DCOREUM

Whitepaper

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Content

Foreword

Every new beginning comes from some other beginning's end, new era "species" is rising.

Evolution of an era is growing rapidly, and new technologies are born every century. In the last century, technology information, biotechnology, new materials and new energy have changed the cognition and structure of human society from the whole to the part.

Today, the era of Artificial Intelligence (AI), Blockchain, Cloud and Big Data are coming to us, and the development of technology pushes us to a new era -- the era of a digital economy with artificial intelligence.

In the process of exploring the development of digital economy, the Web3 world that is supported by blockchain technology as the underlying infrastructure is rising, and an Internet revolution has arrived.

Web3 different from Web1 and Web2 in the past, Web3 is a new iteration of the Internet, an Internet era dominated by decentralization. Web3 users is growing, the global crypto population has increased by 178% in 2021, rising from 106 million to 295 million, and expect number of global crypto owners to reach 1 billion by the end of 2022, reported by Crypto.com.

As the population of Web3 growing and the Web3 infrastructure improving, it showing a change from "dirt road" to "paved roads" – it's capable for driving but not yet for flying. Various applications like DeFi, GameFi, SocialFi, metaverse, DAO, storage, privacy, and creator ecosystems are thriving.

However, the above ecosystems are not enough to make the Web3 era explosion because there is still lack of support of traditional businesses and participation of more Internet users. New technologies generally start from the exploration by a few technical elites and geeks and then gradually spread through government and commercial applications until the participation and use of the general public is grow. Only when the various ecosystems of Web3 reach the perspective of all ordinary users, can it be said we have truly entered the Web3 era.

DCOREUM, the decentralized economy ecosystem, was founded to enrich the ecosystem of Web3, gather traditional businesses, bring new mechanisms and interaction methods to traditional businesses. Empower and upgrade traditional business from the perspective of value creation at the application layer rather than the simple transformation of their products.

In the early stage of DCOREUM ecosystem , it has a huge traffic portal; widely covering a variety of media and social platforms; simultaneously connect various online and offline community resources; facilitate project consensus and community growth; promote the project to Web3 users, and support the rapid development of the industry.

The digital world of the "Internet of everything" led by Web3 is accelerating towards us.

Are you ready?

Let us grasp the beat of this era and look forward to "Web3 -- the Future Digital World".

Background

DCOREUM was originally built as a series of extensions after the creation of the blockchain payment platform of X Infinity in 2018.This fintech company builds Web3 global payments solutions for crypto platforms, by providing digital wallet functions; fiat and crypto currency exchange functions; issuing tokens in SHA256 or ERC20, QR Code transfer; supporting merchant outlets and systems, market analysis, etc. Actively building a Web3 global payment complete solution with decentralization and blockchain expertise.

Later, in the development process, X Infinity found that providing global payment solutions for Web3 could only partially meet the comprehensive development of the Web3 ecosystem. After increasing of the traditional businesses cooperation with X Infinity, the traditional businesses are looking for Web3 opportunities through X Infinity, then X Infinity and other early ecosystem projects are starting to take a deeper strategic planning.

As a result, DCOREUM, a decentralized economy ecosystem, was born, dedicated to building the world's first economy blockchain and becoming a bridge between traditional industries and Web3.

1. DCOREUM Value Consensus

1.1 The Transformation of Traditional Business by Web2

Business is an economic activity in which currency is used as a medium for exchange to achieve the circulation of goods, as well as an organized activity to provide goods and services required by customers, its essence is exchange. The industry encompasses business, which in terms of categorization, is classified as a tertiary industry, namely the service sector, which includes business and personal services, etc.

Based on the original definition of business, the traditional business model has added many restrictive attributes and usually refers to the operation way in the business field of industries with long existence, low technology and poor innovation ability. Based on this understanding, physical shops can be understood as the traditional industry, and the corresponding new retail is the emerging industry.

In the rapid development of Web2, the traditional business model has been impacted to a certain extent and ushered in the following changes:

1) Break through geographical limitations. Users can break through the original scope of activities to choose a more diverse lifestyle, such as online taxi booking, online financial lending, online education, O2O laundry, manicure, food shopping, and massage. To reach a wider range of people, location selection is no longer as important as it once was.

2) Break through time limit. Instead of being subject to the "business hours" of traditional industries, some services can even be enjoyed and provided 24 hours a day.

3) Disintermediation. The Internet has been eliminating information asymmetry, from information asymmetry in information content to now eliminating information asymmetry between service consumers and providers, reducing transaction costs for both parties through platforms.

4) Wider market. After breaking through space, time and disintermediation, it will inevitably attract more market participants and service consumers.

5) Create new products and services. The four points above mentioned will inevitably bring new services and products to traditional businesses.

1.2 Web2 Weaknesses

Web2 has been in development for over a decade since 2003, and although the Internet era was a revolution from core content to external applications, Web2 has now presented many problems, such as excess on the distribution side, channel overload, lack of user attention, overly mechanical authentication, unsecured account security, centralized privacy issues, inability to meet users' value needs, etc.

Web2 began to face doubt frequently in 2015. Tech companies obtained commercial value of unparalleled wealth by exploiting and selling personal privacy and data without users' permission, while the users who owned the data could not get any benefit from it. The exchange between platforms and users became unequal, and the business model of Web2 added significant hidden costs to users.

On the other hand, as a transition product of the development of the Internet, Web2 has also realized the transformation or empowerment of some physical businesses -- games, food and beverage, retail, communication, culture and tourism, transportation, education, finance, medical and so on.

However, whether the Internet consumption transformation to Consumer or the industrial Internet upgrade to Business, their essence is the online, digital and intelligent transformation for traditional business. Moreover, all these transformations cannot be separated from the core problems faced by Web2 mentioned above, and the business transformation and development based on Web2 also have to face the new issue of "requiring the redistribution of Internet value."

1.3 web3 Economy – Creating New Markets and Business Models

1.3.1 Web3 Innovation

Web3 brings not merely technological innovation but also a key step from technological innovation to user concept innovation in the development of the Internet.

In a narrow perspective, the Web3 phase allows users to manage their data more autonomously and derive value from creating Internet content, with a unified communication protocol and through a more concise approach, whereby users can receive personalized services that can be read, written and owned.

In a broad perspective, Web3 has designed new technical protocols and built new infrastructure to make the Internet more decentralized and secure, and users to take control of their own digital identity and digital assets, creating an economic system in the digital world for the first time that can truly deal with the right, circulation and trading towards data elements, thus realizing synergistic innovation between the technical and economic systems, and promoting the integrated development of the digital economy and the real economy.

1.3.2 Web3 Economy

Web3 features the key characteristics of decentralization, machine trust, creator economy and digital nativity. In terms of application, the biggest difference between Web3 and Web2 is reflected in the greater subjective initiative of Web3 users regarding data and financial assets. The creation of digital tokens enables every contribution act of Web3 users to be valued, thus expanding the boundaries of the Internet economy.

Three core features of Web3 Economy:

1) The creator economy encourages the co-construction and co-sharing of new protocols and formulation rules for Web3 applications, allowing everyone to participate in the application scenario based on open and transparent rules, enabling any participation and contribution in the ecosystem to be empowered and rewarded.

2) Distributed innovation facilitates rapid iteration. The value circulation of digital assets and data in the Web3 ecosystem accelerates the rapid iteration of innovative applications, and the Web3 economic space develops rapidly under the open collaboration model of decentralized organization.

3) An open economic circle accelerates the flow of value. Web3 economic space breaks the geographical boundary of the network world, the collaboration boundary of the industry chain, and the role boundary of the organizational structure. The Web3 open economy system is built through interoperable digital identities and digital assets, allowing the mutual flow of user and asset data within different economies, promoting continuous innovation in business models and forming a wider market scale and economic ecology.

