it's essential to recognize that cryptocurrencies are merely tools that can also be utilized for their remarkable quality: decentralization.

In our endeavor to build an economy for open-source projects, we aim to avoid having a centralized entity controlling everything. Instead, we want contributors and owners to have complete control over their projects, enabling them to make their own decisions regarding what to do, who to collaborate with, and what to avoid. Therefore, we will harness the power of smart contracts and crypto assets, leveraging them in service of the OSS community.

A Tailored Token per Project

To foster a decentralized and permissionless economy, it's essential for each project to possess a corresponding token. As will be further elaborated in the tokenomics section, the setup is immensely flexible, allowing projects to choose the type of token that aligns best with their needs.

This model functions autonomously, applying to each project individually, without any interference from others. We will zoom in on the operations at the level of a single project and delve into the primary uses and interactions of this token.

Being a Project Backer

Individuals who own project tokens are referred to as the project's backers. We will delve later into the reasons why all our individuals may want to acquire some project tokens and how they will acquire them. Despite their varied reasons, they all share the same benefits:

- ***Proof of backing***
  Project tokens can be acquired through either dedicating time and effort to the project or making donations (whether partial or complete) to support the project. These tokens serve as proof of active participation and involvement in the project It showcases the backer's contribution and dedication.

- ***Payement methods***
  These tokens serve as a means of payment, varying based on the project's income stream model. For instance, they grant the right to use the project in cases of double licensing. Another example, tokens can be utilized to influence the project's development by offering bounties for specific tasks, providing an avenue to shape the project's direction.

- ***Voting rights***
  If the project operates under a decentralized autonomous organization (DAO) model, holding tokens grants voting rights. This enables token holders to participate in governance decisions, such as proposing and voting on project updates, funding allocation, and other important matters.

- ***Value accrual***
  Beyond their functional uses, the tokens also hold intrinsic value (as we are later going to demonstrate in the Tokenomics sections), representing a stake in the project's success and growth. They align the interests of contributors with the project's long-term objectives, fostering a sense of ownership and shared purpose.

- ***Yield***
  Some projects may choose to give rewards to backers who lock in their tokens for a set time. This reward comes from actual earnings and depends on how well the project does. (We'll provide evidence for this later in the document.)

Concrete Example: Core Synergies of a Bounty System

In this paper, we focus on exploring one specific income stream for open-source projects: a bounty system. However, it's important to note that the implementation details of the 3 Fundamental Socioeconomic Pillars described in this paper can be readily applied to other income streams as well.

We will delve into the fundamental synergy of our bounty system model, which revolves around the following key aspects:

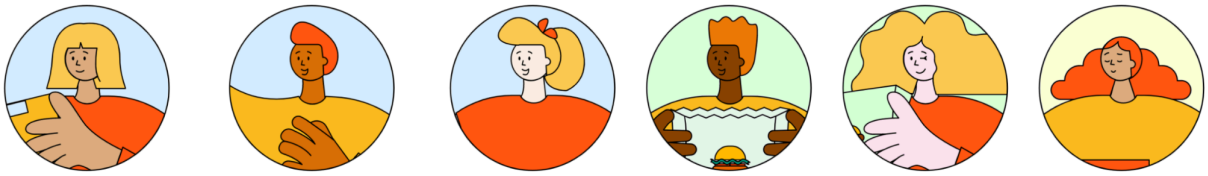
- ***Offering Project Tokens as Bounties for Issue Solving***
  By offering project tokens as bounties, we incentivize contributors to actively address and resolve issues within the project, fostering a collaborative and efficient development process.

- ***Offering a Bounty to Speed up the PR Review Process***
  To streamline the pull request (PR) review process, we utilize bounties as rewards, motivating reviewers to promptly assess and approve contributions.

- ***Compensating Contributors through Bounties***
  Contributors are duly compensated for their valuable input by receiving bounties, acknowledging their efforts, and encouraging ongoing engagement.

- ***Attracting Financial Backers for a Well-Funded Project***
  By implementing this tokenomic model, we create an attractive proposition for potential financial backers. These backers can support the project by acquiring tokens, thereby ensuring its sustained growth and prosperity.

In our hypothetical open-source project, we have several key individuals:



Anissa *Core Contributor* | **Boris** *Part-time Contributor* | **Chaaya** *Potential new Contributor* | **Usher** *User* | **Usha** *User* | **Dona** *Donor*

- ***Contributors***
  - Anissa, *a core contributor (or maintainer),* who is in charge of the project's development and code quality (or one of its components). She is seeking to be rewarded for her labor and have more developers participating in this project.
  - Boris, *a part-time contributor,* who regularly contributes to the project. He is seeking to be rewarded for his labor.
  - *Chaaya, a potential new contributor.*

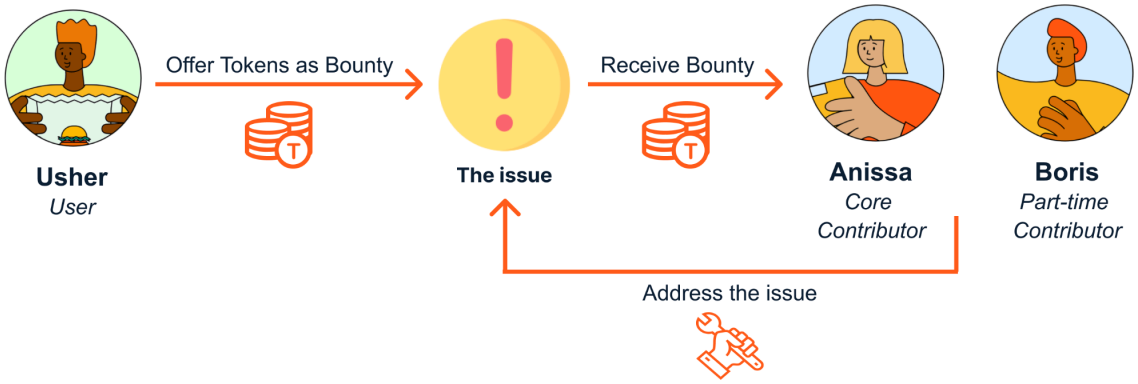
- ***Users***
  Usher and Usha, who actively utilize and benefit from the project. They wish to have a say in the project to meet their specific requirements.

- ***Donors****:* Dona, who believes in supporting meaningful endeavors, but also seeks acknowledgment for her contributions.

To foster an inclusive economy that caters to the interests of all participants within a decentralized and permissionless system, we discuss a system based on cryptocurrencies. This entails having or creating a corresponding token for our imaginary project, designed with a robust tokenomic model - meaning the token has real demand and utility.

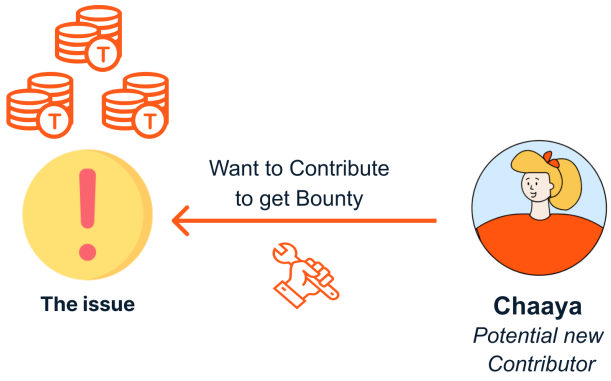
Offering Tokens as Bounties for Issue Solving

Consider Usher, one of our project users, who comes across a bug. As a typical open-source user, Usher opens an issue, hoping for a swift resolution. However, Anissa and Boris, the contributors, may be busy with other commitments and may not prioritize this specific issue, or they might not even perceive this as a genuine problem. But from Usher's perspective, this bug is critical and needs immediate attention.
To prompt a faster resolution from the contributors, Usher purchases some project tokens and offers them as a bounty on his bug report. To motivate developers to tackle his problem, he needs to assemble a substantial bounty in tokens. Throughout this phase, additional users can also pitch in tokens to boost the bounty.



