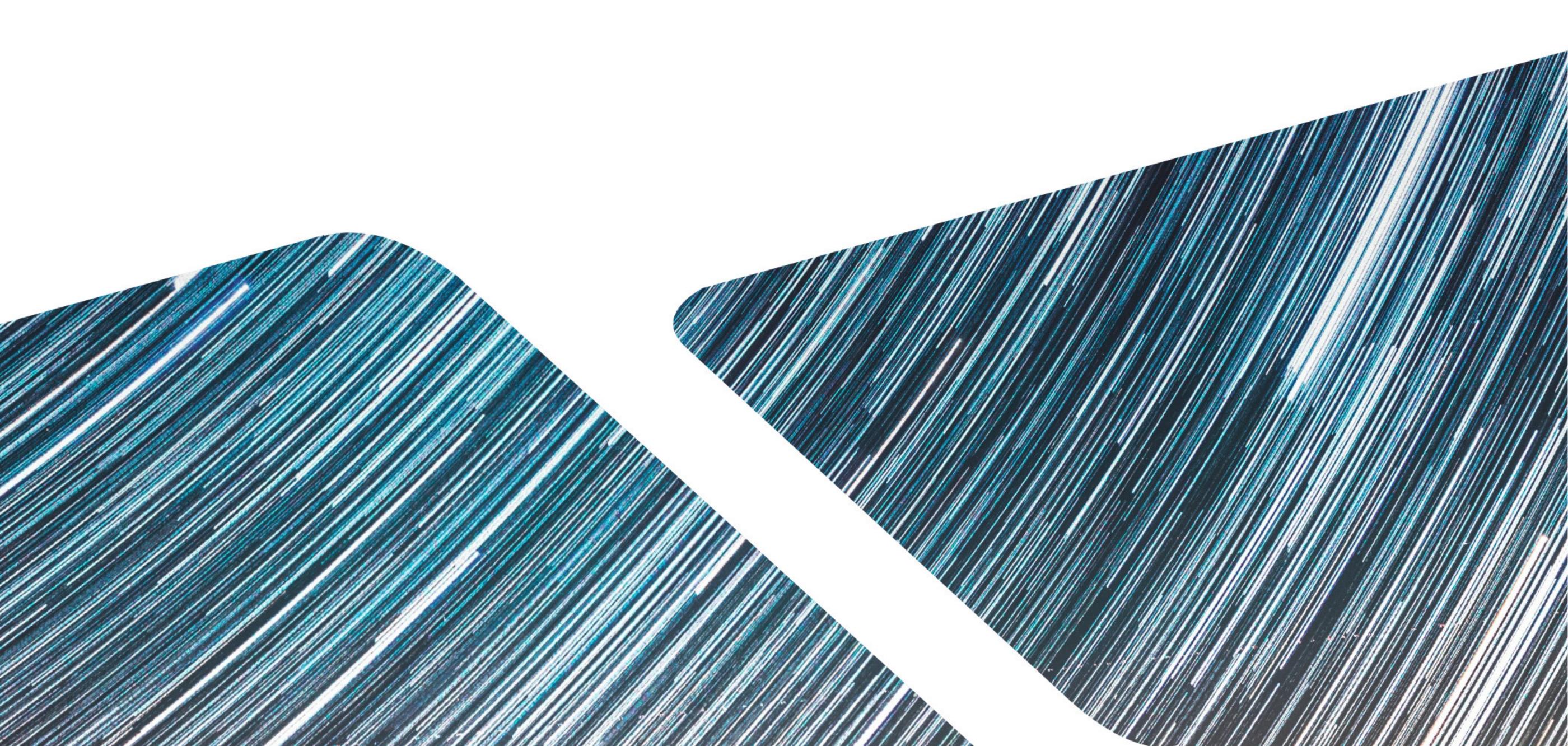


LINK THE WORLD, TOUCH THE FUTURE

# WHITEPAPER

V 1.0





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# 1. Overview

# 1.1 Background

In the past two years, blockchain technology-based crypto assets have developed rapidly. Blockchain is distributed ledger technology based on cryptographic algorithms, which enables multiple parties to build and maintain a trust free, tamper-resistant and immutable ledger in a distributed system. It solves the problem of peer-to-peer trust in public networks among parties that do not know each other, which is not just a technological innovation, but a new economic model created through the elimination of intermediaries and removing the need for trust among economic participants.

Increasingly, private enterprises, governments, academics and technology enthusiasts are conducting in-depth research and experimenting with possible applications on blockchains. Industries with the greatest need for trust are primed for disruption by blockchain technology. An example of this is the financial sector which has to store accurate ledgers of credit ownership, transfer value among participants and verify information securely and promptly. Through blockchain technology, this centralized process can be made cheaper by eliminating the cost of trust in an intermediary and creating a more efficient process for the financial industry. Given the potential for disruption, many outstanding companies and technical teams are endeavoring to build infrastructure, provide application services, and promote the mainstream adoption of blockchain technology. A new industry is emerging.

# 1.2 Problems

While development of blockchain technology has been ongoing for a decade, it is still at a relatively early stage compared with other mature technologies. The development of blockchain infrastructure and decentralized applications ("DApps") have high technical thresholds. Blockchain technology enables the creation of cryptocurrencies, which are anonymous and can be circulated globally without any restrictions. As with all emerging technologies, cryptocurrencies pose regulatory challenges to governments who will need to create appropriate guidelines and regulatory frameworks for the technology. Currently, there is no clear guidance from the regulators on what the treatment for cryptocurrencies is, which has hindered the entrance of large institutions into the space. The high technical threshold and shortage of talented developers have made it even harder for blockchain technology to be integrated with existing financial services infrastructure, which creates a high barrier for the inflow of capital and for adoption by users, leading to illiquidity and high volatility of crypto assets. This, in turn, creates a negative cycle which further hinders the adoption of blockchain technology in the mainstream financial services. The absence of technical talents and appropriate regulations has seriously dampened the development and adoption of the new digital economy powered by cryptocurrencies.

# 1.3 Vision

As a technology-oriented digital financial institution, BXA places huge emphasis on regulatory compliance and plans to leverage our global network of cryptocurrency exchanges as a pivot. Our existing infrastructure, such as fiat-to-crypto currency gateways, intimate knowledge of financial regulations and massive userbase, enables BXA to break through the high technical threshold, create fiat-to-crypto trading platforms with deep liquidity and offer a wealth of digital financial services



services (such as cryptocurrency trading, real-time payment network, security token offering and circulation, and other financial derivatives).

Our vision is to establish a smart economy with efficient value transfer.

# 2. Exchange Alliance

Started from Bithumb, the largest cryptocurrency exchange in South Korea, BXA is creating a cross-regional cryptocurrency trading platform and establishing a global financial service network.

# 2.1 Global Expansion Plans

BXA is in the process of establishing 12 local entities around the world (USA, Japan, UK, Canada, Australia, New Zealand, Singapore, Hong Kong, South Korea, Thailand, Mexico and Peru). Bithumb is the largest crypto currency exchange in South Korea, and the only one of the top 10 exchanges in the world to provide fiat currency transactions. In January 2018, Bithumb's highest daily trading volume reached \$6 billion, ranking first in the world. According to Coinmarketcap.com, it accounted for 3–5% of the world's average daily trading volume by the fourth quarter of 2018 and was rated the world's three largest crypto exchanges.

Under the framework of distributed cryptocurrency trading technology, BXA members from different countries and regions can share transaction data securely, continue to be compliant with local regulations, and complete settlements quickly. As a result, BXA will have the largest order volume and deepest liquidity among all exchanges globally. Due to the technical structure, BXA can expand rapidly with a plan to develop at least one additional regional exchange every quarter.

# 2.2 The BXA Advantage

As a global exchange alliance, BXA has numerous advantages to support our vision.

#### 2.2.1 Technology

Blockchain is a technology-intensive emerging industry. As pioneers of the industry, the cooperative members of BXA have a deep pool of talented developers and technical know-hows. BXA has already developed a full range of technical solutions such as distributed centralized exchanges, distributed decentralized exchanges, high-performance public chains, and one-stop user terminals (wallets) to support the globalization of the ecosystem.

#### 2.2.2 Compliance

In addition to cryptocurrency trading services, BXA's goal is to provide financial services globally. To achieve this, BXA has obtained regulatory licenses from various countries.

In addition to that, BXA will seek various financial licenses such as trusts and funds to provide diversified financial



services. While no clear regulatory frameworks have been established for financial services that BXA is looking to provide, BXA will work closely with local regulators to establish suitable frameworks. Our team already have significant experience in navigating the regulatory landscape in South Korea, which is known to have some of the strictest regulatory requirements on cryptocurrency-related financial services.

#### 2.2.3 Userbase

BXA has a huge advantage in encouraging adoption of the BXA platform with our huge existing user base, which is essential to the prosperity of all economic system. Reassuringly, the Bithumb cryptocurrency exchange, one of the leading members of BXA, alone has more than 4.5 million active users as of September 2018. Southeast Asia, Latin America and other regions that the alliance plans to penetrate are characterized by either a lack of access to financial facilities and the dense population, or a strong demand for a more efficient and inclusive financial system. For the regions highlighted, BXA's distributed exchange model will be supported by proprietary technologies such as Distributed Centralized Exchange ("DCEX") and Distributed Decentralized Exchange ("DDEX"), which is far more attractive than mergers and acquisitions alone.



# 3. BXA Technology Solution

#### 3.1 Overall Architecture

BXA's architecture can be divided into three distinct layers based on functionality:

**Base Layer** - It includes distributed centralized trading technology, distributed decentralized trading technology, BXA public chain, user terminal (wallet) and so on, combined with channels and regulatory licenses to constitute the infrastructure for BXA ecosystem operation.

**Service Layer** - BXA exchanges and other partners provide feature-rich API interfaces, efficient and transparent clearing channels, and a compliant global market to facilitate the establishment of financial services at low cost.

**Application Layer** - Global users exchange commodities (be it digital assets or physical assets) and use financial services in the terminal with fiat currency and cryptocurrency in real time. BXA will support the use of financial derivatives and other complex commercial applications in the future.

