DeFiXy Protocol

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Abstract

DeFiXy Protocol is an amazon-like platform for Crypto Assets and products, it is set to actually empower the unbanked by bridging the gap between fiat-driven economies and the crypto space. Till date, it is a challenge for beginners to use blockchain services. For this reason, majority of the unbanked and even the average individual who is interested in venturing into crypto finds it tremendously difficult to onboard. DeFiXy Protocol will tackle this challenge by providing a user-friendly P2P exchange that supports majority of assets and fiats, it will also offer dynamic staking services and decentralized finance services. Our P2P market place will allow users with reputation and collateral to setup their own mini market-place or kiosk where they serve the inexperienced users. All the services and features offered by DeFiXy Protocol are integrated in a decentralized manner and allow our users enjoy a friction free experience.

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This document is DeFiXy Protocol's whitepaper version 1.0. It contains all there is to know about DeFiXy protocol's technologies and features. It is available for download at DeFiXy.com

Contents

List of Figures

List of Tables

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1. Introduction to DeFiXy Protocol

1.1. What to Expect - Introduction

In this chapter, DeFiXy Protocol is introduced and expounded on utilizing a problem-solution format. A brief description of the features and services provided are also covered

1.2. What is DeFixy Protocol

Simply put, DeFiXy Protocol describes itself as an amazon-like blockchain platform that provide easy to use solution for the everyday crypto-asset users. Our solutions address the complexity that comes with trading crypto-assets with fiats, and the use of DeFi services.

1.3. The Problem

Most people can still remember the response Mark Cuban, a famous American entrepreneur gave when asked what it will take for cryptocurrencies (Bitcoin) to be massively adopted. He said; "It'd have to be so easy to use, it's a no-brainer. It'd have to be completely friction-free and understandable by everybody first."
This addresses the complexity that comes with most (if not all) blockchain technologies. Just think about how complicated it was for you to buy your first cryptocurrency, how many platforms or apps you researched until you finally found the one app/platform that supported fiat to cryptocurrency conversion. If you are already using cryptocurrencies and other blockchain solutions, this is no longer an issue to you but think of the newcomers, who would like to use blockchain solutions or even have no other alternatives than to use blockchain solutions but have kept away because they do not understand the fundamentals.
As long as these individuals stay away, blockchain techs would not be massively adopted. Though not everyone will understand it as Mark Cuban suggested but it should be easy to use. Though it would not be absolutely friction-free as Mark Cuban also suggested but it should have less friction.

1.4. The Solution

As long as blockchain technologies remain complicated, mass adoption will not be reached. When more people have access to blockchain solution and find it easy to use, then the adoption rate will increase rapidly. This motivates the development of solutions that reduces both the complexity and friction that comes with the use of blockchain solutions.
In this light, DeFiXy protocol presents a user-friendly Amazon-like p2p Marketplace. A decentralized marketplace that is built such that the complexity and friction encountered when carrying out Fiat to Crypto transactions is reduced. Our mission is to seamlessly connect Fiat-driven economies to the crypto space thereby, creating a platform where the inexperience can onboard with ease.
The features that DeFiXy Protocol offer include:

1. **P2P Marketplace (exchange):** Where individuals can trade crypto-assets in a decentralized manner. The main feature of the P2P market-place are as follows:
   - The ability of users to create trades or setup barter between any pair of whitelisted assets, even between assets that defer in blockchain and also between a whitelisted asset and any of the supported fiats.
   - Individuals with staked assets can create mini-kiosk within the platform and offer customized products and services to other users. Such kiosk owners enjoy a share of the transaction fees accumulated on the platform among other benefits.
2. **Dynamic Staking:** The staking feature offered by DeFiXy protocol provide users with different reward thresholds, these thresholds are functions of two variable, the lockup duration τ measured in days and the dynamic demand-supply ($\frac{\delta d}{\delta s}(t)$) factor of the asset staked.
   The protocol also offers lockup buyout. With this, an individual who initially staked his/her assets for a duration (say 30 days lockup) can unstake prematurely but the action incurs a lockup buyout fee.
3. **DeFi services:** DeFiXy protocol offers DeFi services such as lending and borrowing. users can take out collateralized loans with competitive interest rates. The rates for borrowers and lenders are determined by the users collateral blend ratio (β_r).
   Since the loans offered do not have maturity period, there are no late payments but the borrower can setup a periodic payment that are deducted automatically in any of the supported assets or fiats as specified by the borrower.
   Similarly, a lender can lend asset on a flex period lending mode or on a fixed period lending mode. With the latter offering a better interest rate.
4. **Debit card integration:** After meeting the regulatory requirement of target regions, DeFiXy protocol will integrate card payment solutions which will allow users to directly spend crypto assets.

DeFiXy protocol will implement all the said features with the average individual with little to no blockchain understanding in mind. The platform will integrate user interface that are highly user-friendly. Individuals will be able to interact with the platform in a smooth and seamless manner, even those that are new to the space.

2. The Technology

2.1. What to expect - The Technology

In this chapter, the technology presented by DeFiXy Protocol is covered. It is broken down to the individual features/services. The way each feature and service will interact with each other is also discussed.
It should be noted that the features were not discussed in any particular order.

2.2. Dynamic Staking

The staking services offered by DeFiXy Protocol adopts what we call a Proof of commitment (PoC) consensus. The staking rewards enjoyed by stakers varies (increases) such that stakers that are committed for longer periods enjoy higher staking rewards. The staking consensus is an integral part of our platform as it is the underlying mechanism on which other features work.
The Dynamic staking matures in two stages, the alpha stage (α-stake) and the beta stage (β-stake).

2.2.1. The α-stake

The α-stake is the staking implemented before the DeFi and p2p Marketplace goes live. This allows early supporters to enjoy unparallel staking rewards.
The staking rewards follows the given model:

$$Reward_{\alpha} = \frac{N_{DFX}\, t}{100} . \frac{r_{\alpha}(t)}{365.25} \tag{2.1}$$

where N_{DFX} is the amount of tokens staked by a user and, r_{α} is the annual staking rewards.
The α-stake rewards $r_{\alpha}(t)$ is a function of time, it is given by Eqn 2.2 and Figure 2.1.

$$r_{\alpha}(t) = \begin{cases} 15.00 \left[1 + \frac{0.25}{7} t\right] & 0 < t \leq 7 \\ 15.00 \left[1.25 + \frac{0.5}{7}(t-7)\right] & 7 < t \leq 14 \\ 15.00 \left[1.75 + \frac{1.25}{7}(t-14)\right] & 14 < t \leq 21 \\ 45.00 & t > 21 \end{cases} \tag{2.2}$$

t in both equations is period the user has been staking for without claiming rewards or unstaking the tokens. This is expressed in days.
Although the rate at which staking rewards are accumulated is expressed in days, the actual computations are done every block minute. These equations expressed in minutes, as used for the computations can be found in appendix A

