FEAF

Feedafriend.io

Decentralized, Trust-Based
Philanthropic Online Marketplace

Abstract

Feedafriend.io is a decentralized integrated online marketplace that directly connects food donors with recipients and other stakeholders like wholesale food suppliers and last-mile partners. Feedafriend.io helps to build trust with donors, ensuring that their donated funds reach the intended recipients. It also minimizes administrative costs via low-cost transaction fees and provides more accountability through traceable milestones, allowing donors to scale those projects that demonstrably work. FEAF tokens will power Feedafriend.io. FEAF is a SPL token that serves as the primary method of accessing the ecosystem of services that the platform provides. Solana is perfectly suited for Feedafriend.io because of its high throughput, low latency, and low transaction fees. Users can easily use common wallets such as Phantom to access the platform. Solana's scalability and efficiency make it an ideal blockchain for facilitating transactions and interactions within the Feedafriend.io ecosystem.

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1.0 Summary

Feedafriend.io is a transparent social impact network built on Solana. It creates and sustains trust among various stakeholders in the charity sector, such as donors and recipients, via an open, secure, and auditable platform. Ultimately, Feedafriend.io will help uplift those in poverty through financial inclusion and education.

We introduce Wish-to-earn (Beneficiaries), Donate-to-earn (Donors) and Refer-to-earn (Social influencers) models through the innovative use of a new tangible blockchain asset class – NFHTs.

1.1 What Is the Problem?

Charitable organizations, non-governmental organizations (NGOs), and other social enterprises are increasingly facing a tough funding environment. Besides declining donations, many of these organizations are increasingly facing criticisms on how they manage donations.

These problems are prevalent because social organizations are not transparent enough about their operations. Consequently, donors have lost trust in them. At the same time, they are struggling with inefficient and costly platforms because of many intermediaries involved that charge high transaction fees.

Many of them have faced massive pressures to cut costs in the past, leading to under-investment in infrastructure processes and shifting focus away from important issues that deliver real impacts.

1.2 Feedafriend.io Solution

Given the aforementioned problems, it is understandable that society is skeptical of the current centralized platforms. Empowered by the internet, donors and other stakeholders in social impact networks are not only conscious but better informed.

Stakeholders want to be assured that their funds will go to good use, and the intended recipients will receive them more than ever before. As such, stakeholders in social impact networks have no choice but to implement transparent systems.

Feedafriend enforces transparency by leveraging Blockchain to record all the transactions. Because all the charitable history is stored on the Blockchain, donors can easily audit the ledger to determine which recipients have received the donations and how much they received.

The network also incentivizes participants with FEAF tokens. For example, recipients who do not request food for six consecutive months will automatically receive non-fungible humanity tokens (NFHTs) and token rewards. The same goes for any participant that helped such recipients in their journey to become self-sufficient.

2.0 Overview of Challenges in the Philanthropic Sector

One of the significant consequences of poverty is the lack of access to the adequate size of healthy and balanced food. This is what most charitable organizations like food banks are trying to address.

Despite food being fundamental to human existence, Food and Agriculture Organization (FAO) estimates that 768 million people worldwide face hunger in 2020[1]. This figure is 118 million more than what it reported in 2019.

Because climate crises and the coronavirus pandemic have exacerbated the problem, donors would need to double their investments in food donations to get the world back on track towards achieving sustainable development goals (SDGs). This is currently not the case because sources of funding are stagnating.

According to Blackbaud Institute, charitable organizations in the U.S. witnessed a meager 1% growth on a year-to-year basis in 2016[2]. The report also noted that smaller organizations experienced flat growth in funding compared to the same time in 2015.

A similar study conducted in Canada by the Fraser Institute reported a decline of 3.8% in charitable funding (from 25.1% in 2006 to 21.3% in 2016)[3]. Evidently, donors are unwilling to stake their funds in mainstream philanthropic organizations because of a litany of challenges that exist, such as:

- Lack of trust
- High cost of transactions
- The Limited scope of donated products

1 The State of Food Security and Nutrition in the World 2021 (FAO, IFAD, UNICEF, WFP and WHO, 2021), https://doi.org/10.4060/cb4474en.

2 "How Nonprofit Fundraising Performed in 2016," accessed November 2, 2021, https://institute.blackbaud.com/wp-content/uploads/2017/02/2016-Charitable-Giving-Report.pdf.

3 "Charitable Giving in Canada Drops to 10-Year Low, According to Tax Data | Globalnews.Ca," Global News, accessed November 2, 2021, https://globalnews.ca/news/3130108/charitable-giving-in-canada-drops-to-10-year-low-according-to-tax-data/.

2.1 Lack of Trust

The primary objective of food banks is to source and distribute food to the most vulnerable members of society. Food banks may also serve as storage and distribution units for smaller front-line agencies, where they do not give out food directly to hunger-stricken households.

To achieve these goals, food donors need the trust of their stakeholders, including donors, suppliers, merchandise and logistics partners, and recipients. Because of increased demands for accountability, many mainstream food donors use various approaches such as self-reporting, recipient reporting, and third-party reporting to provide transparency mechanisms.

Notwithstanding these measures, many fraudulent cases have been reported in the industry, raising concerns about transparency mechanisms in the sector. Recent high-profile scandals in the industry involve the misuse of funds by Helpers Community Inc.[4] and Donald Trump's charitable organization that admitted to violating tax filings in 2016[5].

The global philanthropy sector is increasingly facing trust issues because donors do not have a single database to audit how their money is being used. The information in most of the mainstream philanthropic systems is also fragmented, making it difficult to compare it with other sources.

4 "Lessons from the Helpers Community Charity Scandal," accessed November 2, 2021,
  https://www.sfchronicle.com/opinion/editorials/article/Lessons-from-the-Helpers-Community-charity-scandal-10996340.php.

5 David A. Fahrenthold, "Trump Foundation Admits to Violating Ban on 'Self-Dealing,' New Filing to IRS Shows,"
  Washington Post, November 22, 2016, sec. Politics,
  https://www.washingtonpost.com/politics/trump-foundation-apparently-admits-to-violating-ban-on-self-dealing-new-filing-to-irs-shows/
  2016/11/22/893f6508-b0a9-11e6-8616-52b15787add0_story.html.

2.2 High Cost of Transactions

In most foodbanks, the intermediaries fundraise from donors and subsequently pass the proceeds to the charity. Intermediaries can come in many forms: donor-advised funds (DAFs), community foundations, social ventures, and fund aggregators, among others.

These fundraisers can greatly increase the donations that foodbanks can receive. However, this is often at a cost to the foodbanks. Donors that support philanthropic causes via intermediaries usually pay hidden fees. Because of the opacity in the sector, most donors never learn how much of their donations actually reached the intended beneficiaries.

Similarly, they cannot verify the accuracy of reporting from foodbanks. Because of the many parties involved and levies each party charges, donors usually pay more hidden fees. According to Today.com, a typical charity usually spends approximately 75% of its budget on donor-related programs[6].

The rest of the funds go towards funding intermediaries. Since foodbanks must also take a percentage cut from donations to cater for administrative expenses and other costs, only a fraction of the donated funds reaches their intended goals.
The complexities involved also distract the donors from the nuances of food donations to which they are donating.

2.3 Limited Scope of Donated Products

Most food donations usually involve non-perishable, in-date food that well-wishers donate in various places, including churches, schools, businesses, and other collection points. Some platforms have online portals from which donors can donate their money via conventional payment systems such as credit or debit cards.