# 3.2 Base Layer - DCEX

#### 3.2.1 Current Situation

With the explosion of crypto assets, there are thousands of exchanges globally. However, most exchanges are limited by the following issues and will have difficulty expanding:

- o Insufficient liquidity: Active traders and liquidity is the lifeblood of the exchange. Currently, there is a lack of sharing mechanisms among different exchanges, which brings users difficulty accessing these exchanges interchangeably and burden of moving funds from one exchange to the other. Most exchanges only have the resources to acquire operating licenses in a limited number of regions, and some even operate without acquiring the relevant licenses. These exchanges can only serve local users and cannot open up to global users without violating regulatory requirements.
- O High cost of development and operations: The development and operation costs of an exchange is high. A wellestablished trading system requires significant time and labor to develop and maintain. As a result of the technical difficulties and financial costs, there is a steep barrier to entry for aspiring cryptocurrency exchanges.

#### 3.2.2 Solution

To this end, BXA proposes a complete set of solutions: Distributed Centralized Exchange ("DCEX"). BXA's DCEX is a high-performance crypto assets trading platform that serves the whole world. It can provide localized trading services for local customers according to the rules and regulations of each legal jurisdiction. By relying on the unique structure of the DCEX, global crypto assets investors can share transaction data and liquidity, meanwhile, have an extraordinary trading experience with the seamless integration of multiple exchanges distributed globally.

#### 3.2.2.1 Technical Framework for DCEX

The DCEX is composed of a Platform and a Counter.



Counter refers to the local exchange which provides the user interface for users to interact with the DCEX platform.

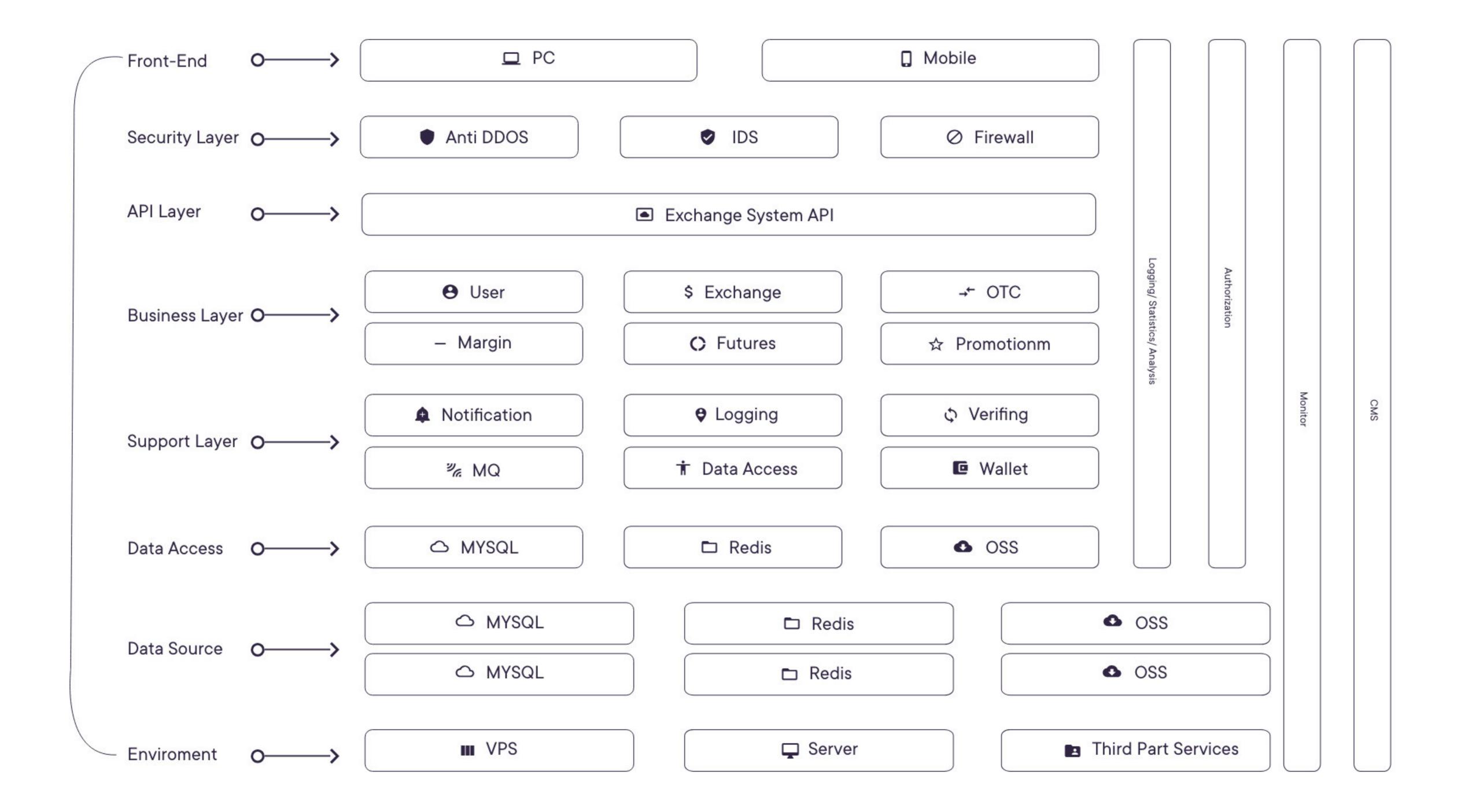
Each Counter will ensure compliance with local rules and regulations to provide transaction services. The major functions of Counter are:

- To provide local basic services, such as registration, login and KYC audit;
- To provide fiat currency related services, such as deposit, trade and withdrawal;
- To interact with the DCEX through APIs and provide user interface for crypto-to-crypto trading, leveraged transaction and futures trading; and
- To support the personalized combination and hot swap of function modules.

Platform functions as the central server and is the core of DCEX. It provides support for all business links which have no relation to fiat currencies. Platform main functions are:

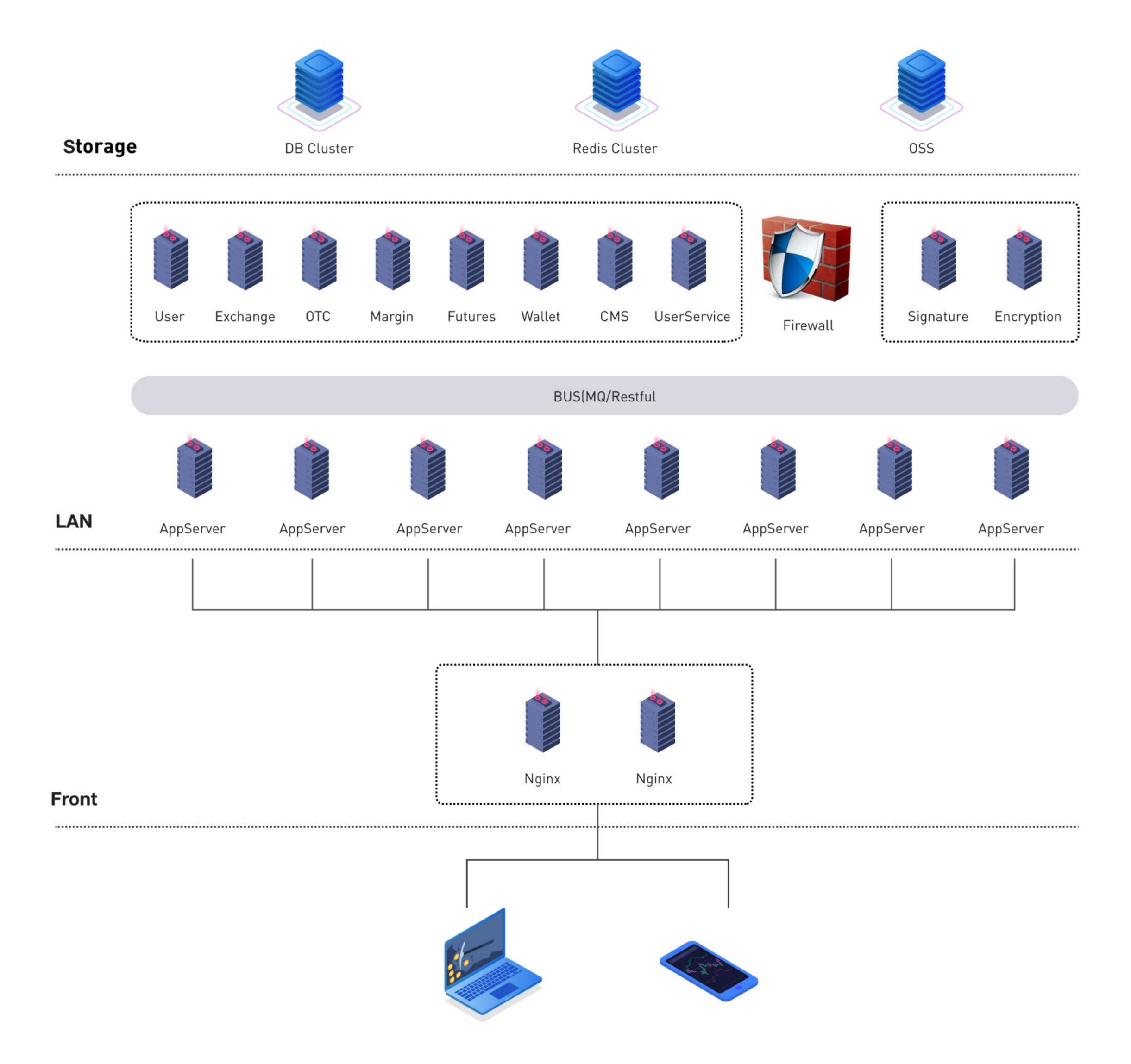
- To provide counters all over the world with API interfaces;
- To manage accounts and ledgers;
- To match crypto-to-crypto trading, leveraged transaction and futures trading; and
- O To manage the listing of crypto assets.