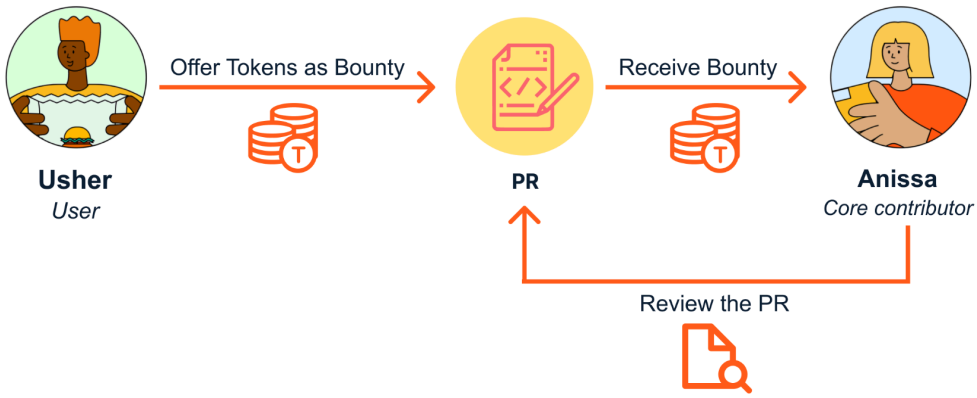
Anissa and Boris, noticing the bounty growing on this issue, decide to address it, thereby re-prioritizing their tasks. Boris will develop the necessary code changes and submit a pull request (PR), while Anissa will review it. Anissa and Boris will only earn the bounties pledged once the issue is resolved and the PR is merged, which drives them to resolve the issue promptly. This mechanism aligns perfectly with Usher's need for a swift resolution to his problem.

It is worth mentioning that if Anissa and Boris happen to be too occupied or uninterested in claiming the bounty, new contributors like Chaaya may emerge to submit a code change, especially if there is a suitable financial incentive. This approach can address the problem of understaffing and burnout in the project by encouraging more individuals to contribute and resolve issues.

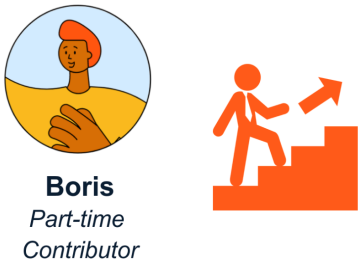


Offering Bounties to Speed Up the PR Review Process

Now, let's consider a similar scenario involving another user named Usha. Just like Usher, Usha encounters a bug and opens an issue. However, instead of waiting for someone else to address it, Usha takes the initiative to resolve the issue herself. But there's a catch – she requires a review from Anissa before her changes can be merged into the project. If the project is understaffed or if her proposal does not align with the core contributors' priorities, her pull request (PR) may experience delays in being reviewed and merged. Even worse, it is possible that her PR could be disregarded without much consideration.



Similar to offering bounties on issue resolution, users can also provide bounties for reviewing PRs. To ensure its prompt review, Usha can buy tokens and offer them as bounties to incentivize Anissa to prioritize and promptly review her PR. By attaching a tangible reward to the review process, Usha motivates the reviewers to dedicate their time and attention to her changes.



When core developers like Anissa identify a shortage of reviewers, she has the option to "recruit" additional individuals, like Boris or Chaaya, to be entrusted with the code review process. That is particularly true if the review bounties are lucrative enough. By doing so, she incentivizes the project to expand its core team capable of reviewing changes, thereby addressing issues of understaffing and burnout and cultivating a larger community familiar with the project.

Compensating Contributors Through Bounties

As we just discussed, our system allows users to offer bounties in the form of the project's token as an incentive for resolving their issues or reviewing their pull requests. The tokens received as bounties offer contributors like Anissa or Boris a range of possibilities. They can opt to sell the tokens on a market, to get a tangible remuneration, or they can choose to retain the tokens and become backers of the project, with all the benefits that it implies.

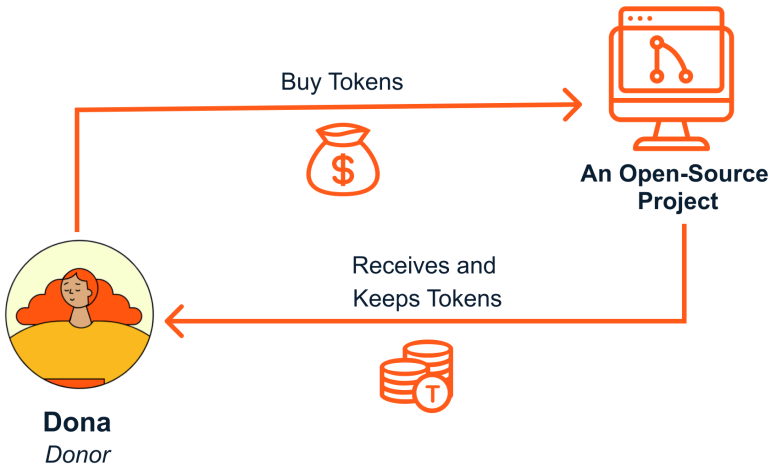
This system proves to be highly efficient in combating the issue of power centralization within an open-source ecosystem. Even if Boris lacks official recognition and doesn't hold substantial authority in the project, his continuous contributions, rewarded with bounties, empower him to influence the project by offering his tokens in exchange for tasks he deems crucial. The more Boris contributes, the more tokens he earns, and consequently, the greater his ability to exert influence on the project's direction.

However, it is important to highlight that Boris was not the sole contributor to earn this bounty. In fact, without the open-source project where the bounty was offered, Boris would not have received any bounty at all. Therefore, it is only fair that a portion of the bounty Boris receives is allocated to the contributors of this project. Similarly, like many software, this project likely relies on various dependencies that were programmed by other contributors. These contributors also deserve fair compensation, so it is reasonable that a portion of the bounty Boris receives goes to them as well.

Attracting Financial Backers for a Well-Funded Project

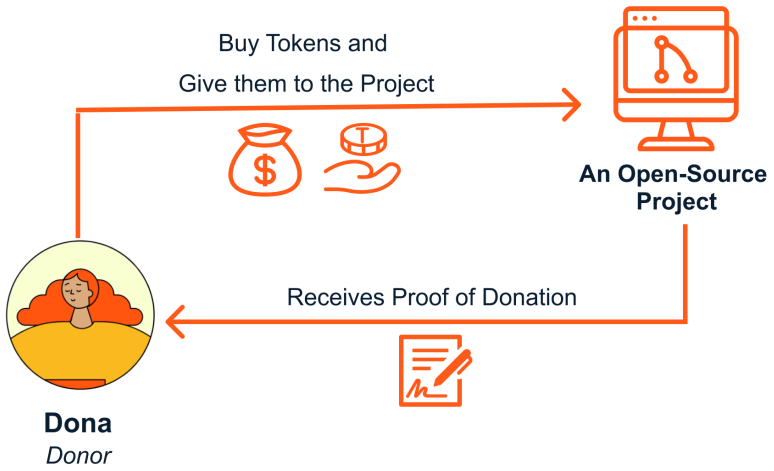
A financial backer could be a donor like Dona interested in funding the project by ideology. Now, when she decides to donate, she has two novel options:

- ***Partial Donation***
  Dona acquires tokens directly from the project and retains them. Through this method, both the project and Dona benefit. The project receives funding, and Dona enjoys the perks of being a project backer.



- ***Full Donation***

  In this option, Dona still buys tokens from the project, but instead of keeping them for herself, she donates these tokens back to the project.



By doing this, she voluntarily renounces the rights typically associated with being a token holder (project backer). In return for her donation, she receives Proof of Donation, which could include various privileges and benefits specifically defined by the project. These benefits might be different from those provided to regular token holders. For instance, Dona might be recognized publicly as a donor on the project's website or receive additional voting power for specific decisions.

In both scenarios, Dona effectively becomes a backer of the projects, reaping the associated benefits, which may incentivize her to donate even more than she would have without receiving compensation. This mutually beneficial arrangement strengthens the project's financial standing and fosters a positive cycle of support and growth.

Aligned Incentives: Freedom is Key

The advantage of this arrangement is that contributors like Anissa and Boris, being compensated in the project’s tokens upon PR merging, have a vested interest in swiftly completing the merging process. Furthermore, the main objective of the developers like Anissa and Boris is to increase genuine earnings. Thus, efficient problem resolution establishes a pleasing customer experience, where the bounty is perceived as "good value" by the users, pushing them to use them more often.

This aligns contributors' motivations with the needs of our users, creating a win-win situation for everyone involved. Users' issues receive prompt attention and resolution, while contributors receive their deserved compensation.