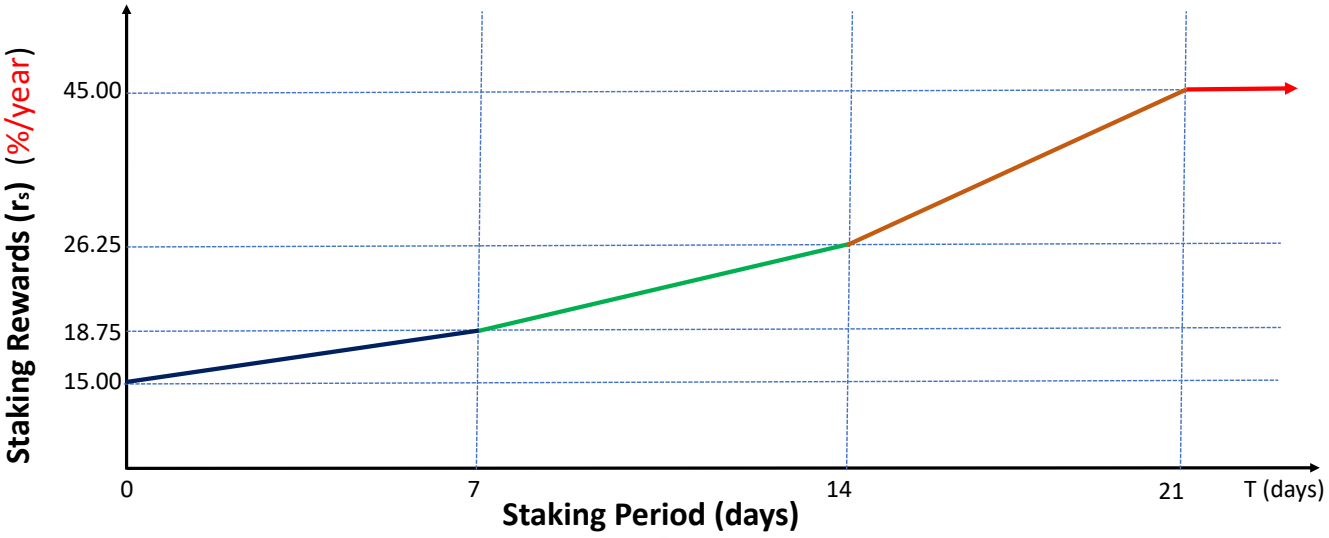

Figure 2.1.: Staking rewards for α-stake

Exclusive for our early supporters, staking rewards grow from an annual returns of 15% to up to a maximum of 45% just in 21 days. There is no lockup required to enjoy this great returns.
It should be noted that anytime a user claim rewards, unstake or stake tokens, the staking time resets therefore the rates start all over from 15%.

2.2.2. The β-stake

The β-stake is built off of the α-stake. It is the generalized dynamic staking consensus that governs the distribution of rewards to users of DeFiXy Protocol's DeFi features and the p2p marketplace. The β-stake will go live when the main features of DeFiXy Protocol are integrated.
Three factors play important role in determining a user's rewards, they are;

- The duration for which the user has assets staked.
- If the staking was done with a lockup for a duration of time or not.
- and the users asset blend ratio β_r. This is determined from the percentage of the user's assets that is DeFiXy Protocol's native token. When a user holds some native tokens, such a user enjoys an increasing rewards rate until the maximum rate r_{max} is reached.

The staking rewards follows the given model:

$$Reward_{\beta} = \frac{N_{DFX}t}{100} . \frac{r_{\beta}(t)}{365.25} \tag{2.3}$$

where N_{DFX} is the amount of tokens staked by a user and, r_{α} is the annual staking rewards.

The α-stake rewards $r_\alpha(t)$ is a function of time, it is given by Eqn 2.2 and Figure 2.1.

$$r_\beta(t) = \begin{bmatrix} r_1 \\ r_2 \\ r_3 \\ \vdots \\ r_{N-1} \\ r_N \end{bmatrix} = \begin{cases} r_{\beta 0}.f_1(t,\beta_r,\tau_1) & 0 < t \leq T_1 \\ r_{\beta 0}.f_2(t,\beta_r,\tau_2) & T_1 < t \leq T_2 \\ r_{\beta 0}.f_3(t,\beta_r,\tau_3) & T_2 < t \leq T_3 \\ \vdots & \vdots \\ r_{\beta 0}.f_{N-1}(t,\beta_r,\tau_{N-1}) & T_{N-2} < t \leq T_{N-1} \\ r_{\beta 0}.f_N(t,\beta_r,\tau_N) & T_{N-1} < t \leq T_N \\ r_{\beta max} & t > T_N \end{cases} \tag{2.4}$$

Where $r_{\beta 0}$ is the nominal interest/reward rate. It's value is not constant, it is dependent on (proportional to) the dynamic demand-supply factor ($\frac{\delta D}{\delta S}(t)$) of the asset.

$T_1, T_2, T_3, \ldots, T_{N-1}, T_N$ are the different lockup threshold periods.

The set of functions $f_i(t,\beta_r,\tau_i)$ are the rewards multiplier functions, they are linear and are designed such that the following conditions are met:

$$\begin{gathered} f_1(T_1,\beta_r,\tau_1) = f_2(T_1,\beta_r,\tau_2) \\ f_2(T_2,\beta_r,\tau_2) = f_3(T_2,\beta_r,\tau_3) \\ f_3(T_3,\beta_r,\tau_3) = f_4(T_3,\beta_r,\tau_4) \\ \vdots \\ f_{N-2}(T_{N-2},\beta_r,\tau_{N-2}) = f_{N-1}(T_{N-2},\beta_r,\tau_{N-1}) \\ f_{N-1}(T_{N-1},\beta_r,\tau_{N-1}) = f_N(T_N,\beta_r,\tau_N) \end{gathered} \tag{2.5}$$

$$f_1'(t_1,\beta_r,\tau_1) < f_2'(t_2,\beta_r,\tau_2) < f_3'(t_3,\beta_r,\tau_3) \ldots < f_{N-1}'(t_{N-1},\beta_r,\tau_{N-1}) < f_N'(t_N,\beta_r,\tau_N) \tag{2.6}$$

And the end of the piece pise function is such that $r_\beta(t)$ converges to the nominal value on the left and to the maximum value on the right.

That is,

$$r_{\beta 0}.f_1(t_0, \beta_r, \tau_1) = r_{\beta 0}$$

Which implies that

$$f_1(t_0, \beta_r, \tau_1) = 1 \tag{2.7}$$

and,

$$r_{\beta 0}.f_N(T_N, \beta_r, \tau_N) = r_{\beta max} \tag{2.8}$$

where t_0 is the time at which assets are deposited/staked and T_N is the lockup time required to reach maximum rewards rate.

