



# Whitepaper 2.1

2023

# Table Of Contents

## 04 Uniting the Cryptocurrency World

4	Preface
4	What We Are
4	Mission
5	Background
6	Crypto M&A
6	Evolution of TNC Coin
7	Real Research
7	Blockchain Current Problems
7	Problems with the Existing Blockchain Ecosystem

## 9 Token Mechanics

9	Tokenomics
11	What is Crypto M&A?
11	Crypto M&A Token Swap Process
13	Crypto M&A Token Swap Conversion
14	Merger Token Selection
14	Token-to-Coin Migration
17	Proof of Merger Consensus
19	Wrapped TNC
19	TMOND: TNC Ecosystem's Utility Token
19	TMOND Use Cases
20	Issuance and Allocation
21	TMOND Burning

## 20 TNC Coin Blockchain Technology

22	Algorithm for Block Generation (DDPoS)
25	Reinforced Security of the Personal Key
25	Blockchain Generation
26	Monitoring Performance Improvement
27	Differentiated Processing of Smart Contracts
30	TNC Mainnet Innovation
31	Network Participants
31	a.) TNC Block Producer (TBP)
32	b.) TNC Block Observer (TBO)

32	c.) Coin Holder (CH)
33	d.) BP and BO System costs
33	e.) Matters Related to the TNC Coin Price
34	f.) TNC Network (Ecosystem)
35	g.) TNC Coin Mainnet Platform Future Services
36	<b>Technology Conclusion</b>

## **37 DApps Development on TNC Mainnet**

37	<b>DApps Approval and Selection Process</b>
38	Advantages of the TNC Mainnet for DApps
39	Introducing the first DApp developed on Top of TNC Mainnet
39	The World's First Communication Network API
40	Benefits For TNC Coin Holders (CHs)
40	Voting Rights in TNC
40	<b>TNC Alliance Standard Token Agreement (TASTA)</b>
41	Decentralized Single Sign-On (DSSO)
42	Decentralized Single Transfer-On (DSTO)
43	Application Program Interface (API)

## **45 TNC Network Companies**

45	<b>TNC Teams (TNC Consulting)</b>
46	<b>Tokenmarketcaps</b>
47	<b>Real Research</b>
49	<b>Aladdin Wallet</b>
50	<b>Buyaladdin</b>
51	<b>Aladdin Exchange</b>

## **52 Conclusion**

## **53 Legal**

53	<b>Disclaimer</b>
54	<b>Privacy Policy</b>

## **57 References**

# Uniting the Cryptocurrency World

## Preface

### What We Are

**TNC Coin** is the pilot project of TNC IT Group. In addition to being the official cryptocurrency of TNC and all its mergers (see section Token Mechanics) and an improved version of a third-generation mainnet, built to serve the purpose of hundreds of crypto companies.

Developed to address the problems in the current blockchain systems, TNC Coin is a blockchain network prepared to handle 300,000 transactions-per-second (TPS) with improved block generation systems.

Technically superior to other distributed ledgers, TNC Coin will implement a Dual Delegated Proof-of-Stake (DDPoS) protocol to guarantee security and speed, asset immutability, and scalable features to cater to the demands of DApps development.

TNC Coin also serves as an entity that is independent of TNC Group. It stands as a blockchain company that mainly offers blockchain networks with high scalability with robust security engineered for the needs of innovative fintech and crypto projects.

The new mainnet is set to offer more security and velocity in order to respond to the TNC community needs.

### Mission

We at TNC Coin brought new projects and opportunities to our talented pool of developers, which we have gathered through the TNC IT Group Crypto M&A project. We assembled some of the best blockchain experts from reputable startups and companies that utilize blockchain technology in different industries.

As a project that has been planned for the past years, TNC IT Group started by connecting clients with competent blockchain professionals to develop blockchain networks that can adhere to the industry and business ecosystems' demand.

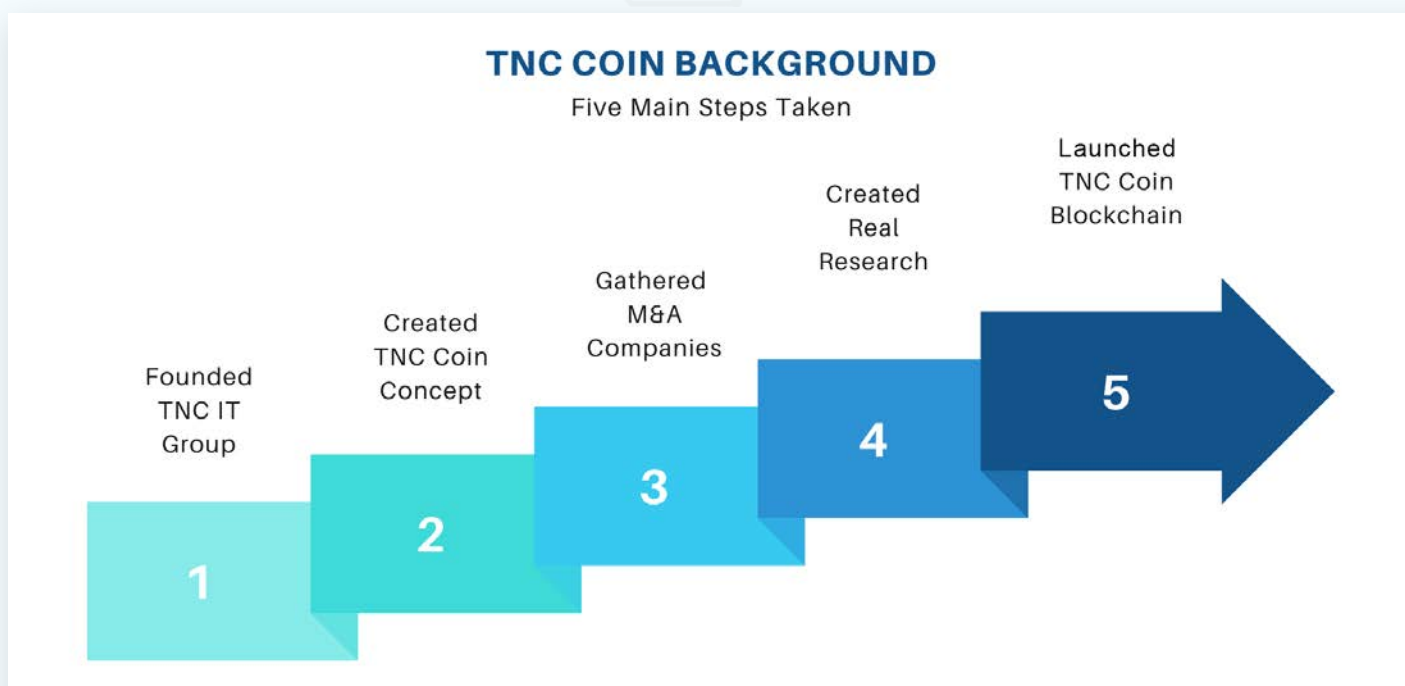
TNC Coin's mission is to represent a better performing mainnet developed to support TNC's upcoming projects — namely Real Research — and its continuously growing ecosystem.

# Uniting the Cryptocurrency World

Through our TNC network, we will promote and execute blockchain technology to various organizations such as governments, banks, schools, and established business enterprises.

Moreover, we believe the mainnet's launch will reinforce the value and importance of TNC Coin in the market while creating innovative and useful platforms to encourage cryptocurrency adoption.

## Background



TNC Coin was introduced and launched by the TNC IT Group in 2018. TNC is a blockchain development company that provides project investments and total blockchain solutions.

Since 2018, the TNC team has been carefully planning the creation and launch of its TNC Coin mainnet. The concept was created in the early months of the company – developed by some of the best IT and blockchain professionals on the market.

Through the novel Crypto M&A, TNC was able to bring together several companies and bring together the best blockchains developers in the crypto scenario. After two batches of successful mergers, it was time to create a project that serves not only mergers but also countless companies: Real Research.

# Uniting the Cryptocurrency World

Real Research was developed on top of TNC Coin mainnet and combines blockchain and big data technologies to optimize the current research market. Finally, TNC mainnet has reached its final testing stage and has proven to be able to handle 300,000 TPS while maintaining the blockchain's security and privacy characteristics.

## Crypto M&A

In motion for about two years, Crypto M&A is an ambitious project of the TNC IT Group. Our IT companies pioneered the creation of a Crypto M&A program to bring together hundreds of crypto companies in using TNC Coin. TNC's pivotal Crypto M&A experienced great success in its primary stage and – after the company's extensive efforts – Crypto M&A commenced in its second batch of mergers.

## Evolution of TNC Coin

### TNC COIN Evolution Cycle



**Stage 1** TNC Token started running on Ethereum blockchain.

**Stage 2** TNC Group Token was listed in several crypto exchanges.

**Stage 3** Crypto M&A commenced the token swap with mergers.

**Stage 4** TNC Coin was adopted for the merger's community.

**Stage 5** TNC Group Token has migrated into TNC Coin.

TNC Coin started as an ERC-20 standard token running on top of the Ethereum blockchain network. Named as TNC Group Token it served as the swapping cryptocurrency for the first batch of the Crypto M&A mergers. After a successful migration, TNC Coin is now a cryptocurrency coin running on its own mainnet.



# Uniting the Cryptocurrency World

## Real Research

Real Research is a secure research and analytics platform that aims to cater to every business enterprise and government institution's research and marketing needs. It offers companies and political parties an innovative platform to conveniently conduct surveys and acquire data from real qualified respondents.

By leveraging the use of the TNC Coin blockchain technology, Real Research offers a highly secure, efficient, and reliable ecosystem for data gathering. Its goal is to help business owners and government representatives to draw credible conclusions backed-up by real and unmanipulated data.

## Blockchain Current Problems

The blockchain grants organizations value when working together on shared wound areas or shared opportunities, especially difficulties particular to each industry sector. The problem with many current blockchain networks is that they remain stove-piped: organizations are developing their own mainnets and applications to run on top of them in a non-effective way. Many different distributed ledgers are being developed in any industry sector by various groups to many different standards. This defeats distributed ledgers' purpose, fails to harness network effects and can be less efficient than current approaches.

According to Deloitte,<sup>1</sup> the major challenge correlated with blockchain is a lack of awareness of the technology itself, mainly in sectors other than banking, and a complete lack of knowledge on how it works. This is hampering investment and the exploration of ideas.

## Problems with the Existing Blockchain Ecosystem

Each blockchain network has different problems, usually linked to speed and energy consumption. If Proof-of-Work blockchain consumes less energy and computing power, on the other hand, they also compromise scalability a lot. For instance, the famous Ethereum, in 2018, was capable of handling only 15 to 20 TPS and, after a huge improvement, claims only 9000 TPS in 2020.<sup>2</sup> Being used for most of the crypto projects, since it guarantees a greater possibility of trading between ERC-20 tokens, the platform comprises the performance of cryptocurrencies, leaving them far behind traditional platforms like VISA, with 24,000 TPS.<sup>3</sup>

# Uniting the Cryptocurrency World

On the other hand, countless decentralized applications (DApps) are emerging, often based on their own mainnets, with speeds much lower than intended and very high energy consumption.

Coin holders are also affected by certain types of mainnet, namely the Delegated Proof-of-Speed (DPoS) mainnets, as they require the purchase of millions of billions of coins in order to become DApp developers. Despite being much faster mainnets when it comes to TPS volumes, they cause costly problems, and developers end up preferring the traditional Ethereum.

On top of the slow TPS, with respect to Ethereum, users must pay a so-called “gas fee” for every transaction, no matter how small the amount. In addition to the financial burden.

New mainnets that have been emerging as potential competitors are Stellar, Ripple, QTUM, or EOS, with their own consensus. However, so far, all stay at 10,000 TPS, always compromising the scalability of cryptocurrencies compared to the traditional banking system.

Also, as of October 2020, some mainnets like EON started to promise 100,000 TPS.<sup>4</sup> Ethereum has also highlighted the hard work to reach 100,000 TPS as well. Still, no mainnet has so far been able to promote 300,000 TPS, with low energy consumption and a consensus algorithm that guarantees lower costs for app developers like the DDPoS used by TNC Coin.



## PoW

- Significant burden arising from the gas fees for inter-user money transfer
- Difficult to commercialise due to slow TPS



## DPoS

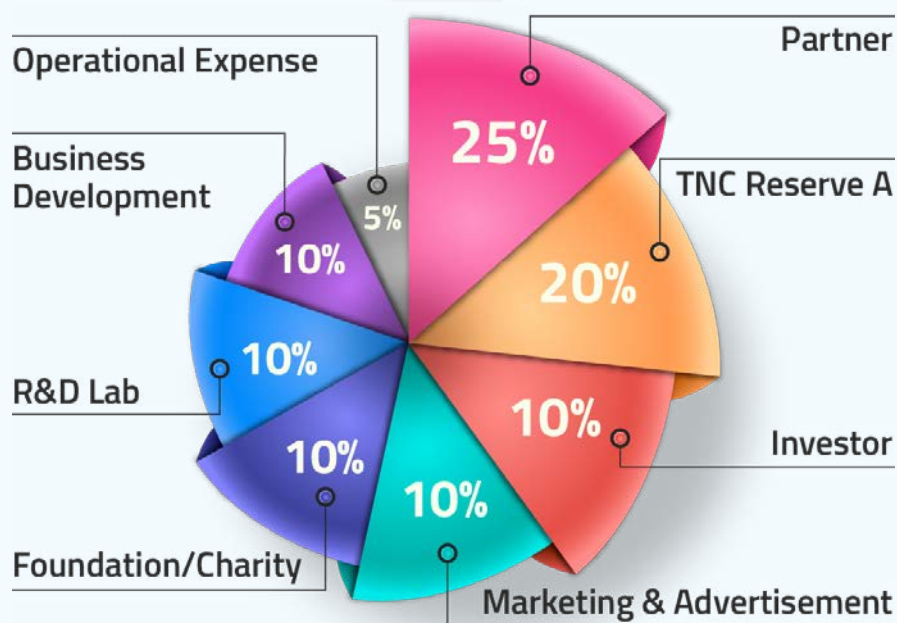
- High initial costs. DApp developers must purchase 2-3 million coins initially
- 21 BPs are exposed, leaving the network vulnerable to attacks
- Non-exercise of voting right by the individuals and abuse of voting rights by the exchange
- Low BP voting rate (less than 20% of the coin holders)



# Token Mechanics

## Tokenomics

Initially, TNC Coin started with a total supply of 1 trillion coins. We've burned 800 billion coins, leaving us with our current total supply of 200 billion (specifically 196,719,999,947). The pie chart depicts the distribution of TNC Coin followed by more details about how each distribution channel is managed. The distribution chart represents 50 percent of the total supply. The other half will be dedicated to TNC Crypto M&A token swap purposes only.