Significantly, it is essential to note that all these actions are independent and unilateral. Usher and Usha do not require explicit permission from Anissa and Boris to proceed, nor are the contributors obligated to address the users' issues. Instead, their decision to work on the issues is driven by their own motivation and incentives.

By fostering such collaborative dynamics, the project creates an environment where users and contributors mutually benefit from their interactions. The successful resolution of users' problems strengthens the project's overall quality and enhances user satisfaction. In this way, the open-source ecosystem thrives on the collective efforts and motivations of its participants.

PROJECTS' TOKENOMICS

We've crafted the tokenomics with the aim that it should conform to each project's needs, rather than projects needing to bend to the system. Our focus is to benefit the community and resolve typical problems encountered in open-source projects, including underfunding, understaffing, and centralization of decision-making.

As such, the foundational elements of our tokenomics are centered around several guiding principles:

- Token demand, directly *tied to the project's success*
- Value accrual, based on real revenue
- *Controlled volatility* and *minimal speculation* to encourage steady growth
- *High customizability* to match the unique working culture of each project community.

Set-up: a Tailored Token per Project

Promoting a decentralized and permissionless economy necessitates that each project has an associated token so that the model can function independently on a project-by-project basis. Each project can choose the token setup that is most compatible with their requirements.
Since our system requires a token, the token can come from two potential sources:

- ***Reuse of preexisting a token***
  For projects that already have a token, the utilization of the native token is strongly recommended. This approach enhances trust and momentum in the native cryptocurrency while simplifying the system by eliminating the need for multiple tokens. Furthermore, developers contributing to a web3 open-source project typically have confidence in what they're developing and would usually prefer not to be compensated with a secondary token. Therefore, for simplicity, trust, and contributor motivation, we encourage projects to use their native token.

- ***Creation of a new token***
  If the project doesn't have a token or opts not to use it, a new token can be minted to build an economy centered around open-source development. The objective of the “Open-Source Economy” is to furnish well-tested smart contracts that facilitate easy token creation with just a few clicks, eliminating the need for specialized smart contract engineering skills.

All concepts explored in this section can be used to add extra utility to preexisting tokens, but from now on, we primarily focus on the case of freshly created tokens. The incentives discussed below are optional and opt-in. We believe that they are useful for creating a sustainable incentive structure for the project and token accrual over time.

Token Demand: Intrinsically Linked to Project’s Success

The demand for the project token is primarily driven by real-world utility, as the token offers tangible benefits and functionality.

- **Goog and Services: Third-party income**
  Every open-source project implements a revenue stream that they deem suitable, whether it's double licensing, a Software as a Service (SaaS) model, consulting, a bounty system, and so forth.

  It's recommended that all forms of income be transacted in the form of project tokens. This implies that clients will need to mint project tokens to compensate the project for the provided services. Projects can then decide meritocratically how to distribute this income.

  In this paper, we focus on exploring one specific income stream for open-source projects: a bounty system. However, the principles discussed here can be applied to other revenue streams as well. In the case of a bounty system, the success of an open-source project often leads to a larger user base with more pressing issues, new feature requests, or pending PRs for merge. Our model allows these users to offer bounties for specific code changes or reviews. These bounties, paid

in project tokens, create a clear correlation between the project's success and the token demand.

To encourage users to offer bounties, various methods of bounty offerings can be introduced:

- The governance of a project can initiate ***crowdfunding campaigns*** aimed at addressing specific issues or creating new features.

- Users can determine a ***flexible reward range*** for bounties:
  - As time progresses, the reward diminishes, motivating developers to tackle the issue quickly.
  - Conversely, as time goes on, the reward can increase, prompting more developers to show interest in the issue.

- **Voting rights *(optional)***
  If the project opts for decentralized governance, the project token can grant voting rights. The success of the project increases the importance of governance decisions, sparking more interest in acquiring tokens for voting influence. This interest further drives token demand.

Moreover, we have integrated already existent financial models into our system to stimulate token demand.

- ***Financial Backers (like donors)***
  Generally, the more successful an open-source project is, the more donations it receives. However, in our model, instead of making a donation without any tangible return, donors can mint tokens from the project. This arrangement not only allows the project to secure the funding it needs, but also transforms donors into token backers, providing them with all the benefits associated with it.

In summary, these real-world applications and utilities, directly tied to the project's success, stimulate demand for the project token.

Why Not Just Use a Stablecoin?

It can be debated that there's no necessity for new tokens to establish a bounty system. The bounty could simply be provided in an existing cryptocurrency (BTC, USDC, etc). Others might argue for a custom token, which doesn't necessarily have to incorporate a value appreciation mechanism and could maintain a stable price over time.

However, this overlooks the vital objectives of the "Open-Source Economic Model":

- ***Attracting more financial backers (like donors)***
  Attracting more financial backers (like donors) to attract sufficient funding for open-source projects.

- ***Motivate and retain high-quality experienced contributors***
  Motivate and retain high-quality experienced contributors to join and remain committed to these projects.

If we only utilize a stablecoin or a token without value appreciation tied to the project's success, what motivation do backers have to join a project? Contributors will receive a bounty whose value doesn't grow over time along with the project's success. Therefore, why tackle issues now rather than later? The same question applies to financial backers, why donate now instead of later? It's true that, during a project's early stages, becoming a backer can be risky. It is often more beneficial to support projects that have already proven successful rather than those still struggling to gain recognition.

For open-source projects to thrive, be well-funded, and attract ample developers, we require a system that allows backers to bet on the future. This means the token's value appreciation must be tied to the project's success. Simply put, we propose offering backers a greater quantity of tokens (for an equivalent level of involvement) if they lend their support at a project's inception rather than at a more mature, successful stage.

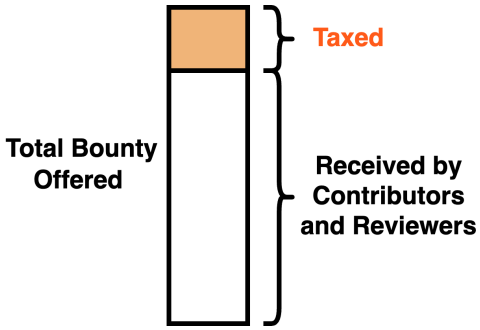
By meeting this condition, backers are encouraged to donate and collect bounties as early as possible, while the project reaps the benefits of sincere support that drives its success. This strategy doesn't just promote early contributions but also aligns the backers' interests with the project's long-term success.

Sustainable Model: Ensuring Long-Term Viability

Our goal is to develop a strong tokenomics system that focuses on establishing sustainable methods for generating project revenues and ensuring the appreciation of the token's value over time.

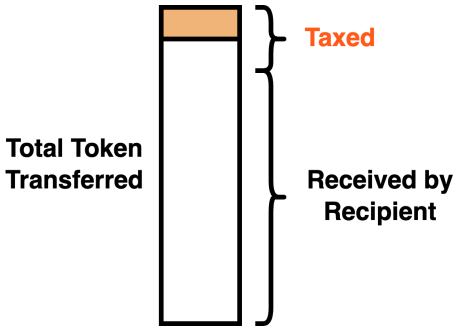
To achieve this, we have introduced a tax mechanism on key actions:

- ***Income Distribution Tax***
  When distributing a project income, such as bounties, a tax is levied on the bounty amount. As the token demand for bounties stems from real needs, this mechanism allows us to reach value accrual that is based on authentic revenue and correlates with project success.



- ***Token Transfer Tax***

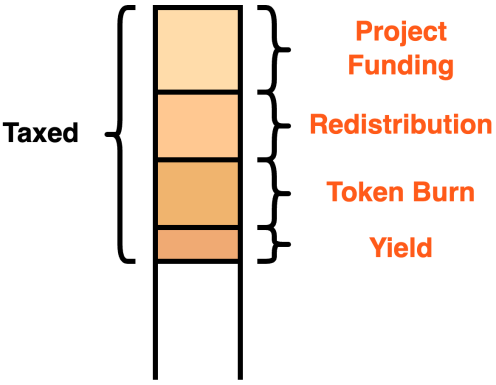
  A tax will be imposed on token transfers to limit speculation and promote a more stable ecosystem. Our primary goal is to promote the use of project tokens within the "Open-Source Economy Model" to support the OSS project. Therefore, we discourage any misuse or excessive trading of the tokens for purposes outside the intended ecosystem.



