



starbase



# starbase

## Starbase Whitepaper

~ Towards a future of easy innovation  
via Blockchain crowdfunding and token payment

~

**Written by:** Tomoaki Sato

**Contributors:** Ernane Luis

**Reviewer:**

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## Definition of words

Starbase:

The platform name; Starbase is both an open and closed source project. Starbase.Inc will do technical consulting by providing a crowdfunding/sourcing platform which enables you to issue conditional tokens from templates.

Starbase Token:

The token which is issued by the Starbase team, and which has consumable, rewardable, inflationary features.

STAR:

Currency symbol of Starbase token. Starbase token detail is described in the following section.

Token:

Token is a frequently used term in the blockchain industry for data which has some value. We will use ERC20 type tokens, which are the most widely adopted type of tokens on the Ethereum blockchain.

Core team:

People who are going to provide or who are currently providing some service or product.

Possible core teams are listed below:

- Global and innovative non-blockchain based projects  
Such as bio-technology ventures in France, an encrypted chat application platform in Russia, Fintech company in Israel, and those who need rapid, global growth with a lot of supporters.
- Startups, New business planners in big companies  
A lot of companies and projects which don't know anything about the blockchain technology can join the Starbase platform as a decentralized fundraising or human resource management solution.  
Decentralized crowdfunding and human resource management provide a cheap, fast, and global way to communicate with your team member and expand your team around the world.

- Artists/Athletes/Talents  
Hidden talents can use the crypto crowdfunding system. They can issue the tokens and sell them. After they become famous or acquire revenue, they can automatically return to the service by attaching some rights to the token. For example a talent can sell his own token which has consumable features and token holders can receive 1 hour of service from the talent by consuming the token.
- Event organizer  
Event tickets can also be represented by tokens, and sold online. For example, if you have 1 event token, you can join the event and you will receive part of the event's revenue.

#### Supporter:

Supporters are those who want to support projects by purchasing core team's tokens or by working on core team's projects.

Possible Supporters are below:

- Blockchain engineers, designers  
Ethereum, Augur, SingularDTV, DigixDAO, GEMZ, Factom, and many other token based projects are developed by blockchain savvy engineers and designers. They understand the potential of a project since the development phase and can support the Core team's project by sharing the long-term incentive with the issued token.
- Non-blockchain Engineers, designers  
Even non-blockchain engineers and designers can cooperate in promising blockchain projects and if they believe in the potential, they will end up supporting core teams' projects by using the issued tokens.
- Blockchain Marketers  
Some famous blockchain marketers, and blockchain-knowledged marketers know how-to marketize your tokens. They will cooperate in the core team's project by accepting payment in the issued tokens.
- Non-blockchain marketers  
Even marketers without blockchain knowledge can join the movement and support the core team's project should they want to. They will be paid in issued tokens.
- Blockchain legal specialists  
This is fairly difficult part to conduct, but there are some blockchain-specialized



lawyers and accountants in the world. They know how the legal framework operates, and can help tremendously the core team's project. They can also be paid in issued tokens.

- Non-blockchain legal specialists

It may take some time for non engineers, and non blockchain users to understand the blockchain ecosystem, but legal specialists will understand the potential and possibly support your project by accepting the issued tokens.

#### Milestone:

The Milestone is a term that is often used for crowdsourcing or engineering payment systems.

Milestone payments are requested by supporters and set by core teams to guarantee that the work payments will be paid after completing a certain milestone.

#### Work:

Starbase is a token based crowdsourcing platform. Core teams can post works and supporters can do them for a payment in Bitcoin, Ether, or their issued tokens. Generally this kind of job is not long term, but in duration of 1 week to 6 months. For example, software development, translation, logo design, web/mobile design, movie making, online consulting, financial advice, legal advice can be posted to Starbase with the relevant payment information. Each job should have milestones and for each reached milestone a payment can be sent in the issued tokens and Bitcoin, Ethereum.

#### Crowdsale:

Crowdsale is used to refer to the sale of tokens on "Internet of Value" by using a permissionless blockchain. It's global and transparent process, which cannot be modified neither by the token issuer or the Starbase admin.

#### Early Purchaser:

Before the public crowd sale, core teams often need to do marketing and demo product development in order to prove their capability and get attention. In that case, early purchase system can help core teams by selling their tokens.

#### Token sale:

Token sale is the generic name of early purchase + crowdsale.

#### ICO:

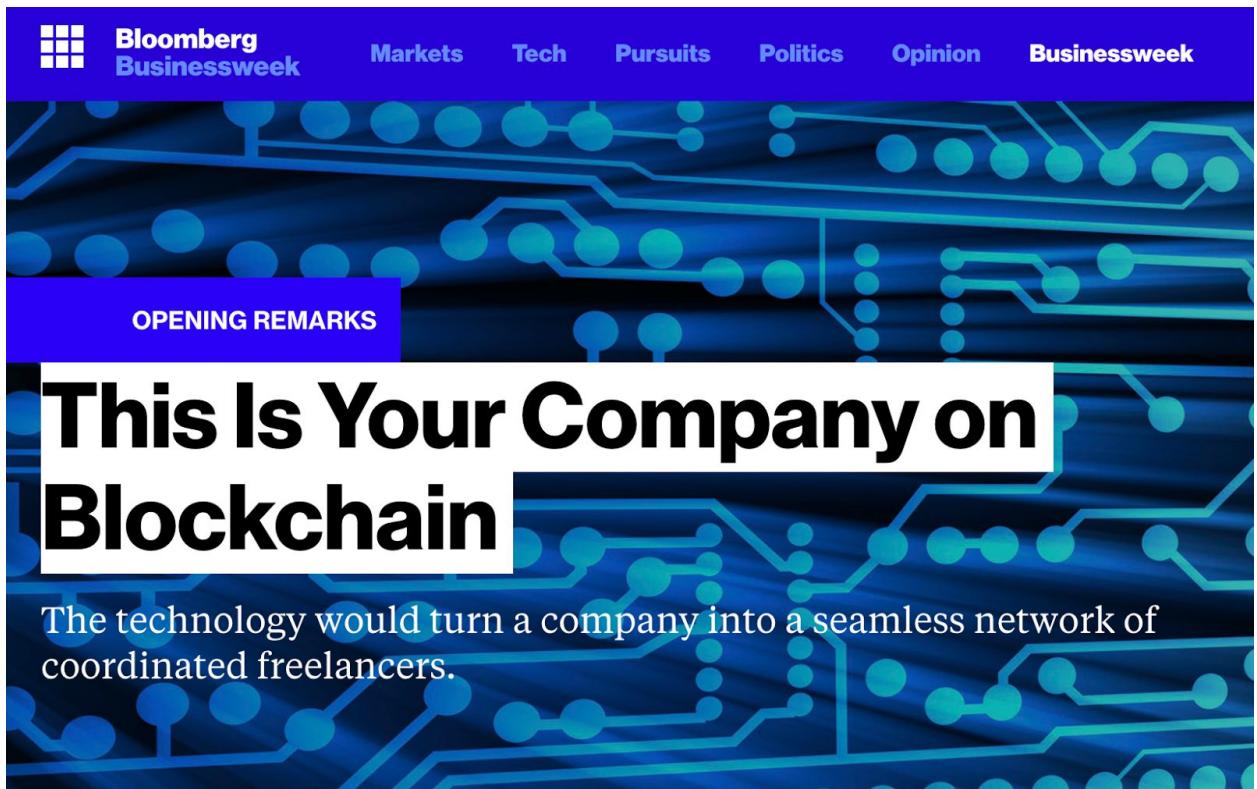
In blockchain world, there are a lot of definitions for the term ICO, but by our definition, ICO is the time when the issued tokens become transferrable. By using

Starbase templates, just after the crowdsale phase, issued tokens are non-transferable. After the core team releases the service or product, then the token will become transferrable, and it can be traded on global crypto currency exchanges. This is what we call “ICO”.

Smart contract:

Written programs which can be run on the blockchain.

## Background: Global projects, the “Internet of Value”.



Source: <http://www.bloomberg.com/news/articles/2016-08-25/this-is-your-company-on-blockchain>

Currently in the blockchain world a lot of projects are starting from crowd sales, or by creating new cryptocurrencies to finance new projects.

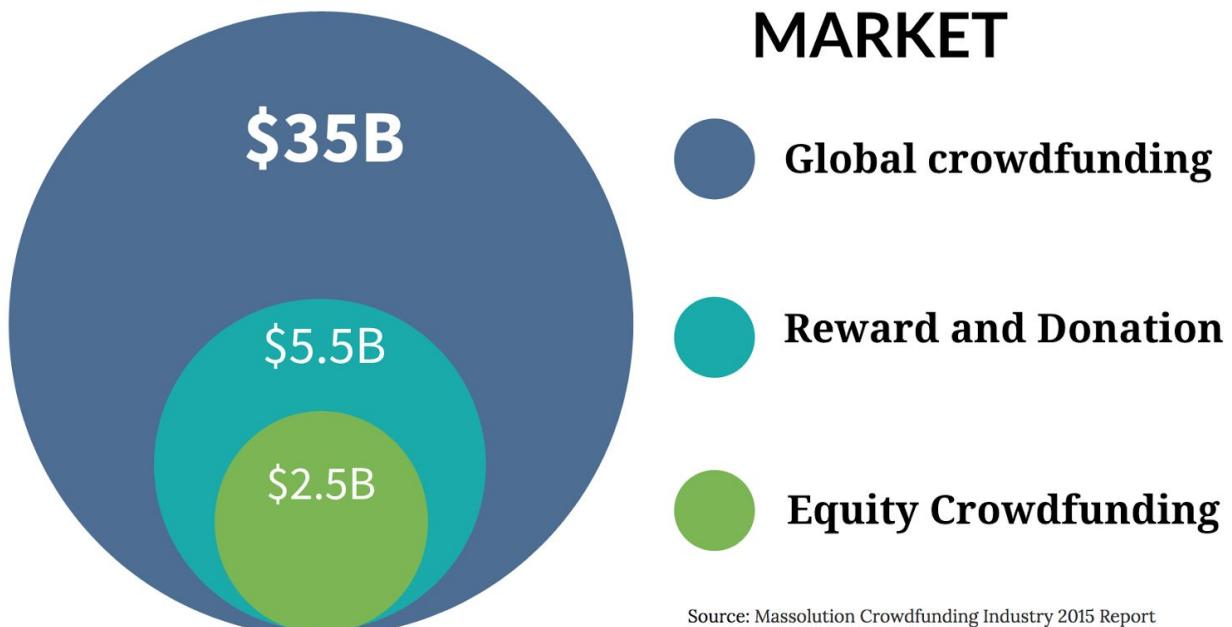
New projects in the blockchain world are mostly based on global individuals. Financial incentives and human resources are moving around between individuals quickly and globally with cheap transaction fees.

In the case of Ethereum, roughly 500k people are holding Ether tokens, and they are sharing the intense interest and incentive of the project.

## Background: Token Based Crowdfunding Solution

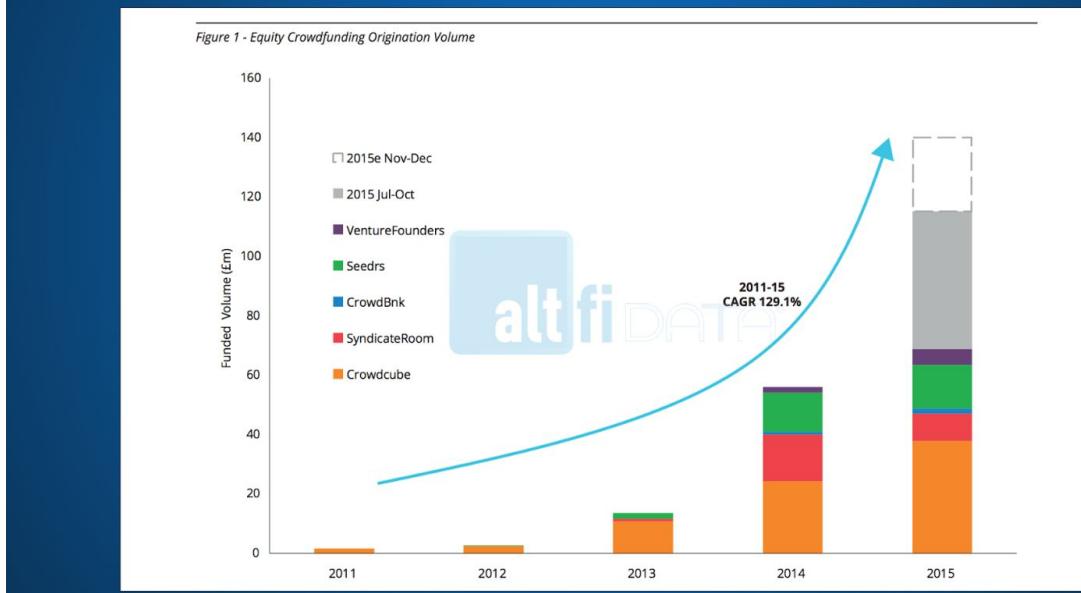
### ~ Crowdfunding market growth ~

The crowdfunding market is rapidly growing, and it doubles in size year by year.