An attempt to represent $r_\beta(t)$ graphically is shown in figure 2.2. It shows three different categories of users, as described below:

- **Users with zero native tokens:** In this case, the blend ratio of the user is $\beta_r = o$. If the user lent out assets, such a user will enjoy an interest rate that is only dependent on the dynamic demand-supply factor of that asset. The interest rate of the user will follow the nominal value the asset.
- **Users with native tokens but no lockup:** In this case, the blend ratio of the user is $\beta_r > o$ but the lockup $\tau = 0$. This user will enjoy interest/rewards rate the follow $r_\beta(t)$. But if the user withdraws the native tokens before any particular threshold period, the interest rate resets to the previous threshold value for already accumulated rewards and future rewards will be based on the nominal value.
- **Users with native tokens and lockup:** In this case, the blend ratio of the user is $\beta_r > o$ and the lockup period $\tau = T_i$. This user will enjoy interest/rewards rate that is equal to the value at $t = T_i$, that is, the maximum value of $r_\beta(t)$ in the range t_0 to T_i.
  Even though the user had the assets locked up, the native assets can still be withdrawn before the lockup period elapses. If this happens, the user's interest rate resets to follow $r_\beta(t)$ up till the previous threshold value for already accumulated rewards and future rewards will be based on the nominal value.

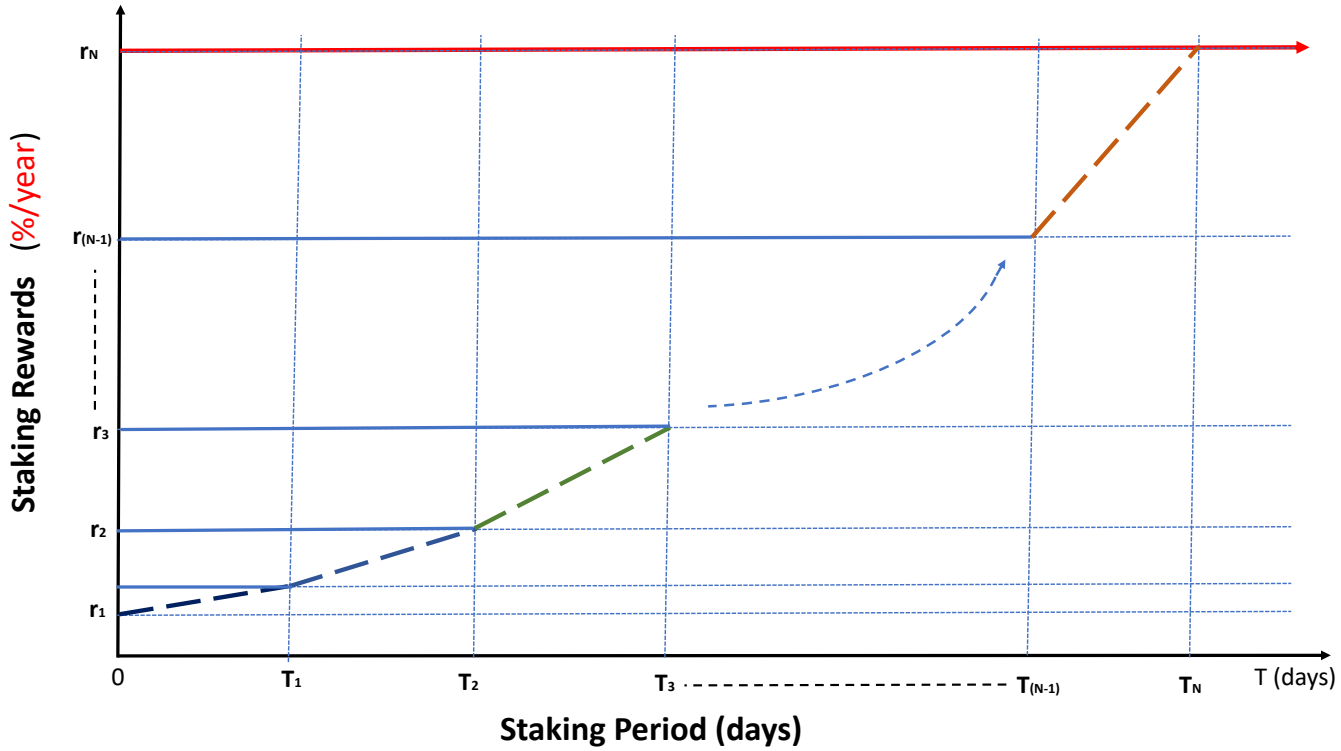

Figure 2.2.: Staking Rewards for β-stake

This generalizes the rewards structure of users of DeFiXy Protocol's features. Depending on all the factors represented, users will get rewarded in DeFiXy protocol's native token according to one of the described categories.4

When a user deposit assets into DeFiXy Protocol, the rewards/interests follows the logic in Figures 2.3.