As a highly available, highly concurrent, secure and modular trading system, DCEX's logic architecture is divided into eight layers: front-end display layer, security layer, API layer, business layer, support layer, data access layer, data source layer and environment layer. Each layer focuses on the business of itself, simplifying system design and facilitating software upgrades. The overall structure is as follows:





At the hardware level, the physical networking of DCEX is divided into storage cluster, business cluster and front server cluster. Only front-end service cluster has an Internet interface, and other clusters are in the intranet environment, which can effectively isolate external attacks. The front server adopts Nginx hot standby to offer a provider. The App Server cluster provides request buffering support and improves concurrency. Meanwhile, it communicates with other business clusters through the MQ / RESTful interface. Business data is stored in the storage cluster. The overall structure is as follows:





#### 3.2.2.2 Business Process

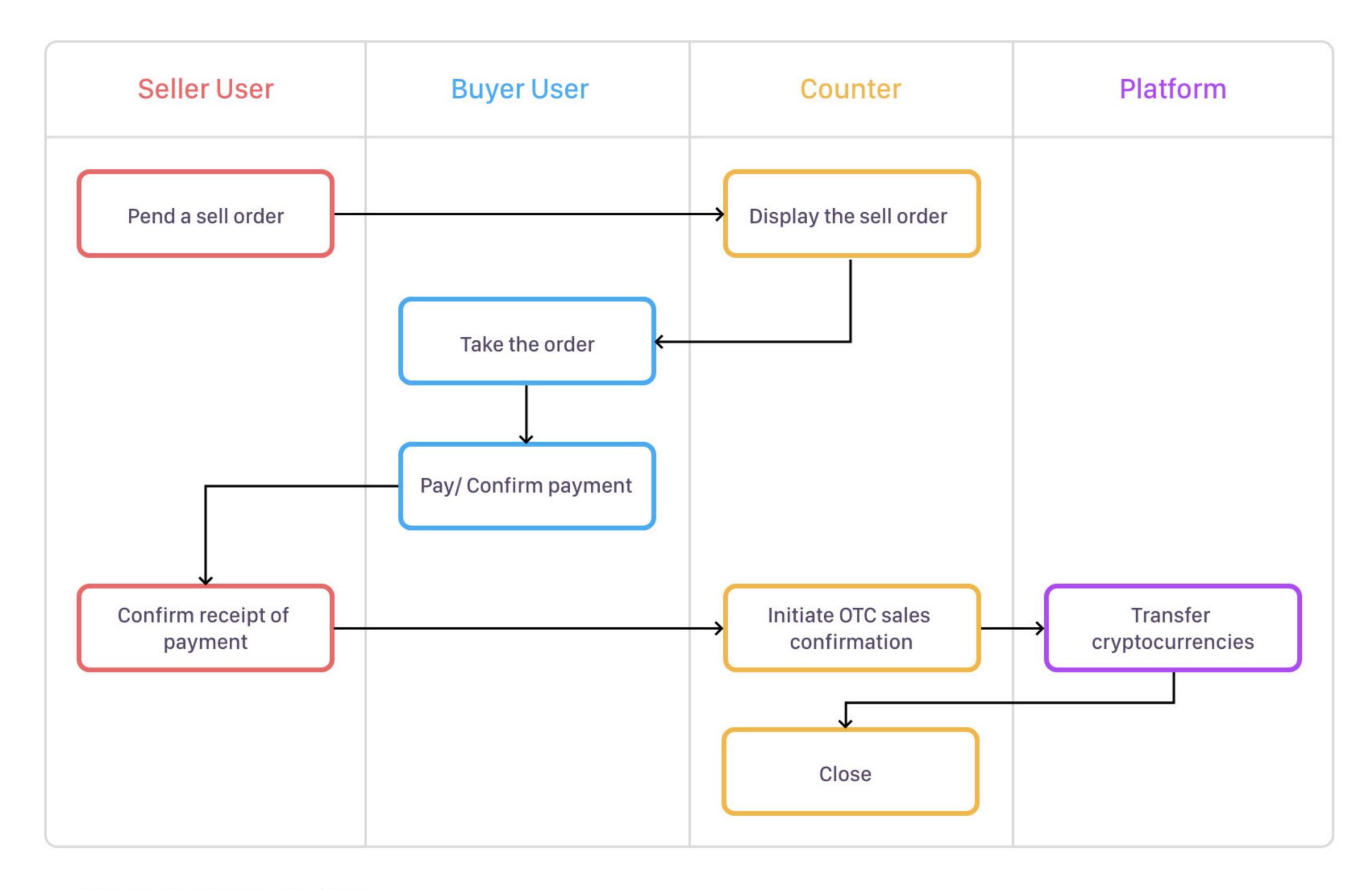
DCEX offers a wide range of business services including fiat-to-crypto trading, OTC trading, crypto-to-crypto trading, leveraged transaction and contract trade. The fiat-to-crypto trading and OTC trading are local businesses; while crypto-to-crypto trading, leveraged transaction and contract trade are global businesses. This way, operators of various DCEX can flexibly select business contents according to local rules and regulations. The following is an introduction on basic business processes by taking OTC trading and crypto-to-crypto trading as examples.

#### **OTC Trading**

OTC trading are exchanges which facilitates trades between fiat currency and cryptocurrency through over-the-counter guarantee between users. The cryptocurrencies involved in the transaction process needs to be deposited into the platform beforehand and the platform serves as an escrow to guarantee the transaction, limiting counterparty risk.

Because BXA has already obtained the relevant licenses required, we are able to provide OTC trading services for large institutions while maintaining full compliance standards.

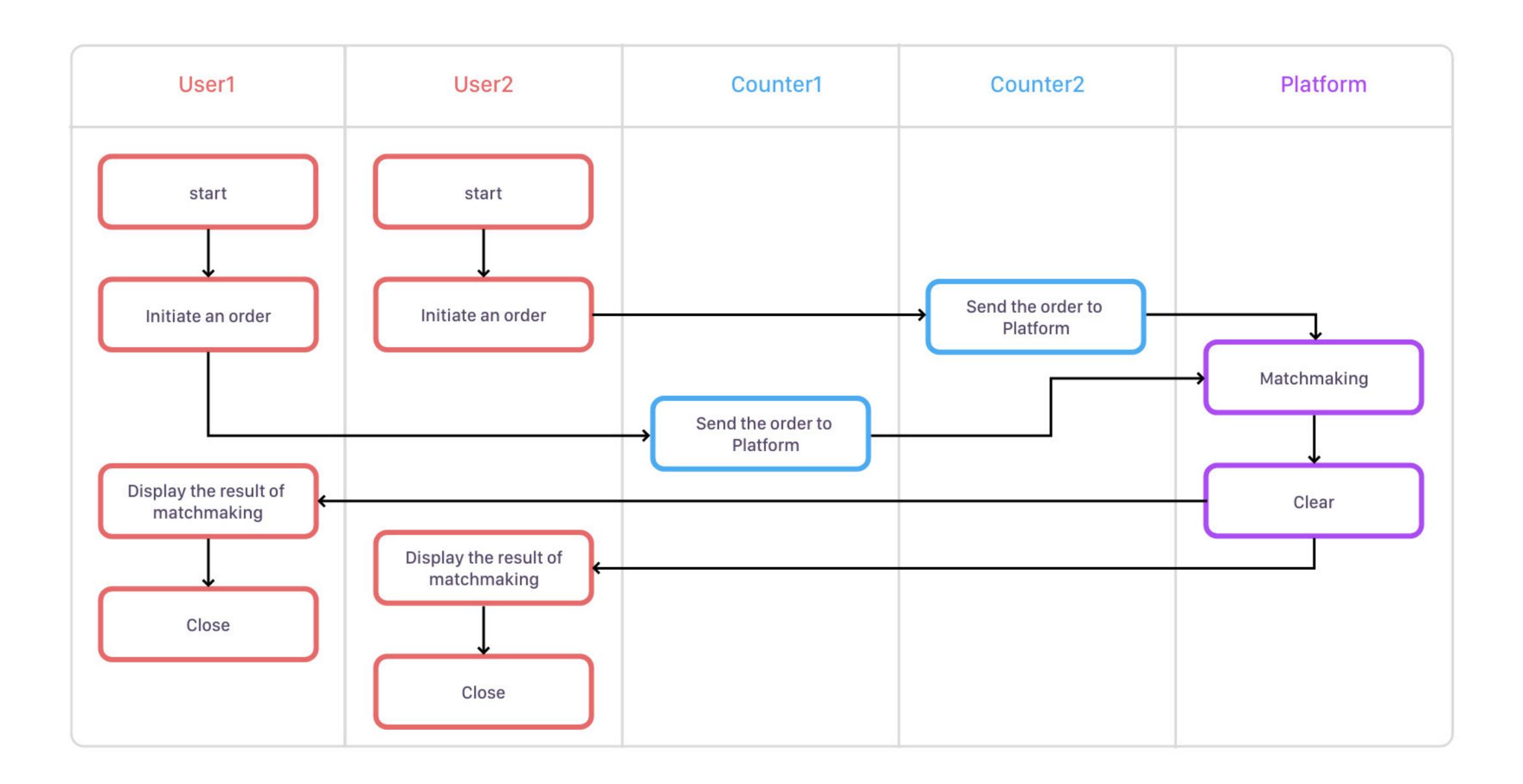
The example below assumes that the seller is acting as the maker and demonstrates the process of the OTC trade:



#### Crypto-to-Crypto Trading

Crypto-to-crypto trading refers to the spot trading of a cryptocurrency with another cryptocurrency between users. Bid and ask orders are submitted to the platform through the respective counters, which will then be combined and matched by the DCEX platform. All exchanges in the DCEX will share order data and combine liquidity. The process is as follows:





#### Counter Deployment

In the DCEX, the Counter is an independent business entity. This is due to the differences in rules, regulations, customs, and user preferences among different jurisdictions, which leads to different requirements and expectations. Platform provides the Counter with comprehensive modular functions that can be quickly adopted by users, and the Counter can also quickly deploy regulatory-compliant transaction services. Currently, it can easily configure the trading market, trading pairs, interfaces and promotional activities, thereby reducing the development and maintenance costs of local exchanges significantly.

# 3.2.2.3 Advantages

DCEX has a flexible architecture, comprehensive functions and outstanding performance. Compared with traditional centralized exchange structures, DCEX has the following advantages:

- Greatly reduce the development and maintenance costs of local exchanges;
- Support flexible business customization to quickly meet the needs of local exchanges for business compliance; and
- Allow exchanges within the system to share transaction data and combine liquidity, leading to better trading experience for users globally.