Source: Massolution Crowdfunding Industry 2015 Report

# MARKET (Equity Crowdfunding)



## Starbase's Mission

Starbase's mission is to make it easy for everyone to start or support projects which aim to create new services and products.

Starbase provides a crowdfunding and crowdsourcing/recruiting platform which gives long term incentive sharing mechanism on the "Internet of Value".

The current incentive-shared team making solution for new project initiators is based on traditional, local and slow stock based system. Therefore, it's difficult for core teams to recruit savvy members without a fair amount of initial capital. Even when core teams want to share the stock or options as compensation, they can not share long-term-incentive with project members swiftly, globally nor at a low-cost.

Current fundraising solutions for new products/services are not globally oriented and are usually slow. Additionally, some people can not accept payments because they are unable to open bank accounts or are unable to make a promise as a public record. We would like to create an ecosystem where everyone in the world can easily participate by using a decentralized infrastructure, Ethereum.

## ~ Merits for core teams ~

**Fundraising and Team making is always difficult for core teams  
, but in blockchain world, it's easy !**



By using ICO system, core teams can make recruiting and fundraising more efficient, global, fast, and cheap-cost transactions.

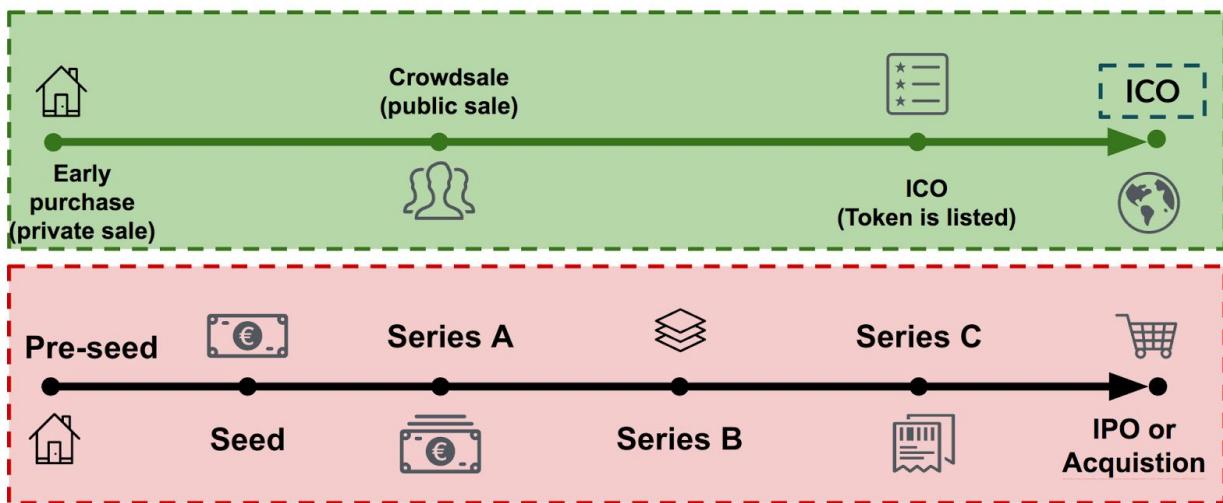
## ~ Merits for supporters ~

**Supporters in blockchain world helps innovative projects to get their tokens,  
and they sometimes becomes 2x - 100x return ! Starbase helps it !**



~ From IPO To IPO & ICO Age ~

## STARBASE SOLUTION



The above is a visualization of the traditional IPO timeline. It will take about 5 years for a shareholder to sell stocks, before which it is almost impossible to sell unlisted stocks to someone.

In most cases venture capitals or angels have to take a high financial risk for supporting it. A similar risk is present with the founders and co-workers which work in startups.

However, currently many new projects are doing ICOs, and can sell their tokens in addition to quickly gain many new team members around the globe.

Thanks to the decentralized value network, permissionless blockchain, somewhere between 1 month and 2 years after the crowdsale, the core teams' tokens can be traded on public crypto currency exchanges, and get some returns..

By adapting this mechanism, supporters can engage in low risk support of new startups and ventures. Due to this, new startups and ventures can have more supporters globally, and may be able to easily fundraise a bigger amount quickly.

## Starbase Overview



By using Starbase, core teams, such as startup founders, new business project leaders, artists et. al, will be able to issue ERC 20 type tokens on the blockchain in a simple way. Starbase will firstly focus on the Ethereum blockchain and the standard type of tokens, ERC20 tokens.

Starbase team believes there will be thousands of tokens in the world to create new innovations, currently there are 600+ tokens and \$20B+ market cap, and Starbase would like to support token issuance, sale & payment, especially for crowdsourcing.

Using the power of Blockchain you can crowdfund your rocket idea by issuing global tokens!

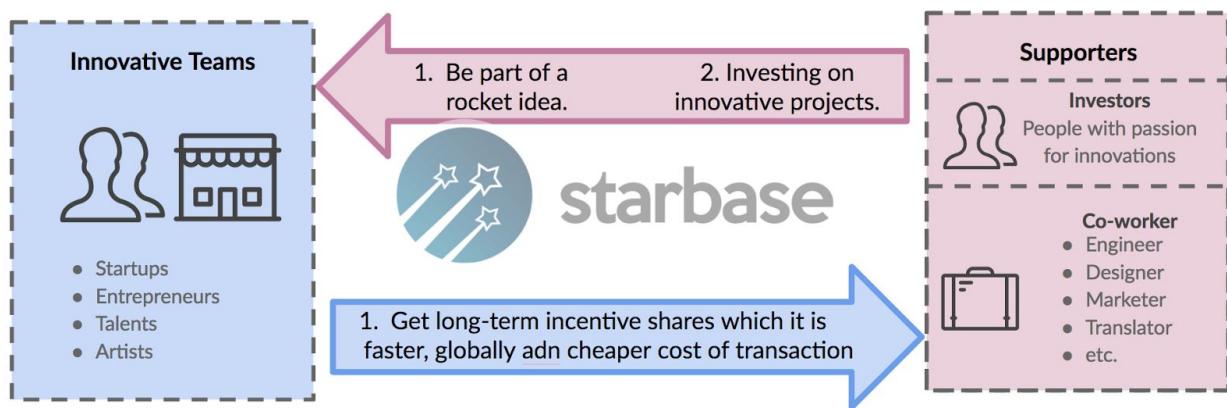


Figure: Starbase overview

1. Starbase provides a technical infrastructure for core teams to issue tokens or to give tokens as work payments or as a long-term incentive.
2. Starbase provides a technical infrastructure for core teams to issue tokens in order to raise funds.
3. Starbase provides a technical infrastructure for supporters to purchase tokens in order to support the fundraisers of core teams.
4. Starbase provides a technical infrastructure for supporters to work for the core team's project and receive tokens as long term incentive. Token holders are motivated to raise the value of said tokens.



# Starbase Innovative Features which contributes public blockchain economy

**Starbase contributes public blockchain economy  
by providing these features for non-blockchain people**



## **STAR Account**

~ Web & Mobile based  
MultiSig account for  
Ether and Token ~

## **STAR Reward**

~ Web & Mobile based light weight  
Ether & Token distribution &  
purchase system ~

## **STAR Protection**

~ World First Crypto Token  
Investor Protection ~

Starbase provides token based crowdfunding and crowdsourcing for non-blockchain people. In order to achieve the purpose, we provide these features.

1. STAR Account
2. STAR Reward
3. STAR Protection

And we believe these features makes more non-blockchain people can use blockchain token based system, and increase blockchain system utility.

Starbase starts from Ethereum blockchain to implement these functionalities.

From Massolution Crowdfunding Industry 2015 Report

**~ Starbase as a Crowdfunding Platform ~**

**STARBASE MERITS AS  
CROWDFUNDING PLATFORM**

Type	Global Token	Rewards	Debt	Equity
Company	 starbase	<b>KICKSTARTER</b>	 LendingClub	 SEEDRS
Return	1. Price change at markets and/or 2. Reward from Issuer and/or 3. Rights to receive service/ product	Products or Thanks letter	Fixed repayment with interest rate	If the company acquired or IPO, high return
Risk	Middle risk. (Token will likely to be traded)	Altruistic	Low risk	High risk (nothing or high return)
Best fits	Innovative global projects	Product based startups	Proven business model with track records	Local Startups

**~ Starbase as funding platform using  
blockchain~**



## 5-1. Difference (As blockchain based funding related platform)

**Starbase provides “Adaptable” global token based crowdfunding/sourcing for everyone, including traditional companies + non-blockchain users**

Name	 starbase	 WINGS	 WAVES
Blockchain	Ethereum	Ethereum	Waves
Core team governance	<b>STAR voting for filtering + Human due diligence</b>	Prediction market	Depends on application, Waves is blockchain layer
Token issuance	<b>Custom token templates</b>	Complete DAO framework and management and communications	Custom token templates
Token reward	<b>Token holders can receive from Starbase site or directly from Ethereum smart contract</b>	Token holder can receive from WINGS app or directly from WINGS smart contract	Waves app or directly from Waves blockchain

Figure: A comparison between Starbase with other crowdfunding platform.

Starbase provides not only a global, fast, and simple fundraising solution at the crowdfunding, but also supports the preparation for a “crowdsale” by introducing “early purchasers”.

The Core team can pay their issued tokens for some jobs or commitments before making the tokens transferrable in exchanges around the world.

The core teams can also make it easy for supporters to accept issued tokens payment from core teams by calculating and visualizing the value of tokens issued.

## Starbase Platform Timeline For Core teams

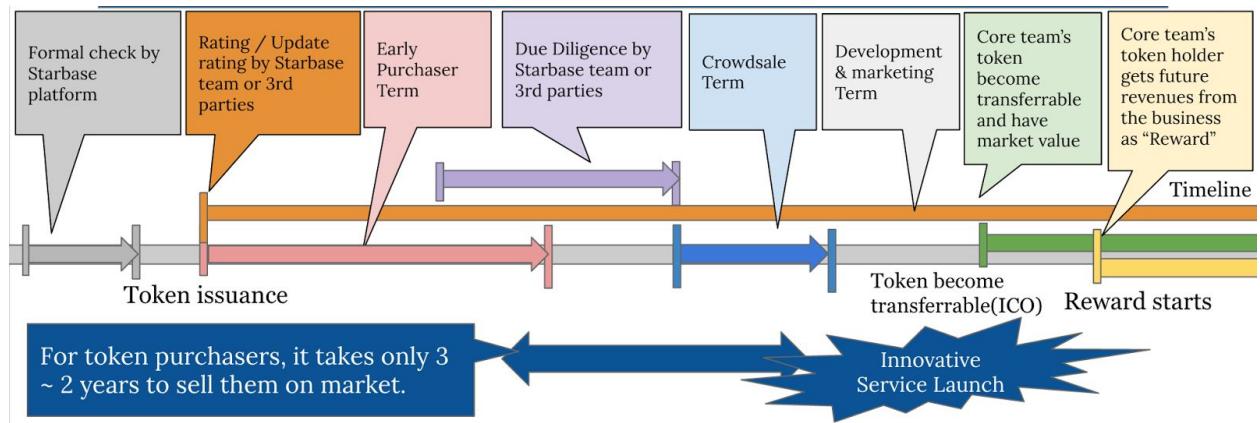


Figure: Core team flow who would like to use Starbase

Innovative projects who would like to use Starbase will follow the timeline of follow the part of this timeline, such as using Starbase only for token issuance, only for token sales, or only for crowdsourcing (work payments).

## 1. Token Issuance Phase

# Starbase Consumable/Rewardable/inflationary Token Issuance Templates

Starbase supports core team's token issuance via the Starbase smart contract templates.

The contract templates have 3 basic types of properties; they are:

1. Consumable. (Utility value)
2. Rewardable.
3. Inflationary.

1. Consumable means that the tokens can be used for the service/product. Existing models of consumable tokens are Factoid, Ether, etc. By implementing the consumable property, core teams can offer discount for the token holders. Afterwards, the core teams' token holder can expect to use the core team's service cheaper than users after launch. It has resemblance to Kickstarter.
2. Rewardable means that the token holders can receive rewards from the core teams. Reward is paid by core teams from the launched project revenue by the form of Ether and Tokens on the Ethereum blockchain. Therefore, token holder can expect the reward from the core teams, and get good returns from the purchase if everything is going well.
3. Inflationary means that the core teams can issue more tokens after the first crowdsale has finished. Core teams can pay newly issued tokens for their platform contributor or sell it to the public for future financing.

