1. Vision

2. Problems
   - Trade / Token swap inefficiency
   - Blockchain Interoperability
   - Private keys and slow Blockchains

3. The CeFi Platform

4. CeFi Chain
   - Scalability
   - dPoS Blockchain
   - Constructor/Queue Mechanism
   - CeFi Decentralized Exchanges
   - CeFi Wallet
   - AIL : Augmented Information Layer

5. Infrastructure For Developers
   - Design Focus

6. Ecosystem
   - Financial services
   - dApp developers
   - Cryptocurrency users
   - Cryptocurrency Exchanges

7. Our Network–Growth Strategy
   - N2B (Network–to–Business)
   - N2C (Network–to–Customer)

8. Token Economy
   - Staking
   - Network Governance
   - Replacement of Bank
   - CeFi’s supply

9. Allocation

10. Roadmap
Vision

The future of the decentralized blockchain technology depends on the next generation of decentralized financial infrastructure. Thus, it is essential to create a solid and firm token economy in order to develop a safer and more flexible financial ecosystem, as well as to process high influx of users. In addition, for the financial ecosystem to thrive, the use of cryptocurrencies and tokens must be more user-friendly. Therefore, How to design dApps and decentralized services to improve convenience and trustworthiness for users is the key to the development of financial infrastructure.

For a distributed system to have a real impact, several challenges must be overcome. Today's financial blockchain architecture still has several drawbacks such as long transaction times, limited scalability and user experience, and lack of decentralization and liquidity. To solve these problems, CeFi's vision is to lower the barrier to entry to the token economy for both service providers and end users by building an innovative financial infrastructure using the blockchain technology. Thus, we aim to introduce an innovative and powerful blockchain architecture that solves the above problems.

Our goal is to design a high-performance, scalable infrastructure that enables seamless interoperability between different blockchains. This is an important condition for adopting CeFi by many service providers and organizations for its convenience. For instance, CeFi offers a decentralized cryptocurrency wallet. Thanks to CeFi Wallet, we can generate a private key that is controlled by the user, which is derived from other keys so that the network can work on any blockchain and associate those assets with the CeFi chain in the process.

Current and future tokens, crypto networks and dApps in the crypto market will be more complex and fragmented due to more sophisticated wants and needs from the users. Thus, we plan to bring all of these together through CeFi. For example, a single CeFi ID is granted to users for more integrated crypto asset management services and offers various financial services for a safer and more convenient financing life. The possibilities arising from this integration are end-
less. Imagine a world
in the CeFi chain where you can apply for instant loans, or insurance, and access
the entire dApp world services just with your identity. What’s more, since the
CeFi’s core technology is intended as an open source platform, we plan to build
next-generation dApps using the CeFi stack.
Problems

Trade / Token swap inefficiency

Blockchain is evolving to provide fast and efficient transactions like Lightning Network, but asset trading or exchange through blockchain is still inefficient. For example, consider the simplest form of ERC20 token swap facilitated through a very basic Ethereum smart contract. Since it has to go through several stages of confirmation, 4 transactions and gas fees are required for the swap to occur with considerable time. However, by leveraging CeFi’s future CeFi network, we can reduce all unnecessary verification times and execute token swaps within only a few seconds.

Blockchain Interoperability

Blockchain-based systems are still in their infancy. It’s still undergoing a lot of innovations. Though some of the early blockchains like Bitcoin or Ethereum have become an important part of the ecosystem, new projects appear constantly. We, however, expect that the future would need an interoperable environment rather than a single chain to serve all functions and purposes for various ecosystems and users to share and exchange.

The problem lies that each chain has its own application and community, so it is difficult to use blockchain and cryptocurrencies as more practically and effectively. What’s important though is that communication among all participants in the network space should not be restricted.
To achieve that, CeFi plans to create an open ecosystem for any users to utilize completely integrated services and access other applications no matter what chain they are on.

Private keys and slow Blockchains
The public/private key pair is your identity as well as the key to your identity in the cryptocurrency space. In order to verify your identity and manage crypto assets in the network, the user must bring the private key to the wallet. However, this method varies from network to network. It means there is no single wallet and ID to store all your assets. Therefore, CeFi will provide one identity for all chains and assets.

