

# LINK

# Blockchain, Designed for Everyone

white paper v 2.0



<b>Important Notice</b>	3
<b>LINE and Blockchain</b>	5
<b>Problems with the Existing Cryptocurrency Ecosystem</b>	6
Investors Before Users	6
Unbalanced Token Economies	7
User Experience (UX) Problems	7
<b>LINK Token Economy</b>	8
LINK Ecosystem Principles	8
LINK	10
LINK dApp Ecosystem	10
LINK Distribution: Contribution Mining	11
LUCAS (LINK User Contribution Assessment System)	13
Distribution of User Reward	14
LINK Acquisition and Use	14
Plans for Distribution	16
<b>Technology</b>	18
Scalability	18
Usability	21
<b>Roadmap</b>	23
Moving toward an Open Network	23
Ecosystem Expansion Strategy	23
LINK Milestones	24
<b>Important Notes</b>	26

# Important Notice

LINK digital tokens (hereinafter referred to as "**LINK**") are not intended to constitute securities, units in a collective investment scheme, or other capital market products each as defined under the Securities and Futures Act (Cap. 289) ("**SFA**") of Singapore, or its equivalent or any other regulated products in any jurisdiction.

LINK does not entitle you to any ownership or any other interest in Naver Corporation, LINE Corporation, LINE Tech Plus Pte. Ltd ("**LTP**") and/or any of their affiliated companies (together, "**LINE**").

LTP is not required to be licensed by the Monetary Authority of Singapore as LINK does not constitute a regulated product, e-money or "digital payment token" in Singapore. LTP does not provide any digital payment token services in Singapore. Please note that Singapore residents and entities are specifically excluded from participating in LTP's initiatives.

Please note that you may not be able to recover any monies paid for LINK in the event that the LINE Token Economy fails to materialize or where LTP's business fails.

This Whitepaper is meant to provide more information on the LINK Token Economy and functions of LINK, and does not constitute a prospectus or offer document of any sort.

This Whitepaper does not constitute or form part of any opinion or any advice to sell, or any recommendation or solicitation of any offer to purchase LINK nor shall it or any part of it or the fact of its presentation form the basis of, or be relied upon in connection with, any contract or investment decision.

No person is bound to enter into any contract or binding legal commitment in relation to the sale and purchase of LINK and no digital tokens or other form of payment is to be accepted on the basis of this Whitepaper.

Any agreement between LTP and you as a recipient or purchaser, and in relation to any airdrop, sale or purchase of LINK is to be governed by a separate document setting out the terms and conditions (the "**T&Cs**") of such agreement. In the event of any inconsistencies between the T&Cs and this Whitepaper, the T&Cs shall prevail. Your eligibility to receive, purchase or sell LINK on digital token exchanges, including the BITBOX exchange, is subject to your compliance with their respective terms and conditions.

No regulatory authority has examined or approved any of the information set out in this Whitepaper. No such action has been or will be taken under the laws, regulatory requirements or rules of any jurisdiction. The publication, distribution or dissemination of this Whitepaper does not imply that the applicable laws, regulatory requirements or rules have been complied with.

This Whitepaper, any part thereof and any copy thereof must not be taken or transmitted to any country where distribution or dissemination of this Whitepaper is prohibited or restricted.

No part of this Whitepaper is to be reproduced, distributed or disseminated without including this section and the section titled "IMPORTANT NOTES" at the back of this Whitepaper.

**PLEASE READ THE SECTION TITLED "IMPORTANT NOTES" AT THE BACK OF THIS WHITEPAPER VERY CAREFULLY.**



# LINE and Blockchain

With the launch of its messenger in 2011, LINE quickly grew into a global leader among IT companies. Today, the LINE app is one of the world's most popular messengers, with over 187 million users. But, more than just a chat app, LINE has also evolved into a "smart portal," offering more than 100 services to its users, connecting them to the information, services and brands they need, anytime and anywhere. And LINE continues to grow, now bringing its know-how as a smart portal to the world of FinTech, launching innovative new services which could benefit the development of the banking, insurance, securities and payment/settlement sectors.

We recognize that the key to LINE's successes and the growth of the LINE ecosystem has been our users – and now we are ready to take that partnership to the next level. By bringing blockchain technology to the LINE platform, we aim to share the value created by the contributions of our users with the participants of the LINE ecosystem.

As a blockchain network based on Interchain, LINK Network will be integrated into LINE to serve as a platform for a wide range of LINE services and accelerate the LINK Token Economy. LINK, the general-purpose base coin of the LINK Network, will seamlessly make its way into the LINE services that our users around the globe access and use in their everyday lives.

Our users are also essential to how we are developing the LINK ecosystem, as we apply the knowledge and insights we gain from interacting with them to ensure our services will continue to grow and improve. After all, the LINK ecosystem is not only for cryptocurrency experts, but also for the general public, providing seamless access to all LINK-related services, including safe-keeping, providing convenient access to tokens and conducting secure transactions with LINK.

In short, LINE is building a service-oriented blockchain ecosystem around LINK, where anyone can use LINE's services, conveniently and securely, in a token economy that will grow together with our users.

# Problems with the Existing Cryptocurrency Ecosystem

Following the release of the Bitcoin white paper by Satoshi Nakamoto in 2008, countless cryptocurrency projects sprang up and the cryptocurrency market grew exponentially. Even more than a decade later, however, cryptocurrency is still considered only as a means of investment and there is no cryptocurrency that has penetrated into our daily lives. The following analysis explains a number of reasons why the current cryptocurrency ecosystem has ended up where it is today.

## **Investors Before Users**

When cryptocurrencies were booming, they attracted plenty of investors and emerged as a new funding channel for cryptocurrency projects. As a result, investors and developers both focused on securing fast financial gains instead of helping tokens mature and become a new kind of currency for everyday life. Today, the cryptocurrency ecosystem is dominated by investors. The companies and foundations behind cryptocurrency projects offer tokens in a way that ensures investors can maximize their gains, with a focus on raising as much investment as possible.

Under such conditions, project teams are pushed to focus more on generating money-making news for investors rather than developing and maintaining more necessary products. The success of a project is not determined by attracting users or facilitating services; instead, token price and market capitalization have become the measure of success. Because of these issues, the people who most contribute to the ecosystem through their use of tokens and dApps have been marginalized, and consequently tokens have failed to develop significantly as a real-life technology.