### Partner – 25%

We will set aside 25% for our partners who have supported TNC throughout the years. This fund will be distributed to our partners, namely Alternative Development Organization, Abdullah Al Awadi & Associates, Evorese, SEECRA, Cryptoventures, Financial Policy Council, Deep Dive Technology, Grow-will International Law Firm, Deboot, Prism, Tokenomics, BDLAW, Usman Zafar, Fairwinds, Aladdin, TiENCHAT, Buyaladdin, Paytomat, ABBC Foundation, Elamachain Foundation, ADN, Sigma Chain, Global Blockchain Organization, FINLINK, Cyber Security & Privacy Foundation, Liker World, Tokenncoin, and Real Research.

### TNC Reserve A – 20%

We will set aside 20% of our token distribution for our reserve funds. This reserve fund is for the purposes of emergencies. Once it's been used up, TNC's goal is to refill it back up again.

# Token Mechanics

## Investor – 10%

We will set aside 10% for our company investors. This fund will be distributed to TNC's group of investors. These investors make it possible to keep TNC afloat through their trust and confidence in our company. We use this fund to give back to the ones who believed in us first.

## Marketing and Advertisement – 10%

We will set allocate 10% for our Marketing and Advertising expenses. This fund will cover expenses needed to spread the word about TNC and its projects. These expenses cover activities such as social media marketing, organizing conferences, influencer marketing, etc. This fund has been used to fund activities such as the World Metaverse Conference and the World Live Streamers Conference.

## Foundation / Charity – 10%

We will set aside 10% of our token distribution for foundations and charities. This fund will cover the donations given to TNC's chosen foundations, charities, and causes.

## R&D Lab – 10%

We will allocate 10% for our research and development team. This fund will cover the expenses needed to research and develop future projects for TNC. These expenses cover activities such as market analysis, developmental engineering, and customer surveying. These will lead to business development and the introduction of new projects. We have used this fund to hold research and development activities for StreamCoin and Real Research.

## Business Development – 10%

We will allocate 10% to our business development team. This fund will cover the expenses needed to develop and launch new projects for TNC. These developments will expand our operations. We have used this fund to develop our projects like StreamCoin and Real Research.

## Operational Expense – 5%

We will allocate 5% of our tokens to our operational expenses. This amount will cover the expenses needed to run the day-to-day operations of the company. These expenses include office rent and taxes essential for our business operations.

# Token Mechanics

## What is Crypto M&A?

Crypto Mergers and Acquisitions (M&A) project enforces the TNC IT Group's company tagline: *to unite the cryptocurrency world*. The program executes a mass-scale merge of a number of cryptocurrencies in the market to create a wider ecosystem under a single network.

Unlike traditional financial currencies, cryptocurrencies are technically permitted to be merged through the process of a *Token Swap*.

### What is Token Swap?

A token swap, also known as token migration, is the transfer of digital tokens from one blockchain onto another blockchain.

Crypto M&A can also serve as a reboot system for blockchain businesses. Through the Crypto M&A project, TNC extends investment opportunities to merger companies with promising projects that lack funds.

Aside from the merging cryptocurrencies, the Crypto M&A project will be building a network of blockchain companies. Blockchain projects included in the network are given the opportunity to prove its project and technology to apply for TNC's support and investment.

## Crypto M&A Token Swap Process

After the evaluation and negotiation, everything will be sealed through the signing of the official agreement. Participating merger companies will receive a corresponding amount of TNC coins in exchange for their existing coin or token on the Aladdin Pro Wallet, the official partner wallet of the Crypto M&A project.

Aladdin Pro Wallet is developed as a custodial wallet. To facilitate the token swap efficiently with conversion computations ensured mathematically accurate, a smart contract will back the automatic token swap process.

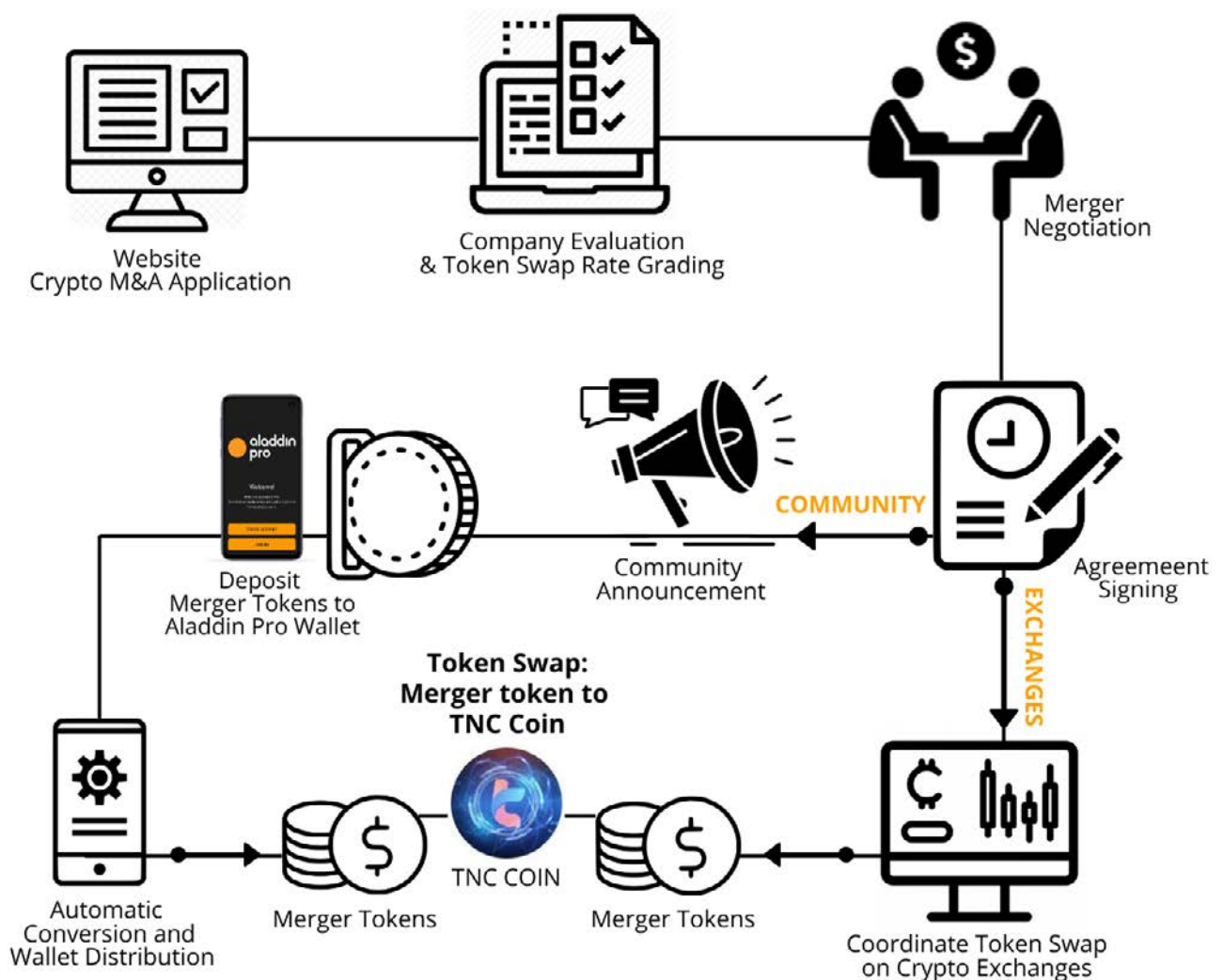
# Token Mechanics

## What is a Custodial Wallet?

The custodial wallet is wherein user private keys are stored by a third party. Similar to the principles of a bank, users may own the money but the bank can have control over the funds.

Merger communities who wish to retain the value of their assets must participate on the token swap to maintain the value of their assets. They are requested to withdraw their tokens from exchanges to Aladdin Pro Wallet or deposit their token on the wallet from any other source. In the Aladdin Pro Wallet, the token swap will automatically take place.

## Crypto M&A Process



# Token Mechanics

## Crypto M&A Token Swap Conversion

To ensure the merger tokens are converted accurately, TNC has collaborated with Aladdin Pro Wallet to run a smart contract. The smart contract codified the ratio that has been agreed upon by the two parties on the Crypto M&A deal. A total of 500 billion (50% of the TNC Coin total supply) is granted for the whole merger's token swap process.

### What is Total Supply?

In cryptocurrency, the total supply refers to the total amount of coins in existence right now that can be in circulation and minus any coins that have been verifiably burned.

The amount of tokens given to merger companies will change after TNC Coin gets listed on the exchanges. Companies were given the grade A, B, C, D, or E, wherein each grade corresponded to an exact amount of token paid to the merger company.

GRADE	TOKEN SWAP AMOUNT
Grade "A" company	+20%
Grade "B" company	+10%
Grade "C" company	Base Rate
Grade "D" company	-10% (or more as per evaluation)
Grade "E" company	-20% (or more as per evaluation)
TOTAL (50% OF TOTAL SUPPLY)	500 billion TNC Coins

# Token Mechanics

## Merger Token Selection

For a cryptocurrency to join the Crypto M&A program, there is a technical requirement for the token type. To ensure the token swap will efficiently take place, TNC will initially only accept cryptocurrency that are under ERC-20 and running on Ethereum blockchain. Given that the merge tokens adhere to the technical standards, compatible tokens will then be converted into TNC Coin.

### What is ERC-20?

ERC-20 tokens are tokens designed to solely circulate on the Ethereum platform. The token abides by a list of standards so that the asset can be shared, exchanged for other tokens, or transferred to a crypto wallet. The ERC-20 token standard has been created with three optional rules and six mandatory.

TNC prefers tokens with similar specifications as the majority of cryptocurrencies are created under the same standard. ERC-20 tokens are circulating on various decentralized platforms built on the Ethereum blockchain network.

## Token-to-Coin Migration

TNC Coin has been initially launched as an ERC-20 token streaming on Ethereum. With TNC mainnet to launch, TNC Coin will undergo the migration process from Ethereum to TNC Mainnet.

Along with the mainnet launch, TNC Coin also launched the TNC-21 testnet to encourage developers to build an ecosystem bound by the TNC-21 token standard. The TNC-21 testnet allows easy token deployment and DApps creation.

As TNC Coin mainnet aims to be fully-capable in powering up crypto and blockchain projects, the TNC-21 testnet is made open source. All developers and students alike are encouraged to utilize TNC testnet as their primary decentralized project sandbox environment — to build DApps and deploy their own branded tokens.

TNC-21 standard token comes with its own unique propositions. Inspired by Ethereum's ERC-20, TNC-21 launches as the official protocol for further improvements on the TNC network. With mass-scale development in mind, the protocol was designed to facilitate less complicated and efficient token creation for all decentralized projects.



# Token Mechanics

Currently, most DApps are developed under the ERC-20 standard. TNC aims to present a reliable alternative to drive diversity in the DApps market. TNC Coin mainnet can provide a robust blockchain that efficiently runs with 300,000 TPS speed.

TNC Developer Link: <https://testnet.tncdapp.com>

The TNC team will facilitate the procedure and cooperate with the exchanges that listed TNC and the previous mergers to list the mainnet-based TNC Coin in replacement of the old TNC Coin (ERC-20) token. During writing time, TNC Coin is planned to be listed in a wide-range of crypto exchanges.

It is currently listed on several exchanges, see the growing list below:



Along with its new mainnet, TNC introduces the Proof-of-Merger (PoM) consensus. TNC Coin launches the Proof-of-Merger protocol to fully support TNC IT Group's Crypto M&A project.

The Proof-of-Merger is a consensus designed to level the crypto asset market price through facilitating automatic token burning. It is already known that token burning is an effective way of increasing and stabilizing the price of coins in the market.

# Token Mechanics

The process of the PoM starts with pre-issued coins agreed upon in the Crypto M&A token swap agreement. There will be 4 wallets per merger. These are the Main wallet, Merger wallet, Operation wallet, and the Burning wallet.

The Main wallet contains the total amount of the initial issued coin. It only has the function to distribute the coin to the Merger wallet and Operation wallet. This distribution only occurs when the merger takes place and operates the coin/token swap according to the crypto M&A process.

The Merger wallet is the channel to deliver the assigned coin to the merger company. Here, they must follow the crypto swap rate that set by the agreement in the Crypto M&A Terms and Conditions. This wallet can only send to two different locations: Merger wallet and Burning wallet.

The Operation wallet will contain exactly same amount of coins as the Merger wallet. This includes not only the receiving amount, but also the burning amount with the Merger wallet.