You can easily replace other keys for other blockchains by importing a key pair from CeFi ID. In fact, blockchain is too slow to host and maintain a highly performing decentralized exchange. To perform seamless cross-chain transactions, you need a blockchain that can handle high transaction throughput. Therefore, CeFi’s developers find a way to place the blocks vertically on top of each other. This performs parallel transaction validation to enhance the higher transaction speed.
The CeFi Platform

CeFi’s BOB (Block-on-Blocks) blockchain system has been developed after our utmost efforts to build a real decentralization when designing a CeFi platform. The key is to develop a decentralized financial platform that can use most cryptocurrencies, including Bitcoin and Ethereum as well as other altcoins. Thanks to the block-on-blocks (BoB) architecture, we believe that the CeFi blockchain can increase transaction throughput compared to the current legacy chain. In addition, our next goal is to develop a decentralized exchange that can handle all kinds of digital assets regardless of the underlying chain. Building highly scalable blockchains connecting to various blockchains will be a milestone that can make a big impact on the entire blockchain.

In addition, we aim to introduce a secure virtual wallet network through CeFi. The CeFi wallet provides a user-friendly interface to the CeFi chain for regular users and handles private keys in a decentralized way.
CeFi Chain

Scalability

We hope that the CeFi blockchain will be highly scalable through the new blockchain architecture we are going to introduce. CeFi CHAIN allows vertical expansion of each block. Multiple blocks can be stacked on top of each other with different sets of validators assigned to different blocks. By vertically expanding the blockchain, individual blocks can be independently verified by a staking verification group monitored as a whole by a supervisor of the CeFi network.

This process is similar to the process known as sharding in Ethereum, but with CeFi the big difference is that different blocks stacked on top of each other can run different applications. The first of these applications are decentralized exchanges independent of the blockchain. Each block is assigned a different group of validators, so consensus is reached at each block level. That being said, the only limit to the expansion of the CeFi chain is the number of staked validators available. The consensus algorithm we use is based on an algorithm capable of processing up to 15,000 transactions per second with 104 nodes.

dPoS Blockchain

At the heart of CeFi dPoS is the CeFi token. Validators within the network need to pin CeFi tokens to become validators. These tokens will not be accessible to validators during the validation process and during the next 3 blocks (to prevent cheating).

In a traditional delegating blockchain, participants in the network vote for their delegates who represent themselves and can propose new blocks to be added to the blockchain. CeFi dPoS is a bit more complicated. There are 21 nodes elected as part of the generator/queue mechanism, essentially responsible for the state of the network (account balance, etc.). In addition, 104 validators are assigned to each block and its sub-blocks placed vertically and consensus is reached between
those node groups. Delegation of stakes inside the CeFi network can: 1) vote for 21 people who will be elected as master nodes, 2) if CeFi token holders do not want computer work, they can lend their stake to other validators. If a user lends a CeFi token to another validator, they will waive a significant portion of the fees generated by that CeFi token.

**Constructor/Queue Mechanism**

The highest level of consensus mechanism we plan to use within the CeFi chain is the constructor/queue mechanism. The generator mechanism determines the structure of each block and maintains the state of the CeFi network. This mechanism allows the CeFi chain to respond to transaction surges. If the transaction volume suddenly surges, the CeFi chain builds a block structure containing more blocks, which can lead to more transactions through the network.

**CeFi Decentralized Exchange**

CeFi aims to be a truly decentralized exchange built on top of the CeFi chain. The decentralized exchange architecture we envisioned enables decentralized execution of orders on the CeFi chain, but not on the main chain of that asset. This eliminates the need for intermediaries or similar centralized systems. In addition, the network will reduce verification time to a minimum. Once the tokens are deposited into the CeFi wallet, transactions will be smooth regardless of the underlying blockchain. Users can trade within the wallet with just one click of the transaction button. When exchanging one token for another, CeFi users can access the new token within a few seconds and then send these tokens to others within the network after this time. Therefore, CeFi users can get the most out of the decentralized service and app ecosystem in a fast and flexible way.