The taxes collected play a crucial role in our economy by providing essential support to project revenue and fostering growth in token value:

- ***Project Funding***

  A portion of the tax will be allocated to support the open-source project. This will cover several costs that may not be immediately apparent to users, including server expenses and compensation for key individuals vital to the project, such as managers, designers, and developers whose contributions might not be prominently recognized. Such compensations might also be provided as post-task awards.



- ***Asset Redistribution***
  Many open-source projects depend on other projects that are not visible but are still crucial. The folks working on these behind-the-scenes projects deserve to get paid too, but they often miss out on financial incentives because they're not in the spotlight. That is why part of the tax is used to pay them.

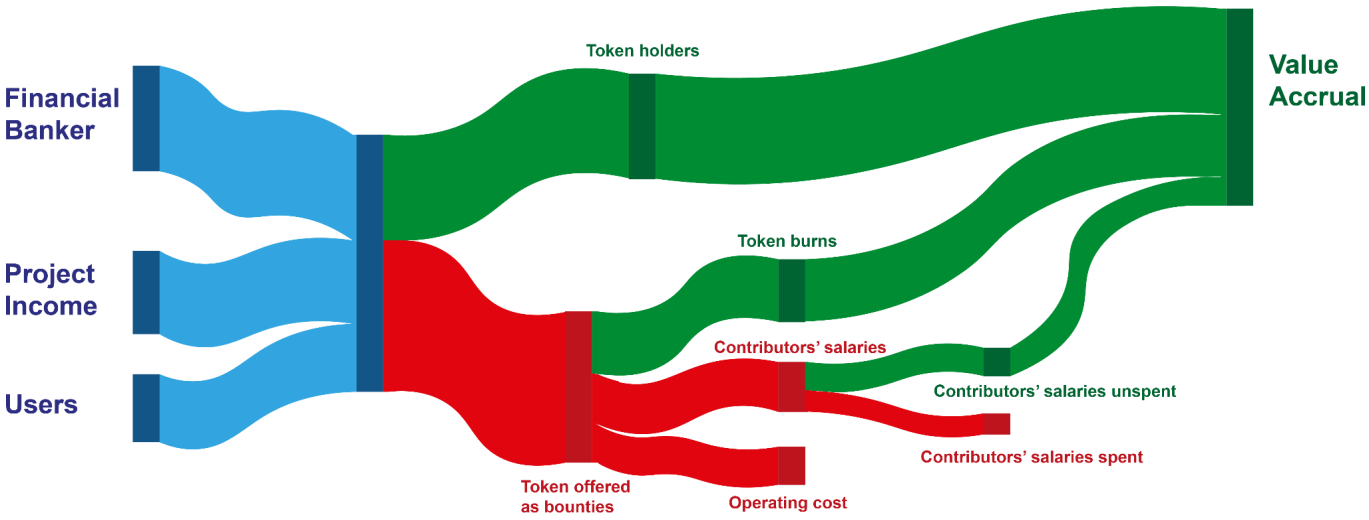
- ***Token Burn (sending tokens to the "zero address")***
  Another portion of the taxed tokens will be burned. This simple yet effective mechanism benefits all project backers and ensures value accrual based on the project's success.

  Usually, this approach is paired with a *fixed token supply* to ensure a deflationary model. However, as we will discuss in the next section that there is a less speculative strategy that aims for minimal volatility and speculation while promoting steady growth.

- ***Providing Yield to Token Backers***
  Some of the taxed tokens can be distributed to token backers who stake their tokens for a certain period. This incentivizes token demand and fosters price stability.

All the features discussed offer high customization, which means they can be tweaked to fit specific needs, and even though they are strongly recommended for a sustainable economy, they are not obligatory. The proportion allocated to each mechanism can also be adjusted over time.

These taxes are directly linked to the success of the project and are based on genuine activities driven by real needs. As a result, they make a fundamental contribution to the sustainability of the system, enhancing a true token value accrual.

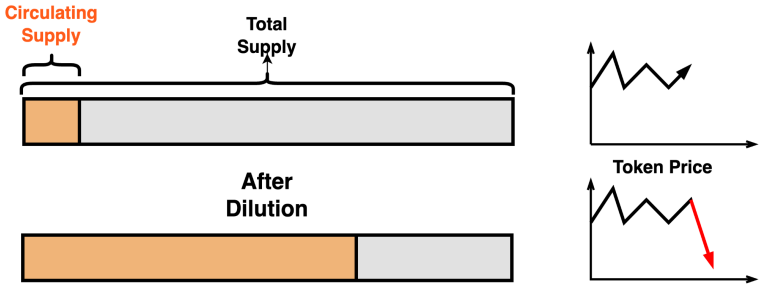


Limitations of a Deflationary Model

In the previous section, we saw the mechanisms of token-based taxation and burn. Usually, such approaches are paired with a fixed token supply to ensure a deflationary model.

While this may sound good in theory (as the value of existing tokens should increase as the total supply decreases), it can lead to hoarding. Let's delve deeper into the potential issues with this model:

- ***Disconnection Between Current Price and Total Token Supply***
  In a fixed supply model, a few entities, sometimes one, often retain the majority of unsold tokens. This creates two categories of supply: the circulating supply (tokens currently in the market) and the total supply (all tokens, including those held back by the project).

  The price of the token is typically based on the circulating supply, not the total

supply. This could lead to a discrepancy between perceived and actual token value, especially if the project decides to release more tokens into the market, which can suddenly dilute the value of circulating tokens.

- ***Token Value Could Plummet to Zero***

  In a scenario of a sell-off, where demand for the token diminishes significantly, the token price can fall drastically, potentially even reaching zero. This extreme depreciation might occur due to various factors such as lack of product adoption, departure of key project contributors, regulatory changes, or negative sentiment in the broader crypto market.

- ***Risk of Centralization and Manipulation***

  If a small group of holders controls a significant portion of the token supply, it opens the door for potential market manipulation. These could take the form of schemes such as "Pump and Dump" or its inverse, "Dump and Pump".

Source: www.blockchainresearchlab.com

In the latter scenario, these dominant token holders may artificially lower the token's price by offloading a large number of their tokens. This can spark panic amongst other holders, prompting them to hastily sell off their tokens. As a result, the dominant token holders can seize the opportunity to repurchase more tokens at this reduced price. This entire process leads to greater centralization of the project, posing a significant risk.

➢ ***For all of these reasons, we prefer to implement a better model than a fixed token supply.***

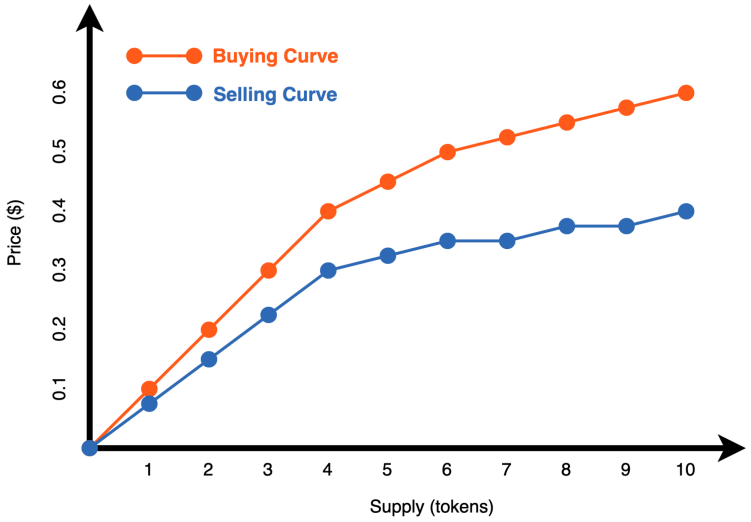
Fostering Steady Growth: Promoting Low Volatility and Minimizing Speculation

In order to encourage sustainable growth, reduce market volatility, and limit speculative activities, we plan to utilize an Augmented Bonding Curve.

What is an Augmented Bonding Curve?

An Augmented Bonding Curve (ABC) is a mechanism for the decentralized funding of projects. It is an extension of a traditional bonding curve model, used in token economies, that introduces a reserve pool.

In a typical bonding curve model, tokens are minted or burned in response to purchases or sales, and the price is determined by two mathematical functions. One curve for purchasing the token, and one curve for selling the token. This allows the token supply to expand and contract in response to market demand, and the price to increase as more people buy in.