A majority of the world's population cannot participate in food donations because bureaucratic mainstream systems hinder them. While contributions from such a population can help lift the masses out of poverty, it is impossible because mainstream banks do not have the tools to facilitate the transactions.

Besides limiting the volume of donations, bureaucratic systems also restrict the nature of products that beneficiaries need to alleviate poverty. In most cases, the products do not match the needs of beneficiaries.

Market Overview:

According to the report of NGOs and Charitable Organizations Global Market Opportunities and Strategies 2030: COVID-19 Impact and Recovery, the global NGOs and charitable organizations market reached a value of $253,336..3 million in 2020, which is a decline of 0.9% rate from the previous year. This decline in the percentage is due to the pandemic crisis. Also, the report has suggested that the market would skyrocket to $294,313.5 million in 2023 with a CAGR of 5.3% and $325,651.4 million in 2025 at a CAGR of 5.2%.

The World Giving Index, an annual report published by the Charities Aid Foundation, has released the most charitable countries in the world. According to its report, the United States has bagged first place with a score of 58%. It was then followed by Myanmar, New Zealand, Ireland, Australia, and others. In mass population countries like India, it is identified that Family Philanthropists have donated about 40 billion INR to social and charitable organizations. About 50% of these donations have been earmarked for the Education sector. And other less economic countries like South Africa and Bangladesh have also been ranked with 36% and 26% respectively.

3.0 Feedafriend.io's Value Proposition

Imagine a world where you could easily identify and fund products that beneficiaries themselves have posted as wish lists and effectively tackle their problems. Would it not be beneficial to find that you can easily scale up such projects until hunger is eradicated? That is what Feedafriend.io intends to achieve via blockchain.

3.1 Mission Statement for FEAF Labs

To disrupt the USD841billion global philanthropic market by gamifying and incentivizing the donor experience, through mulitple platforms in the FEAF ecosystem –

1) **FEEDAFRIEND** - Decentralized, Trust-Based user-friendly gamified Philanthropic Marketplace connecting donors, suppliers and beneficiaries in need

2) **FEAF Metaverse** - Play to Earn game where users connect with real world beneficiaries through AI-generated NFT avatars and they can participate in "wish-fulfillment" and "team-building" quests.

3) **FEAFBIT EXCHANGE** – Cryptocurrency exchange that will use trading and liquidation fees to buy back FEAF Tokens.

4) **FEAF Capital** – Crypto Investment Arm which will be used to invest in other projects. Returns will be used to buy back FEAF tokens.

5) **FEAF Academy** – Learn to Earn opportunities. Empowering beneficiaries with donor sponsored courses.

• To Drive adoption: incentivize the next 2 billion users to come onto Solana, leveraging our patent pending Non fungible Humanity tokens (NFHTs) which potentially gives lucrative perpetual income streams through play to earn, wish to earn, donate to earn, learn to earn and refer to earn based rewards.

• The FEAFS system empowers and incentivizes the underprivileged to transition from beneficiaries to social influencers, uplifting them while fostering a culture of self-sufficiency and mutual support.

· **Ensure transparency:** Using blockchain technology, FEAF ensures a transparent process by connecting donors, suppliers and beneficiaries, fostering trust and accountability

· **Foster connections:** FEAF creates a platform where Gamers, Recipients, Influencers, Donors and Suppliers (GRIDS for short) connect on a fun and human level.

3.2 Our Vision

Our vision is to create a world where donors fully trust that their money will fund the projects they want them to. By enabling absolute trust and confidence via a Blockchain-powered platform, we believe donors will choose to give more funds towards the causes they care about.

At a time when the world is facing endless natural disasters and pandemics, an alarming refugee crisis, and the increasing gap between the rich and the poor, the need for Feedafriend has never been more significant.

For donors
We guarantee absolute confidence that contributions will be used for their intended purposes, and the funds will reach the anticipated recipients.

For charitable organizations
Charitable organizations usually spend huge sums of money on fundraising and marketing initiatives. Moreover, the usual fees associated with donations banking and processing are higher when using mainstream institutions.

Feedafriend.io helps such organizations harness the power of peer-to-peer (P2P) networks which eliminate intermediaries. This minimizes transaction settlement times and fees.

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For beneficiaries
Beneficiaries can post their wish lists on the platform and the products they need quickly. Feedafriend can also transform the general public's mindset about giving for good causes and spur the mass adoption of cryptocurrencies as a whole. We believe Feedafriend.io is an industry 4.0-based application that the world has been waiting for.

3.3 Our Core Objectives

With Feedafriend.io, foodbanks can digitize their assets to create a decentralized, immutable charitable history, making it possible to track how donors' funds have been used right from the donation stage to recipients' reach. Blockchain-enabled smart contracts and the FEAF tokenization model inherent in Feedafriend.io achieve transparency, lower costs, and a diversified portfolio of products and reach.

3.3.1 Improved Transparency

Mainstream platforms used by foodbanks are siloed and fragmented, making them difficult to be trusted by stakeholders in the sector. A cryptographically-powered single database would establish a trusted identifier (ID) so that donors, beneficiaries, and other stakeholders are sure of how funds are raised and spent. Feedafriend.io provides full traceability, facilitating an end-to-end audit trail that achieves trust.

3.3.2 Reduced costs

Mainstream platforms used by foodbanks are siloed and fragmented, making them difficult to be trusted by stakeholders in the sector. A cryptographically-powered single database would establish a trusted identifier (ID) so that donors, beneficiaries, and other stakeholders are sure of how funds are raised and spent. Feedafriend.io provides full traceability, facilitating an end-to-end audit trail that achieves trust.

3.2.3 Diversified portfolio of products

Because of the bureaucratic nature of current philanthropic platforms, only a selected group of nominated suppliers can participate in food donations. This leaves many actors who would have wished to donate food items and money from diverse geographical locations.

With Feedafriend.io, donors would not need the typical legacy documentations when donating. Beneficiaries simply post their wish lists and preselect the products they want from suppliers on the platform via an easy-to-use interface.

Suppliers, especially those that are closest in proximity, can then supply those products that match beneficiaries' needs. When donors login to the platform, they can easily spot those products that are needed most by beneficiaries and fund them.

DONATE

4.0 Feedafriend.io Ecosystem

Feedafriend.io is a Blockchain-enabled platform built atop Solana and powered by FEAF tokens. Feedafriend.io's ecosystem has a rich menu of services, including an easy-to-use interface, built-in wallet, and explorer to allow stakeholders to track donations transparently.

Donors, charitable organizations, and other stakeholders can use these services to build trust among themselves. Furthermore, each phase of the tracking process gives the stakeholders a chance to drive engagements by communicating the value of the work delivered.

These communications can potentially foster deeper relationships with donors while offering tools donors can share on their social media networks, placing the charity to billions of future donors.

4.1 Stakeholders

Four parties that are at the core of Feedafriend.io's ecosystem include:
- Donors
- Beneficiaries
- Logistics and last-mile partners
- Suppliers

4.1.1 Donors

Donors are individuals, organizations, churches, religious associations, institutions, or government agencies that donate their funds on the Feedafriend.io platform. Unlike mainstream platforms where donors have always been skeptical about how charitable organizations utilize their funds, Feedafriend.io enhances transparency mechanisms via blockchain.

4.1.2 Beneficiaries

These are clients that use or benefit from charitable services. Unlike conventional platforms where donors interact with beneficiaries via intermediaries, Feedafriend.io connects them directly via a trustless, decentralized platform, eliminating costly transaction processes.