Web 3.0 can create more diverse interactions, break through worldwide interaction barriers, and create new markets and business models by linking data from individuals, enterprises and machines with efficient machine-learning algorithms through cryptography.

1.4 Harvesters take the leap & Traditional Business test the water

As Web3, Metaverse, NFT and other concepts and technologies constantly breaking through, Web3 has received unprecedented attention, whether individuals, enterprises or institutions want to enter into the Web3 world. Tech companies as "vested interests" in the Web2 era are aggressive, for example, Twitter, Google and other companies are pivoting to Web3, including data storage, social networking, digital currency and more. eBay allowing NFT trading and acquired dedicated NFT Marketplace KnowsOrigin. Amazon own Crypto and Web3 company cloud services market for more than 50%, including the top three crypto exchange. Tencent, Ali, Byte, Baidu, JingDong and other tech giants use NFTs as the Web3 entry point, to extend their reach into new areas. In addition, World-renowned investors and public companies such as SoftBank, Sequoia Capital, Blue pool Capital, Temasek, Horizons Ventures, A16Z, MicroStrategy, Marathon Digital Holdings Digital and others bringing massive funds into Web3 territory.

Traditional business entities, which are mainly offline, oriented towards the consumer and small business, with consumption and transactions as the main scenario, have not been genetically linked to the digital economy but have been influenced and transformed during the development of the Internet. The traditional business entities are the mainstream and dominant force in the city, and the advanced and developed business is a symbol of the economic development of the modern city. Along with the increasing interaction between traditional industries and individuals at the level of data and assets, industry digitization has become a new direction for the deep integration of the traditional economy and Web3.

Compared to the related industries layout by the tech giants, investment institutions and listed companies and other subjects with first-mover advantages, the traditional business economy has the characteristics of huge traffic, wide audience and rich scenarios. For the stock economy, whose value system is dependent on the framework of the traditional economy, Web3 creates the conditions for a self-looping digital native in the embedded value system, extending economic activities to the virtual world and giving rise to multiple types of digital native application scenarios. Therefore, once the relevant scenarios are officially entered, the advantages in terms of audience numbers and categories, market volume, application scenarios and replicability will bring explosive growth to the industry.

2. DCOREUM Overview

2.1 About DCOREUM

DCOREUM is a decentralized economy ecosystem based on Web 3.0 and the world's first comprehensive blockchain project that is organically combined with blockchain, real industry, and traffic economy。

Relying on its extensive business experience and complete investment system, DCOREUM will better empower and upgrade various business entities through blockchain technology.

DCOREUM selects the most robust blockchain of the entire network as the service support. Currently, BNB chain is used as the primary carrier. In the future, multi-chain expansion will be conducted with other mainstream public chains such as Ethereum and Polygon, to enhance the carrying capacity of the network layer and expand the extensiveness of the underlying support, to realize the data and assets circulation without delay, borderless and decentralized. DCOREUM is preparing to build its own blockchain system to further extend the depth of the project and allow more projects that want to enter Web3 business to link to DCOREUM ecosystem seamlessly.

Through blockchain, DCOREUM can optimize and upgrade the business model of the existing real businesses related to industry, culture and finance; for specific projects, such as games, social media, media, MCN and even blockchain projects, and it can provide continuous empowerment in strategy, product, branding, operation, and investment and financing sectors. For example, in real economies, through infrastructure tools such as connecting Web3.0 wallets, it is possible to redefine the brand of products and expand the boundaries of the business landscape, and each individual user can regain the data-exclusive of identity information, which strengthens the trust between enterprises and users. In the cultural and art industry, exclusive NFT can be created through DCOREUM to protect the copyright of artists, at the same time to expand the dissemination of artworks for better commercial value; NFT-based Metaverse is also a necessary carrier to promote the connection between virtual and real business.

All these actions are just the tip of the iceberg of DCOREUM. Dcoreum has connected various quality projects in a variety of industries including real estate, finance, media, entertainment, gaming, etc.

DCOREUM as a Web3 Global Economy Ecosystem can serve various industries, countries, and business ecosystem, to achieve low-cost mutual benefit and build DCOREUM into the world's largest decentralized business platform through the business concept of co-construction, co-governance, and co-sharing.

2.2 How DCOREUM connects traditional business and Web3

2.2.1 Traditional business enhances the resilience of the blockchain ecosystem.

If the beginning of the commercialization of the Internet was the invention of the World Wide Web and the birth of the browser, the beginning of the commercialization of the blockchain was DeFi and NFT.

In May 2020, DeFi is exploded by DeFi lending leader Compound by using innovative lending-as-mining to skyrocket the amount of liquidity pool by ten times in a month, with high COMP valuations. After this, new DeFi concepts emerged, with lending platforms, decentralized exchanges, decentralized autonomous organizations, oracle machines, etc. Excellent DeFi projects have used the Token liquidity mining to achieve user cold start. The total market value of the top 100 DeFi projects rose from billions of dollars to a maximum of 120 billion dollars in the second half of 2021.

Mike Winkelmann, a digital artist known as Beeple, sold his NFT digital artwork "Everyday – The First 5000 Days" for $69 million at Christie's on March 11, 2021. After that, Zion Lateef Williamson, Takashi Murakakou, Snoop Dogg, Eminem, Twitter CEO, Edward Joseph Snowden, Paris Hilton, Yao Ming and other stars and artists from all walks of life have released NFTS through various NFT platforms, introducing NFTS to the public.

DeFi and NFT are in-system business models built based on the blockchain.Although they have bringing a staged prosperity to the overall crypto market, the lack of underlying asset backing, relatively homogeneous product categories and overly financial characteristics of the bearer products have made these products inherently fragile and lack resilience. Especially after being affected by the global market depression and the deeper ripples caused by the major news events (Luna collapse, FTX bankruptcy) themselves and their aftermath, the disappearance of billions of dollars from the ecosystem and the increase in regulatory and criminal investigations, everything has put the business model of the in-system cycle of the blockchain to a major test.

2.2.2 DCOREUM Three Core Strengths

DCOREUM is positioned as a decentralized economy ecosystem, dedicated to building the world's first economy blockchain and becoming a bridge between traditional industries and Web3. It depends on the three core strengths that DCOREUM has: ecology, flow, and technology.

1) Ecosystem

The importance of ecosystem to blockchain projects, especially blockchain, is self-evident. The ultimate goal of DCOREUM blockchain is to pursue the prosperity of "application ecosystem," closely related to the real economy and human life.

Unlike all existing blockchain projects, the DCOREUM project has had a relatively complete ecosystem and application scenario since its establishment. At present, DCOREUM has already achieved partial ecosystem development and expansion.

At present, DCOREUM has cooperated in real estate, finance, media, entertainment, catering, tourism and games and other fields and will develop more application products based on a blockchain. Through the expansion of the ecosystem industry, the development of the DCOREUM project has truly realized the implementation of blockchain technology, strengthened the integration with the real economy, and made the project more resilient, cyclical adaptable and anti-risk ability.

DCO, token of DCOREUM already listed in DEX, which can be freely circulated in the secondary market. After certain product upgrades and community expansion, more CEX will be listed to promote the development of DCOREUM better.

2) Traffic

The real value of blockchain is reflected by user participation, and without a user database, there is no room for development. Building up a healthy user ecosystem with the internal drive is the main foundation for the long-term development of blockchain projects.

Since DCOREUM has already had a large natural traffic resource from community, media and entertainment sectors since its launch, for example, CH90 DAO focuses on education and project guidance related to blockchain, offering zero thresholds of entry for Web2 users.