The Augmented Bonding Curve model enhances this by introducing a reserve pool of funds. This pool acts as a communal treasury: when someone buys tokens, a portion of their payment is locked in the reserve, and when they sell, funds are released from the reserve to compensate them. This provides a buffer against price volatility and a source of ongoing funding for the project.

In addition to the ABC mechanism of buying from and selling to the bonding curve, we can have a secondary market that allows for direct peer-to-peer trading of tokens. This allows the market price to deviate from the bonding curve price when the community feels it is necessary.

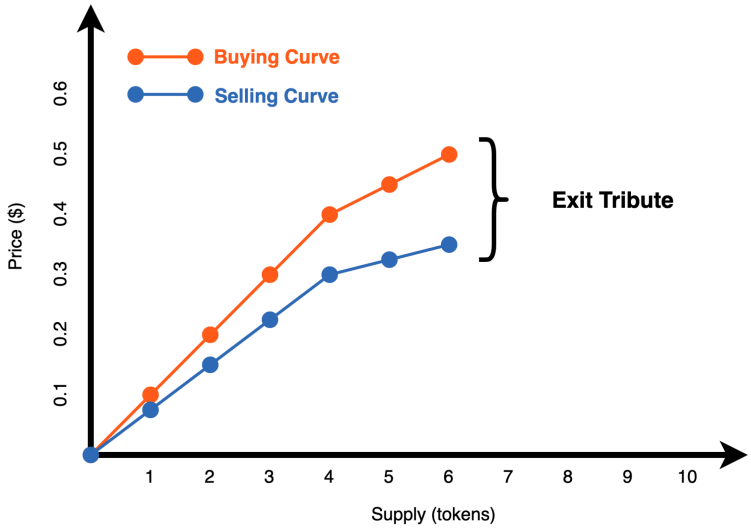
Benefits of an Augmented Bonding Curve

Augmented Bonding Curves (ABCs) offer a powerful mechanism for reducing volatility and price manipulation while adding a supplementation source of funding for the project. Each project can set its own parameters for ABCs, but here are the key recommendations:

- ***Define a Steady Growth Curve***
  This approach promotes a consistent, albeit gradual, price increase in conjunction with the rise in token supply. This tends to stabilize token valuation, minimizing abrupt price spikes and dips, especially if an exit tribute is in place.
  Indeed, price manipulation requiring modifying the circulating token supply, become way more costly.

- ***Define an Exit Tributes***
  Allow for a discrepancy between the buying and selling curves.
  In our ABC example, if someone buys the 7th token, the price determined by the curve is $0.5, while the selling price to revert to a supply of 6 tokens is lower: $0.35.

Allow for a discrepancy between the buying and selling curves.
In our ABC example, if someone buys the 7th token, the price determined by the curve is $0.5, while the selling price to revert to a supply of 6 tokens is lower: $0.35.



- **This feature has two advantages:**
    - The difference in price adds another *source of funding* for the project.
    - *Discouraging price manipulation* that requires modifying the circulating token supply, since it becomes way more costly. That enhances market stability.

➢ ABCs coupled with other tools offer distinct advantages Promoting Low Volatility and Minimizing Speculation.

- ***Ensure Low Volatility on the Secondary Market with AMM and Arbitrage Bots***

    - If the project sets its ABCs as recommended, the primary market's price will be assuredly designed to have a steady price increase in correlation with the token supply rise. This design discourages token supply manipulation due to the associated cost of “Exit Tributes”.

    - The goal, then, to ensure low volatility, is to align the behavior of the secondary market as closely as possible to that of the primary one. We can achieve this through the introduction of arbitrage bots and AMMs.

    - Arbitrage bots help maintain stability by ensuring that prices don't stray too far from the ones of the primary market.

    - Simultaneously, AMMs ensure that the secondary market has sufficient liquidity to handle large orders without substantial spread, effectively absorbing volatility.

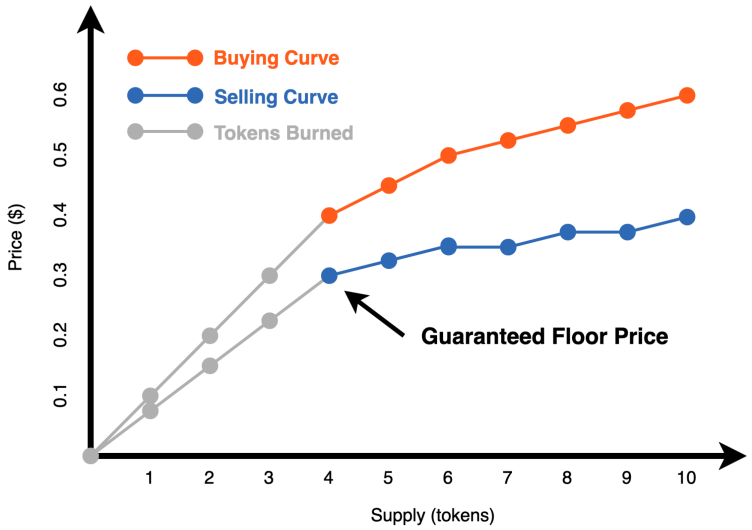
➢ ***All these tools will be provided by “Open-Source Economy.”***

- ***Preventing Token Value Plummeting to Zero with Token Burn***

  Simultaneously, AMMs ensure that the secondary market has sufficient liquidity to handle large orders without substantial spread, effectively absorbing volatility.

  If, as recommended in the previous section, the project opts to implement a token burn strategy—by sending tokens to the "zero address"—either at *Bounty Distribution* or at each *Token Transfer*, it would mechanically set a *guaranteed floor price* on the bonding curve.
  Indeed, when a token is sent to the "zero address", it doesn't decrease the token supply; it simply renders the token inaccessible indefinitely.

  Example:
  Let's consider a hypothetical project with a total supply of 10 tokens, 3 of which have been burned, leaving project backers with 7 tokens.
  Assume that all backers decide to sell their tokens. The first token would sell for 0.4 $, the second for 0.375 $, and so on, until the last one sells at the floor price of 0.3 $.



  In the event of a sell-off, while it remains advantageous to be the first seller, the last one is guaranteed a floor price established by the curve design and the

quantity of burned tokens. **As the project becomes more successful, more tokens are burned, raising the floor price.** This mechanism potentially guarantees early investors a selling price higher than their purchase price, ensuring them a positive outcome regardless of the project's fate.

Uniting the Pieces: Overall Project Benefits

With the “Open-Source Economic Model”, open-source projects gain access to various sources of funding. While some are straightforward and easy to understand based on what we have already discussed, others may require further explanation.

- ***Taxation***
  The income distribution tax is tied to the project's success.

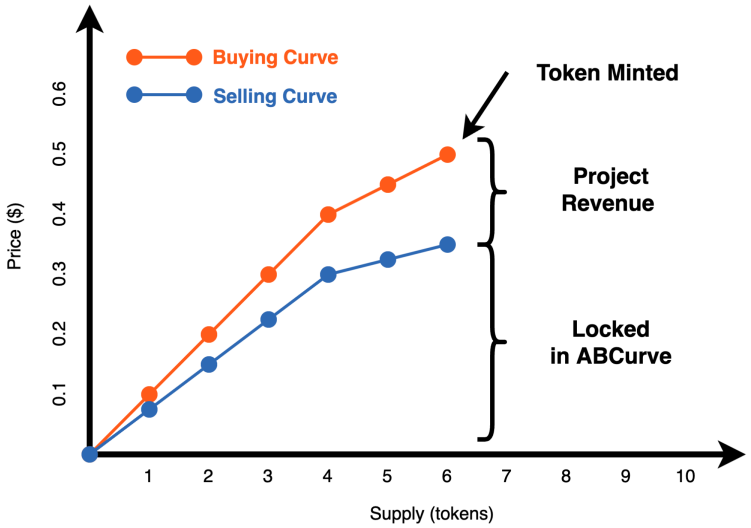
- ***Arbitrage and AMM Gain***
  Earnings generated by providing arbitrage bots and AMM to ensure low volatility on the secondary market.