Besides uplifting those in poverty via food donations, Feedafriend.io also wants to spur mass adoption of cryptocurrencies, allowing recipients to earn passive income that appreciates over time.

4.1.3 Suppliers

They are individuals, companies, or educational providers that provide food items, generic medicine, sanitary products, skills upgrading programs, etc., in Feedafriend.io's ecosystem. Suppliers are the first link in Feedafriend.io's supply chain, providing essential goods and services that beneficiaries are in dire need of.

4.1.4 Logistics and Last Mile Partners

The platform will rely on logistics and last-mile partners to deliver the products to beneficiaries.

Once onboarded on the Feedafriend.io platform, any logistics and last-mile partner can deliver goods and take photos that are recorded on the platform. The donors will pay logistics fees, and last-mile partners can receive remuneration in FEAF tokens if they choose.

Logistics and last-mile partners will also give a printout of instructions to beneficiaries on how they can claim Feedafriend.io staked tokens and monitor the prices. Since beneficiaries' tokens will be staked for six months before claiming them, it gives them time to learn how to claim them.

The platform also brings in a rating system for the beneficiaries, where the logistics and last-mile partners can rate them each time when they supply the products. Along with the rating, the partners can upload a photo as well. The prime purpose of this rating system is to eliminate the beneficiaries who seem to be economically independent or self-sufficient. For instance, if the beneficiary owns a good house or a car parked in their garage, the partners can quickly take a snap of it and can upload the picture along with the low score rating. This low score rating will denote that they are no longer in need of food or any other products as they seem to be economically independent. This rating will also be stored on the blockchain network.

By following this, the history and rating of both donors and beneficiaries will be recorded on the blockchain. So in the future, these low scores will alert the donors that the particular beneficiary is economically self-sufficient, making the food/product reach the right hands of the deserving beneficiaries. This rating system helps in balancing the ecosystem.

4.2   Feedafriend.io Marketplace

Feedafriend.io's marketplace is an integrated ecosystem comprising of many functionalities:

- Registration and identity verification
- Donations
- Tracking of donations
- Referral fees and NFHTs
- Withdrawals
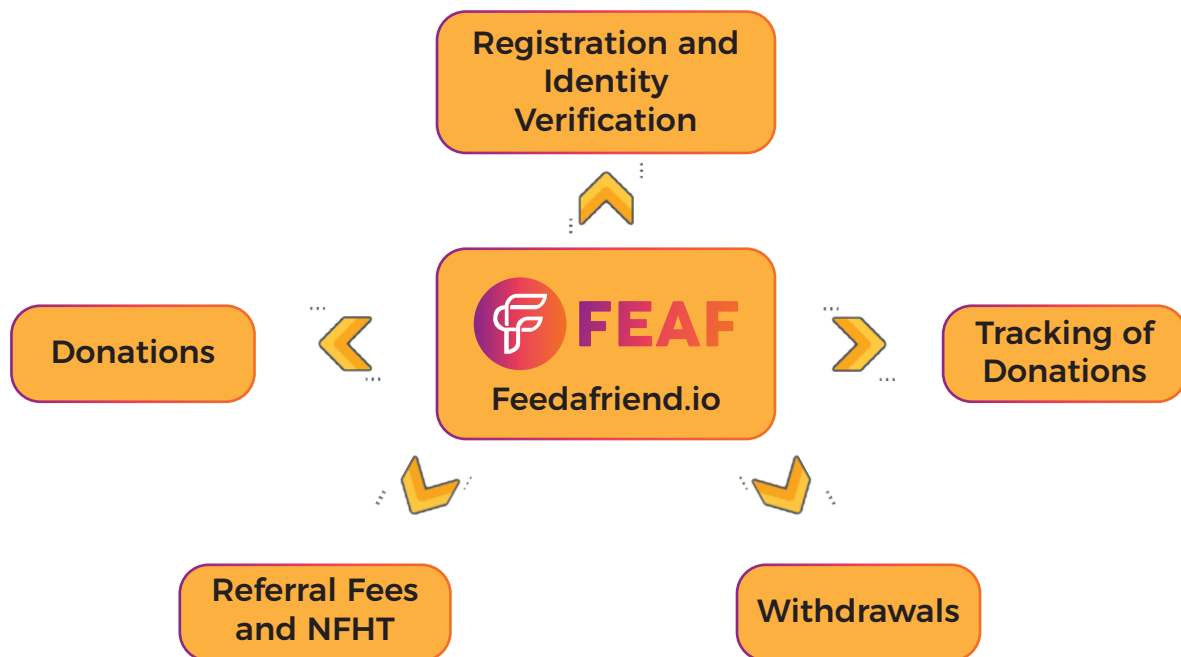
Figure 1: Feedafriend.io marketplace

4.2.1   Registration and Identity Verification

Beneficiaries, suppliers, and logistics & last-mile partners must register on Feedafriend.io's ecosystem and have their identities validated before using the platform's services. Over a certain threshold of anonymous donations, a donor is required to register their identity. Once onboarded to the platform, beneficiaries can allow Feedafriend.io to share their details.

Feedafriend.io will also provide a private dashboard where donors and beneficiaries can manage private communications and transaction histories. The private dashboard will also allow donors to choose how to manage their personal data, view their charitable contributions, and request receipts for tax computation purposes.

4.2.2 Donations

Feedafriend.io will provide an easy-to-use interface where donors can easily donate to their preferred projects. As a decentralized system, Feedafriend will allow donors to convert major cryptocurrencies, including BTC, ETH, LTC, and SOL , into FEAF tokens at the prevailing exchange rates.

Besides supporting cryptocurrencies, Feedafriend will also allow token holders to convert significant fiat currencies such as the USD and Euro into FEAF tokens. And with a robust inbuilt wallet, Feedafriend will enable donors to securely store and manage their crypto assets without the need for external services.

With Feedafriend.io, donors can effortlessly search, discover, and review charities on a single pane of glass. The platform will also publish regular updates, create and send fundraising campaigns, and request feedback.

4.2.3 Tracking of Donations

Feedafriend.io directly links donors to beneficiaries via Solana, and stakeholders can easily audit the transaction histories, ensuring complete transparency on the use of the donated funds. Because the transaction history is immutable, stakeholders can easily verify relevant information such as timestamps, donated amounts, and beneficiary addresses, among others.

To make the traceability process as transparent and seamless as possible, Feedafriend.io will embed a "send and notify" option in the wallet, which will allow donors to receive notifications in every step of their donation flows automatically.