In addition to the user ecosystem, DCOREUM has joint with numerous blockchain project owners, technology developers, exchanges, industry media, capital ventures, blockchain communities and blockchain service platforms to form an extensive user ecosystem. Through the participation and contribution of these investors, DApp users, code contributors, management volunteers and other different roles, the user ecosystem of DCOREUM is getting rich and diverse and can also absorb more information about user needs during the product iteration process to help the improvement and development of the project.

3) Technology

As a blockchain infrastructure for enterprise businesses, the DCOREUM blockchain pursues "higher throughput, faster confirmation and stronger security," benchmarking against the traditional Visa and Alipay payment experience.

On the other hand, DCOREUM focuses on the upgrading and application of Defi, NFT and other segments in the direction of industrial layouts, such as AIGC, virtual reality and other interactive technologies and modes. On the premise of safeguarding user identity and data autonomy management rights, it strikes a balance between efficiency of interconnection and fairness of rights and interests through consensus algorithms, smart contracts, cryptographic communication and other technologies and explores the value of data.

For example, Demon War, a blockchain game project in ecosystem, is creating a completely independent virtual game world, reshaping the panorama of "production, life and ecosystem," involving many virtual reality scenes, and organically combining the economic model with Defi.

See "3. DCOREUM Economy Blockchain Implementation" for details.

2.3 DCOREUM Advantages

DCOREUM: The emergence of decentralized economy ecosystem is tasked with helping traditional businesses enter the Web3 world at a lower cost and more efficiency. DCOREUM organically combines blockchain, real industry and traffic economy. Relying on its extensive business experience and complete investment system, DCOREUM will better empower and upgrade various business entities through blockchain technology, becoming a bridge between traditional industries and Web3.

1. Diversified use scenarios

The development of ecosystem partners in all fields and multiple dimensions brings inherent advantages to DCOREUM, and the perfect use scenarios make blockchain empowering the real economy no longer on paper.

2. Large volume of traffic data

The projects of DCOREUM ecosystem have a large traffic access, with wide range of media and social platforms that can be simultaneously opened up and at the same time connect various online and offline community resources to facilitate project consensus and community growth.

3. Complete multi-chain technology

In addition to the circulation of DCO in its own blockchain, DCO is currently also available on the BNB chain, and will subsequently expand on other public chains, such as Ethereum, Polygon and other EVM-compatible public chain, to expand the scope of interaction and use.

4. Token economic value

In order to guarantee the actual value of DCOREUM tokens and at the same time expand the development of community's consensus, DCOREUM builds a complete token economy system in which token holders can fully enjoy the diversified resources and revenues brought by the project.

2.4 DCOREUM Vision and Mission

Vision： DCOREUM is dedicated to building a business world where Web2 and Web3 can interact seamlessly.

Mission：

1) Helps traditional businesses enter Web3

DCOREUM is determined to become a bridge between traditional businesses and Web3. After the comprehensive research by Research DAO, DCOREUM helps it to enter Web3 at a lower cost and more efficiently, brings a new mechanism and interaction mode to traditional businesses, and enables and upgrades traditional businesses subjects from the perspective of value creation at the application layer, rather than superficial transformation of its products.

2) Helps individual investor to gain value in Web3

The IDO platform product of DCOREUM will be one of the ways for individual investors to choose to participate in Web3. In selecting cooperation projects, DCOREUM has established a professional and rigorous process, and data indicators to provide the first protection measures for individual investors.

Secondly, the ecosystem application scenarios of DCOREUM will cover all aspects of life. Individual users can use DCO tokens in their daily life scenarios, and in the future, DCOREUM will also link with other business segments to serve users.

In addition, DCOREUM's DeFi product, innovates the way users participate, reshapes the new model of liquidity mining, builds a full life cycle of DCO token application scenarios, establishes a more effective market linkage, allowing individual investors in the ecosystem to have access to disruptive growth margin.

3) Helps the overall development of the Web3 industry.

Currently, there are mainly tech giants, institutional investors, listed companies and global renowned brands that can easily seize the opportunity to enter Web3. In contrast, the Web3 entry threshold for traditional business is higher because they need more support from the latest technology and the help of huge capital. However, traditional

business brings huge users and traffic to Web3. Therefore, DCOREUM hopes to integrate more traditional business application ecosystem through a decentralized economy blockchain to help overall development of the Web3 industry and diversify the whole Web3 industry.

2.5 DOCREUM Business Design Concept

DCOREUM has undergone careful design and polishing by a professional team in the architecture of the business and involves several ecosystem application segments in the horizontal expansion of the industry chain to meet the needs of users for multiple application scenarios of DCO token, allowing more massive user and traffic from the business sector to enter Web3 through DCOREUM.

DCOREUM not only brings innovation in application scenarios for traditional businesses but also brings new empowerment opportunities for already connected traditional businesses when both ecosystem and users become mobile, prompting it to reach an optimal positive cycle of co-building ecosystem, co-sharing traffic resource, and redistribution of value.

In addition to the horizontal industry chain, DCOREUM decentralized economy blockchain will also connect GameFi, DeFi, NFT, Metaverse, and infrastructure (exchanges, wallets, payment platforms, etc.) compatible with the various channels of blockchain so that traditional business and Web3 have a diversified interaction. Accelerate the growth and development of Web3 economic and ecosystem.

2.6 DCOREUM Ecosystem Application Overview

DCOREUM provides a digital business world of with co-construction, co-sharing and co-governance, building exclusive communities that link industry leaders in multiple areas, which has helped the DCOREUM decentralized economy ecosystem network develop rapidly.

See "4.2 DCO Ecosystem Application Scenarios" for details.

3. DCOREUM Economy Blockchain Implementation

3.1 DCOREUM Blockchain Development Background

During the design discussion and practice of the business, the DCOREUM team found that it was far from enough to focus only on the horizontal expansion of the ecosystem or the iterative update of the application layer, which could not meet the application needs of the ecosystem layer, carry the huge traffic and user base, and achieve in all aspects the vision of DCOREUM to become a bridge between traditional business and Web3.

Therefore, DCOREUM decentralized economy blockchain came into reality.

DCOREUM decentralized economy blockchain dedicated to solving scalability and usability issues, leveraging the existing developer community and ecosystem without compromising decentralization. It is an offline/sidechain extension solution for existing platforms that provides scalability and superior user experience for DApps user functions.

3.2 DCOREUM Technical highlights

The DCOREUM economy blockchain is a branch of the core ETH with an account abstraction layer supporting Ethereum Virtual Machine (EVM). The DCOREUM decentralized economy blockchain combines the benefits of the Bitcoin and Ethereum blockchains and constructs a proprietary blockchain upon them, which can remain decentralized and support Ethereum applications while significantly improving TPS performance. Its new data structure helps to increase development speed and support faster release cycles, enabling sequencing at very low bandwidths, thereby achieving higher throughput and delay minimization.