The Burning wallet will receive the coin from Merger wallet and Operation wallet. This transaction will only occur when the PoM state the reduction from its original distribution plan.

Then, the merger company distribution amount will be pre-set, and an equal amount of the coin will be allocated to the head company.

PoM introduced a new concept of coin/token distribution and allocation rules to the market where all the members who join can monitor and grow the project in a fair manner. Unlike the Initial Coin Offering (ICO) method, the initial issued coin/token will follow the coin/token distribution along the way of completing the project.

This new set of rules will guide the crypto market in fair manner and create a mutual benefit to both parties. On top of creating the new set of rules, this process will definitely protect coin users and investors by containing the strict requirement of releasing the coin to the market.

Up until now, most of the coin/token companies were free to issue large amounts of coins/tokens and create a bubble effect for their own coin/token. However, PoM will only release the coin/token when the operation company completes the merger process.

# Token Mechanics

The speed of completion will also boost the coin/token amount released in the market. When the market price or circulation of the coin/token exceed the control, then the burning process will intervene to control the market situation. This burning process will apply to both the Merger wallet and the Operation wallet at the same time, so that both parties can only access to limited amount of coin/token that will be released to the market.

Thus, TNC Coin ensures that all foundations, merger companies, and users are under fair conditions with the Proof-of-Merger Protocol. The Crypto M&A program will bring mutual benefits for TNC and other blockchain merger companies. It will also provide swap and easy liquidation for blockchain startup companies that need investment.

## Proof of Merger Consensus

While the above explanation describes one merger under PoM, we shall now look into future stages when several mergers take place.



# Token Mechanics

With reference to above image, 1 trillion TNC token will not be released to the market unconditionally. But will be released to the market according to the merger at a certain rate by the merger stage. This means the merger process will proceed with a time table, and each merger will have its own swap ratio for the merger coin swap.

As the merger proceeds with the new concept of Proof the Merger (PoM) merger proof method, the TNC headquarters will also receive operational tokens at the same rate.

Since the 2nd merger group is applied from a new set of rates, 1 billion swaps are adjusted to a lower number, and a reduced amount will be burnt in the initial swap stage. The coins with the difference in total quantity as much as the number of the 2nd merger will be burned, and the coins held by the operation company will be burned equally as much as this burned amount.

The merger verification method that we proceed will create a new paradigm in the market in which the tokens to be released in the market are adjusted according to the progress of the project, and we are trying to complement the shortcomings of existing ICO companies and establish themselves as a more competitive system.

Blockchain became one of the most important emerging technologies for the past years, mainly after the rise of cryptocurrencies. With the appearance of more cryptocurrencies and more projects, the number of blockchains has been increasing in the market.

The number of blockchains reaching speeds above those of traditional methods like Visa (24,000 TPS) has also been increasing, even though there are only a few blockchains claiming to have achieved over 100,000 TPS.

TNC Coin mainnet proven reaches 300,000 TPS by using the Dual Delegated Proof-of-Stake (DDPoS) consensus algorithm — an upgraded version of the third-generation EOS DPoS. This solves security and speed issues. In short, the TNC Coin mainnet aims to not only be technically superior but also supporting to its users.

# Token Mechanics

## Wrapped TNC

TNC Swap is TNC Coin's latest advancement. Through this platform, users can easily swap TNC coins from the TNC mainnet into other network like Binance Smart Chain by using their wrapped TNC swap website ([swap.tnccoin.com](https://swap.tnccoin.com)).

As one of the leading digital currencies, TNC can be traded on a lot of crypto exchanges. However, we highly recommend our users to use TNC Swap as it sets forth a gateway to a bigger market without the need to create accounts and adhere to different legal policies. This bigger market means metaverse, NFT market, etc.

The swap process for wrapped tokens is set for one to one ratio which will boost the current market value from the centralized exchange. This downgrading of the TNC coin will provide us with much more confidence and the possibility to adopt the current market movement.

Note: At present, TNC Swap supports Binance Smart Chain and is available for MetaMask users only. Nonetheless, we are working hard to add more networks and wallets in the near future. Additionally, users can only swap TNC to bTNC and vice versa. You cannot swap one token for another (e.g., BEP-20 to ERC-20).

TMOND is a cryptocurrency token that performs a vital role in the TNC ecosystem. With the TNC mainnet in full swing, we are introducing gas fees to open the network to more independent participants and reward them for their contributions. These gas fees will be paid out in TMOND.

TMOND will be utilized for a number of use cases. As mentioned above, the first use case is gas fee payment. This is so that validators and block producers will get compensated for their resources. Since TNC mainnet is using DDPoS, we encourage more people to take part in our ecosystem as TNC Block Producers (TBPs). These are 21 entities tasked to keep the TNC mainnet up and running – 17 are elected as masternodes while 4 are randomly selected as TNC Block Observers (TBOs). For their resources lent to the TNC ecosystem, they will obtain TMOND. Please refer to the following sections for more information on how to become TBPs and TBOs.

# Token Mechanics

Those who want to deploy smart contracts (DApps and custom tokens) on the TNC mainnet will also need TMOND. If they wish to mint their own tokens, they would still need to pay for all network fees using TMOND, similar to other blockchains like Ethereum and Binance Smart Chain.

In addition, TNC Coin holders can stake their coins on our staking programs and obtain TMOND as rewards. This will ensure that loyal TNC Coin holders will be able to obtain advantages from the network as they help ensure the stability of our blockchain.

TMOND will have no cap on its maximum supply. However, to begin introducing TMOND to the TNC ecosystem, we have minted up to 1,500,000,000 tokens using the BEP-20 token standard.

## **TMOND contract address:**

0xb6455AC9D03c42A6D40915E0c2EcB7e464D8925f



# Token Mechanics



The initial 1.5 billion TMOND supply will be allocated to the following:

- 70% for TNC Coin staking rewards
- 15% for initial liquidity on decentralized exchanges
- 10% for marketing and promotions
- 5% for TNC Coin ecosystem advancement

The rationale for the sizable staking rewards is that we want to introduce TMOND to the ecosystem without TNC Coin holders having to purchase TMOND from exchanges. We believe that this will encourage developers to try out TNC mainnet's astounding 300,000 TPS without having to pay anything since it is free for those who hold and stake their TNC Coin.

## TMOND Burning

We will also perform regular burning to keep the TNC economy under check. Given that TMOND will continually be issued as staking rewards, we need to balance out the amount of tokens in circulation.

Hence, we will perform regular TMOND burning. As to the frequency and the amount of TMOND that will be burned, we consider two factors: the current price of TMOND and the number of blocks that are added for a time period (the ideal time period is 3 months).

# TNC Coin Blockchain Technology

Blockchain became one of the most important emerging technologies for the past years, mainly after the rise of cryptocurrencies. With the appearance of more cryptocurrencies and more projects, the number of blockchains has been increasing in the market.

The number of blockchains reaching speeds above those of traditional methods like Visa (24,000 TPS) has also been increasing, even though there are only a few blockchains claiming to have achieved over 100,000 TPS.

TNC Coin mainnet proven reaches 300,000 TPS by using the Dual Delegated Proof-of-Stake (DDPoS) consensus algorithm — an upgraded version of the third-generation EOS DPoS. This solves security and speed issues. In short, the TNC Coin mainnet aims to not only be technically superior but also supporting to its users.

## Algorithm for Block Generation (DDPoS)

The most common way of generating blocks is the Proof-of-Work consensus, popularly known for being Bitcoin and Ethereum's consensus. A block header gets generated as the nonce value is changed by a hash algorithm through Graphics Processing Unit (GPU). and a block is generated whenever the hash value of the block header is smaller than the value of the proposed bits. This requires costly equipment with high computing power, and the cost is significantly higher compared to the amount of mined coins.

### What is the Graphics Processing Unit (GPU)?

A GPU is a specialized electronic circuit that performs rapid mathematical calculations, primarily for the purpose of rendering images. It accelerates the creation of images in a frame buffer task to show output in a display device.

In order to reduce such cost, Qtum and various other cryptocurrency developers have come up with the Proof-of-Stake (PoS) method in which blocks are randomly generated, and priority in this random block generation is given to the nodes with more outstanding shares.

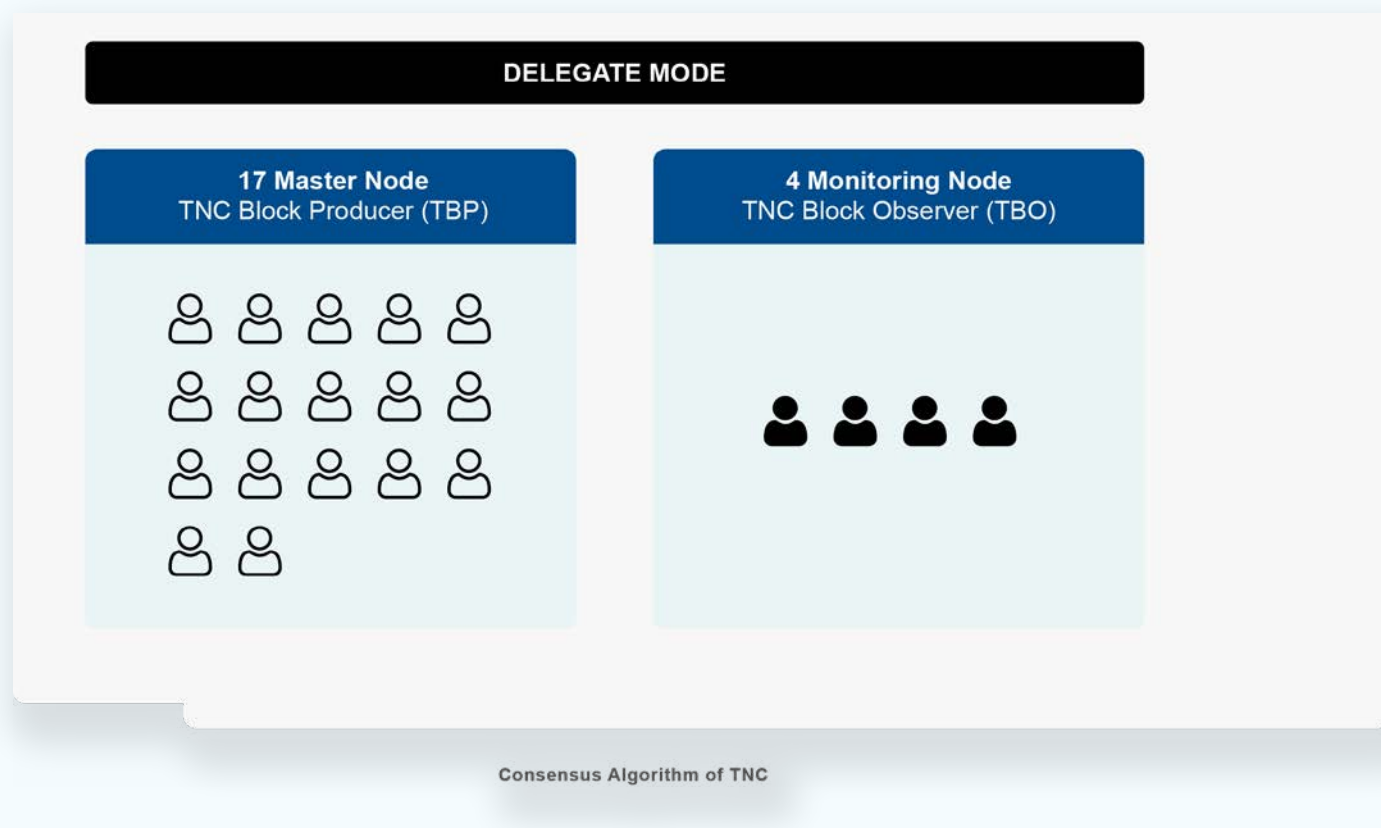
# TNC Coin Blockchain Technology

However, giving priority in block generation to those with greater shares hinders the popularization of blockchain. For this reason, Graphene improved the algorithm to Delegated Proof-of-Stake (DPoS) in which masternodes are elected in the democratic way of voting for blocks to be generated in a random order in the masternodes.

Although it addresses the disadvantages of the PoW and PoS algorithms, this protocol also has a drawback. As there is a low number of predetermined numbers of nodes, 51% of the elected masternodes are expected to be in collusion. In order to resolve these issues, TNC Coin adapted to a novel consensus algorithm.