- ***Token Mint (or Partial Donation)***
  The difference between the buy and sell curves directly finances the project treasury. Here's an example to clarify:

  Example: If someone mints the 7th token at $0.5 while the selling price to revert to 6 token supply is $0.35, as determined by the curve:

  - $0.35 is *locked* by the ABCurve smart contract to ensure the possibility for token holders to sell a token at an $0.35 price.

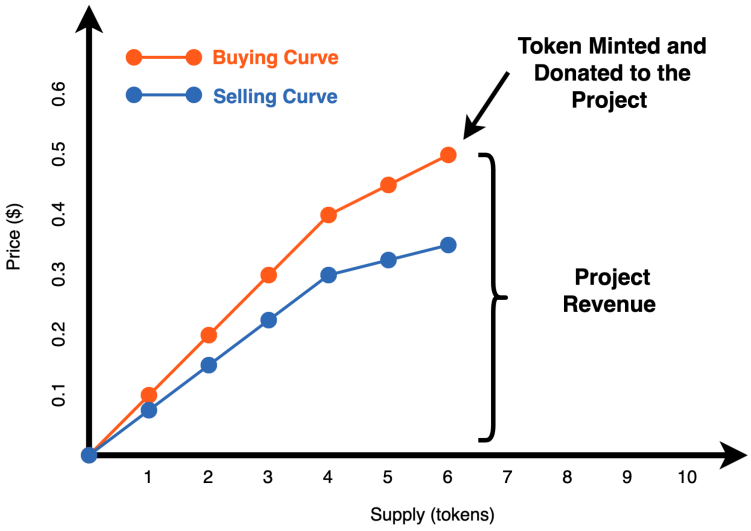
  - $0.15 becomes *project revenue*, funneled directly to the project treasury.



Therefore, the act of minting tokens is more than a simple purchase; it is akin to a ***partial donation*** to the project. This is the reason why individuals who own these project tokens are termed "project backers." Their token purchases benefit the project directly.

- ***Full Donations***

  For those wishing to *fully donate* and ensure that the entirety of their contribution benefits the project, they have the option to mint tokens and directly donate them to the project. In return, the donor receives *Proof Of Donation, with various privileges and benefits determined by the project.*



This approach fosters a vibrant ecosystem where everyone stands to gain:

- ***The Project***
  Gains tokens that can be distributed as bounties to incentivize contributions.

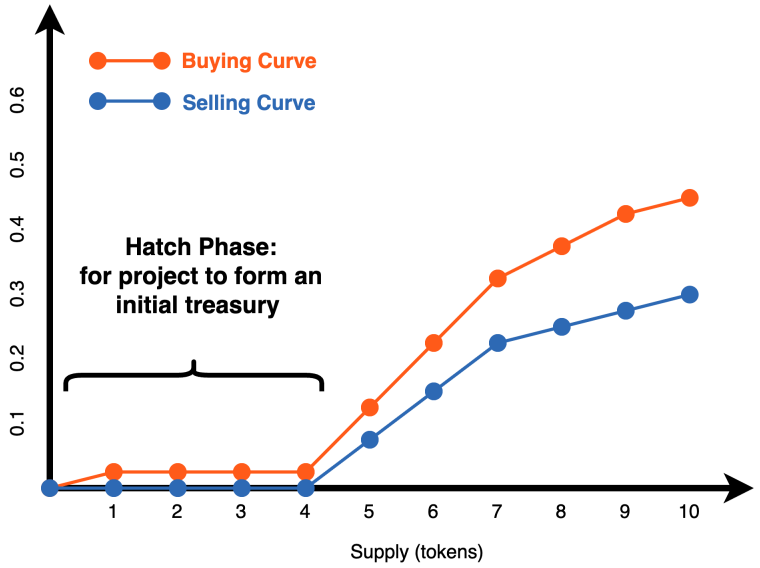
- ***Contributors,***
  Including experts with non-user-facing roles, may receive more tokens as bounties coming from the project governance.

- ***Project Backers***
  Can sell their tokens at higher prices, yielding greater remuneration from their participation.

- ***Potential Backers***
  Are attracted by the donation-driven price increase, resulting in more tokens minted and, therefore, better project funding.

- ***Hatch Phase***
  Some ABC models introduce a "hatch phase," where tokens can be bought at an intentionally low price.

  This phase enables the project to mint tokens to form an initial treasury. By doing so, the project can jumpstart its bounty offerings, enticing early contributors to participate in exchange for tokens. While these tokens may initially have little or no value, they have the potential to appreciate significantly if the project achieves success. This tactical maneuver serves to foster initial involvement, framing it as an investment in the project's future potential.



The project thereby benefits from multiple real income sources, mainly driven by user needs for offering bounties and donors, regardless of their donation model preference. This multifaceted approach enables the project to develop and grow a treasury, guided by its governance, and may also impact the token price depending on the governance model. This complex but flexible structure opens doors for more sustainable development and success within the open-source ecosystem.

DECENTRALIZED GOVERNANCE

This apply to any open source project and among others, meaning also to Open-Source-Economy.

We will outlines a governance model for Decentralized Autonomous Organizations (DAOs) inspired by Switzerland's political system, which combines the efficiency of centralized decision-making with robust mechanisms for direct citizen involvement. The model suggests a structured governance approach where a central body makes informed decisions quickly, while still being controlled by the DAO members through direct democratic rights akin to the Swiss rights to propose and counteract laws. This framework aims to balance efficiency with accountability, ensuring that those at the top are responsive to the community they serve.

Background: Swiss Political System as a Model

Switzerland, with a population exceeding 8 million, has thrived under a political system that marries centralized governance with citizen empowerment. The Swiss system features two key democratic instruments:

- **Right to Propose Legislation (ie. Initiative)**: Citizens can propose new laws.
- **Right to Counteract Government Decisions (ie. Referendum)**: Citizens can veto laws passed by the government.

Both the mechanisms require the collection of a significant number of signatures before it can officially proceed to a vote. This preliminary filtering process is crucial as it allows only the most supported or critically important issues to advance, reducing the risk of spam and ensuring that the focus remains on substantive matters.

These mechanisms ensure that while the government can act efficiently, its power remains checked by the population, preventing corruption and ensuring alignment with the public's best interests.

DAO Governance Model

To implement an efficient decision-making DAO, we will establish key governance structures inspired by the Swiss political system.

- **Centralized Decision-Making with Decentralized Control**
  Establish a central governance body within the DAO that is responsible for swift and knowledgeable decision-making. This body would operate under strict oversight mechanisms empowered by DAO members, mirroring Swiss federal authorities' efficiency but controlled through direct democracy tools.

- **Implementation of Direct Democracy Tools**
  - **Initiative Right**: Like Swiss citizens, DAO members should have the right to propose new policies or changes directly.

  - **Referendum Right**: Members should have the ability to call for a vote to reject decisions made by the central body, ensuring a balance between swift decision-making and member oversight.

- **Mechanisms for Reducing Noise and Temporization**
  Introduce a signature gathering phase for proposals, requiring a minimum threshold of member support before a vote. This process filters out less popular or less critical issues, reducing decision fatigue among members. Additionally, introduce a mandatory deliberation period before any major decision to prevent rash or manipulated voting ("temporization").

- **Legal and Structural Framework**
  To uphold the decentralized ethos of the Open-Source-Economy entity, it is crucial to avoid traditional corporate structures, which typically lead to shareholder centralization. Instead, establishing a foundation in Switzerland offers a strategic solution. This foundation will act as the legal entity for the Open-Source-Economy entity and will extend its governance model to encompass all other open-source projects under its umbrella.

Operating from Switzerland, which is renowned for its stable legal environment and favorable stance towards innovative governance models, the foundation is dedicated to protecting member rights and promoting open-source contributions. This unified approach ensures that the principles of decentralization are maintained across the entire spectrum of open-source initiatives, fostering a cohesive and supportive environment for growth and innovation within the sector.

The governance model for DAOs, inspired by the Swiss political system, aims to blend centralized efficiency with decentralized control. By adopting direct democratic rights and establishing a legal decentrelized entity, DAOs can enhance their governance structures to be more robust, transparent, and aligned with the interests of their communities. This model not only promises improved operational efficiency but also fosters a deeper sense of ownership and engagement among members, potentially setting a new standard for DAO governance worldwide.

THE PLATEFORM

Open-Source-Economy is a platform designed to empower open source projects by allowing them to seamlessly adopt a decentralized business model. This platform eliminates the need for projects to manage marketing, sales, legal, accounting, and other domains traditionally necessary to generate income, enabling them to focus on development.