# 3.3 Base Layer - DDEX

#### 3.3.1 Current Situation

Over the past few years, blockchain has experienced explosive growth with a variety of applications emerging. As a medium for value transfer, thousands of tokens were created. Most tokens created were based on Ethereum, leading to a vibrant ecosystem of distinct tokens and a strong demand for exchanges to facilitate the trading of different tokens. However, centralized exchanges do not allow users to have control over their own assets, to which some believes runs contrary to the notion of decentralization, a core tenet of cryptocurrencies. This led to the development of decentralized trading platforms such as Etherdelta, 0x, and IDEX. However, existing decentralized exchanges have the following problems:

- O High technical threshold: Unlike centralized exchanges, DEX transactions are executed via smart contracts and represents actual transactions on the blockchain, requiring significant technical expertise of developers;
- Unoptimized trading experience: Limited by the exchange structure and the performance of Ethereum, trading can take a long time if the network is congested and gas fees may rise significantly. Most of the existing decentralized exchanges are web interfaces, which need to be used concurrently with various browser plug-ins.
  The transaction process is cumbersome and UI/UX is not optimized for the end-user.
- Low liquidity: Most decentralized exchanges lack deep liquidity. This limits the entry of large traders who cannot execute their trades on the platform

To solve these issues, BXA has developed the distributed decentralized trading technology to help partners quickly build user-friendly decentralized exchanges with pooled global liquidity.

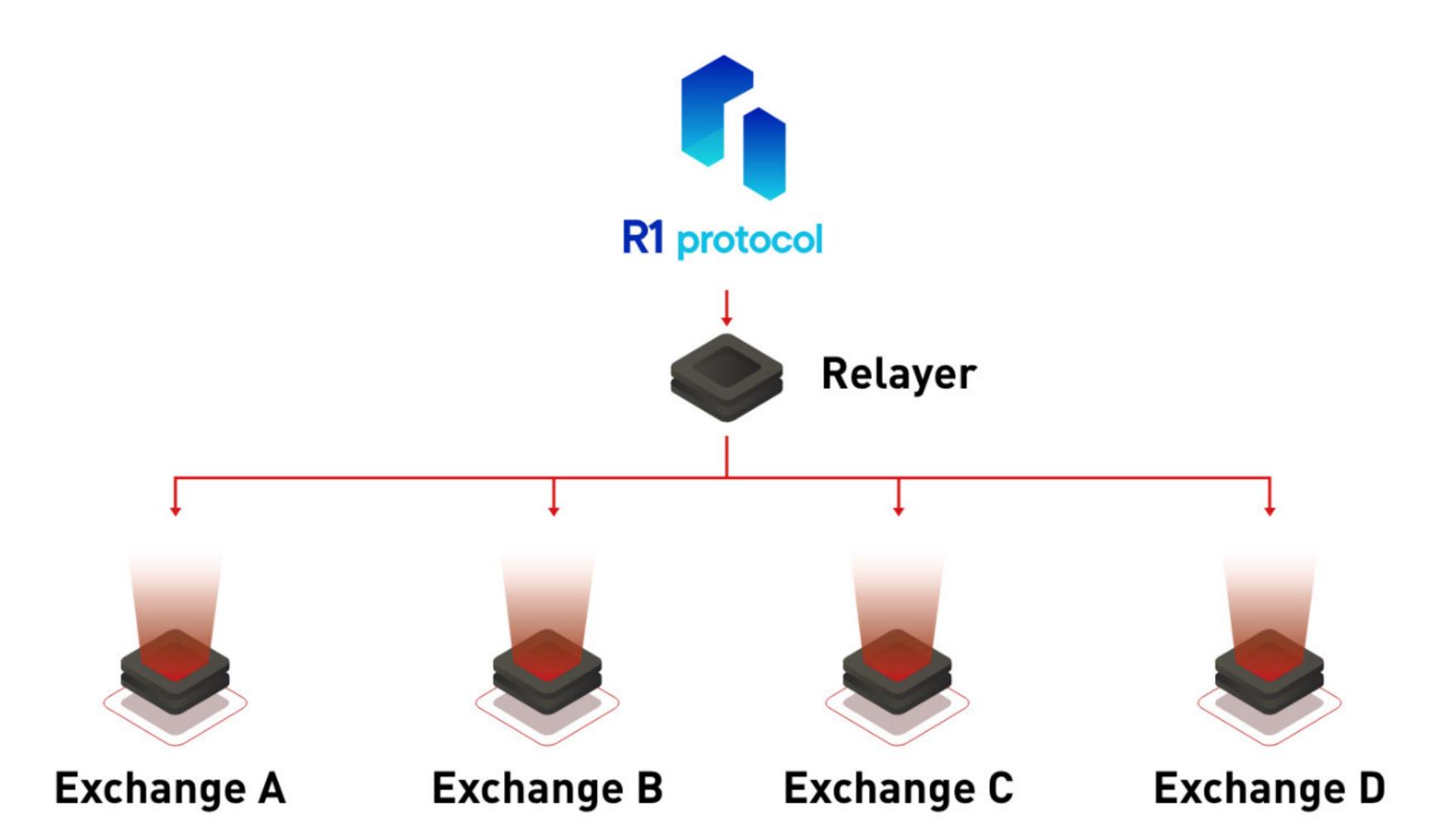
#### 3.3.2 Solution

#### 3.3.2.1 Technology Architecture

The core of Distributed Decentralized Exchanges ("DDEX") is the proprietary R1 protocol. At present, R1 protocol has been deployed on the Ethereum blockchain. The assets are stored securely on-chain, and the order matching is conducted efficiently off-chain. Through the R1 protocol, all connected DDEX can share order data and liquidity, providing users with better experience.

Including the R1 protocol, DDEX has three distinct layers:

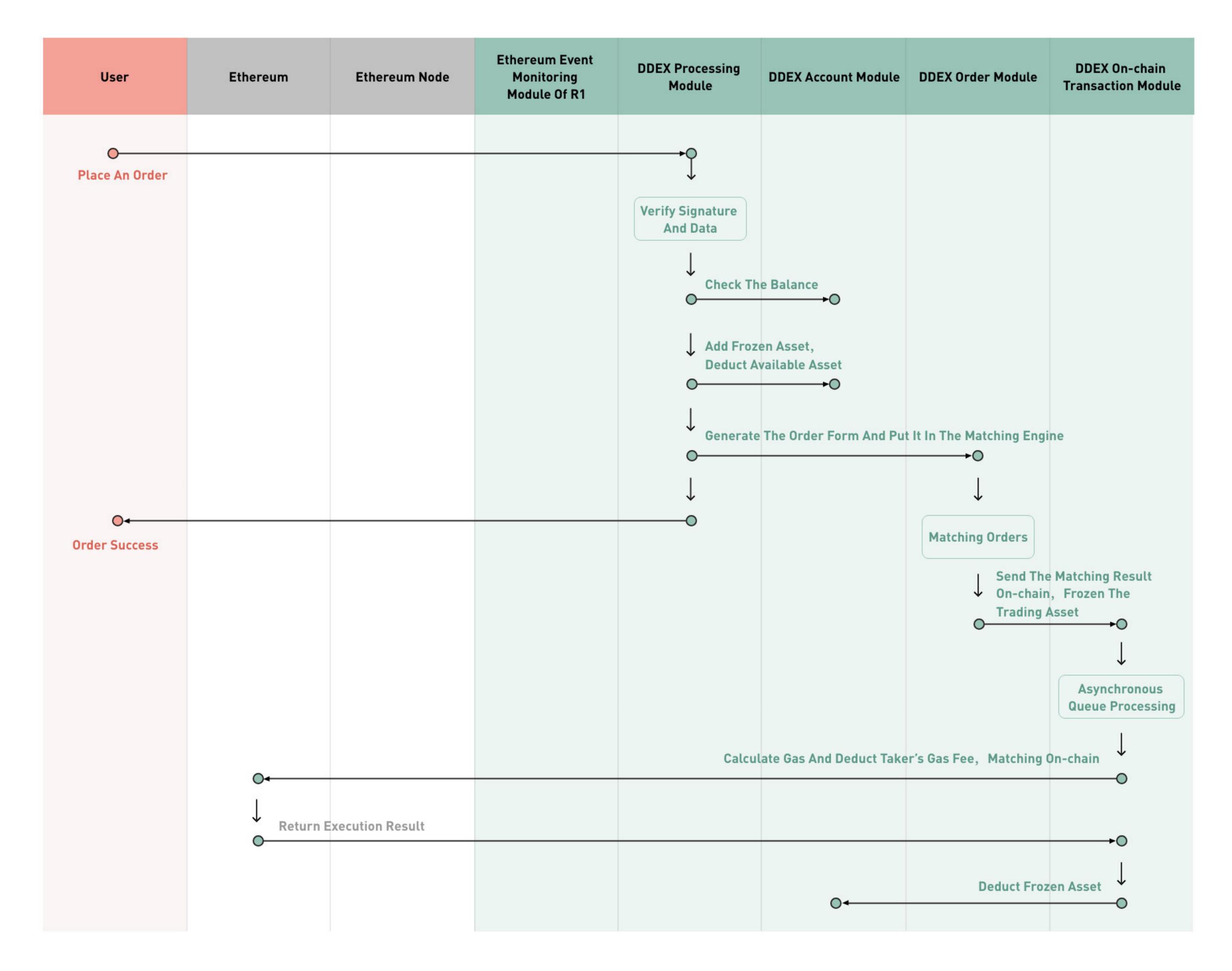
- Relayer: An order relay system that interacts with R1 smart contract and is mainly responsible for order matching and transmitting data onto the chain. Relayer provides OpenAPI externally, allowing third-party exchanges to submit orders to the matching engine.
- O Third-party exchanges: Collect user's order data and submit the signed order to the Relayer.



#### 3.3.2.2 Business Process

A complete transaction process has the following process: user submits a trade order, Relayer matches the order, Relayer submit the transaction data to blockchain, and complete the transaction. The detailed process is as follows:

- (1) A user submits order details, inputting information on whether he is buying or selling the token and specifies the price and quantity. The client converts the data into the standardized order data format.
- (2) The user signs the order with the private key kept by himself/herself; no exchange or Relayer will store the user's private key information.
- (3) Relayer sends the order into the order pool. After the order is signed, the client sends the order information to the Relayer, which will put the order into the order pool for matching after checking the authenticity of the order.
- (4) If order matching is successful, Relayer's matching engine uniformly matches the orders even if they are from different exchanges.
- (5) On the backend, data is submitted to the chain for processing. After successful order matching, Relayer will submit the information of the two orders that have been matched and the trading amount to the blockchain for final settlement.