In addition, the decentralized exchange that CeFi intends to develop can be connected to a payment system. The advantage will be rich liquidity and convenience for users. The payment history is first propagated over the network using the P2P protocol, but a system that automatically matches orders between users must be
introduced to provide faster payments. The CeFi central system differs from the traditional system in that it is an order matching mechanism between individual users. The central booklet should enable a two-way anonymous transceiver communication network that cannot be accessed by anyone other than the two parties involved in the exchange.

**CeFi Wallet**

The goal of the CeFi architecture is to improve the slow speed of the blockchain, allowing users to quickly access the traded funds after a single CeFi transaction or token swap. CeFi aims to provide users with the possibility to trade all types of tokens directly from the wallet.

The key to making this possible in a decentralized way is the decentralized virtual wallet network. Thanks to CeFi, private keys can be conveniently stored and protected by the network. The keys are not disclosed to anyone and are protected through public key encryption. To achieve this, we plan to split the private key into several encrypted parts that are stored on different nodes in the network. It aims to transmit private keys using a hybrid network where only wallet owners can identify specific nodes on the network that owns a portion of the keys.

The private key is required whenever a user tries to transfer the token back to the original root chain. In this case, CeFi reassembles the private key using a multi signature threshold signing scheme. Not all nodes holding the partitioning key are required to participate in the process. Adding more than three-quarters of all splitting keys together is enough to devise the original private key. This process is intended to provide the highest level of security while preventing node downtime.

**AIL: Augmented Information Layer**

With the introduction of the Augmented Information Layer (AIL), CeFi plans to enable cross-chain communication and information exchange. It also allows users and developers to extend the basic functionality of any token and build
more sophisticated applications.

The information layer enables CeFi to allow any users to attach additional data to any transaction performed within the CeFi chain. CeFi aims to make AIL compatible with a variety of distributed data storage systems, providing endless possibilities for interconnection.

These layers will act as a bridge between different chains. It always keeps the data on the side chain. The scalability through this is endless. For example, insurance companies can use AIL to store sensitive credit score data and e-commerce sites can store orders in a hash format within a hierarchy. Also, a secure, independent and valid identity on the blockchain can finally become a reality.
Infrastructure For Developers

Design Focus

The CeFi platform aims to be a state-of-the-art distributed system. The architecture we envision takes advantage of the most recent technological developments in space and introduces several innovative elements. We specifically intend to design CeFi with the following goals in mind:

1) High transaction throughput
2) Full cross-chain interoperability
3) One CeFi key to access all current and future blockchains
4) Privacy masking through identity

Our goal is to make it easy for anyone to build new applications by leveraging CeFi’s infrastructure and using CeFi STACK (CeFi Chain, CeFi) as the backend infrastructure.

CeFi’s user base consists mostly of wallet users and general traders. Developers implementing CeFi chains for decentralized applications will have immediate access to this collective user pool. CeFi’s goal is to enable all users to access communities and users on different chains using a single address on the CeFi chain even if developers run applications on Ethereum, Lisk, Neo, Waves, etc.

To achieve this, we plan to release CeFi as an open source protocol and run it as a truly distributed system. This aims to ensure the stability and credibility of the developer community. We plan to create a development ecosystem that meets the needs of dApp and FinTech startups as well as existing financial service providers.
Ecosystem

Financial services

We work to make all kinds of financial services to use CeFi backend technology. We aim to build a protocol-level solution that can easily connect the system to CeFi and leverage the infrastructure. By using the information layer, we think it will finally be easier to attach data to individual transactions or public key IDs.

dApp developers

We plan to create new applications based on the architecture for dApp developers to use the CeFi chain. CeFi provides a ready-to-use solution that any dApp can implement to access the CeFi user base.

Cryptocurrency users

CeFi aims to make cryptocurrency users more comfortable to use than any other blockchain. CeFi aims to provide an easy-to-use interface, a high level of security and good liquidity. All of this comes from one CeFi wallet.