## **Unbalanced Token Economies**

Many cryptocurrency projects start selling their tokens even before they are on the network. When doing so, they tend to inflate the scale of the economy with a focus on the price and trading volume by offering excessive bonuses to early miners or investors. This creates a huge imbalance in token distribution, harming the growth of the cryptocurrency's ecosystem. Moreover, as many dApp developers require the use of their own tokens for their services, the demand for platform coins and the economic ecosystem splits, further slowing overall growth. Users need to have both platform coins and dApp tokens to use the ecosystem's services, which many find too inconvenient and so stop using the ecosystem altogether.

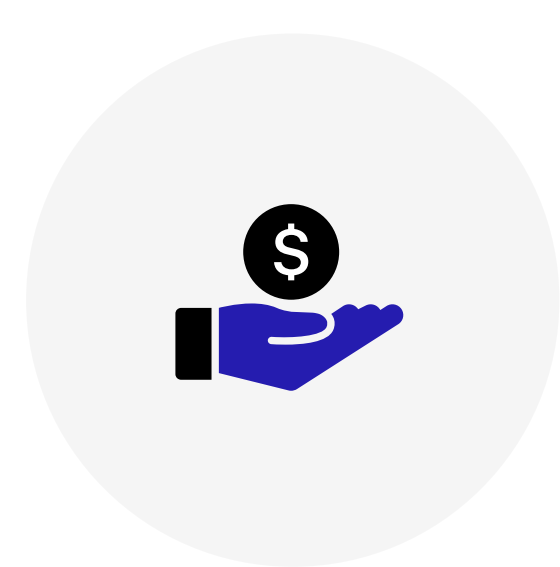
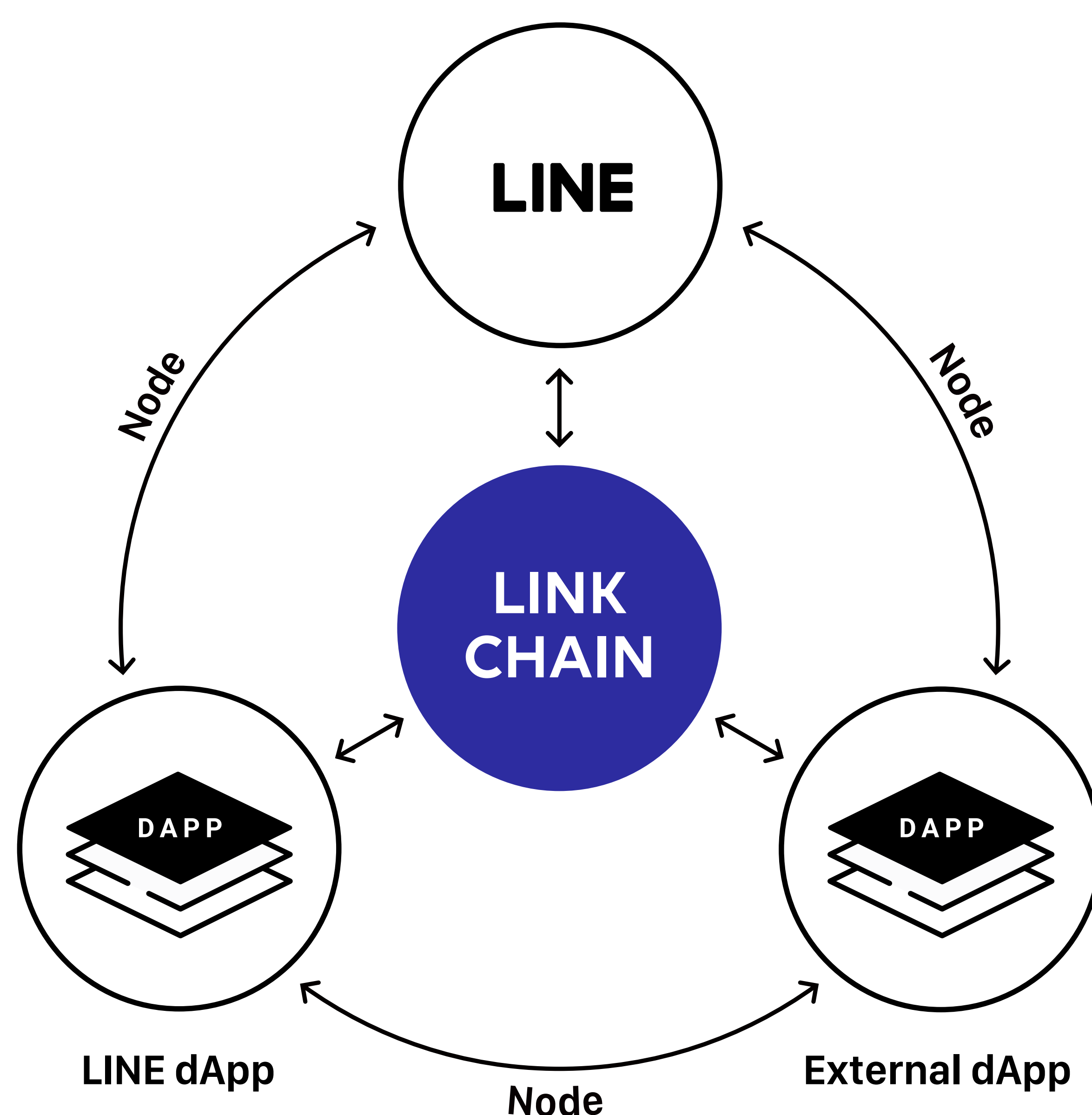
## **User Experience (UX) Problems**

Security is inherent to cryptocurrency as cryptocurrencies are technology literally built upon cryptography. However, along with security comes a related negative: user experience (UX) problems. That's because the safety and security of cryptocurrency also requires users to manage their own digital wallets – in fact, most people find even creating a digital wallet to be so frustrating that they give up before they start using it. When the cryptocurrency industry was just beginning, it was mostly the domain of cypherpunks, so such technological barriers were not an issue; most users already were experts on cryptography, programming or computers in general. But more recently, as interest in cryptocurrencies has grown, the complexity of the technology is standing in the way of its wider adoption. And cryptocurrency wallets are not the only UX-related problem – dApps have also fallen short. Although many dApps have been launched, offering a wide range of services using blockchains, they have mostly focused on technology-issues and overlooked service quality. Even when users do make the effort to create a digital wallet and try out dApps, they often stop after a short time because of the shortcomings compared to easier-to-use, more established services.