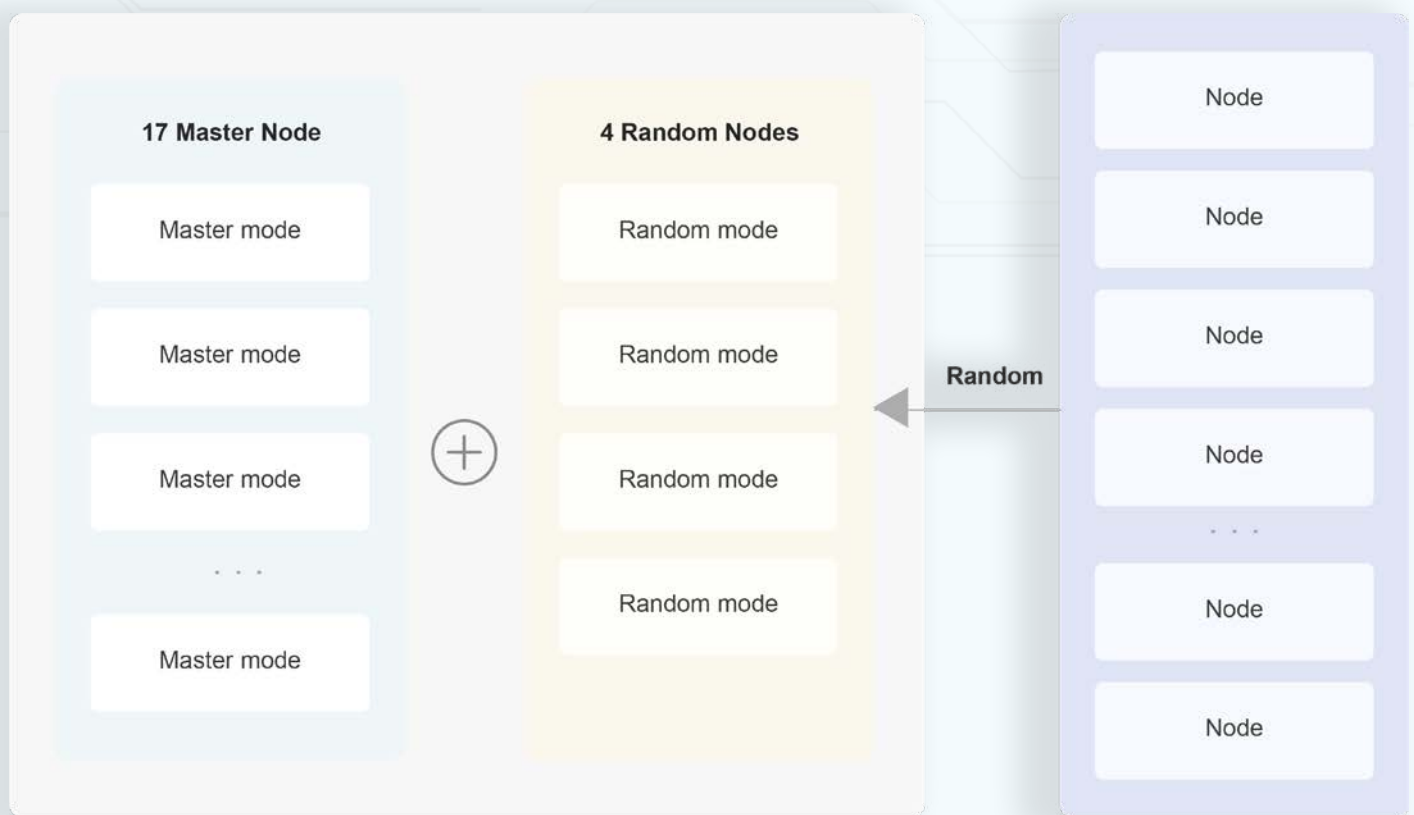
## What is DDPoS Consensus Algorithm?

In the novel Dual Delegated Proof-of-Stake (DDPoS), the TNC nodes are arbitrarily chosen, including TNC Block Observers (TBOs), jointly generate blocks in a random order in order to maintain the integrity of the elected masternodes and the entire blockchain.



This chain blocks' method does not incur any costs, not even in the use of the blockchain. Even if the masternodes collide, integrity can be maintained as collusion is prevented by the random nodes (TBOs) that are arbitrarily selected.

# TNC Coin Blockchain Technology

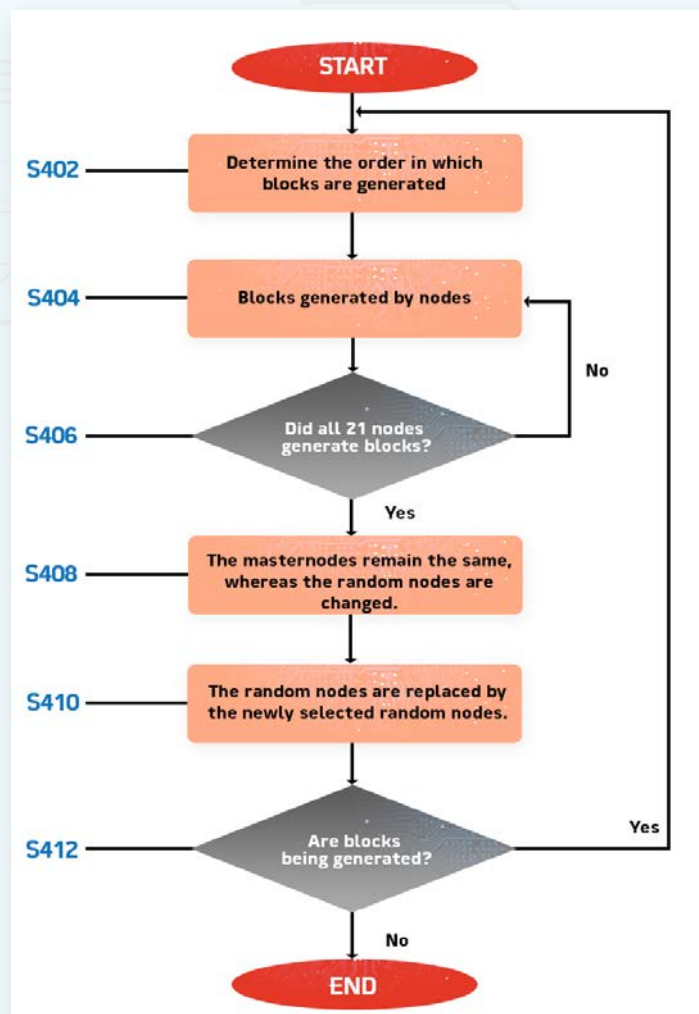


Blocks generated sequentially according to the arbitrarily determined order

DDPoS is additionally more secure, preventing threats in advance. Through this consensus, TNC Coin can certify to have the fastest mainnet speed of 300,000 TPS in the existing blockchains.

For a better understanding, please observe the flow chart of the entire process.

# TNC Coin Blockchain Technology



## Reinforced Security of the Personal Key

Within the TNC mainnet, users only need to remember their respective ID and password. Yet, on the system, each of the users controls an encrypted non-redundant personal key, based on their individual activities such as posting messages, posting comments, transferring coins, among others. In order to ensure the security of the DApp service and as a countermeasure against possible hacking.

## Blockchain Generation

TNC is designed to facilitate inter-block communication. This can be obtained by generating a Proof-of-Message existence and a Proof-of-Message sequence. A block can be produced every three seconds, and blocks can be generated by up to 21 nodes. These 21 nodes consist of the elected masternodes (TBPs) and arbitrarily selected nodes (TBOs) in each round (i.e. at the time of generating 21 blocks). These nodes are involved in the block generation process to ensure security. During the block production rounds, each node supports the validation of blocks and transactions.

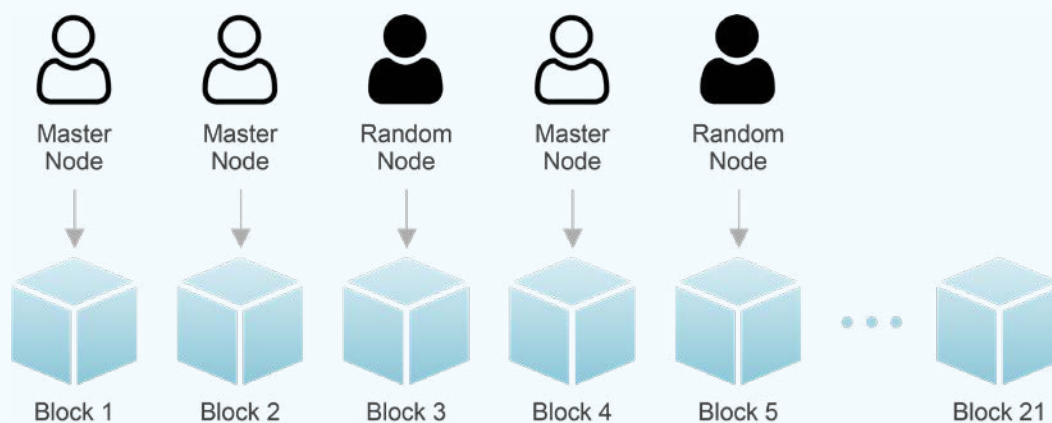
# TNC Coin Blockchain Technology

Note:

**TBP stands for TNC Block Producer, while TBO stands for TNC Block Observer.**

*These terms are going to be further discussed below under TNC mainnet - Network Participants.*

In comparison with the method of generating blocks using hash links, it has almost zero overhead, and it is possible to optimize the time and bandwidth for verifying the proof of the chain — because 21 definite block producers produce a block every 3 seconds, it takes 63 seconds to determine irreversibility.



## Monitoring Performance Improvement

### (1) Test node

Suppose a function is recorded in a currently active blockchain by a user who wants to test TNC functions or DApp that is currently in development. In that case, there is a high risk of impacting a system that is operating well. However, when it comes to developing a new DApp or applying an upgrade, there is a need to test it out in a blockchain that is actually in operation. Our company provides test nodes that are kept separate from the blockchain services to facilitate safe development.

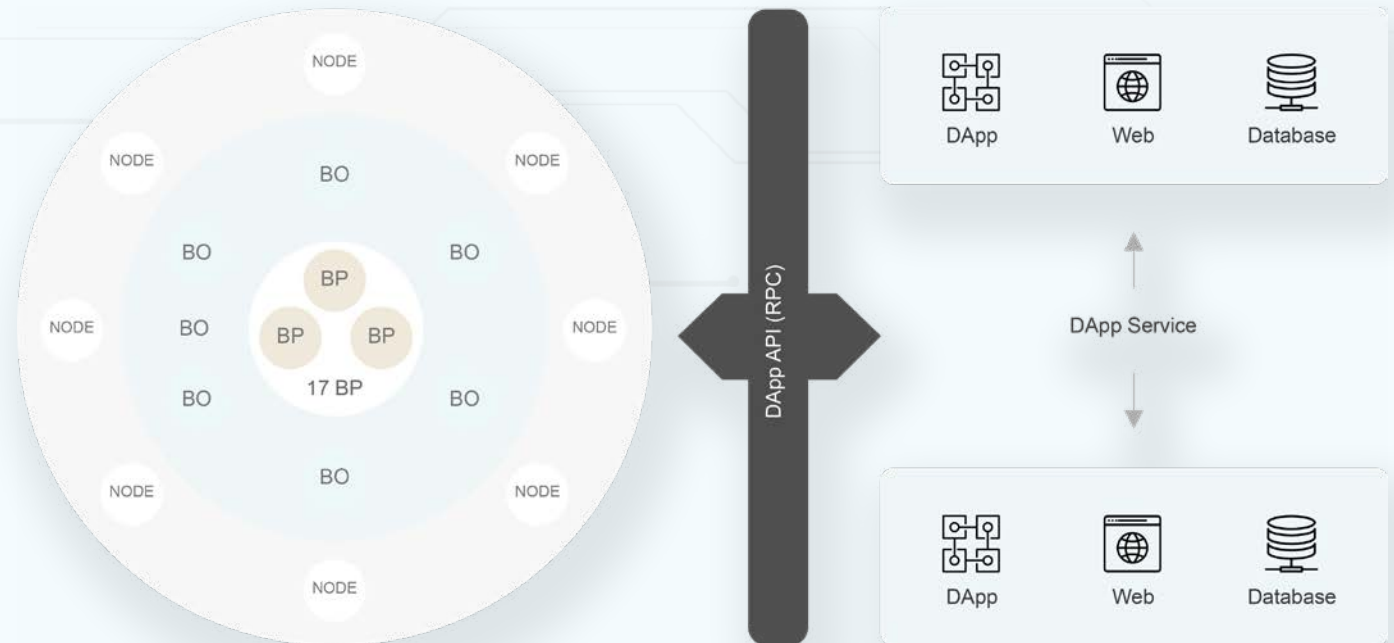
### (2) Debug node

As for the blockchain services that are already in operation, TNC offers a debug mode service that enables debugging by applying the changes in advance in case of changing the blockchain engine database to add a new function or upgrade the blockchain performance, or resolving development issues by changing the blockchain time.



# TNC Coin Blockchain Technology

This allows debugging the problems in which the existing data are affected by the added codes for performance improvement or the issues resulting from a hard fork in the operating nodes.



## Differentiated Processing of Smart Contracts

In order to execute a smart contract on Ethereum and EOS, for instance, the contract must be uploaded on the mainnet server after program coding for compile, and this kind of development process is time-consuming and complex. With TNC, on the other hand, the DApp developer simply has to call the API, provided by the mainnet, from its development environment, which facilitates the development process. From the perspective of DApp developers, this is a high-speed and stable development environment. In the future, support will be provided for immediate execution of smart contracts using SQL commands through the database provided together with the blockchain service.

### Example of API concerning tokens of DApps to be provided by TNC

#### (1) Create a Token

```
$token->create_token($required_auth, $name, $symTBOI_name, $publisher, $init_ amount );
```

# TNC Coin Blockchain Technology

## 1.1) Argument Description for Token Creation

required_auth	Creating a user's active key
Name	Token name
symTBOI_name	Token symbol
Publisher	Account ID of the user
init_amount	Initial amount

## (2) Transfer

```
$token->transfer_token($required_auth,$from,$to,$amount,$symTBOI_name,$memo);
```

### (2.1) Argument Description for Transfer

required_auth	Active key of sending user
From	Account ID of sending user
To	Account ID of receiving user
Amount	Token amount to be sent
symTBOI_name	Token symbol
Memo	Memo

## (3) Display Balance

```
$token->get_token_balance($account);
```

### (3.1) Argument description for display balance

Account	Token owner's account
---------	-----------------------

## (4) Burn

This is the function that allows users to delete the tokens in their possession. The following function is launched by the token issuer, in order to reduce the total amount of tokens:

# TNC Coin Blockchain Technology

```
$token->burn_token($required_auth,$account,$amount,$symTBOI_name);
```

## (4.1) Argument description for burn

required_auth	Active key of Token owner's account
Amount	Token owner's account ID
Amount	Number of tokens to be erased
symTBOI_name	Token symbol

## (5) Error handling

For example, during execution, the result is returned by the operation related to the function activated.