# 3.3.2.3 Advantages

Using R1 protocol, DDEX has solved the problems of long transaction processing time and unoptimized user experience of existing DEXs, and has the following advantages:

- Efficient: Order matching is conducted off-chain, and the trading experiences are comparable to centralized exchanges.
- Accessible: All exchanges in the system can share order data and liquidity, providing users with better trading depth and higher asset liquidity.
- Low cost: Collaborators can use the modular tools provided by DDEX to build a decentralized exchange with one click, eliminating the high costs of development and maintenance.

At present, the first Ethereum-based DDEX on the largest cryptocurrency exchange in South Korea has been launched and the transaction volume ranks among the top decentralized exchanges. Subsequent version based on other public chains such as EOS and NEO will also be deployed.



# 3.4 Base Layer - Public Chain

#### 3.4.1 Goal

As a secure and efficient digital business alliance, BXA will transfer value among economic entities all over the world. Auditing and clearing are costly and inefficient in existing centralized organizations. Blockchain technology can build peer-to-peer trust in multi-party cooperation scenarios, reduce intermediate costs, and improve efficiency. To this end, the blockchain structure is the best option to build the BXA value networks upon. While processing capacity of the mainstream blockchain systems (ETH, EOS) has been improved significantly, it is far from adequate to support the massive transaction volume of BXA exchange network. Therefore, we have opted to build a high-performance public chain to meet the needs of BXA which fulfils the following criteria:

- Efficient clearing and settlement platform to open channels for internal value circulation;
- Efficient decentralized trading platform to support the trading needs of global users;
- O Secure and easy-to-use token mapping and issuance mechanism to achieve cross-chain circulation of value;
- Easy-to-use business chain expansion mechanism to support the establishment of complex business scenarios;
- Adapt to the regulatory requirements of different jurisdictions globally; and
- Expand and grow the BXA ecosystem by identifying suitable incubator projects and conducting suitable investment in these projects.

# 3.4.2 Solution

#### 3.4.2.1 Technology Architecture

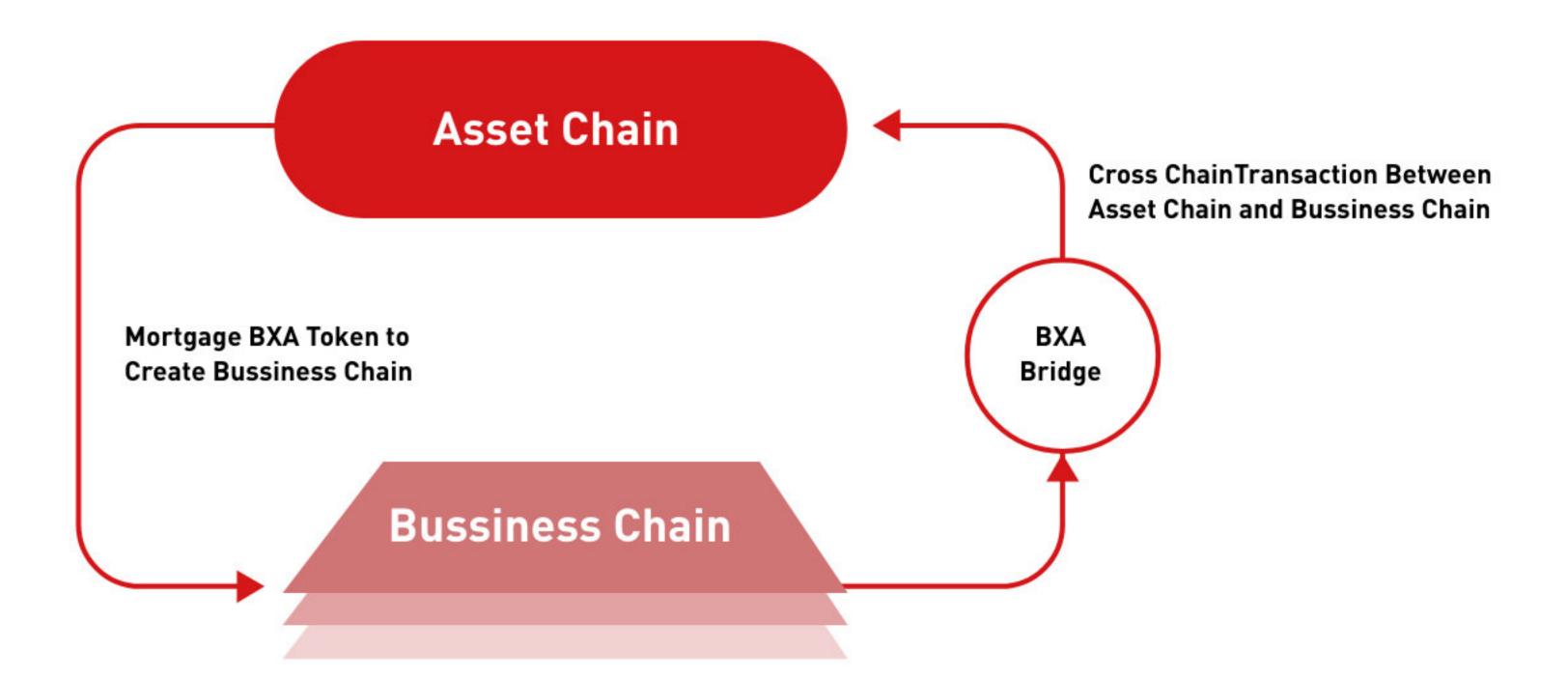
With the six points above as our objective, we created the BXA Chain, a high-performance public chain that supports crypto asset issuance and circulation with the ability to quickly map and distribute crypto assets.

Benefiting from the built-in decentralized exchange protocol and the high processing speed, BXA-based decentralization will provide user experience similar to that of centralized exchanges. The major features of BXA Chain include:

#### Asset Chain + Parallel Chain Design

In terms of technology architecture, BXA adopts the design of asset chain + business chain. The asset chain is used to process asset circulation and the business chain is used to process actual business services. Different business services can be isolated through different business chains. Both asset chain and business chains have their own independent consensus nodes which are based on the same consensus algorithm. Cross-chain transactions between asset chain and business chains are conducted through BXA's Bridge technology.





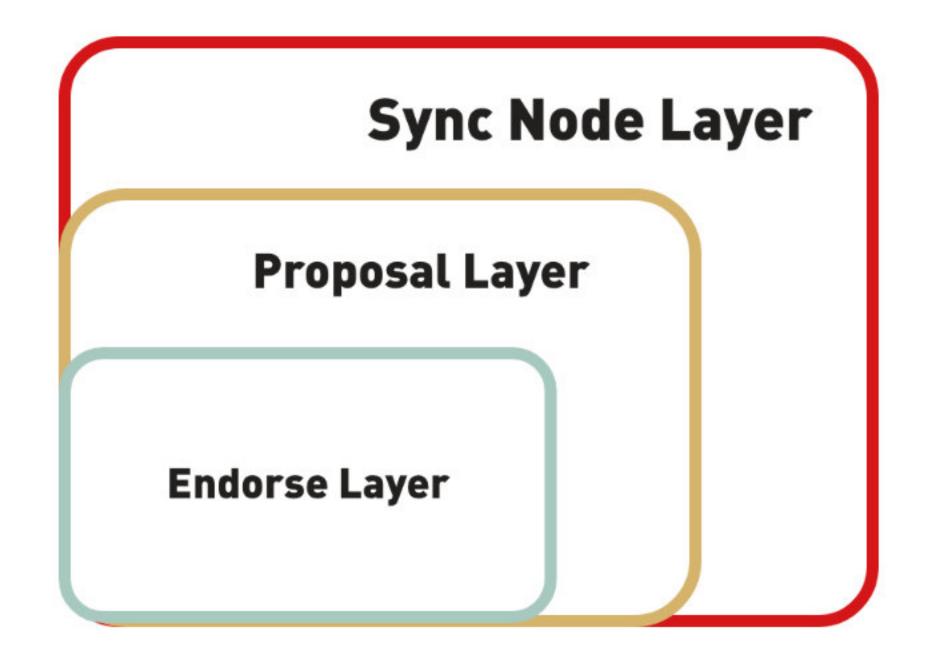
#### **Native Contract**

Through the design of the asset chain + business chain, BXA Chain effectively separates different businesses.

Virtual machines running on business chains support complex contract deployments, while system-level services on asset chain are simultaneously implemented by Native Contracts which are implemented in a native programming language. Featuring high stability and high efficiency, Native Contract enables higher TPS on the BXA Chain. At the same time, the modular Native Contract can help users to securely and quickly define, issue/ destroy, and transfer crypto assets, all of which makes BXA Chain more asset-friendly.

#### **Consensus Cluster**

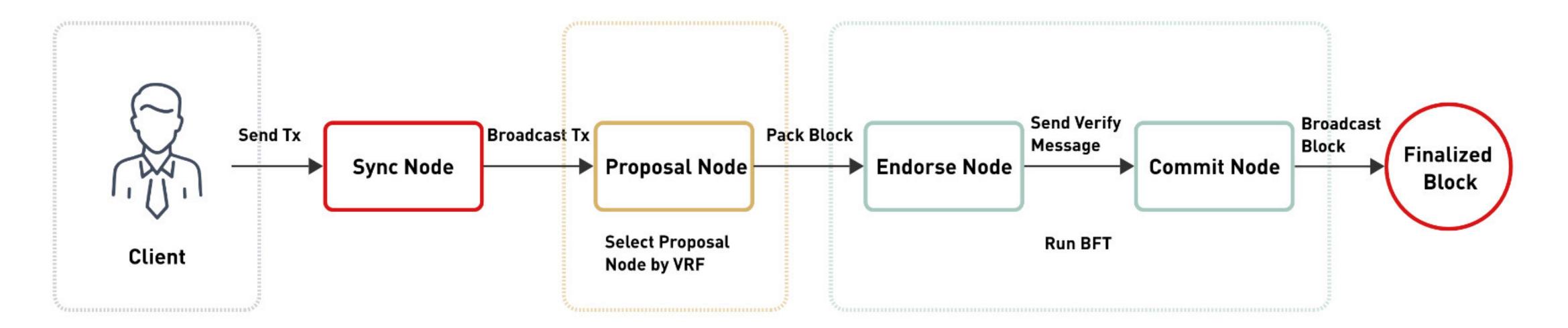
BXA Chain uses OBFT (Open Byzantine Fault Tolerance) as a consensus algorithm. The community stakes BXA tokens to select consensus node clusters, which runs the OBFT algorithm to reach network consensus. Consensus nodes can be divided into proposal nodes, endorse nodes, and commit nodes. Among all nodes within the BXA consensus cluster, a large proportion of nodes are proposal nodes with a significantly smaller proportion of nodes functioning as endorse nodes and commit nodes.