# LINK Token Economy

## LINK Ecosystem Principles

The LINK project was launched to create a blockchain platform and token economy that regular people around the world would actually like and use in their daily lives. But to achieve mainstream acceptance, we need to overcome those three abovementioned issues: investor-centered ecosystems, unbalanced token economies, and UX problems. That's why LINK has defined the following three principles to resolve these issues and build a blockchain-based ecosystem that is accessible for all.



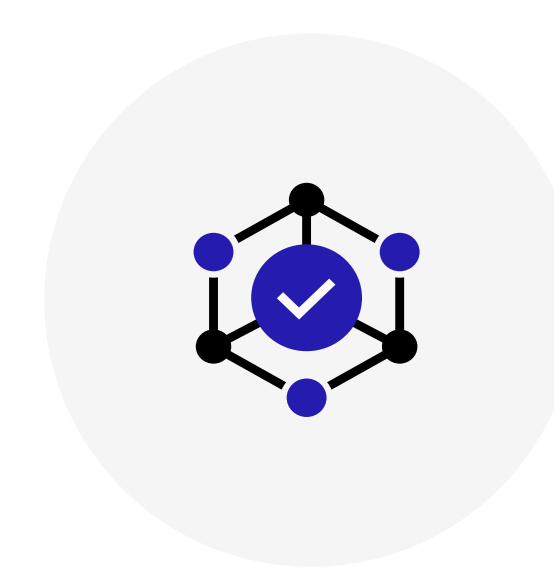
### Rewarding Contributors

Rewarding those who participate and create value within the LINK ecosystem



### Balanced Economic Model

Using LINK to create a balanced and interconnected ecosystem



### Designed for Everyone

Creating an ecosystem that is easy-to-use for everyone, regardless of their expertise



### **01) Rewarding Contributors**

Service providers used to be at the center of the internet industry. Then the emergence of online advertising led to the rise of free services, causing the tech landscape to change radically for users. And now, with blockchain technology and cryptocurrency, once again a new ecosystem is being ushered in – this time, on top of free services, contributors can be directly rewarded for their actions. LINK will not be sold to the general public through an initial coin offering like other cryptocurrencies. Instead, the LINK ecosystem aims to share growth between users and the ecosystem as a whole by rewarding contributors based on how their actions create value in the LINK ecosystem.

### **02) Balanced Economic Model**

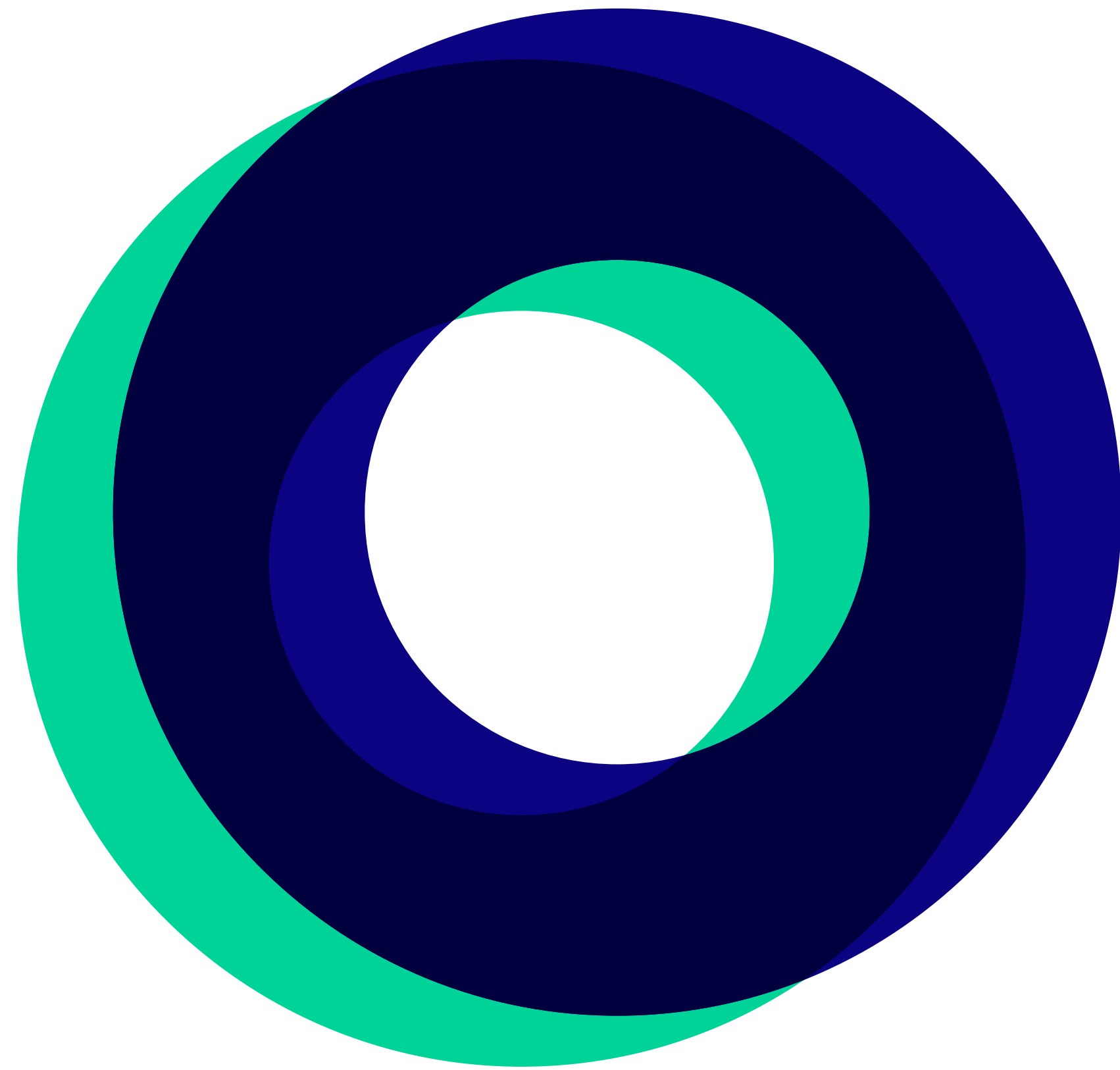
LINK will serve as the main currency for our dApps as well as the platform within the ecosystem, creating economies of scale through the integration of both economic systems. Since the tokens will not be sold via an initial coin offering, there is less danger of LINK suffering from any destabilizing inflation before actual demand builds naturally in the ecosystem. Growth in the LINK ecosystem will come from the contributions of the participants. As the ecosystem and user demand grow, supply will expand correspondingly to match that growing demand, ensuring the entire economy remains balanced.

