

# CRYB

Crypto-based social media network

# Abstract

Cryb is a crypto-based Social network where beginners, crypto enthusiasts and analysts exchange information, communicate and rate assets according to their investment attractiveness, share price forecasts, build portfolios and professional networks.

Cryb provides a single space where users can securely exchange messages and transactions in a single app. The platform allows portfolio management and forecasts of independent analysts, traders, investment funds, hedge funds and private investors.

Cryb is a whole ecosystem platform, connecting the users, sharing the latest crypto news, to help make better effective decisions and obtain valuable, maximally objective information, due to the high uncertainty of the crypto-currency market and the new digital economy.

Cryb's main priority is to support the development of the community. Cryb rewards social activity, according to a fair, complex system, which objectively reflects the contribution of each participant. The actual section of the public opinion is stored in the blockchain, thereby ensuring the openness and invariability of the results obtained.

# Disclaimer

This document is intended to describe the current plans of Cryb to develop its business and its CRYB tokens. Nothing in this document should be construed as a guarantee or promise. The document outlines our current plans, which may change at our discretion, and the success of which will depend on many factors beyond our control, including market factors, factors in the crypto-currency industries and others. Any statements about future events are based solely on our analysis of the tasks described in this document, and our analysis may not be correct. The acquisition of FNT tokens is subject to many potential risks. Buyers of CRYB tokens may lose all or part of the cost of the funds used to purchase CRYB tokens.

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# 1 Our mission: why do we create Cryb

Our mission is to ensure the existence of a single ecosystem, where all members of the crypto industry: crypto enthusiasts, independent analysts, private investors, traders, investment funds and other crypto-institutions will be able to trade, securely exchange their opinions, receive information, discuss and propose strategies and forecasts.

We wish to establish a significant environment for the development and the exchange of information, between professionals and newcomers, in the world of the digital economy. Our point is to provide an opportunity for each user to make an intellectual contribution to the formation and development of tools and assess the market of crypto-currencies.

Each participant in the platform will be rewarded for activeness, the contribution of the collective rate, forecasting and managing its portfolio.

The platform will be a valuable source of information, not only to the community but also to investors and investment funds. The objective and useful commitment of each user will benefit the crypto community.

## 2 Introduction

Cryb is a platform that:

- 1) message and transact to all users of the ecosystem;
- 2) performs as a social community for crypto enthusiasts, traders and investors, where everyone can share their comments, opinions, forecasts, rates and portfolio returns;
- 3) allows users to make forecasts and analysis of the market;
- 4) allows creating a benchmark for cryptocurrencies;

### 2.1 Platform Description

#### Wallet

Cryb wallet allows cryptocurrency users to safely send, store and retrieve their digital assets. Crypto wallets are an essential tool for buying, trading and selling cryptocurrencies. Traders need them to store crypto securely, as well as to protect and validate transaction information.

#### Messenger

Cryb's secure end-to-end encrypted messaging app will become the communication method of choice for activists, people in the crypto community, and others concerned about privacy.

Cryb is a free, privacy-focused messaging and voice talk app you can use on Apple and Android smartphones and via desktop. All you need is a wallet address and mnemonic phrase to join. You can text or make voice calls with friends, team members and make live streams for community members either one-on-one or in groups, and use emoji reactions or stickers just like in other apps. But there's one big difference: Cryb is private.

#### Social news

Social news is a tool for broadcasting public blogs and articles to large audiences. Social news can have an unlimited number of subscribers. With Cryb users will get all in one platform, where they would be able easily to access all the latest crypto news, comment and share them.

Users will be able to add a discussion group chat to the channel, and subscribers will see a comment button for each post in the channel. Comments show up in a thread of their own and also land in the discussion group to keep everyone in the loop and make it easier for admins to keep the conversation civil.

#### Rate

Cryb offers a rating scale that allows users to rate the investment attractiveness of publicly-traded coins and upcoming projects on a scale from one to ten. Cryb

operates based on public opinion, which comes from thousands of community members. A collective opinion is by far a much better impartial and objective one, than the opinion of a single expert.