Data structure of block data and transaction dissemination occurs independently
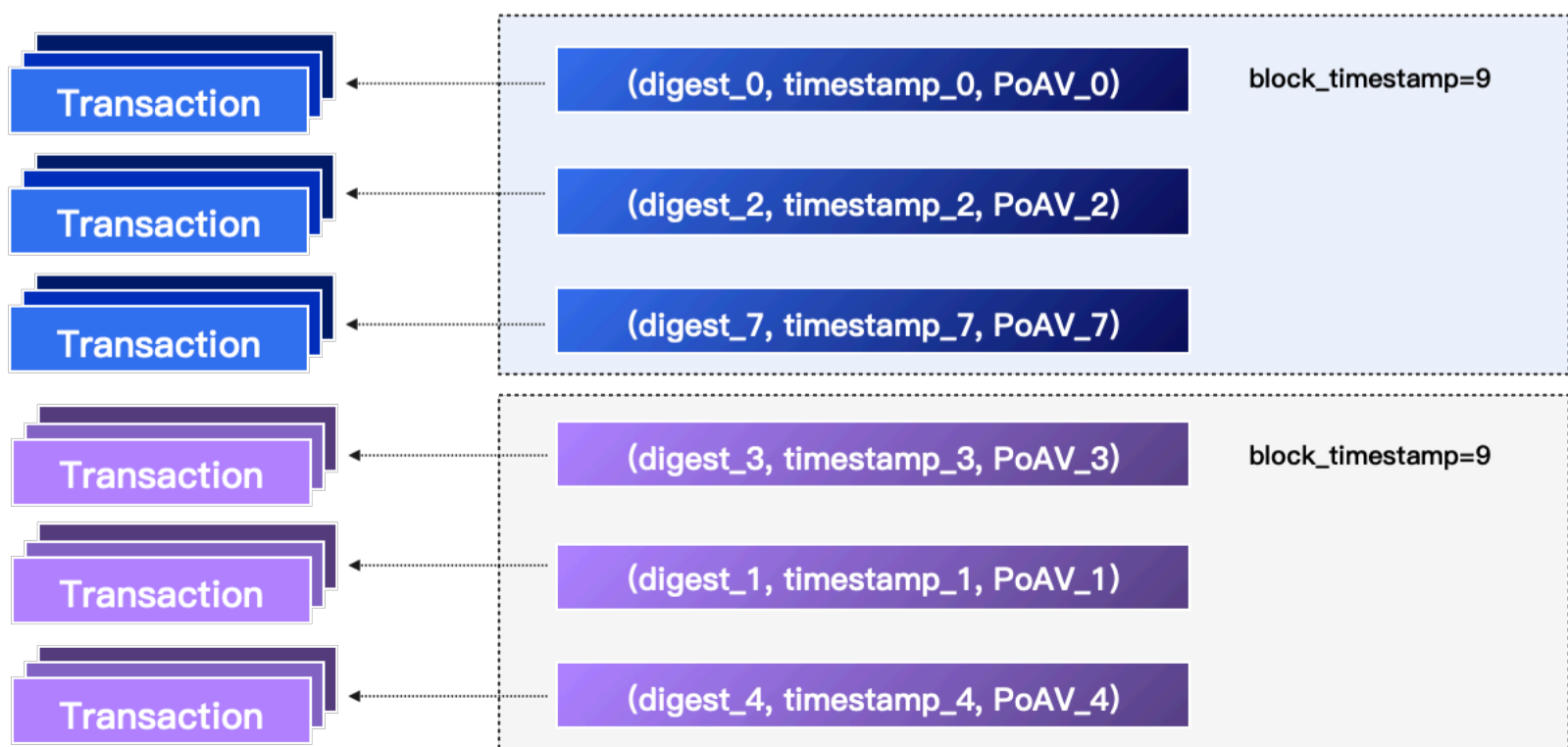
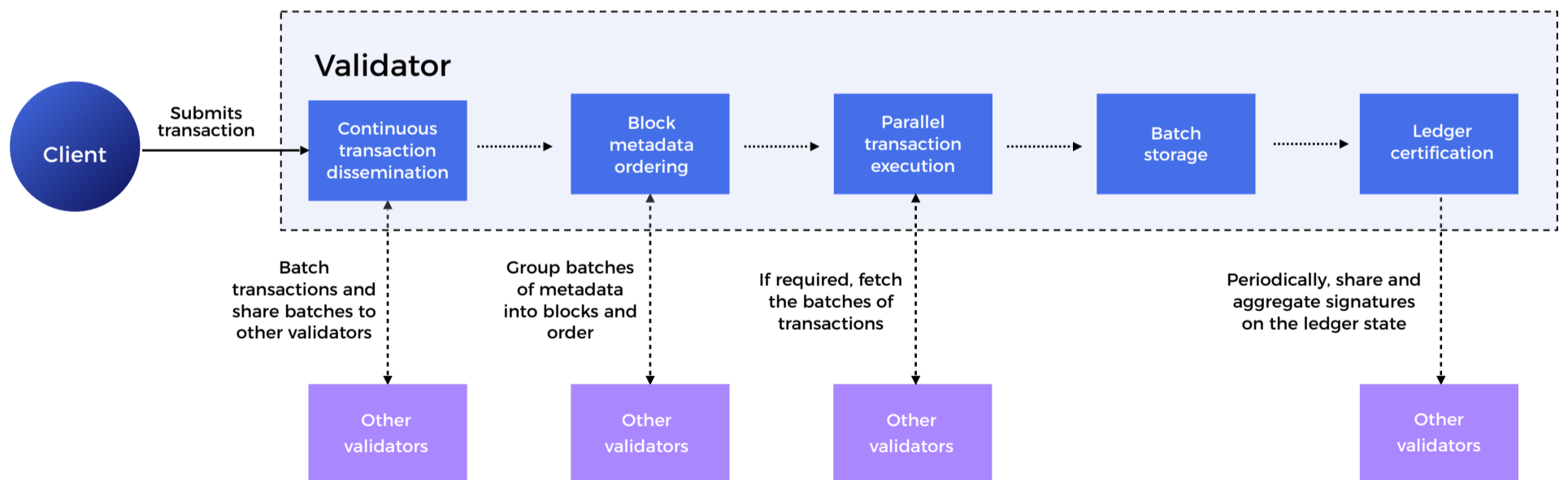The biggest advantage of DCOREUM is that if a chain is started on DCOREUM, that chain can benefit from DCOREUM's ability to pass messages on other blockchains at will and has higher access to other DeFi projects on the DCOREUM chain, which is the value of DCOREUM as a working network of interconnected blockchain.

The goal of DCOREUM is to provide a decentralized network for traditional business, where any merchant can use the DCOREUM chain and overcome the traditional limitations of specific community blockchains, providing a convenient, fast and low-cost, stable network architecture in a multi-sidechain architecture.

DCOREUM plans to provide wallets, payment API and SDK, products, identity solutions and other support solutions to enable developers to design, implement and migrate DApps built on a base platform such as Ethereum. DCOREUM provides a very open development environment and an open API interface for developers. Developers can develop various types of Web3 applications based on nodes on DCOREUM to provide services to various end users.

Open API and third-party application development

Validator

| Client | Submits transaction | Continuous transaction dissemination | Block metadata ordering | Parallel transaction execution | Batch storage | Ledger certification |

| Batch transactions and share batches to other validators | Group batches of metadata into blocks and order | If required, fetch the batches of transactions | Periodically, share and aggregate signatures on the ledger state |

| Other validators | Other validators | Other validators | Other validators |

DCOREUM Network aims to build a decentralized platform by using adapted versions of the Plasma framework to solve the problems faced by the blockchain ecosystem. Using the DCOREUM decentralized economy blockchain will enable faster, cheaper, and more secure transactions.

