Trister World Technology Yellow Paper (V1.0)

New Future of DeFi Financial World

*Note:

Trister World is our third strategic upgrade of Trister. The Yellow Paper focuses on Trister's general technology planning regarding the new DeFi financial world and stresses Trister World's fundamental principles, product applications, economic models, technological developments, innovative applications, and technology logics in terms of DeFi. We will continue updating the parameters of our core technology products to make them more comprehensive, specific, readable, and professional and will release and launch them step-by-step. At a later date, we will release whitepapers for our major eco-products and core technology architectures separately.

*Definitions

On the basis of the future decentralized finance (DeFi), the Yellow Paper probes into future global financial developments and the R&D of blockchain technologies, as well as their applications in the financial industry. The key terms involved in the Yellow Paper are defined below:

(1) DeFi: "decentralized Finance" or "Open Finance".

(2) Assets or idle assets: Assets mentioned in the Yellow Paper mainly refer to

the global mainstream digital assets, e.g. BTC, ETH, USDT, LINK, and MANA, as well as the eco-financial interest instruments of Trister World, i.e. Trister Token (hereinafter referred to as "tToken" assets).

(3) Capital or idle capital: These terms refer to the digital assets, digital currency, or commonly recognised token held by individuals, rather than the legal currency of each state. It has the same meaning as the above-mentioned assets or idle assets mentioned in (2).

Introduction

Based on the global community of Trister's Light, Trister World is a brand new DeFi ecosystem developed to provide a new generation of the decentralized financial world. It is also known as Trister 3.0. Amidst the continuous development of decentralized blockchain finance and the iterations of technologies all over the world, we are constantly studying and developing cutting-edge technologies worldwide. Since its founding, Trister has dedicated itself to building an extensive and inclusive financial platform that is open to everyone, regardless of nationality, region, race, or income. Trister has undergone three key stages, i.e. Trister's Light (Trister 1.0), Super Trister (Trister 2.0), and this new strategic upgrade of Trister World (Trister 3.0). We have made upgrades and new iterations to enable more DeFi enthusiasts to know, understand, and join the commonly recognised Trister ecosystem. We are planning to launch an open-ended online lending platform (Trister's Lend) in the second quarter of 2021 and gradually release and launch other DeFi eco-products and applications.

As DeFi ecology continues to grow, Trister World will continue to expand and extend its value system for the platform, redefine the future of the digital economy, promote innovations and developments of the new financial world in parallel with DeFi financial ecology, and eventually achieve a genuinely decentralized and autonomous community.

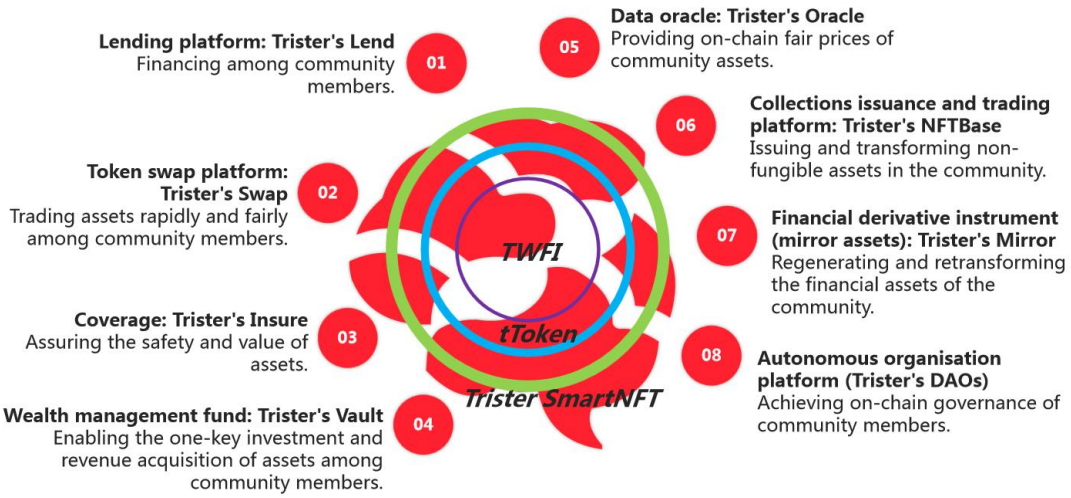
1 Overview of Trister World

1.1 Introduction to Trister World's aggregation ecological platform and eight major products matrix

1.1.1 Stemming from Trister's fan community and upholding principles of "value creation, value circulation, and value-driven", Trister World is a disruptive DeFi financial aggregation platform created by a team of top encryption scientists from all over the world.

1.1.2 Three to five years have been spent planning the construction of a complete Trister World aggregation platform, and we have gradually launched and aggregated a matrix for eight major financial products and financial derivative products, including the decentralized open-ended lending platform (Trister's Lend), decentralized token swap platform (Trister's Swap), decentralized wealth management fund platform (Trister's Vault), decentralized insurance platform (Trister's Insure), decentralized data oracle platform (Trister's Oracle), decentralized collections issuance and trading platform (Trister's NFTBase), decentralized mirror assets and trading platform (Trister's Mirror), and decentralized autonomous organisation platform (Trister's DAOs). In addition, we are adopting TWFI token to realise the Trister World community governance, promoting the eco-financial interest instrument tToken in our different eco-products and applications, and trying to provide our users with a new global DeFi future with low thresholds, convenient operation, stable revenue, openness, fairness, open sources, and safety.

1.1.3 Trister World's eight major products matrix (figure)



1.2 TWFI - the core value token in Trister World

1.2.1 TWFI token is the core value token of Trister World, shouldering the value of the entire Trister World ecology and the community governance function.

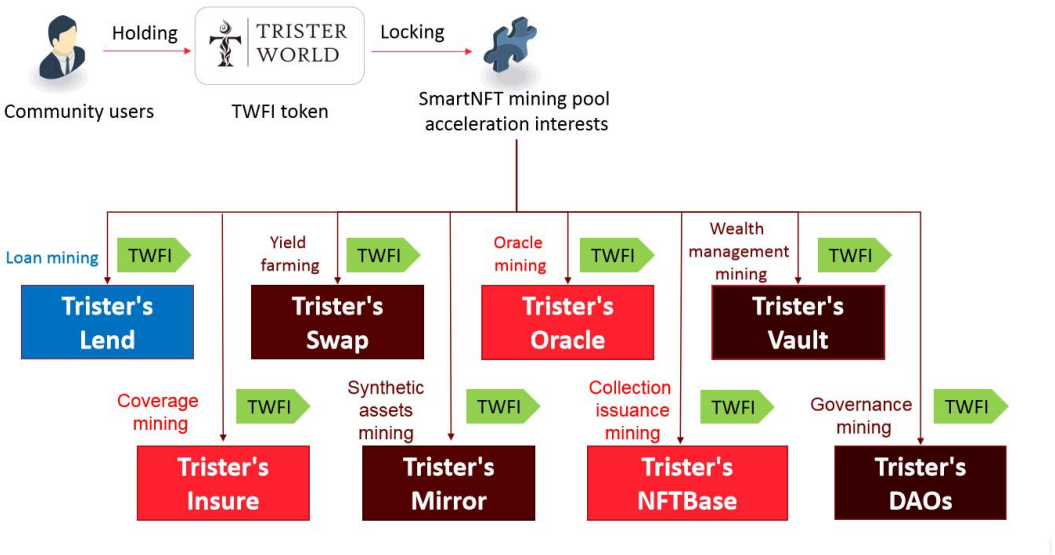
1.2.2 TWFI token's total issuance quantity is 80 million, 10 million for each of the eight major eco-products of Trister World.

1.2.3 *Note: Only when one eco-product of Trister World aggregation platform is formally launched, should TWFI mining and output be started for this eco-product.

For example:

After the protocol of the decentralized token trading platform (Trister's Swap) is formally launched and deployed, the output of 10 million tokens for Trister's Swap is begun according to Swap's TWFI token mining model and output mechanism.

1.2.4 Trister World mining logic (figure)

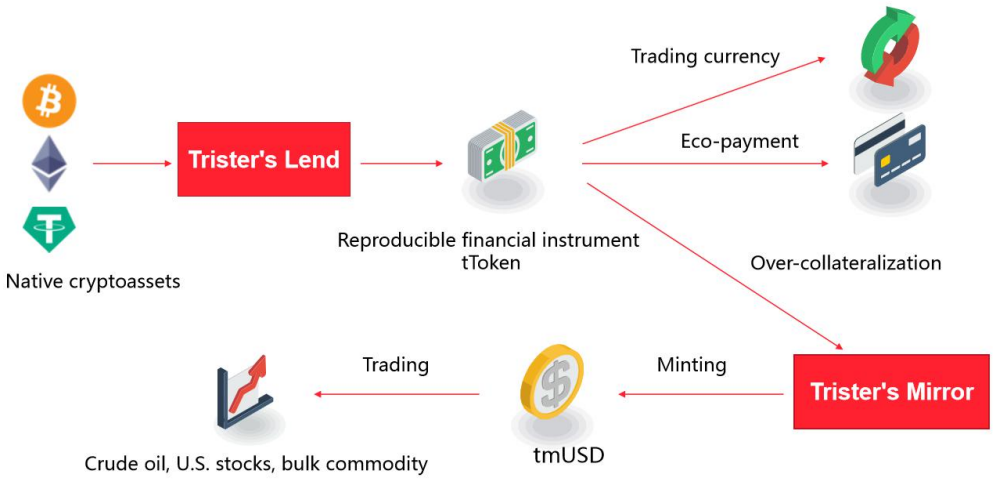


1.3 tToken - the eco-financial interest instrument in Trister World

1.3.1 Trister Token (hereinafter referred to as "tToken", detailed information as shown in Chapter 2.4 of the Yellowpaper) is a critical component throughout Trister World, representing the eco-financial interest instrument of the Trister community.

1.3.2 Furthermore, tToken is also the financial interest instrument running in different eco-products and applications throughout Trister World. The user holding tToken can obtain interest revenue and interlink different eco-products of Trister World. At the same time, they can also mine in different eco-projects, thus obtaining more revenue by "mining at different locations with one token".

1.3.3 The financial purposes of tToken are demonstrated in the figure below:



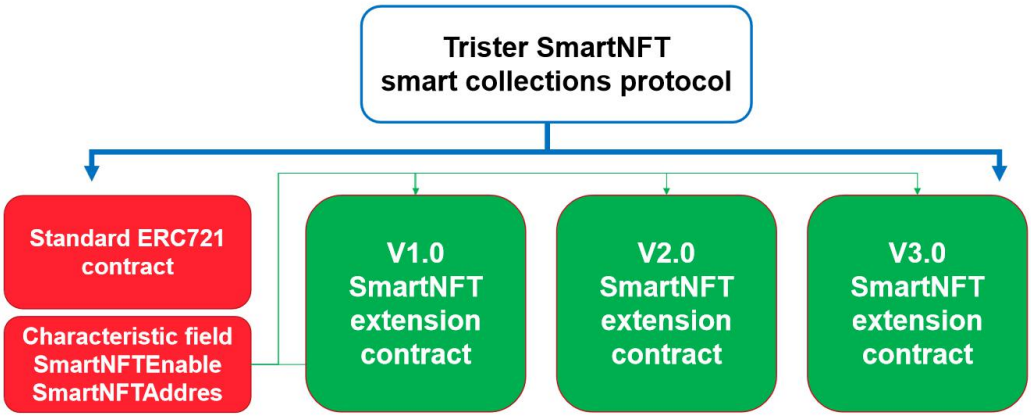
*Graphic description: The tToken corresponds to the reproducible financial instrument of the native cryptoassets and then to the payment capital and trading currency in the ecology. Finally, the guaranteed stablecoin (tmUSD) will be minted through Trister's Mirror protocol and traded with tmAsset, a mirror of real assets.

1.3.4 As Trister World ecology continues to grow in the future, we will interconnect tToken with other eco-platforms and make it the general financial interest instrument of the whole DeFi industry.

1.4 Trister SmartNFT - the ecological VIP card in Trister World

1.4.1 Trister SmartNFT is the smart collections protocol of the Trister World aggregation platform. It originates from ERC721 standard and surpasses the ERC721 standard contract with more technological extensions, compatibility, convenience in upgrading, and flexibility.

1.4.2 Trister SmartNFT contract architecture (figure)



1.4.3 Trister SmartNFT is known as the "ecological VIP card" in the Trister World aggregation platform. As a member of Trister's NFTBase family, it features limited issuance, a unique number, unforgeability, on-chain transparency, and openness. In addition, its functions can be constantly iterated, expanded, and upgraded.

1.4.4 In various eco-products of Trister World, the community users holding the Trister SmartNFT are entitled to special interests, including agent mining, collective investment, agent voting, agent minting, market maker agency, mining acceleration, and sharing of the profit dividend.

1.4.5 By using Trister SmartNFT, the user may obtain the mining acceleration service, the algorithm of which depends on four values.

1.4.5.1 Basic acceleration rate "$Rate_B$"

$Rate_B$ refers to the acceleration rate of all Trister SmartNFTs that are affected by the total locked quantity of TWFI tokens. The algorithm of the basic acceleration rate mainly uses three parameters: (1) maximum acceleration rate $Rate_{BM}$, which refers to the acceleration rate when the TWFI locking rate is 100% (virtually impossible); (2) optimum locking rate P, which represents our

expected TWFI locking rate. The better locking rate is not always the higher one, as the higher locking rate may affect liquidity; (3) optimum acceleration rate $Rate_{BP}$, which refers to the acceleration rate when the TWFI locking rate reaches the optimum locking rate P. Under normal circumstances, the setting of the optimum locking rate P and the optimum acceleration rate $Rate_{BP}$ can enable the user to configure a reasonable locking rate.

For example: {$Rate_{BM}$ = 1.2, P = 0.8, $Rate_{BP}$ = 1.19}

This means that when the locking rate is 100%, the maximum acceleration rate is 1.2, but the optimum acceleration rate of 1.19 can be obtained when the locking rate is 80%.

1.4.5.2 Mining pool acceleration rate "$Rate_C$"

(1) $Rate_C$ refers to the acceleration rate of each Trister SmartNFT that is affected by the locked quantity of TWFI tokens.

(2) The algorithm of the mining pool acceleration rate mainly has one parameter: the maximum mining pool acceleration rate $Rate_{CM}$, which refers to the mining pool acceleration rate when TristerSmartNFT locks the largest number of TWFI tokens. For other Trister SmartNFT holders, the mining pool acceleration rate $Rate_C$ is calculated by the following formula:

$$Rate_C = 1 + \frac{\text{Locked quantity of TWFI tokens on this Trister SmartNFT}}{\text{Maximum locked quantity of TWFI tokens on all Trister SmartNFTs}} * (Rate_{CM} - 1)$$

(3) The design of the mining pool acceleration rate $Rate_C$ can better balance the TWFI tokens locked by each Trister SmartNFT, thus avoiding excessive concentration of TWFI tokens.

(4) For each Trister SmartNFT, the final acceleration rate $Rate_{BC}$ = basic acceleration rate $Rate_B$ * mining pool acceleration rate $Rate_C$.

1.4.5.3 Commission rate "f" of Trister SmartNFT

The commission rate "f" means that every Trister SmartNFT holder may set a certain commission rate to extract some fees from the mining revenue as a Trister SmartNFT holder.