Core team can combine these 3 properties with the property value, and make smart contract for the core team's token.

We will review them, and if everything is in order, then the Starbase system allows the core team to issue token. Then they can start the campaign.

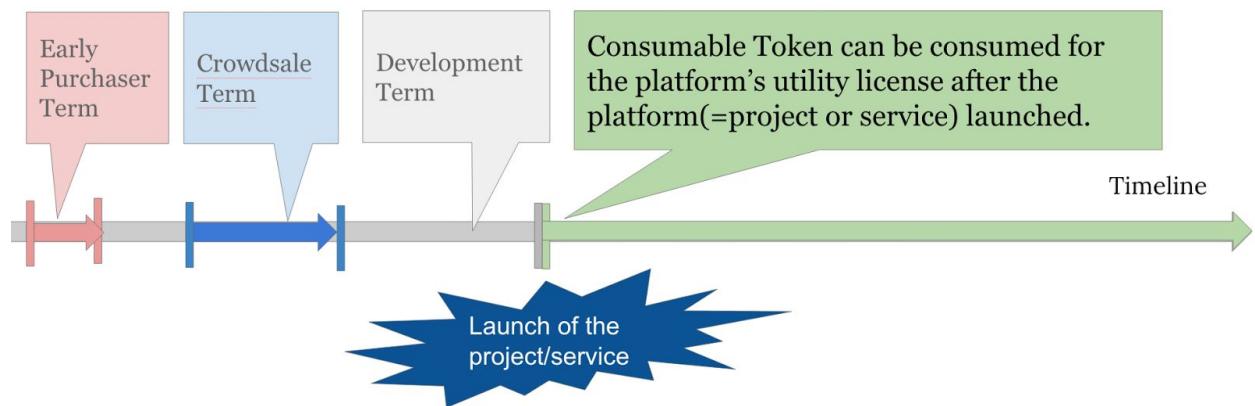




Figure 1. Consumable token issuance.

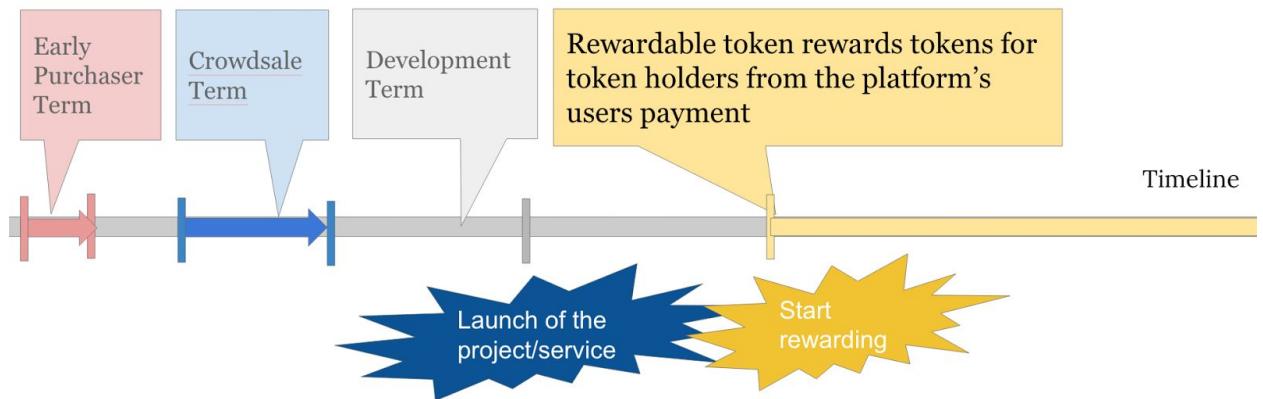


Figure 2. Rewardable token issuance

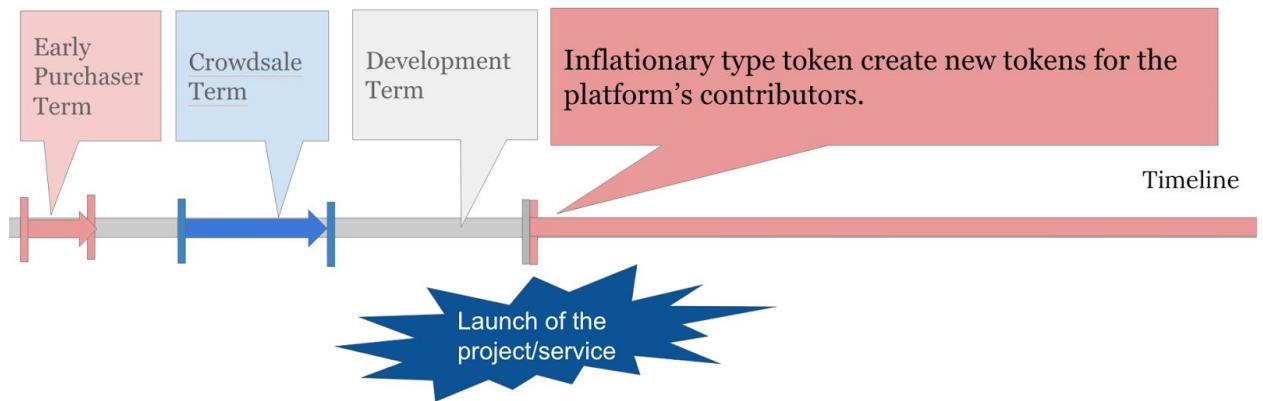


Figure 3. Inflationary token issuance.

Core teams which use Starbase platform can compose these token properties and issue new tokens on the Ethereum platform.

For example: 1) A non-consumable, rewardable, non-inflationary token. 2) A consumable, rewardable, non-inflationary token. 3) A consumable, non-rewardable, inflationary token etc.



# STAR Reward (Planning)

## ~ Reward system for projects' Token Holders ~

Starbase implements 2 ways of rewarding functionalities for innovative projects including those who don't know or use blockchain technology.

1. STAR Reward - Deposit & Withdraw way
2. STAR Reward - Buyback projects' token way

And these reward feature is fairly Starbase core feature to make more global innovation grow with many stakeholders and supporters.

### 1- Deposit & Withdraw way

The STAR Reward system is on the Ethereum blockchain for STAR tokens, and the core teams will be able to use the Ethereum blockchain for their platform launch as well. For core teams' token holders to receive rewards from the core teams, they need to know the private keys of their addresses, or the wallet provider should correspond with the reward payment.

If you deposit a core team's token on some crypto currency exchange, and the crypto currency exchange doesn't treat the core team's token reward payment, you will lose the rewards.

In order to prevent the loss of reward payments, the Starbase reward system is required. The Starbase reward system is designed with simplicity in mind. If you would like to receive a core team's reward, you need to claim that reward yourself by using MyEtherWallet or MistWallet, or send the tokens to Starbase and click the "Claim rewards" button.

Afterwards you will receive rewards from the core teams. This Starbase reward system also applies to the STAR token. Therefore, for the STAR token holders to receive rewards from Starbase, they need to send STAR tokens to Starbase web application and click "Claim STAR token rewards" or use MyEtherWallet, Mist wallet, Metamask, or the command line.

This reward mechanism is not only used for STAR token described below, but also for other core teams' tokens who will use Starbase platform.

### 2- Buyback projects' tokens way



The STAR Reward system for Buyback is based on trust of the project owner, because currently we don't have decentralized exchange which has verifiable functionality of buying the project's token.

Starbase is not crypto currency exchange, and don't develop it. With exchange partners, we will implement verifiable buyback feature. Then core teams can buyback their tokens and can reward their token holders.

Until then, Starbase implements to interface to submit their claim of "They bought x amount of their token" onto Ethereum blockchain, and also users of Starbase which has their tokens can know the buyback reward.

## Early Purchase System

The Starbase platform provides an early purchaser system for core teams which issue tokens. This is fairly useful for getting the first budget for marketing and development prior to the crowdsale.

Until the crowdsale finished, the core teams can not make changes to the bonuses of crowdsale purchasers. Therefore, the Starbase early purchaser token assignment mechanism provides decides the percentage of total tokens which are assigned to early purchasers as a "bonus"

This early purchaser mechanism creates a big difference between token sale and traditional crowdfunding/lending platforms. This makes core teams aim to gather early angels and team members rapidly, globally, and swiftly for a "rocket start".

Here's the early purchase flow

1. Early purchaser deposit Bitcoin, Ether to the core team's early purchase address which is generated for each user's unique ID. (i.e. email address)
2. Deposited Bitcoin, Ether is automatically forwarded to early purchaser address managed by the core team, not managed by Starbase.
3. Bitcoin and Ether are converted to some other currency, then the early purchase will be written on the contract.
4. When crowdsale starts, crowdsale contract reads the early purchase contract's information, then the early purchases will be reflected for the token balances.



The Starbase Token will also use the early purchase system.

Details of the calculations are below.

After the crowdsale has finished, an early purchaser will receive:

$$\begin{aligned}\{\text{earlypurchaser\_token\_amount}\} &= \{\text{earlypurchaser\_token\_amount}\} * \\ &\{\text{earlypurchase\_value}\}/\{\text{total\_earlypurchase\_value}\} + \\ &\{\text{crowdsale\_token\_amount}\} * \{\text{earlypurchase\_value}\}/\{\text{earlypurchase\_value}\} \\ &+ \{\text{crowdsale\_value}\}\end{aligned}$$

After the crowdsale has finished, a crowdsale purchaser will receive,

$$\begin{aligned}\{\text{crowdsale\_purchaser\_token\_amount}\} &= \{\text{crowdsale\_token\_amount}\} \\ &* \{\text{crowdsalePurchase\_value}\}/\{\text{earlypurchase\_value}\} + \{\text{crowdsale\_value}\}\end{aligned}$$

Starbase will also introduce an early purchase system for the STAR token sale. STAR Early purchase will be immediately finished when it reaches to 6 Million CNY. The crowdsale token amount is 125,000,000 and early purchase bonus is 50,000,000.

If a crowdsale has “bonus” mechanism, early purchasers of the crowdsale generally have the best rate of the bonus.

Definition:

Counter currency = Currency to use for the calculation purpose

earlypurchaser\_token\_amount = Total amount of token for all early purchasers

earlypurchase\_value = The amount of the counter currency the early purchaser paid

total\_earlypurchase\_value = Total amount of the counter currency early purchasers paid in total

crowdsale\_token\_amount = Total amount of token for all crowdsale purchasers

crowdsale\_value = The amount of the counter currency the crowdsale purchase paid

## 2. Token Sales Phase

### Starbase Rating & Due Diligence overview.

The Starbase team will check the core team's business and member profile, and the technical detail.

Here's the visual presentation:

<http://www.slideshare.net/StarbaseGlobal/starbase-rating-due-diligence-flow-71018567>

Here's the overview for core teams to issue tokens:

## Starbase rating system

All core teams which are formally checked by the Starbase platform will be rated by Starbase's rating partner or the Starbase company. Different rating partners' ratings are shown as unique rating.

If a core team's rating is low, then supporters will receive a notification when they want to support said core team such as "This core team project doesn't have good rating".

Rating is important to select core teams for early purchase phase. The Starbase platform will try to have multiple rating partners and make it very informative for any supporter who takes a risk by supporting them.

The rating fees for rating partners are paid by the Starbase company revenue. The Starbase company will contribute to the Starbase platform in order to improve the rating system and provide good project suggestions for users.

## Starbase due diligence process

All core teams who which are formally checked and rated by Starbase can submit a "Crowdsale request". In order for the request to be approved, core teams will be due diligenced by the Starbase incubator partners or the Starbase company.

After said process is over, it's either shown as "Approved by {due\_diligence\_partner} / Approved by Starbase company". or it's shown as "Rejected by {due\_diligence\_partner} / Rejected by Starbase company".