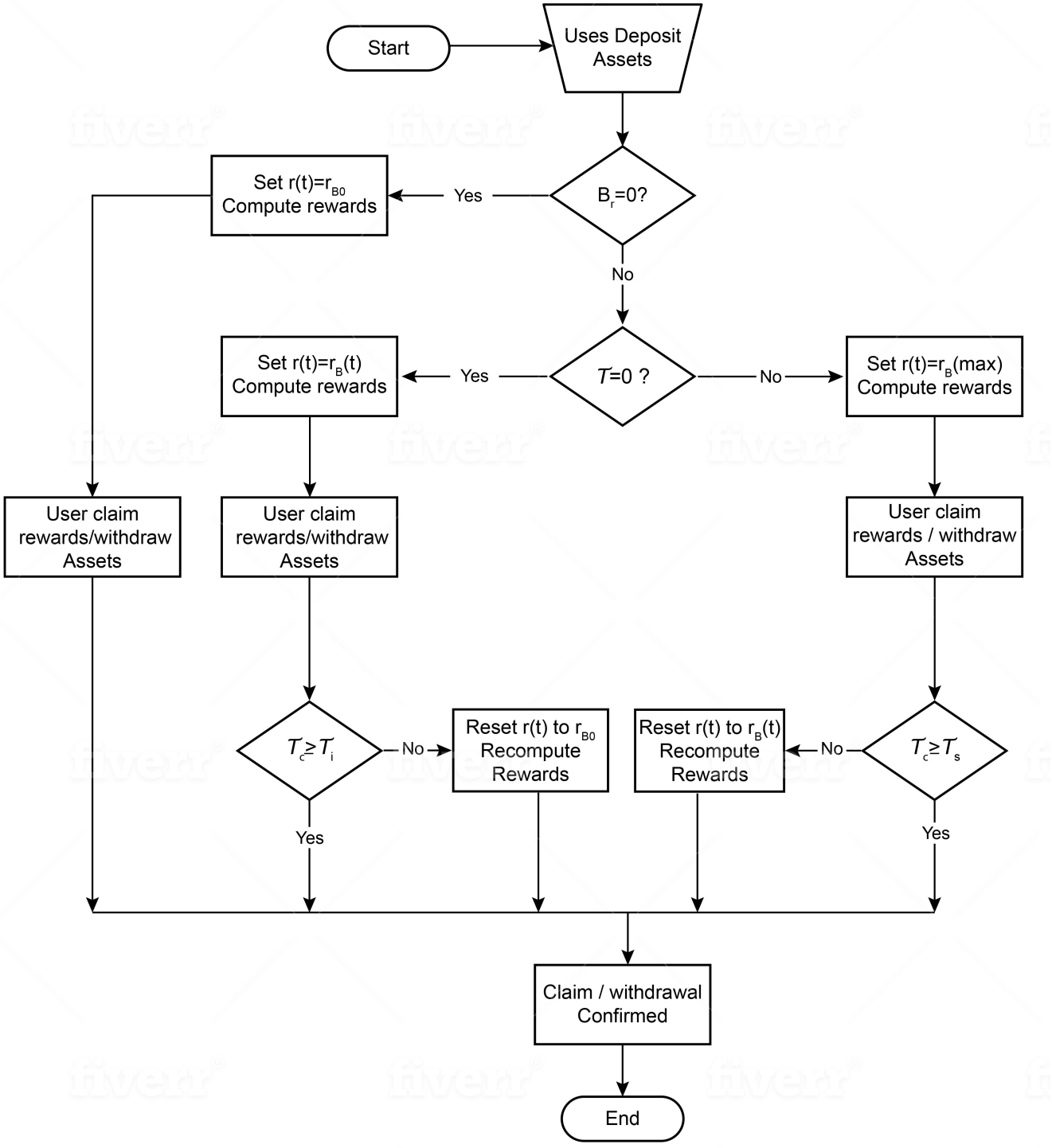

Figure 2.3.: β-stake Rewards/Interest Logic

2.3. DeFi Service

Bitcoin will probably be worth more than 1,000,000 USD and Ethereum will probably be worth more than 100,000 USD one day. Same thing can be said about so many other valuable crypto assets, then why in god's name would you want to sell those valuable assets of yours?
Let's try to understand this from a different angle. If you have a rare stone that worth a lot now and it is likely going to be 100 times it's current value in say 10 years. If you are in need of a couple of thousand dollars, my question is, would you sell your rare stone now or would you simply use it as a collateral to secure a short-term loan that can be paid off within a short period of time? I am sure that most people will go for the latter option.

DeFi has made this possible in the crypto space, you no longer have to sell those valuable crypto-assets every time you have an emergency or a short-term need. With the use of DeFi services, you can now secure short-term and even long-term loans at competitive rates.

DeFi projects allow People to deposit funds (crypto assets) into the system and in turn, they earn interest from those funds being put to work. This is similar to how people earn interest in bank savings accounts. People can also take out collateralized loans for which they pay the system interest.

2.3.1. The Problem - DeFi

Two things can be said about the DeFi systems;

Firstly, users that deposit their assets to the platform earn more in interest than what they would from a traditional bank. This is great thing right? People get to earn more on their crypto assets by using DeFi services, this attracts people to the space.

Secondly, users that take out loans from the system often pay way more interest on the loans taken out as compared to traditional banks. This is definitely a problem that most DeFi projects do not address. To attract more borrowers to the space, the interest paid by borrowers need to be comparable, if not lower than those paid for an equivalent loan amount in the traditional banking system.

2.3.2. The Solution - DeFi

To ensure that depositors of funds enjoy great ROI and the borrowers don't pay more than what they would in traditional banking systems, DeFiXy Protocol has developed a **Dual-rewards DeFi System**. The system is designed to ensure that both categories of users enjoy competitive rates.

DeFiXy Protocol's **Dual-rewards DeFi System** works in such a way that both the depositors (lender) and the borrowers enjoy two dividends. It uses a hybrid-β-stake model called the **β-Stake $\emptyset$-Interest model** (Beta-stake/Null-interest model).

The **β-Stake $\emptyset$-Interest model** is given by:

$$I = I_{0(\beta/\emptyset)} \pm \sum_{t_0}^{t_L} R_{0(\beta/\emptyset)} F_{Ni}(t, \beta_r, \tau) \tag{2.9}$$

Where $I_{0(\beta/\emptyset)}$ is the nominal interest rate for both the lenders and borrowers, $R_{0(\beta/\emptyset)}$ is nominal rewards rate and,$F_{Ni}(t, \beta_r, \tau)$ is the piece pice function defined for the different threshold for the β-Stake $\emptyset$-Interest model.

$F_{Ni}(t, \beta_r, \tau)$ has similar properties as those described in Equations 2.5 to 2.8

For a depositor (lender), the plus is used, hence, such a user's ROI grows over time (adding effect). For the borrower, the minus sign it used, such a user's interest rate decreases over time (nulling/canceling effect).

As this is a hybrid-β-stake model, the rate at which a user's interest increases or decreases, as the case may be is dependent on β_r and τ.

2.4. P2P Marketplace

So back to one of Mark Cuban's response; What makes a commodity or asset easy to use or friction-free or widely adopted? Of course, how easily accessible the asset is plays a big role on its adoption. Think of it, merchants that have online outlets do better than those that only operate out of physical locations. Buyers will likely patronize items that a readily available at online stores like Amazon and Ebay than those that can only be obtained at physical locations.

Similar trend can be seen in the blockchain industry, crypto-assets that are listed or can be obtained from many exchanges see more trading volumes and are more likely to be adopted by the community than those with low listings.

Just as p2p ecommerce stores like Amazon and Ebay are helping bridge the gap between people in need of goods and services and people who have or can provide such goods and services, P2P marketplaces in the crypto space are helping bridge the gap between people and the use crypto assets.

Though, p2p exchanges are still a growing trend in the crypto space, they are advantageous as they help serve people who for any reason, have no access to other form of exchanges and are typically more cost effective as compared to centralized exchanges and even custodian-based exchanges.

2.4.1. The Problem - P2P Marketplace

Though p2p exchanges seem to be good options for trading crypto-assets, there are still a lot of improvements needed. Some of these include:

Most p2p exchanges that support Crypto-Fiat trading do not have built-in Fiat wallets. As such, remittance for such trades are still done outside the exchange. For this reason, the process is mostly manual, the buyer has to manually confirm payment and the seller has to manually confirm receipt. This is not exactly the idea that comes to mind when you think of a friction-free process or an easy to use process right?
With the remittance of trades been required to be done outside the exchange, usage becomes more complicated especially to first time users and also pose other concerns and issues.