1.4.5.4 User acceleration rate "$Rate_U$"

(1) As different users may lock different numbers of TWFI tokens on the same Trister SmartNFT, an additional user acceleration rate $Rate_U$ will appear.

(2) The algorithm of the user acceleration rate mainly has one parameter: the maximum user acceleration rate $Rate_{UM}$, which refers to the user acceleration rate when Trister SmartNFT locks the largest number of TWFI tokens. For other users, the mining pool acceleration rate $Rate_U$ is calculated by the following formula:

$$Rate_U = 1 + \frac{\text{Locked quantity of TWFI tokens of this user on Trister SmartNFT}}{\text{Maximum locked quantity of TWFI tokens of users on this Trister SmartNFT}} * (Rate_{UM} - 1)$$

(3) The design of the user acceleration rate $Rate_U$ can better balance the TWFI tokens held by users, thus avoiding excessive concentration of large TWFI token holders.

1.4.6 User's final acceleration rate "$Rate_{BCU}$"

$$Rate_{BCU} = Rate_B * Rate_C * (1-f) * Rate_U$$

1.4.7 Profit dividends for Trister SmartNFT holders

1.4.7.1 The user holding Trister SmartNFT is entitled to profit dividends from each eco-application of the Trister World aggregation platform. The dividend

calculation formula is as below:

$$\text{Dividends of Trister SmartNFT} = \text{Total dividends} * \frac{\text{Basic acceleration rate} * \text{Mining pool acceleration rate}}{\Sigma(\text{Basic acceleration rate} * \text{Mining pool acceleration rate})}$$

1.4.7.2 Unlike the mining algorithm, the profit dividend is only distributed to the Trister SmartNFT holder.

1.4.8 Both the mining acceleration and the profit dividend of Trister SmartNFT are innovative designs derived from the game-balance theory. This is reflected in the following aspects: (1) On the one hand, the Trister SmartNFT holder needs to consistently recruit users and lock their TWFI tokens on the Trister SmartNFT in order to improve the mining pool acceleration rate of Trister SmartNFT. However, the mining users with their TWFI tokens locked do not expect the excessive polarization in the distribution of TWFI tokens. Instead, they hope to distribute tokens in a more balanced way, which is more beneficial for the users' mining revenue. (2) On the other hand, the Trister SmartNFT holder can set the mining commission rate for market competition and market game.

2 The First Eco-product: decentralized Open-ended Lending Protocol - Trister's Lend

2.1 Overview of Trister's Lend

The already developed Super Trister possesses some decentralized open-ended lending functions. We plan to launch the new and complete functions of Trister's Lend during the second quarter of 2021.

(1) Definition: Based on the Ethereum network, Trister's Lend is the decentralized open-ended lending protocol platform for Trister World originating from Trister community. It is used for financing among members of the Trister community. Based on the smart contract technology and capital supply-demand relationship, this protocol can achieve a financing protocol rapidly and smartly among members of the Trister community. In theory, in the Trister's Lend protocol, the user serving as the capital owner has full control and ownership over his/her capital and is free to enter or leave the decentralized network.

(2) Trister's Lend protocol supports the loan of all ERC20 standard tokens.

During an earlier stage of the plan, it supports the loan of over 20 mainstream tokens and is scheduled to support the loan of new tokens of the institutional party, not requiring the DAOs governance voting. In a later stage, the TWFI (*please refer to Chapter 2.13 of the Yellow Paper for the introduction to TWFI as the platform token and governance token of Trister's Lend protocol) holders will determine whether to support the loan of new tokens through DAOs governance voting.

2.2 Five critical innovations in the technology development of Trister's Lend

2.2.1 The loan capital pool of Trister's Lend is hosted in the smart contract, which will be automatically executed as per the code. No third-party institution or individual can employ the capital.

2.2.2 Instead of adopting the conventional P2P matching mode between the borrower and the lender, Trister's Lend uses the capital pool model, which significantly increases the efficiency in matching loan orders.

2.2.3 Through the Trister SmartNFT interest mining pool, a community user can obtain and use the acceleration function or acquire a higher mining acceleration rate by overlapping it with the TWFI token - the core governance token of Trister World.

2.2.4 Learning from the effective methods and mechanisms of conventional banks and other financial institutions around the world, we have added a risk reserve mechanism that is designed on the basis of research and development on the product economic model of Trister's Lend. Thus, the risk reserve mechanism acts as our assets safety reserve in emergencies.

2.2.5 The capital pool of a traditional loan contract has no market maker mechanism, and capital risks are solely assumed by the protocol. As for Trister's Lend, we have developed a new method that enables the institutional user to open a new loan trading pair by pledging its assets, thus providing liquid currency loan services.

2.3 Trister's Lend protocol provides different participation methods for community members

(1) As a depositor

The community member may deposit his/her idle digital assets in the

protocol for interest revenue.

(2) As a borrower

The community member may acquire the right to use capital in the short term or at will by pledging his/her assets properly and paying a certain amount of interest.

(3) As a liquidator

The community member may liquidate the user capital by having a health factor (*please refer to Chapter 2.7 of the Yellow Paper for the introduction to the health factor of Trister's Lend) lower than the threshold to avoid the capital pool suffering any loss. The liquidator will be rewarded for liquidation. Any user may serve as the liquidator.

(4) As a miner

The community member may obtain the mining revenue (TWFI token) for Trister's Lend protocol for borrowing or lending.

(5) As a mining pool owner

Any community member holding the Trister SmartNFT is a mining pool owner, who is assigned with different acceleration rates according to the number of TWFI tokens locked into the Trister SmartNFT. The user may obtain a higher mining revenue by placing his/her "borrowed/lent" capital in the Trister's Lend protocol via the Trister SmartNFT.

2.4 Depositing to Trister's Lend

2.4.1 For a community member, depositing his/her idle capital in Trister's Lend represents safe and low-risk financial management behaviour. Unlike the traditional P2P matching protocol between the borrower and the lender, the capital pool of Trister's Lend gathers the deposited assets of all users to provide better liquidity and achieve a balance in the capital system. The borrower may withdraw his/her capital deposited in Trister's Lend protocol at any time, without needing to worry over the lender of the capital, the amount of

borrowing, or the term of borrowing.

2.4.2 For Trister's Lend, we have designed a new financial interest instrument that features prices linked to the original currency at a 1:1 ratio. It is known as tToken. A community member may deposit the token assets to the Trister's Lend protocol, as long as they are supported by the protocol, and subsequently acquire a tToken voucher.

For example:

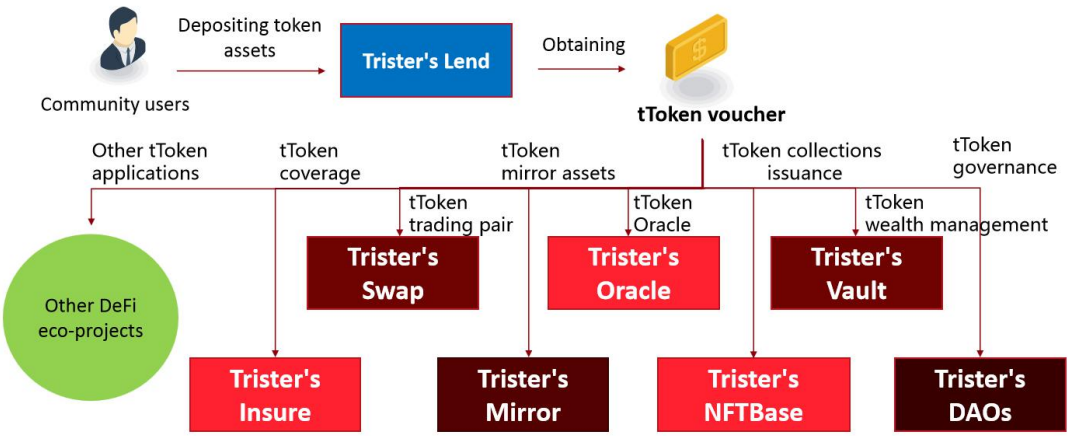
The user will acquire tETH after depositing ETH to Trister's Lend protocol.

The user will acquire tUSDT after depositing USDT to Trister's Lend protocol.

The user will acquire tDAI after depositing DAI to Trister's Lend protocol.

2.4.3 As a financial interest instrument, tToken can serve as the collateral used for borrowing the required capital from Trister's Lend protocol, or as a means of payment in all eco-products and applications in the entire Trister World. It may also stand as the collateral used for mining in other mining pools of Trister World, thus acquiring more revenue by "mining at different locations with one token".

2.4.4 The circulation logic of the financial interest instrument tToken in Trister World is as below:



2.5 Borrowing from Trister's Lend

2.5.1 A Trister community member may borrow currently lacking but urgently needed capital from Trister's Lend protocol by pledging his/her tToken.

2.5.2 The community member may borrow the capital from Trister's Lend protocol to: (1) achieve the right to use the capital at his/her disposal in emergencies; (2) borrow the capital for going long and acquiring revenue in a bull market; (3) borrow the capital for short-selling and acquiring revenue in a bear market.

2.6 Collateral factor of Trister's Lend

2.6.1 The collateral factor represents the maximum amount of assets that the user can borrow from Trister's Lend protocol by pledging the same number in collateral, i.e. tToken. When the collateral factor for a certain tToken is 0, the user cannot borrow any asset from Trister's Lend protocol with this collateral.

2.6.2 Every kind of tToken in Trister's Lend protocol has a collateral factor (within the range of 0 ~ 1), which is determined according to the results of an evaluation based on the collateral liquidity in the trading market and its previous price fluctuation within a certain period.

For example:

If the collateral factor of the digital currency USDT is 0.8, the user can borrow capital equivalent to $8,000 from the market when he/she has pledged tUSDT with a value of $10,000.

If the collateral factor of the digital currency ETH is 0.75, the user can borrow capital equivalent to $7,500 from the market when he/she has pledged tETH with a value of $10,000.

2.6.3 Based on the market quotation, token liquidity, and other specific circumstances, the Trister's Lend protocol operator will flexibly adjust the collateral factor in a timely manner.

2.7 Health factor of Trister's Lend

2.7.1 The collateral factor indicates that users can apply the capital to its maximum amount and upper limit, but if they raise a loan depending on the collateral factor, the collateral may be at the risk of liquidation at any time due to the frequent drastic fluctuations of a token’s market prices. Therefore, with regards to the development of the Trister's Lend protocol, a health factor (H) is also generated, which may be used to present the borrower’s account security.

2.7.2 The computational formula of the health factor (H) is as follows:

$$\mathbf{H} = \frac{\sum \ (\mathbf{Collateral\ value} * \mathbf{collateral\ factor})}{\mathbf{Total\ borrowing} + \mathbf{gross\ interest}}$$

2.8 Capital usage efficiency of Trister's Lend

2.8.1 For each lending capital pool in the Trister's Lend protocol, the capital usage efficiency represents the capital usage efficiency of a given pool, with a value between 0~1.

2.8.2 Ideally, greater capital usage efficiency is better. This means that if the Trister's Lend protocol has the best capital usage efficiency, the depositor can obtain the highest deposit rate, and the lender can also obtain the optimal loan rate.

2.9 Risk reserve of Trister's Lend

The Trister's Lend protocol, much like traditional banks or other financial institutions, will draw a certain percentage of profits into the risk reserve capital pool, which will be taken as a safety capital reserve in extreme cases.

2.10 Borrowing rate model of Trister's Lend

2.10.1 Trister's Lend, the decentralized lending protocol, is a next generation

DeFi financial platform, and we strive to provide users with financial solutions that are low-cost, efficient, and inclusive. Thus, the borrowing rate of the Trister's Lend protocol will be subject to an overall adjustment through Oracle with reference to the borrowing rate of other platforms on the market.

2.10.2 Trister's Lend will provide users with better financial services at a lower borrowing rate to attract more users to borrow money from Trister's Lend protocol.

2.11 Deposit rate model of Trister's Lend

The deposit rate model of the Trister's Lend protocol depends on two factors.

2.11.1 The first is capital usage efficiency. The principal purpose of the DeFi lending platform is to guarantee the security of the capital pool. In such a system, the revenue of the depositor is actually paid by the lender. Therefore, if the loan rate remains constant, it is better to have a lending platform with greater capital usage efficiency, which means that the higher revenue on loan interest is, the higher the deposit rate will be. Conversely, if the capital usage efficiency is low, it means that the lower the revenue on loan interest is, the lower the deposit rate will be.

2.11.2 The second is to make overall adjustments through Oracle and refer to the deposit rate of other platforms in the market so as to achieve enhanced efficiency in terms of market competitiveness under the condition that the security of the capital pool is ensured.

2.12 Conditions of liquidation and liquidator's reward of Trister's Lend

2.12.1 The health of the platform system, as the lending protocol, largely depends on whether Trister's Lend can quickly liquidate the borrower's assets in the event that the borrower has insufficient collateral. When the health factor (H) of the borrower's account is less than 1, the conditions for the liquidation of

the Trister's Lend protocol will be triggered, and Trister's Lend will include the corresponding collateral in the liquidation queue that is to be handled by the liquidator.

2.12.2 Mortgage assets included in the liquidation queue will be liquidated, and the liquidator will be rewarded for implementing liquidation. The Trister's Lend protocol determines the value of mortgage assets through Oracle. For instance, if the calculated value of this collateral through Oracle is 10,000 USDT, the liquidator is only required to pay 9,500 USDT to take this collateral, and the liquidator will also receive a 5% liquidation reward.

2.12.3 Once liquidation is complete, the borrower will simultaneously lose the ownership and the corresponding creditor's rights associated with the collateral.

2.12.4 Any user may serve as the liquidator.

2.13 TWFI Token output mechanism of Trister's Lend

2.13.1 TWFI is used as both the platform coin and the governance token of the Trister's Lend protocol.

2.13.2 The total volume of TWFI tokens in the Trister's Lend biological platform is 10 million, without pre-mining, reservation, or private placement. All these tokens are outputted flexibly based on the liquidity capital amount within several years using the "fair mining" method. After Trister's Lend (a decentralized lending open protocol) is put into service, the mining mechanism is official launched with a price of 10 million TWFI.

2.13.3 The method for flexible outputs of TWFI tokens in the Trister's Lend protocol is as follows:

The first-year benchmark output is 10%, and the weighted output of the capital amount is 10%. Thus, the first-year output is 10%~20%;

The next-year benchmark output is 5%, and the weighted output of the capital amount is 10%. Thus, the next-year output is 5%~15%;

The third-year benchmark output is 2.5%, and the weighted output of the capital amount is 10%. Thus, the third-year output is 2.5%~12.5%;

At the beginning of the fourth year, the benchmark output is 1.25% and the weighted output of capital amount is 10%. Thus, the output from the fourth year onward is 1.25%~11.25% (until all TWFI tokens deployed corresponding to the Trister's Lend protocol are dug out).

2.13.4 The protocol party can set a target capital amount (including deposit balances and loan balances) and calculate the output of blocks generated the next day through Oracle.

2.14 Expenses of the Trister's Lend operation team

2.14.1 20% of TWFI tokens outputted by each block will be sent to the address of the Trister's Lend operation team as the expenses of the operation team.

2.15 Mining output of the Trister's Lend lending pool

2.15.1 The mining reward, which is obtained using mining output to deduct the expenditure of the operation team, will be included in each lending capital pool and is to be held by the depositor and borrower. Moreover, the deposit/borrowing balances in each lending capital pool and the weighting coefficient are used to determine the mining output of the borrower and depositor.

