IZE BLOCKCHAIN TECHNOLOGY

IZE Token Project

IZE fintech

IZE Fintech Blockchain

White Paper Ver 2.1

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IZE fintech

1. Background

1) Background of the Project

IZE was initiated with the goal of aligning with the standards of Web 3.0 by valorizing big data and ensuring personal information protection. In a contemporary society where information and data utilized in technologies such as AI and big data hold significant value, IZE aims to provide fair compensation to data providers and to endow rights and value to big data, fostering direct connections between providers and consumers. Through this connection, we pursue a big data personal information valuation project that contributes to economic activities in daily life.

Since its inception with the birth of Bitcoin in 2008, blockchain technology has emerged as a foundational platform technology capable of driving innovation and fundamental change alongside advanced technologies such as A.I., Big Data, IoT, AR, and VR, leading the 4th Industrial Revolution. Among the various fields of the 4th Industrial Revolution, Big Data stands out as an area ripe for innovative transformation through blockchain technology.

In the era of blockchain, all data in the world are fundamentally valuable digital assets that should be utilized. Big data, derived from analyzing data on individual behavior, corporate actions, governmental operations, and many different aspects of the world, can form the foundation for analyzing new consumer markets and predicting the future in today's digitally driven world.

IZE Fintech Project is based on a vision which utilizes all the dispersed information in the world on a platform and provide it to the data consumers in need. With this vision, we are met with the challenges of extracting valuable data without infringing the privacy of the information provider. To overcome this matter, IZE undertakes the following missions:

Mission 1: Utilizing blockchain technology for the protection of information providers' privacy and compensating their value for providing information.
Mission 2: Employing artificial intelligence technology to gather fragmented data effectively.

Mission 3: Leveraging blockchain functionalities to extract beneficial information from fragmented data provided by information providers and rewarding them appropriately.

The existing blockchain projects related to data focus primarily on the utilization of personal information. This trend often revolves around activating the ecosystem of tokens issued by their foundations and concentrating solely on the foundation’s development through token economics within their own token ecosystem. Our project aims to create a continuous cycle where data is provided and used, laying the groundwork for building industry-specific ecosystems focused on data utilization.

The IZE Fintech team anticipates that fundamental and lasting innovation in the data industry market can only be achieved when our project's mission is accomplished, and our goals are met.

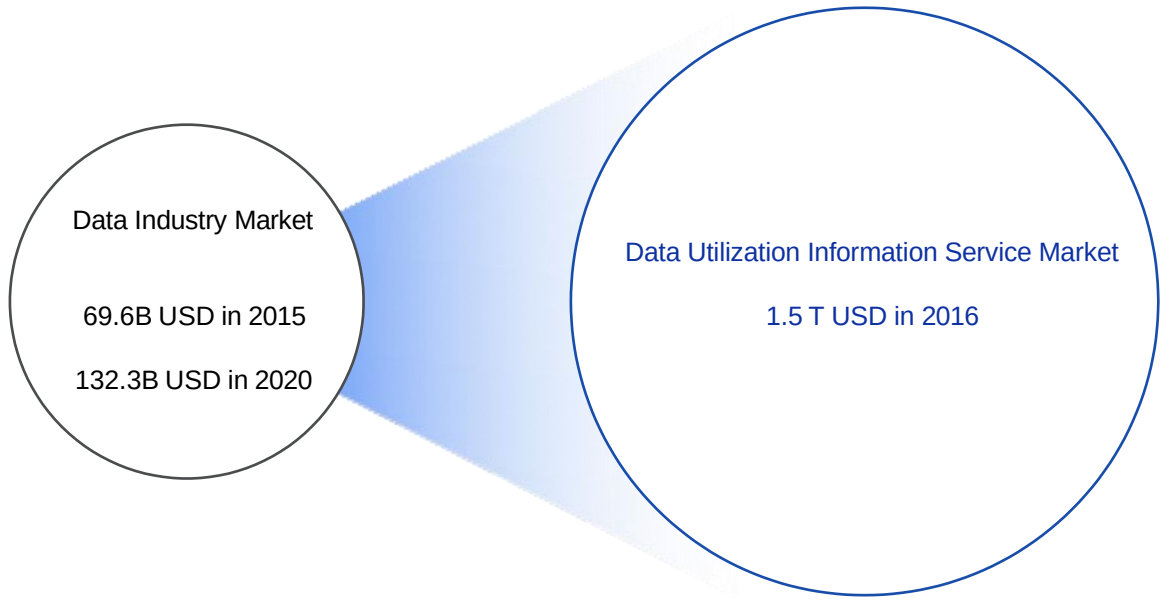
1. Background

2) Data Market Overview

In the era of the 4th Industrial Revolution, data serves as the bridge linking various industries, facilitating the exchange of information among them. This shared information from each industry enables the creation of new collaborative businesses. By utilizing the vast amount of shared data, various business models can be created, leading to the generation of new added value.

As pillars of the 4th Industrial Revolution, AI and Big Data industries are experiencing exponential growth. The Big Data industry is becoming increasingly important for AI development. Businesses are increasingly driven by data and future competitiveness will be defined by how well the data is used. This data is shared according to the needs of each field, and not unlike biological reproduction, the data is organically reformed and reproduced to create an even greater frame of Big Data that can generate new types of businesses.

According to “Data Industry Market Report” the data distribution market size is expected to increase from 69.6 billion USD in 2015 to 132.3 billion USD in 2020.



[Size of Global Data Market]

451 Research ‘Data Industry Market Report’, Outsell ‘Information Industry Outlook 2017’

1. Background

3) Issues in the Data Market

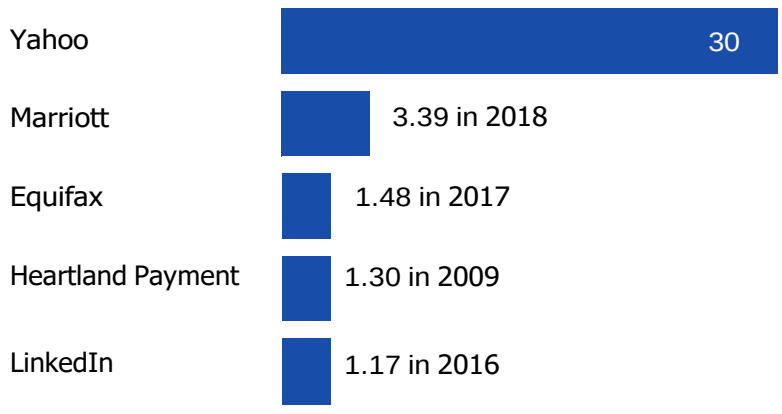
- **Security of the Collected Personal Information**

Personal data is at constant risk of being hacked, leading to potential leaks and the damages have been escalating. For instance, Capital One, a major US bank, experienced a breach exposing data from around 106 million individuals, stored on Amazon's cloud servers, raising further concerns about the safety of data centers even with major cloud providers.

Service providers and businesses also face the risk of data breaches from hacking when they store personal information within their internal systems. Despite investing considerable time and resources to prevent such incidents, achieving a flawless defense is challenging, as demonstrated by hacking cases occurring worldwide.

Major Personal Information Hacking Incidents

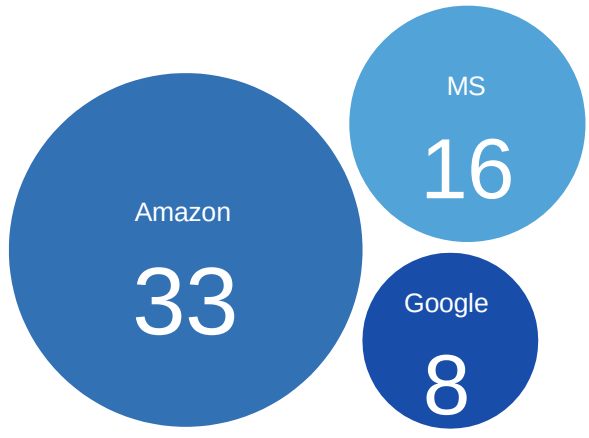
(Unit: 100M people)



* Leaked Personal Information Source: Wall Street Journal

Major Personal Information Hacking Incidents

(Unit: %)



*2Q. 2019 Source: Synergy Research Group

1. Background

3) Issues in the Data Market

- **Lack of Recognition for Personal Data Value**

Information providers often do not receive adequate recognition and compensation for the value of their personal data during the data distribution process. While providers may perceive data provision as a condition for accessing services, it actually represents a source of new value for data collectors. Especially with large internet companies, the monopolistic nature of the information they acquire leads to disproportionate profits, leading to a rise in unfair transactions involving personal data.

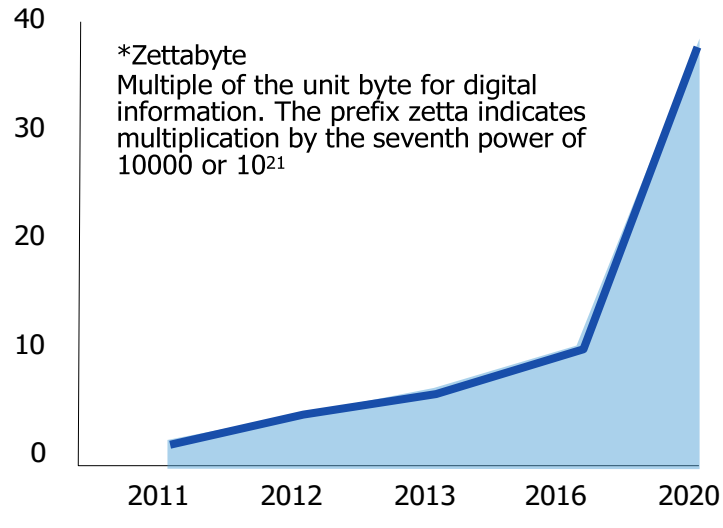
- **Demands for Diversity and Efficiency in the Big Data Information Market**

The advancement of big data technology, characterized by the generation, collection, analysis, and representation of diverse large-scale data, enables more accurate predictions and efficient operations in the increasingly diverse modern society. It also enables the provision, management, and analysis of personalized information tailored to individual members of contemporary society, achieving technological feats that were once deemed impossible in the past.

According to Gartner’s research, it is anticipated that the volume of data will increase from 40 ZB (zettabytes) in 2020 to 170 ZB by 2025.