Another problem that can be observed in p2p exchanges is that most p2p exchanges do not operate as a free marketplace. To better understand what we mean, think of Ebay, anyone can post a trade or bid for any item or commodity and buyers can buy freely and still enjoy trade protection. This described what we mean by free marketplace. In the crypto space, this is not the way p2p exchanges work. Typically, only a handful of assets are support. Trading unsupported assets is impossible.

2.4.2. The Solution - P2P Marketplace

To ensure that traders enjoy an easy to use, friction-free experience and are able to trade any verified crypto asset or product, DeFiXy Protocol has developed a **Dual-Layer Amazon-like P2P Marketplace**. DeFiXy Protocol's **Dual-Layer Amazon-like P2P Marketplace** integrates a fiat layer and a crypto layer. In this way, remittance of trade are done within the platform, the fiat layer will support different fiats and crypto layer would support different crypto assets and products.

As it is our mission to present to our users, a free marketplace for cryto assets, we have modelled our p2p marketplace after ecommerce stores such as Amazon. On our **Dual-Layer Amazon-like P2P Marketplace**, traders can list and trade any verified asset across different blockchain and against any supported fiat.

The main feature that our **Dual-Layer Amazon-like P2P Marketplace** is that users with staked assets can create mini-kiosk within the platform. Such users can serve as brokers and handle large trading activities for other users. One advantage of this is that a user can create and offer other users any kind of crypto product. For example, an ICO mini-kiosk can be created which allows users who want to participate in an ICO but cannot due to region restriction to still partipate though the ICO mini-kiosk.

A simplified logic that shows the process that takes place when a user buys/sells an crypto asset or product through a mini-kiosk is represented in Figure 2.4.

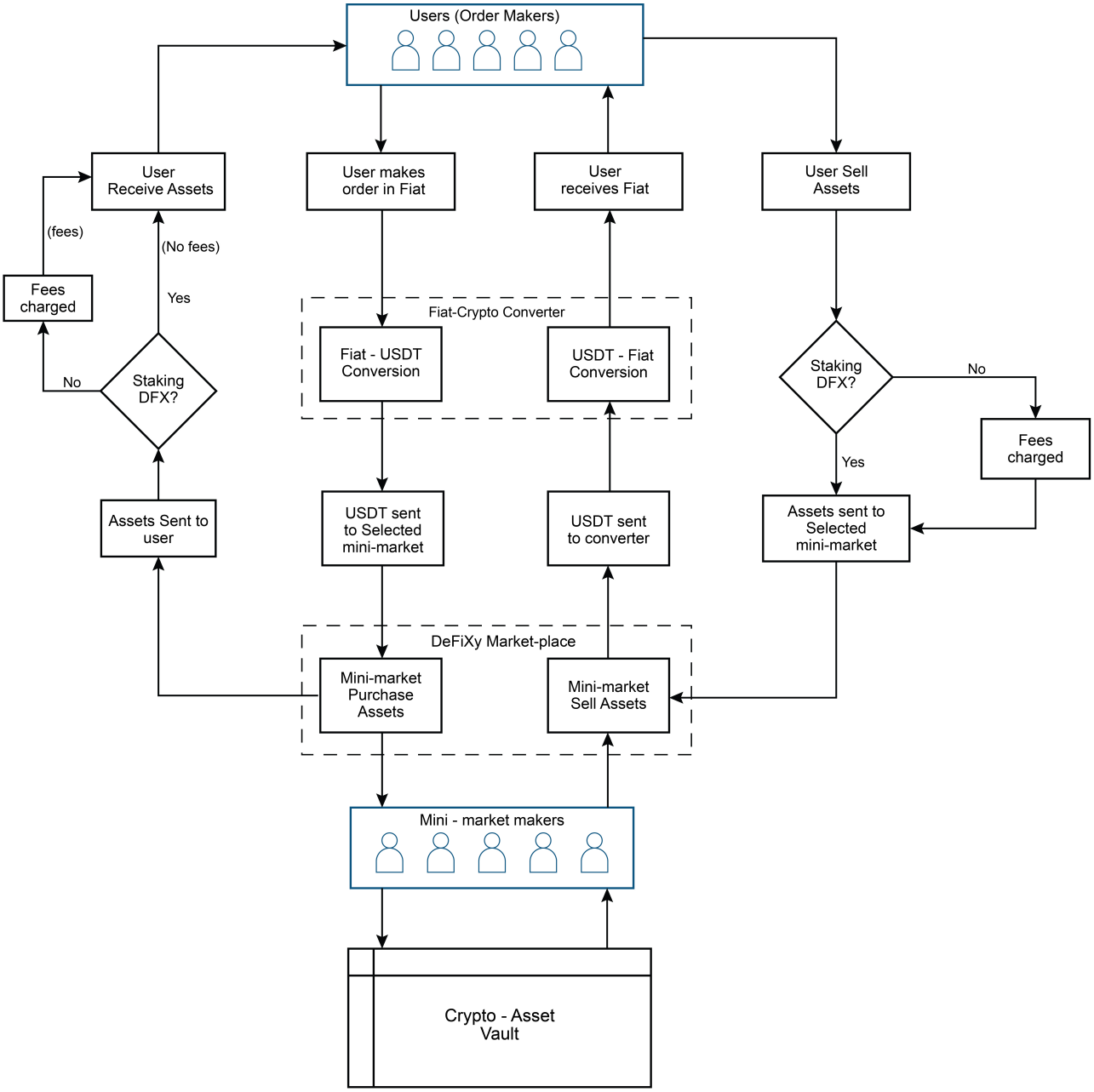

Figure 2.4.: P2P Marketplace logic

3. Tokenomics

3.1. What to expect - Tokenomics

In this chapter, DeFiXy Protocol's tokenomics is presented. The distribution of the token and its value proposition is also covered

3.2. DeFiXy Protocol Token

DeFiXy protocol's functionality is heavily dependent on its native token. As such, the token is a utility token. The token details can be found in Table 3.1.

The total supply of DeFiXy token is 100,000,000 (100 million), and are pre-mined which means

Token Name:	DeFiXy
Token Ticker:	DFX
Token Type:	ERC20
Decimals:	18
Token Contract:	0x81bc8af0f2cbd17f97306cbe7bea5a5927a0646a

Table 3.1.: Token Details

that no additional token can be created.

3.3. Token Distribution

The distribution of DeFiXy is shown in Figure 3.1.