### **03) Designed for Everyone**

With LINE's long and successful track record in UX design, operating a service that millions of people around the world use as part of their daily lives, we are able to bring a rich and practical know-how to the LINK UX. We will also provide dApp developers with an outstanding technology-based platform and toolkit so that they can freely implement their ideas. As with all LINE does, the LINK UX is all about putting users first, creating a seamless and accessible service that works equally well for the tech-savvy and beginners.

## **LINK**

LINK is the general-purpose base coin for the LINK ecosystem, and it represents the connection and cooperation between participants as well as the synergy created by them. The ticker symbol for LINK is “LN”, and its logo image is as follows:



## **LINK dApp Ecosystem**

DApps are the key to circulating and promoting the use of LINK in the LINK ecosystem, and their growth is a critical driver for the ecosystem in general. The LINK ecosystem utilizes the following system to attract more dApp projects and nourish the overall ecosystem.

### **01) LINK Alliance**

The LINK Alliance is an association of dApps responsible for developing the LINK ecosystem by introducing functions within the service that use LINK, as well as allocating the LINK required for user rewards from the LINK Secretariat. LINK Alliance dApps facilitate the LINK token economy by offering LINK to ecosystem participants as a reward and create the market for LINK. LINK Alliance dApps can be either developed in-house by LINE or by third-parties and selected through a screening procedure. The LINK Secretariat is responsible for the overall selection of LINK Alliance dApps during the initial period of the ecosystem.

## **02) General dApps**

General dApps refers to non-Alliance dApps that participate voluntarily in the LINK ecosystem, offering LINK-based services. In the LINK ecosystem, individual developers will be able to develop LINK-based dApps easily using LINK Framework, a development toolkit that allow developers to adopt blockchain features and develop dApps. In addition, dApp developers will be able to register their dApps on the LINK dApp store to advertise and attract LINK ecosystem participants from around the world.

## **03) Support Programs for dApps**

To further expand the LINK dApp ecosystem, the LINK Secretariat plans to offer a wide range of support programs. It will select promising dApp developers that demonstrate great potential to contribute to the LINK platform and promote the use of LINK, providing them with comprehensive support for their deeper integration into the ecosystem. Support programs will include financial aid, technical support for the use of LINK Framework, and consultations regarding the token economy.

## **LINK Distribution: Contribution Mining**

Numerous projects have distributed large quantities of tokens to a small number of investors for the purpose of financing. The scale of token investments and sales achievements have also been used to assess project outcomes. However, the LINK Network does not distribute LINK for financing; rather, the LINK Alliance distributes LINK to its most active users as compensation for activities that contribute to the ecosystem. This approach to distribution creates three types of differentiated value.

### **01) Avoidance of the Excessive Token Network Effect**

The value of the financing procured by a project through token sales has no relation to the actual network value. This is because, when it comes to the network value at the time of financing, the future value to be created by the token project is considered to be little more than collateral, and has little relation to the value generated by the actual network and its level of activity. Therefore, distributing tokens on a large scale via financing is



essentially setting up an ecosystem with immense liabilities. In the early stages of a market, when measuring the value of a blockchain network is even more difficult, this kind of risk must be endured not by the initial institutional investors, but rather by the majority of subsequent investors and actual users.

The LINK Network issues LINK on the basis of how many active wallets exist in the network and how much of the key currency (LINK) is distributed and used (payment & staking). With this structure – where a token is distributed according to the actual network activity level and growth, without artificial value inflation – the network's value increases along with the growth of the ecosystem.

## **02) Formation of Network Value**

The value of a blockchain network is essentially contingent upon how many people trust and use the network. Just the value of an internet-based service is often based on the number of its users, so too are the number of wallet addresses the basis of value for blockchain networks. In fact, we call this new reality “the internet of value.” In addition, to facilitate the mainstream acceptance of crypto-assets, we must go beyond the blockchain platform's current focus on utility (network fees), and instead emphasize integrating with all types of regular services.

Instead of adding to the expense of development through token sales, the LINK Network secures global users for the network by allocating LINK to LINK Alliance members and setting up LINK's internal service functions. Global users acquire LINK from the diverse dApps of the LINK Alliance even as they experience those dApps. This means that the LINK Network rapidly distributes wallets worldwide, and that LN can be rapidly adopted not only by existing crypto-asset investors but by regular users as well.

## **03) Fair Distribution of Wealth**

The distribution of tokens is a problem of how to initially distribute the wealth and authority created in the new internet environment that is blockchain. The vast majority of people around the world are still not accustomed to acquiring tokens by participating in

the sale of tokens or blockchain creation, and have no experience with this kind of process. Although there have been attempts to sell tokens in the fairest manner possible to a large number of investors, for most regular users around the globe the essential problem still has not been solved.

In the LINK network, a variety of people around the world, even those without initial capital, can acquire the value and authority of the LINK Network through their contribution activities (labor) on the internet. Thus, anyone can acquire and use LINK with the service that they enjoy using, which means that a wide range of people around the globe have the opportunity to receive LINK fairly, without regard for nationality, assets or time zone.\*

### **LUCAS (LINK User Contribution Assessment System)**

LUCAS is a system that assesses the contribution level of participants in the ecosystem to determine the amount of rewards they should receive. The current version of LUCAS calculates the contributions of each LINK Alliance dApp every month based on the number of active wallets (users), the transaction amounts within each dApp (LINK transactions) and the quantity of LINK from **staking**\*. It then determines the contributors' LINK allocations by revising that amount according to the volume of LINK ecosystem activity and the contribution levels of each dApp in the ecosystem. Currently, there is a limit on the amount of allocation that one dApp can acquire a one-month period. LUCAS ensures an appropriate currency supply is maintained for the network's actual value, without overexpansion, enabling the healthy growth of the LINK ecosystem.

\* Users that are from countries sanctioned by the United States or from countries considered as high risk and monitored by the Financial Action Task Force, or from countries where the offering of LINK is illegal, will not be able to participate in the LINK network

\*Staking: The act of locking down the LINK held in a wallet. LINK undergoing staking cannot be transferred to another wallet, however, it can be directed to a desired dApp or other wallet, based on the benefits may be provided. In addition, after a user chooses to unstake LINK, a certain period is required before it can be transferred.