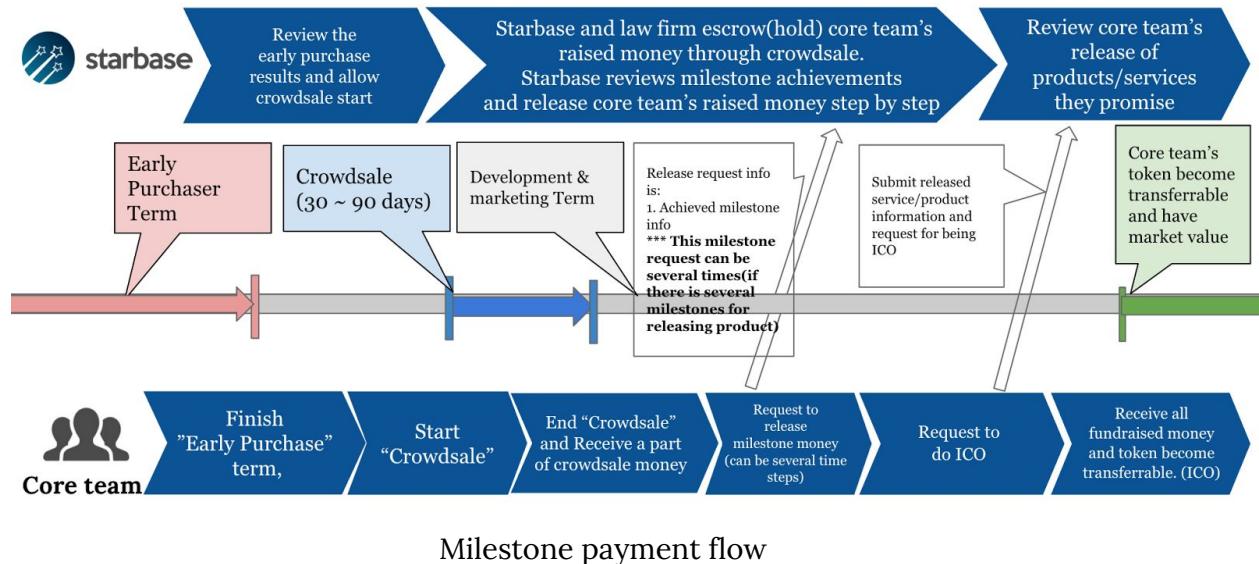
Until the due diligence process has not been passed the core team can not start crowdsale.

And if the voting points for each elements are low, then they can not start due diligence process with Starbase due diligence partner.

The fees for due diligence partners are paid by the Starbase company revenue. The Starbase company will contribute to the Starbase platform to improve the due diligence system and deliver good and innovative projects for supporters who are passionate about supporting such projects by investing or working in them.

### 3. ICO & After ICO Phase

#### Milestone Payments & ICO for core teams



All core teams who use Starbase platform won't get money instantly after they sold tokens to the public. The raised money is escrowed by Starbase, a 3rd party team, and the core team.

The Core team should send a "Release milestone" request to Starbase and 3rd party team, and if the set milestone is actually fulfilled, then the core team can receive a part of the payment.



We define “ICO” as “Change the status of a issued token to transferable from non transferable”. In order for core teams to do a ICO, they are recommended to be reviewed by 3rd party and prove that they created the service/product that they promised. We will support the mechanism with a 3rd party partner.

## STAR Reward (Execution)

### ~ Reward system for projects' Token Holders ~

As mentioned at STAR Reward (Planning) section, Starbase implements 2 ways of rewarding functionalities for innovative projects including those who don't know or use blockchain technology.

1. STAR Reward - Deposit & Withdraw way
2. STAR Reward - Buyback projects' token way

Core teams can use these reward mechanism for rewarding their token holders.

#### 1. Deposit & Withdraw way

Core teams need to deposit their Ether or tokens to STAR Reward rewarding contract for core teams, and tokens holders can withdraw Ether or tokens from the contract.

In order to deposit, core teams input Ether amount and the memo of the information, and can deposit

#### 2. Buyback way

Core teams can buyback their tokens by Ether to reward their token holders. When core teams system wants to pay rewards for their token holders, the core team or another agents buy their tokens from the exchanges.

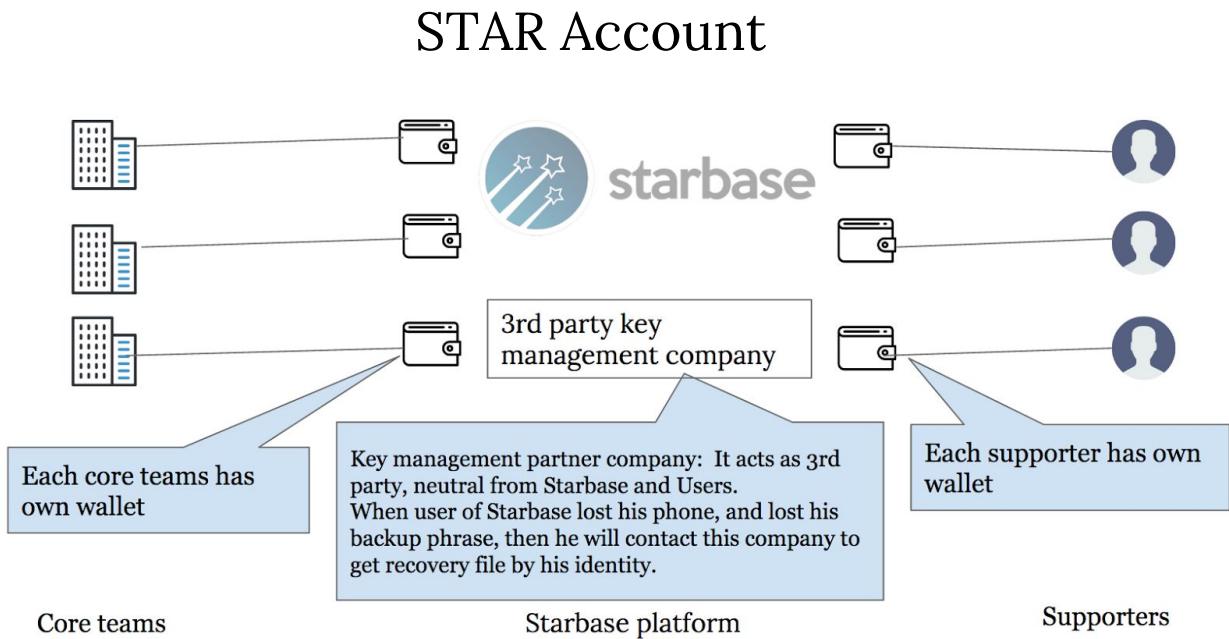
Then the price of tokens will increase and existing token holders can be rewarded from the price change.

## Price Lock Payment System

Core teams want to pay their tokens also after ICO for sharing the middle or long term incentive. Price lock payment system is a solution for that. By using price lock payment, users can pay tokens to other Ethereum address only when the token's price is above some price.

There will be liquidity issue, if the token doesn't have liquidity, it doesn't need much cost to price manipulation for unlocking the payment. But if we have a decent time span to measure the price, it'll be harder to manipulate the price.

In a 2nd year operation, Starbase will implement that kind of mechanism.



Starbase implements STAR Account system which is similar to Bitgo like 2 of 3 multisignature account.

Starbase server aims not to control users' funds, and users can manage their funds by themselves easily without blockchain knowledge. Here's how "STARAccount" works:

1. STAR Account system is 2 of 3 multisig, users hold tokens by their own hands, because Starbase only holds 1 key of the 3 keys



2. With 2 of 3 signatures, users can execute certain transactions like transfer, receive rewards.
3. Users can sign by themselves using 1 keys encrypted by transaction password, and the other is on Starbase server
4. And the transaction will be broadcasted from the user's client or the Starbase server to the network and transaction will be executed.

STAR Account is basis for STAR Reward mechanism (Deposit and Withdraw type reward distribution contract) and STAR Protection (Escrow with Put option) mechanism.

## STAR Protection

### STAR Account For Releasing Funds To Core Team

It's important for core teams to have escrow mechanism for increasing their trustability.

From Starbase web application, core teams can find escrow partner and create their 2 of 3 wallets, "STAR Account" one.

By using the mechanism, core teams can not run away and prove they will likely to fulfill the promise. Escrow mechanism is commonly used for blockchain projects, and blockchain people, it's easy to create escrow wallet and system by themselves and use it, but non-blockchain companies it's still difficult to create them and utilize it.

## STAR Protection

### Put option for sold tokens

STAR Protection aims to protect token purchasers of a project. Core team can choose to make put option for going to raise/raised funds.

By promising minimum price of token by smart contract, token purchasers can limit their loss.



## Upgradable Core Team Address

All core teams which use the Starbase platform will have a project owner address on the Ethereum blockchain. This address is a multisignature address. Therefore, if the Core team loses one of their keys, they can recover it by making a request to Starbase.

Even in case that the Starbase platform gets hacked, the core team can not lose control of their issued token, because Starbase doesn't have control to the project owner address.

This address mechanism is generally the same as with the most used multisig wallet contracts on Ethereum. We will release the project owner address on Starbase public github repository.

## Starbase Revenue Projection

The Starbase platform revenue is coming from the following 3 sources and revenue is distributed to the STAR holders. The important fee structure ensures that Starbase doesn't take fees from investors, or payees.

1. Token issuance fee. When the core team's new token is issued by using the Starbase platform, the Starbase platform takes a operational fee for newly issued tokens.

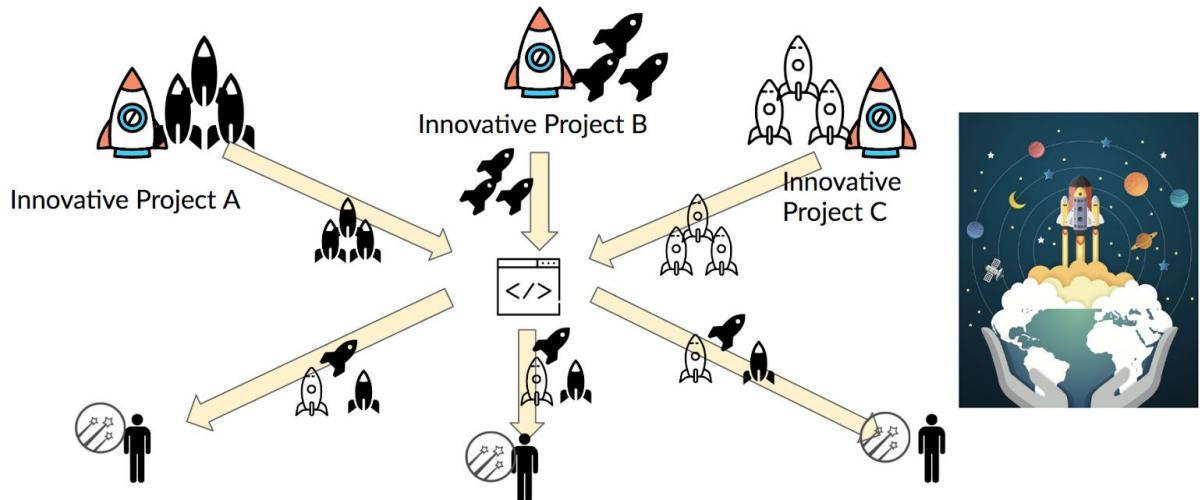


Figure 1: Token issuance fee

2. Crowdsale fee. When the core team's issued tokens are purchased by supporters, Starbase takes a fee as a platform.

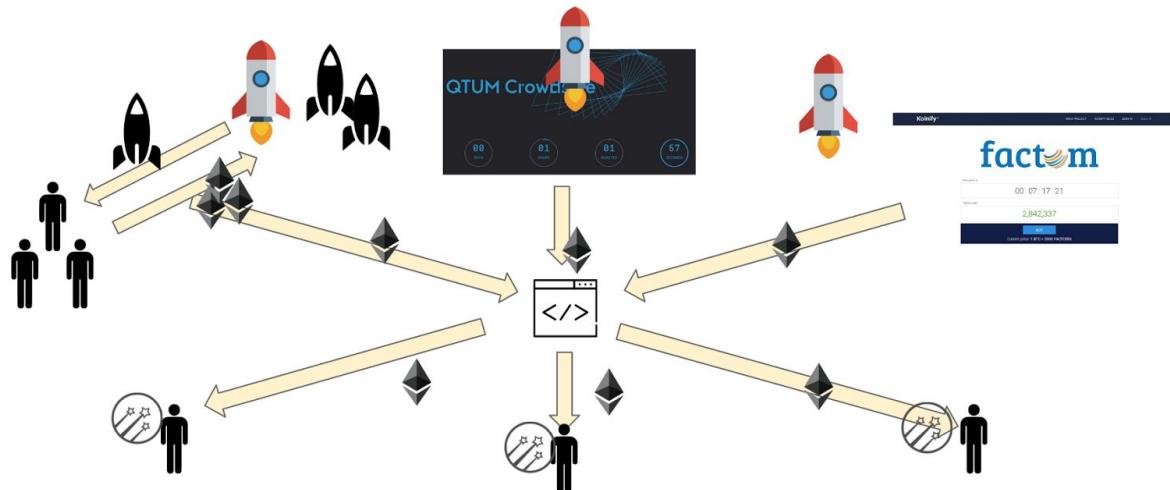


Figure: 2. Crowdsale fee

3. Crowdsourcing work payment fee. When the core team's issued tokens paid for supporters, such as freelancers, engineers, team members, marketers, legal professional etc, then the Starbase platform takes a payment fee. The fee is only applicable when the payer uses a Starbase



smart contract for their work payment which is similar as to most crowdsourcing platforms.