For example:

Assuming that there are three lending pools, the balances and weighting coefficients are as follows:

Token capital pool	Deposit balance	Weighting coefficient of deposit mining	Borrowing balance	Weighting coefficient of borrowing mining
AAA	100000 USDT	1.4	70000 USDT	1.2
BBB	5000 USDT	1.5	2000 USDT	1.1
CCC	20000 USDT	1.7	1000 USDT	1.5

Thus,

The formula for calculating the mining output of deposit/borrowing pools of the corresponding tokens is as follows:

$$\textbf{Mining output of token capital pool} = \textbf{Total output} * \frac{\textbf{Capital pool balance} * \textbf{Weighting coefficient of capital pool mining}}{\sum \textbf{(Capital pool balance} * \textbf{Weighting coefficient of capital pool mining)}}$$

2.15.2 At present, the weighting coefficient for mining different token lending pools is set by the Trister's Lend operation team in accordance with demand, and the TWFI holders will vote on whether to add new token lending pools. The vote will also determine the mining weighting coefficient of new lending pools.

2.16 Trister SmartNFT agent mining

2.16.1 Users can deposit/raise a loan directly under the Trister's Lend protocol, or deposit/raise a loan through Trister SmartNFT and enjoy the corresponding acceleration of the agent mining. If users deposit or raise a loan without using the Trister SmartNFT, they will not have the benefit of mining acceleration.

2.16.2 When users carry out agent mining through Trister SmartNFT, *refer to Chapter 1.4.5 of the Yellow Paper for the algorithm of acceleration mining.

2.16.2 The acceleration rate of mining pools is determined with reference to different mining acceleration rates that will be enjoyed by each Trister SmartNFT, which are based on the number of locking TWFI tokens when users deposit or raise a loan through the Trister SmartNFT.

For example:

There are three Trister SmartNFT users and two independent mining users in the capital pool at the existing mining direction, and the capital amount and weight are as follows:

SmartNFT No.	Capital amount	Acceleration rate of mining pools
#88	100000 USDT	1.3
#99	5000 USDT	1.5
#555	20000 USDT	1.2
/(independent user A)	500 USDT	1 (no acceleration)
/(independent user B)	1000 USDT	1 (no acceleration)

Thus,

the formula for calculating the mining output of the corresponding Trister SmartNFT users and independent users is as follows:

$$\textbf{Mining output} = \textbf{Total output of capital pool} * \frac{\textbf{Capital amount} * \textbf{Mining pool acceleration rate}}{\sum \textbf{(Capital amount} * \textbf{Mining pool acceleration rate)}}$$

2.16.3 We have carried out sufficient calculations and demonstrations when designing the algorithm of acceleration rates to avoid excessive concentrated locking of TWFI tokens that could be caused by the algorithm. This adjustment allows for balanced distribution and locking of TWFI tokens as far as possible. In other words, when a certain reasonable value (for example, when the locking is 70%, the maximum acceleration rate is 1.48) is reached, the acceleration rate increases slowly.

2.17 User acceleration rate of Trister's Lend

In addition to obtaining the acceleration rate of the mining pool itself, users who lock TWFI under the Trister SmartNFT can also obtain a higher acceleration rate based on the total value locked of TWFI made by users. For example, there are a total of four users with a Trister SmartNFT number of 88. The TWFI locked quantity and the user acceleration rates are assumed as follows:

User	User capital amount	TWFI locked quantity	User acceleration rate
0xA	10000 USDT	1000	1.3
0xB	10000 USDT	500	1.2
0xC	10000 USDT	200	1.1
0xD	10000 USDT	0	1

Thus, the mining output obtained by the corresponding user is as follows:

$$= \textbf{Mining output of this SmartNFT} * \frac{\textbf{User capital amount} * \textbf{User acceleration rate}}{\sum (\textbf{User capital amount} * \textbf{User acceleration rate})}$$

2.18 SmartNFT dividend pool of Trister's Lend

20% of profits of the Trister's Lend protocol will be allocated to Trister SmartNFT holders as dividends, and Trister SmartNFT holders can receive the same through Claim on the Trister SmartNFT pages.

2.19 Buyback and destruction mechanism of TWFI Token of Trister's Lend

20% of profits of the Trister's Lend decentralized lending protocol will be used to buyback and destroy TWFI tokens.

2.20 Protocol profit distribution of Trister's Lend

2.20.1 After deduction of the risk reserves and other necessary expenses (e.g. call expenses of the Oracle), the Trister’s Lend protocal’s specific mode of profit distribution is as follows:

Protocol profit distribution ratio	Mode of distribution
20%	Dividends for Trister SmartNFT holders
20%	Used to buyback and destroy TWFI tokens
20%	Used as the funds for Trister's Lend eco-development, with the expenditure determined by TWFI holders via a vote.
40%	Held by the Trister's Lend operation team to make the required operating expenditures.

2.20.2 When Trister's Lend gradually matures, the Trister's Lend operation team will transfer all rights of control for the protocol to TWFI-DAOs to increase the proportion of the Eco Fund. In the future, 100% profits of the protocol will be subject to the management of TWFI-DAOs.

2.21 Lending market maker mechanism

2.21.1 The traditional lending contract capital pool has no market maker mechanisms, and asset risks are borne by the protocol itself. The development of Trister's Lend has resulted in significant innovation, which will allow institution users to initiate new lending trading pairs by means of pledged assets to provide lending services in low liquidity currencies.

2.21.2 Detailed design scheme (examples)

(1) For example, if an institutional party pledges a certain amount of capital (e.g. 100,000 USDT with a part of TWFI tokens being locked), an unpopular currency like the ABC lending pool can be initiated. Additionally, the institutional party can configure the price Oracle and lending rate Oracle of ABC/USDT (if there is no Oracle, the system default settings can be used). The designated collateral and collateral factors on the Trister's Lend protocol platform are also configurable. The lending of ABC tokens can be promoted to all users of this institutional party so as to successfully initiate lending trading pairs of ABC token assets on the Trister's Lend platform.

(2) Lending capital pools in unpopular currencies will be kept separate from other lending capital pools in mainstream currencies on the Trister's Lend lending protocol platform. When the liquidation of unpopular currencies becomes impossible due to a drastic fluctuation in prices, a settlement shall be made through the mortgage capital amount of the institutional party.

(3)* Lending in unpopular currencies initiated by the institutional party shall not involve Trister's Lend mining.

(4) This lending market maker mechanism is expected to be supported in Trister's Lend V2.0.

2.22 Interests of Trister's Lend platform coin and governance token TWFI holders

2.22.1 TWFI-DAOs can vote on whether to add new lending pools and to modify the related parameters in the protocol.

2.22.2 TWFI-DAOs can decide the expenditures of the Eco Fund of the Trister's Lend platform system by voting.

2.22.3 Trister's Lend V2.0 plans to support institutional parties to initiate a custom lending in unpopular currencies. To do so, pledged capital is required, and a part of TWFI tokens must be locked.

2.23 Eight highlights of the Trister's Lend business model

2.23.1 A dynamic interest rate is used to select the optimal borrowing and deposit rate, thus ensuring users' interests to the maximum extent possible.

2.23.2 Flexible mine output is used, and the mine output quantity is determined by the amount in the capital pool.

2.23.3 Two-way mining is used, and the involved depositors/borrowers all have mining outputs.

2.23.4 The mining acceleration of mining pools is added, and users can accelerate the mining outputs through the Trister SmartNFT mining pool.

2.23.5 The buyback and destruction mechanism of TWFI is added, and users who hold TWFI can participate in community DAOs governance.

2.23.6 Regular lending is developed, and it supports users setting up the method of regular lending.

2.23.7 Third-party mortgage lending is allowed to support users in order to grant their borrowing limit to others, and users can make money from the price difference of interests.

2.23.8 The lending capital pool market maker is added to allow the institutional

party to initiate new lending trading pairs by means of pledged assets. This also supports the institutional party to set up a custom lending pool in unpopular currencies.

2.24 Comparison of decentralized LEND protocols

For the ease of understanding the technical principles and highlights of Trister's Lend's innovative business models, we have provided a comparison between Trister's Lend and a representative decentralized lending protocols in the industry presently.

Comparison of decentralized LEND protocols				
	MakerDAO	Compound	AAVE	***Trister's Lend***
Deposit	Not supportable	Supportable	Supportable	*Supportable*
Deposit rate	/	Automatic calculation	Automatic calculation	*Automatic calculation*
Deposit currency	/	Various	Various	*Various*
Borrowings	Supportable	Supportable	Supportable	*Supportable*
Borrowing rate	Centralised adjustment	Automatic calculation	Automatic calculation	*Automatic calculation*
Switch between the fixed borrowing rate and floating borrowing rate	Not supportable	Not supportable	Supportable	*Supportable*
Borrowing currency	Only DAI	Various	Various	*Various*
Mortgage currency	Various	Various	Various	*Various*
Collateral factor	Different collateral with different collateral factors	Different collateral with different collateral factors	Different collateral with different collateral factors	*Different collateral with different collateral factors*
Liquidation ratio	Different collateral with different liquidation	Different collateral with different	Different collateral with different	*Different collateral with different liquidation*

	ratios	liquidation ratios	liquidation ratios	*ratios*
Liquidation mechanism	Auction in batches	Liquidation by liquidators	Liquidation by liquidators	*Liquidation by liquidators*
Liquidation penalty	13%	5%	5%	*5%*
Liquidators' reward	Make money from the price difference base on the auction	5%	5%-15%	*5%-15%*
Flash loan	Not supportable	Not supportable	Supportable	*Supportable*
Deposit mining	Not supportable	Supportable	Not supportable	*Supportable*
Borrowing mining	Not supportable	Supportable	Not supportable	*Supportable*
Mining acceleration	Not supportable	Not supportable	Not supportable	*Supportable*
Agent mining of mining pools	Not supportable	Not supportable	Not supportable	*Supportable*
Buyback and destruction of protocol revenue	Not supportable	Not supportable	Not supportable	*Supportable*
Custom lending pool of the institutional party	Not supportable	Not supportable	Not supportable	*Supportable*

3 The Second Eco-product: decentralized Token Swap Protocol - Trister's Swap

3.1 Definition: Trister's Swap is a decentralized token fast swap protocol derived from the Ethereum network and L2 network technology. Based on smart contract technology and the capital supply-demand relationship, this protocol can achieve a capital swap among members of the Trister community.

3.2 With the Trister's Swap protocol, users who serve as the capital owner possess full control and ownership over the self-owned capital and can freely access to and from the decentralized network.

3.3 The Trister's Swap protocol supports the swap of all ERC20 standard tokens.

3.4 The Trister's Swap protocol provides community members with different methods of participation:

(1) As a token swapper

Community members can place their assets in the Trister's Swap protocol for the token swap.

(2) As a liquidity provider

Community members can provide liquidity to Trister's Swap for rewards on trading commission and yield farming of TWFI tokens (*see the corresponding chapter on the output mechanism of Trister's Swap token TWFI for details).

(3) As a miner

Community members participating in the Trister's Swap protocol, regardless of trading behavior and liquidity provision behavior, can receive

rewards for mining in the form of TWFI tokens.

(4) As a mining pool owner

Any community member holding Trister SmartNFT is a mining pool owner, who is assigned with different mining acceleration rates according to the number of locked TWFI tokens in Trister SmartNFT. Users can obtain higher mining output revenue by placing their token assets in the Trister's Swap protocol via Trister SmartNFT.

3.5 Basic technical principle and the major problem of the well-known automated market maker project - Uniswap

3.5.1 Basic principle of Uniswap

3.5.1.1 The basic principle of Uniswap is built upon the "constant product market maker (CPMM)" algorithm, which operates with a simple formula. Specifically, assuming that two tokens (A and B) form a trading pair, a liquidity capital pool, composed of several A tokens and B tokens, will be built through a smart contract. Users always conduct counterparty trading with the liquidity trading pool, and the product of the number of A and B (Na * Nb = k) will always remain the same.

3.5.1.2 In addition to engaging in counterparty trading with the liquidity capital pool, community users can also increase the liquidity of the capital pool by actively injecting equal proportions of A and B tokens into the capital pool at the price of A and B tokens. They can also obtain a Liquidity Provider Token (referred to as LP Token). The number of a LP Token represents the share of this capital pool held by the user, and this is what we call "liquidity enhancement".

3.5.1.3 Conversely, users can also return the LP Token to the capital pool and obtain equal proportions of A and B tokens at the token price. This is what we call "liquidity removal".

3.5.1.4 Each time a user trades with the Uniswap liquidity capital pool, a 0.3% commission will be charged and then allocated to the LP Token holders.

3.5.2 Major current problem of Uniswap

3.5.2.1 The trading process is too slow, and as Uniswap is built on the Ethereum network, trading often cannot be completed in time due to Ethereum's network congestion, resulting in many pending swap trades.

3.5.2.2 Trading gas costs are too high. Gas costs of Uniswap fluctuate with the gas price of the Ethereum network. During network congestion, the gas costs for a single trade can reach 0.1 or even 1ETH. Excessive trading costs can discourage many ordinary players.

3.5.2.3 Uniswap uses the CPMM algorithm of 50/50, with a large trading slippage. Usually, block trading tends to overconsume the amount of a single currency in the capital pool, generating significant slippage. In principle, slippage is one of the common methods to detect fluidity, and slippage being at a lower percentage represents better liquidity.

3.6 Basic technical principle of the development and improvement of Trister's Swap

We have thoroughly researched the well-known automated market maker (AMM) project, i.e. Uniswap. Meanwhile, we strove to upgrade the swap economic model and optimise the technology from many aspects targeted at the major problem seen in other representative decentralized token swap protocols in the industry.

3.6.1 Main characteristics of Trister's Swap V1.0

(1) The Ethereum L2 network technology is used to solve the problem of slow trading rate, thus improving the trading rate and reducing the trading cost.

(2) Mining rewards will be given to L2 in-and-out, swap trading, LP liquidity market making, with a temporarily set proportion of 10:20:70.

(3) It supports users implementing acceleration mining through Trister

SmartNFT.

(4) YieldFarming as a service is developed to support the yield farming service for institutional users.

3.6.2 Functional planning of Trister's Swap V2.0

(1) It supports liquidity trading pools with different proportions like Balancer (e.g. 80/20 or 98/2).

(2) It supports trading with limited prices.

(3) It supports routing trading, that is, when such trading pairs as A<->B, B<->C, and C<->D exist, users can directly carry out trading of A->D or D->A.

(4) It supports the acquisition of trading prices through external third-party Oracles, thus improving and reducing the slippage of trading prices.

3.7 YieldFarming As a Service (YAAS)

What makes Trister's Swap special is that it allows "yield farming" itself to be a public service (YAAS) so that the institutional party or the project party can define its own yield farming incentives and issue its initial tokens without compiling any smart contracts.

3.7.1 After the institutional party or project party determines the YAAS settings, its community users can purchase the corresponding tokens and deposit them into the capital pool defined by the institutional party or the project party to participate in yield farming.

3.7.2 To use YAAS, the institutional party or the project party needs to satisfy the following conditions:

(1) Specify the trading token and the capital pool ratio for yield farming. For example, in the case of WETH and DAI trading pairs, the capital pool ratio is 50/50 (we plan to support other ratios in Trister's Swap V2.0, such as 80/2 and 98/2).

(2) Specify the rate of trading costs. The rate of trading costs supported by

YAAS is temporarily set to a range of 0.1% to 3%.