DCOREUM's WEB3.0 development open platform
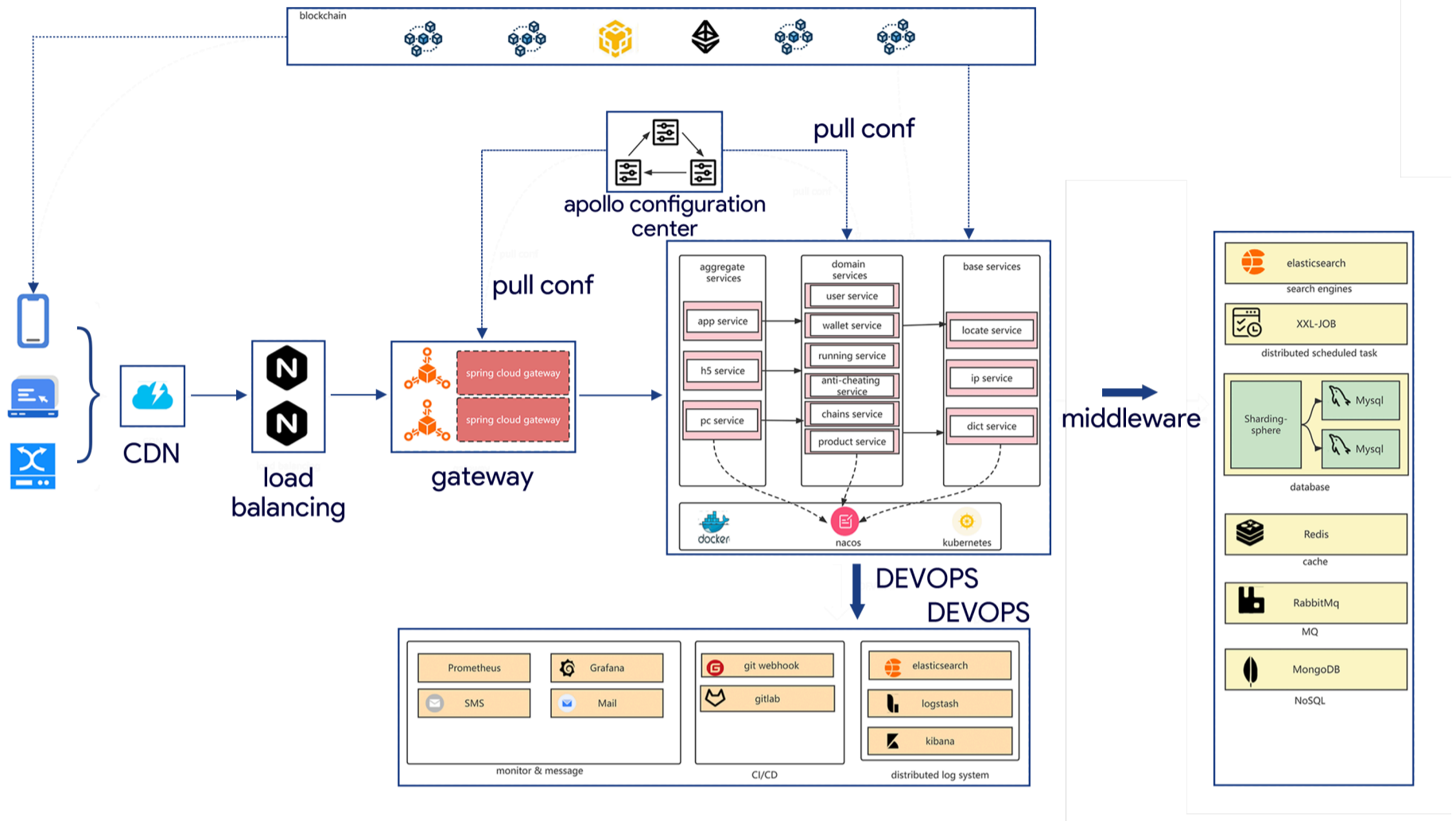
3.2.1 Network Architecture

DCOREUM has fully learned the current mainstream public blockchain network architecture and created a new one. The whole system is divided into six layers:

DCOREUM Network Architecture

Programmable Currency	Programmable Finance	Programmable Society

Application Layer

Script Code	Algorithm Mechanism	Smart Contract

Contractual Layer

Issuance Mechanism	Distribution Mechanism

Motivation Layer

PoS	Random clustering algorithm	Selection contract	......

Consensual Layer

P2PNetwork	Dissemination Mechanism	Validation Mechanism

Network Layer

Data Blocks	Chain Structure	Timestamp
Hash Function	Merkele Tree	Asymmetric Encryption

Data Layer

3.2.2 Merkle tree structure

DCOREUM uses Merkle tree, also known as a hash tree, a typical binary tree structure consisting of a root node, a group of middle nodes, and leaf nodes. The Merkle tree records the characteristics of the hash value layer by layer, giving it some unique properties. For example, any changes to the underlying data are passed to its parent node, one layer along the path to the root of the tree. This means that the value of the root of the tree actually represent a "digital summary" of all the underlying data.

Merkel tree structure can be used when it is necessary to prove the existence or non-existence of particular data element in a set of data; when it is necessary to quickly compare a large amounts of data; or when it is necessary to targeting modified data and zero knowledge proof quickly.
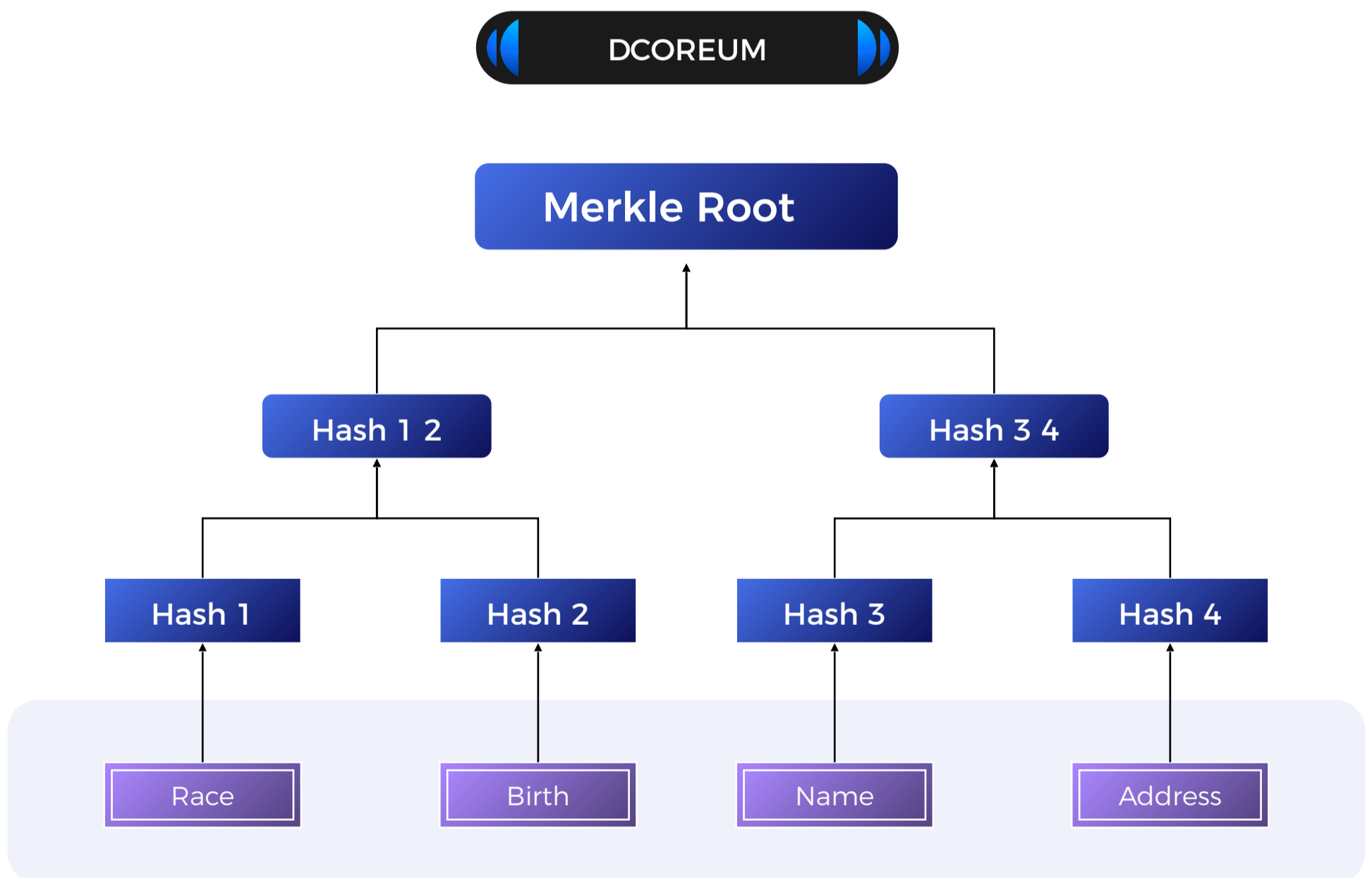
3.2.3 Ecosystem Participants

1.**End users** :

2. **DApp Developers:** It is expected that developers will use the DCOREUM Network to extend their applications and provide a better UI/UX for their end users.