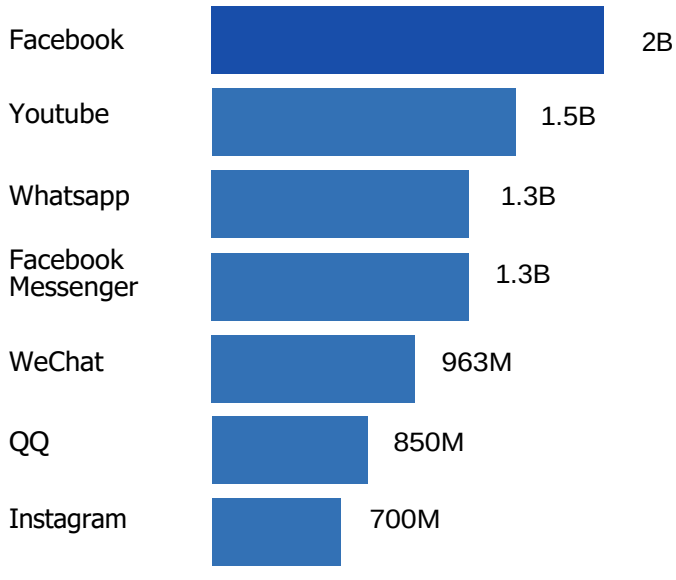
Global Data Generation

Source: Gartner (Unit: Zettabyte)



Global SNS Users

*As of Sep. 2017. Source: Statistica (Unit: person)



The explosive growth of data is largely driven by Social Network Services (SNS). Experts anticipate a significant expansion of big data due to increased SNS usage. By 2023, SNS users worldwide are expected to reach 4.88 billion, representing 60.6% of the global population. Facebook leads with 2.989 billion users, followed by YouTube (2.527 billion), WhatsApp (2 billion), Instagram (2 billion), WeChat (1.319 billion), and TikTok (1.081 billion). Recent statistics show a steady increase, with 173 million new SNS users in the past year, equating to 5.5 new users per second. SNS data collection contributes to a vast and deep ocean of information as we engage on these platforms.

However, ultimately, the value and accuracy of that data depend on the quality of analysis. The issue with data must be approached from the perspective of demand and usage rather than just supply. Hence, efforts to understand and utilize data are essential, and many companies are already focusing on this area. According to Allied Market Research, the total revenue from big data and business analytics increased from $130 billion in 2016 to $225.3 billion in 2023. It is projected to reach $665.7 billion by 2033, with an average annual growth rate of about 11.6%.

The book "Weapons of Math Destruction" by Dr. Cathy O'Neil, a mathematics Ph.D. graduate from Harvard University and a former hedge fund professional, warns of the dangers and pitfalls of big data. Drawing from her experience with extensive data, Dr. O'Neil critiques the growing trend of blindly trusting data and highlights its risks. She illustrates how supposedly rational and objective modeling using data can lead to flawed outcomes and emphasizes the crucial role of human wisdom and interpretation in making decisions, emphasizing the need for thoughtful consideration alongside data analysis.

Along these notes, the role and significance of Chief Data Officers (CDOs) have gained prominence in large corporations in recent times. Instead of blindly trusting abundant data, these companies prioritize making informed choices and conducting thorough analysis. This prompts discussions on how we can apply blockchain technology to enhance data diversity and efficiency.

Bilateral Trust on Data

Information providers are now offering more data than ever before, while the demand from data users is skyrocketing. However, providers face the challenge of ensuring that the data they offer is accurately delivered to the intended recipients, while users are burdened with assessing the reliability and accuracy of the information they receive. Both providers and users require transparent distribution processes and trustworthy systems to address these concerns effectively and users also need mechanisms for objective evaluation of information reliability from providers. Such evaluation systems must be undertaken by a third party, making blockchain an ideal technology to take on the role.

The implementation of a decentralized consensus mechanism within the blockchain ecosystem enables all participants to update the reliability of data. This structure will allow users to access the most reliable and up-to-date data at all times, allowing them to direct their focus solely on efficiency and performance through data utilization.

- **Data Marketplace**

Most big data currently available relies on information providers to provide their data to trusted third parties, who then deliver it to data consumers. However, the valuation of this data is often opaque, and price is determined by these intermediaries. Third parties can manipulate the perceived value of data, making it seem valuable to consumers while undervaluing it to the provider, which presents challenges in verifying true data worth. Hence, employing transparent blockchain technology for data transactions becomes crucial, ensuring pricing based on decisions made jointly by both providers and consumers. Data pricing should be determined through a consensus mechanism by the principle of market pricing based on mutual understanding between both parties, without third-party intervention, with expert third parties playing a supportive role to enhance price reliability.

2. IZE Project

The following illustrates the model of our blockchain project, which aims to seek efficiency of information acquisition, to acquire diversity of information, and to protect the privacy of information provider.

1) IZE Blockchain Development Summary

- **Strategy 1: Data Acquisition Strategy**

Maximize data collection efficiency by employing a dual approach of active and passive data collection methods.

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-Active Data Acquisition: Data collected through surveys or direct questioning of data owners.
-Passive Data Acquisition: Data processed from sources such as browsers or mobile platforms used by data owners.

Active Data Acquisition is achieved by IZE Application integrated within the metaverse IZEverse, offering a MyData Selling service. Through this platform, users participate in direct surveys, inquiries, and online discussions to secure data, with information providers receiving rewards in IZE tokens.

Passive Data Acquisition is achieved by IZE Add-On web/mobile application, which is integrated into IZEverse, where it analyzes activity and social data of information providers using AI technology. Information providers receive IZE tokens based on their activity in IZEverse.

- **Strategy 2: Information Storage and Protection Strategy**

To protect the acquired information and prevent hacking, we utilize the Stroj storage, an encrypted blockchain based database and IPFS (InterPlanetary File System), a blockchain distributed information system. Zero-knowledge proof mechanisms are used to protect confidential information.

- **Strategy 3: Information Process Strategy**

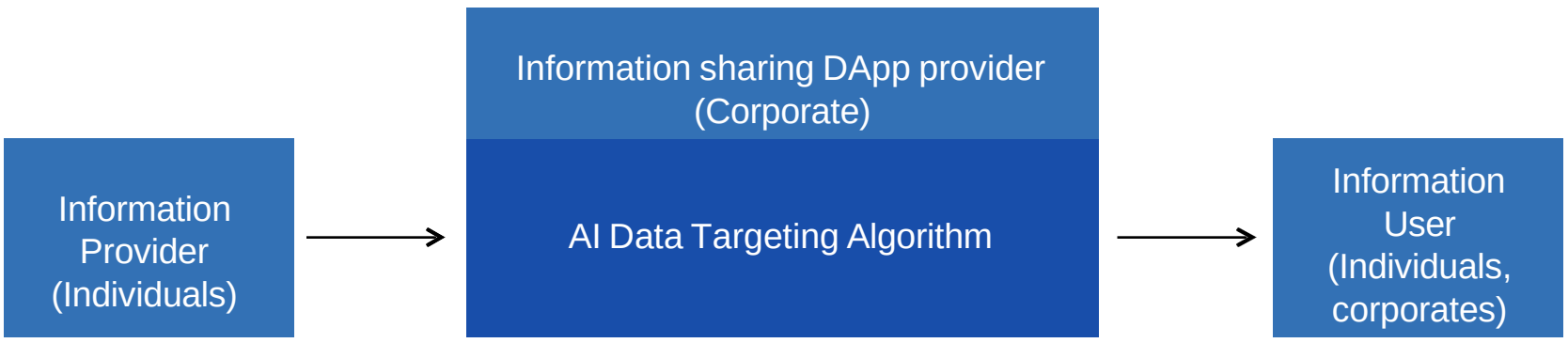
Spark technology, a general-purpose technology suitable for AI solutions, is implemented to process big data. Spark is ideal for building large-scale big data analytics and machine learning application programs due to its short processing time.
IZE project aims to strategize blockchain and information technology for data, developing the necessary technology and business strategies to fulfill the mission of IZE.

2) DApp Feature

- **IZE Application**

The IZE Application is an application designed to collect specific information desired by information users from information providers online or on mobile platforms.
Information collection is undertaken within the range of information that can be directly rewarded, such as areas listed below.

IZE facilitates DApp development for information provision using data targeting algorithms, granting DApp providers eligibility to form nodes on the IZE blockchain. These DApp providers can collect data across diverse devices and platforms.



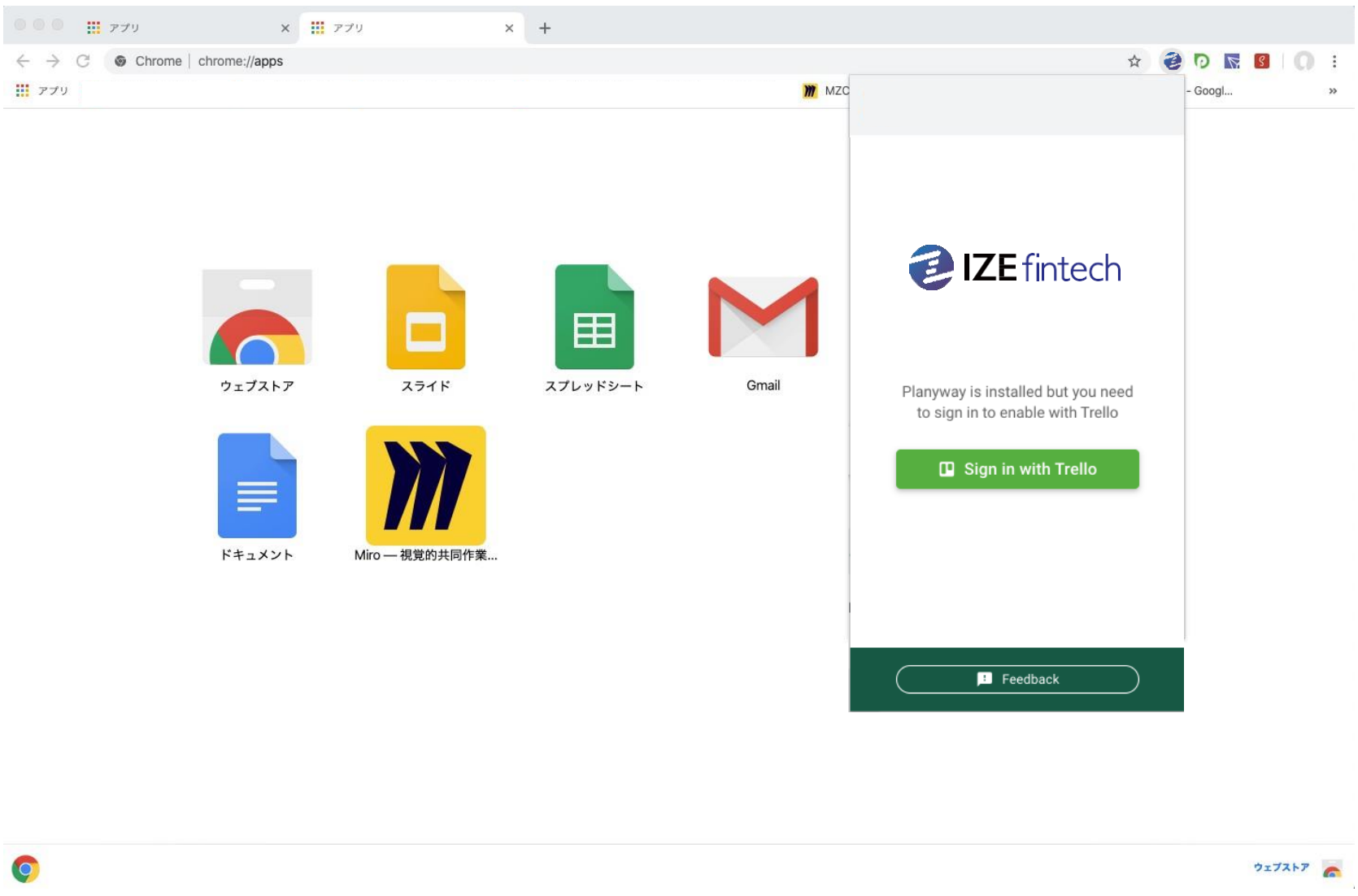
Target information holders
Online, mobile research
Commission research on specific topics
Spot preference surveys
Product, service preference surveys
Media, politics, culture preference surveys