(3) Deposit reward tokens for yield farming.

For example:

The reward tokens deposited for yield farming are the ABC tokens released by the institutional party or the project party, totaling 100,000. When the reward token pool is empty, the incentives will pause. Mining may resume when the institutional party or the project party deposits tokens again.

(4) Set the starting block height for rewarding and reward quantity per block.

For example:

From the 12 million block heights, 100 ABC tokens, as specified in Paragraph (3), will be rewarded per block.

(5) For purpose of using YAAS, the institutional party or the project party needs to lock some TWFI tokens.

3.7.3 The yield farming incentives defined by the institutional party or the project party shall not be separate from TWFI mining incentives of the Trister's Swap protocol and the Trister SmartNFT acceleration mining.

3.8 Output mechanism of Trister's Swap TWFI token

3.8.1 TWFI is used as both the platform currency and the governance token of the decentralized token swap protocol - Trister's Swap.

3.8.2 The total volume of TWFI tokens in the Trister's Swap independent eco-platform is 10 million, without pre-mining, reservation and private placement. All these tokens are outputted flexibly as per the Trister's Swap capital amount over a period of years with the "fair mining" method. Where:

The first-year benchmark output is 10%, and the weighted output of the capital amount is 10%. Thus, the first-year output is 10%~20%;

The next-year benchmark output is 5%, and the weighted output of the capital amount is 10%. Thus, the next-year output is 5%~15%;

The third-year benchmark output is 2.5%, and the weighted output of the capital amount is 10%. Thus, the third-year output is 2.5%~12.5%;

In the fourth year and later, the benchmark output is 1.25% and the weighted output of capital amount is 10%. In other words, the output from the fourth year onward is 1.25%-11.25% (until all TWFI tokens deployed corresponding to the Trister's Swap protocol are dug out).

3.8.3 20% TWFI tokens outputted by each block of Trister's Swap will be sent to the address of the Trister's Swap operation team as the daily expenditure of the team.

3.9 Distribution of Trister's Swap mining incentives

3.9.1 Mining pools are divided into three types in Trister's Swap:

（1）L2 in-and-out mining: We provide incentives to community users for transferring token assets from L1 to L2 or from L2 to L1, with the mining incentive proportion at 10%.

（2）Swap trading mining: We provide incentives to community users for any trading with the Trister's Swap capital pool by using the assets stepping into L2, with the mining incentive proportion at 20%.

（3）LP yield farming: We provide incentives to community users for achieving liquidity of Trister's Swap and for market making with the LP Token. The incentive proportion is 70%.

3.9.2 For purpose of facilitating the use and circulation of tToken, the Trister's Swap protocol supports using tToken as the trading currency and assignments of more mining weights to tToken trading.

3.10 Trister SmartNFT agent mining

3.10.1 Community users can directly carry out L2 in-and-out mining, Swap trading mining and yield farming under the Trister's Swap protocol. Alternatively, they can carry out L2 in-and-out mining, Swap trading mining and yield farming through Trister SmartNFT and enjoy corresponding agent mining acceleration.

3.10.2 If a user does not use Trister SmartNFT for L2 in-and-out mining, Swap trading mining and yield farming, he/she will not be entitled to mining acceleration.

3.11 Composition of commission of Trister's Swap protocol

3.11.1 The trading rate of Trister's Swap is 0.3%, including 0.2% for the liquidity LP and the other 0.1% as follows:

（1）20% for dividends of Trister SmartNFT holders;

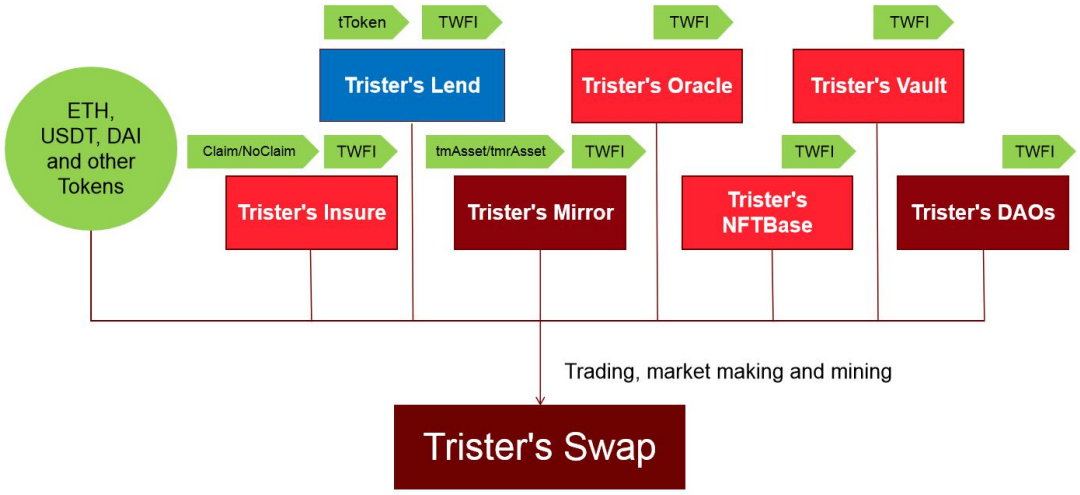
（2）20% for buyback and destruction of TWFI tokens;

（3）20% for Trister's Swap Eco Fund, with the expenditure determined by the TWFI holder;

（4）Remaining 40% for necessary operation expenditures of the Trister's Swap operation team.

3.11.2 When Trister's Swap gradually matures, the operation team will transfer all rights of control for the protocol to TWFI-DAOs for the purpose of increasing the Eco Fund’s proportion. In the future, 100% of profits for the protocol will be subject to management and expenditure by TWFI-DAOs.

3.12 Trading logic of Trister's Swap (figure)



3.13 Comparison of decentralized token swap protocols

For the ease of understanding the basic principles, technical innovations and business model highlights of Trister's Swap, we provide a comparison chart showing the differences between Trister's Swap and representative decentralized token swap protocols in the industry.

Comparison of Swap protocols			
	Uniswap	Sushiswap	*Trister's Swap*
Swap trading	Supportable	Supportable	*Supportable*
Router trading	Supportable	Supportable	*Supportable*
L2 trading	Not supportable	Not supportable	*Supportable*
50/50 capital pool	Supportable	Supportable	*Supportable*
80/20 capital pool	Not supportable	Not supportable	*Supportable*
98/2 capital pool	Not supportable	Not supportable	*Supportable*
Limited price trading	Not supportable	Supportable	*Supportable*

Trading commission rate	0.30%	0.30%	*0.30%*
Trading commission assigned to LP	0.30%	0.25%	*0.20%*
Yield farming	Supportable	Supportable	*Supportable*
L2 in-and-out mining	Not supportable	Not supportable	*Supportable*
Trading mining	Not supportable	Not supportable	*Supportable*
Dynamic mining output	Not supportable	Supportable	*Supportable*
Mining acceleration	Not supportable	Not supportable	*Supportable*
Agent mining of mining pools	Not supportable	Not supportable	*Supportable*
Buyback and destruction of protocol revenue	Not supportable	Not supportable	*Supportable*
YieldFarming As a Service	Not supportable	Not supportable	*Supportable*

4 The Third Eco-product: decentralized Wealth Management Fund Protocol - Trister's Vault

4.1 Definition of Trister's Vault

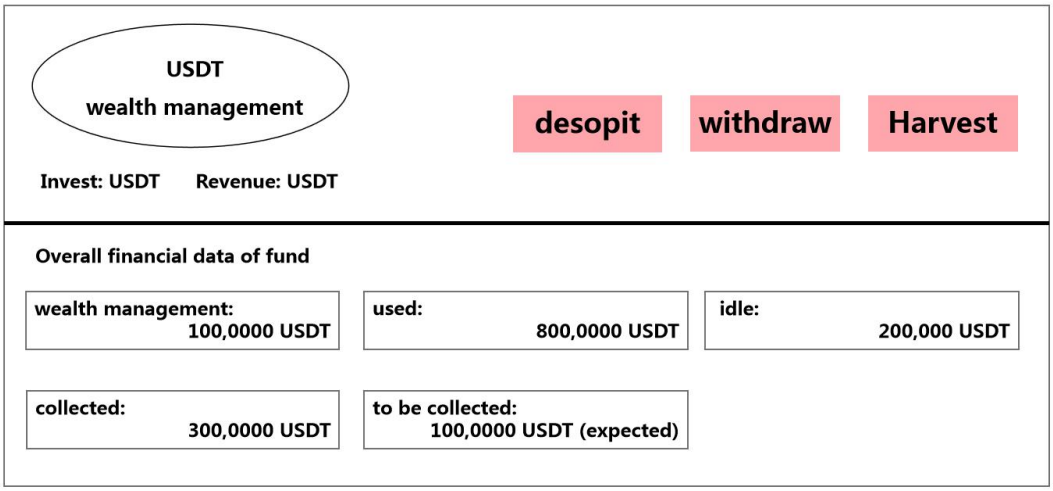
Trister's Vault is a smart contract revenue aggregator based on the Ethereum network and also a DeFi protocol used for automatically achieving the best revenue policy configuration. This aggregator can help Trister community members obtain the best market revenue with a single click, reducing the threshold for ordinary investors and lowering losses incurred by asymmetric information.

4.2 Basic principles of Trister's Vault

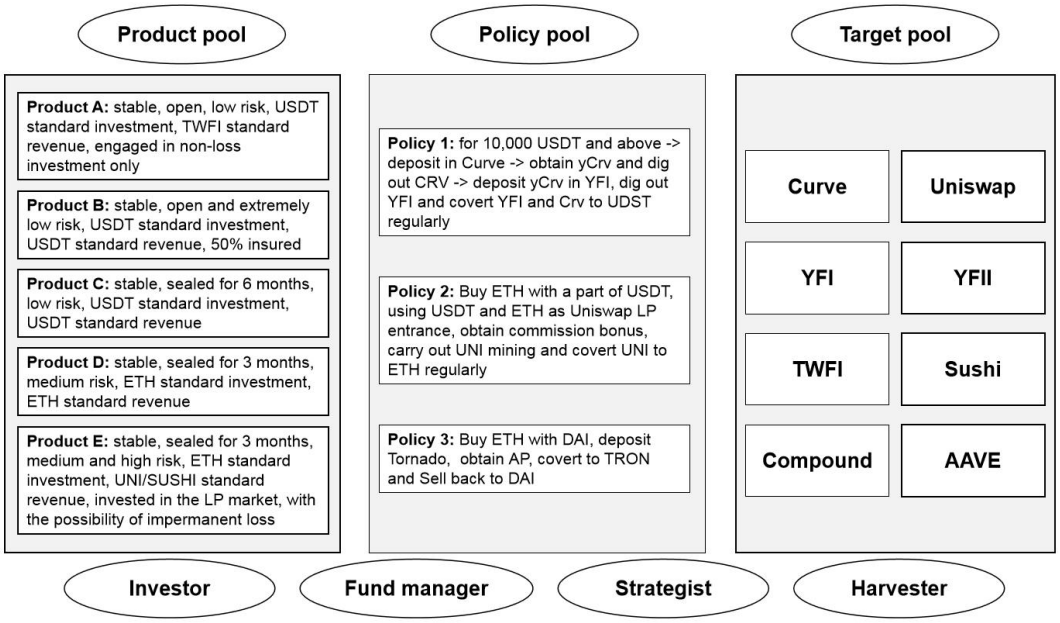
4.2.1 The basic principles underpinning Trister's Vault include a fund manager for each financial product being able to select open-source investment policies contributed by strategists, integrating strategies into an innovative fund product, raising capital from the Trister community for investment and exchanging the obtained token revenue to a revenue currency through a smart contract.

4.2.2 During the process, (1) the "fund manager" can obtain corresponding management revenue. (2) Once the "Harvest" button is clicked by the "harvester", some incentives "to be harvested" from the smart contract can be "cashed in", with a portion of rewards being obtained from the cashed-in amount. (3) Once the "investor" clicks "Collect", the "capital and revenue can be withdrawn".

For example, see "USDT wealth management" (schematic diagram of Trister's Vault's "USDT wealth management") below.



4.3 Core architecture of Trister's Vault



4.4 The Trister's Vault protocol provides different participation methods for community members

(1) Investor

The community member participates in wealth management projects within the Trister's Vault protocol, invests capital and obtains revenue.

(2) Strategist

The community member can contribute audited investment policy contract codes to the Trister's Vault protocol for selecting the combined investment policy by the fund manager and obtaining incentives.

(3) Fund manager

The fund manager manages the capital invested in the fund contract and rebalances when appropriate, thus helping the investor to obtain the maximum revenue. Trister's Vault allows any member to serve as a fund manager.

(4) Harvester

The harvester, by calling the smart contract, can help the fund manager to collect revenue of the "unclaimed parts". Any user can use the "Harvest" function to convert the "unrealised revenue" in Vault into the "realised revenue".

Through this function, the harvester can be rewarded with a proportion of this "realised revenue" (provisionally, 1% of the cashed revenue), with corresponding contract calling fees paid. The function for harvesters, "Harvest", can reduce comprehensive contract calling costs incurred by revenue withdrawal by each user. Furthermore, it also can reduce slippage incurred by the DEX/Swap trading during harvest.

(5) Miner

By investing in the wealth management project of the Trister's Vault platform, the investor will obtain TWFI token rewards.

(6) Mining pool owner

Any community member holding Trister SmartNFT is a mining pool owner, which is assigned with a mining acceleration rate according to the locked TWFI tokens in Trister SmartNFT. The fund investor can obtain higher mining output revenue by including its assets in the Trister's Vault protocol via Trister SmartNFT.

4.5 Linear release function of Trister's Vault

To protect the revenues of other users in the Trister's Vault pool being diluted by quick entry of substantial capital into Trister's Vault and immediate revenue withdrawal, all revenues outputted by the Trister's Vault pool will be evenly released within 24 hours upon being deposited and revenues of the deposited capital can be completely claimed 24 hours later.

For example:

A user can receive revenue four hours after he/she deposits his/her money in Trister's Vault, but he/she can only claim 1/6 of the revenue yielded by the amount deposited.

4.6 Automatic rebalancing as per policies of Trister's Vault

4.6.1 Automatic rebalancing as per policies of the Trister's Vault pool refers to the fund manager switching investment policies as per real-time revenue changes of the market within the context that the contract code security audit is confirmed.

4.6.2 Policy switch of the Trister's Vault pool cannot be seen by the investor of the fund. The investor, without any additional operation, can have the maximum revenues of the current market.

4.7 Mining revenue superposition of Trister's Vault

In addition to strategic investment revenue, the user participating in Trister's Vault can also have mining revenue bonuses.

4.8 Institutional fund planning of Trister's Vault

4.8.1 In addition to fund products released by the Trister's Vault operation team, any person or fund company can also release their own fund products on Trister's Vault.

4.8.2 However, the institutional funds feature the following stipulations:

(1) The institutional fund product will not be engaged in TWFI mining.

(2) The institutional fund manager can only configure assets and rebalance among different policies in the policy pool of Trister's Vault. To avoid malicious stealing of assets by the institutional fund manager, the institutional fund manager shall not use any other policy contracts other than Trister's Vault policy pool.

(3) The institutional fund manager can define management rates and the proportion for performance rewards at his/her discretion.