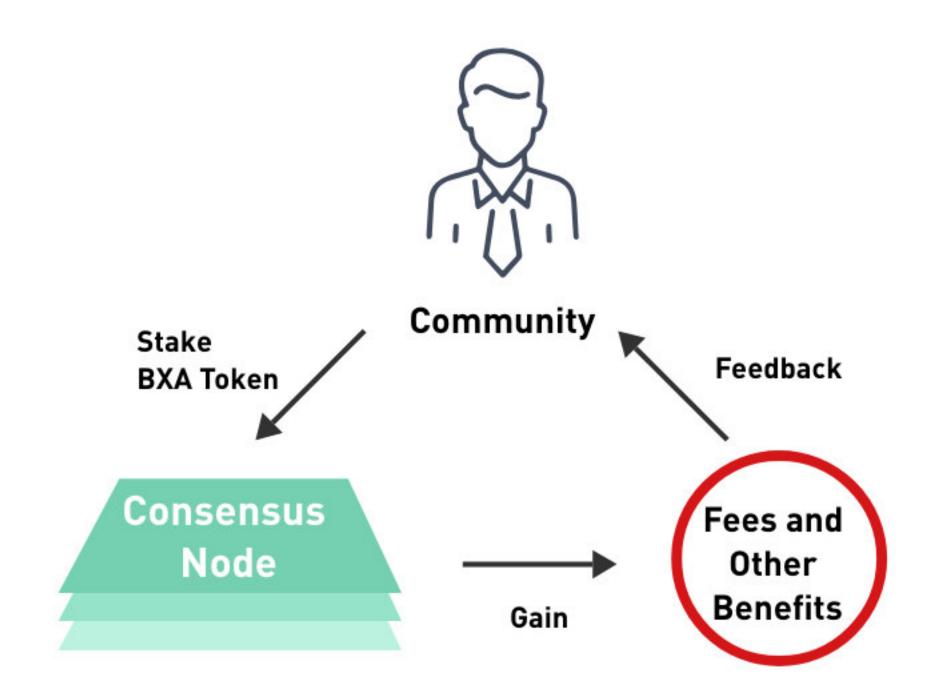
Each round of BXA Chain execution process is as follows:

- (1) The proposal layer randomly generates proposal nodes according to trusted random numbers.
- (2) Proposal nodes package the transaction from the transaction pool and sends it to the endorse layer.
- (3) In the endorse layer, the endorse nodes select the transaction according to the arrival time and then verify the validity.
- (4) Confirm the verification result of endorse nodes. After the confirmation number required by the BFT is reached, the block is valid and will be broadcasted to the entire network.



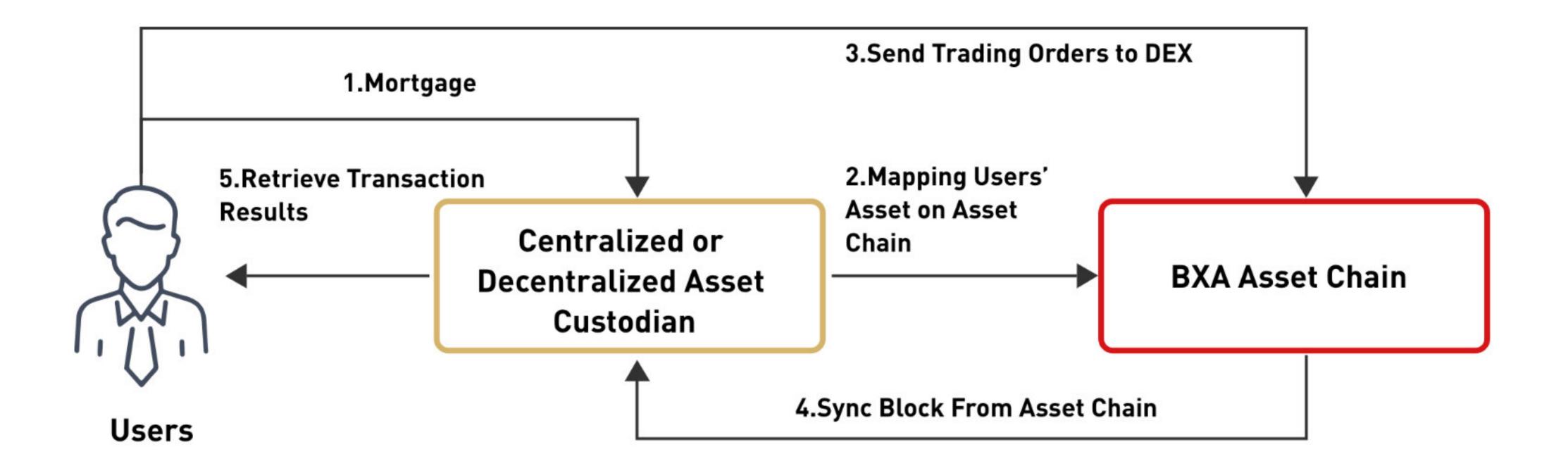
#### Governance on the Chain

Community members can become consensus nodes and participate in governance on the chain by staking BXA tokens. Consensus nodes will share the fee and benefits to encourage participants' positive behavior, ensure the availability and effectiveness of BXA Chain, and promote ecology development.



#### 3.4.2.2 Business Process

BXA is an asset-friendly public chain. We take the asset chain-based DEX transaction as an example to illustrate the main processes of the business.



- O Users mortgage crypto assets such as BTC and ETH to centralized or decentralized asset custodians.
- The asset custodians map the tokens equally to those in users' accounts on the asset chain.
- O Users initiate transaction requests to assets chains through the DEX client.
- Orders are matched on DEX, and the results are sent to the asset chain by the DEX Relayer.
- The asset chain executes liquidation procedure and transfers the corresponding crypto assets to user accounts.
- The custodians synchronize the block of the asset chain to obtain DEX transaction processing results submitted by users.
- O Users obtain the counterparty tokens of DEX transaction from the custodians.

#### 3.4.2.3 Advantages

Compared with other mainstream public chains, BXA Chain has the following advantages:

- The asset chain + business chain design can separate different business scenarios, which can effectively reduce trading amount on the asset chain and greatly improve the processing performance of the whole system.
- The OBFT consensus algorithm has the high processing capability of BFT algorithm and makes up for its centralization.
- O By sharing revenue with consensus nodes, participants can promote BXA ecosystem development.
- The sync nodes can choose the business chain data to synchronize with flexibility according to their needs. If the nodes do not care about the specific business chain, they can only synchronize the asset chain's data, which will greatly reduce the size of data stored on the ledger and lower the threshold of being a synchronous node.



# 3.5 Base Layer - User Terminal

#### 3.5.1 Wallet

Wallet is not only a tool for users to manage crypto assets, but also an entry point for decentralized services. BXA will develop a secure, easy-to-use and scalable multi-chain wallet. In addition to crypto assets management, it will be equipped with rich functions and application scenarios, such as Know Your Customer (KYC), transaction, payment and so on, to be a one-stop digital finance service terminal for users.

The technical architecture mainly includes:

- O Blockchain Light API Crypto asset data interface:
  - The RPC of the blockchain is encapsulated and abstracted into a unified data interface, which can more flexibly maintain the data on the chain without affecting the logical server.
- Wallet Service Wallet Server:
  - Manage user asset information (no private information: such as a private key);
  - Dock cryptocurrency data interface; and
  - Provide customized services.
- O App Mobile app:
  - Encapsulate the interaction on the chain through the wallet server, reduce the complexity, and serve the end users with better interaction experiences.
- SDK Software Development toolkit:
   In addition to docking existing Ethereum DApps, it is easier to launch crypto currency-based services through the SDK.

BXA wallet user can manage all public chain assets with their private key. With security and reliability, the private key is stored locally with encryption, which supports the interaction between hot and cold wallet, as well as the hardware wallet access, Flexible SDK and simple interaction scalability on the chain, allowing Developers to build DAPP more easily and provide comprehensive digital financial services.

# 3.5.2 TouchB

In addition to wallet, BXA has begun to deploy a new payment terminal in 2018: TouchB Payment Kiosk. The TouchB payment kiosk will connect to the BXA payment network, allowing users to make payments in crypto assets or fiat currency. For crypto asset users, TouchB has created real-world applications for them, making crypto assets more practical; for non-crypto asset users, TouchB provides them with a window into the blockchain world.