Information users can access more meaningful information based on targeted research on panels (information providers) analyzed by AI data targeting algorithm. This algorithm enables a more objective and rational model due to AI model participation of DApp provider.

IZE tokens are rewarded as incentives for data provision, voting, and referrals for accumulating more information providers. Panels (information providers) are rewarded with IZE tokens for the data they provide, while DApp developers who constitute nodes receive IZE tokens as rewards for node construction. Information users can purchase desired information with IZE tokens.

- **IZE Add-On Web Browser Add-On Application**

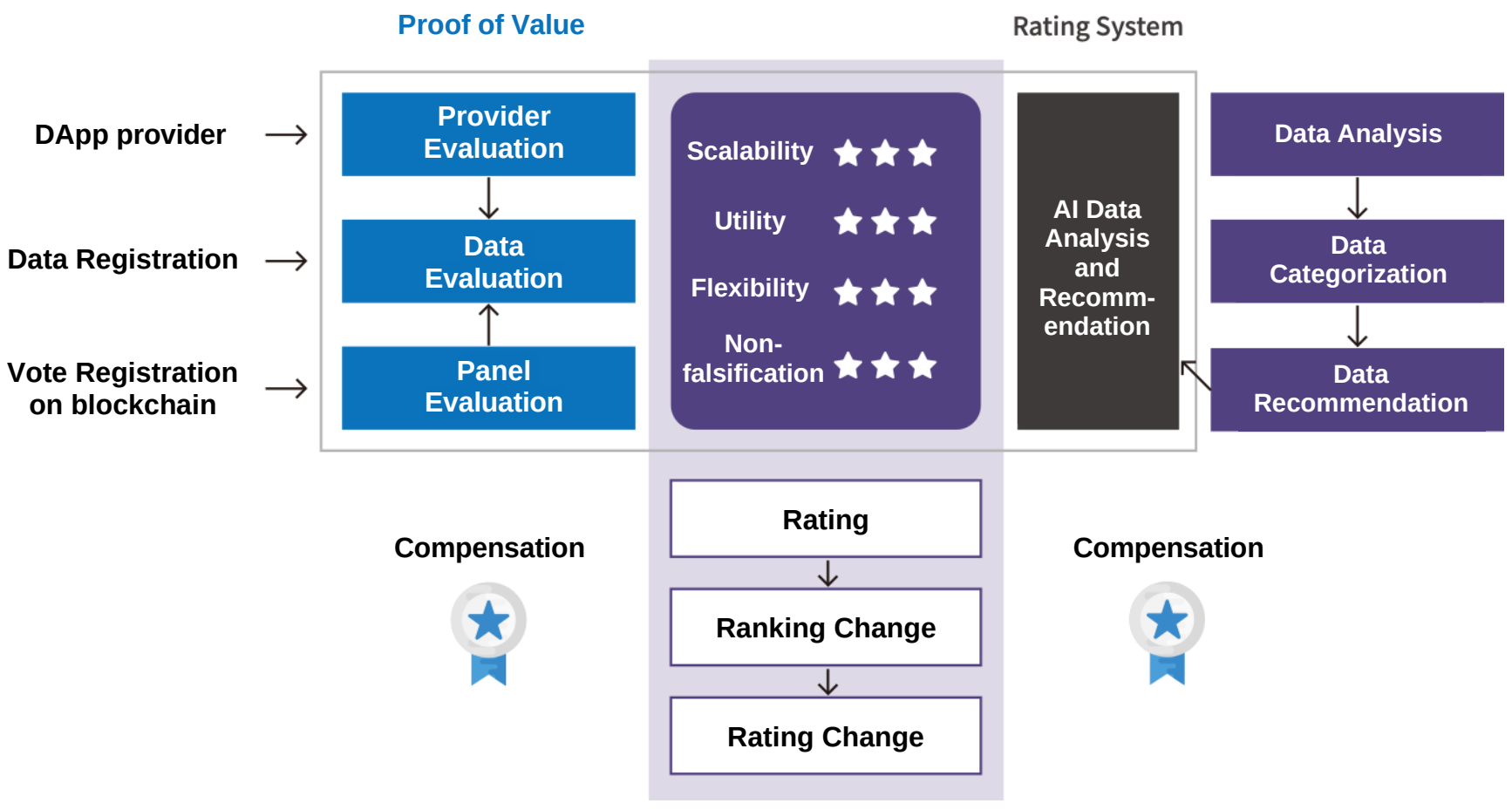
The solution for collecting data provided by the data owner's web browser is the IZE Add-On, which is developed in the form of a web browser add-on (extension) program.



IZE Add-On is an application in the form of a Google Chrome Add-On that collects information crawled from information providers. The data collected by the Add-On is processed into valuable information through analysis algorithms. To determine how valuable the collected data is to the ecosystem, it is necessary to measure how much the crawled information contributes to the data information ecosystem. For this measurement, the value contributed to the information ecosystem quantitatively correlates with the crawling time and qualitatively relies on the Proof of Value (PoV) blockchain algorithm.

The method of Proof of Value (PoV) is based on the provision of information and its consumption. PoV is derived from the data usage excluding malicious purpose. Additionally, a rating system involving users of the IZE Application is put into effect to counteract malicious data provision.

[Data PoV and Rating System]



3) Metaverse Feature

- **IZEverse**

IZEverse is a metaverse where social, economic, and cultural activities take place in a 3D virtual world. Anyone can engage in conversations with friends, make purchases, receive education, acquire knowledge, and more, regardless of location. IZEverse enables social, economic, and cultural activities in a 3D virtual world, allowing users to enjoy various content such as learning, hobbies, games, and shopping within the metaverse. Users can grow their avatars through activities and earn IZE coins as rewards for participating in specific contents, which they can transfer to other wallets within the metaverse or use for shopping on IZE First Pay. User activities and data within IZEverse are collected by IZE and utilized as big data. IZEverse is an integrated platform where diverse individuals gather and enjoy various contents and digitize and share their thoughts, creating value through information exchange.

IZEverse is an immersive metaverse that provides users with a fully realized 3D virtual world to explore and engage in. From customizing avatars to exploring diverse metaverse shops, interacting with people from different nationalities and languages, purchasing goods, and even pursuing educational opportunities, users have the freedom to indulge in a wide range of experiences tailored to their interests.

IZEverse offers diverse educational content for those interested in learning. From language courses to programming tutorials, users can engage with instructors in real-time within the metaverse, receiving education tailored to their interests. Additionally, users can review materials through videos for further clarification. This allows users to expand their knowledge and skills for self-improvement while enjoying the immersive experience of the metaverse.

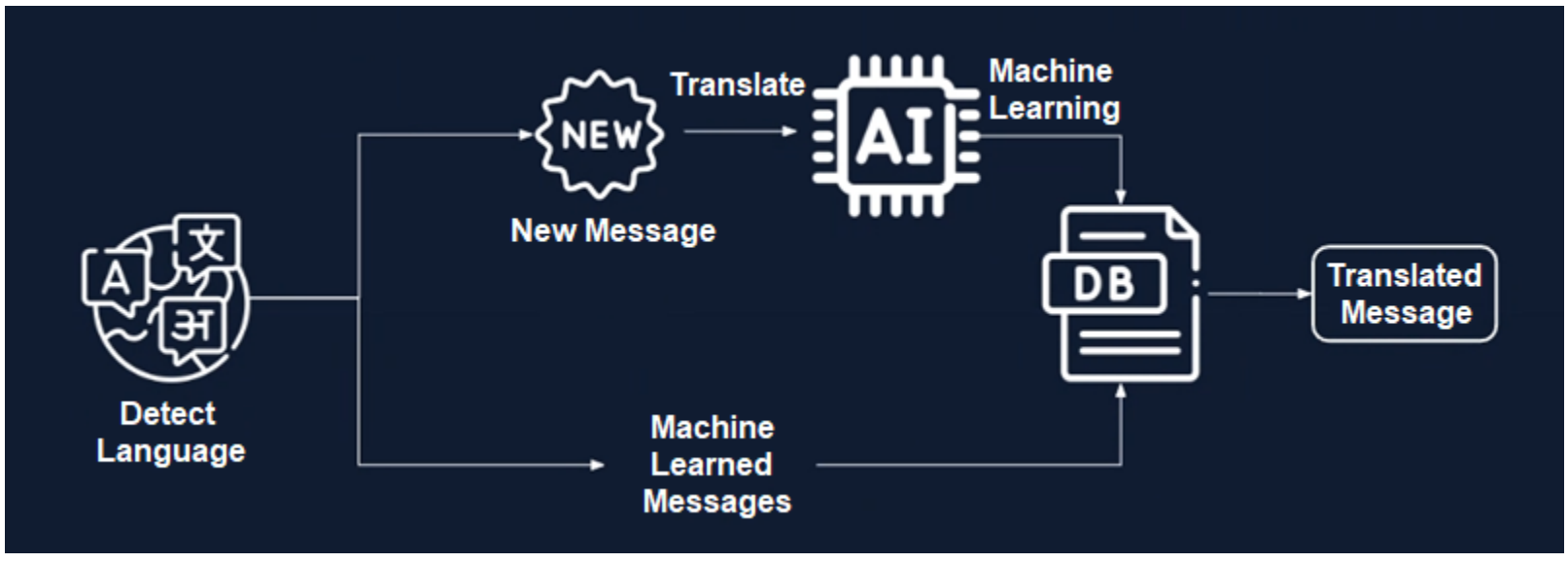
For those seeking more casual entertainment, IZEverse offers a variety of games and hobbies. Whether it's playing virtual sports or creating art, users can unleash their passions while socializing with others.