Every member of the community can choose several different criteria for evaluating projects and can rate and comment on each selected criteria. The rates are being checked by the moderators and benchmarked, depending on the actual comments and rates given.

Cryb platform provides a tremendous opportunity for projects' genuine evaluation, starting from receiving simple feedback, to assessing a project's attractiveness to the market and drawing up an investment strategy for existing coins, tokens and securities. At the same time, the community gets the opportunity to receive the rewards it deserves, for its analytics, openness and activity contribution.

## Forecast

Cryb provides a timely and representative view of the market expectations. The platform provides the ability to predict assets and tokens movements, track trends and conduct industry analysis within cryptoeconomics. It also enables forecasting on existing crypto-currency indices, and make up your indices.

## Portfolio

Cryb allows users to build and share their active/passive investment portfolios. This unique engagement enables a pool of experts formed in the market. Members of the platform will gain their rewards according to the success of their trading strategies and portfolio returns. Portfolio builders will have the opportunity to expose their trading strategies and publish their crypto-currency portfolios, to gain rewards and increase their followers. Cryb exchange will allow users to copy any preferred portfolio directly to their account, applying the new strategy to their portfolio.

## Community

Cryb is creating and developing a productive community, consisting of people engaged in the cryptocurrencies world. Its unique and genuine system, which objectively reflects the contribution of each participant to the development of the platform, has been created to stimulate the community, and users are being rewarded for every effective action they make. A combination of social network tools together with financial analysis will make Cryb an understandable and reliable source of information.



## 2.2 Definitions

**Trading** - the ability to trade in a variety of digital assets in the exchange platform.

**Project** - Startups, presented on Cryb platform, which is being assessed by the users, according to its attractiveness.

**Rating** - a decentralized quantitative and qualitative indicator for the success and attractiveness of upcoming projects and investment attractiveness of traded coins and securities. Rating is based on a multi-criteria evaluation, given by the platform's users.

**Forecast** - a decentralized prediction by the platform's users, regarding the tokens, coins, industries or markets prospects.

**Discussion** - is created by the users, so every user can create a discussion about his/her or any other Project/Token/Coin.

**Portfolio** - users can create portfolios and share their returns with the community.

**Stake** - allows you to confirm the action by staking tokens, and sending it to the blockchain.

**Burn** - a necessary step for creating a Discussion.

**Contribution points** - encouragement points for the activity on the platform: rating, forecasting, portfolio returns, achievements and ranks.

**Reward** - tokens that are being distributed according to the activity and performance on the platform.

## 3 General Description of the platform

### 3.1 Advantages

**Mathematical model.** The Cryb platform has developed a special mathematical model, which allows conducting a decentralized, collective, multi-criteria evaluation of different projects.

**The source of information.** All projects' detailed information and ratings are viewed by the users, who can study the market's current situation, based on estimates and comments.

**Project rate/moderation.** The platform allows you to get an assessment, conduct a marketing study and predict the popularity of the projects in the future.

**The reward for rate/moderation.** A reward is given to any participant who rates or moderates any asset, depending on the evaluation time, other users evaluation and their role played on the platform.

**Forecast.** The platform presents the forecasts of hundreds of participants, who will help analyze the general trends and moods of the community.

**The reward for the forecast.** Participants who forecast assets get rewards, depending on the forecast's time and accuracy.

**Portfolio building.** The platform allows you to build your own active/passive portfolio. Users can share it with everyone and compete in ROI (return on investment) with other users.

**The reward for portfolio building.** Participants who build portfolios get rewards, depending on their ROI.

**Motivation system.** Cryb has developed a special motivation system for participants, which rewards for their activities on the platform, and is based on a smart balanced inspection system.

**Decentralization.** Each rate, forecast or portfolio change is formed from a set of independent estimates, by using Ethereum Smart Contracts.

**Interaction.** All data on the platform is derived from collective rates and forecasts. The heterogeneity and multidimensionality of opinions and forecasts make it possible to reduce white noise and make rates more objective, while forecasts are more accurate, despite a large number of errors, subjective opinions and outliers.

**Variety of opinions.** The collective mind includes different levels of analysts, with a different set of knowledge, competencies, logic, qualifications, experience and views. Each user is very important for the Cryb platform.