4.8.3 We are planning to offer an institutional fund in Trister's Vault V2.0.

4.9 Output mechanism of Trister's Vault TWFI token

4.9.1 TWFI is used as both the platform currency and the governance token of the Trister's Vault protocol.

4.9.2 The total amount of TWFI tokens in the Trister's Vault independent eco-platform is 10 million, without pre-mining, reservation and private placement. All these tokens are outputted flexibly as per the Trister's Vault capital amount for a period of years with the "fair mining" method.

The first-year benchmark output is 10%, and the weighted output of the

capital amount is 10%. Thus, the first-year output is 10%-20%.

The next-year benchmark output is 5%, and the weighted output of the capital amount is 10%. Thus, the next-year output is 5%-15%.

The third-year benchmark output is 2.5%, and the weighted output of the capital amount is 10%. Thus, the third-year output is 2.5%-12.5%.

In the fourth year and later, the benchmark output is 1.25% and the weighted output of capital amount is 10%. In other words, the output from the fourth year onward is 1.25%-11.25% (until all TWFI tokens deployed corresponding to the Trister's Vault protocol are dug out).

4.9.3 And 5% TWFI tokens outputted by each block of the Trister's Vault protocol will serve as community incentives for excellent investment policies.

4.9.4 And 20% TWFI tokens outputted by each block will be sent to the address of the Trister's Vault operation team as the daily expenditure of the team.

4.9.5 For the purpose of facilitating both the use and circulation of tToken, the Trister's Vault protocol supports using tToken as the investment capital of wealth management and assignments of more mining weights to tToken wealth management products.

4.10 Trister SmartNFT agent mining

4.10.1 Community users can directly carry out wealth management mining under the Trister's Vault protocol or engage in agent wealth management mining through the Trister SmartNFT mining pool, thus enjoying the corresponding agent mining acceleration.

4.10.2 Any user who does not use the Trister's Vault protocol for wealth management mining through Trister SmartNFT is not entitled to mining acceleration.

4.11 Profit of Trister's Vault protocol and its distribution method

4.11.1 For wealth management fund products operated by the Trister's Vault ecological protocol party, Trister's Vault will charge 20% of each investment revenue as the revenue of the protocol level (*special note: there is no charge for the principle invested by the community user). After necessary fees such as the gas fee and the calling fee of Oracle are deducted, the protocol profits are distributed as follows:

20% for dividends of Trister SmartNFT holders;

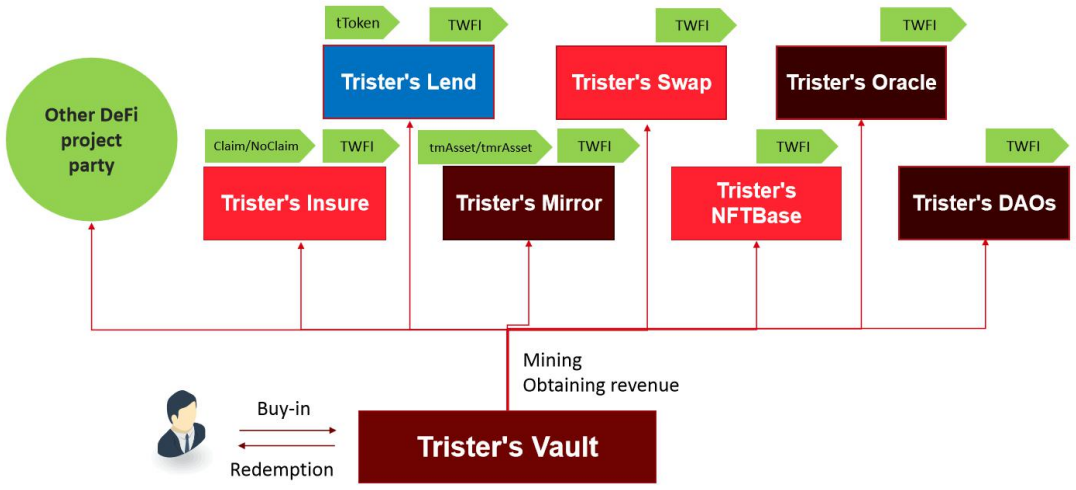
20%for buyback and destruction of TWFI tokens;

20% for Trister's Vault Eco Fund, with the expenditure determined by the TWFI holder via voting;

Remaining 40% for necessary operation expenditure of the Trister's Vault operation team.

4.11.2 When the Trister's Vault platform gradually matures, all control rights for the protocol will be transferred to TWFI-DAOs to increase the proportion of the Eco Fund. In the future, 100% profits of the protocol will be subject to management and expenditure by TWFI-DAOs.

4.12 Fund investment logic of Trister's Vault (figure)



5 The Fourth Eco-product: decentralized Cover Protocol - Trister's Insure

5.1 Overview of Trister's Insure

5.1.1 Definition: Trister's Insure is a blockchain cover protocol based on the Ethereum network, which affords the community user risk protection through subscribing the coverage. Moreover, protection is provided to the community user against asset losses due to risks in the performance of the DeFi project, such as controls for smart contract vulnerability and code vulnerability as well as arbitraging algorithms.

5.1.2 Main features of the decentralized cover protocol, Trister's Insure V1.0, are as follows:

(1) No-threshold insurance acceptance;

(2) No-threshold coverage;

(3) Usage of the double-token mechanism of CLAIM and NOCLAIM;

(4) Usage of compensation voting and forced voting mechanisms.

5.1.3 The Trister's Insure protocol comprises collateral, CLAIM tokens and NOCLAIM tokens.

(1) Collateral: This asset is put into the coverage capital pool by the market maker (DeFi project party or major client subscribing the coverage) for compensation.

(2) CLAIM token: In case of a coverage incident and payable claims, the token holder shall be entitled to the compensation.

(3) NOCLAIM token: This provides the token holder the right to when the token time is due and there is no compensation.

5.1.4 In order to improve the liquidity of CLAIM/NOCLAIM tokens, yield farming incentives will be given to the LP of a designated trading pair on the Trister's Swap platform for these tokens.

5.2 The Trister's Insure protocol provides different participation methods for community members, as below:

(1) As a "coverage market maker"

The community member can carry out market making for the DeFi project, deposit collateral, obtains equivalent CLAIM and NOCLIAM tokens and realizes liquidity of these tokens.

(2) As a "coverage seeker"

Community members can purchase CLAIM tokens. In case that any coverage incident occurs and the incident is passed by the community via voting, compensation will be made for the token holder.

(3) As a "coverage provider"

The community members can deposit collateral, obtain CLAIM and NOCLIAM tokens, sell CLAIM tokens, hold NOCLIAM tokens and realise liquidity of these tokens.

(4) As a "miner"

The coverage market maker and the coverage provider realise liquidity of CLAIM/NOCLAIN tokens on the Trister's Swap platform and obtain TWFI token rewards.

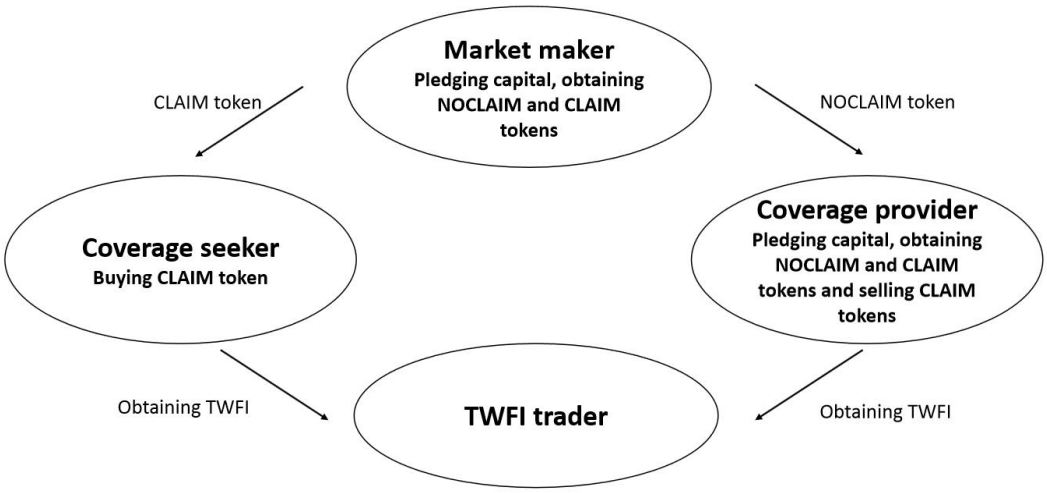
(5) As a "mining pool owner"

Any community member holding Trister SmartNFT is a mining pool owner, which is assigned with the mining acceleration rate according to the locked TWFI tokens in Trister SmartNFT. The "coverage market maker" and the "coverage provider" can build their corresponding tokens in the Trister's Insure protocol through Trister SmartNFT, so thus obtaining higher mining output revenues.

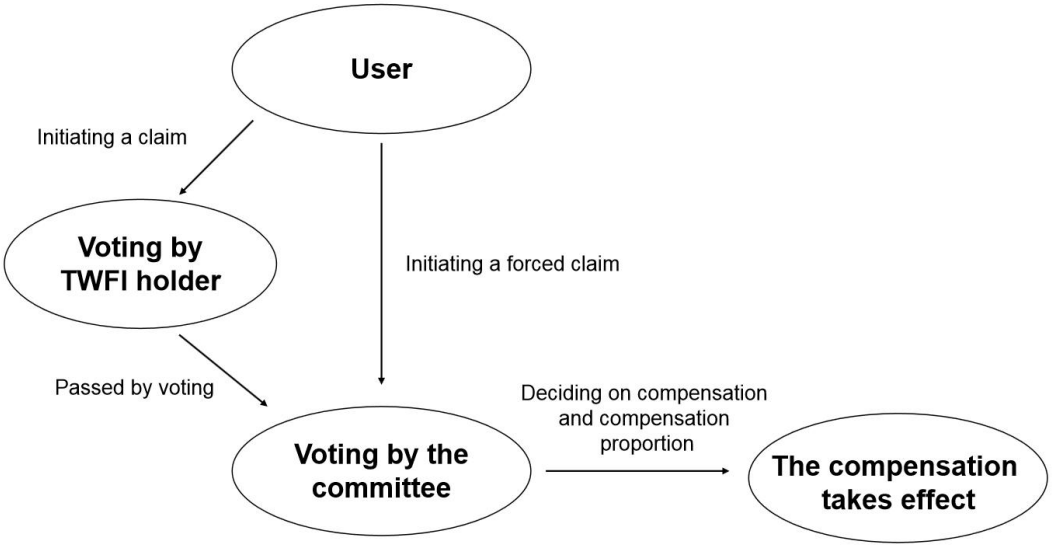
(6) As a "voter"

In case of a coverage claim incident, the Trister's Insure user can decide to conduct preliminary voting on compensation. The committee will begin voting upon the approval of preliminary voting.

5.3 Basic principle of decentralized cover protocol - Trister's Insure



5.4 Coverage claim mechanism of Trister's Insure



5.5 Output mechanism for platform currency and governance token TWFI of Trister's Insure

5.5.1 TWFI is used as both the platform currency and the governance token of the Trister's Insure protocol.

5.5.2 The total volume of TWFI tokens in the Trister's Insure independent eco-platform is about 10 million, without pre-mining, reservation and private placement. All these tokens are outputted flexibly as per the Trister's Insure capital amount for a period of years with the "fair mining" method.

The first-year benchmark output is 10%, and the weighted output of the capital amount is 10%. Thus, the first-year output is 10%~20%;

The next-year benchmark output is 5%, and the weighted output of the capital amount is 10%. Thus, the next-year output is 5%~15%;

The third-year benchmark output is 2.5%, and the weighted output of the capital amount is 10%. Thus, the third-year output is 2.5%~12.5%;

In the fourth year and later, the benchmark output is 1.25% and the weighted output of capital amount is 10%. In other words, the output from the fourth year onward is 1.25%-11.25% (until all TWFI tokens deployed corresponding to the Trister's Insure protocol are dug out).

5.5.3 20% TWFI tokens outputted by each block will be sent to the address of the Trister's Insure operation team as the daily expenditure of the team.

5.6 Distribution of mining incentives of Trister's Insure protocol

5.6.1 In the Trister's Insure protocol, mining pools are divided into two categories:

(1) Mining by coverage market maker: A coverage market maker deposits the collateral to the Trister's Insure contract, obtains CLAIM and NOCLAIM

tokens and achieves liquidity, with the proportion of 70%.

(2) Mining by coverage provider: A coverage provider deposits the collateral to the Trister's Insure contract, obtains CLAIM and NOCLAIM tokens and achieves liquidity, with the proportion of 30%.

5.6.2 For purpose of supporting tToken as a collateral type for a user and promoting use and circulation of tToken, we assign more mining weights with tToken trading pairs.

5.7 Trister SmartNFT agent mining

5.7.1 Community users can directly carry out coverage market-making mining and coverage provider mining under the Trister's Insure protocol, or Trister's Insure agent coverage market-making mining and agent coverage provider mining can be executed through Trister SmartNFT mining pool, allowing users to enjoy the benefits of corresponding agent mining acceleration.

5.7.2 Any user who does not choose to carry out Trister's Insure coverage market-making mining and overage provider mining through Trister SmartNFT is not entitled to mining acceleration.

5.8 Profit of Trister's Insure protocol and its distribution method

5.8.1 Regardless of CLAIM or NOCLAIM redemption incidents, the trading rate for the Trister's Insure protocol will be 0.5%. After the gas fee and Oracle call fee are deducted, the profits are distributed as follows:

20% for dividends of Trister SmartNFT holders;

20% for buyback and destruction of TWFI tokens;

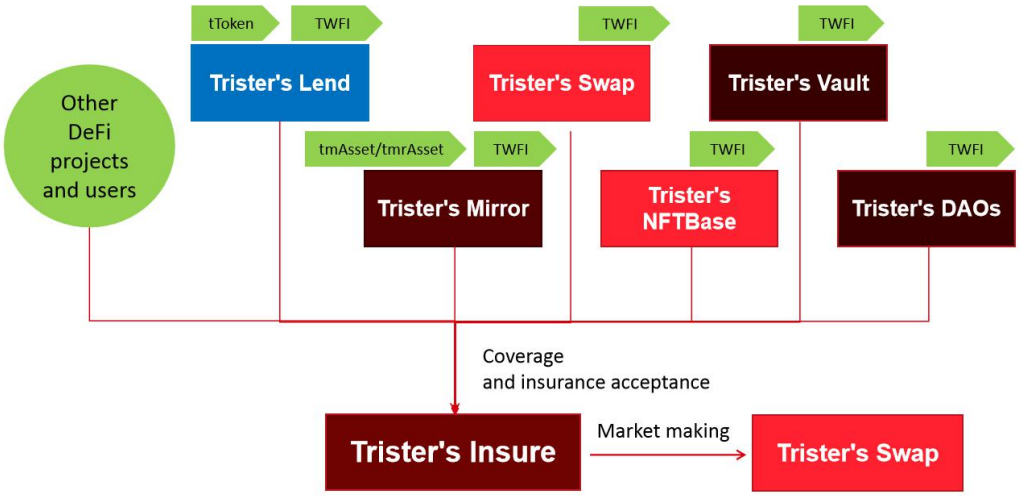
20% for Trister's Insure Eco Fund, with the expenditure determined by the TWFI holder via voting;

Remaining 40% for necessary operation expenditure of the Trister's

Insure operation team.