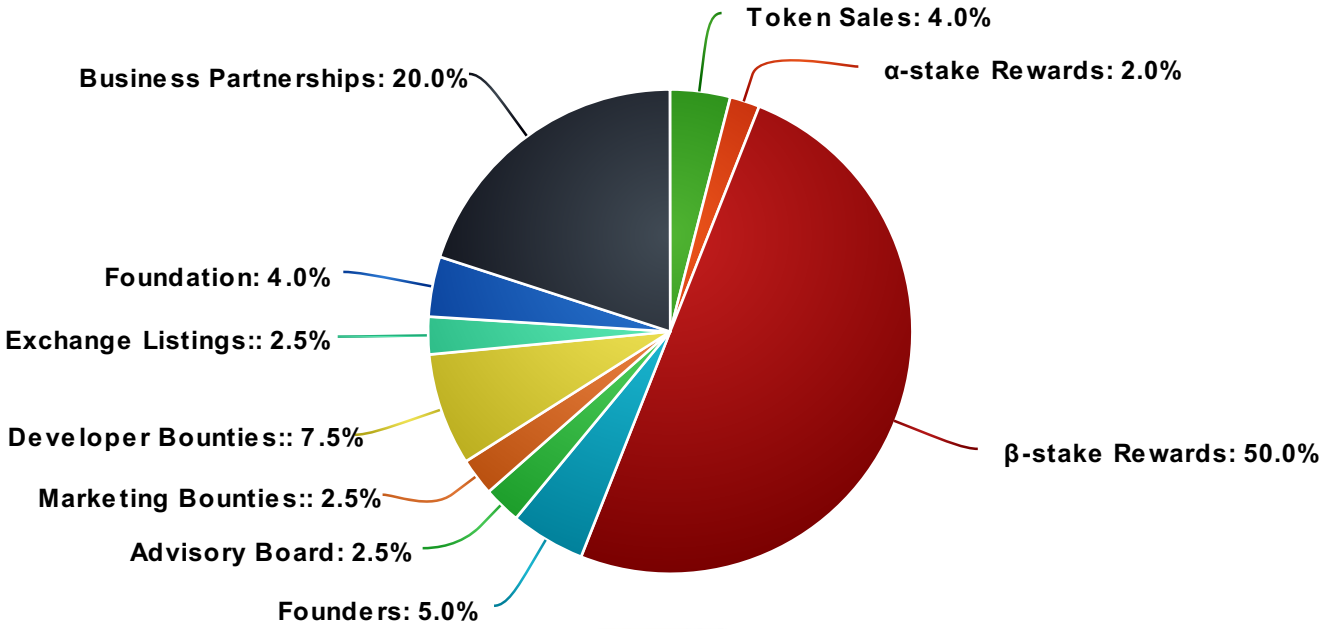

Figure 3.1.: DeFiXy Protocol's Token Distribution

Table 3.2 gives a detailed explanation of the use of each distribution allocation.

3.4. Possible FAQs - Token Distribution

There are questions that our early supporters and the community might have about the distribution and supply. We have taken our time to answer some of these questions and we will keep updating it over time.

1. **How will the token sales be conducted?**
   Where and how the token sale will be conducted will be determind and announced as soon as possible
2. **How many rounds of sale will there be?**
   There will be only one round of sales done.
3. **Was there any seed investor or private sale?**
   There were no seed investors and no private sale.
4. **What would be the sales price of DFX?**
   The token sale will be done at a fix price, which will be announced as soon as possible.
5. **What is the circulating supply?**
   The initial circulating supply is 40,000,000 DFX. That is, the sales allocation.
   The real-time circulating supply is as follows:

$$DFX_{circulating} \approx 40,000,000 + R_{\alpha-Stake}$$

Where $R_{\alpha-Stake}$ is the α-stake rewards claimed.

This is an approximation of the circulating supply before DeFi services and p2p Marketplace trading are integrated. It is an approximation because it does not account for the residual DFX that might be added to the circulating supply through exchange listing competition airdrops.

6. **Is the team's allocation vested?**
   Yes, the team's allocation is vested. The earliest release is after the integration of DeFi services.

Allocation	Supply (M)	Description of Allocation	Lockup/Vesting
β-stake Rewards	50.00	**Dual-rewards DeFi System** and **Dual-Layer Amazon-like P2P Marketplace** funds. Distribution begins when live	Lockup/Vesting
Business Partnership	20.00	Funds set aside for major partnership. Max. of 1% distributed to a major partner. 2 years vesting after each distribution	Lockup/Vesting
Developer Bounties	07.50	Funds set aside to incentivize potential developers. Max. of 0.05% can be received	Lockup/Vesting
Founders	05.00	Funds set aside for founders. Locked up, vesting for 5 years	Lockup/Vesting
Token Sales	04.00	Tokens sold to early supporter. This is the only sales made	No lockup, distributed
Foundation	04.00	Funds for DeFiXy Protocol's foundation, Vesting 10 years	Lockup/Vesting
Advisory Board	02.50	Funds for advisors, 5yrs vesting starts at distribution	Lockup/Vesting
Exchange Listings	02.50	Funds for exchange listing competition. Locked up	Lockup/Vesting
Marketing Bounties	02.50	Lockup, max. of 1% released at a time and only if necessary. Community votes	Lockup/Vesting
α-stake Rewards	02.00	No lockup, distributed to stakers over the staking period	No lockup, distribution started

Table 3.2.: Token Allocation Breakdown

3.5. DeFiXy Token Value Proposition

As earlier stated, The DeFiXy protocol's token is a utility token that powers DeFiXy protocol, it's value proposition are as follows:

1. **Mini-Market Categorization Factor $C.F$:**
   One of the main feature that DeFiXy Protocol offer our users is a platform where p2p trading/bartering can be done freely, seamlessly and at significantly low cost. The cool thing about the p2p market-place is that users can also setup and customize their own mini market-place within our protocol. The size of a mini market-place is determined mainly by the size and number of transactions allowable within a given period, this is determined based on the amount of DeFiXy tokens the mini market-place owner has staked or are delegated to it, among other factors.
   A mini market-place that has a large amount of DeFiXy tokens staked/delegated to it will have more transactions capacity, hence such a kiosk owner gets a bigger cut of the total transaction fees accumulated on DeFiXy protocol.

2. **Computation of the Collateral Blend Ratio (β_r):**
   As we can recall, the interest rate of a borrower and the ROI of a lender is heavily dependent on the borrower/lenders collateral blend ratio (β_r) and the lockup time τ.
   A borrower who is holding or staking a large amount of DeFiXy tokens has a larger β_r value hence, pays a lower (ever decreasing) interest rate on loans as compared to one who is holding or staking few amount of DeFiXy tokens.
   Similarly, a lender with large amount of DeFiXy tokens held/staked has a higher β_r value hence, enjoys a higher return on their investment.

3. **Transaction Fees:**
   The fees for transactions carried out on DeFiXy Protocol can also be settled using DeFiXy tokens. users can decide to have the transaction fees other supported assets but when DeFiXy token is set for transaction fees, the user enjoys a way lower transaction cost.

4. **DeFiXy Tokens Buyback**
   As the DeFiXy protocol's **Dual-rewards DeFi System** and **Dual-Layer P2P Market-place** mechanism is dependent on the non-depletion of the β-stake allocation, DeFiXy protocol will be conducting periodic token buybacks using a significant portion of profit made. All buybacks will be returned to the β-stake vault.
   In this way, the β-stake vault never gets depleted and the maximum circulating supply is never reached.
   Hence, the following expression is always true:

$$DFX_{circulating}(Max) = \lim_{t\to\infty} DFX_{circulating}(t) < DFX_{Total}$$

3.6. Allocation of Funds Raised

The allocation of funds raised from the sales will be utilized as shown in Figure 3.2.