## 3.2 Roles on the platform

**User** - can participate in different activities on the platform.

**Event creator** - can create any sort of event, act as an entrepreneur and take the total costs of creating the event.

**Portfolio builder** - can build a portfolio and get rewards, according to its ROI.

**Rater** - rates projects, estimate them and gets rewards for them.

**Moderator** - checks the informativeness and relevance of the content, made by the users. The moderator also gets rewards.

**Forecaster** - makes forecasts about future events in the financial market and gets rewards, according to the results.

### 3.3 Platform principles

The owners of the projects (ICOs, assets) will fill in the necessary data to the platform, for example their white paper, project description, team, consultants etc. A personal project page is created on the platform for this matter.

Users can choose to participate in any of the roles that affect the possible list of actions performed on the platform. They can follow the project's page, rate and forecast the project's token/coin price.

Users of the Cryb platform will receive rewards, depending on the accuracy of their forecasts, their ROI results on the portfolio, activities on the platform and content moderation.

To improve the quality of the evaluation, a motivation system is provided. It affects the reward of each user. The rater should be more reasonable and precise to make estimates.

**Rater.** Selects or offers its list of criteria for which he submits evaluations to the project and comments on them. He grades the project according to the selected criteria.

**Moderator.** Assesses the rater's review, expressing the degree of his agreement with the evaluations (relevance) and its reasoning (informativeness). This affects the average evaluation of the project and the rater's contribution points.

After each rate, a weighted average estimate is calculated according to the mathematical model. The average weighted value for each criterion is taken into account, including the moderators' estimates and the rating of the project as a whole.

**Forecaster.** Can make its forecast about any event in the market of the tokens, cryptocurrency or other assets, for a certain period. Short-term, medium-term and long-term forecasts are possible up to a certain date.

To compile collective forecasts for a certain period, existing forecasts are selected and interpolation, approximation and extrapolation methods are applied, which is a necessary step to increase the degree of decentralization. Forecasts are dynamically changed and recalculated based on new forecasts. The reward of the predictors depends on the period for which the forecast was made and the accuracy of the hit in real magnitude that occurred in the market.

**Portfolio builder.** Can make its portfolio of different crypto assets and compete on ROI with other members on the platform. In the future, Cryb will allow different types of portfolio building and combine crypto and traditional economy assets.

### 3.4 Rating mechanism

1. Users evaluate the project by rating it and justify their choice with an analytical review.
2. Most rating events won't have an ending date, therefore the rating will be dynamic and change over time.
3. The final rating is calculated according to the Cryb math model.

### 3.5 Forecast mechanism.

1. Users forecast the token/coin price and stake their CRYB tokens.
2. After an event is resolved, the overall crowd forecast and the number of rewards are being calculated.
3. Rewards will be distributed to users according to their contribution level (amount of tokens staked, time of forecasting action, reputation etc.).
4. Users claim their rewards for a particular event.

### 3.6 Portfolio mechanism

1. Every user can create a portfolio and change it over time.
2. Every change is made by staking a fixed amount of tokens and every change is recorded in the blockchain.
3. At every pre-set day ROI of each portfolio is calculated and users get rewards according to their performance.

## 4 Math model

### 4.1 Rating evaluation Methodology

Evaluation takes place according to several user-selected criteria. The ten-point scale is used to make an estimation, where 1 is the lowest score, corresponding to "very bad", and 10 is the highest score, corresponding to "excellent". Raters are provided with a cloud (list) of characteristics for evaluation. There is also an opportunity for offering your criteria, in the "Other" column:

1. Team
2. Advisors
3. Idea
4. Implementation
5. Development stage
6. Business-model
7. Feasibility of the blockchain
8. Feasibility of the token
9. Quantity and quality of provided information
10. Marketing
11. Other

The criteria are intended to create a better perception of structure and convenience. In addition, based on the criteria, it will be possible to collect, process and analyze more information. This will allow projects to rate their weaknesses and strengths.