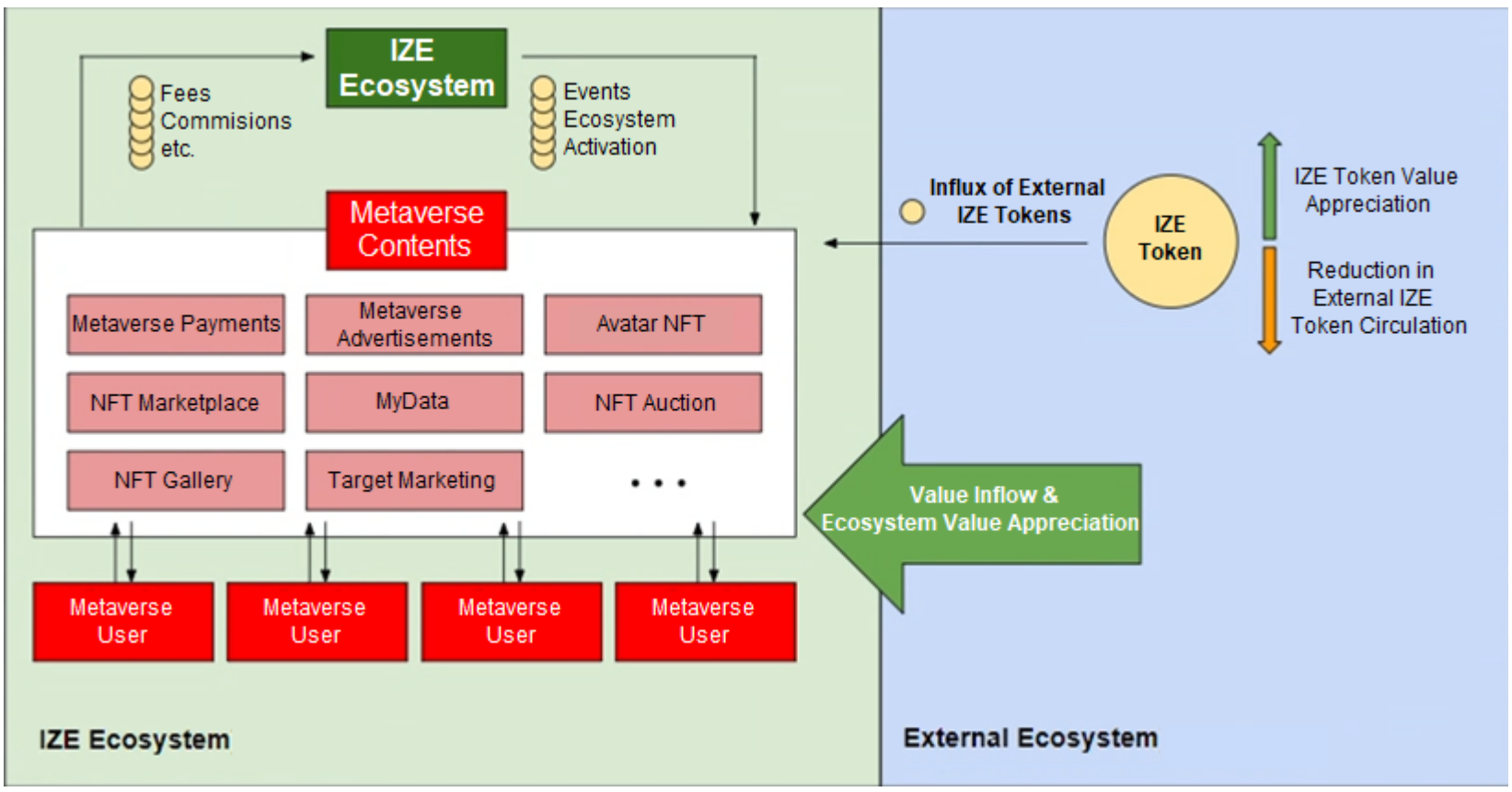
IZEverse isn't just a place for fun and games. It offers a unique economic ecosystem. Through a reward system, users can earn IZE coins by participating in specific content within the metaverse. These coins can be used to shop with IZE FIRST PAY, purchase desired avatars to express their personality, collect NFTs from famous artists, or even create their own NFTs. Additionally, users can pursue education and self-development, and they can even transfer their assets to other wallets outside the platform.

Data privacy and protection are always a top priority at IZEverse. The platform is fully compliant with GDPR and other relevant regulations, and users' personal information is encrypted and securely protected. The IZEverse team collects and utilizes user activity and data to inform and improve the user experience, but always with user privacy and security in mind.

Real-Time Translation System

IZEverse supports video and content sharing, as well as voice, text, video, and real-time translation, removing barriers to information communication and creating a metaverse that everyone can share. Through this, users can naturally communicate with each other and generate much more social data than other social networking services. They will discover new value in diverse languages and expressions that cannot be found in other platforms or big data.

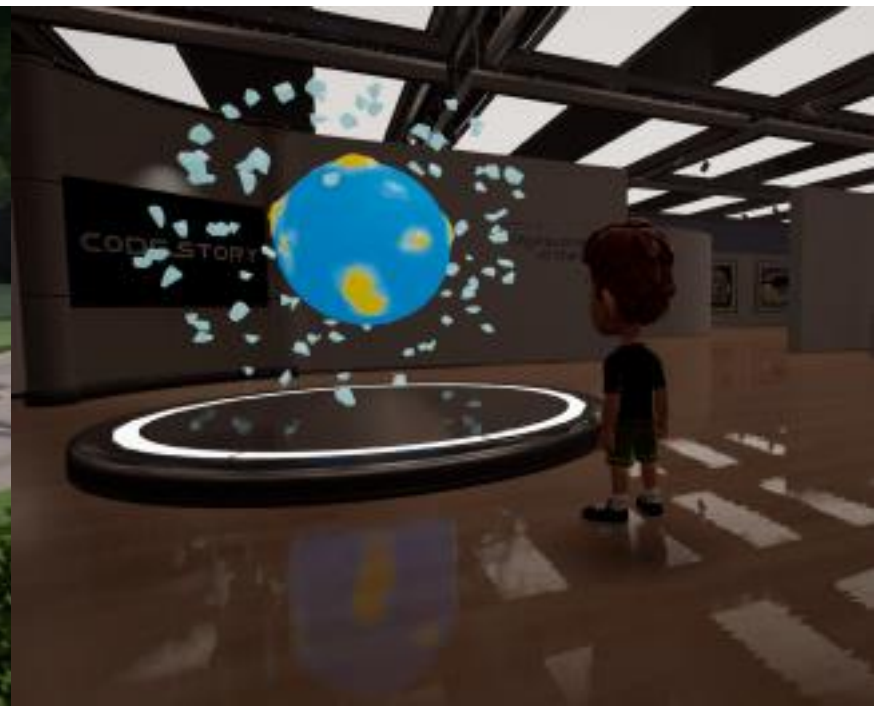




In IZEverse, IZE tokens are provided through various channels. They can be acquired either by entering IZEverse directly from external sources or through internal content within IZEverse.

My Data Selling

IZEverse users can utilize the data selling feature within the metaverse content. Metaverse users can access the My Data Selling Center in IZEverse and participate in various surveys through the My Data Selling NPC. These surveys are requested by institutions, organizations, governments, etc., aiming to collect big data through the IZE project. Information users (requesters) pay an information fee to receive the information, which is converted into IZE and rewarded to the information providers (participating users). Users can browse the list of various surveys in the My Data Selling and select only the data they want to provide or participate in surveys with higher rewards. By participating in surveys, users receive corresponding rewards in IZE. IZE holds a pool for information providers, and by participating in surveys, information providers can receive additional IZE rewards based on their rating system scores for information provision from the IZE pool.



You can use the IZE tokens you receive as rewards in IZEverse in various ways. At the most basic level, you can personalize your avatar, another version of yourself in IZEverse. IZEverse offers a variety of avatar skins for user expression. The avatars supplied in IZEverse are the most basic form, and they can be purchased from the department store in IZEverse.

NFT Creation and Exchange

Users can create their own unique avatars using "Avatar Creator." IZEverse supports a simple NFT creation tool, allowing everyone to produce their own NFT items. Users can pay the production cost in IZE tokens and create a special avatar skin that is unique to them. Any unused NFT items can be traded on the NFT exchange or auctioned off in NFT auctions to sell to others. This way, users can purchase and collect NFTs from their favorite artists, as well as become creators themselves by producing NFTs.

Metaverse Education

In IZEverse, education and classes are available. Instructors can create their desired classes and teach students by sharing video calls, videos, documents, etc. To attend classes, students must pay tuition fees in IZE tokens. Moving away from traditional online education where students only watch the instructor's screen, in the metaverse, both instructors and students exist and can observe each other's avatars. Students can express their uncertainties or questions more actively through their metaverse characters. Through metaverse education, instructors and students can engage in two-way communication similar to offline interactions, leading to an increase in the quality of education. At the end of each course, depending on the category of education, students can receive certificates, special avatars (related to the field of study, e.g., firefighting-related avatars for fire safety education), NFTs, etc., which can serve as proof of their educational achievements.