4.2.4 Referral Fees and NFHTs

To improve funding initiatives, Feedafriend.io will leverage the power of social media influencers to reach as many donors as possible through an aggressive marketing strategy. The social media influencers will, in turn, receive perpetual referral fees in the form of non-fungible humanity tokens (NFHTs) as platform partners. Charitable organizations, social impact associations, and any individual/organization can also receive the same benefits by referring their members to the platform.
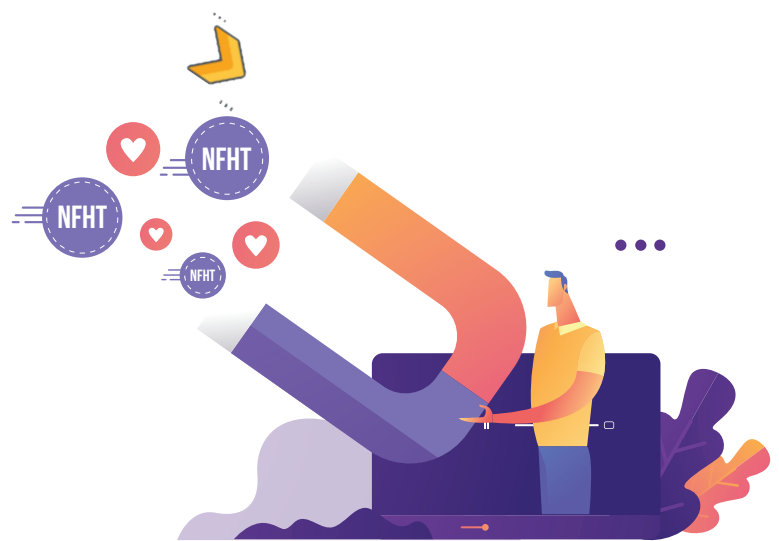
NFHTs are a new and unique asset class whose value is derived by the perpetual income the holder will get from referral fees. The more "likes" the influencers get in the form of donations from their followers, the greater the value of the NFHT grows. NFHTs create a new way for social media influencers to showcase and monetize their social outreach and impact, as well as create a new revenue stream.

Social media platforms can have an additional metric to benchmark social influencers to help brands with their sponsorship decisions. Unlike the conventional tokens, whose intellectual property can easily be stolen, NFHTs are Blockchain-powered, meaning users can easily validate their proof-of-ownerships. For example, when users exchange the NFHTs on the platform, smart contracts automatically trace back to the wallet address that first issued them. These digital assets can be sold or traded amongst social influencers, charitable organizations and traders just like any other revenue-generating asset.

The influencers can contribute back to the platform by staking their tokens or using the remuneration for other charitable causes. They can also cash in these rewards or take crypto loans against the value of their NFHTs for other purposes.

Besides social media influencers, the platform will also incentivize beneficiaries to become self-sufficient via NFHTs. Whenever a beneficiary (Parent Beneficiary) refers other beneficiaries (child beneficiaries) to the platform, and the child beneficiaries ask for food, they will receive tokens. These tokens will be staked for six months in the liquidity pool before those child beneficiaries can get access to them. These staked tokens in the pool will generate interest for six months.

Parent Beneficiaries NFHTs will accrue part of the interest that is generated out of the staked tokens of their child beneficiaries. If a Parent Beneficiary successfully stops asking for aid for six consecutive months, they can unlock their NFHTs. Any referral fees and interest which is accrued will be staked in the liquidity pool until the beneficiary is able to unlock their NFHT. Once they unlock their NFHT, it will enable them to earn a perpetual income as their role transitions from a beneficiary to a social influencer amongst beneficiaries. The incentive to become self-sufficient and to stop asking for food can be much greater than the benefit of beneficiaries to become dependent on free food. In this way, Feedafriend.io not only allows beneficiaries to become self-sufficient but also allows them to participate in the cryptocurrency economy, where they earn a steady stream of revenue by becoming social influencers.

Additionally, any donors who have participated in helping such beneficiaries to emerge out of poverty also receive NFHTs and a share of the token rewards for their efforts.

Charity associations, as well as religious institutions, can refer their attendees to the Feedafriend platform. For each successful referral, they will receive NFHTs and perpetual referral rewards. Additionally, the kitchens of religious institutions, which serve the masses, can step into the platform as a charity beneficiary to receive food supplies from attendees. They can also choose to register as suppliers for food, where attendees can prefer to donate food from these religious institutions. This example shows how an organization can play a myriad of roles in the platform as a donor, supplier, and referrer.

This facilitates tremendous opportunities to donors as the Feedafriend blockchain platform will bestow a series of benefits along with the donation activities. Upon the donor's consent, the fees can be paid on behalf of the religious institution as well. In a world where many religious institutions are running their own individual charity-based programs, Feedafriend aims to encourage all of these institutions to come on the platform and also provides a chance to share the benefits with their attendees.

To be precise, Feedafriend offers remarkable benefits on the whole and does not incur any loss to the institutions. This is because these institutions can receive perpetual income from the benefit of the platform, which will be in addition to the donations they already get.

Also, the platform offers a phenomenal opportunity to the holders of the NFHTs. The top holders of the NFHTs by value will receive exclusive and lucrative perks on the metaverse.

4.2.5 Referral Program

One of the exciting things about Feedafriend is its referral policy. As a community-driven platform, Feedafriend values every referral made by users. This referral program offers some of the exciting rewards that the industry has never witnessed before. Every user of Feedafriend can participate in the referral program and they do not have any restrictions/limitations in the number of referrals. It is totally up to their ability to refer.

The referral policy of Feedafriend platform is categorized into three levels and so, it is called a 3-level referral system. For each level, a percentage on the total transaction of FEAF tokens is rewarded to the referrer. The level and percentage are as follows.

S.No	Level	Percentage
1	Level - 1	3%
2	Level - 2	4%
3	Level - 3	5%

For instance, when person A introduces person B to the Feedafriend platform, B is the level-1 referral for A. As a reward, 3% of the total purchase of FEAF tokens by B will be rewarded to A. When B brings up C to the platform, C becomes Level-2 referral to A. Now, 4% of the total purchase of FEAF tokens by C will be rewarded to A. Similarly, the next level follows. The most important thing is that the referral rewards will also accrue value in NFHTs. Additionally, other interesting bonuses shall also be provided to users in the way that could be utilized in metaverse.

4.2.6 Withdrawals

Transparency and traceability are just one part of Feedafriend.io's vision. Creating vibrant and engaged beneficiaries is equally essential for the future success of the industry. In this regard, Feedafriend will provide a secure and straightforward interface where beneficiaries can easily withdraw their funds.

Recipients will use a robust wallet management system to convert their FEAF tokens into major cryptocurrencies, such as BTC, ETH, LTC, or SOL, at the current exchange rates.

5.0 Technology Primitives

As a decentralized and integrated online marketplace that connects donors with beneficiaries, Blockchain is at the center of the platform's value propositions.

Blockchain and the concept of cryptocurrencies were first introduced in 2008. At the time, Satoshi Nakamoto—pseudonymous author(s)—published a whitepaper outlining its role in Bitcoin[7]. At the time, Blockchain solved the double-spending problem—a decades-old problem that had prevented the adoption of many digital currencies.

At its outset, a Blockchain is a distributed ledger technology (DLT) that stores transactions in an electronic ledger (or database). As a form of DLT, Blockchain does not rely on centralized entities to manage and update its ledger. Instead, it uses a decentralized consensus framework where all nodes must agree for a block (a group of transactions) to get validated.

Once a block gets verified, it is appended to the ledger, and an identical copy is distributed to all the users (also called nodes) in the decentralized network. When it was unveiled, Blockchain focused mainly on securing transactions on the Bitcoin network.

However, other use cases have emerged recently, especially in scenarios involving replacing centralized authorities with trustless ecosystems. In this regard, Blockchain can store any asset, whether tangible (car, house, or land) or intangible (patents, intellectual property, or branding).

Today, you can store and trade almost anything of value on the Blockchain network, minimizing risks and cutting costs in the process.

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[7] Satoshi Nakamoto, "Bitcoin: A Peer-to-Peer Electronic Cash System," URL: Https://Bitcoin. Org/Bitcoin. Pdf-(: 17.07. 2019), 2008.