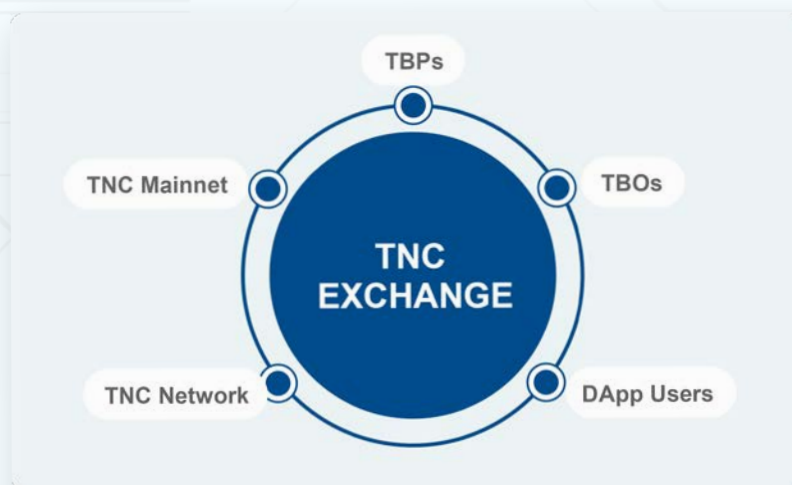
```
$response=$token->burn_token($required_auth,$account,$amount,$symTBOI_name);
```

The following result value is implemented by:

```
if($response->status == "success")      // success
{
}
else // fail
{
$code = $response->result->cause->payload->error->code;
$message = $response->result->cause->payload->error->message;
}
```

# TNC Coin Blockchain Technology

## TNC Mainnet Innovation



Proof-of-Work (PoW) and Proof-of-Stake (PoS) are two common consensus algorithms with their own offerings. For PoW-based protocols, blocks are generated by those who have completed tasks—the complex mathematical problem—among all of the people participating in a decentralized setting. The consensus is reached when 51% or more people agree. Waiting for approval requires a lot of time to perform the work and reach a consensus, that is the downside of this method.

On the other hand, the PoS system is more stringent in consensus. For this protocol, those with greater shares that are generating blocks and more than half of the network participants must agree to reach a consensus. Moreover, users with more shares can easily manipulate the governance within the network.

Then, Delegated Proof-of-Stake (DPoS) was introduced by EOS. Since then, it has been garnering attention as an alternative to boost speed and stability. The DPoS protocol allowed the verification process to be one upon the committee's selection, without the need for the approval of the entire group. This model reaches consensus when the majority of those who have been elected to have the authority to vote—similar to the parliamentary political system. Due to this, the DPoS system can have issues in the process of electing the deciding authorities in relation to a conflict of interest, and some TBPs may engage in collusion or be attacked.

In wanting to improve the DPoS system, TNC proposes an enhanced PoS consensus called the **Dual DPoS (DDPoS)**. DDPoS is similar to the DPoS consensus protocol when it comes to selecting certain nodes as the TNC Block Producers (TBPs) are selected through a voting process.

However, in order to resolve the issue of collusion or an attack against certain TBPs, a TNC block observer (TBO) system, in which the TBOs arbitrarily selected in each round, participates in the block generation process alongside the TBPs. TBO is the newly-integrated system in the DDPoS.

# TNC Coin Blockchain Technology

## Network Participants

Roles in the Network	
<b>TNC Block Producer (TBP)</b>	TNC Block Producers replaces the role of “miners” as the custodians of the network, running the underlying network layer to process all transactions.
<b>TNC Block Observer (TBO)</b>	TNC Block Observers (TBOs) are designated to monitor whether the TBPs are generating the blocks properly or whether there are any errors.
<b>Coin Holder (CH)</b>	In TNC, a coin holder (CH) is someone with TNC coins (PIA) or DApp token
<b>TNC Network</b>	The community that serves as internal market research would vote to gauge DApps popularity.

### a) TNC Block Producer (TBP)

Within the TNC network, the coin holders eventually become TNC Block Producers (TBPs). TBPs are selected through a voting process determined by the number of votes received from those with TNC Coins and DApp tokens.

TBPs are chosen by voting under the assumption that the person with the largest amount of coins suffers the biggest losses when the coin economy is in a slump and thus, he/she will make decisions that select a person who will guarantee the highest reliability and stability as a TBP. Those with small amounts of coins, on the other hand, may combine their voting rights in order to have the coin holder they support participating as a TBP.

As a technical requirement, the TBP must be equipped with the system necessary for generating and maintaining blocks that meet the requirements of TNC. Also, aspiring TBPs must deposit a certain amount of money to compensate for damages they may cause in the future.

The TBPs, who equip themselves with the system and operate it in order to maintain the mainnet, are not merely issued new coins or provided with a monetary compensation; instead, they are granted the authority to judge DApps wishing to enter into the TNC mainnet and given priority to invest in them under favorable conditions.

# TNC Coin Blockchain Technology

## Funding Decentralized Projects on the Network

The deposit is first used as a reimbursement, in case losses are endured in the future due to the TBP's action. The deposit will be returned to the TBP whenever they decide to exit and as long as they are going to exit free of faults. To ensure efficient operation of the mainnet, the TBPs will only calculate the coins and DApp tokens in possession for a month; the voting process is repeated every month.

**TNC Network Fund** will be the repository of all deposits from TBPs and other payments within the system.

The TBPs are provided with equal rewards using the network fees paid by the DApp developers based on the number of wallets they use. TBPs have the priority to participate in the investment for DApp that has a good coin economy ecosystem.

The DApp token value is calculated based on the internal exchange pricing, so that none of the DApp participants is placed at a disadvantageous position. As such, the TNC ecosystem is designed to achieve mutual growth with the DApps.

## b) TNC Block Observer (TBO)

In TNC, block observers (TBOs) are designated to monitor whether the TBPs are generating the blocks properly or whether there are any errors. Any coin holder can participate as a TBO if he/she has a block monitoring system that meets the minimum requirements of TNC.

In addition to the TBPs, the TBOs and coin holders are given the right to invest in the approved DApps. All of the TBOs are also provided with equal rewards from the network fees paid by the DApp developers based on the number of wallets they use.

## c) Coin Holder (CH)

In TNC, a Coin Holder (CH) refers to someone with TNC coins (TNC) or DApp tokens. CHs can exercise their right of vote to the extent of the total value of the coins and DApp tokens in their possession. In case CHs vote for a TBO or TBP, they can receive some of the network fees assigned to the said TBO or TBP as a reward based on a certain ratio.

CHs also have the right to participate in the DApps that have been judged and approved by TBPs to enter into the TNC ecosystem. They can participate in excellent DApps and redeem the tokens as PIAs on the internal exchange at any time.



# TNC Coin Blockchain Technology

CHs, who want to participate indirectly because they lack the information necessary for direct participation or for any other reason, may delegate their right of participation to a certain TBP. In this case, the TBP that has been delegated the participation right may participate in a DApp using the delegated coins calculated based on a certain ratio.

## d) BP and BO System costs

Please observe the table below to understand BP and BO system costs.

*Disclaimer: The amount in USD may vary depending on the changes in computer or memory prices, among others.*

Node	CPU	RAM	HDD	N/W	Average Maintenance Cost (Monthly)
BP	16 core	128 G	1 T	1 T	1,356 USD
BO	2 core	8 G	128 g	100 M	119 USD

In short, the total system maintenance cost is approximately 1,500 USD/month for a BP and 1,300 USD/month for a BO, according to the average exchange rates that may vary.

Moreover, the necessary costs for maintaining the entire system if the BPs and BOs use only a single server, as you can observe.

E.g., 17 BPs and 100 BOs:  $(1,500\text{USD} \times 17 \text{ BPs}) + (1,300\text{USD} \times 100 \text{ BOs}) = 155,500\text{USD/month}$ .

Finally, As the number of DApps joining the mainnet and the number of the members of the DApps increase, the cost of maintaining the system will increase.

## e) Matters Related to the TNC Coin Price

- When a fund engages in coin participation in a DApp, the amount of TNC Coins sold will temporarily increase, which may adversely affect the TNC price.
- On the other hand, when a DApp achieves growth, there will be additional funding for the DApp, which is done using TNC Coins; thus, the demand for the TNC will rise, making it possible for the price rally.

# TNC Coin Blockchain Technology

- When the services of a DApp expand, many users will need its tokens to use its services, and even in this case, the users will have to purchase TNC Coins and exchange them for the DApp tokens in question on the internal exchange, thereby increasing the demand for TNC.

## f) TNC Network (Ecosystem)

The TNC Network comprises of all participants in the ecosystem, including the TNC Block Producer (TBP), TNC Block Observer (TBO), and Coin Holders (CH). CHs are given the task to vote for DApps in order to determine their level of popularity, based on which the TBPs, TBOs, and the whole TNC Network can decide whether to allow a certain DApp to receive a discount rate in the presale stage.

### What is an Ecosystem?

Blockchain ecosystems refer to the participating groups that interact with one another within the blockchain network and the surrounding off-chain world. In your typical blockchain, the network participants include users, miners, developers, among others.

Then, in the crowd-sale stage, the TNC CHs can individually participate in the DApps. Also, TNC Network can be utilized to launch free airdrops for future CHs, to reward various internal activities, and used as a crowdfunding platform for DApps development.

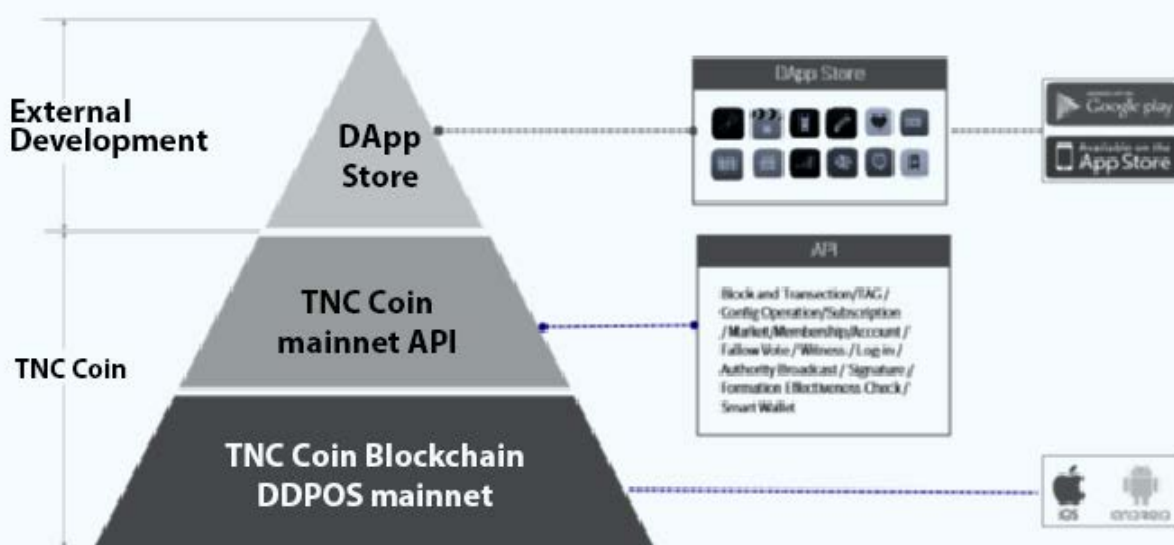
### TNC Network Standard Rules

- TNC will form a Participation Advisor Committee composed of TBPs to propose participation guidelines.
- TNC will not participate in any of the DApps in excess of 20% of the TNC Network in order to ensure the sustainability of the participation activities.
- With the biggest importance placed on the interests of the entire community, TNC will participate in DApps that can make the most contribution to the TNC Network.
- The profits from TNC's participation will be accrued in the TNC Network.

# TNC Coin Blockchain Technology

## g) TNC Coin Mainnet Platform Future Services

The TNC Network comprises of all participants in the ecosystem, including the TNC Block Producer (TBP), TNC Block Observer (TBO), and Coin Holders (CH). CHs are given the task to vote for DApps in order to determine their level of popularity, based on which the TBPs, TBOs, and the whole TNC Network can decide whether to allow a certain DApp to receive a discount rate in the presale stage.



The future TNC Coin mainnet services can be summarized into three layers, as follows:

- (1) The primary backbone is the blockchain mainnet using the DDPoS system.
- (2) The intermediate layer is comprised of the mainnet API and the standard module API. In addition to the API of the mainnet itself, the real-time video streaming, messenger, and P2P cloud service modules will be provided through the API for the DApps to boost their service development speed.

There are plans to allow the standard modules to work a single, smart contract by developing them by other companies. In other words, the excellent DApps that enter TNC in the early stages will, in effect, be able to cut down the time and cost of development without bearing additional costs or sharing their profits.

# TNC Coin Blockchain Technology

(3) The topmost layer is occupied by DApp Store, where there will mainly be DApps developed and operated by external developers. Users will be able to freely download any of the DApps they like. Votes will be cast by BPs, BOs, and CHs to select the DApps to enter DApp Store. To prevent stagnancy in the entire network, which happened recently with EOS, TNC will provide the same mainnet to multiple DApps and offer API for DApps that are expected to have huge traffic early on to set up an independent mainnet.

In the TNC mainnet, blocks are generated and verified by 17 selected BPs and 4 BOs, randomly selected in each round. To resolve the issue of low voting rates among CHs, CHs who have voted are given a share of the income of the BOs and BPs they have voted for. BPs are selected among those who meet the minimum equipment specification requirements. BOs, on the other hand, play the role of monitoring the BPs. Anyone, satisfying the minimum equipment specification requirements, can request to participate as a BO. Measures are taken so that BOs and BPs cannot be easily attacked.