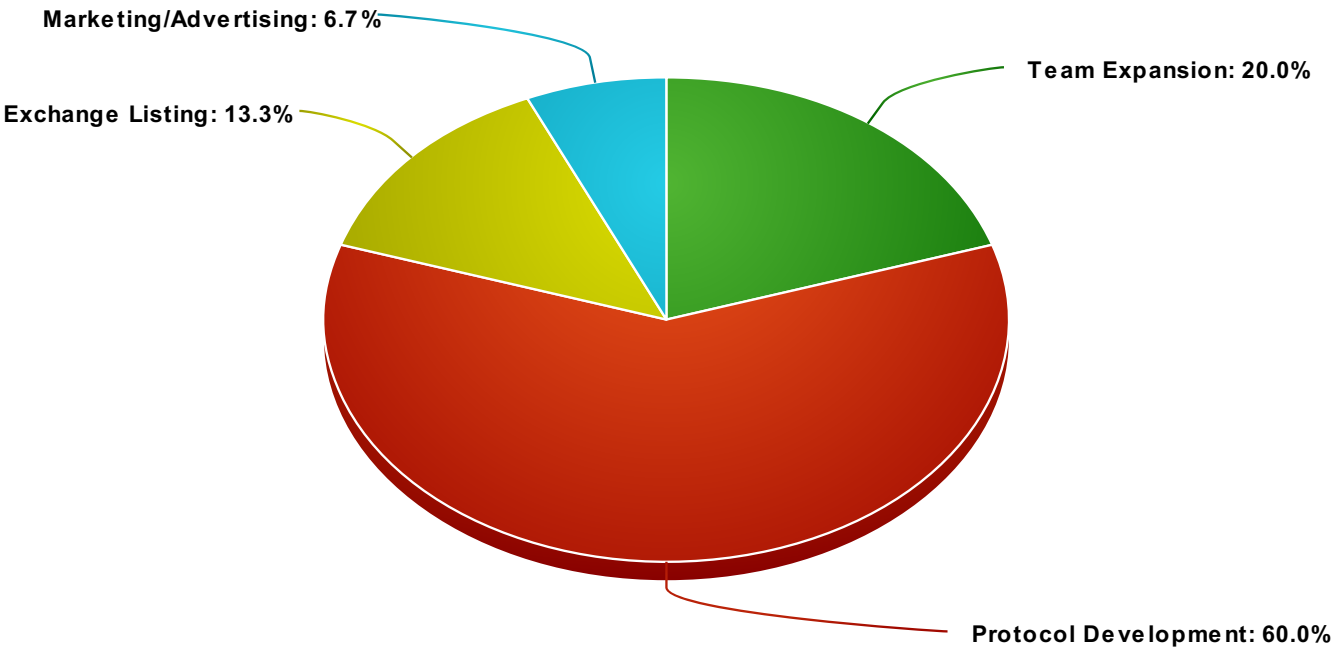

Figure 3.2.: Allocation of Funds

80% of all funds would be dedicated to developing DeFiXy protocol. Not more than 20% of this is used to expand the team while the remaining 60% or more is utilized on actual development.

The remaining 20% is allocated towards exchange listing cost and marketing.

4. Timeline

4.1. What to expect - Timeline

In this chapter, DeFiXy protocol's roadmap and timeline is presented. As our whitepaper is a living documents, updates will continually be made on all the document including the roadmap with the objective of completing each milestone on or before the said time.

4.2. Timeline discussion

DeFiXy protocol's timeline is presented in figure 4.1, all the milestones are represented in time slots, each milestone's time slot represents the time interval in which the team is working on a particular group or features or update. The upper limit of the time slots represents when the tasks/update is completed or the feature is launched.

Below is a more detailed explanation of each milestones represented in figure 4.1

1. **Market research and Analysis**
   To better understand the challenges associated with the use of blockchain solutions and how DeFiXy protocol would come in, the team did extensive market research. The aim of the research is to see if people that are potentially interested in owning crypto assets find it to complicated, even to acquire.

   The outcome shows that a lot of people find it complicated. Many people stay away due to many reasons, from not knowing where to buy from or where/how to store their crypto assets to the fear of being scammed by trading platforms.

   Truly, for the use of crypto assets to be massively adopted, there need to be blockchain solutions and crypto trading platforms that limits these challenges.
2. **Concept and Technology Design**
   After studying these challenges, we began with analyzing and developing ways to reduce or remedy the challenges. This led us to designing solutions that are not just going to change the way crypto assets and products trade but are also going to drastically reduce the challenges faced by users of blockchain solutions and assets.
3. **α-stake Implementation**
   Our α-stake mechanism is designed to give incentives to the early supporters of Defixy protocol. The α-stake is designed such that stakers that are committed for longer periods are rewarded with higjer rewards than those that commit for short period of time.

   This stage on our timeline indicate the period spent on implementing the α-stake mechanism.
4. **α-stake Testing and Launch**