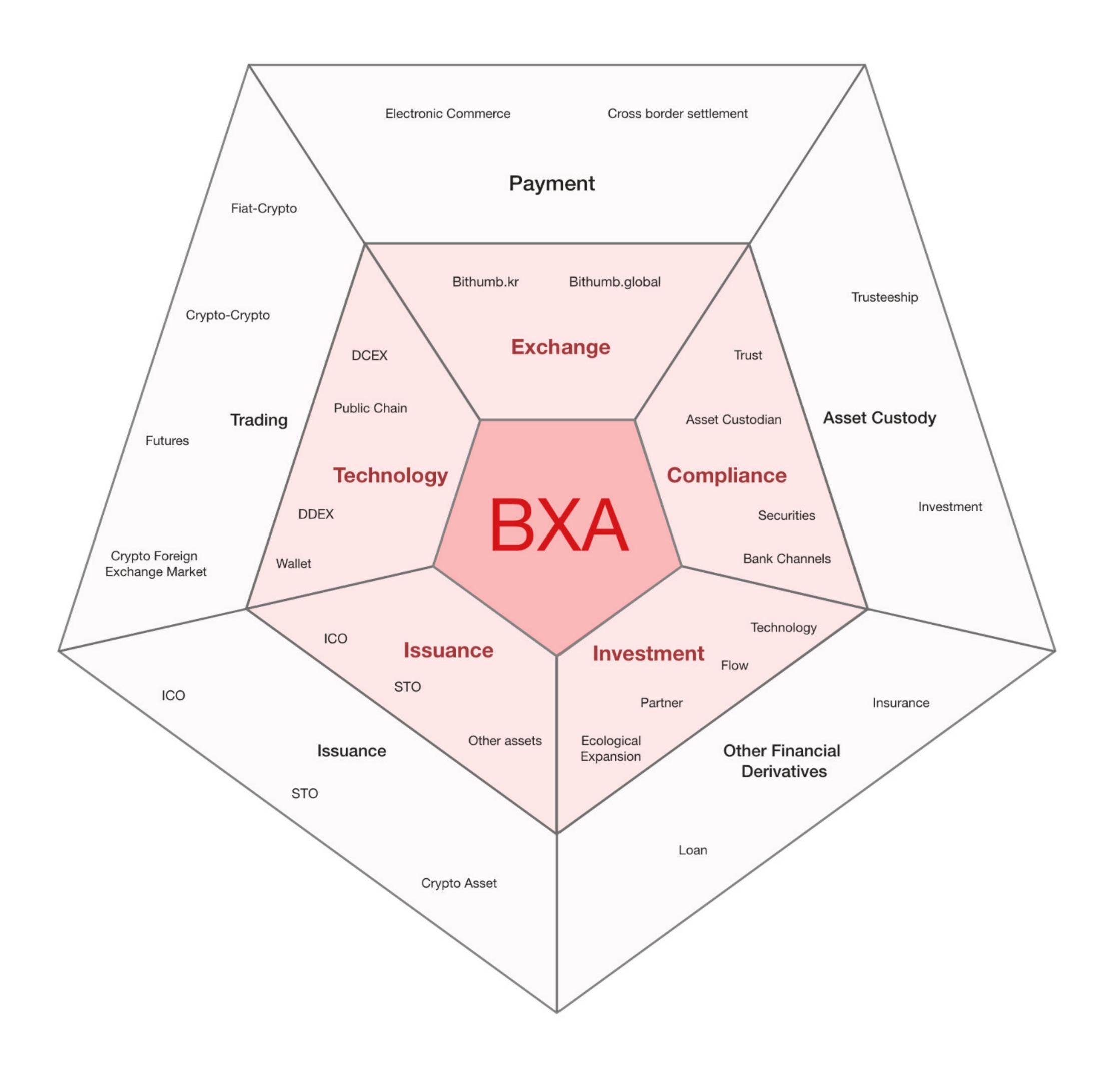
BXA sells or presents TouchB at low cost to merchants to encourage adoption of the BXA Payment Network. In 2018, over 2,000 TouchB Payment Kiosks had been distributed to retail, hospital, hotel and other industries in South Korea, and were adopted by a number of major merchants, including Jucy and Hasot, for the low payment costs. In the future, TouchB will also support other business scenarios of BXA and become the entry point to digital financial services.



# 4. Business Scenario

## 4.1 Business Architecture

With full intention to comply with relevant rules and regulations of the jurisdictions that BXA operates in, we will gradually build multiple business scenarios under the support of infrastructure such as the public chain. Some of the business opportunities include token/security issuance, transactions, payments processing, asset custody, financial derivatives and other financial services. This chapter will focus on the global payment network and discuss business opportunities such as Security Token Offerings ("STO") and cryptocurrencies.





# 4.2 Global Payment Network

#### 4.2.1 Current Situation

With the rapid development of the Internet, the world is becoming increasingly connected. The Internet can spread information at a zero cost but it cannot transfer value without a trusted intermediary in place.

In 2015, the global payment industry revenue was \$1.8 trillion and is expected to grow to \$2.2 trillion by 2020. Banks, payment networks, merchants, POS service providers and other financial intermediaries levies significant fees on every transaction made between consumers and merchants

For the huge fees paid to these financial intermediaries to process payments, the current payment experience, especially cross-border payment, is subpar. Take a successful international wire transfer as an example, it has to go through a number of institutions, of which each institution has its own internal clearing system. Agency relationships has to be established among all agencies before a transaction can be routed through them. Not only does every transaction in cross-border payment need to be recorded in the bank, it also needs to carry out capital settlement and reconciliation with all relevant counterparties, which leads to long processing time. Even so, the cost of making an international bank wire is generally more than 3%.

Leveraging on blockchain technology, BXA is able to aggregate the functions of these financial intermediaries, provide a secure platform that does not require trust in any intermediary and build a more efficient global payment network.

#### 4.2.2 Business Process

BXA will be acquiring the relevant payment licenses from more than thirty jurisdictions, enabling BXA to provide fiat-to-crypto and crypto-to-crypto trading services in BXA exchanges. Among exchanges in different jurisdictions, BXA can use crypto assets to conduct cross-regional clearing and settlement within the system. Because of blockchain technology, this process is secure, happens in real-time, and does not require any intermediaries. On this basis, we can build an efficient global payment network and greatly reduce payment costs. With the transparent and tamper-resistance characteristics offered by blockchain technology, other exchanges and payment providers can quickly join BXA, becoming a member of the global payment network and liquidity pool. This in turn creates a reinforcing cycle of deeper liquidity and less slippage when trading crypto assets. With this, it is now possible to use crypto assets for day-to-day transactions.

Know Your Customer ("KYC") is an important component of BXA to ensure regulatory compliance. After KYC is conducted, a digital identity is created and pegged to the account public address. Transactions can then be conducted among verified merchants and users.

Users can choose to pay in fiat currencies or selected crypto assets which have sufficient liquidity to minimize slippages. If users choose to initiate payment with crypto assets, COIN, as an example, the main process is as follows:

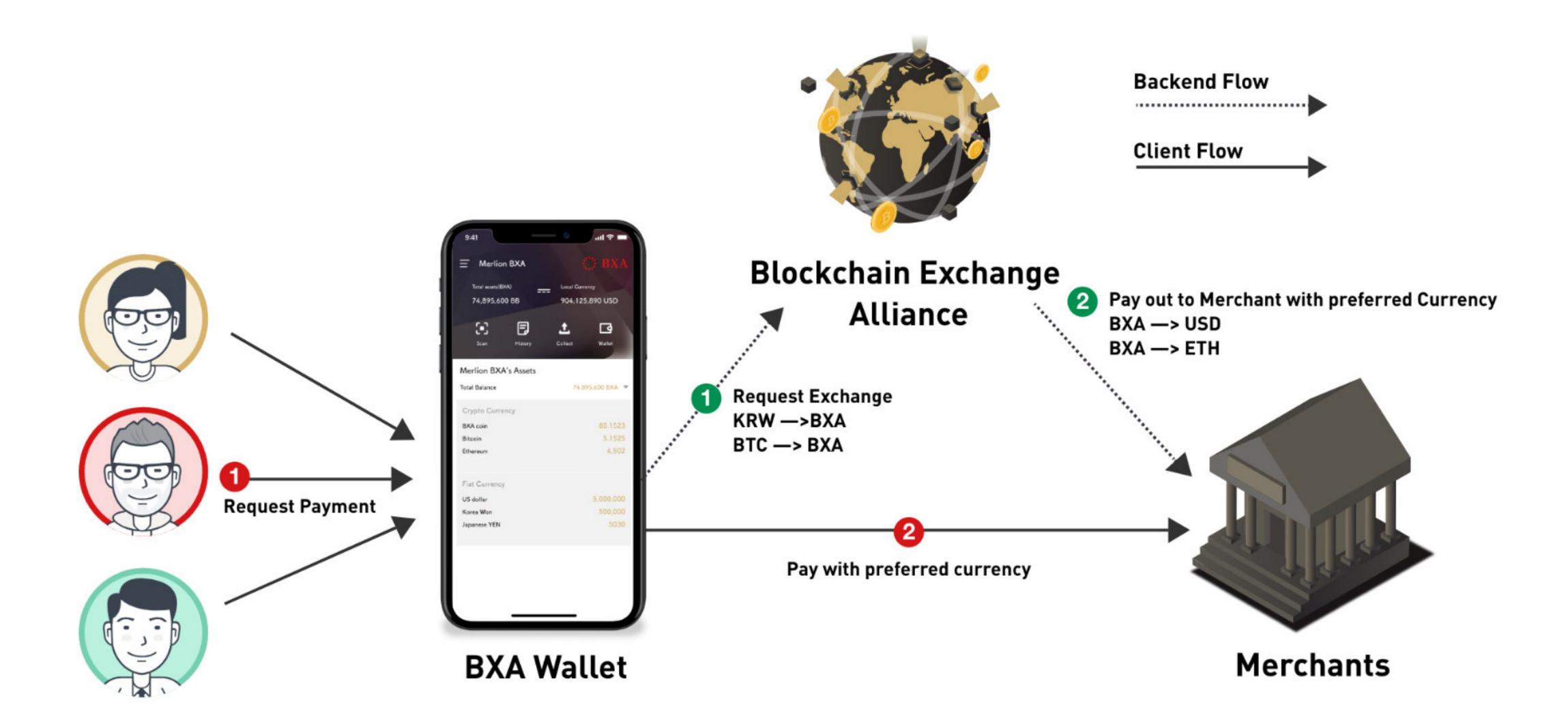


- (1) User pays in COIN at the payment terminal.
- (2) If the merchant supports direct payment in COIN, the COIN enters the merchant's account address and the payment is done.
- (3) If the merchant supports fiat currency payment, COIN enters the local exchange of the country where the merchant is located and fiat is credited to his account after liquidating the COIN. The payment is done.