5.1 Blockchain Primitives

At the core of Blockchain lies five inherent primitives that are relevant in an online marketplace: decentralization, hashing, immutability, and consensus protocol, and tokenization model.

a. Decentralization

Blockchain networks create trustless ecosystems. This is because no node has to know or trust each other. Instead, each node in the ecosystem has a copy of the same ledger. When one node's ledger gets altered or is corrupted, the other nodes automatically reject it. Decentralization helps to enforce security by eliminating a single point of failure.

b. Hashing

When a block gets confirmed and requires to be appended to the chain, it is subjected to a hashing algorithm that converts it into a fixed-size string of characters (called the hash)[8]. The hashing algorithm is unique in the sense it only works one way. While the same transactions will always generate the same hash value, the reverse is not valid.

When used in Blockchain, the irreversibility property of hashing means that nodes can verify whether data has been modified or corrupted because any change in a transaction will result in a completely different hash value, affecting every iteration of other blocks. It also builds a ledger that all the decentralized nodes can trust.

c. Immutability

When a new block gets appended to the chain, it strengthens the validation of the previous block. This renders the entire chain tamper-proof, which delivers immutability. As such, no party can alter or corrupt the block once it gets appended. When a particular record has an error, the system creates a new transaction that is appended to reverse the mistake. Users can access and verify both transactions on the ledger.

[8] Sarwar Sayeed and Hector Marco-Gisbert, "Assessing Blockchain Consensus and Security Mechanisms against the 51% Attack," Applied Sciences 9, no. 9 (2019): 1788.

d. Consensus protocols

Consensus algorithms are crucial in decentralized networks such as Blockchains because there is no centralized server or entity to validate the transactions. They provide fault-tolerant mechanisms that allow Blockchains to achieve the required agreement (consensus) on the status of the ledger.

This way, Blockchains operate as self-regulating entities working on a global scale without a centralized company. There are several consensus protocols, each of which works differently. However, the most common protocols include proof-of-work (PoW), proof-of-stake (PoS), proof-of-authority (PoA), and proof-of-staked-authority (PoSA).

e. Tokenization model

Because Blockchain networks operate as self-regulation systems without a centralized server, they require the participation of volunteer nodes (validators) that work to verify and authenticate transactions. Such an environment requires an incentivization mechanism to reward such nodes. A tokenization model ensures that validators get rewarded in a fair, open, and auditable manner.

5.2 Blockchain Role in Online Charitable Marketplaces

A Blockchain-based integrated online marketplace provides multiple benefits when compared to traditional centralized platforms, as summarized in the table below:

Table 1: Comparison between Blockchain-enabled charitable marketplaces and centralized marketplaces

Feature	Blockchain-powered marketplace (Feedafriend)	Centralized marketplaces
Transparency	A Blockchain-enabled platform is fully transparent. Any stakeholder in the system can audit the transactions' histories, which are immutable.	A centralized marketplace is opaque. This is because centralized entities manage and control the creation and manipulation of transactions. As such, stakeholders cannot audit them.
Funds utilization	There are no intermediaries in Blockchain-powered marketplaces. As such, beneficiaries receive almost 100% of the funds that donors have contributed.	Centralized marketplaces have several intermediaries that charge high transaction costs. As such, beneficiaries only receive a fraction of the donations.
Security	Blockchain-based marketplaces have robust security features. There is less fraud because Blockchain leverages P2P and decentralized consensus protocols to validate transactions. Feedafriend.io, on Solana, benefits from this security, with its growing user base ensuring decentralization and safety.	Traditional marketplaces are largely centralized and prone to a single point of failure.
Incentivization mechanisms	Blockchain-powered marketplace provides an equal revenue-sharing framework that allows stakeholders to engage responsibly.	Centralized marketplaces lack incentivization mechanisms, resulting in unequal revenue-sharing mechanisms.

5.3 Solana Blockchain

Feedafriend.io will be built atop of the Solana blockchain. This blockchain is perfectly suited for Feedafriend.io because of its unparalleled scalability, low transaction fees, and high throughput capabilities. Solana's innovative architecture allows for thousands of transactions per second, ensuring seamless and efficient operations even during peak demand periods.

Moreover, Solana's fast transaction finality and low latency make it ideal for real-time interactions on the Feedafriend platform. Donors, beneficiaries, and stakeholders can enjoy instant confirmation of transactions and quick access to funds, enhancing the overall user experience.

Additionally, Solana's cost-effectiveness ensures that donors can contribute to charitable causes without being burdened by high transaction fees. This affordability democratizes philanthropy, allowing individuals of all income levels to participate and make a difference in the lives of others.

Furthermore, Solana's robust security features provide peace of mind to users, ensuring the integrity and confidentiality of their data and transactions. With Solana's advanced cryptographic techniques and decentralized consensus mechanism, Feedafriend.io can offer a secure and trust-based environment for philanthropic activities. Solana's scalability, speed, affordability, and security make it the perfect blockchain solution for Feedafriend.io.

6.0 Technical Specifications

The figure below shows the overall structure of Feedafriend.io:

| Donors | Beneficiaries | Suppliers | Logistics and Last Mile Partners |

Registration and Identity Verification Smart Contract

Donation Smart Contract

Referral Fees and NFHT Smart Contract

Tracking Smart Contract

Feedafriend.io Integration
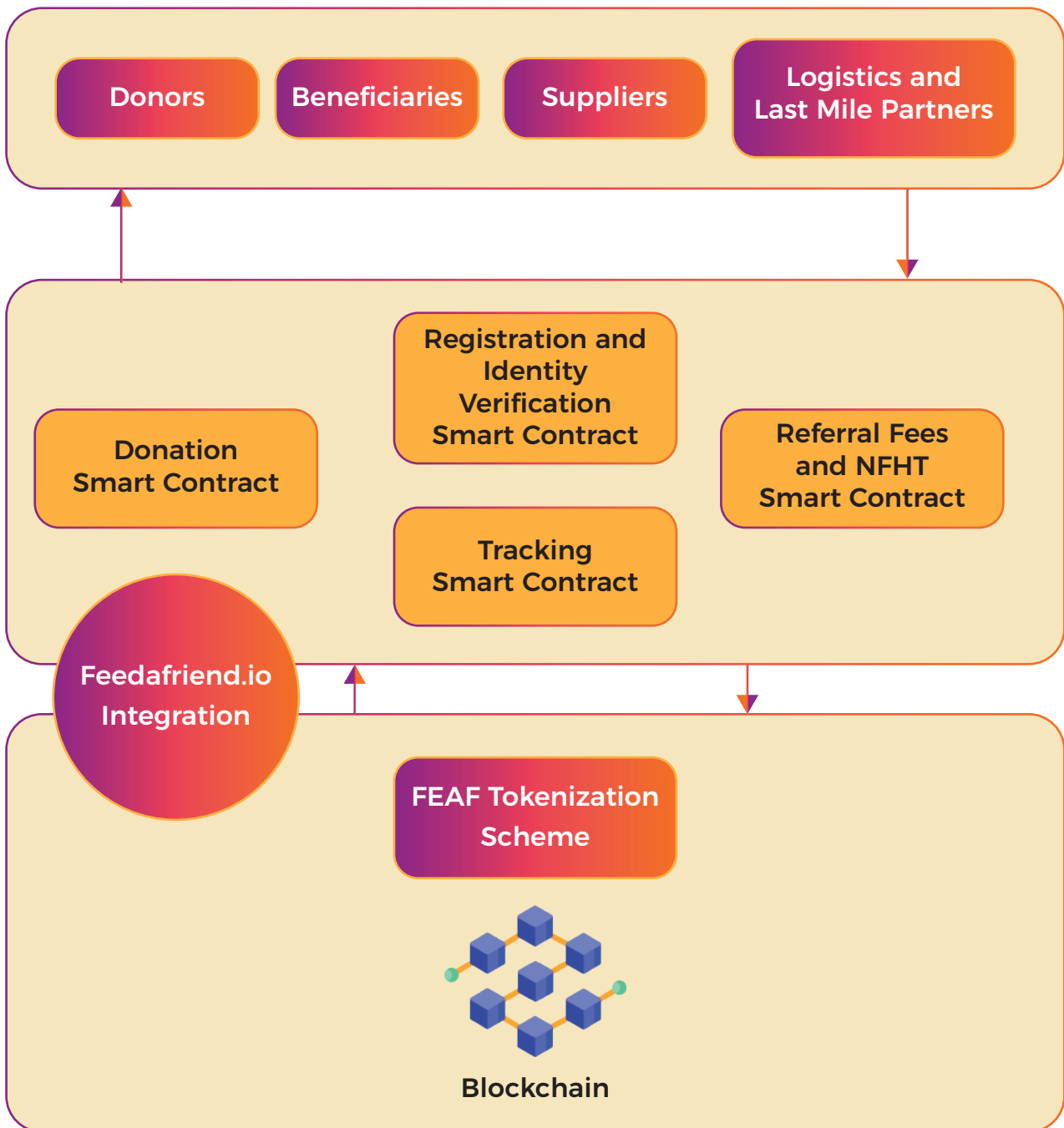
FEAF Tokenization Scheme