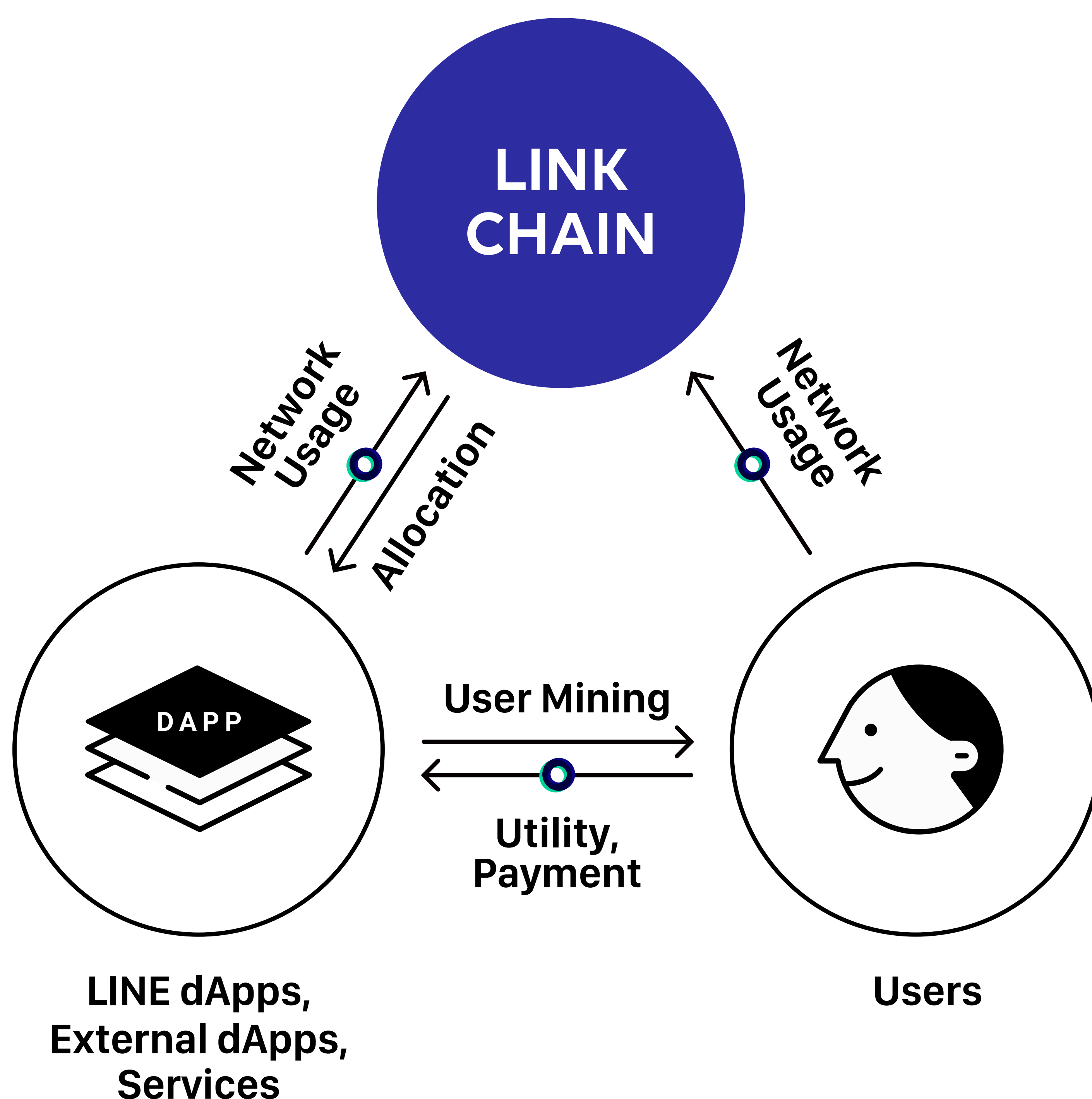
## Distribution of User Reward

LINK allocated to the LINK Alliance dApp is only used for user rewards, and is paid to users according to the policy of each dApp. In order to prevent fraudulent acts that may arise in the process of reward distribution, LINK Alliance dApps must comply with the reward distribution guidelines set forth by the LINK Secretariat. Included in those distribution guidelines are requirements for disclosing reward distribution standards and the maximum rewards allowed per user. There will also be a whistleblowing system to encourage users to report any LINK Alliance dApp that appears to commit fraudulent activities, where users can get rewarded if such activities are investigated and confirmed.

## LINK Acquisition and Use

You earn LINK by making contributions to the ecosystem through a variety of methods. With your LINK, you can use it to make payments or win benefits. You can also use LINK to secure resources or pay network usage fees.

—  
Map of the LINK Token Economy





The LINK Token Economy is comprised of a service level and a platform level:

### 01) Service Level

Users who employ LINK Alliance dApps receive rewards based on their contributions according to the reward policy of each dApp. The LINK users earn can be used in a variety of ways, such as paying for content, engaging in e-commerce or transfers, trading game items or exchanging with other cryptocurrencies. By staking LINK with a dApp, users will be able to enjoy such benefits as exercising influence or authority within a service and receiving discounts. In addition, after the platform opens, third-party dApp projects will be able to issue their own tokens and users will be able to use LINK to buy tokens for projects they consider promising.



#### Content

Payment for music, videos, webtoons, and fiction



#### Commerce

Payment for products/ services, discount benefits, and payback



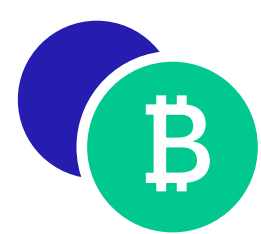
#### Social

In-app payment systems and wire transfers between individuals



#### Gaming

In-game trading and character improvements



#### Exchange

Payment of commissions, fee discounts, and digital token trading

## **02) Platform Level**

LINK platform operators can charge fees for platform usage, including generating transactions (for example, transmitting coins or data on the blockchain network through such activities as transfers, reward payments or the uploading of smart contracts). LINK platform fees are paid by each dApp or user according to the dApp's policy, and the fees can be paid either in the form of a direct payment or through staking-based resource allocation (both methods are explained in more detail below).

### **a. Direct Payment**

The direct payment method refers to paying LINK whenever you use the LINK platform. Just like in other cryptocurrency systems, a small amount of LINK will be paid for simple transfers, but more will be charged for transactions with expensive computations, such as executing smart contracts.

### **b. Staking-Based Resource Allocation**

Network resources can also be secured through staking LINK in a user's wallet, allowing the targeted wallet to enjoy the benefits related to generating transactions. This applies to all ecosystem participants, including LINK Alliance dApps.