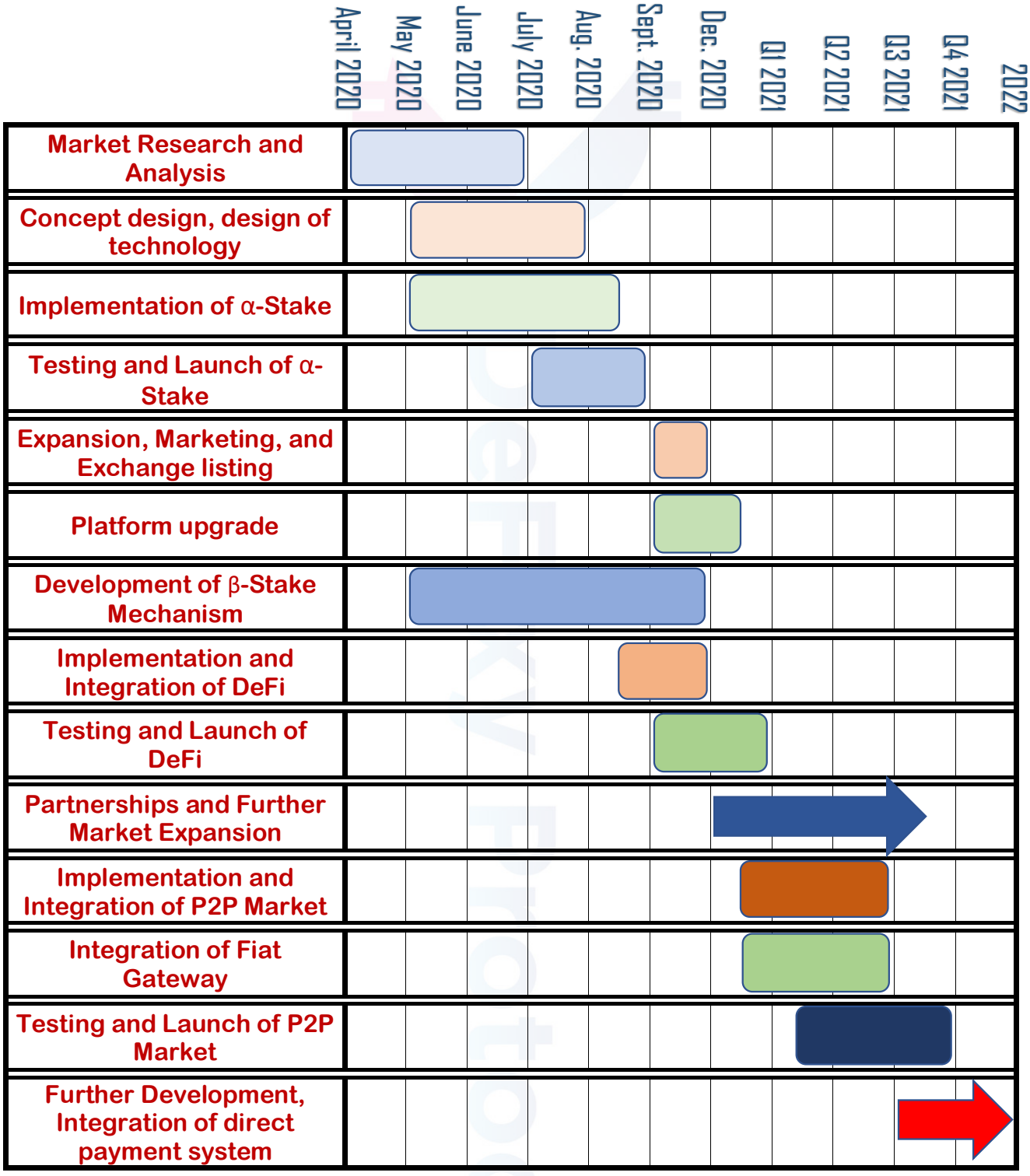

Figure 4.1.: Project Timeline

Implementation of the α-stake was followed by testing. At the end of the testing period, α-stake was launched.

5. **Team expansion, Marketing and Exchange Listing**
   Our main focus at DeFiXy protocol is to grow rapidly in technology and in adoption, for these

reason, we will be investing resources on expanding our team, marketing and also exchange listings. This commenced right after α-stake went live.

6. **Platform Upgrade**
   With great team and resources put together, DeFiXy protocol would do an upgrade of the platform in preparation for the integration of DeFi features and our p2p marketplace.

7. **β-stake Mechanism Development**
   Our β-stake Mechanism is the algorithm on which the DeFi service DeFiXy protocol operates on. This has been in development since we started working on the α-stake Mechanism (α-stake is a simplified implementation of the β-stake). To launch a customer centred DeFi feature, our β-stake mechanism as to be completed. As such, resources will be put to work to get this done.

8. **DeFi Implementation/Integration**
   DeFi Implementation and Integration will be done almost in parallel with the continual development of β-stake Mechanism. They are in a way, opposite faces of a coin. As our DeFi service is one that has not been implemented by any existing DeFi project/platform and it is one of DeFiXy's major feature, we intend to put all hands on deck to get this launched within months.

9. **DeFi Testing and Launch**
   Implementation of the DeFi feature will be followed with months of series of testing after which it will go live.

10. **Partnerships and Further Market Expansion**
    For rapid growth to be possible, partnership is essential. DeFiXy protocol plan on collaborating with many of the already established blockchain project.

11. **P2P Marketplace Implementation/Integration**
    Our second feature, that gives us an edge is our dual-layer Amazon-like marketplace. It incorporates a fiat-layer together with a crypto-layer. Our mission is to bridge that gap between Fiat economies and the crypto space, as such, the solution we build is focused on this. After launch of DeFi, the team will proceed to development of our Marketplace.

12. **Fiat Gateway Integration**
    The marketplace allows fiat-crypto direct transactions. As such, integration of Fiat payment gateways is Paramount. This will go slightly in parallel to the development of the marketplace.

13. **P2P Marketplace Testing and Launch**
    Testing will follow after development which will then be followed by the launch of the marketplace feature.

14. **Future developments/Integration of Direct Payment System**
    Future development will continue to meet the demands of this dynamic space. Integration of debit card and other direct payment solutions will also be embarked on.

Appendices

A. Actual computation of α-stake

Computation of the rewards accumulated by stakers under the the α-stake model is done every minute. The expressions used in our algorithm are given here.

A.1. α-stake Rewards Model in Minutes

$$Reward_{\alpha}(t_{min}) = \frac{N_{DFX}\, t_{min}}{100} \cdot \frac{r_{\alpha}(t)}{525,960} \tag{A.1}$$

where N_{DFX} is amount of tokens staked by a user, r_{α} is the annual staking rewards and, t_{min} is the staking period expressed in minutes

A.2. α-stake Rewards Rate

The dynamic rewards rate of the α-stake model in minutes is given by:

$$r_{\alpha}(t_{min}) = \begin{cases} 15.00\left[1 + \dfrac{0.25}{10,080}t_{min}\right] & 0 < t \leq 10,080 \\ 15.00\left[1.25 + \dfrac{0.5}{10,080}(t_{min} - 10,080)\right] & 10,080 < t_{min} \leq 20,160 \\ 15.00\left[1.75 + \dfrac{1.25}{10,080}(t_{min} - 20,160)\right] & 20,160 < t_{min} \leq 30,240 \\ 45.00 & t > 30,240 \end{cases} \tag{A.2}$$

4.2.1. Single expressions for computing *alpha*-stake rewards

Equations 1 and 2 can be combined to give a single expression that can be used to compute the rewards, this is given by:

$$Reward_{\alpha}(t_{min}) = \begin{cases} \dfrac{N_{DFX}\, t_{min}}{3,506,400}\left[1 + \dfrac{0.25}{10,080}t_{min}\right] & 0 < t \leq 10,080 \\ \dfrac{N_{DFX}\, t_{min}}{3,506,400}\left[1.25 + \dfrac{0.5}{10,080}(t_{min} - 10,080)\right] & 10,080 < t_{min} \leq 20,160 \\ \dfrac{N_{DFX}\, t_{min}}{3,506,400}\left[1.75 + \dfrac{1.25}{10,080}(t_{min} - 20,160)\right] & 20,160 < t_{min} \leq 30,240 \\ \dfrac{3N_{DFX}\, t_{min}}{3,506,400} & t > 30,240 \end{cases} \tag{4.3}$$

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