3. **Staker:** Stakers are required to deposit/pledge the tokens to qualify and they play a very important role in the DCOREUM network. They use the ⅔ majority PoS consensus mechanism to validate transactions and propose checkpoints on the mainnet. They also select block producers that meet specific criteria to produce blocks on the sidechain.

4. **Block Producers:** Block producers are selected by Stakers and, in turn, can speed up the block generation time. They must provide a large number of stakes to be nominated.

3.2.4 Consensus

The DCOREUM network uses a dual strategy of proof-of-stake in the checkpointing layer and block producers in the block producer layer to achieve faster blocktimes while ensuring a high degree of decentralization by achieving finality on the mainnet by using checkpoints and fraud proof mechanisms.

Through this mechanism, the DCOREUM Network achieves high transaction speeds, a high degree of decentralization and finality on the mainnet. In the first version, which has Ethereum as the base chain, the Ethereum root contract enforces solvency and finality very effectively through header blocks (checkpoints).

3.2.5 Interoperability

The Ethereum mainnet is the first base/mainnet for the DCOREUM Network securely integrates with, using an adapted implementation of the Plasma framework. In addition, the DCOREUM network intends to integrate multiple leading smart contract platform cryptocurrencies, such as Bitcoin and others, to provide an universal platform for users to use/exchange assets from various blockchains.

It can also provide a solid foundation for large DEX (decentralized exchange) that hosting assets from multiple blockchains. In addition, a single platform with assets from multiple blockchains can also generate entirely new use cases, which the developer ecosystem can conceptualize their future products.

Judging from the proliferation of Layer 1 blockchains, it is a given there might be more than 2-3 public blockchains that will be adopted in the mainstream eventually, rather than only one winning blockchain platform. Therefore, the DCOREUM development team wants to see hitherto unseen use cases that arising from the decentralized applications movement across these blockchains. The vision of the DCOREUM development team is to provide the infrastructure and interfaces so that anyone wishes to build decentralized applications on any blockchain can easily do so, and communicate and transfer value across multiple blockchains.

4、DCOREUM Economic Model

4.1 DCO Token Economics

DCO is DCOREUM's blockchain token, with an initial supply of 160 million on BNB Chain. The actual circulating supply will be issued and cross chain supported after DCOREUM Mainnet is launched. Users can create DCOREUM nodes by pledging DCO, thus directly participating in DCOREUM's governance through the consensus mechanism and sharing the PoS mining benefits of DCOREUM blockchain.

4.2 DCO Ecosystem Application Scenarios

In DCOREUM ecosystem, its DCO token has a variety of practical application scenarios, and ecosystem projects have been implemented. With the further development of DCOREUM and the expansion of ecosystem, there will be more application scenarios for DCO tokens.

Under different industry backgrounds, DCO has different application scenarios and emphases. Still, they have all distributed applications built by intelligent contracts based on distributed networks, distributed databases, distributed storage, distributed computing, distributed ledger and distributed governance. It follow the open source and open technology framework, transparent and co-governing governance mechanism, and co-construction and co-sharing, widely use the DCO token in a variety of daily life scenarios.

4.2.1 Media Sector

Common Web3 media release and content creation can be divided into three business models: creators release content through the creation platform, creators mint content NFT for sales, and creators release content through the social media with token issuing platform to earn token rewards.

As the world's first economy blockchain, DCOREUM's DCO token can support signing and motivate artists and creators, helps celebrities to build their Web3 IP, create and publish music and image NFT, and purchase music/image/peripheral products NFT. In addition, the DCO token can also be used to purchase tickets for Metaverse concerts or preferential access to purchases limited ticket for Metaverse concerts.

4.2.2 Financial sector

In the financial sector, smart contracts and oracle machines are used to build an open financial system based on Web3, aiming at providing various financial services to users without relying on third-party central institutions.

DCOREUM blockchain can support the launch of project tokens to help traditional businesses expand in the Web3 ecosystem. DCO tokens can be used for annual fee payments, pledge lending and peer-to-peer financial transactions. In the ecosystem, it can also obtain a share of co-investment on high-quality first-level projects.

4.2.3 Entertainment sector

By embedding an identity layer into the network architecture, Web3 returns ownership and utility of the social graph and entertainment related data to the user, creating a complete user profile for the user. Web3 also creates, updates, queries, and validates user social graph data by establishing a user-centric decentralized social graph protocol.

In DCOREUM's entertainment ecosystem, users can use DCO tokens to tip, spend, redeem, and credit deduction on designated partner platforms. In addition, if you want to join a traditional business with DCOREUM, you need to hold a DCO token to get preferential access to franchise opportunities and fee deductions. DCOREUM solves the problem that platforms not interoperable and monopolize user information by blockchain technology.

4.2.4 Game sector

Web3 games are blockchain-based games that include interactive game experiences and decentralized finance. Web3 games use digital assets to confirm the rights of currencies, props, resources and game behaviors in the game, endow the property of free circulation under the open economic system, and inject vitality into the game industry. Web3 games make the asset rights, creation rights and governance rights of games owned by the players instead of centralized game companies, which brings stronger fairness and openness to the game industry.

In DCOREUM GameFi ecosystem, users can purchase and trade various game characters/items and related NFTs using DCO tokens. In Web3 games, the revenue from asset appreciation is shared between the player, the game publisher, and the token holder.

4.2.5 Real estate sector

Due to its diversity and globalization, the current economic form naturally conforms to the distributed network architecture. The demand for crossing the boundaries of traditional industries, gathering data resources, and constructing transparent and trusted supply chains is increasingly strong. Web3 accelerates the integration of data and reality to a wider range and deeper level.

In DCOREUM real estate ecosystem, to enhance the value of the real economy and drive the digital transformation and development of real estate, the DCO blockchain can run through the whole supply chain financial process of the real estate industry and build applications to make the supply chain configuration more transparent and efficient. At the same time, it also supports the payment of property fees and the allocation of real estate by using DCO tokens. Relying on Web3 technology innovation and application to build a digital native economic model to help the real estate sector move towards digital native space faster and better.

4.2.6 Culture and art section

By storing the ownership information and transaction records of literary and creative works on the decentralized blockchain network, Web3 enables creators and IP owners to confirm the rights of works conveniently. It uses smart contracts and cryptographic technology to guarantee the secure access and transmission of NFT. It guarantees that the creators and owners enjoy the benefits generated in the whole life cycle of work. It form a new value distribution model of ownership economy and build a new cultural and creative ecosystem.