#### 4.2.1 Rater's evaluation

Each rater, in addition to writing the overview, assigns the values  $c_1, \dots, c_n$  in the range from 0 to 10, corresponding to their estimates for each of the  $n$  criteria. The estimation step is 0.5. The project's evaluation is considered as a weighted average. Thus, if the weight of the  $i$ -th criterion is  $\omega_i$ , then the individual estimation of the project  $P$  is calculated by the formula:

$$G(P) = \frac{\sum \omega_i \cdot c_i}{\sum \omega_i}.$$

Users can set the weight  $\{\omega_i\}$  independently.

If the weight of each analyst is different, i.e. the set of  $\{\omega_{ij}\}$  will correspond to the analytic  $j$ , then the evaluation of the project by this user is considered as:

$$G_j(P) = \frac{\sum \omega_{ij} \cdot c_{ij}}{\sum \omega_{ij}}.$$

### 4.2.2 Rater's assessment weight before moderation

The weight of the analyst's estimation before moderation  $r_j^* = r_j^*(K_j)$  depends on the class

$K_j$ . The class  $K_j \in \{1, 2, 3, \dots, n\}$  is determined based on the historical reputation of the user. Initially, all users are assigned the class  $K_j = 1$ . It increases with the growth of the reputation. The rules for the transition from a class to class are described in Section 7.3.

The value of  $r_j^*$  is calculated as follows:

$$r_j^* = (1 + 0.1 * (K_j - 1)).$$

## 4.3 Accuracy and reputation

### 4.3.1 Raters

The accuracy of the estimated  $j$ -th rater is defined as :

$$A_j = |G_j(P) - S(P)|,$$

where  $G_j(p)$  is the estimation of  $j$ -th evaluation participant, and  $S(P)$  is the rating of the project. We denote the empirical distribution of  $\{A_j\}$  as  $F_T(x)$ . The higher accuracy of the evaluation is, the smaller the value of  $A_j$  is. Thus, the top 1% of the accurate estimates coincides with the first percentile of the distribution  $F_T(x)$ . After each voting, the total reputation of the participant  $\xi_j$  is increased by the value of  $\Delta_j$ , depending on which percentile participant occurred:

$$\Delta_j = \Delta(A_j) = \begin{cases} 100, & \text{if } A_j \leq F_T^{-1}(0.01) \\ 75, & \text{if } F_T^{-1}(0.01) < A_j \leq F_T^{-1}(0.05) \\ 50, & \text{if } F_T^{-1}(0.05) < A_j \leq F_T^{-1}(0.1) \\ 50(1 - 0.1k), & \text{if } F_T^{-1}(0.1k) < A_j \leq F_T^{-1}(0.1(k+1)), \quad k = 1, \dots, 9 \end{cases}$$

Category  $K_j = n$ , if  $500(n - 1) \leq \xi_j < 500n$ ,  $n = 1, \dots, n$ .

The accuracy of the  $k$ -th moderator is determined in a similar way:

$$D_k = |E_k(R_j) - \Phi(R_j)|$$

The total reputation of the participant  $\xi_k$  is increased by the value  $\Delta(D_k)$ .

### 4.3.2 Forecasters

Let  $H$  be an event predicted by  $M_H$  forecasters. We denote the corresponding forecasts as  $F_i(H)$ ,  $i = 1, \dots, M_H$ . We denote the realization of the event  $H$  by  $F^*(H)$

. Thus, the prediction of the forecaster  $i$  is more accurate when the value of the loss function is smaller :

$$L_i(H) = |F_i(H) - F^*(H)|.$$

The overall reputation of the forecaster depends on the accuracy of the forecast. After each forecast, it increases by  $\xi_i = \Delta(L_i)$ , where the operator  $\Delta$  is defined in Section 7.3.1

## 4.4 Rewards

### 4.4.1 Raters

The reward for the rater is influenced by:

- 1) the average assessment of analytical review by moderators  $I(R_j)$ ;
- 2) his reputation (more precisely, class  $K_j$ );
- 3) time of assessment (in the case of the ICO)  $t_j$ ,  $t_j \in \{1, 2, \dots, n\}$ , which depends on the number of days it took the participant to vote since the evaluation started.