## **Plans for Distribution**

### **User Rewards**

User rewards will be issued based on user-contribution activities to LINK Alliance dApps. The rate of user reward issuance will be determined by the growth of the LINK ecosystem's internal value, based on the LUCAS (LINK User Contribution Assessment System). The eventual opening of LINK Network node participation will allow for user rewards to be paid as node operational compensation as well.

## **Reserves**

Reserves are allocated for ecosystem expansion, and will be used by the LINK Secretariat for, including, but not limited to, LINK ecosystem operational expenses (including, without limitation, R&D and infrastructure expenses), dApp acceleration, marketing the LINK Network, etc. Reserves will only be issued after public announcements are made in advance through official communications channels.

LINK issuance is limited to 100 million over three years from the beginning of issuance, and is to increase by 5% annually thereafter. The actual amount of issuance will be determined by the value of the LINK ecosystem. Even when there is a sudden growth in the network's value due to growth in active wallets and transaction volume, an "ecosystem factor" has been set up within LUCAS so that the stability of the LINK distribution is ensured. Conversely, should there not be any significant growth in network value, the issuance rate of LINK slows down. The LINK issuance limit is allotted at a ratio of 8-to-2 for the purposes of user rewards and reserves, respectively. The total LINK issuance limit is 1 billion while the LINK ecosystem is maintained, with a maximum issuance limit of 800 million LINK for user rewards and 200 million LINK for reserves.



# Technology

The LINK ecosystem is built on LINK Network, a blockchain-based network we developed in-house, and the growth of that ecosystem depends on the evolution of that LINK Chain infrastructure. Because our goal is to make the LINK ecosystem a part of people's everyday lives, we plan to advance our technology in the following areas:

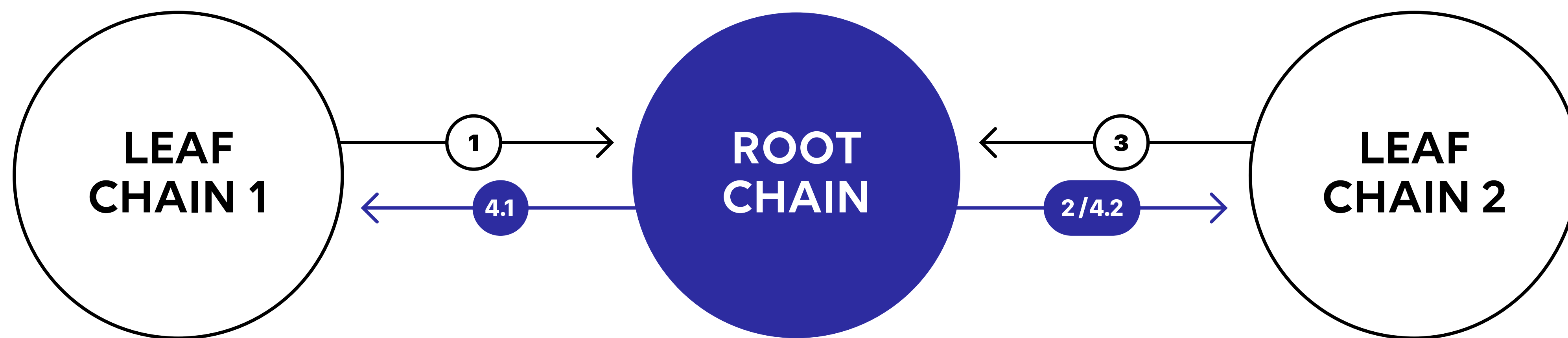
## Scalability

Whether it is Bitcoin or any other cryptocurrency, scalability has become the most widely discussed blockchain challenge, as the volume of transactions has increased beyond the processing capacity for existing blockchain networks. It is critical for blockchain-based networks to securely record data, but their data processing speeds are slower than the traditional network structures used for existing IT services. Consequently, dApp developers often face many constraints during the development phase and end up designing their services to avoid the scalability problem. This, in turn, leads to significant issues with usability. However, LINK Network will solve the scalability problem through its LINEAR Network, an Interchain-based solution.

## LINEAR Network

### 01) Overview

The LINEAR Network will be composed of a rootchain, its main chain, and a number of leafchains connected to the rootchain. The rootchain's role is to issue LINK and to record the data of the leafchains. Once coins are issued at the rootchain, the coins are transferred to the leafchain to which each dApp belongs according to the Root Manager Contract. Then, these coins are transferred to the dApp according to the dApp Manager Contract. DApps are allocated to a leafchain according to their need. If necessary, a dApp can monopolize one leafchain. In addition, LINK issued at the rootchain will be transferable to a leafchain of the user's choice, where it can be used for the dApps running on that leafchain.



- |  |                                 |
|--|---------------------------------|
| 1 Request transfer                         | 4.1 Issue receipt for deduction |
| 2 Check if leafchain is ready for transfer | 4.2 Issue receipt for addition  |
| 3 Reply with its status                    |                                 |

Let's go through each step to see how a coin is transferred on the LINEAR Network.

- Step 0 User A on leafchain 1 sends a request to transfer coins to User. B on leafchain 2.
- Step 1 Leafchain 1 checks if the transfer request is valid. If it checks out, leafchain 1 sends the transfer request data to the rootchain.
- Step 2 The rootchain checks if the transfer request is valid. If it checks out, the rootchain sends a request to leafchain 2 to see if it is available to receive a transfer.
- Step 3 Leafchain 2 checks if the requested transfer is valid. If it checks out, leafchain 2 sends a reply that it is ready to receive the transfer.
- Step 4 Leafchain 1 and leafchain 2 issue a receipt to deduct and add the transfer amount respectively. Each chain controls to ensure there is no redundant deduction or increase.

Step 4.1 The rootchain issues a receipt for deducting the transfer amount to leafchain 1.

Step 4.2 The rootchain issues a receipt for adding the transfer amount to leafchain 2.

There are a couple of differences between LINEAR Network and existing Interchain approaches.

- Unlike child chains in Plasma, leafchains do not spawn further chains.
- The rootchain focuses on reconciling the transfer amount between leafchains. This allows much higher efficiency compared to other protocols where the rootchain serves as a general-purpose blockchain network.