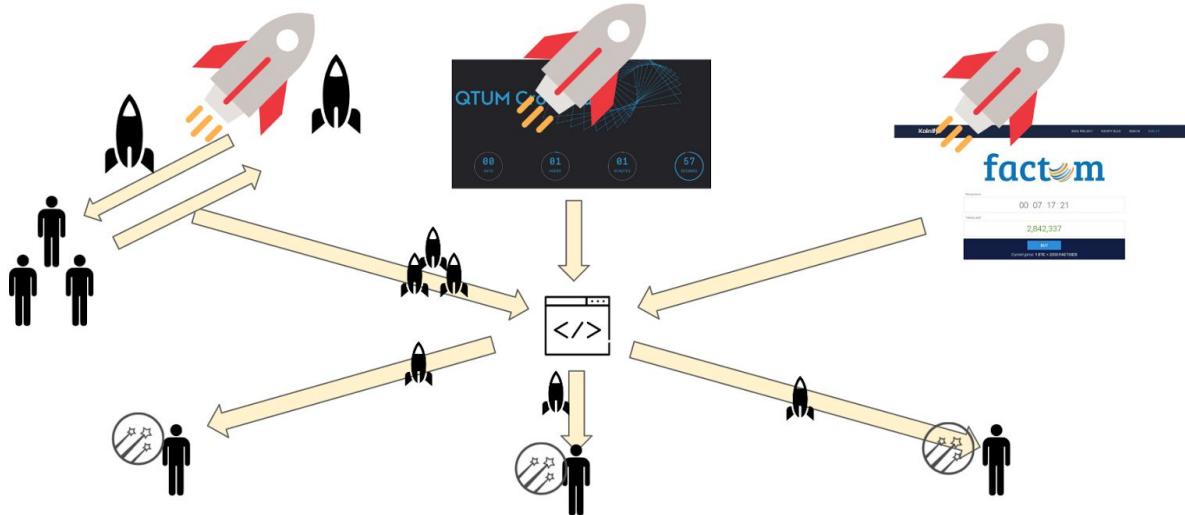


Figure: 3. Work payment fees

These 3 types of fee rates will be adjusted by the Starbase company in order to meet the market needs of core teams and supporters.

If within 5 years:

- Starbase supports 271 core teams token sale & issuance

Average (expected) token sale amount: \$500,000

Average token sale fee: \$37,500

Average issued token valuation: \$1,500,000

Average crowdsale token fee by one client (USD): \$112,500

- Starbase supports 43,350 work payments,

Average work value: \$2,000

Average fee per work : \$100

Then, within 5 years there will be:

$271 * (\$37,500 + \$112,500) + 43,350 \text{ works} * \$100 = \$44M$  Starbase platform revenue distribution.

Therefore, 1 STAR token holder will generally receive \$0.011 equivalent ETH & Core teams' tokens.

If within 5 years,

- Starbase platform supports 0 core teams token sale & issuance

Average(expected) token sale amount: \$500,000



Average token sale fee: \$37,500

Average issued token valuation: \$1,500,000

Average crowdsale token fee by one client (USD): \$112,500

- Starbase platform supports 0 work payments,

Average work value: \$2,000

Average fee per work : \$100

Then, within 5 years, there will be

$0 * (\$37,500 + \$112,500) + 0 \text{ works} * \$100$

= \$0 Starbase platform revenue distribution.

So 1 STAR token holder will receive generally \$0 amount of ETH & Core teams' tokens.

## The Team

Latest team members you can see from <https://starbase.co/about>

Tomoaki Sato - Founder & Blockchain Engineer

- <https://www.linkedin.com/in/tomoaki-sato-086a0555>

- <https://www.facebook.com/tomoaki.sato.35>

- <https://github.com/tomoaki12345>

In the previous startup, Tomoaki Sato did blockchain & smart contract development support, consulting, and held conference as Smart Contract Japan Founder, and held more than 400 people attended conference. Also he did Smart Contract Meetup weekly in Japan.

<https://www.meetup.com/Smart-Contract/>

After he met with various blockchain entrepreneurs around the world, and crowdsale & ICO movements, he started to want to bring this technology for everyone easy to challenge new things.

So now he left the company and starts Starbase as Founder and Blockchain developer in order to make global token crowdfunding & reward payment platform.

Yu Yamanaka - CTO

- <https://www.linkedin.com/in/urelx>

He was Japanese largest curation media infrastructure lead, and can do almost any large user-base web application technology. But he was new to the blockchain technology and absorbed in it. He can do anything fairly in a large scale with infrastructure knowledge and experiences. After we met, he quit his AI company and start to work together.

Ernana Luis - Frontend Engineer

- <https://www.linkedin.com/in/ernaneluis/>

Luis had a strong interest in blockchain technology. He did blockchain research in Bonn university and made Ethereum app within a week. Since he was 15 I started working with Web Development, he had in the past 4 years experience with Mobile Development for iOS and the past 5 months I started working with Mobile Hybrid Technology: Ionic 2, where I could build Android and iOS mobile apps on top of Web Technology, that way I could learn more about Javascript, TypeScript and Angular 2.



**Tomoaki Sato**  
Founder & Blockchain engineer

in f



**Yu Yamanaka**  
CTO

in t f



**Bharat Jariwala**  
FullStack Developer

in f



**Ryosuke Shimizu**  
Blockchain Service Engineer

in f



**Ernane Luis**  
Front-end Engineer

in t f



**Arthur Cabral**  
Communication Manager

in f

## Starbase Advisors



**Eric Gu**  
Founder of Viewfin



**Darvin Kurniawan**  
Founder of REIDAO



**Chandler Guo**  
Angel investor

in

in

in



**Dominic Williams**  
Chief Scientist @ DFINITY Stiftung and President/CTO @  
String Labs

in      

## Starbase Incubator Partners

Starbase will have incubator partners around the world to spread the idea and to enable global innovation. Incubator partners are to generally introduce the token based funding/team-making system to startups as alternative. If said startups want to use it, they will be able to use Starbase. If they decide to do so, then they will do the due diligence process with partner instead of the Starbase company, it's described by the Starbase Due Diligence System in a later part of this documents.

Jan, 2017 - Takumi Innovators and XNode became official incubator partners in China.

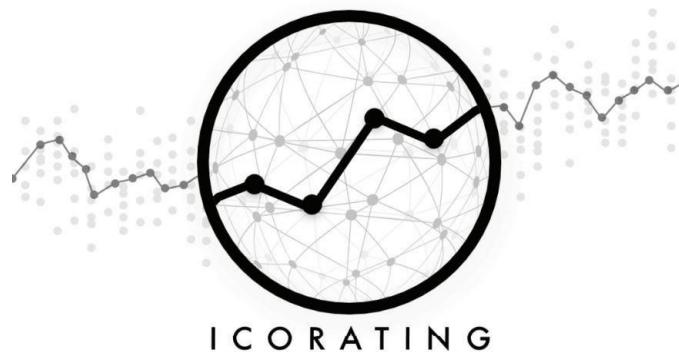


## Starbase Rating Partners

Starbase recommends rating partners for core teams who need rating to increase their trustability or core teams can find by themselves and put the rating information with the rating company name reference.

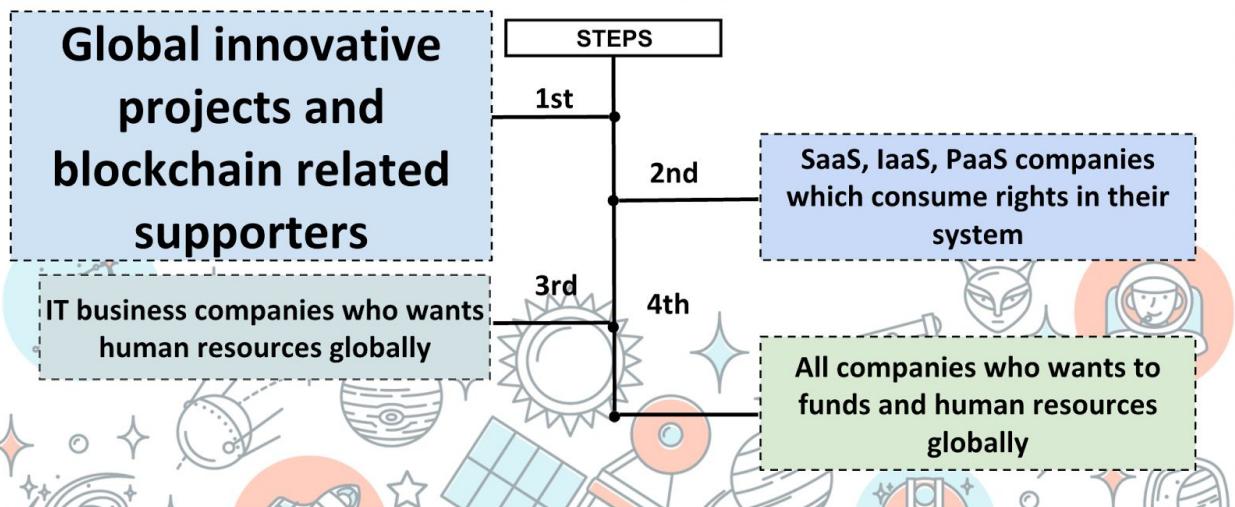
Now, Starbase has ICORating, a global leading rating company who is professionally specialized in ICO projects. And in the long run, Starbase company will have another rating partners as recommendation.

One of important reasons we recommends some rating companies as "rating partner" is that it's useful for supporters who don't know blockchain or crypto currency market to know about reliable rating companies.



Jan, 2017 - ICORating became our rating partner.

## Target User Segments



In order to have market adaption, it's important to target unique user segments. Starbase targets these user segments.

### 1st step (2017Q4- 2018Q2 -Q4)

- Core team:  
Innovative startups or individuals who needs private crowdfunding first. Starbase helps designing tokens by token templates, and then support token issuance & token allocation & private sale of tokens by themselves. Currently in crowdfunding market place, it's difficult to start crowdfunding privately as "Early purchase" or "Early contribution" way, but in blockchain world, it's more easy to do private sale of core team tokens as long as supporters believing in the core team.
- Supporter:  
Blockchain related purchasers, engineers, designers who want to support globally innovative projects by purchasing tokens or working for them.

In the current world, it's difficult for supporting other countries project by investing in them. But by using tokens, as long as they can buy some crypto currencies in their country from their fiat currencies, they will be able to support any countries' projects.

In 1st step, Starbase mainly focuses on token purchasers who already have crypto currencies, are interesting in blockchain, or are interesting in investing global innovative projects as target audiences, because our first important step is to gather good core teams, and good core teams would like to have token purchasers as fast as possible

#### 2nd step (2018Q2-Q4 - 2019Q4)

- Core team:  
IaaS, PaaS, SaaS startups who has software licenses or intangible value transactions in their platform or their service, whether it's B2C(Business to Customer),B2B or C2C platform.
- Supporter:  
In 2nd step, Starbase still continue to focus on those who want to purchase or have innovative project tokens. Starbase try to make tokens value as easy as possible to understand by showing value converted to \$ or BTC exchanged value with the tokens, and the core team's information.