Blockchain

Figure 2: Network Architecture

The network architecture of Feedafriend.io comprises:
- **Front-end system**
- **Middleware**
- **Utility token**
- **Blockchain**

6.1 Front-End System

This is the primary interface that all stakeholders will use to access various services from the platform. It is an easy-to-use interface customized for donors, beneficiaries, suppliers, logistics, and last-mile partners.

For example:
- Donors can easily search, discover, and review projects they want to fund via their customized plan.
- Beneficiaries can post their wish lists in their shopping cart for necessities such as food and medicine. They can also receive selected products that have been donated to the platform.
- Suppliers can discover which items have been funded and supply them to Feedafriend.io.
- Logistics and last-mile partners can use the platform to post photographs or videos of beneficiaries after distributing the products.

To facilitate seamless interaction, Feedafriend.io will integrate robust and secure wallet management with the front-end application. This will help stakeholders convert their cryptocurrencies and other fiat currencies into FEAF tokens and vice versa.

6.2 Middleware

The middleware consists of four primary smart contracts:

- **Registration and identity verification.** This is a smart contract that the platform uses to register beneficiaries, suppliers, and logistics and last-mile partners to Feedafriend.io's platform. It will adhere to know-your-customer (KYC) and anti-money laundering (AML) regulations when validating users' identities on the platform.
- **Donations.** This is a smart contract that stores all the records pertaining to donors' funds. This smart contract will also publish regular updates regarding fundraising campaigns and other notifications about Feedafriend.io.
- **Tracking donations.** This smart contract will track how donors' funds get used on the platform. It will also comprise other features such as "send and notify" options that push notifications to donors on each step of the donation flow.
- **Referral fees and NFHTs.** This smart contract will store and update all the information regarding social media influencers that have received referral fees and NFHTs. It will also provide computations for influencers that want to exchange their NFHTs for other crypto assets.

6.3 FEAF Tokens

FEAF token is the primary coin on the platform and provides utility functionalities. On-chain governance will allow all FEAF stakeholders to collaborate and manage the Feedafriend.io ecosystem. This will lead to more involved stakeholders because users have a reason and framework to steer the project's path actively.

FEAF tokens will provide two primary services:

- **Exchange.** Users can exchange FEAF for other crypto assets such as NFTs or convert them into fiat currencies on external exchanges.
- **Staking and rebates.** Staking secures the Feedafriend.io protocol by aligning the incentives of validators and other users to the correct operation of the Blockchain ecosystem. It is a crucial aspect of the proof-of-stake (PoS) consensus algorithm, which specifies which blocks get validated. Any user who wants to validate the blocks can stake their FEAF tokens. The platform then incentivizes validators to successfully append the blocks to the chain via FEED. Additionally, the platform will reward validators who stake their FEAF with other benefits such as rebates, bonuses, and discounts.

6.3.1 FEAF Token Utility Flow and Revenue Model

The platform has two forms of revenue model:

a. Direct fees from donors

The platform will charge a small fee in FEAF tokens whenever a donor donates to the platform. These fees collected from donors will help the platform fund logistics and last-mile partners.

b. Fees from suppliers

The platform will charge a 10% fee in FEAF whenever a supplier distributes goods to the platform. The platform will distribute these tokens as follows:

- 20% of the tokens will go towards feeding those in need.
- 20% of the tokens will be burned.
- 20% of the tokens will be shared between all the token holders and serve as referral commissions.
- 20% of the tokens will be locked in staking in a liquidity pool (LP).
  These tokens will be available to beneficiaries after six months.
- 20% of the tokens will be stored in an LP until beneficiaries successfully
  stop asking for food donations for six months. The platform will then generate NFHTs to split this amongst donors who have successfully helped alleviate poverty, recipients, and thosewho may have referred beneficiaries to join the platform.

7.0 Tokenomics

7.1 Token Specifications

Table 2: FEAF specification

Feature	Specification
TOKEN NAME	FEED A FRIEND
TOKEN SYMBOL	FEAF
TOKEN TYPE	SPL TOKEN
TOTAL TOKEN SUPPLY	1 Trillion
DECIMAL SUPPORT	18
SUPPLY TYPE	CAPPED
ACCESS TYPE	OWNABLE
VERIFIED SOURCE CODE	YES
MINTABLE	NO
BURNABLE	YES

7.2 Token Distribution (1 Trillion Total Tokens)

Category	Percentage (%)	Allocation (Tokens)
Seed Sale	5%	50,000,000,000
Series A	10%	100,000,000,000
Series B (Optional)	10%	100,000,000,000
Launchpad Sale	15%	150,000,000,000
Public Sale (IDO)	5%	50,000,000,000
Team & Advisors	15%	150,000,000,000
Product Development	10%	100,000,000,000
Partnerships & Marketing	25%	250,000,000,000
Airdrops & Referral Rewards	5%	250,000,000,000
Operations	5%	50,000,000,000
Reserve	10%	100,000,000,000