Besides, new blocks are generated in the order that was randomly determined in each round as a way to raise the efficiency of block production.

## Technology Conclusion

Unlike Ethereum, which charges a fee for every transaction, and EOS, where payment for the network, CPU and memory must be made in advance, TNC presents a coin economy model where its survival and the survival of DApp developers, which are the mainnet participants, are co-dependent.

Within TNC, the users govern and own the mainnet; they are charged for small costs. DApp developers also do not need to pay any enormous fees early on, and are charged only a minimal fee to maintain the system. In fact, the coin holders of TNC and the TNC Network Fund allows coin holders to invest in excellent DApps using their coins.

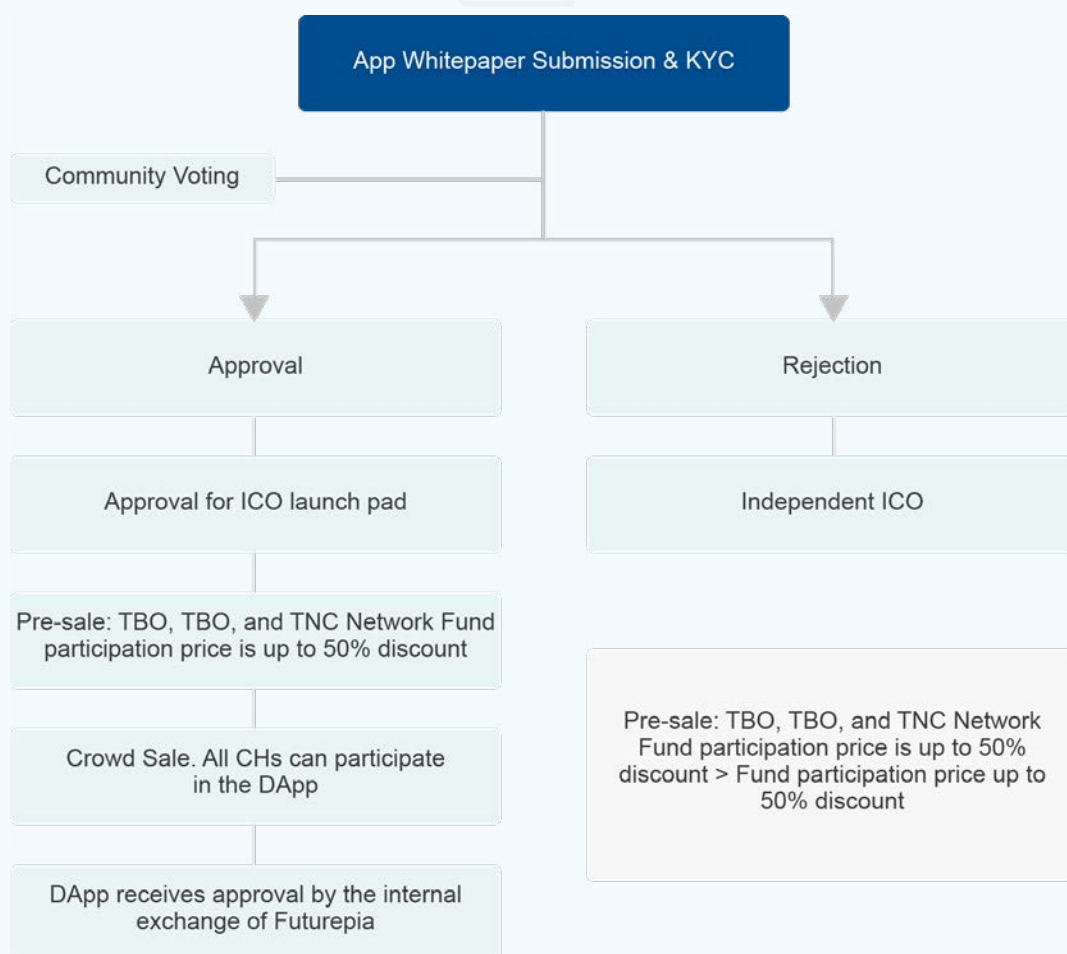
At the same time, the DApps are listed on the internal exchange for the TNC and DApp tokens to be traded in real-time, enabling DApp developers to obtain funding more easily and guaranteeing cashability to the DApp participants.

# DApps Development on TNC Mainnet

## DApps Approval and Selection Process

As mentioned above, DApps developers must seek approval from TNC Network to build their application or project on the network. This may be a lengthier process, including other participation; however, this pulls down the developer side's development cost.

To be able to successfully launch a DApp on the mainnet, developers must follow the DApp Selection Procedure for the TNC mainnet illustrated in the process chart below.



### DApp Application Process

- All DApp developers wishing to get into TNC must first submit their whitepaper, including crucial details such as an expected investment amount, and other information to TNC. All this information is stored as a smart contract, which is posted on TNC for a month.

# DApps Development on TNC Mainnet

- TNC CHs must read the said information and vote on whether to include the said DApp in the TNC Network. DApps that have acquired a certain number of votes by the final timeline are registered on the launchpad. The DApps registered on the launchpad will receive coin participation from TBPs, TBOs and CHs and will be listed on the internal exchange.
- TNC TBPs and TBOs and the TNC Network Fund must read the matters regarding the coin participation and they have the option of participating at a discounted price that is up to 50% off the original price. They can participate only up to 50% of the required participation amount.
- Once this community presale stage is over; In the community crowd-sale stage, all of the CHs can participate.

## Advantages of the TNC Mainnet for DApps

The TNC mainnet is a comprehensive platform based on social networking services, in which the social network database is stored on the mainnet for all of the DApps to use it in a semi-open form. This allows DApps to gain members very quickly. The TNC mainnet has diverse and detailed APIs for DApp service development, allowing DApp developers to develop their services quickly at a lower cost. Support is also offered by the TNC engineers, if necessary, and API is provided upon special requests.

Once the DApp runs on the TNC mainnet, it means that its business model has been verified by those with TNC coins and will be deemed secure by external users. Also, there is a price at which it is traded, and additional coin participation can be drawn at objectively determined prices.

Also, the DApp joining TNC will have the opportunity to get funding from the TNC Network fund and the TNC Network members who engage in coin participation following the review for approval. Hence, it is possible for the DApp to secure the necessary funds at an early stage.

At the same time, the DApps are listed on the internal exchange for the TNC and DApp tokens to be traded in real time. This enables DApp developers to obtain funding more easily and guarantee potential earnings for DApp participants.

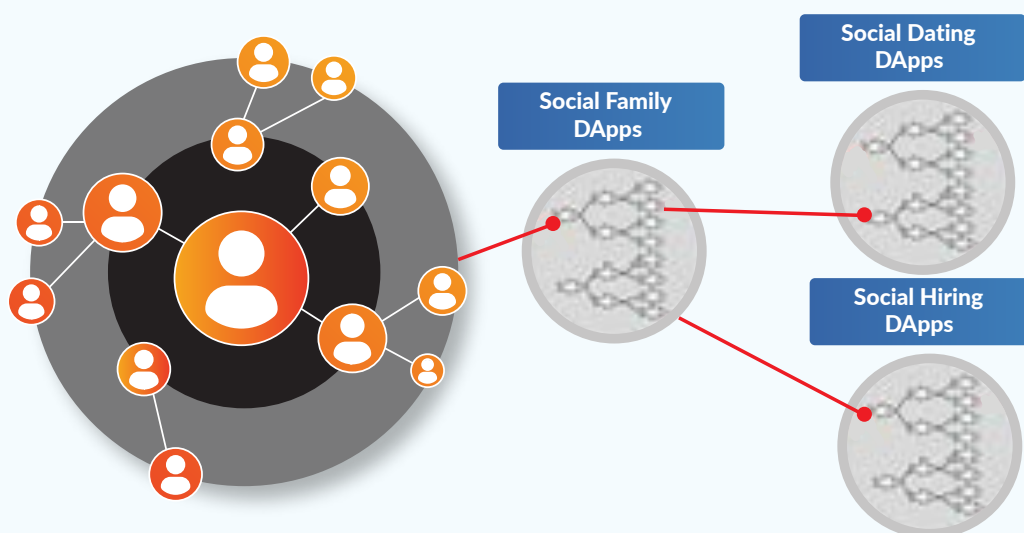
# DApps Development on TNC Mainnet

## Introducing the first DApp developed on Top of TNC Mainnet

DApps developed by TNC that can be used as a standard module by the DApps of other companies will also be launched. For instance, the cryptocurrency wallet set to be developed by TNC will be in the form of a messenger, which may serve as a messaging API for the DApps of other companies.

The user network or the communication network database created through the messenger will be provided to the DApp developers in TNC to help them obtain members more quickly early on.

## The World's First Communication Network API



The TNC mainnet will dynamically provide the world's first social network database extending to three degrees of separation in real-time. Facebook, for instance, provided the social network database of the user, his/her friends, and their friends (two degrees of separation) to the external app service providers.

In short, a social service is set to be launched for users to search occupations of the people within the two degrees of separation. This was also the case with a social marketplace app for selling and buying used goods. As such, countless spin-off DApps will be launched through the TNC mainnet, where people can search for information based on their friends' and their friends' friends' activities.

In a hypothetical scenario, we can consider that if one DApp has 1,000 members and another DApp has 100,000 apps. An individual who is a member of both DApps can create a connection between those in his or her social network in either DApp or the other DApp. This enables the DApps to acquire new members among the member's friends and makes it easier for the member's friends to come across and sign up with the DApp they have not been a member of.



# DApps Development on TNC Mainnet

## Benefits For TNC Coin Holders (CHs)

All TNC Coin Holders (CHs) have the right to participate in the DApps launched on TNC under favorable conditions. They can exchange the tokens from the DApp in which they are participating for TNC Coins or the tokens of other DApps on the internal exchange, with the cashability of the tokens ensured.

The CHs can also vote for TBPs and TBOs using the TNC Coin or DApp tokens in their possession, and are given some of the rewards obtained by the TBPs and TBOs they've voted for. The CHs are provided airdrops, free-of-charge, as DApp tokens or TNC Coins from the TNC Network Fund based on DApp membership registration, self-introduction on DApps and various other activities.

## Voting Rights in TNC

In TNC, CHs can cast votes for various internal elections including, TBP selection, additional issuance of coins, distribution of profits, and so on. Based on the value of the assets CHs are holding — taken into account are the TNC Coins and the DApp tokens assets only — the value of which is converted in terms of TNC Coin for the purpose of value assessment.

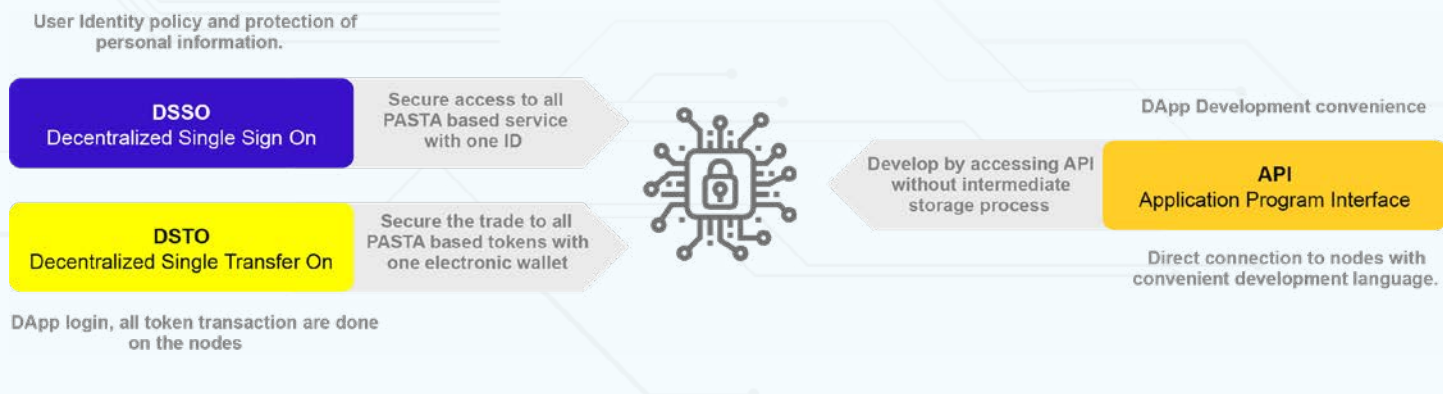
Because of this calculation method, the TNC Coin CHs will not be able to see any changes in the total value of their assets in the initial time period upon their coin participation in DApps. The value of their assets will be reassessed later in accordance with the changes in the token prices of the DApps they are participating in.

When DApps achieve growth, their respective tokens will increase in price, causing changes in the asset value of the token holders, and accordingly, the order of voting among the TBPs may change as a result.

## TNC Alliance Standard Token Agreement (TASTA)

The TNC Alliance Standard Token Agreement (TASTA) is a protocol that allows developers to create TNC mainnet-based DApps easily and quickly. It represents the combination of the TNC Coin Decentralized Single Sign-On (DSSO), Decentralized Single Transfer-On (DSTO), and API, in order to create an environment where users can use the DApps safely and conveniently.