Metaverse Payment System

IZEverse not only revolves around events in the metaverse, but also seamlessly integrates with real life through IZE First Pay. Through IZE First Pay, users can browse for products or items they need in real life within the IZEverse, check reviews from other users, make purchases, and have the items delivered to their homes. Moreover, it supports the Buy Now, Pay Later (BNPL) model, allowing users to immediately purchase desired items even if they don't have the money upfront by undergoing a deferred payment process for a certain amount. IZE First Pay goes beyond being just a payment method; it supports repayment through IZE as well. Users can use the IZE they've earned and already have to pay for their purchases, providing a real-life impact of IZE on users' lives and enhancing their experience within the IZEverse. Since IZEverse supports various payments through IZE First Pay, it can collect data on real user economic activities, including purchase histories of items, NFTs, and educational content, as well as transactions with other users and the types of NFTs purchased through auctions or galleries. This data, being actual transaction data, provides valuable insights into the real purchasing power of users, enabling precise understanding of how actual purchasing power influences various aspects. Additionally, it can gather patterns of users' economic activities based on the timing of purchases, allowing it to provide a golden time for more efficient targeted marketing. By providing such payment data and economic activity pattern data, the IZE project can reward users with more IZE, allowing them to engage in activities and purchases they desire more freely.

Metaverse Advertisement

IZEverse can conduct very special meta-advertising campaigns targeting metaverse users. Meta ads can be carried out in specific areas or globally within the IZEverse and take on a different form than conventional ads. IZE's meta ads are imaginative creations that stimulate creativity. Despite being virtual reality, most metaverses fail to effectively utilize their virtual potential. IZEverse breaks free from these constraints by offering proactive and innovative ads through meta advertising and rewards users with IZE. For example, if it's an advertisement for a modern zombie movie, IZEverse will gradually introduce zombies into specific areas. As the zombie territory expands and related NPCs appear, users find themselves naturally immersed in scenes from the movie, experiencing and overcoming challenges alongside NPCs. The impact felt by users when they realize they've been part of a specific movie scene and advertisement is much greater than a typical trailer on a billboard. To experience the scene they participated in firsthand, users may proceed to book movie tickets through IZE First Pay.

User Activity Data Valorization

IZEverse users naturally accumulate their data while exploring and enjoying the platform. IZEverse continuously collects user data in anonymized form, stores it on IPFS, and processes it to generate valuable big data through data mining. Users can passively monetize their activity data using the IZE Add-on, and they receive IZE as rewards for the sale of this data.

IZEverse collects different kinds of big data. It gathers user activities within the metaverse, such as movement, item usage, and story progression. Based on this data, it can easily analyze the level of interest in a specific content, item usage frequency, and other factors to identify components that can aid in the creation of a more engaging interactions for users. This accumulated big data, when combined with the gaming industry, can significantly aid in formulating strategies for early-stage game companies, serving as a stepping stone for successful content and maximizing business profits.

Additionally, gathering social activity data within the game allows for collecting insights into specific age groups' preferences, interaction patterns, and conversational styles. This social data facilitates understanding users' interests and current focuses, which can be leveraged for targeted marketing. For instance, if a user in her 20s engages in conversations about BTS and consistently participates in K-Pop content, it indicates a significant interest in BTS and K-pop. With this information, targeted exposure to new K-pop male idol groups or offering BTS-related products or concert tickets can potentially lead to purchases. Users exposed to such targeting earn rewards in IZE, enabling them to use it for purchasing desired BTS merchandise.

Furthermore, as users explore and enjoy IZEverse, they also accumulate their data. IZEverse continuously collects and anonymizes user data, storing it in IPFS. By aggregating this information from IPFS, valuable big data is produced through data mining processes. Users can passively monetize their activity data using IZE's Add-on, automatically converting their activity information into value. When this big data is sold, users receive rewards in IZE as compensation for the sale.

In conclusion, utilizing the gathered data, IZEverse advances into a metaverse offering enhanced services. By leveraging user analytics and data, IZEverse improves its service offerings and innovates new content. By promptly delivering diverse high-quality content to users, IZEverse encourages deeper user engagement and exploration of its immersive experiences.

Lastly, by harnessing the collected data, IZEverse improves into a metaverse offering enhanced services. Through the diverse array of user analytics and collected data, IZEverse enhances its own services and facilitates the development of new content. By promptly delivering diverse high-quality content to users, IZEverse encourages deeper user engagement and exploration of its immersive experiences.

4) Payment Feature

- **IZE FIRST PAY**

IZE FIRST PAY is an innovative BNPL (Buy Now Pay Later) platform that offers users a more flexible and affordable purchasing method. Through IZE FIRST PAY, users can purchase products and services now and pay later, spreading the cost over a series of installments. This makes it easier for users who may not have the funds to pay upfront or prefer to split payments over time to access purchases more easily.

This platform supports a wide range of products and services, from fashion and electronics to travel and entertainment. Users can explore the platform's extensive product catalog and easily find the products they need using powerful search tools and filters.

One of the key benefits of IZE FIRST PAY is its simple and intuitive payment application process. Users can apply for payment on the platform within minutes and receive approval almost instantly. Once approved, users can start shopping immediately and take advantage of the platform's flexible payment options.

IZE FIRST PAY's commitment to user privacy and security is paramount. The platform securely collects and shares users' information in compliance with relevant laws and regulations. Users have full control over their personal information, with the ability to update, modify, or delete their information at any time.

IZE FIRST PAY is a BNPL (Buy Now Pay Later) platform that revolutionizes the landscape by offering users a flexible and affordable purchasing option. With a wide range of product and service catalogs, a straightforward application process, and a commitment to user privacy and security, IZE FIRST PAY is the ideal platform for anyone seeking a more accessible and convenient shopping experience.

IZE FIRST PAY is not only a flexible and affordable way to make purchases, but it also provides a wealth of data that IZE uses to gain insights into consumer behavior and preferences. With each transaction made on IZE FIRST PAY, IZE collects valuable data on users' purchase history, spending habits, and product preferences. This data is analyzed and utilized by IZE to make informed business decisions, improve the user experience on IZE FIRST PAY, and develop new products and services that meet users' needs.

Although concerns about user privacy may arise due to data collection and utilization, IZE takes every precaution to ensure that users' information is secure and protected. IZE FIRST PAY's security features include advanced encryption, multi-factor authentication, and secure storage protocols. IZE complies with all relevant laws and regulations regarding data collection and privacy, including GDPR, CCPA, and PIPEDA.

In addition, IZE is committed to being transparent about its use of data and offers users the ability to control their data through its privacy settings. Users can choose what data to share and what to keep private, giving them control over their personal information.

In conclusion, IZE FIRST PAY not only provides a flexible and affordable purchasing options, but it also contributes to IZE's valuable big data collection. With advanced security features and user privacy controls, users can continue to enjoy the convenient and accessible shopping experience on the platform with confidence that their information is protected.

5) IZE Blockchain Structure and Ecosystem

We propose a service that provides a trustworthy transaction process based on blockchain for data providers and information users, allowing participation in various fields to receive rewards and profits for data sharing.

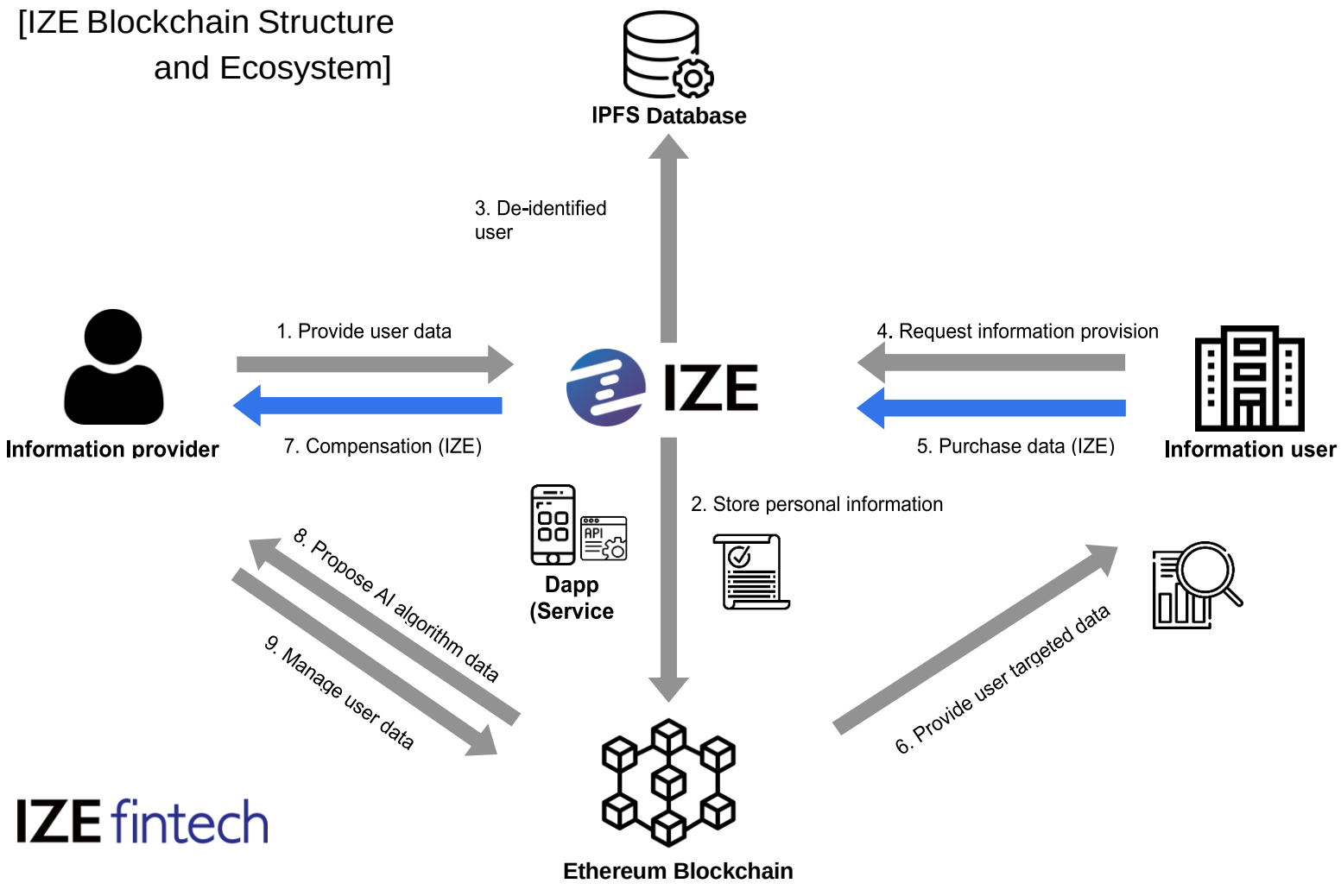
IZE project is designed to protect private information while seeking the efficiency of data information to meet the users' demand. IZE application collects information the user needs while IZE Add On service rewards the big data participants with benefits and compensations through Add-On data analysis algorithm.