The changed weight of the analyst's assessment for the calculation of the reward

$r_j^{**}$  :

$$r_j^{**} = (1 + 0.1 \cdot (K_j - 1)).$$

Let the total sum of all  $T$  rewards for the analyst be equal to  $X$ . Each participant gets his share of  $p_j$ ,  $\sum p_j = 1$ .

According to the rules, each participant receives a reward for the participation in evaluation and, with all other variables equal, the reward is greater, when the  $I(R_j)$  is smaller. The list of voting participants is ranked from the minimum value of  $I(R_j)$  to the maximum value. The participant is assigned a weight corresponding to his place in the ordered sample. The assignment is determined by the formula of exponentially declining weighted function:

$$n_j = \lambda^{(j)}(1 - \lambda)/(1 - \lambda^T),$$

where  $(j)$  is the place of the  $j$ -th participant,  $T$ - is the total number of participants, and  $\lambda < 1$ . These weights are basic in calculating the final rewards. The weight  $n_j$  is normalized to the reputation class  $K_j$  and the number of days elapsed since the beginning of voting (in case of ICO and market forecast):

$$m_j = n_j \cdot r_j^{**} \cdot (1 + 0.025 \cdot (5 - t_j))$$



We define  $p_j = \frac{m_j}{\sum m_j}$ . then each voter receives  $p_j \cdot X$ .

#### 4.4.2 Forecasters

The reward of the forecaster, in addition to the accuracy of his assessment, is affected by his reputation.

The list of predictors is ranked from the minimum value of  $L_i(H)$  to the maximum value. The participant is assigned a weight corresponding to his place in the ordered sample. The assignment is considered by the formula exponentially declining weighted function:

$$n_i = \lambda^{(i)}(1 - \lambda)/(1 - \lambda^{M_H}),$$

where  $(i)$  is the place of the  $i$ -th predictor,  $M_H$  is the total number of predictors and  $\lambda < 1$ . Further, the found weight is normalized to the forecaster's reputation class. Thus, the new weight is calculated by the formula:

$$m_i = n_i \cdot (1 + 0.1(K_i - 1))$$

$$f_i = \frac{m_i}{\sum f_i}.$$

Now, if the total amount of rewards allocated to the predictors is  $Z$ , then each of them receives a reward  $f_i \cdot Z$ .

#### 4.4.3 Portfolio builders

The reward of the portfolio builder depends on the ROI of his portfolio, by the accounting date. The reward creation process is similar to the described above. The difference is, the participant is assigned with a weight corresponding to his place in the sample of the ROIs set, in the descending order:

$$p_i = \lambda^{(i)}(1 - \lambda)/(1 - \lambda^{M_B}),$$

where  $(i)$  is the place of the  $i$ -th portfolio builder,  $M_B$  is the total number of portfolio builders and  $\lambda < 1$ .

If  $W$  is the total amount of reward picked out for this type of users, then the reward for the  $i$ -th portfolio builder is calculated by the formula:  $p_i \cdot W$ .

## 5 Cryb community environment

### 5.1 Motivation for all crowd participants' members

The motivation system to the platform's participants is closely linked to the reward system. The more a member is contributing to the platform, the higher his reward is.

The motivation system consists of the following elements: level, profile status, rating, position in the leaderboard and achievements.

Each user has his table of achievements and ranks. The table of progress consists of a set of individual small achievements, which has different levels.

Achievements can be obtained by: accuracy of forecasts, quality of ratings, portfolio building, invited friends, the information provided and more. Getting a few achievements or reaching a higher level, allows you to get a new rank.

All achievements and ranks are displayed on the user's profile page on the platform. The sum of all system's motivation elements is the contribution points of each user. The leaderboard is compiled from this rating. There will be different amounts of contribution points for raters/moderators, forecasters and portfolio builders.

In addition, showing the forecast's results to the analysts will increase their skills for the next forecast, as they can do some analysis of their past performance and make better preparations for future evaluations.

### 5.2 Decentralization

The crowded group should not have any communication or exchange of opinions inside the group, to avoid the influence of some individuals on others.