# DApps Development on TNC Mainnet



## Decentralized Single Sign-On (DSSO)

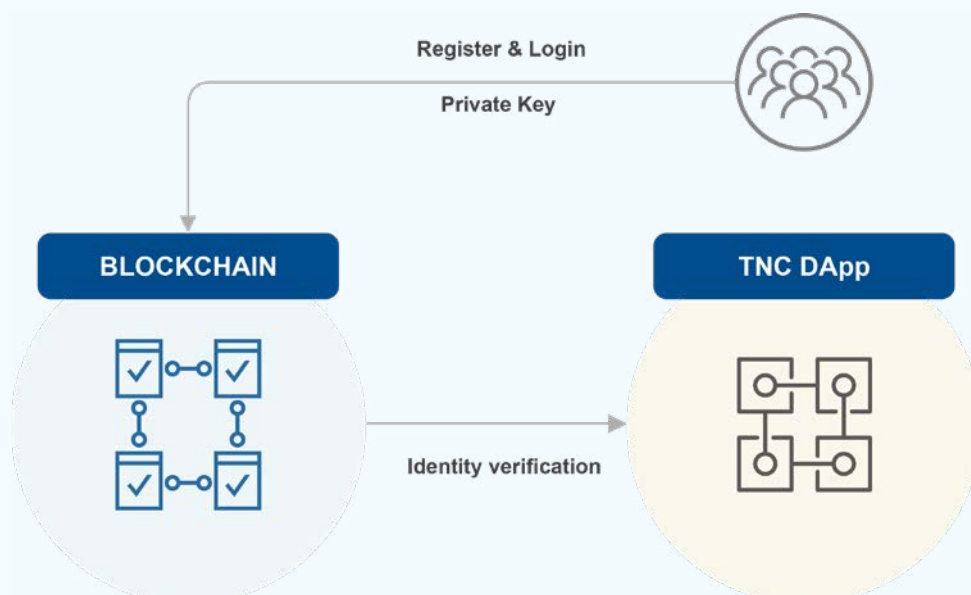
Through TNC Coin Decentralized Single Sign-On (DSSO), users access the blockchain node directly with a key owned by the individual upon login access and complete the authentication process using the blockchain.

For security and speed purposes, it sends only authenticated results to DApp, which can occur on DApps. Users can prevent personal information hacking and leakage.

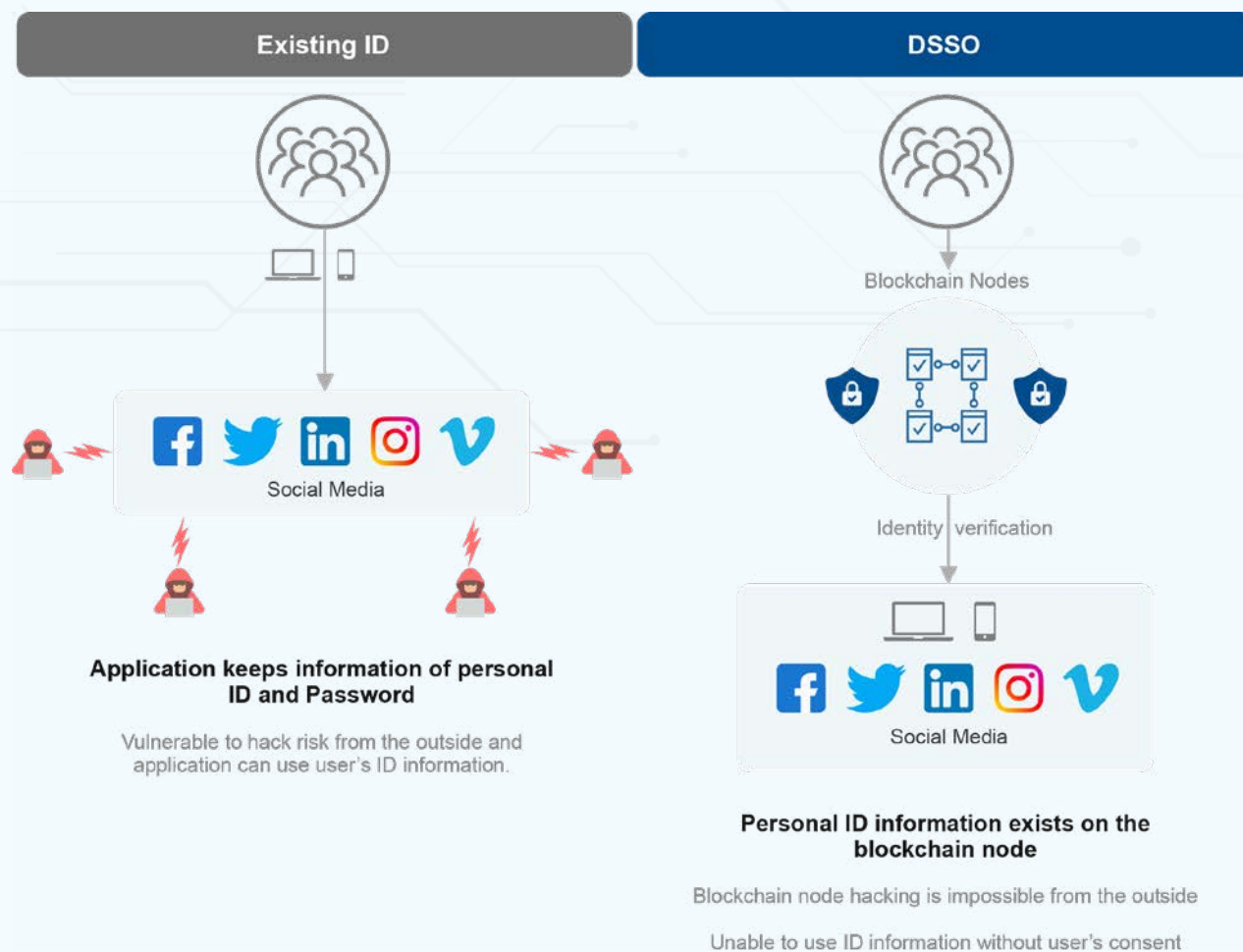
### What is DSSO?

DSSO is an improved version of the SSO authentication method that enables users to securely authenticate their identity in multiple applications and websites by using just one credential set.

In short, DSSO allows users to store their IDs in the blockchain and have their data protected.



# DApps Development on TNC Mainnet



## Comparison between traditional methods and DSSO

### Decentralized Single Transfer-On (DSTO)

Within the TNC mainnet, users directly access the blockchain node and transfer it on the blockchain with the individual's key when transferring electronic currency.

The transfer information can be sent to the DApp to prevent hacking and leakage of transfer information that may occur.

### What is DSTO?

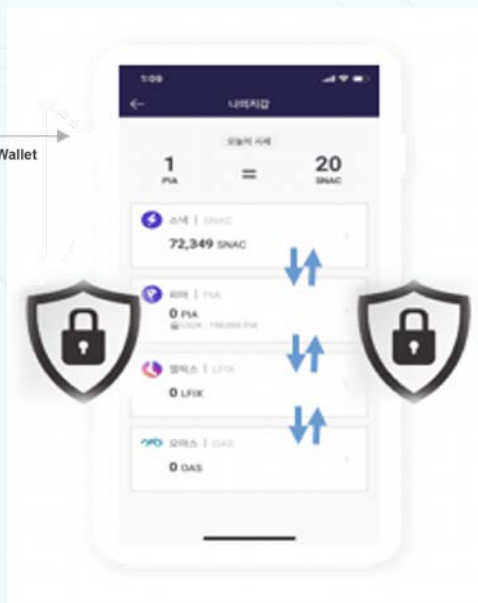
DSTO is a third-generation authentication method for transfers within the TNC Coin mainnet. It authenticates and secures transactions' data within the blockchain against hacking and leakage.

# DApps Development on TNC Mainnet

In short, DSTO provides full protection for users' encrypted assets and transactions.

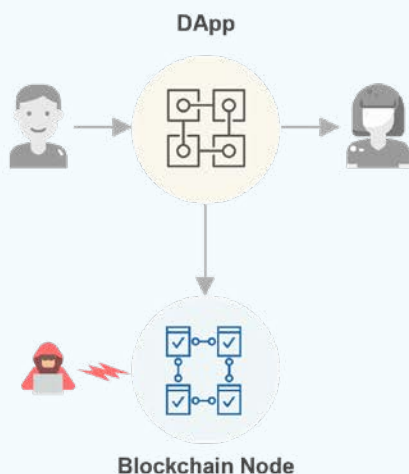


Create TNC Wallet



## Existing Remittance Method

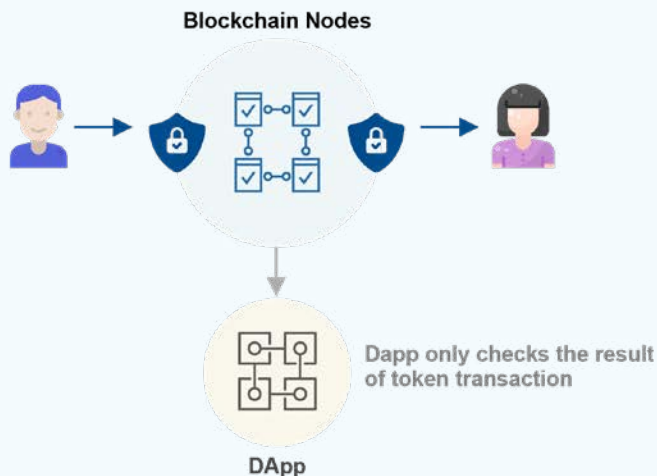
Dapp stores transaction on blockchain



Due to users are trade through Dapp, they can know transaction history of Dapp and there are risk of hacking

## DSTO

Direct trade from the blockchain node by user



Token transaction proceeds on the blockchain node  
Also {Exchange > Remittance} process can protect  
Only user can acknowledge the transaction history

## Comparison between traditional methods and DSTO

## Application Program Interface (API)

In order to use TNC's blockchain, it is possible to connect directly to a decentralized network using a development language that is familiar to developers without using a separate system or a development language.

# DApps Development on TNC Mainnet

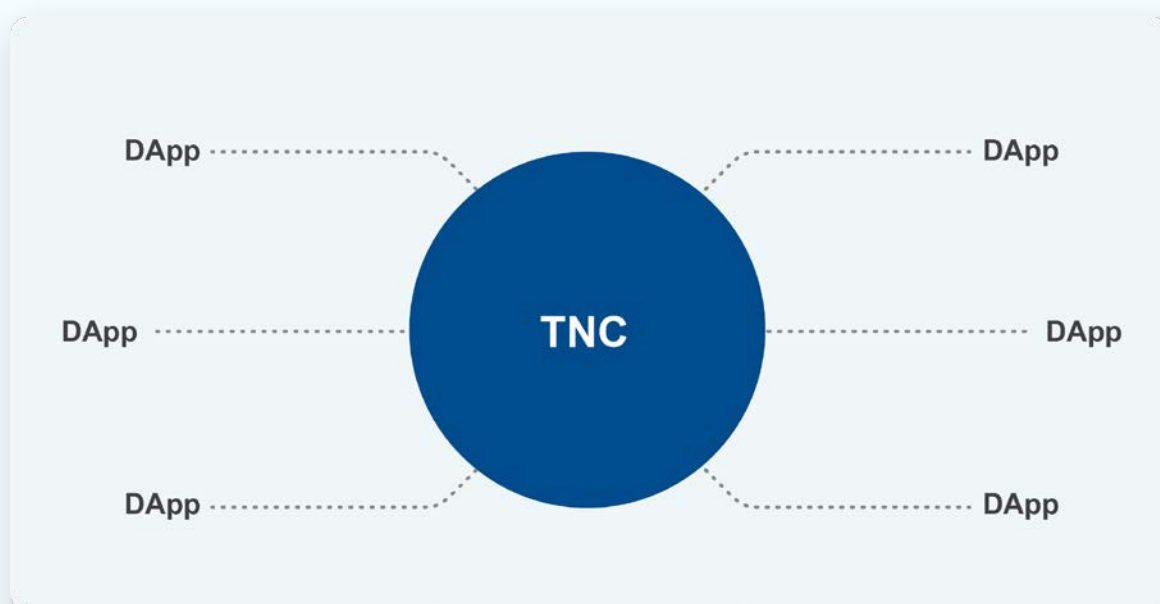
## What is the TNC API?

*The API (application programming interface) is a connector that unites the TNC and DApps as a program function provided for the convenience of developing DApps that run on the TNC.*

In order to use TNC's blockchain, it is possible to connect directly to a decentralized network using a development language that is familiar to developers without using a separate system or a development language.

In addition to providing the TNC mainnet Core Engine API, TASTA also offers other useful modules such as live streaming, smart wallet, communication network, and P2P cloud API.

It supports both Windows and Linux environments and provides 130 APIs that have already been developed.



# TNC Network Companies

## TNC Teams (TNC Consulting)



**TNC Teams** is a consulting firm that provides a wide spectrum of services and solutions in the blockchain industry. The team aims to support start-up projects to help them grow successful in their chosen field. With its diverse team of analytical and creative professionals, TNC delivers competent services proven to result in significant progress.

Main Business Offerings	Business Consultancy
Crypto Market Websites Advisory Services Exchange Listing	Business Establishment Team Establishment Market Making Legal Opinion Audit Reporting
Technical Services	Technical Services
Blockchain Development Web Development Mobile Development Crypto Wallet Services Crypto Wallet Development Services	Content Marketing Design Services Digital Marketing Services

# TNC Network Companies

## Tokenmarketcaps



**Tokenmarketcaps** is a one-stop cryptocurrency market portal that aims to provide the latest cryptocurrency rankings, exchange volume, crypto news and events, ICO updates, and many more. With a free-to-download application, users can acquire the latest information about the top-performing cryptocurrencies like Bitcoin, Ethereum, Tether, Litecoin, and TRON and over 2,000 altcoins within the market.

Users can navigate with ease within the Tokenncoin app to know the rankings, volumes, and price changes per cryptocurrency based on market capitalization or exchanges. Price comparison tools and historical data is also available as added extra features.