## **02) Strengths**

- **Maximum TPS (transactions per second) is scalable:**  
On the LINEAR Network, the maximum TPS can be increased with additional leafchains. If the total number of transactions significantly increases over the platform, it is relatively easy to increase maximum TPS by adding leafchains. This means that the cost for network resources should not increase much even if a number of sizable dApps participate and grow within the ecosystem.
- **Sharding:**  
When each dApp is assigned to single leafchain, the total TPS available for each dApp increases, and it also guarantees that the TPS available for one app will not be affected by the amount of usage on another app. Take the case of CryptoKitties, which opened the possibility of Ethereum-based games, but also revealed the limitations of scalability on a blockchain network when its popularity rendered other dApps on Ethereum unusable. On the LINEAR Network, however, a dApp will only affect the capacity of its leafchain. Even if it approaches the maximum TPS, dApps in other leafchains will be able to continue processing transactions as usual.
- **Flexible leafchains:**  
There is one requirement made on each leafchain to participate in the LINK ecosystem – they must use the same communication protocol as the rootchain. This allows flexibility for leafchains to be customized and optimized for their dApps. For example, the consensus algorithm and block size limit of a leafchain can be modified to increase the efficiency of a dApp.



## **Usability**

As existing blockchain ecosystems tend to be more developer-centric and technology-driven, users of blockchain-based services often find the user experience to be quite poor and inconvenient. In fact, even developers complain about how difficult it is to find the relevant documentation and tools they need. But using the LINK Framework, we aim to build a platform that both users and dApp developers can enjoy.

### **LINK Framework**

#### **01) Overview**

The LINK Framework is a toolkit for dApp developers designed to support the seamless interaction of dApps with the LINK Network, offering a suite of utilities to help with the development and maintenance of smart contracts, wallet manager and block explorer. Taking advantage of LINE's security technology, the LINK Framework also aims to build a high level of security for dApps and LINK. Additionally, it helps to minimize the work required for the development and operation of dApps. This allows dApp developers to focus more on improving the user experience, rather than hunting for solutions to technological problems, which means higher service quality.

#### **02) Good for Users**

Using the LINK Framework, dApps in the LINK ecosystem aims to offer the same level of user experience as traditional web/app services – so much so that users will not realize that those dApp services are running on a blockchain network. In addition, the LINK Framework manages user's wallet by matching each user's wallet to their LINE account so users do not need to manage their private key by themselves when using LINK Framework-based dApps.

#### **03) Good for Developers**

Developers who wish to test or operate a LINK-based dApp can easily get a taste of the LINK ecosystem through the LINK Framework. On top of the LINK Framework, we also provide a series of well-organized documents on a wide range of topics related to LINK-based dApp development, ensuring a better developer experience compared to existing blockchain-based platforms.

We also plan to launch the LINK Developer Program, which will enable developers to try out their ideas in the LINK ecosystem. In addition, the LINK Network provides a smart contract system where parts of the smart contract can be updated or revised. dApp developers can utilize this system to more easily manage smart contracts, widely considered one of the greatest difficulties faced by developers. Furthermore, a standardized interface for a variety of tokens such as stable coins or non-fungible tokens (NFT) will be provided to improve convenience for developers.

#### **04) Good for the Token Economy**

DApp developers can implement the token economy conveniently with the features offered in the LINK Framework, such as token issuance and wallet management. They can also manage the token economy efficiently using the Framework's web-based analytical tools, which offer a centralized method of monitoring various indicators, including transaction trends and token distribution status. In addition, developers can receive expert advice regarding their dApp token architecture and reward policy so that they can design and build a balanced token economy.

# Roadmap

## Moving toward an Open Network

In order for the LINK ecosystem to grow as an independent blockchain network that aims to build up trust, a diverse array of agents must be allowed to participate freely. However, there are still technical limitations preventing large-scale, convenient usage and security issues regarding the governance structure of blockchain networks have not been completely resolved. That is why LINE, in building the initial LINK ecosystem, is focusing on how users around the world understand and experience blockchain and crypto-assets. As it develops, the LINK Network will gradually open up, to enable a wider range of members to participate in the network according to the conditions of the ecosystem's growth, technological advancements, and sociocultural changes.

## Ecosystem Expansion Strategy

The LINK ecosystem will be implemented in the three phases as explained below. Throughout all three phases, it will continue to grow and expand, as it ultimately develops into a self-sufficient economic system.

- **Phase 1: LINE Network**

Laying the foundation for the LINK ecosystem through LINE's services

- Start linking with LINE's services
- Distribute LINK through in-house dApps
- Release LINK Wallet
- Release LINK Network SDK

- **Phase 2: Alliance Network**

Building the LINK dApp Alliance with selected dApp developers, implementing features as a general-purpose platform

- Release the LINK Framework (Open API), allowing third-party dApps to join the Alliance
- Release the LINEAR Network, implementing transfers between blockchains
- Expand the demand mechanism for LINK within the platform



- **Phase 3: Open Network**

Expanding the ecosystem by diversifying participation channels

- Enhance the network and expand the demand mechanism for LINK
- Offer opportunities for various entities to participate in the ecosystem on top of dApps

## **LINK Milestones**

**2018**

**April**

- Established UNBLOCK CORPORATION to develop LINK Token Economy

**June**

- Established UNCHAIN CORPORATION to develop the LINK blockchain platform

**July**

- Launched the LINK beta network

**August**

- Created Genesis Block

**September**

- Released LINK Network
- Released the first 2 LINK dApps
- Released LINK Scan

**October**

- Listed LINK on BITBOX (LINE's Singapore-based digital token exchange)

**December**

- Released LINEAR Network
- Released the third LINK dApp

**2019**

**April**

- Updated LINK Scan to v1.1

## **Update History**

LINK Whitepaper v1.0 released on September 4, 2018

v1.1 released on September 13, 2018

v1.2 released on October 1, 2018

v1.3 released on November 21, 2018

v2.0 last revised on August 12, 2019

# Important Notes

## **Disclaimer of liability**

To the maximum extent permitted by the applicable laws, regulations and rules, LINE shall not be liable for any indirect, special, incidental, consequential or other losses of any kind, in tort, contract or otherwise (including but not limited to loss of revenue, income or profits, and loss of use or data), arising out of or in connection with any acceptance of or reliance on this Whitepaper or any part thereof by you.

## **No representations and warranties**

LINE does not make or purport to make, and hereby disclaims, any representation, warranty or undertaking in any form whatsoever to any entity or person, including any representation, warranty or undertaking in relation to the truth, accuracy and completeness of any of the information set out in this Whitepaper.