The IZE Project offers four solutions:

1. IZE Application: Designed for the diverse participation of information providers, the IZE App directly rewards and sells data through collaborations with domestic and international research companies and DApp providers
2. IZE Add On: This browser extension program provides efficient information to the advertising market and data sales market through AI targeting analysis algorithms
3. IZEverse: As an integrated virtual world of IZE's solutions, IZEverse collects user activity information such as MyData Selling responsible for direct information collection from IZE Application, Add On collecting activity data, and payment information through IZE First Pay.
4. IZE First Pay: Introduced to support IZE payments, this BNPL payment solution supports user installment payments and returns the value of payment big data to paying users by encrypting purchase history with personal information.

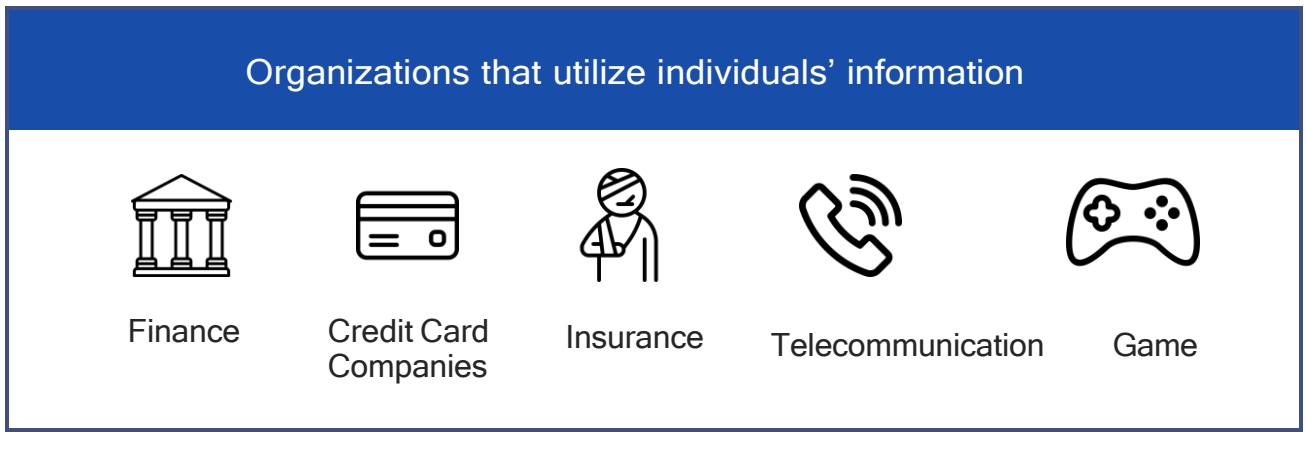
Zero-knowledge proof is employed for confidential information for privacy protection, while Big data storage is distributed through IPFS to provide encrypted blockchain-based database. SPARK technology is applied for efficient processing, enabling quick large-scale analysis and machine learning applications to process big data.

[IZE Blockchain Structure and Ecosystem]



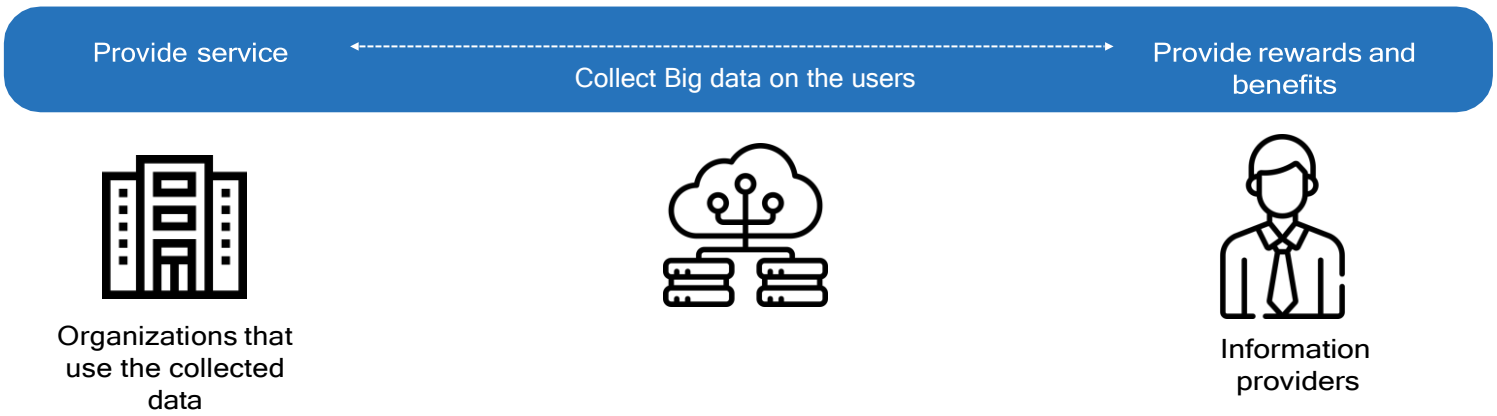
6) Big Data Business Expanding in Fintech Platform Field

IZE Project aims to apply data processed from personal information to various business fields in fintech transaction platforms. It seeks to foster an ecosystem based on the sale of data among personal information providers, businesses, institutions, and organizations, offering a sustainable business environment for ecosystem participants to engage and grow continually.
DApp providers within the IZE ecosystem can also develop specialized DApps based on the information acquired from individuals.



Examples of Big Data Utilization

- Finance: Analyze the user's financial transactions to propose well-suited products
- Credit Card Company: Analyze the user's spending patterns to provide promotions and discounts.
- Insurance: Analyze the user's insurance and their interest to create new insurance products and services
- Telecommunication: Analyze the user's service usage to create new plans and promotions.
- Games: Analyze the user's game activities to design the appropriate balance.



7) An Example of Big Data Service in Fintech Platform Field

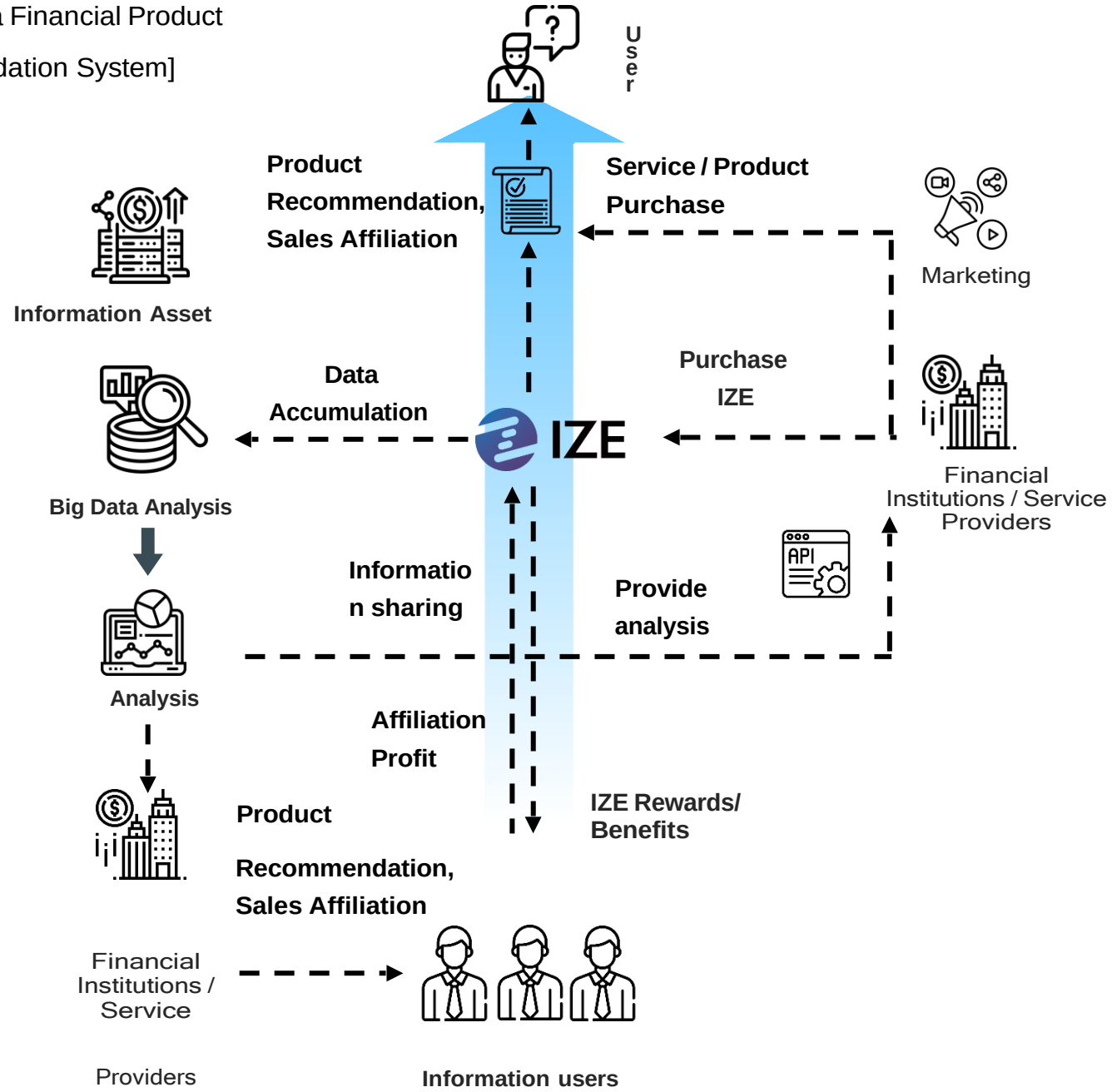
The IZE platform fosters a shared economy-based ecosystem among personal information providers and the entities utilizing this data, creating a sustainable business environment where ecosystem participants can achieve win-win outcomes through value creation. By facilitating the creation, provision, utilization, and compensation of big data through four steps, it accelerates the big data circulation cycle, thereby driving the big data industry forward.