#### 3rd step (2019Q4 ~ )

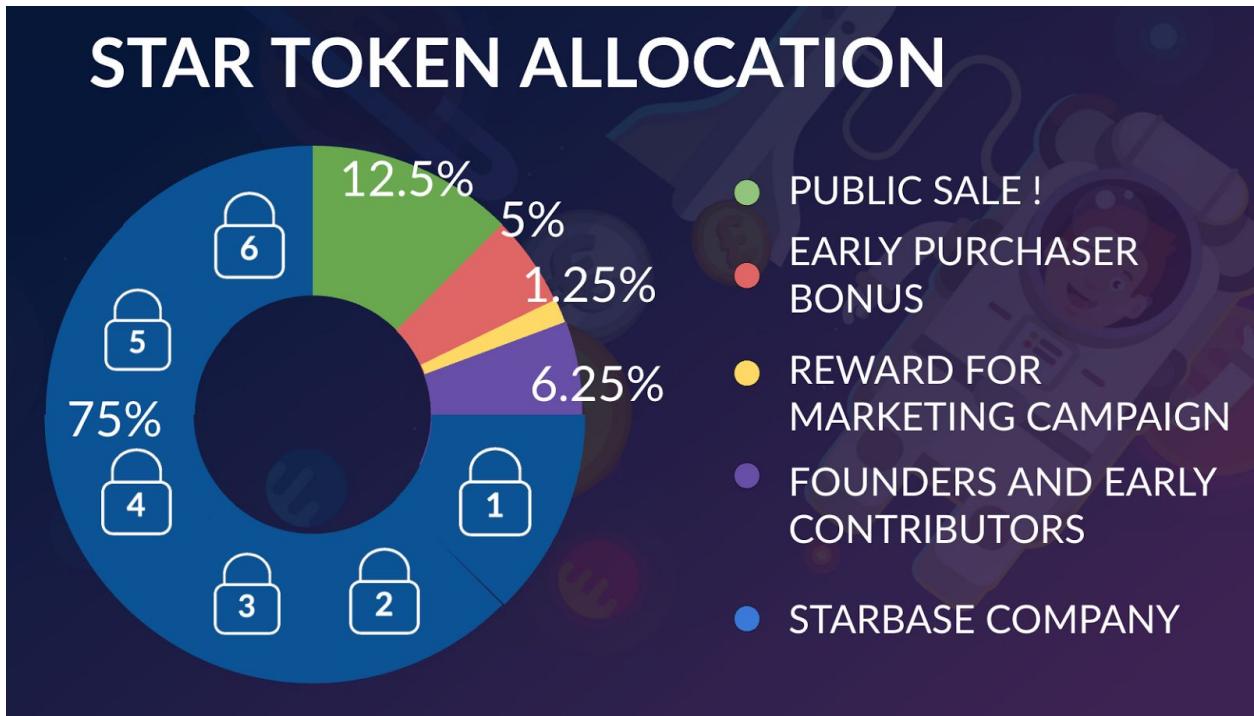
- Core team:  
Starbase considers the world will have more regulations and rules for blockchain tokens, and more and more companies will be able to adapt blockchain tokens without concerning regulatory or tax issues.

Starbase targets those who would like to start new global projects in middle or big companies.

- Supporters:  
Starbase expands targets freelancers or those who want to work for startups.



## STAR Token (Symbol: STAR) Sale



Starbase will issue initial 1 Billion (= 1,000,000,000) Starbase Tokens (Currency symbol: "STAR").

The STAR shall have an input functionality, which allows a digital input function to receive user fees, generated in the operation of the Starbase platform

If you saw before ver 0.4x whitepaper, please refer to important term change for regulatory reason from [here](#).

STAR token initial allocation is as follows:

12.5 %: Public sale

5%: Early Purchaser Bonus

1.25%: Reward for marketing campaign

6.25%: Founders and Early contributors.

75%: Starbase company.

And all STAR token allocated to 75% of Starbase company are non transferable in the first year operation, and every year 12.5% of STAR becomes transferable as described in the following section.

## STAR Consumption (Utility value of STAR)

1. STAR holders can use pay STAR in the Starbase platform for token based crowdfunding and crowdsourcing.
2. STAR holders can vote on STAR DD system by the amount of STAR

Starbase platform provide tools for users easy to accept the payment of STAR for their work. And according to STAR market price, STAR payment acceptors can change how many STARs they need for their work service.

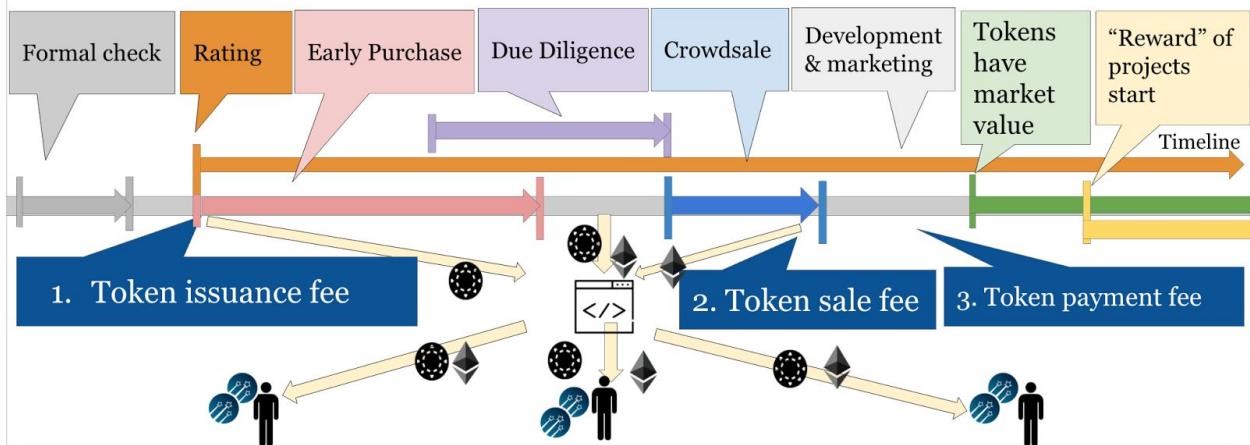
In Ethereum, Factom like decentralized platform, Factoid, Ether can be converted to Entry credit or Gas to receive decentralized service with stable value. Starbase would like to achieve similar system by the price conversion mechanism provided from Starbase platform price systems.

## STAR Reward for STAR holders

The STAR is a rewardable token. The Starbase platform pays a reward to STAR holders from the Starbase platform future revenue. The maximum reward amount is capped to 100 times of the Starbase fundraised amount at the STAR sale.

The reward is given out from the Starbase revenue as described. All Starbase platform revenue. Rewards are distributed on the Ethereum blockchain, and STAR holders can claim and receive rewards proportional to their owned amount of STARs.

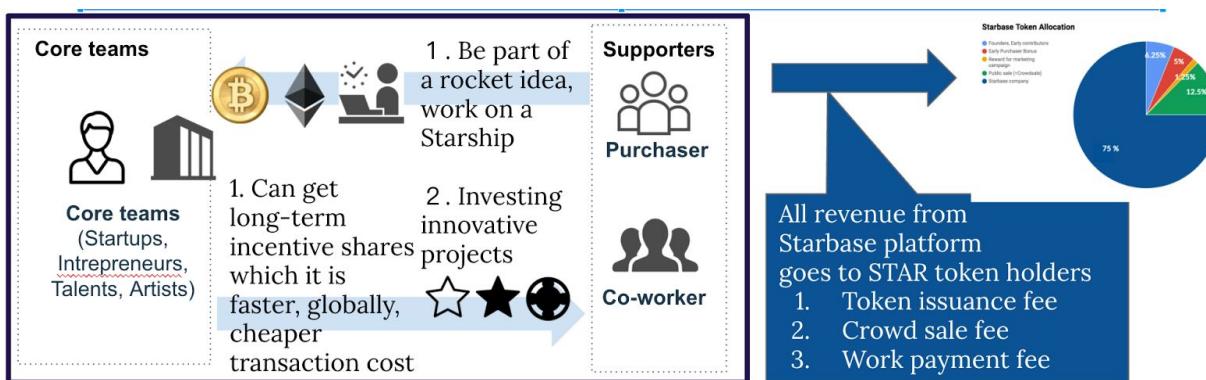
## TIMELINE OF INNOVATIVE PROJECTS AND REWARD FOR STAR HOLDERS GROSS REVENUE GOES TO STAR HOLDERS



Starbase reward payment will occur every quarter and STAR holders can claim rewards either on the Ethereum blockchain, through the Starbase website, or via 3rd party Ethereum wallet collaborator.

STAR holders will earn Ether, ERC20 type Tokens, and STAR on the Ethereum blockchain, because Starbase revenue is from 1. Token sale fees, 2. Token issuance fees, 3. Work payment fees.

Revenues from the first source is distributed by Ethereum, and from sources 2 & 3 is distributed by the Ethereum token issued by the core team.



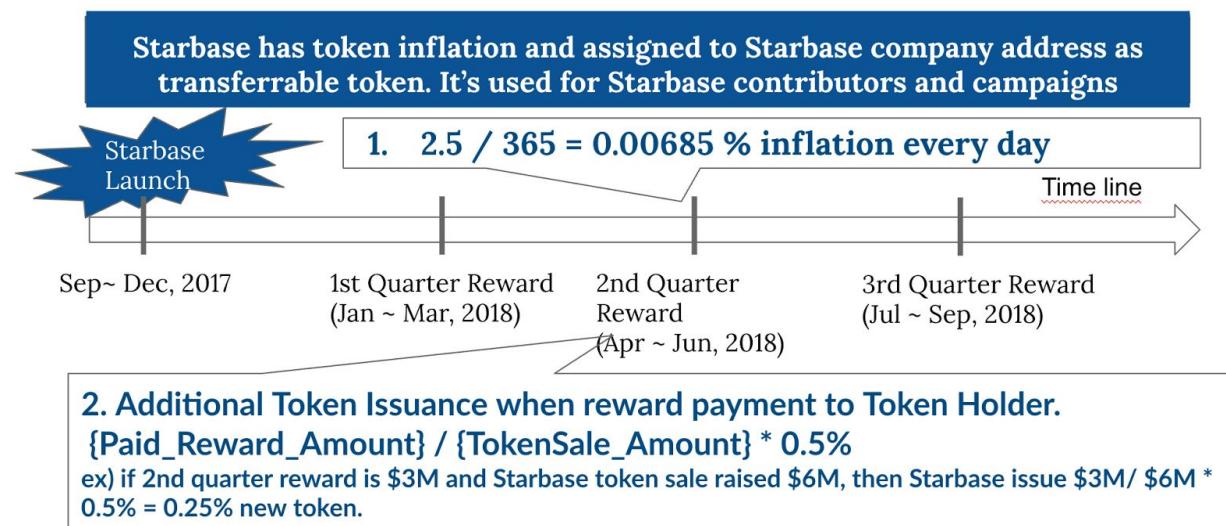


The Ethereum token rewards are good for core teams who use Starbase. If there are 20 000 STAR holders, then the core team can distribute their project tokens to 20,000 individuals which are likely to support their project or invest more.

In order to receive rewards, all STAR holders needs to use an Ethereum wallet such as "Mist" <https://github.com/ethereum/mist> or the Starbase platform in order to claim rewards from there.

This is to insure the safety of the token holders, some tokens may disappear in non-aware wallets, such as cryptocurrency exchanges.

## STAR Inflation



STAR has inflation mechanism. After the token becomes transferrable after the Starbase platform launch, then the STAR inflation will commence. A specific token address, which is held by the Starbase company, will receive new tokens from the inflation.

The new tokens from inflation will all be used for the Starbase platform development, marketing, and legal contingencies.

Maximum inflation is  $2.5\% \text{ per year} + 0.5\% * \{\text{total\_reward\_paid\_out}\} / \{\text{total\_tokensold\_amount}\}$  in total.



For example, if the Starbase platform is in its 3rd year of operation and has paid out 3 times the fundraised amount of Ether and Ethereum tokens on the ethereum blockchain to allSTAR holders, then the maximum inflation by the Starbase company can be  $2.5 * 3 + 0.5 \% * 3 = 9 \%$  in total.

## STAR Lockup Mechanism ~ For Starbase Company ~

At the initial year, all STAR allocated to Starbase company are not-transferable tokens.

STAR becomes transferable only when Starbase company does crowdsale for further development and marketing of Starbase platform once in a year.

And the crowdsale time is once in a year, maximum tokens sold will be below 125M (=12.5%) and the discount rate in the sale depends on the market condition. And it'll be about 10%

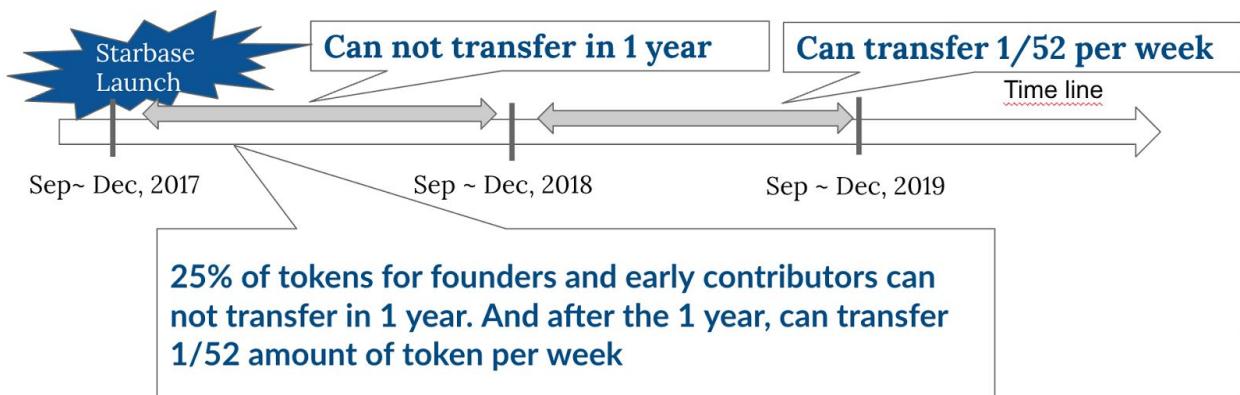
Not-sold STARs at the sale will be locked again for 6 months.