Token Allocation

10% Reserve
5% Operations
5% Airdrops & Referral Rewards
25% Partnerships & Marketing
10% Product Development
15% Team & Advisors
5% Public Sale (IDO)
15% Launchpad Sale
10% Series B (Optional)
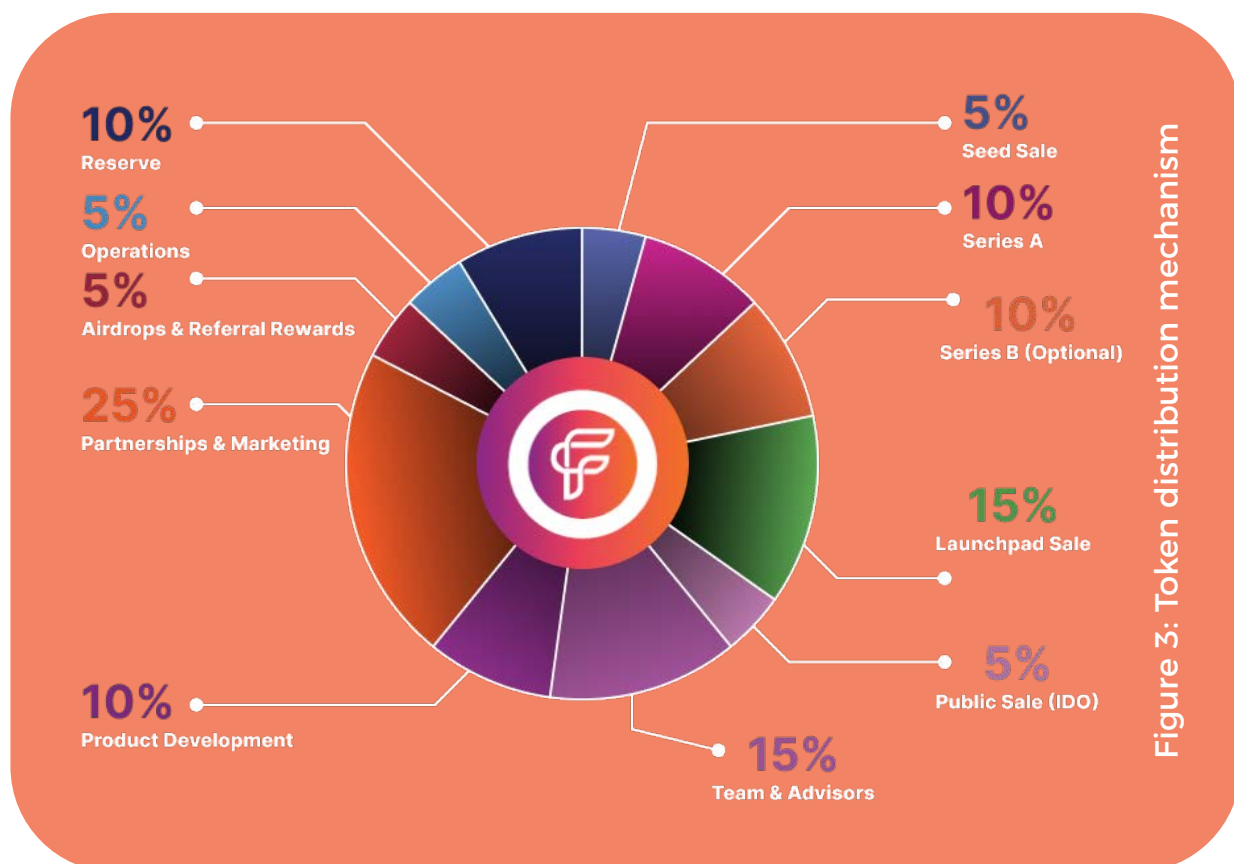10% Series A
5% Seed Sale

Figure 3: Token distribution mechanism

8.0 Future Prospects

After careful consideration, we are excited to introduce additional features to the Feedafriend platform, expanding its capabilities and enhancing user engagement.

8.1 FEAF Metaverse Integration

In addition to the traditional platform accessible to all users, we are introducing the FEAF Metaverse mode. This innovative feature leverages cutting-edge technology to create an immersive digital environment where users can interact and support each other in new and exciting ways.

8.1.1 Avatar Generation with AI

FEAF will utilize advanced artificial intelligence (AI) algorithms to generate digital "Friend" avatars for beneficiaries based on their profiles and wishes. These avatars will be created as non-fungible tokens (NFTs) that belong exclusively to the beneficiary.

8.1.2 Integration with Metaverse Games

Beneficiaries can authorize FEAF to place their avatars within the Metaverse game environment. These digital representations will reflect the wishes and needs of the beneficiaries, allowing them to express themselves and engage with others in the virtual world.

8.1.3 Gameplay Mechanics

In the FEAF Metaverse, gamers and social influencers can embark on a quest to find and assist friends in need. Similar to popular gaming experiences like Pokémon Go, users will seek out friends who have expressed wishes within the Metaverse.

8.1.4 Donate-to-Earn Concept

By providing support and assistance to friends in the Metaverse, users can earn rewards and benefits through the innovative FEAF concept of "donate to earn." Each interaction with a friend in need not only helps them but also earns rewards for the user, fostering a sense of community and mutual support.

8.1.5 Team Building and Competition

As users continue to assist their friends and earn rewards, they will have the opportunity to build their teams within the Metaverse. Friends who receive sufficient support may choose to join the user's team, creating a network of mutual aid and collaboration.

8.1.6 Prizes and Rewards

Social influencers and gamers can form team communities within the Metaverse and compete for prizes and rewards. By leveraging the collective support of their followers and teammates, users can achieve success and recognition within the virtual environment.

By integrating the FEAF Metaverse into the Feedafriend platform, we aim to provide users with a dynamic and engaging experience that transcends traditional boundaries. Through the power of technology and community, we can create a world where support, collaboration, and generosity thrive.

FEAF Metaverse Game

A metaverse version of Feedafriend - is a unique Play To Earn Open world collaborative game where gamers, social influencers and donors can earn FEAF tokens based on their activities of connecting with AI-Generated NFT Avatars of real world beneficiaries and fulfilling wishes.

Our aim is to bring a whole new generation of gamers into the philanthropic marketplace where doing charity and helping others can not only be a fun activity but potentially lucrative as well.

Users can walk around in the game looking for people to help. Based on beneficiary profiles in the Feedafriend app, FEAF Metaverse will use AI to generate NFT digital Avatars which would ask for help in the metaverse game.

The game will encourage challengers for gamers to compete in "wish-fulfillment" missions and "team-building" quests. Any wish which is fulfilled in the game will be connected to the FEEDAFRIEND marketplace to fulfill real world wishes.

Gamers can build in game communities and teams by convincing beneficiaries that they will take care of their wishes. We empower beneficiaries as gamers can compete to gain their digital NFT avatars as a team member.

Gamers can build space colonies in the metaverse for their teams to dwell in. Based on how big their team grows and how well they do in the "wish-fulfillment" missions they can win metaverse land plots and compete against other gamers as they build their colonies.

In order to build their ranking on scoreboards gamers must not only feed their team members but make sure they partake in skills upgrading real world courses. If team members are able to stop asking for help for 6months and become self sufficient the gamer as well as the team member will receive outstanding rewards.

FEAFBIT Exchange

"FEAFBIT Exchange, a sister company of FEAF, is poised to disrupt the cryptocurrency trading landscape as a decentralized exchange (DEX). Users can seamlessly trade various cryptocurrencies, including the FEAF coin, on our platform. What sets FEAFBIT apart is our unique approach to sustainability: 80% of exchange, trading, and liquidation fees are allocated towards buying back the FEAF crypto coin, while 20% is retained for expenses.

This innovative model ensures continuous support for the FEAF coin ecosystem, driving its value and sustainability. Additionally, FEAF coin holders will have exclusive access to launchpools, offering diverse opportunities in the crypto space, including participation in crowdfunding events for projects.

Our unique model allows underprivileged beneficiaries who have received locked FEAF tokens to use their locked tokens to participate in -

Staking - on the platform to participate in the potential returns and airdrops.
Copy trade - beneficiaries can use part of those locked FEAF tokens to copy trade professional traders.