The information IZE Fintech platform providers acquire is utilized by the finance service providers to customize their products and service to individual customers, while the information providers are rewarded in IZE and payment services for the finance service providers.

The IZE platform cultivates a new ecosystem of information sharing business by enhancing the value of information and sharing rewards and benefits among users who are providers and producers of information, as well as service consumers across various levels.

Information providers contribute data to the IZE platform, where it's analyzed and turned into valuable assets sold to financial institutions. These institutions then recommend and sell related products to consumers through marketing partnerships. Information providers are compensated by receiving IZE coins, while financial institutions and service providers use IZE coins to pay for the usage fees of the relevant information. Consumers and marketing companies get bonus IZE coins for signing up for recommended products, aiding ecosystem expansion., expanding the ecosystem.

[Example of a Financial Product Recommendation System]



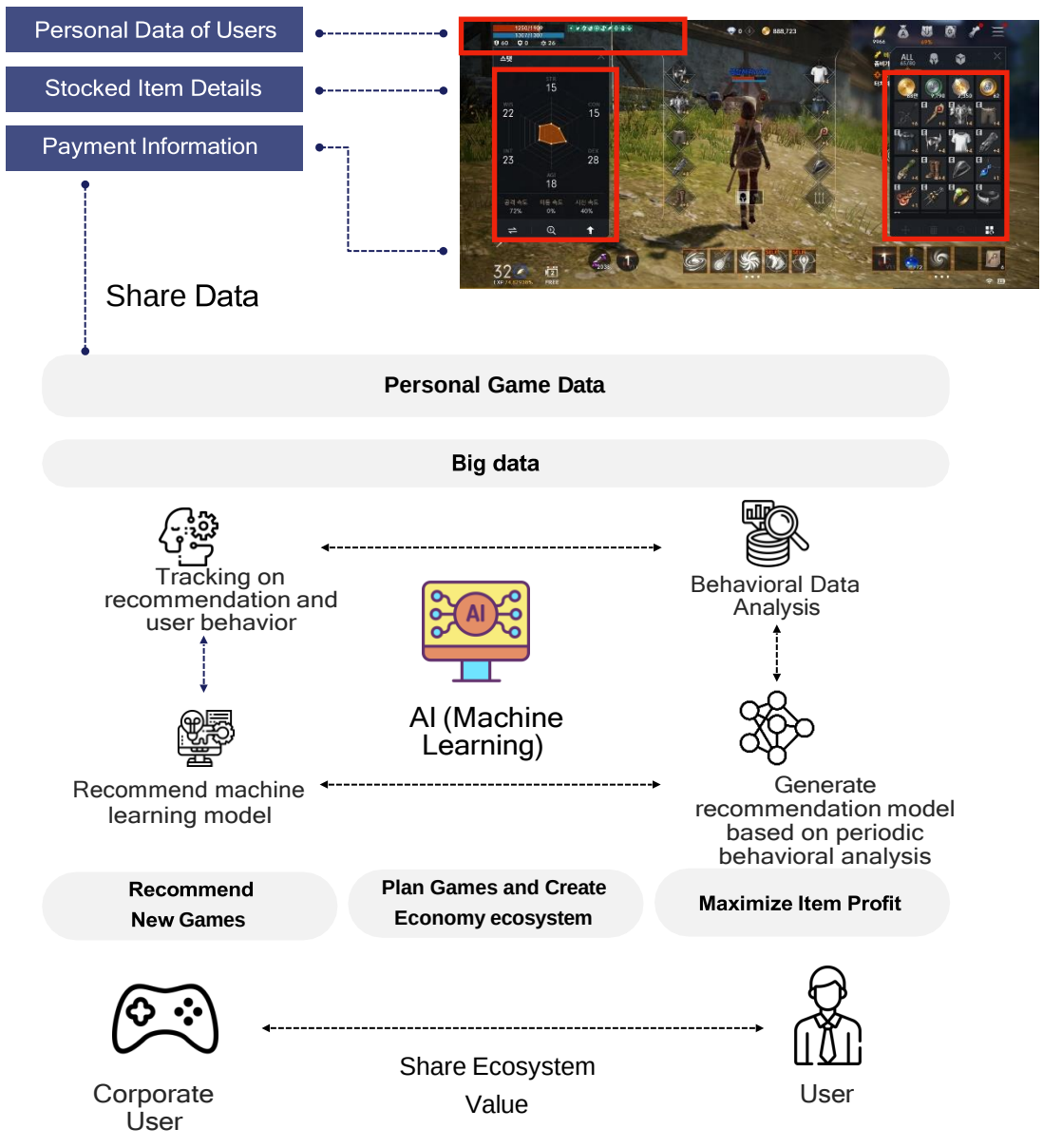
8) An Example of Big Data Service in Game Platform Field

The IZE platform holds immense potential to revolutionize the gaming industry by establishing a seamless ecosystem for user data exchange and compensation. Game economy system planning, often handled by a limited number of game company planners, can be a risky endeavor. Miscalculations in game system design can lead to significant financial losses, even for games with substantial investment. IZE's big data ecosystem, powered by user-generated game-related information, provides game developers with invaluable insights into current game system flaws and potential avenues for improvement. This data can significantly reduce risks associated with game development and operation. In this symbiotic relationship, users who provide data are rewarded with IZE tokens and benefits, while game developers use IZE tokens for platform usage fees.

Game user data (such as personal information, item ownership details, payment information) is obtained and transformed into big data. Behavioral data analysis based on big data is processed with AI to create a periodic preference model, such as item purchase propensity and play style. The model is then statistically analyzed and recommended to the client company based on their specific needs and proposals. This statistically analyzed data is sent to the game developers in real-time to support new game recommendations, game planning and economic system development, and item revenue improvement.

Game developers, stores, and marketing agency can pay for data costs with IZE tokens, while game users can receive IZE rewards while playing games.

[Example of Game Data Service System]



3. IZE Blockchain Technology

1) IZE Smart Contract

Ethereum is an open source blockchain platform consisting of decentralized virtual machines that run Ethernet nodes to implement point-to-point agreements by connecting to a distributed computing network, and all devices that operate Ethereum, the dedicated cryptocurrency. “Distributed” means that anyone can create and run an Ethereum node just as like that of a Bitcoin. Although Ethereum is often compared to Bitcoin, there are differences. While Bitcoin is only a blockchain and payment network, Ethereum is a decentralized computing network where a variety of applications can be built by executing customized smart contracts through the blockchain.

Smart contracts are computer programs that run automatically on Ethereum virtual machines, and always perform according to defined rules. They can respond to and store received messages, or send out information and value. In short, smart contracts are the digital version of traditional contracts. Smart contracts are computer programs that run on the blockchain and can be automatically executed when conditions written in the source code are met. Since the contract terms cannot be manipulated, users can rely on smart contracts.

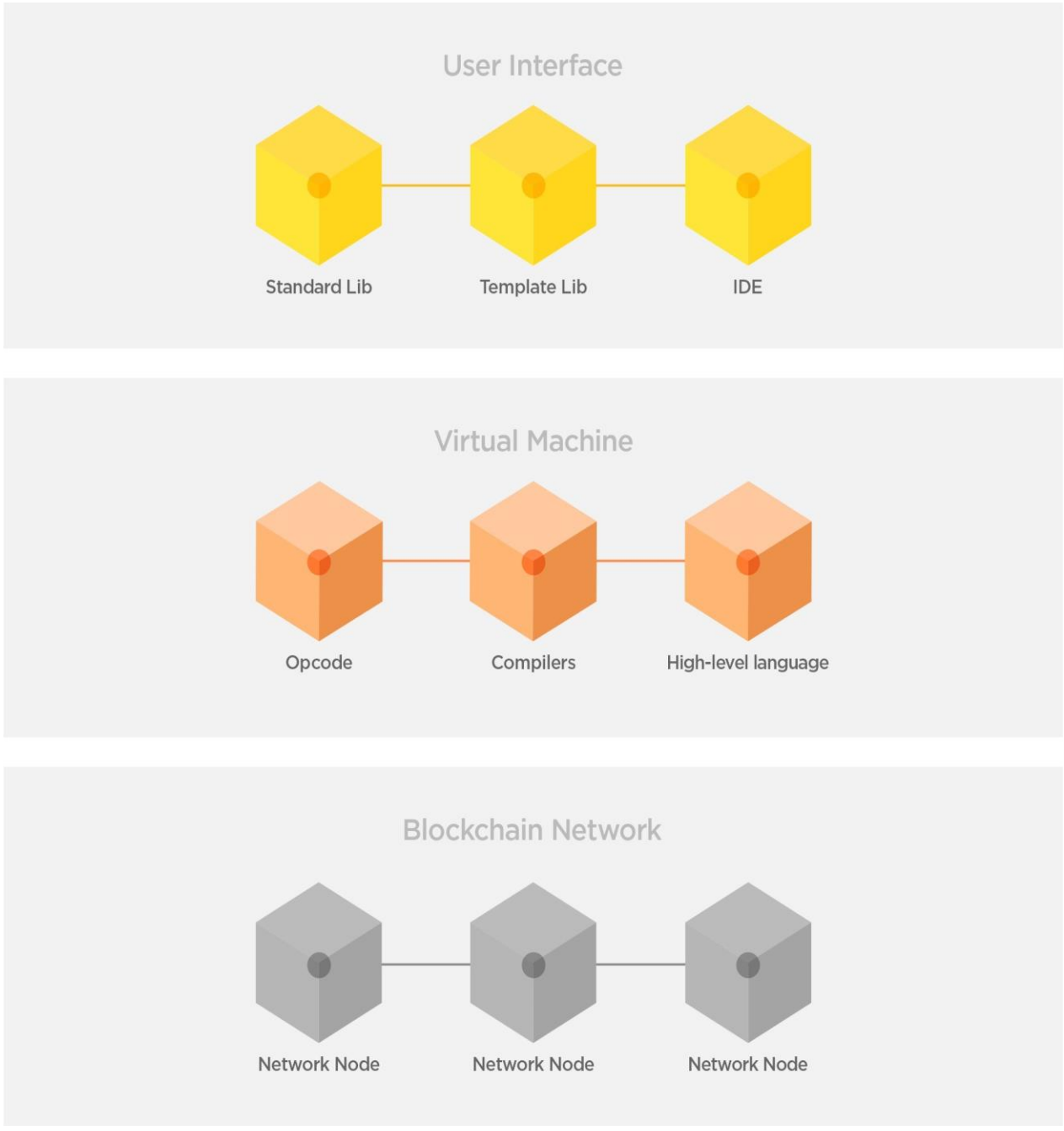
IZE's smart contract represents the data type definition and data manipulation guidelines. This means it includes data structure and its related algorithms. The definition of data manipulation acting as the core of the smart contract because it implements the actual logic flow of smart contract, and the data type definition helps with implementation. IZE smart contract tasks are implemented in a message-based communication structure, and clients invoke tasks by sending messages to Ethereum nodes. Upon receiving a message, the Ethereum node requests the relevant source and executes the smart contract WebAssembly (WASM) code. If the code runs smoothly, the Ethereum node proceeds with other tasks. Several tasks can be combined to form a transaction executed with combined nodes, while tasks can be sent and executed individually or in combination.