## STAR Lockup Mechanism ~ For Founders and Early Contributors ~

The Starbase founders and early contributor's tokens can not be transferred within 1 year. After 1 year has passed then 1/52 of the amount can be transferred weekly.

For example, if an early contributor has 520,000 tokens at the time of the Starbase platform release, then they can transfer 10,000 STAR per week after 1 year has passed since the platform launch.

In Starbase case, tokens allocated to Starbase founders and early contributors' tokens are lock-uped in this way.



# STAR Liquidity

STAR will be as a ERC 20 type token which is commonly accepted at major cryptocurrency exchanges, e.g. Poloniex.

	Token Information	Status	Contact
	DGD - Digix Global Every asset represents a unique bullion bar sitting in designated securitised custodial vaults.	Live	
	FirstBlood FirstBlood.io ("FirstBlood") is a decentralized Esports gaming platform that is powered by the blockchain	Live	
	GOLEM Golem is going to create the first decentralized global market for computing power	Live	
	HackerGold - EtherCamp Hacker Gold (HKG) is the official token of the Virtual Accelerator	Live	
	ICONOMI ICONOMI provides an opportunity for investors looking for high profits, not possible in the old economy	Live	
	MKR - Maker Maker is a Decentralized Autonomous Organization that creates and insures the dai stablecoin on the Ethereum blockchain	Live	
	Pluton - Plutus.it With Plutus Tap & Pay, you can pay at any NFC-enabled merchant.	Live	
	REP - Augur Augur combines the magic of prediction markets with the power of a decentralized network to create a stunningly accurate forecasting tool	Live	
	SNGLS - SingularDTV A Blockchain Entertainment Studio, Smart Contract Rights Management Platform and Video On-Demand Portal	Live	
	TheDAO Update: TheDAO is currently in a refund stage/process	Discontinued	
	SNGLS - SingularDTV A Blockchain Entertainment Studio, Smart Contract Rights Management Platform and Video On-Demand Portal	Live	

List of popular ERC 20 type tokens in the world  
(referenced from: <https://etherscan.io> )

The Starbase team will try to get the STAR listed by the major cryptocurrency exchanges around the world.

Therefore, the STAR holders will be able to sell their STAR on the market after the STAR becomes transferrable.



## STAR Bounty Campaign

Starbase platform will have bounty campaigns for marketing. The Starbase platform will use a maximum of 1.25 % of the STAR (12.5M STAR) for marketing contributors. Several types of marketing endeavours will be led:

1. Facebook campaign. (Like, Comment, Share)
2. Twitter campaign. (Follow, Retweet)
3. Blog articles campaign.
4. Newsletter subscription campaign.
5. Whitepaper & website translation campaign.
6. Slack participation
7. Early purchaser recommendation campaign.
8. Other contributions for the Starbase platform.

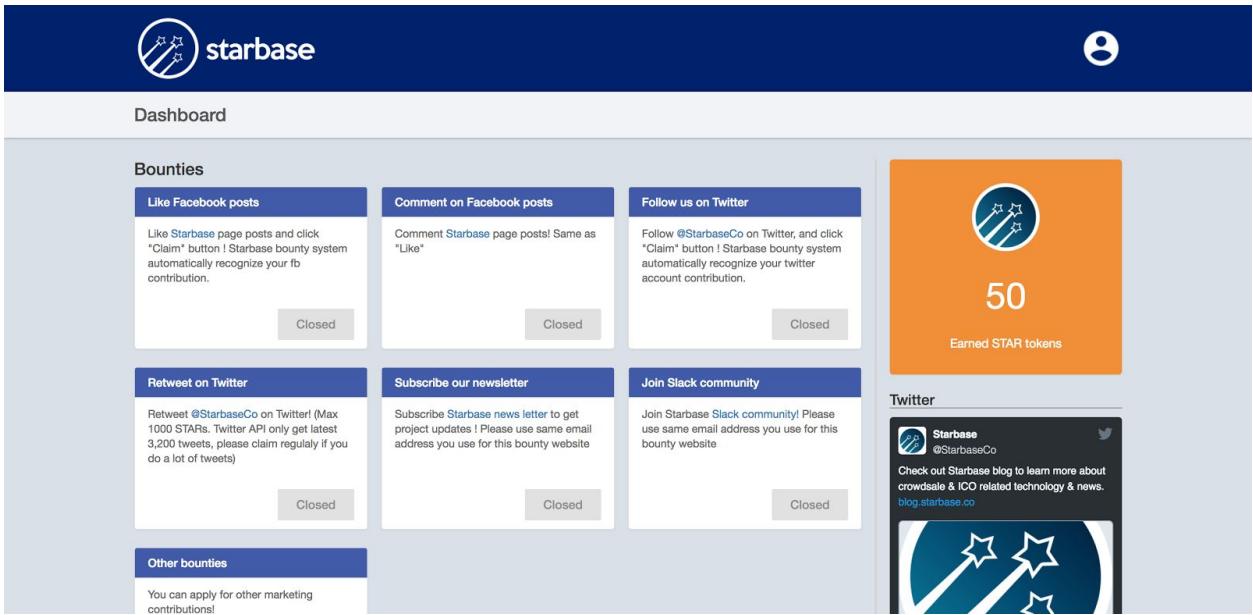
Get STAR tokens by supporting Starbase !

Have an alien mind and abduct clients for rewards.

TRY STAR BOUNTY NOW

What is STAR bounty

Starbase bounty page



The screenshot shows the Starbase Bounty Dashboard. At the top, there's a navigation bar with the Starbase logo and a user icon. Below it, a header says "Dashboard". The main area is titled "Bounties" and contains several boxes:

- Like Facebook posts**: Like Starbase page posts and click "Claim" button! Starbase bounty system automatically recognize your fb contribution. Status: Closed.
- Comment on Facebook posts**: Comment Starbase page posts! Same as "Likes". Status: Closed.
- Follow us on Twitter**: Follow @StarbaseCo on Twitter, and click "Claim" button! Starbase bounty system automatically recognize your twitter account contribution. Status: Closed.
- Retweet on Twitter**: Retweet @StarbaseCo on Twitter! (Max 1000 STARs. Twitter API only get latest 3,200 tweets, please claim regulaly if you do a lot of tweets) Status: Closed.
- Subscribe our newsletter**: Subscribe Starbase news letter to get project updates! Please use same email address you use for this bounty website. Status: Closed.
- Join Slack community**: Join Starbase Slack community! Please use same email address you use for this bounty website. Status: Closed.
- Other bounties**: You can apply for other marketing contributions!

To the right, there's a summary box with a blue background and white text, showing "50 Earned STAR tokens". Below that is a "Twitter" section with the Starbase Twitter profile and a link to the blog: [Check out Starbase blog to learn more about crowdsale & ICO related technology & news. blog.starbase.co](https://blog.starbase.co). There's also a decorative graphic of three stars with arrows pointing upwards.

Image 2: Starbase Bounty Dashboard

Bounty campaign details will be later described in the Starbase blog:  
<https://blog.starbase.co>

And bounty campaign site is <https://bounty.starbase.co>

## STAR Crowdsale Bonus Schedule

STAR crowdsale will last 45 days, and below the time bonus for token purchasers. If you bought earlier, you can get a bigger bonus for your purchased amount.

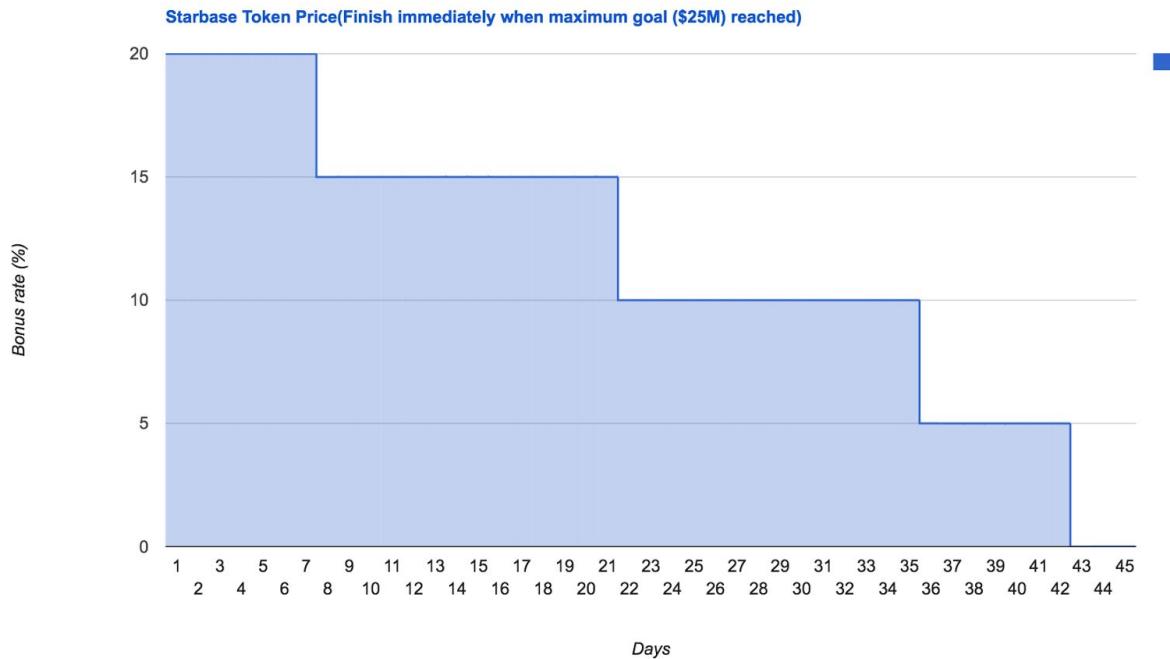
For example, a person purchases \$1000 worth of tokens by using ETH or BTC during the 15% bonus period, then after the sale has finished, the purchase will be counted as \$1150 and will receive STARs 2 weeks after the end of the token sale.

Starbase Bonus Schedule will be as follows:

1st ~ 7th day: 20 % bonus



8th ~ 21th day: 15% bonus  
22th ~ 35th day: 10% bonus  
36th ~ 42th day: 5% bonus  
43th ~ 45th day: 0 % bonus



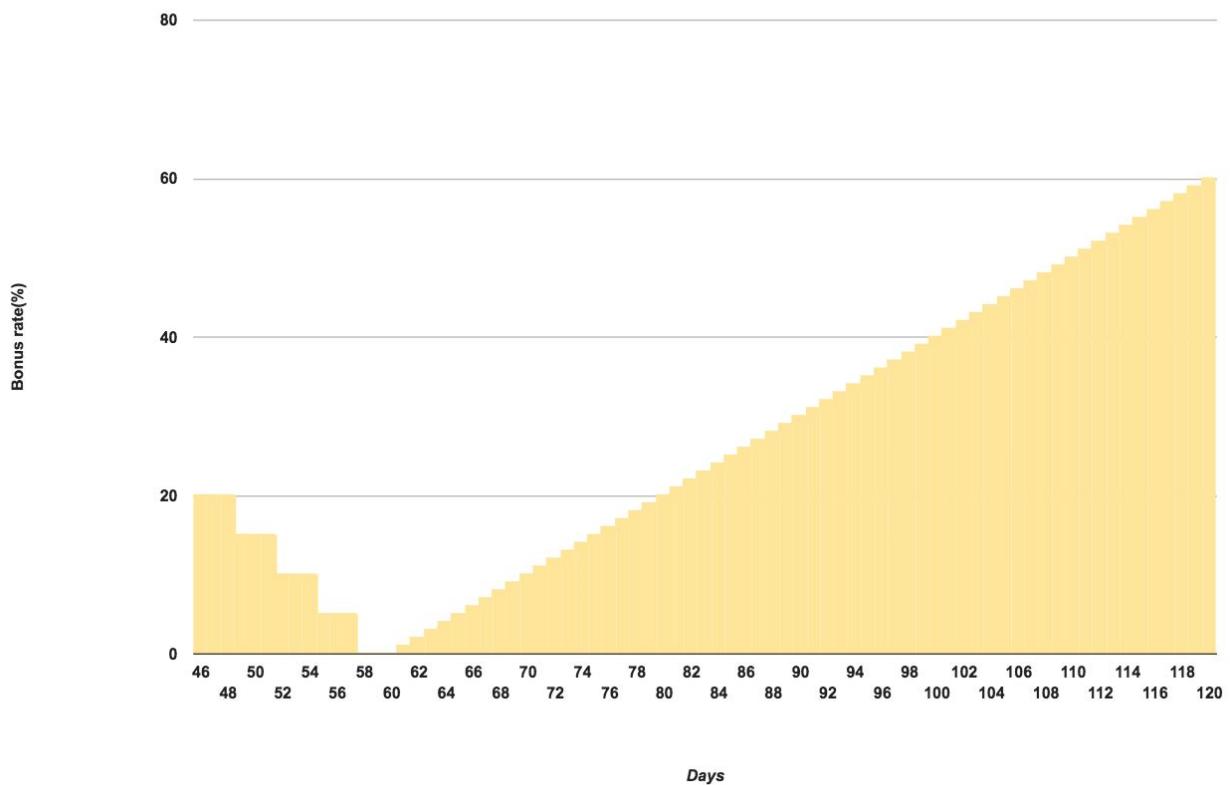
If we do not raise \$2.5M within 45 days, then we will extend the duration of the token sale to fundraise that amount. The extended token sale will be immediately finished when the funded amount reaches \$2.5M. The extended sale token bonus percentage will be as described below.