5.8.2 When Trister's Insure gradually matures, all control rights for the protocol will be transferred to TWFI-DAOs to increase the proportion of the Eco Fund. In the future, 100% profits of the protocol will be subject to management and expenditure by TWFI-DAOs.

5.9 Logic of decentralized cover protocol - Trister's Insure (figure)



6 The Fifth Eco-product: decentralized Collections Protocol - Trister's Oracle

6.1 Overview of Trister's Oracle

6.1.1 The decentralized Oracle protocol, Trister's Oracle, is a decentralized data Oracle network based on the Ethereum network. This protocol sets up a network protocol which "can be participated in, quoted and verified by everyone". In addition, it provides a fair, safe and reliable method for acquiring data for every DeFi ecological application of each eco-product in Trister World and DeFi products outside the Trister World ecosystem.

6.1.2 Trister's Oracle can be constructed as a tool that captures data from different data sources, summarises the final data and uploads it to the caller. The Oracle acts as a bridge between the smart contract and other external data sources. For Oracle, it is not only designed to capture agent data, but also more importantly, it verifies data rationality and reliability through algorithms or rules.

6.1.3 In theory, Trister's Oracle supports quotations between all ERC20 virtual currencies. However, the quotation service is only provided for mainstream currencies and Trister ecological currencies in the early development station of Trister's Oracle technology.

6.1.4 Trister's Oracle will support acquiring off-chain data.

6.2 The Trister's Oracle protocol provides different participation methods for community members, as below:

(1) As a data service requestor

The community member can and will request the price information of specific assets from Trister's Oracle.

(2) As a quoter

The community member can participate in a quotation of virtual currency-virtual currency trading of the Trister's Oracle protocol.

(3) As a verifier

The community member can verify the quotation of virtual currency-virtual currency trading within the Trister's Oracle protocol.

(4) As a miner

The quotation by the community member itself is also the mining, which will be rewarded with TWFI tokens.

(5) As a mining pool owner

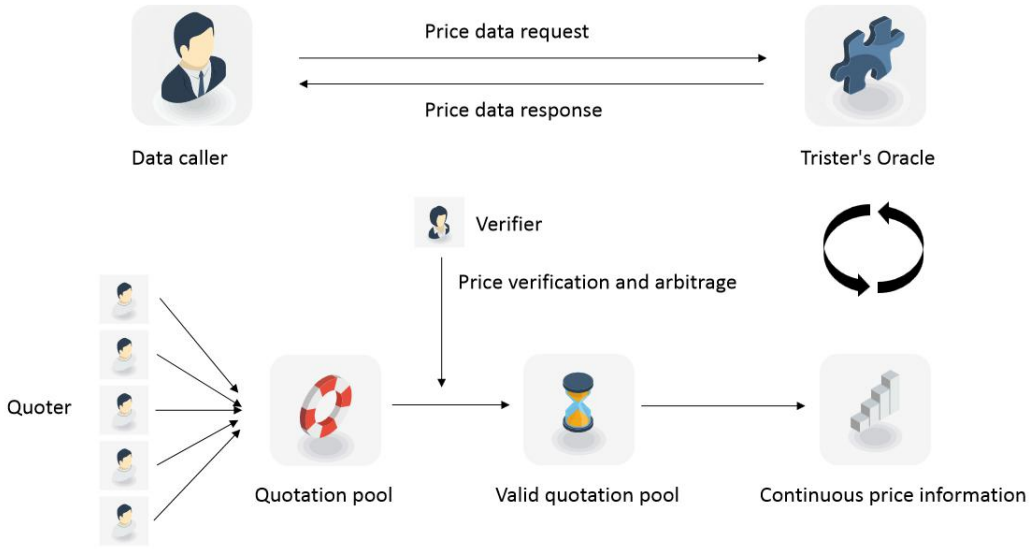
Any community member holding Trister SmartNFT is a mining pool owner, which is assigned with the mining acceleration rate according to the locked TWFI tokens in Trister SmartNFT. The user can authorise its own token capital to the mining pool owner for quotation in order to obtain higher mining revenue.

6.3 Basic technical principle of Trister's Oracle

The main functions of Trister's Oracle are to capture and provide the fair price information of cryptocurrency. Therefore, we designed an on-chain quotation mechanism in Trister's Oracle. Through real-time cryptocurrency quotation by the user to the smart contract on-chain, if the quotation is "not taken" within a specific period, the quotation information is deemed as valid. Different valid quotation information forms the continuous price information. Based on the user's demands for data service, Trister's Oracle summarises the

continuous price information as part of the final price data and provides the same to the caller.

6.4 Development logic of Trister's Oracle (figure)



6.5 Quotation system of Trister's Oracle

Taking the trading price of A/USDT for example,

If it is assumed that the current market price of the token A is 1A=100 USDT, the quoter needs to deposit {xA, 100x USDT} tokens to the Trister's Oracle smart contract, where "x" is an integer and "100x" cannot be less than the minimum quotation scale for the benchmark pricing unit of the trading pair, as stipulated in the Trister's Oracle protocol.

That is, if it is stipulated in the protocol that the benchmark pricing unit of the trading pair is USDT, the minimum quotation scale is 150 USDT and x is an integer not less than 2, the user's quotation can be {2A, 200 USDT}, {3A, 300 USDT}, {4A, 400 USDT} and so forth.

6.6 Quotation verification time of Trister's Oracle

6.6.1 After providing a quotation to the Trister's Oracle smart contract, the quoter needs to wait for several block heights. Such heights are referred to as the "quotation verification time".

6.6.2 Assuming that the quotation verification time set for the protocol is 20, it means that the quotation is valid if it is not "taken" by any verifier after 20 block heights. The quotation can collect {xA, 100x USDT} tokens deposited in the Trister's Oracle smart contract.

6.7 Trister's Oracle verifier

6.7.1 Assuming that the quoter offers an unfair price to Trister's Oracle, intentionally or unintentionally, there is an arbitrage opportunity. In such case, the verifier can make a deal with the quoter within the quotation time for arbitraging and obtaining revenues. The activity is referred to as "verification".

6.7.2 For example, if the current market price is 1A = 90 USDT, the quotation of the quoter is 1A = 100 USDT and {2A, 200 USDT} is deposited into the Trister's Oracle smart contract. Then, the verifier can use 2A for making a deal with the quoter, obtain 200 USDT and exchange 200 USDT for 2.22A in another CEX or DEX. The revenue of 0.22A is obtained through arbitrage.

6.7.3 Once the verification activity takes effect, the original quoter can obtain 2A which is not engaged in the trading. The total volume is 4A plus the 2A exchanged with the verifier, but the {2A, 200 USDT} deposited in the contract previously cannot be taken back.

6.7.4 The verification scale is identical to the minimum scale. That is, when the quoter provided the quotation {2A, 200 USDT} and the minimum quotation scale is 150 USDT, the verifier can obtain 150 USDT with at least 1.5A for making a deal with the quoter. Any scale below is not allowed.

6.8 Trister's Oracle quotation verification and attack defense

6.8.1 When a verifier acts as the taker of the verifier and obtains revenue through arbitraging, the verifier needs to provide a price that he/she deems fair. In such case, it is required by the Trister's Oracle protocol that the quotation scale of the verifier must be greater than the one for arbitrage so as to prevent attacks by the user with his/her substantial capital.

In other words, the verifier needs to verify if scale a2 is greater than the product of the amplification factor α and the arbitraged quotation scale a1.

The amplification factor α is an integer not less than 2.

6.8.2 Assuming that the current amplification factor of the protocol is α = 2, when the quotation provided by the quoter is {2A, 200 USDT} and that the minimum quotation scale is 150 USDT, the minimum quotation of the verifier is {4A, 360 UDST} in the context that the verifier makes a deal with the quoter with 1.5A. Furthermore, the verifier obtains 150 USDT, and the fair price deemed by the verifier is 1A=90 USDT. This is because the principles below must be followed, i.e. the quotation scale must be greater than 2 times the arbitraged quotation scale (150 USDT*2=300 USDT) and the integral quotation unit shall be observed.

6.9 Block price of Trister's Oracle

6.9.1 The quotation not "taken" by the verifier after the quotation verification time and its scale are referred to as the "valid quotation". If one part of a quotation is "taken" by the verifier during the quotation verification time, while another part is not taken, the untaken quotation part and its scale are referred to as the "valid quotation".

6.9.2 The valid quotation in one block can form its "block price", which is comprised of two information types, namely the trading price and the valid quotation scale.

For example:

If the price information of the A/USDT trading pair at a block height includes {{price=100, scale=100 USDT}, {price=101, scale=200 USDT}, {price=102,scale=500 USDT}} and the weighted average price of the valid quotation scale is the "block price", then the block price of A/USDT is (100*100+101*200+102*500)/(100+200+500)=81200/800=101.5USD.

6.9.3 If there is no valid quotation in a block, the "block price" of the last block is the "block price" for this particular block.

6.10 Price chain of Trister's Oracle

6.10.1 The "price chain" of a trading pair {{block height, block price}} is composed of several continuous "block prices".

For example:

The price chain of A/USDT trading pair is {{block height 11500000, block price 101 USDT}, {block height 11500001, block price 102 USDT}, {block height 11500002, block price 103 USDT}, {block height 11500003, block price 99 USDT}}.

6.11 Charge of Trister's Oracle verification taker

6.11.1 For each "taker" (referred to as "deal") of the quoter, the verifier will deduct 0.2% tokens from both parties of the Trister's Oracle protocol as the commission. Consider the "taker" of 200 USDT when the verifier makes a deal with the quoter {2A, 200 USDT} with 2A as an example. In this instance, the verifier will obtain 200*(1-0.2%)=199.6 USDT, and the quoter will receive 2*(1-0.2%)=1.996A.

6.12 Data requestor of Trister's Oracle

6.12.1 Any user can propose data requests to Trister's Oracle to obtain the price services provided by Oracle.

6.12.2 The data request methods are as follows:

(1) Designating trading pairs, such as A/USDT;

(2) Designating block heights. During request, the identifier "now!" can be used for designating the current block height, a previous block or the price of a block height in the future;

(3) Designating price calculation methods. The identifier "current_price" can be used for obtaining the "block price" of current block height. To avoid significant price slippage, the Trister's Oracle protocol also supports other algorithms. For example, the weighted average value of the current block height price and last 10 block prices are calculated, providing the request party with the price of lower volatility.

6.13 Data request fee of Trister's Oracle

6.13.1 For price data of previous blocks and current blocks, the charge of the Trister's Oracle protocol is 0.01 ETH per data request proposed by a data request party to Oracle.

6.13.2 For the price data of a block height in the future, the data request party shall also deposit the gas calling fee in advance and set the "callback" function of a smart contract for price callback. If the gas fee is insufficient by that time, initiation of the callback function "callback" will fail.

6.14 Output mechanism for platform currency and governance token TWFI of Trister's Oracle

6.14.1 TWFI is used as both the platform currency and the governance token of the decentralized Oracle protocol - Trister's Oracle.

6.14.2 The total volume of TWFI tokens in the Trister's Oracle independent eco-platform is about 10 million, without pre-mining, reservation and private placement. All these tokens are outputted flexibly as per the Trister's Oracle overall valid quotation scale for a period of years with the "fair mining" method.

The first-year benchmark output is 10%, and the weighted output of the capital amount is 10%. Thus, the first-year output is 10%-20%.

The next-year benchmark output is 5%, and the weighted output of the capital amount is 10%. Thus, the next-year output is 5%-15%.

The third-year benchmark output is 2.5%, and the weighted output of the capital amount is 10%. Thus, the third-year output is 2.5%-12.5%.

In the fourth year and later, the benchmark output is 1.25% and the weighted output of capital amount is 10%. In other words, the output from the fourth year onward is 1.25%-11.25% (until all TWFI tokens deployed corresponding to the Trister's Oracle protocol are dug out).

6.14.3 And 20% TWFI tokens outputted by each block of the Trister's Oracle protocol will be sent to the address of the Trister's Oracle operation team as the daily expenditure of the team.

6.15 Distribution of mining incentives of Trister's Oracle

6.15.1 The incentives after the expenditures of the operation team are deducted will be attributed to the Trister's Oracle mining pool, including:

80% for incentives of the quotation miner.

20% for incentives for data request party.

6.15.2 For purpose of facilitating use and circulation of tToken, selecting tToken as the reference currency is supported. We will assign more weights during mining for the reference currency as tToken.

6.16 Trister SmartNFT agent mining

6.16.1 Community users can directly carry out quotation mining and data request mining under the Trister's Oracle protocol. Alternatively, they can carry out agent quotation mining and data request mining through Trister SmartNFT, thus enjoying the benefits of the corresponding agent mining acceleration.

6.16.2 Any community user who does not use Trister's Oracle for quotation mining and data request mining through Trister SmartNFT shall be not entitled to mining acceleration.

6.17 Profit of Trister's Oracle protocol and its distribution method

6.17.1 Data calling fee and trading verification commission, collected by the Trister's Oracle protocol, are the protocol incomes, from which gas fees and other necessary fees are deducted. The profit distribution method is as follows:

20% is used as the dividends of Trister SmartNFT holders;

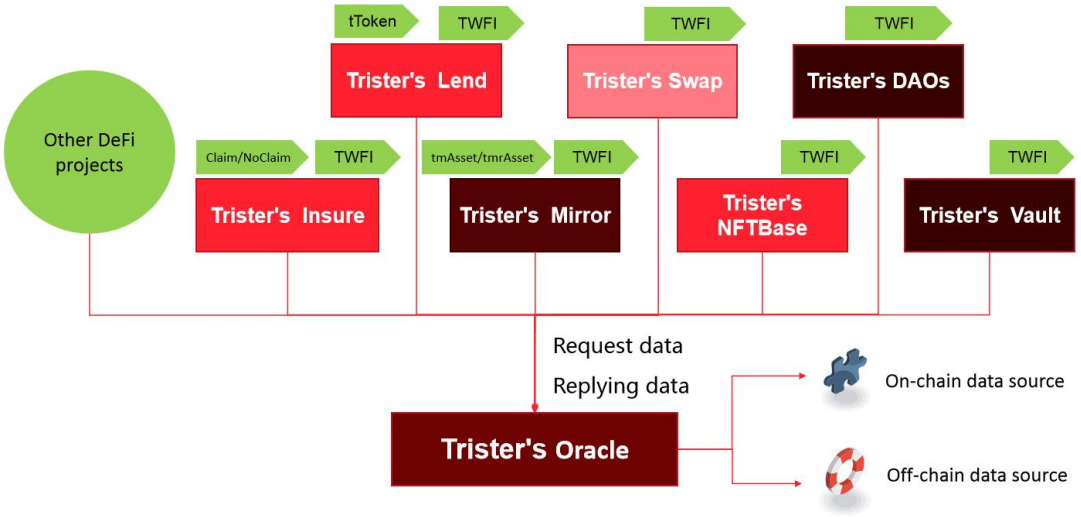
20% for buyback and destruction of TWFI tokens;

20% is used for the Trister's Oracle Eco Fund, with the expenditure determined by the TWFI holder;

The remaining 40%, which is owned by the Trister's Oracle operation team, is used as the necessary operation expenditure of the team.

6.17.2 When the Trister's Oracle platform gradually matures in the future, all control rights for the protocol will be transferred to TWFI-DAOs to increase the proportion of the Eco Fund. In the future, 100% profits of the protocol will be subject to management and expenditure by TWFI-DAOs.