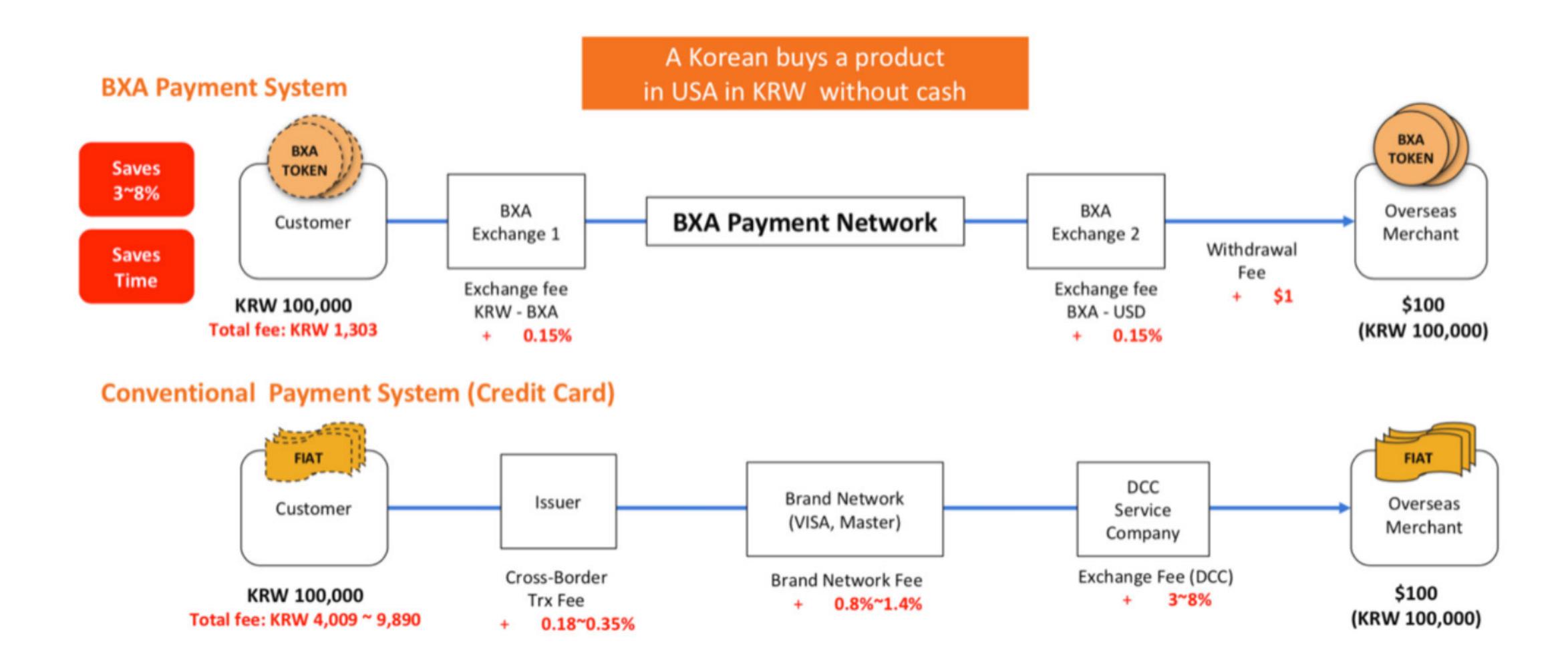
In the actual payment, BXA will select a compliance path according to the regulatory requirements of different regions to complete the payment process.

#### 4.2.3 Advantages

All internal conversion and processes are handled on the backend of BXA infrastructure and users are not exposed to how the currencies are converted. All operations are conducted at the payment terminal with convenience and speediness.



Compared with existing payment intermediaries, such as Paypal, Western Union, Visa and Mastercard, BXA will be able to reduce the payment fee from the existing 3–8% to less than 1%, which results in significant cost savings and helping businesses attract more customers especially in industries with high price elasticity of demand. To further accelerate adoption, BXA is engaging digital companies and organizations that currently process large volume of transactions via digital payment such as industries in e-commerce, logistics, and games.



With the expansion of payment scenarios and the increase of users, the frequency of using crypto coins and crypto assets will continue to grow. Eventually, all this will enter BXA's global order book, bringing unparalleled liquidity and depth.

#### 4.3 Other Business Scenarios

#### 4.3.1 Security Token

## Background

In the past two years, ICO has become an increasingly popular funding method for startups. This new mechanism has provided funding for startups, especially in the blockchain industry. However, due to the lack of regulatory oversight, a significant number of fraudulent or low quality ICOs had perpetuated, dampening investors' confidence towards ICOs.

Most major economies have yet to formulate a suitable regulatory regime for ICOs due to a lack of understanding and clarity on how cryptocurrencies should be categorized into existing regulations. Nonetheless, it is BXA's belief that blockchain and ICOs should be a regulated process. It is heartening to know that regulators are working with blockchain industry practitioners to create a suitable regulatory framework. As a result of cooperation, BXA believe that Security Token Offerings ("STOs") will soon be a new growth driver for the blockchain industry.

Security tokens can be legally issued if they comply with regulatory requirements of the jurisdiction that they were issued in. Security tokens can represent assets such as equity, bonds, intellectual property rights, trust shares, and physical commodities (gold, real estate, art). Through STO, new economic value can be unlocked on the blockchain.

#### Advantages

Compared with existing securitization methods such as equity traded on NYSE or NASDAQ, security tokens can minimize the need and cost for dealmakers, reduce the cost of trust, and improve the transaction efficiency. With proper KYC, all transactions are recorded on an immutable ledger and is transparent. This greatly facilitates the auditing of regulatory watchdogs while improving security for users.

Indeed, existing financial institutions have shown a great interest towards STOs and have begun inhouse experiments on possible applications. When BXA becomes the leading platform for STOs, we will unlock a new growth market that is valued at trillions of dollars.

#### **Solutions**

In view of the immense potential of STOs, BXA has designed our infrastructure to be compatible for future STOs and proposed technical solutions to ensure regulatory compliance. This solution can be divided into two parts (on-chain and off-chain).

The part on the chain includes:

- Security Token ("ST") smart contract: Based on Ethereum, it complies with BXA's ST smart contract standard, of which the functions include ST definition, issuance/destruction, circulation, and regulatory authority management.
- ST trading protocol: A protocol for ST decentralized transactions that allows all ST meeting the criteria to conduct peer-to-peer transactions between qualified users.

Off-chain participants include:

- Issuers: The organization or individual that issues the ST.
- Trusted brokers: Responsible for KYC implementation on users and account open for them.
- Regulators: Responsible for reviewing the issuance and circulation of ST and is able to enforce the operations such as restricting transactions and freezing accounts on illegal accounts.

As an emerging growth driver, STs are still in the exploratory stage and BXA will continue to develop our platform to be fully compatible with STOs so that it can meet the institutional needs and fulfil regulatory requirements to become the gold standard for STO in the future.

#### 4.3.2 Other Financial Service

In addition, BXA will work extensively with experienced institutions to actively explore and provide a variety of financial derivatives and services to meet the needs of users in various aspects, such as lending and investments, to create a global digital financial system.



# 5. Token Mode

#### 5.1 Token Functions

BXA tokens are the main utility tokens of BXA and are used in the BXA ecosystem for all applications developed. The utility of the BXA tokens are:

# **Trading Utility**

In the beginning, trading will give BXA tokens the greatest utility:

- Transaction fees paid by BXA will be discounted on BXA-affiliated exchanges (see the detailed rules of each affiliated exchange for specific discount rate);
- BXA tokens will be used as a base-pair for tokens trading on BXA platform, once there is a sufficient number of BXA tokens circulating in the markets;
- Projects that are keen to be listed on BXA will need to stake certain amount of tokens to enable BXA users to vote for their project. Once the application is approved by voters, the voted token will be listed on all BXA exchanges (subject to the regulatory requirements of the regions where the exchange is located); and
- O BXA token holders can use their BXA tokens to vote for projects they would like to see listed on BXA exchange.

## **BXA Public Chain Utility**

BXA chain is the underlying infrastructure that supports the BXA ecosystem. The BXA token will serve as a fuel for the operation of the public chain. Utility includes:

- O As GAS payment when the asset chain conducts the operations such as transaction sending and contract execution;
- When conducting transactions on DDEX, users get a corresponding fee discount if they stake a certain amount of BXA tokens;
- Because BXA token is the future settlement network of BXA, you can get discounts by paying transaction fees with BXA tokens; and
- Creation of a new business chain requires staking of BXA tokens.

### Payment Utility

BXA Payment network is a core service of BXA. Utility for businesses and consumers includes:

- Using BXA tokens as a currency for payment and enjoy the corresponding discounts;
- O To join the BXA payment network, a certain amount of BXA tokens need to be staked; and
- The payment provider will get a discount on transaction fee if accepting and using BXA tokens for settlement.



# **BXA Expansion Utility**

As a global business alliance, BXA subscribes to the principle of sharing and creating win-win scenarios for our partners.

As such, BXA can provide partners with abundant technical and marketing resources, while the partners need to demonstrate support for BXA tokens in return:

- To join BXA, partners have to stake BXA tokens, for partners with significant strategic value to offer to the BXA ecosystem, the amount of BXA tokens staked might be discounted;
- After paying or staking a certain amount of BXA tokens, BXA members will be able to run their DDEX or DCEX built by BXA, which can access the global traffic pool of BXA to share order data and liquidity; and
- As a digital business infrastructure, BXA welcomes all merchants to provide services in the ecosystem. However, in order to protect the rights and interests of users, merchants need to stake a certain amount of BXA tokens.

# **Ecosystem Governance Utility**

O Holding BXA tokens, you have acquired the right of ecological governance, which means that you can participate in the governance of BXA public affairs by voting and running for nodes.

With the development of the BXA ecosystem, financial services and application scenarios will become increasingly widespread. Whether as utility token or governance token, BXA token will play an irreplaceable role and continuously enhance intrinsic value with the support of global traffic.

#### 5.2 Token Distribution

BXA token will first be issued as a transitional token based on the ERC20 standard. After the public chain is launched, BXA token will be converted into native tokens on the mainnet. The total supply of BXA tokens is fixed at 20 billion and there will never be any new tokens minted. The token distribution plan is as follows:

- O 15% for privatesale, unlocked in batches within 10 months
- 15% to early investors
- 20% to strategic partner
- O 10% to BXA Distributed Exchange Alliance
- o 15% to the BXA team
- 20% for BXA Reserves
- 5% for Marketing & Bounty

#### Token Distribution Private Sale Reserves 15% 20% Marketing & Early Investor Bounty 15% 5% Team 15% Strategic **Partners** Exchange 20% Alliance Strategic Partners Private Sale Early Investor Exchange Alliance Team Marketing & Bounty Reserves



# 6. Roadmap