Cryptocurrency exchanges

CeFi plans to upgrade such roles and functions of the existing cryptocurrency exchange and allows users to secure a certain amount of loans or earn interest income through loans with various cryptocurrencies as collateral. To this end, we plat to improve the user experience through high accessibility and an easy-to-use interface.
Our Network—Growth Strategy

**N2B (Network—to—Business)**

Before alpha chain launch

- Partnerships with professionals in finance and FinTech sector
- Hire professionals to form a professional HR pool
- Host regular events to share ideas about its sustainable growth
- Foster an active developer community on CeFi’s open source technology

After alpha chain launch

- CEFI Academy: Comprehensive digital library of exclusive information and user guidance.
- Build outreach teams to focus on strategic business relationships and build synergistic partnerships

**N2C (Network—to—Customer)**

Before alpha chain launch

- Maintain active communication with users and share contents regarding CeFi’s token economy’s growth and ongoing issues.
- Build a product marketing team
- Hold blockchain or related ongoing events in the Crypto community

After alpha chain launch

- Running marketing campaigns focused on end users
- Build trust and credibility by providing CeFi wallet technology to third party and security experts
Token Economy

The value of CeFi tokens is intended to be directly proportional to the size and activity of the users, liquidity of tokens as well as the size of an ecosystem. The higher the transaction volume on CeFi’s platform, the higher the value of the CeFi token: thus, the value of token will increase. Therefore, in order to increase liquidity, we have adopted “staking” method where the majority of existing CeFi tokens is to be pinned by validators.

CeFi tokens can be sent like any other cryptocurrency, but the main purpose of CeFi tokens is to represent the value and size of the ecosystem. Regardless of the currency on which the user trades, CeFi tokens are directly related to the total value of all transactions. The supply of CeFi tokens to be generated in every new block must be controlled by an algorithm that adjusts block rewards.

Staking

CeFi token holders can use their tokens to stake transactions on the CeFi chain by becoming a staking validator. After staking, the user’s CeFi token is locked and cannot be accessed until the block is validated. In this way, the validator can monitor any kind of malfunction that occurs in the validation process.

Network Governance

We expect CeFi token holders to participate in a quarterly proposal session where they can propose proposals regarding the future development of the CeFi chain and propose new chains that are compatible within the CeFi ecosystem. Since we believe that smart contracts provide a safe and fair solution to all parties during the proposal process, we plan to set up a smart contract where CeFi token holders can send coins to vote on proposals.

Smart contracts intended to be used in this process are publicly published before
voting occurs to provide transparency and fairness to the process. CeFi tokens sent to the smart contract are processed by the smart contract itself, which sends the CeFi token back to its owner at the end of the voting period.

**Replacement of Bank**

CeFi is an attempt to replace the role played by existing financial institutions with cryptocurrency through blockchain. CeFi aims to establish an ecosystem where financial products such as remittances, payments, investment, or loans which have been deemed to be the existing financial industry’s exclusive property are dealt on blockchain and cryptocurrency. Every financial service in CeFi will be managed automatically via smart contract.

**CeFi’s supply**

A total of 500,000,000 CeFi tokens on ERC 20 will be issued for the development and operation of the project. CeFi will be granted as incentive to those who contribute to staking by algorithm in consideration of inflation.
Allocation

CeFi token is the basic currency unit, which is issued and circulated in the CeFi ‘s token economy based on the uniquely developed our CeFi platform. The 30% of the total CeFi tokens is allocated to be used for the platform R&D and growth strategies whereas the 25% is allocated for marketing activities. The other 25% for the foundation, 10% for advisors, and 10% will be allocated for maximum liquidity of supply of tokens.

Type: ERC20
Name of the Token: CEFI
Token’s Allocation:
- Total Issuance : 500,000,000 CEFI
- R&D: 30%, 150,000,000 CEFI (12-month lockup)
- Marketing: 25%, 125,000,000 CEFI (6-month lockup)
- Foundation: 25%, 125,000,000 CEFI (36-month lockup)
- Advisor: 10%, 50,000,000 CEFI (12-month lockup)
- Maximum Liquidity of supply in Total: 10%, 50,000,000 CEFI
Roadmap

2020 4Q
- Token and ecosystem development
- AI trading service development
- Community Build up

2021 1Q
- CeFi Platform Beta Test
- Upgrading AI trading service

2021 2Q
- Decentralized Exchange Beta Test
- CeFi Platform Launch

2021 3Q
- Decentralized Exchange Launch

2021 4Q
- CeFi Mainnet development