In the arts and culture section, DCOREUM helps to achieve digital ownership and stimulate the value of collections. NFT is the only digital certificate generated by blockchain technology for literary and creative works, which can realize authentic and credible digital distribution, purchase, collection and use based on protecting their digital copyright and then transforming cultural creation into an innovative application form with clear rights, open and transparent transactions, and fair and reasonable distribution of interests. DCO tokens can be used in the issuance, trading and secondary creation of NFT in this sector.

5. DAO Governance Model

5.1 DAO Value in Web3

DAO stands for Decentralized Autonomous Organization, an important concept that has emerged since the birth of Bitcoin. An organization built on smart contracts that anyone can join and leave at any time, with procedures and rules that are open and transparent. DAO need no promotion and no intermediaries; ideally, they are open, fair, autonomous, and autonomous. The DAO operates as an organizational structure that raises and manages symbolic assets while allowing for transparent governance that will significantly impact the adoption of Web3 products.

DAO is constantly changing the traditional organizational model, transforming decision-making and management from top-down to bottom-up, and gradually becoming an important system for reshaping value distribution.

With the advent of DAOs, management is gradually being dispersed among individual groups, each of whom can contribute to the construction of Web3. At the same time, data rights, asset rights, proposal rights, governance rights, and development strategy ownership are gradually transitioning into the hands of community consensus creators.

5.2 How does DCOREUM achieve governance through DAO in the future

5.2.1 DCOREUM SubDAO

DCOREUM，the decentralized economy ecosystem, was originally built as DAOs. There are more sub-DAOs in the DCOREUM ecosystem, such as Investment and research DAO, technology DAO, brand DAO, market DAO, operation DAO, education DAO, community DAO, talent DAO, strategic DAO and so on. SubDAO will cooperate with the principle of co-construction, co-governance and mutual benefit, and with the governance model of DAO, the organization will operate more transparently, openly and efficiently.

5.2.2 DCOREUM DAO Management Model

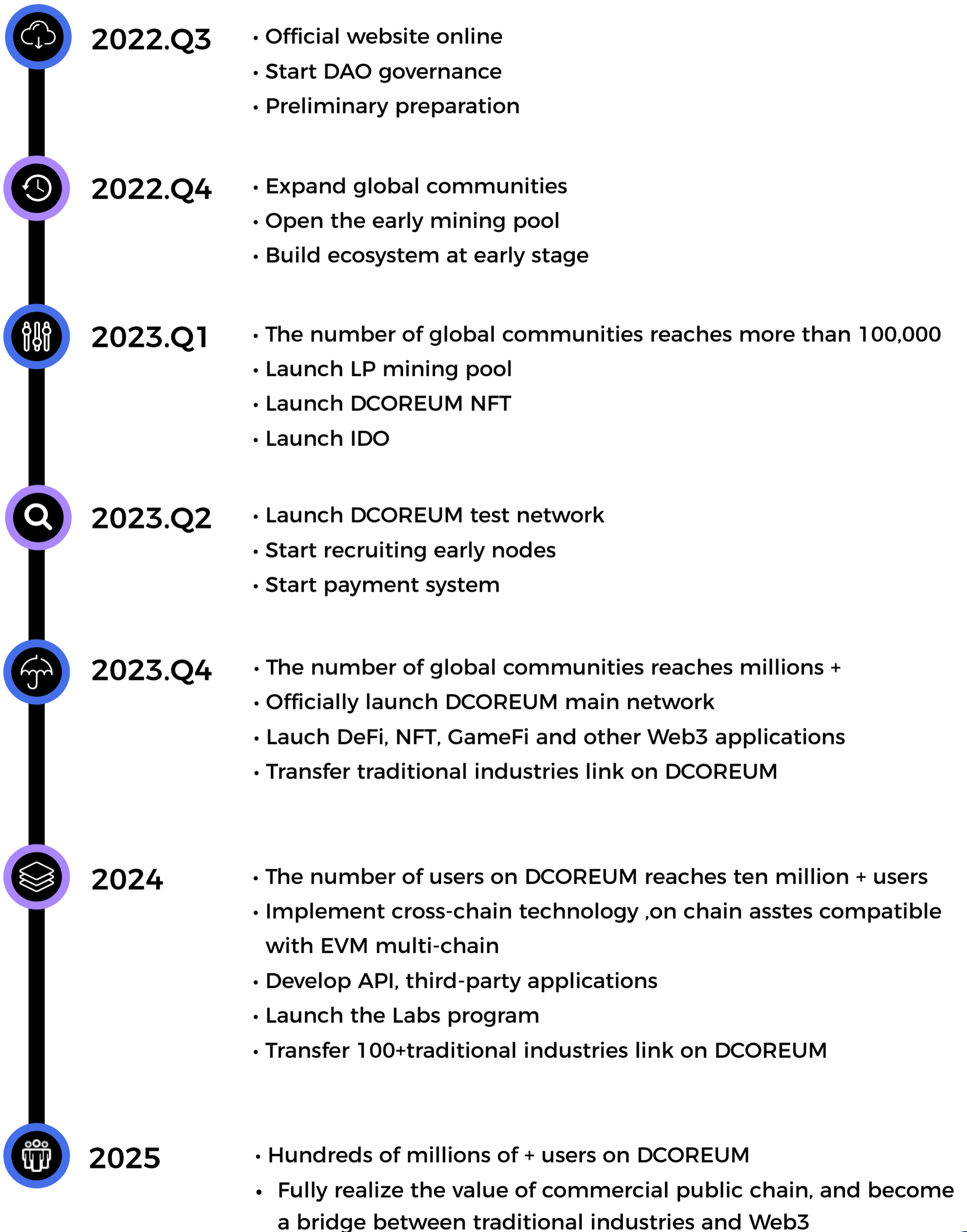DCOREUM is a DAO managed by DCO holders who, through a proposal and voting process, determine the actions and direction of DCOREUM. The DCO value and economic model (primarily tokenization) are related to the ecosystem's success, and any DAO member can propose partnerships and product upgrades for DCOREUM. DCO holders will vote on whether to approve or reject the proposals, and the ideas need to provide adequate analysis and executable.

The decentralization of DCOREUM usually means that it is democratized rather than hierarchical. For example, the measure of any change that should be implemented must be decided by all participants rather than by a single decision-makers combination vote. All votes are counted and performed automatically by software rather than human intervention. That eliminates the possibility of mismanagement or tampering with the vote count, thereby increasing transparency and full visibility.

When DCOREUM enters the mature stage, it will fully adopt the governance mode of DAO, follow the principles of independence, autonomy and equality, and maximizes the contribution and governance of each communities through the effective incentives of the economic model. With the development and expansion of DCOREUM DAO, DCOREUM has established local communities in more than ten countries and regions, including Australia, the United States, South Korea, Japan and Malaysia, etc. There are more projects have developed into SubDAOs, becoming an integral part of DCOREUM and constantly enriching the ecosystem of DCOREUM.