## **Representations and warranties by you**

By accessing and/or accepting possession of any information in this Whitepaper or such part thereof (as the case may be), you represent and warrant to LINE as follows :

- a. **you agree and acknowledge that LINK does not constitute securities, units in a collective investment scheme, or other capital markets products each as defined under the SFA, or its equivalent or any other regulated products in any jurisdiction;**
- b. **you agree and acknowledge that this Whitepaper does not constitute a prospectus or offer document of any sort and is not intended to constitute an offer of securities, units in a collective investment scheme, or other capital markets products each as defined under the SFA, or its equivalent or any other regulated products in any jurisdiction or a recommendation or solicitation for investment and you are not bound to enter into any contract or binding legal commitment and no digital token or other form of payment is to be accepted on the basis of this Whitepaper;**
- c. **you agree and acknowledge that LINK shall not be construed, interpreted, classified or treated as enabling, or according any opportunity to, recipients or purchasers to participate in, or receive profits, income, or other payments or returns arising from or in connection with LINE or LINK, or to receive sums paid out of such profits, income, or other payments or returns;**



- d. you agree and acknowledge that no regulatory authority has examined or approved of the information set out in this Whitepaper, no action has been or will be taken under the laws, regulatory requirements or rules of any jurisdiction and the publication, distribution or dissemination of this Whitepaper to you does not imply that the applicable laws, regulatory requirements or rules have been complied with;
- e. you agree and acknowledge that this Whitepaper, the undertaking and/or the completion of listing of LINK, or future trading of LINK on digital token exchanges, including the BITBOX exchange, shall not be construed, interpreted or deemed by you as an indication of the merits of LINE, LINK, or the digital token exchanges;
- f. the distribution or dissemination of this Whitepaper, any part thereof or any copy thereof, or acceptance of the same by you, is not prohibited or restricted by the applicable laws, regulations or rules in your jurisdiction, and where any restrictions in relation to possession are applicable, you have observed and complied with all such restrictions at your own expense and without liability to LINE;
- g. you are fully aware of and understand that you are not eligible to purchase any LINK if you are a person from any restricted locations as set forth in the Terms of Service (or equivalent document) of the digital token exchanges where LINK is listed;
- h. you have a basic degree of understanding of the operation, functionality, usage, storage, transmission mechanisms and other material characteristics of digital tokens, blockchain-based software systems, blockchain technology and smart contract technology;
- i. you are fully aware and understand that in the case where you wish to purchase any LINK, there are risks associated with digital token exchanges and their business and operations;
- j. you agree and acknowledge that LINE will not be liable for any indirect, special, incidental, consequential or other losses of any kind, in tort, contract or otherwise (including but

not limited to loss of revenue, income or profits, and loss of use or data), arising out of or in connection with any acceptance of or reliance on this Whitepaper or any part thereof by you, including in relation to:

i. any failure by LINE to deliver or realise all or any part of the LINK features described in this Whitepaper;

ii. any failure by LINE to list LINK on digital token exchanges including BITBOX;

iii. your use or inability to use at any time the services or the products of the LINK Chain platform or LINK;

iv. any security risk or security breach or security threat or security attack or any theft or loss of data including but not limited to hacker attacks and losses of passwords or private keys;

v. your failure to properly secure any private key to a wallet containing digital tokens; and

k. all of the above representations and warranties are true, complete, accurate and not misleading from the time of your access to and/or acceptance of possession of this Whitepaper or such part thereof (as the case may be).

Nothing contained in this Whitepaper is or may be relied upon as a promise, representation or undertaking as to the future performance or policies of LINE.

Further, LINE disclaims any responsibility to update any forward-looking statements or publicly announce any revisions to those forward-looking statements to reflect future developments, events or circumstances, even if new information becomes available or other events occur in the future.

Please note that this Whitepaper is also only a work in progress and the information in this Whitepaper is current only as of the date on the cover hereof. LINE reserves the right to update the Whitepaper from time to time.



**No advice**

No information in this Whitepaper should be considered to be business, legal, financial or tax advice regarding LINE or LINK. You should consult your own legal, financial, tax or other professional adviser regarding LINE and their businesses and operations, and LINK. You should be aware that you may be required to bear the financial risk of any purchase of LINK for an indefinite period of time.

**Restrictions on distribution and dissemination**

The distribution or dissemination of this Whitepaper or any part thereof may be prohibited or restricted by the laws, regulatory requirements and rules of any jurisdiction. In the case where any restriction applies, you are to inform yourself about, and to observe, any restrictions which are applicable to your possession of this Whitepaper or such part thereof (as the case may be) at your own expense and without liability to LINE. Persons who have been provided access to this Whitepaper or to whom a copy of this Whitepaper has been distributed or disseminated or who otherwise have the Whitepaper in their possession shall not circulate it to any other persons, reproduce or otherwise distribute this Whitepaper or any information contained herein for any purpose whatsoever nor permit or cause the same to occur.

**Risks and uncertainties**

Prospective purchasers of LINK should carefully consider and evaluate all risks and uncertainties associated with LINE, and its businesses and operations, and all information set out in this Whitepaper and the T&Cs, prior to any purchase of LINK.

You should not transact in LINK if you are not familiar with virtual currencies of this nature. Transacting in virtual currencies may not be suitable for you if you are not familiar with the technology in which LINK services will be provided.

You should be aware that the value of LINK may fluctuate greatly. You should buy LINK only if you are prepared to accept the risk of losing all the money you put into LINK.

**LINK Issuance Costs**

LINE will, in any event, incur no costs in regard to any issuance or distribution of LINK.



THERE IS NO GUARANTEE THAT THE FUNCTIONALITIES OF LINK, OR THAT THE LINK TOKEN ECONOMY INFRASTRUCTURE, WILL BE DELIVERED OR REALISED. IF ANY OF SUCH RISKS AND UNCERTAINTIES DEVELOPS INTO ACTUAL EVENTS, THE BUSINESS, FINANCIAL CONDITION, RESULTS OF OPERATIONS AND PROSPECTS OF LTP COULD BE MATERIALLY AND ADVERSELY AFFECTED. IN SUCH CASES, YOU MAY LOSE ALL OR PART OF THE VALUE OF LINK. IN THE EVENT THAT YOU HAVE PURCHASED LINK, YOUR PURCHASE CANNOT BE REFUNDED OR EXCHANGED.

IF YOU ARE IN ANY DOUBT AS TO THE ACTION YOU SHOULD TAKE, YOU SHOULD CONSULT YOUR LEGAL, FINANCIAL, TAX OR OTHER PROFESSIONAL ADVISOR(S).