6.18 Data acquisition logic of decentralized Oracle protocol - Trister's Oracle (figure)



7 The Sixth Eco-product: decentralized Mirror Asset Protocol - Trister's Mirror

7.1 Overview of decentralized mirror asset protocol - Trister's Mirror

7.1.1 Definition: The decentralized mirror asset protocol, Trister's Mirro, is a protocol based on the Ethereum network, which is used for tracking the asset price in the real world without any real asset support.

7.1.2 Simply stated, Trister's Mirror provides a "mirror" relation between the assets in the real world and the blockchain cryptoassets. These real assets "mirrored" to the cryptoassets of blockchain are referred to as the "original assets". The mirrored cryptoassets are referred to as the "mirror assets".

7.1.3 Neither the real assets nor any counterparty is required for "asset mirroring" with the Trister's Mirror protocol. With sufficient price support, the assets can be infinitely mirrored. Meanwhile, assets of various types can be "mirrored" through prices provided by the stable Oracle, without consideration of cross-chain and on-chain issues of the assets.

7.1.4 In principle, the original assets can be of any type, including properties, gold, precious metals, stocks, funds or bonds.

7.2 Main advantages of using "mirror asset"

The "original asset" in the real world is referred to as the "mirror asset" within the context of blockchain technology, which is featured by:

(1) Reduce trading obstacles incurred by geographical factors. The trading information is stored in the blockchain network. Therefore, the trading can be made by anyone, anywhere.

(2) Eliminate reliance on middlemen. The cryptoassets are based on algorithm protection, requiring no trusts and trading verification by middlemen.

(3) A broad of users can participate in valuable assets through token division.

(4) Improve trading efficiency. Trading settlement efficiency can be significantly improved through the blockchain technology.

(5) Break through some trading rules (such as T+1) of the traditional financial market as well as trading time restrictions (such as daily trading time restrictions of the traditional stock market).

(6) The price of "mirror asset" absolutely corresponds to the "original asset" through the Oracle. Therefore, there is no slippage in the trading of mirror protocol, and the volume is infinite.

7.3 Three components of Trister's Mirror protocol

(1) tmAsset: The mirror asset released based on the Trister's Mirror protocol is referred to as tmAsset.

For example:

The USD asset released based on Trister's Mirror is referred to as tmUSD (tmUSD is unique and is the basic asset of the Trister's Mirror protocol).

GOOG released based on Trister's Mirror is referred to as tmGOOG.

The crude oil futures released based on Trister's Mirror is referred to as tmWAI.

Another type used for tracking retracement of assets is referred to as tmrAsset.

For example:

The reverse GOOG released based on Trister's Mirror is referred to as

tmrGOOG.

The reverse AAPL released based on Trister's Mirror is referred to as tmrAAPL.

The reverse TSLA released based on Trister's Mirror is referred to as tmrTLSA.

As opposed to price changes with an original asset, the price change of a reverse asset can facilitate short selling by the user, without blow-up.

*Note: tToken is a deposit voucher for cryptocurrency, whereas tmAsset is a mirror of the asset in the real world. The two are distinct.

(2) Minting and destruction protocol of tmAsset.

(3) decentralized trading protocol of tmAsset: tmAssetExchange.

7.4 The Trister's Mirror protocol provides different participation methods for community members, as below:

(1) As a minter

The community member can mortgage tToken tokens through the Trister's Mirror protocol to mint tmUSD.

(2) As a trader

The community member can use tmUSD for the trading of another tmAsset or tmrAsset within the Trister's Mirror protocol.

(3) As a miner

The minting activity itself by the community member within the Trister's Mirror protocol is mining as well, which will be rewarded with TWFI tokens.

(4) As a mining pool owner

Any community member holding Trister SmartNFT is a mining pool owner, which is assigned with the mining acceleration rate according to the locked TWFI tokens in Trister SmartNFT. The user can use his/her own token capital for minting through Trister SmartNFT in order to obtain higher mining revenues.

(5) As a voter

The community member holding the TWFI token can decide which assets will be included in the asset whitelist by voting.

7.5 Original asset whitelist of Trister's Mirror

The Trister's Mirror operation team will gradually list a series of original asset whitelists supported, which probably comprise:

(1) USD, Euro, Japanese Yen or other legal tender;

(2) Crude oil futures;

(3) Stocks of Nasdaq Stock Exchange;

(4) Quiz results of sports events.

7.6 Minting tmUSD by pledging tToken

7.6.1 Initially, we propose to produce each tmUSD of the Trister's Mirror protocol by minting tToken, which is over-mortgaged. The quantity of tmUSD to be minted by the user depends on the quantity of tToken held and locked. After tmUSD is minted, equivalent liabilities will be produced as well. The user can unlock tToken and put it into normal service only after repaying the liabilities.

7.6.2 We also propose to design the collateral factor as 700% in the initial stage and have stipulated that the user can destroy tmUSD three days later after tmUSD is minted.

7.6.3 The community user can apply a basket of tTokens of stablecoin vouchers (tUSDT, tDAI and tUSDC) for minting of tmUSD.

For example:

Assuming a user has the tToken equivalent to $700, the user can mint 100 tmUSDs at most. In such a case, the liabilities of the user are 100 tmUSDs, and the collateral factor is 700%. If only 50 tmUSDs are minted by the user, his/her liabilities are 50 tmUSDs, and the collateral factor is 1400%.

7.6.4 The liabilities of each user will vary with the total liabilities of the whole

Trister's Mirror protocol as well as the liabilities proportion of the user. If the user intends to claim the mortgaged tToken, such tToken can be redeemed if the protocol liabilities are paid off three days after the mortgage term.

7.7 Rewards for mining and commission

When the user's collateral factor is higher than the minimum collateral factor stipulated in the protocol, the user can enjoy rewards for mining and commission for TWFI tokens.

7.8 Liquidation

If the user's collateral factor is lower than 200% over a long period, the user's collateral will be marked as "to be cleared". If the user fails to supplement new collateral after a specific "waiting time", the user's collateral will be cleared by another user.

7.9 Profit and commission of trading mirror asset

7.9.1 After obtaining tmUSD, a user can trade the mirror assets in the trading whitelist within the Trister's Mirror trading protocol.

For example:

Where a user has 10000 tmUSDs and the GOOG price at 13:00 is 1500 USD, the user can buy the stock with 1500 tmUSD and obtain one tmGOOG. When the GOOG price is 2000 USD at 14:00, the user can sell the stock for 2000 tmUSD, with 1 tmGOOG reduced. Through this trading, the user accrues a profit of 500 tmUSDs.

7.9.2 The trading protocol does not have any counterparty, and trading is conducted with the capital pool of Trister's Mirror.

7.9.3 And 0.3% commission will be charged for each trade of the Trister's Mirror protocol.

7.10 Calculation of liabilities

7.10.1 The initial liabilities arise when the user mortgages tToken for minting tmUSD. In such case, the user's liabilities and the minted tmUSD shall be equal in quantity.

7.10.2 As the price and quantity of mirror assets in Trister's Mirror protocol is continuously changing, user liabilities may increase or decrease. This is due to the overall liabilities in Trister's Mirror protocol.

Case 1:

Provided that users A and B each mint 1000 tmUSDs by using an amount of tToken equivalent to $7000 at the initial stage and respectively buy one share at the price of $1000 tmGOOG, they will then have 1tmGOOG each. When the price of tmGOOG falls from $1000 to $500, the total value of assets in the Trister's Mirror protocol decreases from $2000 to $1000. This means that the total liabilities of the Trister's Mirror protocol are also reduced by half (namely, from 2000 tmUSD to 1000 tmUSD) and shared by users A and B (each 500 tmUSD). At this time, users A and B sell tmGOOG at the price of 500 tmUSD and still get their collateral back only by returning 500 tmUSD to the system, that is, tToken equivalent to $7000 is free from loss.

Case 2:

Provided that users A and B each mint 1000 tmUSDs by using an amount of tToken equivalent to $7000 at the initial stage, and only user A buys one share at the price of $1000 tmGOOG, then when the tmGOOG price falls from $1000 to $500, the total value of assets in the Trister's Mirror protocol decreases from $2000 to $1500. This means that the total liabilities of the Trister's Mirror protocol are also reduced from 2000 tmUSD to 1500 tmUSD. This is shared by users A and B (250 tmUSD each), namely, users A and B respectively have 750 tmUSD liabilities. Actually, user A has 500 tmUSD (with 750 tmUSD liabilities) when selling out one share of tmGOOG; however, user

B still has 1000 tmUSD (with 750 tmUSD liabilities) and redeems tToken equivalent to $7000 only by returning 750 tmUSD and makes a profit of 250 tmUSD. User A needs to redeem initial tToken collateral equivalent to $7000 by additionally purchasing 250 tmUSD.

7.11 Change rule of liabilities

7.11.1 When new mirror assets (tmUSD) are minted and destroyed in Trister's Mirror protocol, the total liabilities in Trister's Mirror protocol will increase or decrease accordingly. The liabilities amount of each user remains unchanged, but the ratio will change.

7.11.2 When the total value of the mirror assets in Trister's Mirror protocol changes, the total liabilities in Trister's Mirror protocol will increase or decrease accordingly. The debt ratio of each user remains unchanged, but the liabilities amount will change.

7.12 Acquisition of fairest price of off-chain assets through oracle

7.12.1 Trister's Mirror protocol acquires off-chain price information through Oracle and then represents them by virtue of the on-chain price.

7.12.2 In order to prevent a single price source from being controlled, Trister's Mirror will acquire the fairest price of off-chain assets by comprehensively calculating multiple price sources.

7.13 Adjustment of collateral factor

The TWFI holder can adjust the collateral factor through DAOs governance.

7.14 Output mechanism of Trister's Mirror platform currency and governance token TWFI

7.14.1 TWFI is used as both the platform coin and the governance token of the Trister's Mirror protocol.

7.14.2 In the decentralized mirror asset protocol of Trister's Mirror, the total volume of TWFI tokens is about 10 million, without pre-mining, reservation and private placement. All these tokens are outputted flexibly as per the Trister's Mirror synthetic assets for a period of years with the "fair mining" method.

The first-year benchmark output is 10%, and the weighted output of the capital amount is 10%. Thus, the first-year output is 10%-20%;

The next-year benchmark output is 5%, and the weighted output of the capital amount is 10%. Thus, the next-year output is 5%-15%;

The third-year benchmark output is 2.5%, and the weighted output of the capital amount is 10%. Thus, the third-year output is 2.5%-12.5%;

In the fourth year and later, the benchmark output is 1.25% and the weighted output of capital amount is 10%. In other words, the output from the fourth year onward is 1.25%-11.25% (until all TWFI tokens deployed corresponding to the Trister's Mirror protocol are dug out).

7.14.3 20% TWFI tokens output by each block of the Trister's Mirror protocol will be sent to the address of the Trister's Mirror operation team as the daily expenditure of the team.

7.15 Distribution of mining incentives of Trister's Mirror protocol

The incentives after the expenditures of the operation team are deducted will be attributed to the Trister's Mirror mining pool, including:

(1) The incentive for the minting and destruction of tmUSD accounts for

60%.

(2) The incentive for holding other tmAsset (the incentive coefficient of holding different tmAsset can be adjusted as appropriate) accounts for 20%.

(3) The incentive for tmAsset traders accounts for 20%.

7.16 Trister SmartNFT agent mining

7.16.1 Community users can directly carry out minting mining and trading mining under the Trister's Mirror protocol, or they can implement agent minting mining and agent trading mining through Trister SmartNFT mining pool, thus enjoying the corresponding agent mining acceleration.

7.16.2 Any user who does not select the Trister's Mirror protocol for minting mining and trading mining through Trister SmartNFT shall be not entitled to mining acceleration.

7.17 Profits of Trister's Mirror protocol and their distribution way

7.17.1 A trading fee of 0.3% is charged by the Trister's Mirror protocol and will be used as protocol income. After the gas fee and the Oracle call fee are deducted, the profits are distributed as seen below:

20% for dividends of Trister SmartNFT holders;

20% for buyback and destruction of TWFI tokens;

20% for Trister's Mirror Eco Fund, with the expenditure determined by the TWFI holder;

Remaining 40% for necessary operation expenditure of the Trister's Mirror operation team in the initial stage of the protocol.

7.17.2 When the Trister's Mirror platform gradually matures in the future, all rights of control as for the protocol will be transferred to TWFI-DAOs to increase the proportion of the Eco Fund. In the future, 100% profits of the protocol will be subject to management and expenditure by TWFI- DAOs.

8 The Seventh Ecological Product: decentralized Collections Protocol - Trister's NFTBase

8.1 Definition of decentralized collection protocol-Trister's NFTBase

Trister's NFTBase is the collections issuance and trading protocol of the Trister community. Based on the protocol, any user can issue his/her own NFT collections and sell them to community members, and any user who has purchased NFT collections can also trade with each other.

8.2 Trister's NFTBase supports the issuance of the following collection categories:

(1) Standard collections refer to standard ERC721 protocol collections each having a unique ID.

(2) Personalised collections refer to extended ERC721 protocol collections, which users can customise the personalised patterns and names of the collections.

(3) Egg collections refer to extended ERC721 protocol collections, which are similar to a lottery; the issuer can randomly place some "rewards" in the collections, and users can draw a lottery after receiving the collections. The users can obtain additional rewards after winning the lottery and receive them

by clicking "reward exchange".

(4) Mining collections refer to extended ERC721 protocol collections that have a mining function. When obtaining a collection or trading collections, users can obtain corresponding token mining rewards pursuant to the rules.

8.3 How to sell collections

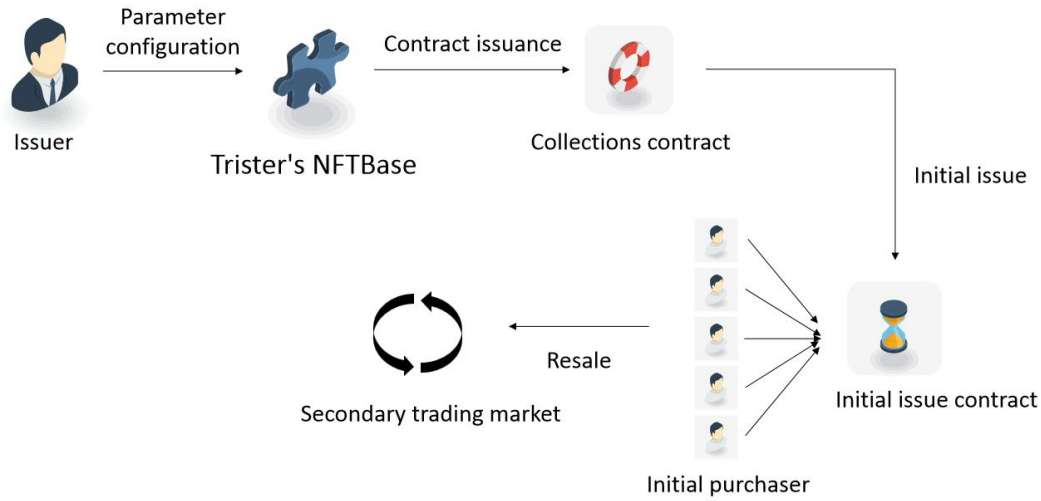
8.3.1 The collections initially issued are sold by the following two methods:

(1) Time and price limited sales indicate that the issuer determines the quantity, price, and time of the sales. The issue also starts the sales at the specified time under the smart contract until they are sold out.