### 5.3 Crowd diversity

The key advantage of the Cryb community would be the fact that users with different knowledge, skills, minds, personal experience and opinions.

## 6 Initial Token offering

### 6.1 Short description of the token

Number of utility-tokens: 100,000,000 CRYB.

Tokens are used for the functioning of the internal ecosystem: Intra platform payments and rewards.

### 6.2 Benchmarks

**500,000 USD:**

- 1) one-sided creation of the wallet and crypto-based social platform, which will allow the community to submit content to the site such as links, text posts, images, and videos.

**1,000,000 USD:**

- 1) integration of fully encrypted peer to peer messaging;
- 2) listing of the results of ICO projects after receiving a rating in the following years;
- 3) launch of the mobile version of the platform for iOS and Android.

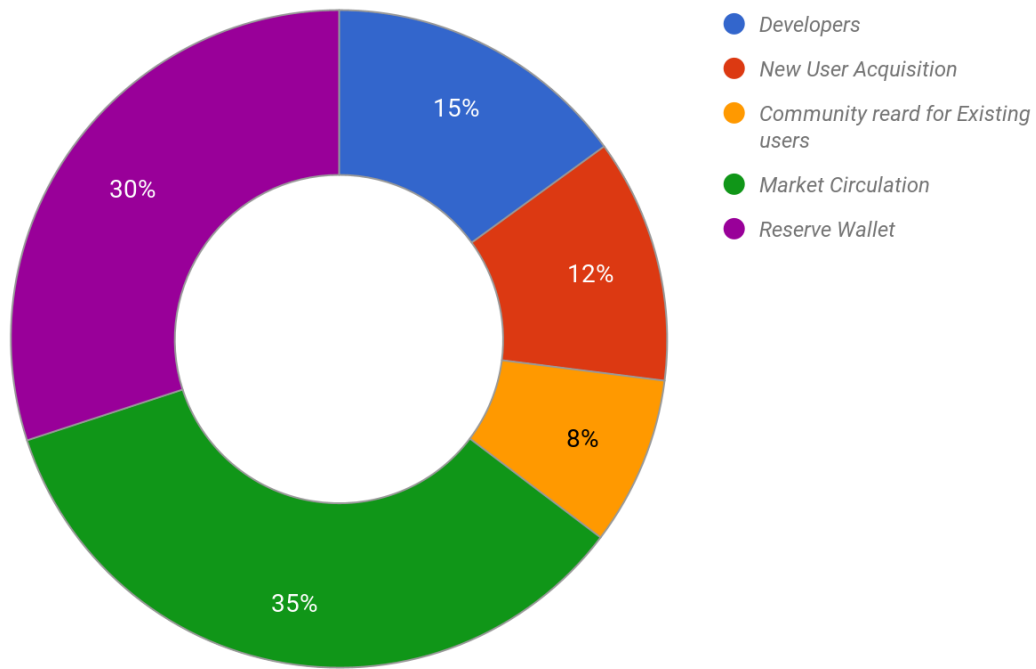
### 6.3 Token allocation

The funds received during the ICO campaign are fully aimed at further development of the platform. The distribution depends on the amount collected during the ICO.

If it is necessary to allocate additional funds for development, the distribution can be changed.

All ICO participants will be notified about these changes.

## Token Allocation



## 7 Roadmap

Event	Date
Market research and study of development dynamics	Q1 2021
Creating a business model Getting started with project advisors	Q2 2021
Development of mathematical and forecasting evaluation models Wallet Beta Release	Q3-Q4 2021
Development of a rewards system	Q4 2022
Reward system testing Starting the Alpha Version Infrastructure development Confirmation of agreements with projects partnership Audit of the platform Community development Publication of White Paper	Q4 2022
Starting the ICO Improvement of platform version using users feedback Platform expansion	Q4 2021
Establishment of R & D department Preparation of an analytical report on the work done to develop the platform	Q1 2022
Launch platform mobile version Launch of trading strategies sharing Launch of cryptocurrency portfolios sharing and copying Development of partners network	Q2 2022
Integration with MintySwap DEX. Allow users to trade, provide one sided liquidity to DEX via MintySwap	Q3-Q4 2022