Main Features

The Open-Source-Economy platform offers several essential features to the community:

- **Predefined Business Models.** We propose predefined business models tailored to the open-source ethos, as outlined in the “Project's tokenomics” section. These models serve as blueprints for projects seeking sustainable revenue streams while adhering to open-source principles.

- **Selling Tools:** Our platform provides selling tools to help projects effectively apply and manage their business models. These tools include features for setting up subscription services, managing one-time payments, and facilitating other monetization strategies that suit the nature of open-source work.

- **Invoice Generation**: The platform automates the invoice generation process, ensuring that payments made to open source projects are promptly and accurately documented.

- **Legal Framework**: We provide a robust legal framework that aligns with international standards to ensure that all transactions are legally sound. This not only helps in complying with global regulations but also builds trust among users and contributors.

- **Marketing Templates**: Open-Source-Economy offers a range of marketing templates that projects can customize. These templates are designed to be easily adapted to different branding strategies, helping projects maintain a consistent and professional online presence.

Launchpad for New Projects Main Features

Open-Source-Economy acts as more than a platform—it's a springboard for new and emerging open source projects. By providing initial visibility, essential tools, and community support, we ensure that new projects get off to a strong start:

- **Visibility and Exposure**: New projects are featured on the platform, giving them immediate exposure to a large and engaged community of developers, users, and potential investors.

- **Resource Allocation**: We provide resources such as access to our network of experienced developers, project management tools, and industry contacts that can help new projects navigate the early stages of development and growth.

- **Mentorship and Guidance**: New projects can benefit from mentorship from experienced leaders in the open source community who provide guidance on technical development, community building, and project management.

Funded Initiatives

The success of our platform enables the funding of numerous initiatives aimed at supporting the broader open source ecosystem:

- **Community Support**: We offer grants and other forms of support to help promising projects scale and improve their infrastructure.

- **Promotion and Advocacy**: Increased funding allows for more substantial marketing campaigns and advocacy efforts. These initiatives are crucial for raising awareness about the benefits of open source projects and increasing their adoption on a global scale.

- **Events**: Hosting and sponsoring events such as conferences, hackathons, and workshops facilitate collaboration, knowledge sharing, and networking within the open-source community.

- **Lobbying for Legal Evolution**: We actively advocate for the evolution of laws and regulations to ensure that open-source remains accessible to all. Through lobbying efforts, we aim to guarantee the protection and promotion of open-source principles, fostering an environment conducive to innovation and collaboration.

Open-Source-Economy is dedicated to creating a supportive ecosystem where open-source projects can flourish. By providing essential tools, predefined business models, and robust community support, we enable these projects to focus on innovation while building sustainable revenue streams. This, in turn, drives the growth and success of the open-source community, contributing to a more open and technologically empowered world.

OSE: THE CORE TOKEN OF THE PLATFORM

In the previous sections, we introduced the tokenomics applicable to any open source project. Building on that foundation, our platform aims to enable open source projects to easily adopt these tokenomics with a ready-to-use framework.

To develop this platform, we are committed to practicing what we preach. Our approach is fully open source, incorporating our own token—OSE—and we are committed to a decentralized, merit-based governance structure.

In this section, we delve into the pivotal role the OSE token plays within the Open-Source Economy ecosystem.

Utility of the OSE Token

Since our system requires a token, the token can come from two potential sources:

- **Voting Rights**
  As a governance token, OSE empowers holders to shape the future of the platform. It enables the open-source community to actively participate in decision-making processes, ensuring that the platform evolves in accordance with the community's needs. The goal is really to build platform by the open source Community for the open source community.

- **Transaction Fee**
  A 3% fee is levied on the revenue generated by open source projects participating in the Open-Source Economy. This fee serves multiple purposes:

    - **Operational Costs**: It helps cover the expenses associated with running the platform, including staff salaries and administrative costs.

- **Support for Innovation**: A portion of the fee funds an incubator program designed to nurture new open source projects, helping to expand and diversify the ecosystem.
- **Promotion and Outreach**: It supports initiatives to promote open source projects, increasing their visibility and attractiveness to potential adopters.

To enhance the appeal of our platform to financial backers and to create a sustainable economic model, the collected fees are automatically converted into OSE tokens. Importantly, **20% of these tokens are burned** in cordance with the tokenomics described in section “Project’s tokenomics”

- **Gateway Token**

  OSE acts as a crucial medium of exchange, facilitating liquidity and economic interactions among projects.

  Within the framework of the Augmented Bonded Curve (ABC), **project tokens are denominated in OSE tokens**. Opting to denominate project tokens in OSE rather than in external stablecoins or other cryptocurrencies like Ethereum presents several benefits:

  - **Community Control**.

    OSE operates within a controlled environment governed by the community of its users, rather than being subject to the whims of broader market dynamics or the policies of external financial entities. This community control ensures that the value and stability of OSE are more closely aligned with the interests and successes of the open source projects it supports.

- **Stability Over Volatility**. Cryptocurrencies like ETH are known for their high volatility, which can introduce significant financial risk and uncertainty to projects whose tokens are pegged to such currencies. This volatility is often influenced by factors unrelated to the actual performance or success of the projects themselves, such as broader economic conditions, speculative trading, and regulatory news. By using OSE, projects can avoid these external fluctuations, focusing more on development and community engagement.

- **Avoidance of Stablecoin Failures:** The collapse of certain stablecoins, such as UST, has highlighted the risks associated with relying on these supposedly stable financial instruments. Stablecoins can fail due to issues like poor design, mismanagement, or a lack of sufficient backing assets. By anchoring to OSE, projects avoid the risk of their token's value being tied to the fate of these external assets.

- **Risk-Free Consideration**
  The OSE token's value and stability are closely tied to the health and security of the Open-Source-Economy platform. If the platform encounters issues such as security breaches or operational failures, the OSE token could also be negatively impacted. Thus, open source projects that depend on the Open-Source Economy for growth can also rely on the stability and reliability of the OSE token.

- **Mutual Benefit and Ecosystem Synergy** By integrating project tokens within the OSE framework, all participating projects contribute to and benefit from the collective success of the ecosystem. This mutual support fosters a network effect, where the success of one project can positively influence others, enhancing the overall value and resilience of the token.

The OSE token is integral to the Open-Source Economy platform, offering multiple utilities that reinforce its value proposition.

The Power of Quoting Project Tokens in OSE

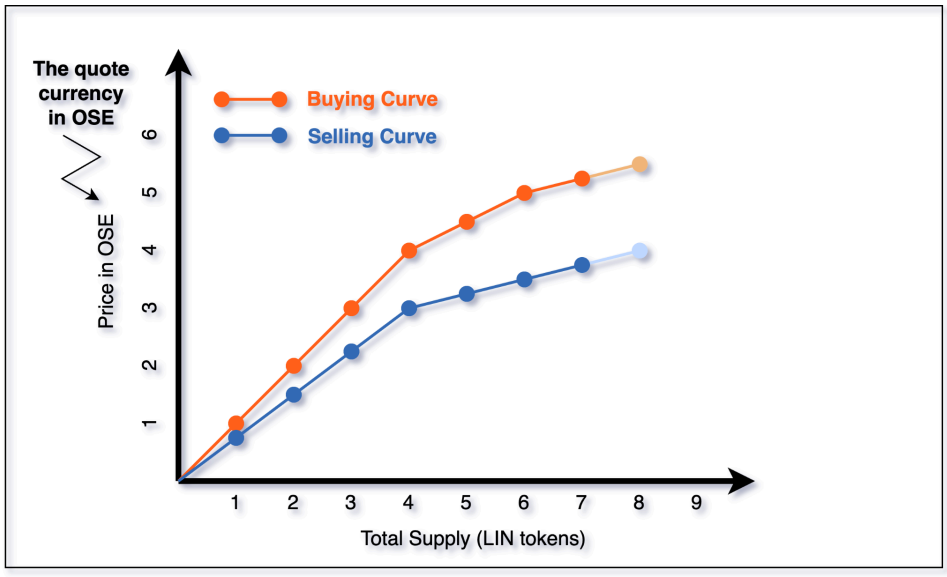
This section delves deeper into how quoting project tokens in OSE benefits the entire open-source ecosystem and influences the Open-Source Economy (OSE) token.