(2) A Dutch auction/anti-dutch auction indicates that the issuer determines the quantity, time and price increase/decrease of the auction. Additionally, the issuer starts the auction at the specified time under the smart contract until they are sold out.

8.3.2 After the collections are sold out for the first time, the collection holder can place NFT on the platform for sales.

8.4 Collection issuance process (flowchart)



8.5 The Trister's NFTBase protocol provides different participation methods for community members, as below:

(1) As an issuer

Community members can issue their own NFT collections through Trister's NFTBase protocol.

(2) As a trader

Community members can issue their own NFT collections through Trister's NFTBase protocol.

(3) As a miner

The issuance or trading activity itself by the community member within the Trister's NFTBase protocol is also mining, which will be rewarded with TWFI tokens.

(4) As a mining pool owner

Any community member holding Trister SmartNFT is a mining pool owner, which is assigned with a mining acceleration rate according to the locked TWFI tokens in Trister SmartNFT. The user can issue or trade NFT collections through Trister SmartNFT to obtain higher mining revenues.

(5) As a voter

Trister community members holding TWFI tokens can adjust relevant parameters and rules of the Trister's NFTBase protocol by voting.

8.6 Revenue from Trister's NFTBase protocol

8.6.1 The issuer needs to pay 1-5ETH to the Trister's NFTBase protocol party when issuing a series of NFT collections.

8.6.2 0.3% of each trading amount will be taken as a trading commission at the initial issuance of NFT trading.

8.6.3 When users are allowed to circulate NFT in the secondary market, 0.2% of each trading amount is taken as a trading commission.

8.7 Output mechanism of Trister's NFTBase protocol platform and governance token TWFI

8.7.1 TWFI is used as both the platform currency and governance token of the Trister's NFTBase protocol.

8.7.2 The total volume of TWFI tokens in the Trister's NFTBase protocol is about 10 million, without pre-mining, reservation and private placement. All these tokens are outputted flexibly as per the Trister's NFTBase overall minting and issuance scale for a period of years with the "fair mining" method.

The first-year benchmark output is 10%, and the weighted output of the capital amount is 10%. Thus, the first-year output is 10%-20%.

The next-year benchmark output is 5%, and the weighted output of the capital amount is 10%. Thus, the next-year output is 5%-15%.

The third-year benchmark output is 2.5%, and the weighted output of the capital amount is 10%. Thus, the third-year output is 2.5%-12.5%.

In the fourth year and later, the benchmark output is 1.25% and the weighted output of capital amount is 10%. In other words, the output from the fourth year onward is 1.25%-11.25% (until all TWFI tokens deployed corresponding to the Trister's Vault protocol are dug out).

8.7.3 And 20% of TWFI tokens output by each block of the Trister's NFTBase protocol will be sent to the address of the Trister's NFTBase operation team as the daily expenditure of the team.

8.8 Distribution of mining incentives of Trister's NFTBase protocol

8.8.1 The incentives after the expenditures of the operation team are deducted will be attributed to the NFTBase mining pool, including:

(1) The incentive for the miner to mint new NFT collections (namely, the

collections are used for deployment of NFT contracts, instead of being sold out) accounts for 10%.

(2) The incentive for the miner to sell their NFT collections for the first time (namely, NFT collections are sold in a flash sale or through auction) accounts for 60%.

(3) The incentive for trading NFT collections in the secondary market (namely, users who have purchased the collections will resell the collections in the secondary market) accounts for 30%.

*Note: For purpose of facilitating the use and circulation of tToken, NFT collections use tToken as the reference currency. We will assign more mining weights for the NFT collections priced with tToken reference.

8.9 Trister SmartNFT agent mining

8.9.1 Community users can directly engage in the issuance, sale and trading mining under the Trister's NFTBase protocol. Alternatively, they can carry out agent issuance, sale and trading mining, thus enjoying the benefits of the corresponding agent mining acceleration.

8.9.2 Any user who does not choose to carry out Trister's NFTBase agent issuance, sale and trading mining through Trister SmartNFT is not entitled to mining acceleration.

8.10 Profits of Trister's NFTBase protocol and their distribution ratio

8.10.1 The commission and trading fees collected by the Trister's NFTBase protocol are used as the protocol income. After the expenditures such as gas fees are deducted, the profits are distributed below:

(1) 20% for dividends of Trister SmartNFT holders;

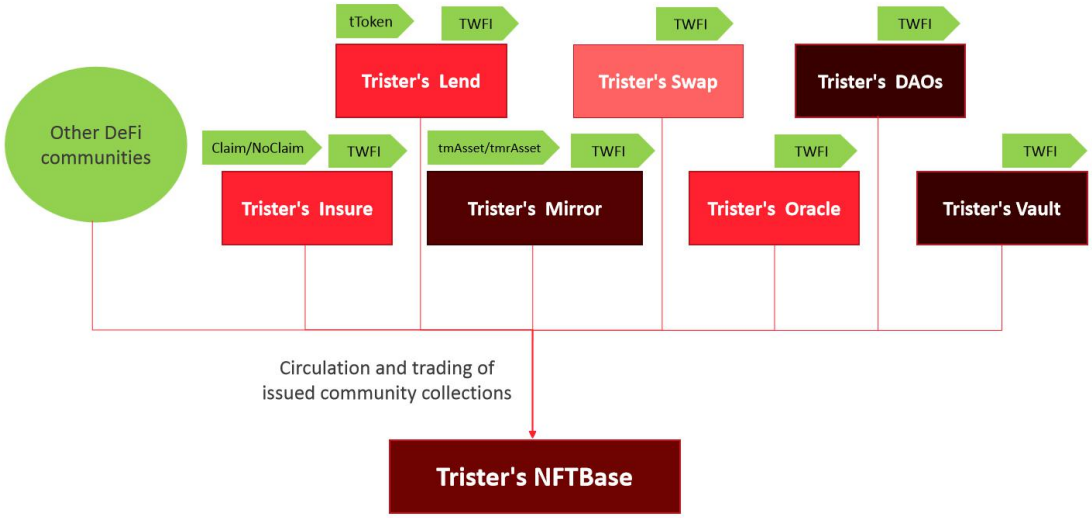
(2) 20% for buyback and destruction of TWFI tokens;

(3) 20% for Trister's NFTBase Eco Fund, with the expenditure determined by the TWFI holder;

(4) Remaining 40% for necessary operation expenditure of the Trister's NFTBase operation team in the initial online stage of the Trister's NFTBase.

8.10.2 When the Trister's NFTBase platform gradually matures in the future, all control rights for the protocol will be transferred to TWFI-DAOs to increase the proportion of the Eco Fund. In the future, 100% profits of the protocol will be subject to management and expenditure by TWFI-DAOs.

8.11 Issuance and circulation logic of collections of Trister's NFTBase protocol (figure)



9 The Eighth Ecological Product: decentralized Autonomous Organisation Protocol - Trister's DAOs

9.1 Overview of Trister's DAOs of decentralized autonomous organisation protocol

9.1.1 DAOs is an autonomous organisation completely controlled by code on the blockchain. All traditionally conceivable articles of association, management specifications and systems in the organisation are completely included in smart contracts, with tampering resistance or intelligent constraint. Individuals and organisations are linked together through these smart contracts, which are propagated around the world, at times even anonymously. This is the DAOs autonomy of code in the blockchain ecology.

9.1.2 Trister's DAOs is an autonomous organisation protocol of the Trister World community. Based on the protocol, any individual or organisation can easily manage their open source blockchain projects.

9.13 Trister's DAOs protocol can be used not only for Trister community projects, but also for any other project.

9.2 Trister's DAOs decentralized autonomous organisation protocol has the following functions:

(1) Open discussion

Any user can initiate an open discussion to speak freely with community members.

(2) Intentional vote

Any user can launch a proposal, and the users holding the designated tokens will provide an intentional vote to understand community members' preliminary opinions regarding the proposal.

*It should be noted that the result of the intentional vote is not binding.

(3) Election of representatives

Users holding designated tokens can elect several appropriate representatives, who they believe will vote to make decisions on their behalf.

(4) Multi-signatures for transferring control rights

The contract owner can transfer all or part of the management functions of the contract to multiple users and subsequently specify the rules for multi-signature resolutions.

(5) Source code update

The right to update the contract source code is decided by the designated user (or voted representative).

(6) Change of parameters

The right to change several contract parameters is decided by the designated user (or voted representative).

(7) External expenditure of public capital

The right to expend the capital of the contract public capital pool is decided by the designated user (or voted representative).

*All proposal methods can be divided into two forms: "non-capital expenditure proposal" and "capital expenditure proposal".

9.3 Application of Trister's DAOs decentralized autonomous organisation protocol

Trister's DAOs itself is a complete set of autonomous protocols, and thus, any project initiator directly uses the corresponding protocol modules of Trister's DAOs, instead of setting up a separate autonomous system. Then,

he/she assembles them together similar to how blocks are built.

For example:

A 100 ETH ecological support fund needs to be expended by a project, which can be achieved through Trister's DAOs in the following ways:

(1) To initiate an open discussion through Trister's DAOs to collect expenditure plans for the ecological support fund.

(2) To initiate an intentional vote through Trister's DAOs and select three schemes widely recognised by the community.

(3) To further improve the three schemes by their respective proposers, elect 11 community representatives through Trister's DAOs and determine which scheme to apply by the majority of the representatives.

(4) To decide the projects and quotas to be supported by the representatives according to the detailed scheme and appropriate capital in a multi-signature way.

9.4 The Trister's DAOs protocol provides different participation methods for community members, as below:

(1) As a project team

The project team can take the initiative to gradually transfer project control rights to the Trister's DAOs protocol for management.

(2) As a community member

In the event that the project is not officially managed by Triser's DAOs protocol, community members can solicit and vote on-chain public opinions through the Trister's DAOs protocol.

(3) As a miner

The minting activity itself for community governance through Trister's DAOs is mining as well, which will be rewarded with TWFI tokens.

(4) As a mining pool owner

Any community user holding Trister SmartNFT is a mining pool owner,

who is assigned with the mining acceleration rate according to the locked quantity of TWFI tokens on Trister SmartNFT and can carry out Trister's DAOs agent governance through Trister SmartNFT to obtain higher mining revenues.

9.5 Trister's DAOs protocol revenue

9.5.1 For non-capital expenditure proposals, 0.01 ETH is charged by Triser's DAOs protocol as a service fee for each proposal; however, voters are free from such service fees.

9.5.2 For capital expenditure proposals, 0.3% capital expenditure as a service fee is charged by Triser's DAOs protocol; however, voters are free from service fees.

9.6 Output mechanism for platform currency and governance token TWFI of Trister's DAOs protocol

9.6.1 TWFI is used as both the platform currency and the governance token of the Triser's DAOs decentralized autonomous organisation protocol.

9.6.2 The total volume of TWFI tokens in the Triser's DAOs protocol is about 10 million, without pre-mining, reservation and private placement. All these tokens are outputted flexibly as per the Triser's DAOs overall capital expenditure scale for years with the "fair mining" method.

The first-year benchmark output is 10%, and the weighted output of the capital amount is 10%. Thus, the first-year output is 10%-20%.

The next-year benchmark output is 5%, and the weighted output of the capital amount is 10%. Thus, the next-year output is 5%-15%.

The third-year benchmark output is 2.5%, and the weighted output of the capital amount is 10%. Thus, the third-year output is 2.5%-12.5%.

The fourth-year benchmark output is 1.25%, and the weighted output of the capital amount is 10%. Thus, the fourth-year output is 1.25%-11.25%.

9.6.3 20% TWFI tokens outputted by each block of the Triser's DAOs protocol

will be sent to the address of the Triser's DAOs operation team as the daily expenditure of the team.

9.7 Distribution of mining incentives of Trister's DAOs protocol

9.7.1 The incentives after the expenditures of the operation team are deducted will be attributed to the Triser's DAOs mining pool, including:

(1) The incentive for non-capital expenditure DAOs proposals (the proposal weight is 50%, and the weight of all voters is 50) accounts for 20%.

(2) The incentive for capital expenditure DAOs proposals (the proposal weight is 50%, and the weight of all voters is 50) accounts for 80%.

*Note: For the purpose of facilitating use and circulation of tToken, using tToken as the expenditure currency for DAOs proposal is supported. We will assign more mining weights for the proposals of using tToken as the capital expenditure currency.

9.8 Trister SmartNFT agent mining

9.8.1 Community users can directly carry out proposal mining under the Triser's DAOs protocol or carry out Triser's DAOs agent proposal mining and enjoy the corresponding agent mining acceleration.

9.8.2 Any user who does not choose to carry out Trister's DAOs agent proposal mining through Trister SmartNFT is not entitled to mining acceleration.

9.9 Profits of Trister's DAOs protocol and their distribution

9.9.1 After necessary fees such as gas fees are deducted from the proposal service fee charged by Triser's DAOs protocol, the profits are distributed as follows:

(1) 20% for dividends of Trister SmartNFT holders;

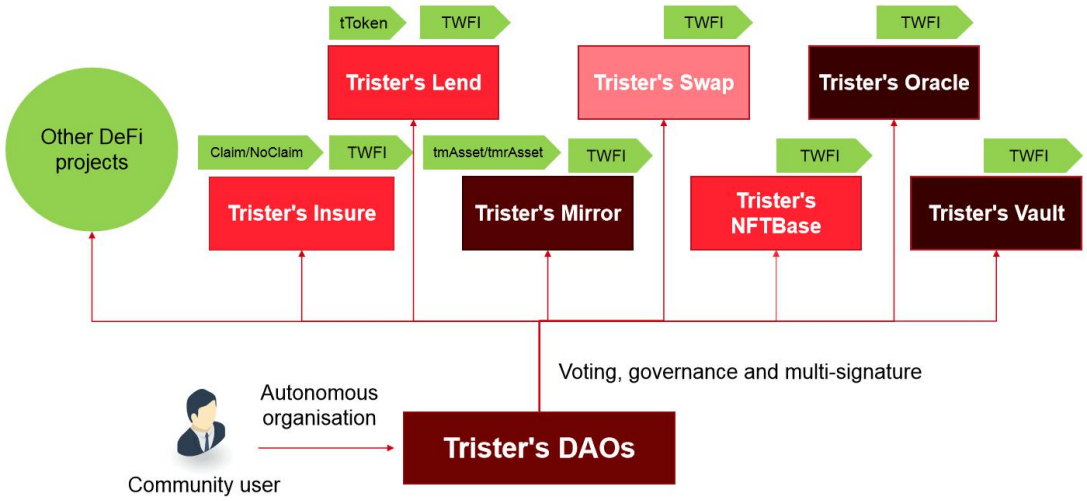
(2) 20% for buyback and destruction of TWFI tokens;

(3) 20% for Triser's DAOs Eco Fund, with the expenditure determined by the TWFI holder;

(4) Remaining 40% for necessary operation expenditure of the Triser's DAOs operation team.

9.9.2 When Triser's DAOs gradually matures, all control rights for the protocol will be transferred to TWFI-DAOs to increase the proportion of the Eco Fund. In the future, 100% profits of the protocol will be subject to management and expenditure by TWFI-DAOs.

9.10 Trister's DAOs governance logic (figure)



* Important hints

The Yellow Paper is rearranged based on the strategic concept, business logic and technology development principles of Trister World (namely, Trister 3.0) over the next three years, which is applicable to communication and academic research among worldwide DeFi developers, DeFi fans and Trister community members.