Starbase Extended Sale Term Bonus Schedule is below.

46th ~ 48th day: 20 % bonus  
49th ~ 51st day: 15% bonus  
52nd ~ 54th day: 10% bonus  
55th ~ 57th day: 5% bonus

58th ~ 60th day: 0 % bonus  
 61st ~ 120th day: {number\_of\_days} - 60 \* 1% bonus

If can not raise more than \$5M in 45 days token sale term, we Extend token sale days. Extended Starbase Token Sales Immediately Finish when Starbase minimum goal (\$5M) reached



## Minimum Fundraise Amount

Starbase will commence operations as long as it raises \$1,000,000 during the Starbase token sale. Token sale includes early purchase and crowdsale.

## Starbase Funded Value Usage

**The amount funded will be used for the Starbase platform as follows:**

1. Development (50% - 75%).
2. Business development (Marketing & Sales & Consulting) (20% - 45%).
3. Legal (10% - 25 % ).



#### 4. Contingency (5- 10%)

##### **Development can include, but is not limited to:**

- Starbase crowdsourcing frontend web application.
- Starbase multisignature wallets which can be managed by the users themselves, and not by Starbase company.
- Starbase value API for token issuance & reward payments
- Starbase value API for token deposit & transfer & withdrawal.
- Ethereum token contract templates for core teams.
- Work payment by Bitcoin, Ethereum, and core teams' tokens UX.
- Cold & Hot wallet separation mechanism.

##### **Business Development costs can include, but are not limited to:**

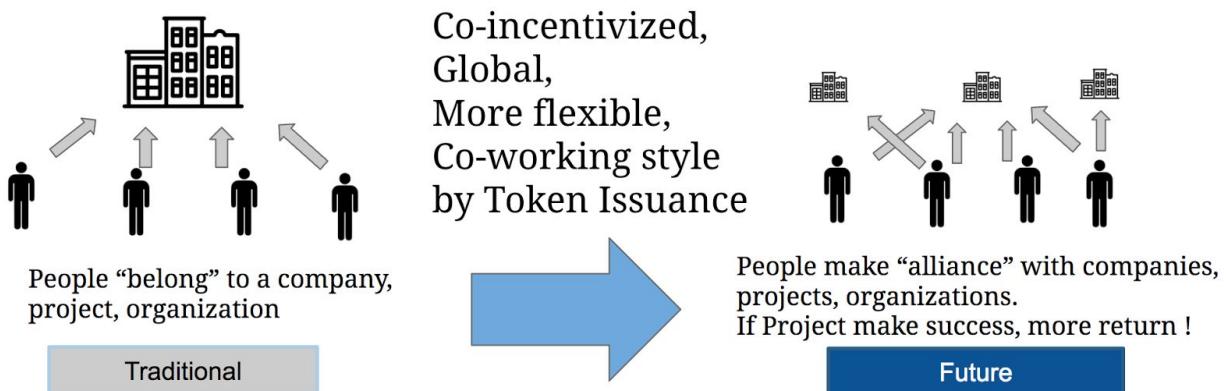
- Hold workshops for global token based funding for new service/product development.
- Create a press release for Starbase platform launch & updates.
- Collaborate with rating agencies for core teams to be able to choose rating agencies and collaborate with them to increase their trust.
- Collaborate with VCs or incubators for core teams to be able to choose due diligence companies and start crowdsale.
- Collaborate with Incubators to provide workshops to bring startups and supporters who don't know much about blockchain or internet of value to tokensale & ICO world.
- Develop enterprise acceptable scheme for VC as supporter (investor).
- Hold engineer workshops for people who want to support global innovative startups as supporters (developers, designers, legal or financial professionals).

##### **Legal costs can include, but is not limited to:**

- Company establishment and opening a bank account and taxation after talking with Switzerland, Singapore, Luxembourg lawyers for developing the global Starbase platform.
- Legal advice and endorsement for the business from governments or authorities.

- Discussion with regulators, lawyers and accountants in Switzerland, Singapore, Luxembourg.
- Jurisdiction operating licenses, such as the Payment Institution License
- Know Your Customer legal database, if required.
- Preparation of data protection and legal admission for regulations in the countries in which Starbase operates.
- Legal staffing costs.

## Starbase as HR Technology



Starbase positions in HR technology, with its fast and global long-term incentive system will raise the popularity and token value. By using Starbase, core teams can pay issued tokens as long-term incentives for supporters. This will create benefits for core teams who don't have much initial capital.

Sharing long-term incentives with supporters, if the value is visible enough, nicely works similar to stock options, phantom stocks, and SAR does in current company models.



## Starbase in the Permissionless Blockchain Ecosystem

Starbase mission in the permissionless blockchain context is to increase the non-blockchain user utilization of the global permissionless blockchain as “internet of value” for new projects..

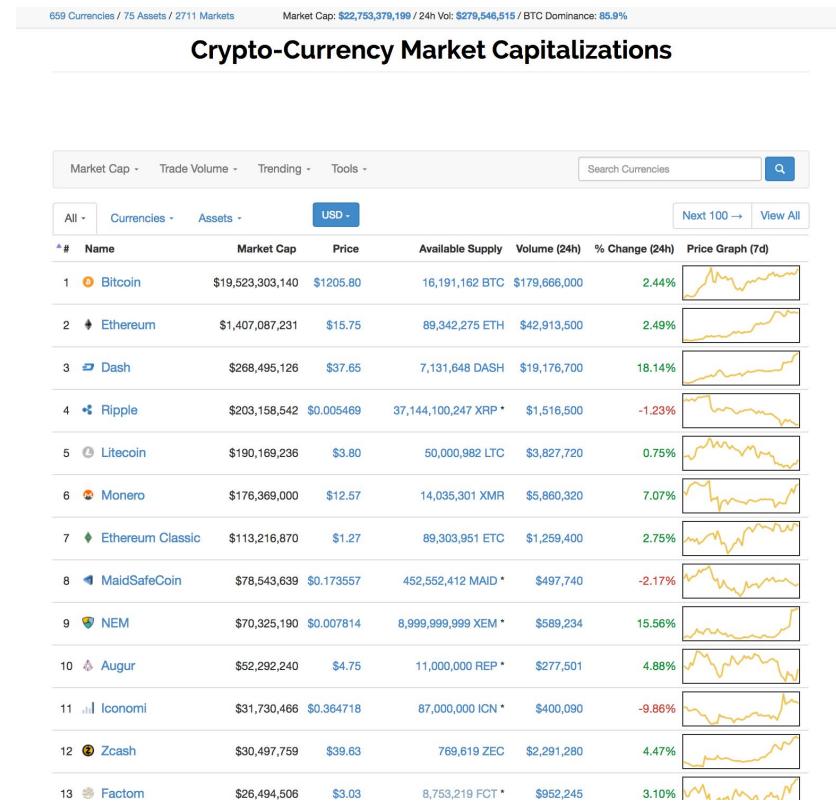
Summary:

1. Make more non-blockchain users utilize blockchain, global “Internet of Value”.
2. Starbase focuses on token issuance & reward payment functionalities more than token transfer, exchange functionalities.
3. Starbase enable more innovative projects easily doing bounty campaign
4. Starbase enable more innovative projects easily doing token issuance
5. Provide new token issuance templates for core teams.

## Merits of Using the Ethereum Blockchain

By using Ethereum for the Starbase platform development, then users can gain the following:

1. More liquidity than any other token types, because they can be easily listed on cryptocurrency exchanges. We will issue tokens using the ERC 20 standard which most commonly used. It is the same standard as with REP, DGD, MKR, SNGLS, etc.)
2. High security as many savvy engineers are already using it, and the core is also rapidly being maintained.
3. Transparent smart contract which can be used under reliable token conditions.
4. Ethereum has the second market cap in the crypto currencies, and decentralized large network and general computation platform already.



From [CoinMarketCap](#), Ethereum is the second and outdistanced from 3rd-

Therefore, we are using Ethereum for the STAR and core teams' tokens for the first.

## Starbase development plan and budget

Functionality		Token sale amount	Min (\$ - 1.5M)	Middle(\$-3.5M)	Large(\$-6M)
General	Starbase crowdfunding/sourcing web app		O	O	O
	Starbase token wallet mobile app (BTC, ETH, STAR, ERC 20s)			O	O
	Starbase multisig wallet to execute transactions on Ethereum		O	O	O
	Built-in Legal & Tax support contract templates for major jurisdictions			O	O
	Core team token management frontend & web API connected with blockchain(Ethereum)		O	O	O
	Core team token management frontend & web API connected with blockchain(Waves, Cosmos )			O	O
	Core team token management frontend & web API connected with blockchain(Counterparty, Omni, Nxt)				O
	Rating system by matching system between core teams and rating companies		O	O	
	Due diligence system by matching system between core teams and due diligence companies		O	O	
	Support of BTC, ETH, STAR, and core team's ERC 20 tokens payment mechanism		O	O	O
Token issuance	3rd party Exchange integration for making STAR purchase easy for work payment			O	O
	3rd party Exchange integration for making core team Ethereum tokens purchase easy				O
	Token issuance frontend & web API		O	O	O
	Token issuance fee reward distribution to STAR holders by the issued core team's token form		O	O	O
	Early purchase management tool for core teams		O	O	O
Token sale	Early contribution management tool for core teams		O	O	O
	Bounty campaign management tool for core teams		O	O	O
	Crowdsale webpage (i.e. Crowdfunding platform's webpage )		O	O	O
	Customizable crowdsale templates				O
Work Payment	Reward payment & withdraw system for core teams		O	O	O
	Basic due diligence automation by simple voting mechanism by STAR token				O
	Milestone based token payment between core team and supporter		O	O	O
	Work payment fee reward distribution to STAR holders by the paid token or STAR form		O	O	O
	Escrow payment mechanism with 3rd party support			O	O

## Risk

This document purpose:

The financial projections are estimations. There is no guarantee that they will be met. This whitepaper is not an offer, but is informational in nature. This document is not for U.S. residents or citizens.

Purchase of STAR:

The purchase of STAR, as described herein, entails a high degree of risk and is only suitable for those who can afford a total loss of their purchase.

No warranty:

Purchasers need to understand that there is no warranty whatsoever on STAR, express or implied to the extent permitted by law, and understand that Starbase PTE. LTD. or related project members will not provide any refund of the purchase of STAR under any circumstances.



Dissolution of Starbase team due to a diminishment in the value of tokens:  
It is possible that the token value may drop significantly in the future, which  
may deprive the Starbase of sufficient resources to continue to operate.

Non refundable:

All purchase of STAR are final and non-refundable. By participating in the Starbase Token(Symbol: STAR) Sale, you acknowledge that the Starbase system is not required to provide a refund for any reason, and that you will not receive money or other compensation in lieu of a refund.

Taxation

Any Starbase party makes no representations concerning the tax implications of participating in the Crowdfunding, making donations, or receiving and holding Tokens. You bear the sole responsibility for determining or assessing the tax implications of your participation in the STAR sale. By participating in the STAR sale, you agree that no other party (including, without limitation to any Starbase party) may be held liable for any loss arising out of, or in any way connected to.

Acceptance of terms and conditions of the Crowdfunding:

By participating in the Crowdfunding, you expressly acknowledge and represent that you have carefully reviewed these terms and conditions, the Whitepaper, the website and fully understand the risks, costs, and benefits associated with Tokens. Therefore, you agree to be bound by these terms and conditions.

Reward based software product.

STAR is a software product given as a reward for participating in the Starbase platform. There are no guarantees of their future value. STAR is neither a security NOR a investment offering.

## Vision Again

**~ Everyone easy to challenge ~**

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starbase