### Key Features

- Real-time Cryptocurrency Rankings
- Leading Exchanges Rankings
- Latest and Ongoing ICOs
- Current News & Events
- Efficient Portfolio Management
- Easy-to-Use Application

The **Tokenmarketcaps Application** is available in both Apple Appstore and Google Playstore. It is designed with jam-packed features to assist cryptocurrency holders, investors, and traders in their crypto market research. Tokenncoin offers a user-friendly and easy-to-navigate cryptocurrency comparison platform.



# TNC Network Companies

## Real Research



**Real Research** is a secure environment that aims to cater to the research and marketing needs of every business enterprise and government institution. We offer companies and political parties an innovative platform where they can conveniently conduct surveys and acquire data from real qualified respondents.

By leveraging the use of blockchain technology and smart contracts, Real Research offers a highly secure, efficient, and reliable ecosystem for data gathering. Our main goal is to help business owners and government representatives to draw credible conclusions backed-up by real and unmanipulated data.

Real Research is an innovative research company leveraging blockchain technology to offer enhanced research services. Our platform serves as a secure environment for organizations, enterprises, and political parties to acquire real, credible, and unbiased data.

Focused on providing primary and secondary market research, our company offers transparency at competitive prices. This means that we are capable of operating the entire process from collecting to processing data while utilizing advanced technologies such as blockchain and big data.

Recognizing a global lack of participation in surveys and questionnaires, among other traditional market research tools, we have decided to create a rewarding system for respondents. In this way, we not only do offer rewards so that respondents feel motivated to answer surveys, but we also help companies and governments to combat the problem of public abstention in this type of research.

Recognizing a global lack of participation in surveys and questionnaires, among other traditional market research tools, we have decided to create a rewarding system for respondents. In this way, we not only do offer rewards so that respondents feel motivated to answer surveys, but we also help companies and governments to combat the problem of public abstention in this type of research.

The company aims to occupy the podium place in the industry of research companies. In addition to guaranteeing unmanipulated and objective services, the team stands out in the market for collecting responses, segmenting the market in order to ensure that research reaches the target audience and validating answers, all through blockchain technology.

# TNC Network Companies

## Real Research



The project offers several services from a portal to an app, both taking advantage of blockchain, Big Data, and data analytics to optimize all results. In the RR project, the team wants happy companies and customers, with access to technology that allows them to create or respond to surveys, questionnaires, or polls, in a safe way. In our services, data is stored on the blockchain with access to Big Data technology, which means that the team can store large amounts of data, always maintaining the security and privacy of those involved.

Finally, through market segmentation, the team is capable of delivering the right information to the companies' and governments' target audience. In this way, the project guarantees effective communication and effective marketing for companies and political parties, and, at the same time, we deliver to users only surveys, questionnaires, or information that may really interest them.

The RR team is formed with competent professionals and seeks to integrate security and modernity with novel or traditional research techniques, always with protection, convenience, and market interests at our core, in order to be a win-win situation for clients' and ordinary consumers.

### Key Features

- Market Segmentation Tool
- Survey Generator
- Rewards System
- Activity Report Generator

# TNC Network Companies

## Aladdin Wallet



**Aladdin** is a fintech company providing top-tier and security-improved digital wallets for cryptocurrencies. It offers three principal wallets, namely the Aladdin Wallet, Aladdin Pro, and Aladdin Plus. The project delivers custodial and non-custodial multi-asset wallets, allowing its users to send, receive, and stake digital assets safely.

Aladdin's ambition is to assure the highest security features for the cryptocurrency world as crypto wallets are essential to every cryptocurrency user. That said, Aladdin aims to build secure and stable asset storage that suits different users.

Aladdin fintech company counts with a generous team of highly-skilled developers experienced in blockchain and applications' development. The company intends to be the leading cryptocurrency wallet development company offering a wide range of cost-effective, high-performance, and easily-integrated wallet creation services.

### Key Features

- Cutting-edge Security
- DApps
- Blockchain
- Wallet Development
- Cross-border Payments
- Custodial and Non-Custodial Specs
- Multi-Asset Tools

# TNC Network Companies

Buyaladdin



**Buyaladdin** is an international e-commerce company that is based and registered in Delaware, U.S. The company's vision is to build a platform that could deliver a global and comprehensive online shopping experience to customers and merchants.

Targeting both crypto and non-crypto users, the flagship product of the company is the Buyaladdin application. This all-payment e-commerce marketplace will accept various cryptocurrencies like Bitcoin, Ethereum, and ABBC Coin as well as fiat payment methods like Visa or PayPal. Buyaladdin is available worldwide, and it will enable users to shop at more than 100 shopping malls, 50 of which are major retailers like Amazon, eBay, Rakuten, and Coupang with an option to pay with crypto.

Together with global partners and highly-capable developers, Buyaladdin company has worked tirelessly to establish a platform that will connect the worlds of cryptocurrency and e-commerce.

## Key Features

- Keyword Shopping Mall
- Price Comparison
- Hot Trends
- Item Review
- Hot Keyword
- Quick Join
- Item Filter

# TNC Network Companies

## Aladdin Exchange



**Aladdin Exchange** is a digital asset exchange developed to facilitate cryptocurrency trading, asset storage, and digital currency listing.

The Aladdin Exchange platform facilitates the effortless buying, selling, and trading of cryptocurrencies like Bitcoin, Ethereum, Bitcoin Cash, and many more. The exchange aims to cater to crypto traders worldwide. The overall management of the exchange operations is overseen by TNC IT Group.

Within the platform, we provide a regulated marketplace for cross-border crypto trading. The platform ensures a reliable market price for token buying and selling. Moreover, the exchange is expertly engineered with a security system of the highest standard to protect trader's digital assets and secure transactions.

The company envisions providing the best digital asset exchange experience to all its users. They aim to create an ecosystem supported by the best blockchain infrastructure and the leading exchange technologies.

Their mission is to commit to offer a secure, convenient, and transparent exchange service to users in the digital currency industry. The company primarily aims to serve millions of digital asset users from all over the world.

### Key Features

- Secure
- Convenient
- Transparent

# Conclusion

The TNC mainnet was designed to support the TNC ecosystem with enhanced features that offer the following advantages:

## **a) Fast and stable transaction processing capacity**

TNC mainnet was designed to support 300,000 transactions-per-second (TPS). In partnership with Sigmachain, we offer a next-generation blockchain that has been certified and authenticated by technology and innovations authority. The TBPs are provided with equal rewards using the network fees paid by the DApp developers based on the number of wallets they use. TBPs have the priority to participate in the investment for DApp that has a good coin economy ecosystem.

## **b) A new method of reaching a consensus that prevents masternode manipulation**

TNC promotes the use of a new consensus system called Dual Delegated Proof-of-Stake (DDPoS) in DApps development. We also provide a development environment allowing immediate use of API and SQL to facilitate development.

## **c) TNC Network Fund and Coin Holders' coin participation in DApps**

Excellent DApps that need funding in the early stages can draw coin participation within TNC Network. Also, TNC Network Fund and TNC Coin Holders can be a source of financial support to promising decentralized projects.

## **d) Providing a communication network solution for DApps**

DApp developers are provided with the user network or communication network database, thereby assisting them in attracting members in the early stages. This presents new DApps with advantages in promoting their services and gaining new members.

## **e) Reward system based on the votes of coin holders**

Coin holders can vote for TNC Block Producers (TBPs) and TNC Block Observers (TBOs) using their coins and take a portion of their profits. TNC pushes decentralization within its network to encourage fairness and efficiency.

## Disclaimer

Read this document thoroughly to comprehend how the TNC Coin blockchain, cryptocurrency, and corresponding features operate.

The information provided by TNC Coin ("We," "Us," or "Our") on this whitepaper is for general informational purposes only. All the information on the document is provided in good faith; however, we make no representation or warranty of any kind, express or implied, regarding the accuracy, adequacy, validity, reliability, availability, or completeness of any information on the document.

## General Information

1. TNC Coin is a third-generation mainnet that aims to deliver its services in line with its vision and purpose. The reader must understand that our blockchain technology is an original protocol, and it is the exclusive property of our organization despite being open source.
2. TNC Coin focuses on providing a blockchain ecosystem to improve the lack of the traditional blockchain systems, and there is a possibility that some of its features may be identical to others. This is purely because other ecosystems are also empowered – and limited – by innovations like the distributed ledger concept and other complementary technologies.
3. This whitepaper is used to introduce TNC Coin mainnet to the community and to highlight all of its special features. It only serves the purpose of providing comprehensive information to the reader regarding TNC Coin and nothing more.

## Important Information

All the information in this whitepaper is announced strictly for informational purposes. It may not be used, published, or distributed without the permission of TNC Coin or TNC IT Group teams. No guarantees are made as to the authenticity, beliefs, exactness, or completeness of any explanation presented in this document. Any action taken by any person in reliance on this document is made by them at their own risk and based on their own assessment.

No information mentioned in the TNC Coin whitepaper compounds legal, financial, tax, or other advice. The whitepaper shall not be granted as a single reference for any investment choice or be considered as a form of advice whatsoever. We strongly suggest that you consult the relevant experts whom you trust for any decision making on your part.



# Legal

Any person who intends to obtain TNC Coins should carefully evaluate the risks and uncertainties that are commonly associated with the market. Regulatory measures, investigations, or actions taken in the crypto world may affect TNC Coin. However, TNC Coin or any of its affiliates shall not be avered liable for any direct or indirect loss or harm caused by any changes in the crypto market.

The TNC Coin whitepaper is not meant to constitute or relate in any way, nor should it be deemed as an offering of securities in any jurisdiction. TNC Coin operates within existing legal frames and entirely complies with all applicable laws.

TNC Coin reserves the liberty to adjust, add, or remove any information of this whitepaper at any time. The whitepaper may change in consequence of new regulatory and compliance requirements from any applicable laws in any jurisdiction.

## Privacy Policy

TNC Coin ("Us," "We," or "Our") owns and operates the website and whitepaper and the TNC Coin (the "Service").

This Privacy Policy ("Policy") notifies you of our guidelines regarding collecting, using, and disclosing personal data when using our Website and its services.

We will protect your data privacy, and we will not share your details with any third party organization unless forced to do so, and if we consider it necessary.

Should you not consent to our policy, we highly recommend that you refrain from using our Website. Otherwise, using our services and providing your personal information means that you comply and agree with our privacy policy in its entirety.

For those who are staying in countries under the European Economic Area (EEA), we created our policy agreeing with the provisions in the General Data Protection Regulation (GDPR).

### 1. Data collection

We collect some of your vital information by visiting our Websites such as the internet protocol (IP) address used by your computer or mobile device to connect to the internet, operating system, browser type, and version, duration of the visit to the site, date and time of the visit, time zone setting, links you click on, and information you key into our forms.

# Legal

We will ask for your approval for the cookies on our Website upon visiting.

We also use your provided information such as your full name, email address, age, mobile number for the customer, and technical support.

## 2. Utilization of Data

The information we collect will importantly provide us timely and appropriate support to prevent fraud and illegal activities from happening through our Website.

## 3. Information Sharing

We will never use your information to make a profit in any way by sharing it with third party organizations and companies affiliated with TNC Coin or TNC IT Group.

We may disclose some of your personal data with government officials, law enforcement officers, legal courts, and others if compelled by a court order or other similar legal procedures.

## 4. Data Protection

For your protection, do not reveal any personal information on platforms and online applications which are not managed and owned by TNC Coin or TNC IT Group to prevent heinous and illegal activities on your account.

## 5. General Data Protection Regulation

Should you be a resident of a country situated within the European Economic Area (EEA), we respect your right for the following, as stipulated in the General Data Protection Regulation:

- The right to be informed
- The right to access
- The right to rectification
- The right to be forgotten
- The right to restrict processing
- The right to data portability
- The right to object
- Rights concerning automated decision making and profiling.

## Legal

## 6. Service Providers

We may hire third-party companies and individuals to perform service-related services or assist us in analyzing how our Service is used. These third parties may have access to your data only to perform these tasks on our behalf and are obligated not to disclose or use it for any other purpose.

## 7. Advertising

We may use third-party Service Providers to show advertisements to you to help support and maintain our Service.

## 8. Links to Other Sites

Our Website may contain links to other sites that are not operated by us.

We strongly advise you to review the site you visit. We have no control over and assume no responsibility for the content, privacy policies, or practices of any third party sites or services.

## 9. Children's Privacy

Our Website does not serve persons who are under the age of 18. Should you know someone who uses our services under the age of 18, please report to us to perform appropriate actions.

## 10. Changes to This Privacy Policy

We may renew our policy from time to time, so we advise you to visit this page regularly. We also recommend checking this policy more often for any changes in the future. Changes to this policy are significant once they are already reflected here.

## 11. Contact Us

If you have any questions about this Privacy Policy, please contact us at: [support@tncitgroup.com](mailto:support@tncitgroup.com)

<sup>1</sup>Deloitte. 2019. Blockchain Enigma. Paradox. Opportunity

<sup>2</sup>Crypto News Flash. 2020. Improved scalability: Ethereum can reach 9.000 transactions per second

<sup>3</sup>Cointelegraph. 2020. ETH Scalability Isn't Going to Be an Issue Soon, Suggests Vitalik Buterin

<sup>4</sup>Cointelegraph. 2018. What Is EON? Why Is It So Popular Among EOS Investors?

<sup>2</sup>Crypto News Flash. 2020. Improved scalability: Ethereum can reach 9.000 transactions per second

<sup>3</sup>Cointelegraph. 2020. ETH Scalability Isn't Going to Be an Issue Soon, Suggests Vitalik Buterin

<sup>4</sup>Cointelegraph. 2018. What Is EON? Why Is It So Popular Among EOS Investors?