DAO

| Loose | Grassroots | Transparent | Open | Fully global |

Company

| Tight | Hierarchical | Usually not transparent | Invite-only | Not always global |
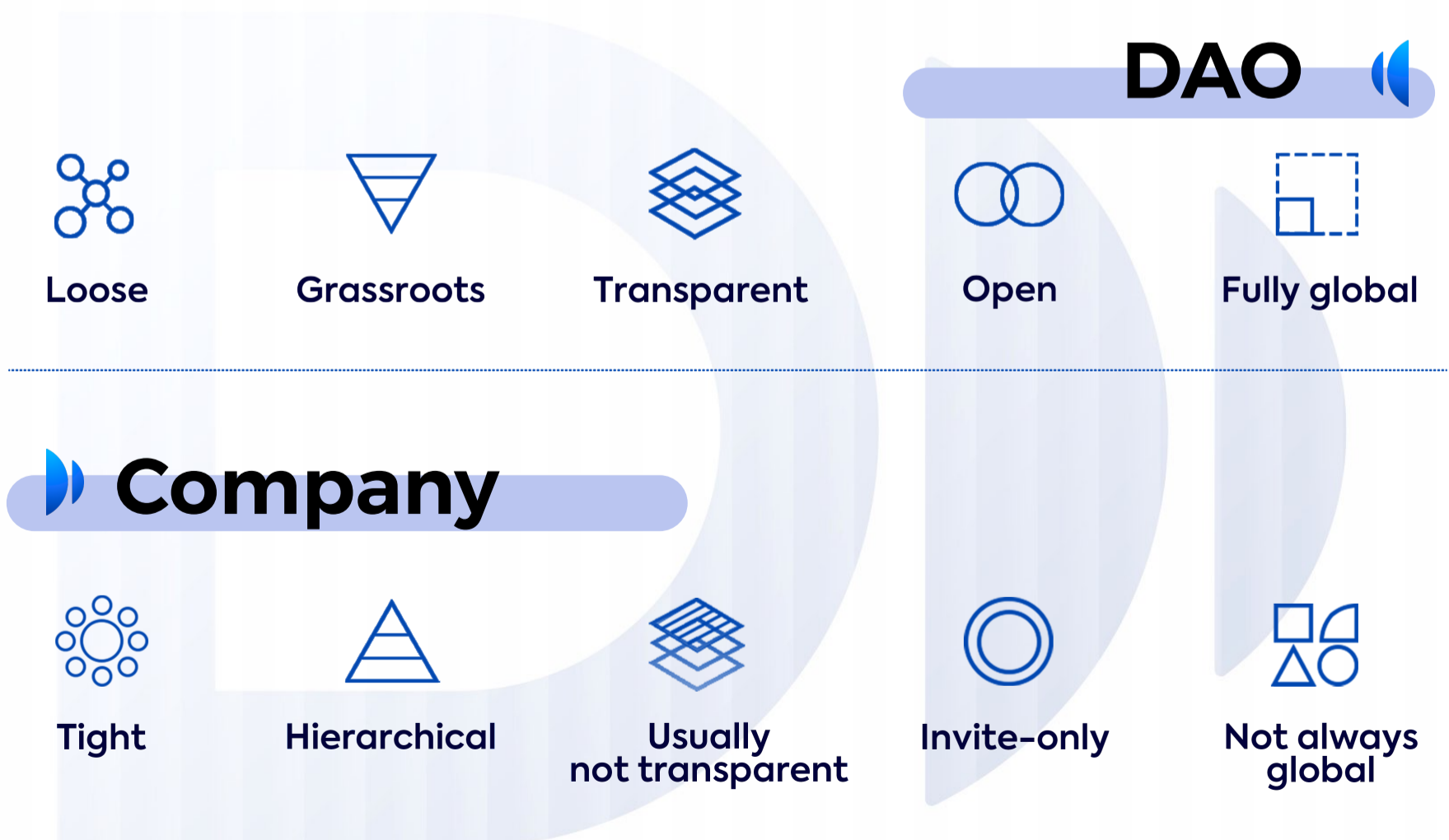
6、DCOREUM Development Roadmap

2022.Q3
- Official website online
- Start DAO governance
- Preliminary preparation

2022.Q4
- Expand global communities
- Open the early mining pool
- Build ecosystem at early stage

2023.Q1
- The number of global communities reaches more than 100,000
- Launch LP mining pool
- Launch DCOREUM NFT
- Launch IDO

2023.Q2
- Launch DCOREUM test network
- Start recruiting early nodes
- Start payment system

2023.Q4
- The number of global communities reaches millions +
- Officially launch DCOREUM main network
- Lauch DeFi, NFT, GameFi and other Web3 applications
- Transfer traditional industries link on DCOREUM

2024
- The number of users on DCOREUM reaches ten million + users
- Implement cross-chain technology ,on chain asstes compatible with EVM multi-chain
- Develop API, third-party applications
- Launch the Labs program
- Transfer 100+traditional industries link on DCOREUM

2025
- Hundreds of millions of + users on DCOREUM
- Fully realize the value of commercial public chain, and become a bridge between traditional industries and Web3

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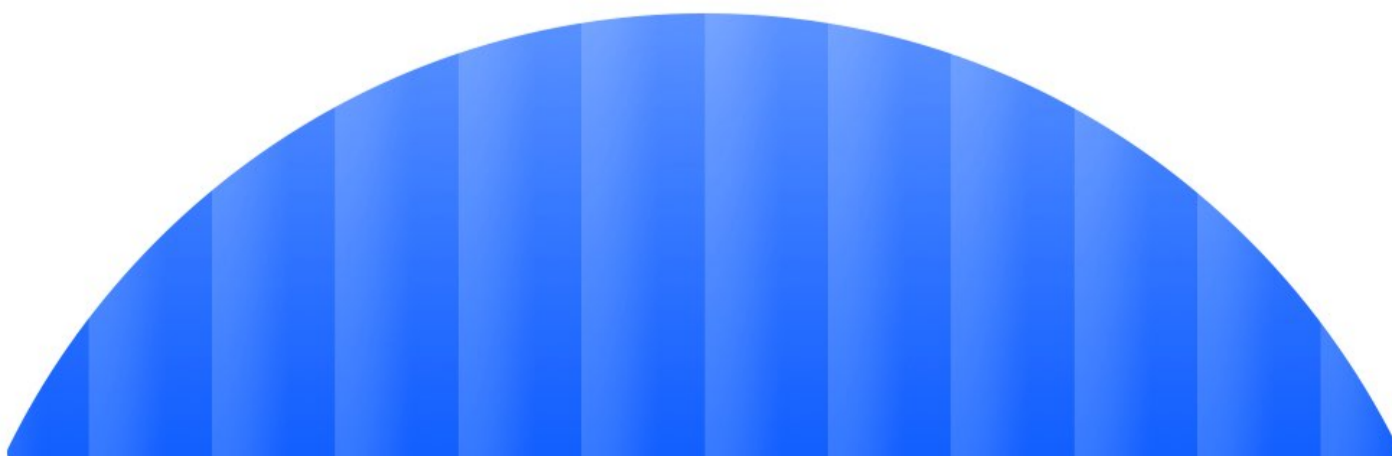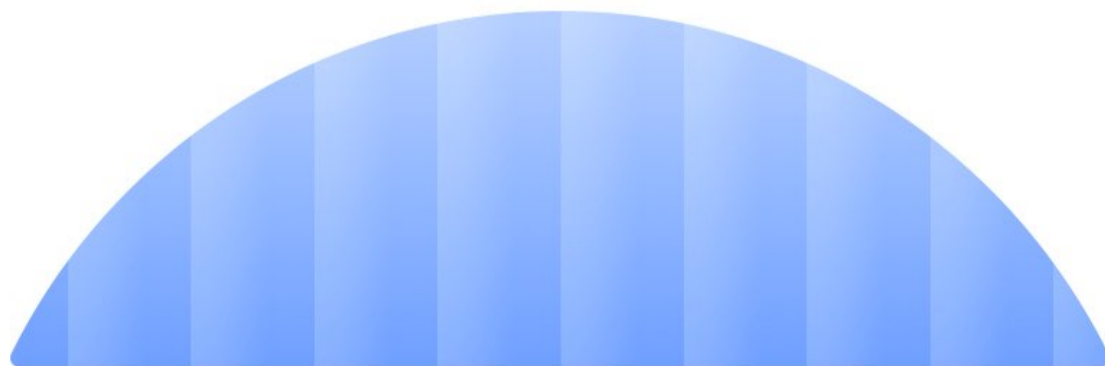
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