This gives underprivileged beneficiaries opportunities that they have never had access to previously. They can still only unlock the rewards when they stop asking for help consecutively for 6months.

Our platform creates an environment for both projects and users interested in joining crypto crowdfunding events, fostering innovation and community growth. Furthermore, FEAFBIT provides holistic support, including initial token issuance and guidance from listing and investment teams, ensuring that projects receive comprehensive assistance throughout their journey.

At FEAFBIT, we're not just facilitating trades; we're pioneering a new era of responsible and community-driven cryptocurrency exchange with a key focus to empower the underprivileged.

Join us as we reshape the future of decentralized trading and contribute to the growth and stability of the FEAF coin."

FEAF Academy

FEAF Academy, is committed to empowering both donors and beneficiaries through the "Learn To Earn" model by offering a transparent and engaging platform for educational sponsorship. Donors who sponsor courses can easily track the progress of completion through our intuitive tracking system. This feature allows donors to stay informed about the educational journey of the beneficiaries they support, fostering a deeper sense of connection and accountability. By providing real-time updates on course progress and achievements, FEAF Academy ensures that donors can witness the direct impact of their contributions. Through transparent and seamless transactions, we facilitate a meaningful connection between donors and beneficiaries, creating a community driven by shared goals and aspirations. Together, we're reshaping the landscape of education sponsorship, empowering individuals to pursue their educational dreams and unlock new opportunities for personal and professional growth.

FEAF Capital

Crypto Investment arm used to invest in various crypto projects with a percentage of returns used to buy back FEAF. Holders of FEAF will stand to benefit from these potential returns. This will help underprivileged beneficiaries to gain from potential upside of crypto investment opportunities which they didnt have access to previously.

9.0 Go-To-Market Strategy

Blockchain is still an evolving technology, having been in existence for roughly 12 years. As such, it can be challenging to get a start-up such as Feedafriend.io off the ground. While the technology has been successful with cryptocurrencies, it is yet to go mainstream with other use cases like the one we are implementing.
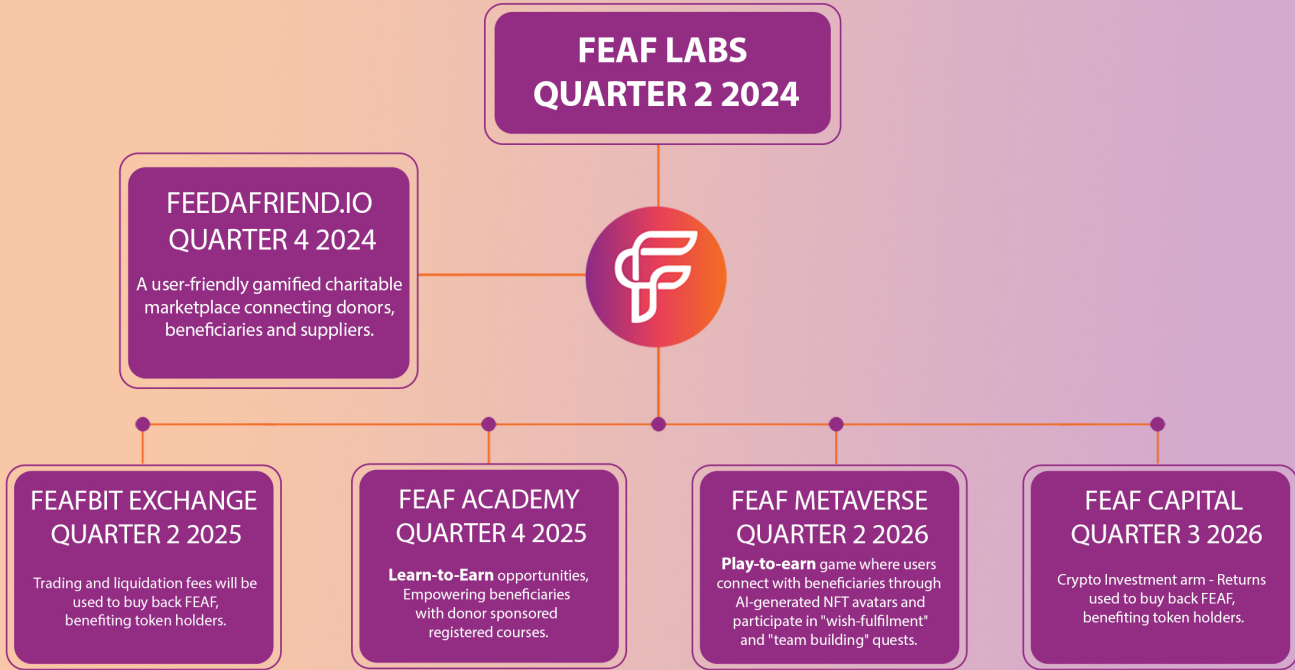
This is because Blockchain solutions are, for the most part, not tangible products. Blockchain also requires significant investments to get it going. However, despite these issues, we believe the technology has bright prospects. With a clear go-to-market strategy to market the product, we are certain to succeed with Feedafriend.io.

The table below summarizes our go-to-market strategy:

Table 4: Go-to marketing strategy

Strategy	Description	Examples
Target segments	Target marketing is key to unlocking marketing efforts because it focuses on specific groups of consumers. By promoting Feedafriend.io services to particular users in the Blockchain community, we are certain to drive more users to the platform.	The platform will target the following groups of users in the Blockchain community: **Crypto cards** (e.g., Crypto.com) **Crypto exchanges** (e.g., Binance, Coinbase, Bittrex, etc.)
Partnerships and channels	Partnerships and channels are a vital component for start-ups looking to increase both sales and loyalty. At Feedafriend.io, we will strive to select not only the best channels but also excellent partners that can enhance our growth.	We will target the following groups of partners and channels: **B2B Channels.** This will include payment schemes and exchanges. **B2C Channels.** This will consist of NFT marketplaces. **Partners.** We will target DeFi, Web3 data projects, and supply aggregators.
Marketing	We believe that a well-structured marketing strategy can pave the way for a successful IDO. In this regard, we will strive to reach out to as many people as possible via an aggressive marketing strategy.	Our marketing strategy will: **Leverage advisors, investors, and founders' networks** **Use public relations (PR) key partnerships.** **Utilize crypto events, hackathons, and social media to drive users to the platform.** **Leverage token rewards for demand and supply acquisition to incentivize users who drive up users to the platform.**

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10.0 Roadmap

Join us on our journey

FEAF LABS
QUARTER 2 2024

FEEDAFRIEND.IO
QUARTER 4 2024

A user-friendly gamified charitable marketplace connecting donors, beneficiaries and suppliers.

FEAFBIT EXCHANGE
QUARTER 2 2025

Trading and liquidation fees will be used to buy back FEAF, benefiting token holders.

FEAF ACADEMY
QUARTER 4 2025

Learn-to-Earn opportunities, Empowering beneficiaries with donor sponsored registered courses.

FEAF METAVERSE
QUARTER 2 2026

Play-to-earn game where users connect with beneficiaries through AI-generated NFT avatars and participate in "wish-fulfilment" and "team building" quests.

FEAF CAPITAL
QUARTER 3 2026

Crypto Investment arm - Returns used to buy back FEAF, benefiting token holders.

Team

Trapal Narula
Co Founder / CEO

Arunee Bajaj
Co Founder / CFO

A J Singh
CTO / COO

SHAMLA
TECH SOLUTIONS

Shamlatech Pvt. Ltd.
Development Team