Disclaimer: Ensuring User-Friendly UX/UI

All complex processes detailed in this documentation, including currency conversions and token allocations, are handled by the Open-Source-Economy platform's backend. Users interact with a simplified interface that shields them from these technical details, ensuring a seamless transaction experience.

Scenario: Buying Bressure the Linux Token

Consider a hypothetical scenario where the Linux community joins the Open-Source Economy platform, leading to the creation of the LIN token. This example will help us understand how transactions involving LIN tokens not only increase their own price but also significantly impact the value of the OSE token, and therefore supports the growth and stability of the open-source community at large.



The LIN token pricing is governed by an Augmented Bonded Curve (ABC), which adjusts the token's price based on its supply and demand dynamics. The quoting of LIN tokens in OSE tokens represents a powerful approach within the tokenomics of the OSE token.

Let's explore the potential with a scenario.

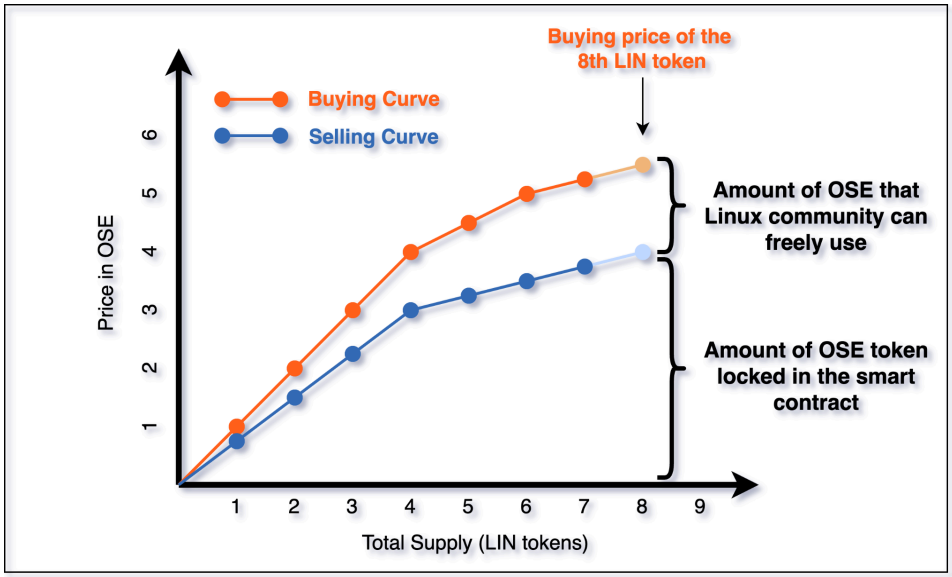
The current pricing for the tokens is as follows:

- **OSE**: The OSE token is currently valued at $10 each.
- **LIN**: Currently, there are 7 LIN tokens in circulation. The price for the next (8th) LIN token is set at 5.5 OSE.

When a user wants to buy 1 LIN. They exchange $55 for 5.5 OSE tokens. These OSE tokens are then used to mint 1 LIN (in accordance with the ABC) and the 1 LIN is distributed to the user.

This transaction results in the locking of some OSE tokens within the ABC's smart contract:

- **Locked Tokens**: 4 OSE tokens are retained within the ABC's smart contract waiting to be sold again the 8th LIN token.
- **Free-to-Use Tokens**: 1.5 OSE tokens are available for discretionary use by the Linux community.

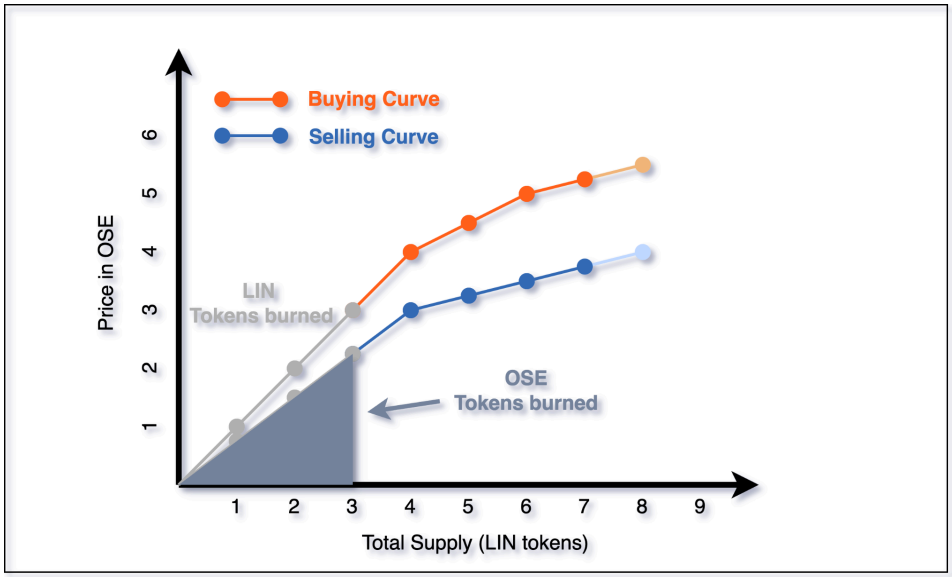


Impact on OSE Price.

Quoting LIN tokens in OSE token has 2 positive impacts on the price of OSE.

- **OSE Token Locked**: Locking a portion of OSE tokens for each LIN transaction under the ABC model effectively reduces the circulating supply of OSE tokens. Consequently, as buying pressure on LIN increases, more OSE tokens are locked, further decreasing the available supply.
  This mechanism links the price of OSE directly to the success of LIN and the Linux project.

- **OSE Token Burned**: The tokenomics of the LIN token includes a mechanism for token burning. Consequently, when LIN tokens are burned, the OSE tokens that are locked under the LIN ABC are also burned, reducing the overall supply of OSE.



The price of the OSE token is intrinsically linked to the success of open-source projects utilizing the Open-Source Economy platform. As these projects thrive and grow, the demand for OSE increases, leading to more tokens being locked and burned under the platform's economic mechanisms. This dynamic ensures that the value of OSE is a direct reflection of the activity and success within the open-source community it serves.

Impact on the Global Open-Source Community

The performance of the OSE token plays significant roles in supporting the global open-source community and its projects. As the price of the OSE token rises, the open-source economy garners more funding. This financial boost enables the platform to develop further and support various initiatives that are vital for open-source community growth.

Key activities funded by this economic upswing include:

- **Development and Expansion**: Ongoing enhancements to the platform ensure it meets the evolving needs of its users.
- **Launchpads and Incubators**: These initiatives are crucial for nurturing new projects, providing them with the resources and guidance needed to succeed.
- **Community Support**: Grants are issued to promising projects to aid their development, while funds are also allocated for community-building activities.
- **Promotion and Advocacy**: Increased funds allow for more robust marketing campaigns and advocacy efforts, raising awareness and adoption of open-source projects globally.

Furthermore, the success of any single open-source project within this economy can have a ripple effect, benefiting numerous other projects. When one project thrives, it not only raises the profile of the platform but also increases the overall credibility and visibility of all associated projects. This shared success fosters a collaborative environment where innovation is continuously fueled by collective achievements, thus strengthening the entire open-source ecosystem and creating a virtuous cycle of innovation and support.

CONCLUSION

Open source has proven to be an invaluable force driving innovation and collaboration, empowering communities to collectively create and improve software freely. Its transparent and inclusive nature fosters a rich ecosystem of shared knowledge and advancements, making it a cornerstone of modern development.

However, this remarkable paradigm is not without its challenges. Key issues include lack of funding, contributors' precarity, and high turnover and burnout. These hurdles often render open-source projects less competitive compared to their closed-source

counterparts, hindering long-term stability and growth. Despite the boundless potential and numerous accomplishments, many OSS initiatives struggle to maintain momentum, unable to secure the necessary resources to succeed.

Our solution is conceived as a revolutionary step in reshaping the open-source landscape, aiming to elevate OSS projects to a level of funding and success akin to their closed-source peers. By focusing our efforts on constructing an open-source economic model, we are directly addressing critical pain points in the current ecosystem, such as contributor and user powerlessness, which obstruct genuine value creation and project revenue. We hope to not only preserve the intrinsic values of OSS development but also propel it into a new era where projects can thrive without compromising their essence.