Each node in the blockchain network receives a copy of the smart contract from the Ethereum blockchain in the macro phase to executes each task in the contract. After the contract is sent to the blockchain, the smart contract owner receives the verification certificate generated by the node. However, this verification does not mean that the transaction has been confirmed, but that the node has processed it without error. Not all nodes execute each smart contract in the actual process. While some blockchain nodes perform the actual work of smart contracts, other nodes process the validation of the transaction block.

-Smart Contract Development

To provide improved smart contract development environment, Ethereum has developed more complete intelligence contract platform, implemented Solidity, a Turing-complete intelligent contract programming language, and supports a virtual machine that enables the Ethereum blockchain to develop, test, and deploy smart contracts. Other types of services are rare, and are likely to cause congestion on the Ethereum network when processing a large number of users.

In order to provide a more intelligent contract platform and support the development and operation of large-scale business DApp, IZE smart contract system suggests improvement of the standard library based on the following structure.

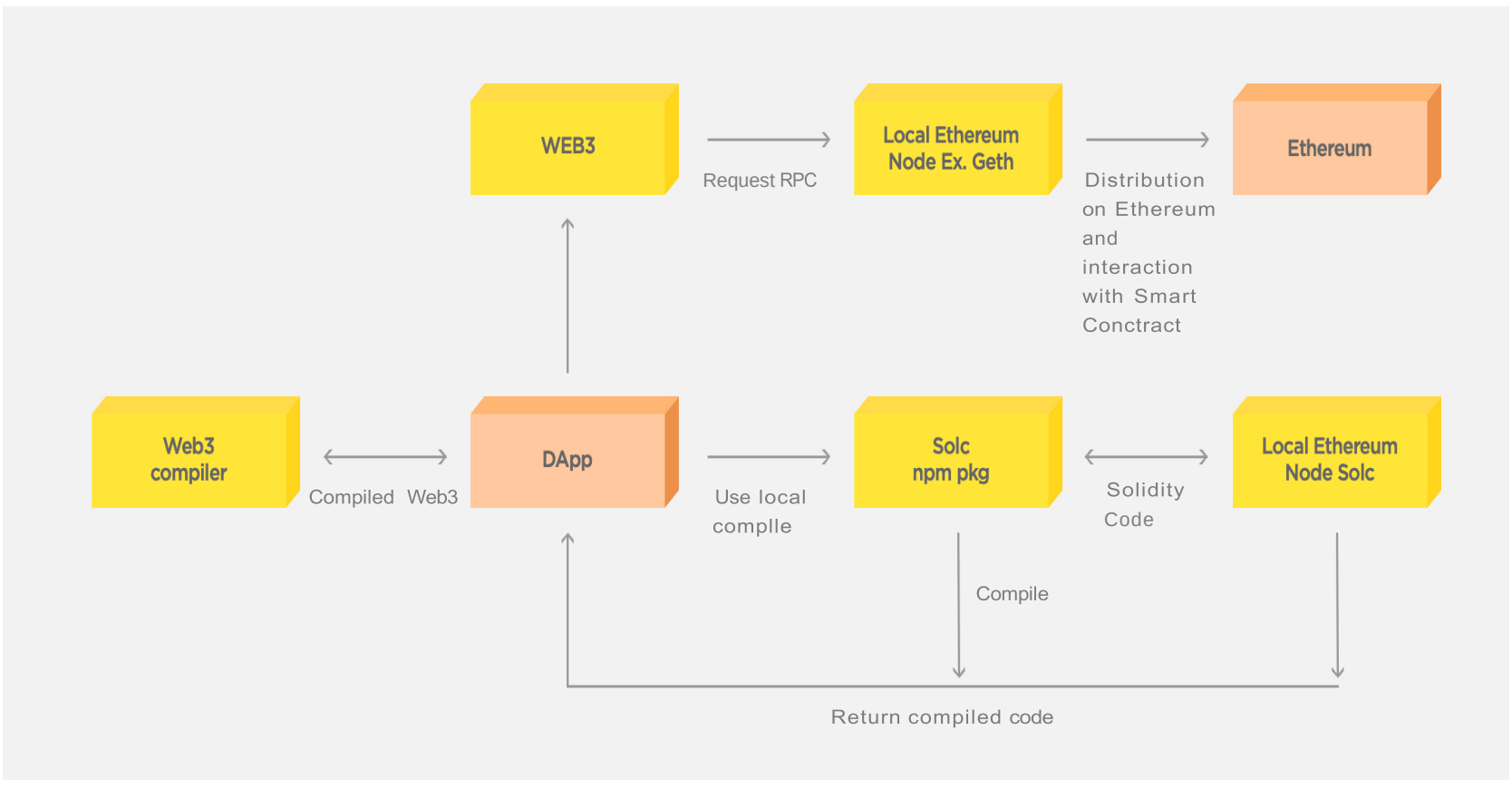


[IZE Smart Contract Components]

IZE implements a high-level application interfaces beyond virtual environments and advanced languages to enable developers to work more efficiently. The general programming languages support the standard library, but it is worth noting that smart contract programming languages rarely provide this type of support. For example, the C programming language specification not only defines retained keywords, data types, vocabulary, and grammar, but also provides a standard library to simplify software development.

Another example is that the C standard library includes a math function (math.h), an input / output process (stdio.h) and a general library (stdlib.h). IZE provides a standard library to ensure its developer-friendliness and minimization of security risks. The standard libraries will encourage developers to build more applications based on IZE smart contracts and help promote IZE's ecosystem.

- Implementation of Smart Contract



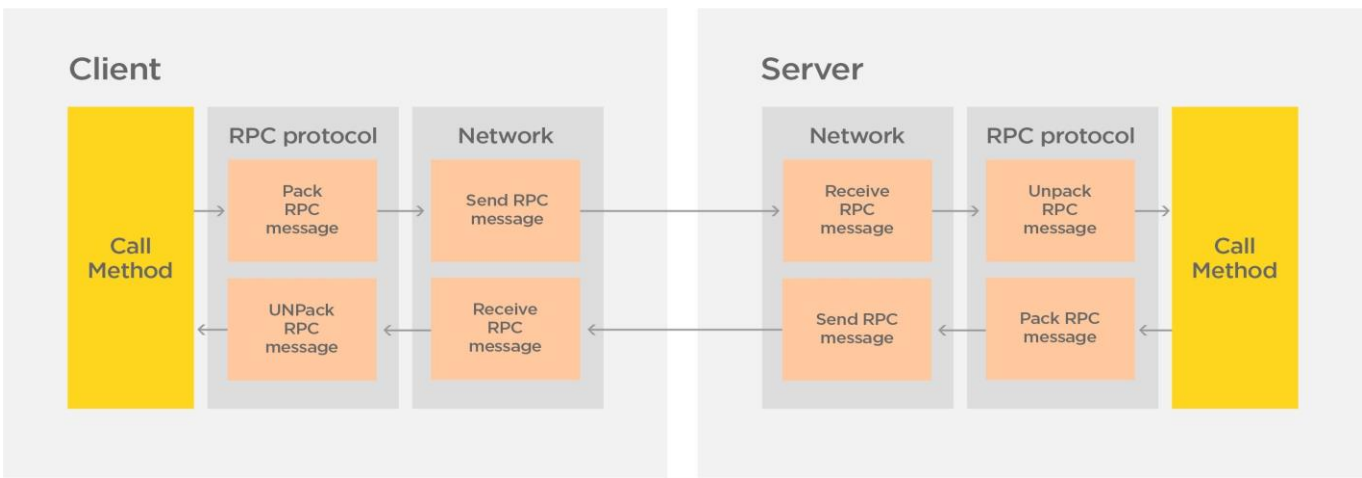
[IZE Smart Contract Execution]

The concrete implementation of the IZE smart contract is a decentralized app, or DApp. The key to DApp is the implementation of secure, efficient and transparent applications. DApps run on a computer network and adjust actions by passing messages or sharing memory between application instances. Blockchains are more available than decentralized databases, and in the event of failure, such as network partitioning, outperforms centralized applications Currently, it is a common practice to separate most storage tasks from the DApp.

The tasks are performed on other distributed computing nodes and the results are returned in the blockchain to ensure the data integrity and transparency. In relation to the IZE platform, the token usage and transfer process is stored on the Ethereum blockchain to prevent tampering of the transaction records and tokens, and to facilitate the tracking and retrieval of tokens afterwards. Since all IZE records are stored on the blockchain, the transparency of the blockchain technology improves the user's confidence in transactions on the IZE platform (e.g., transaction records can be tracked and audited). The execution process of DApp is as shown in the [IZE Smart Contract Execution] diagram. RPC protocol interaction with the local Ethereum nodes is done through Solidity code compiled locally or from Web3. At the end, smart contracts are placed in the main Ethereum chain according to pre-designed and irreversible logic.

- RPC Operation Structure

Remote Procedure Call (RPC) is a computer communication protocol that allows programs running on one computer to call subroutines on another computer without the programmer having to program the interaction. RPC is a distributed computing model, in which a client sends a request to a server to execute multiple processes. The server accepts and processes the request using the parameters provided by the client. When the calculation is complete, the result is returned to the client. In the field of distributed computing, there are many RPC protocols such as early CORBA, Java RMI, RPC styles of web services, Hessian, Thrift, REST API, and etc.

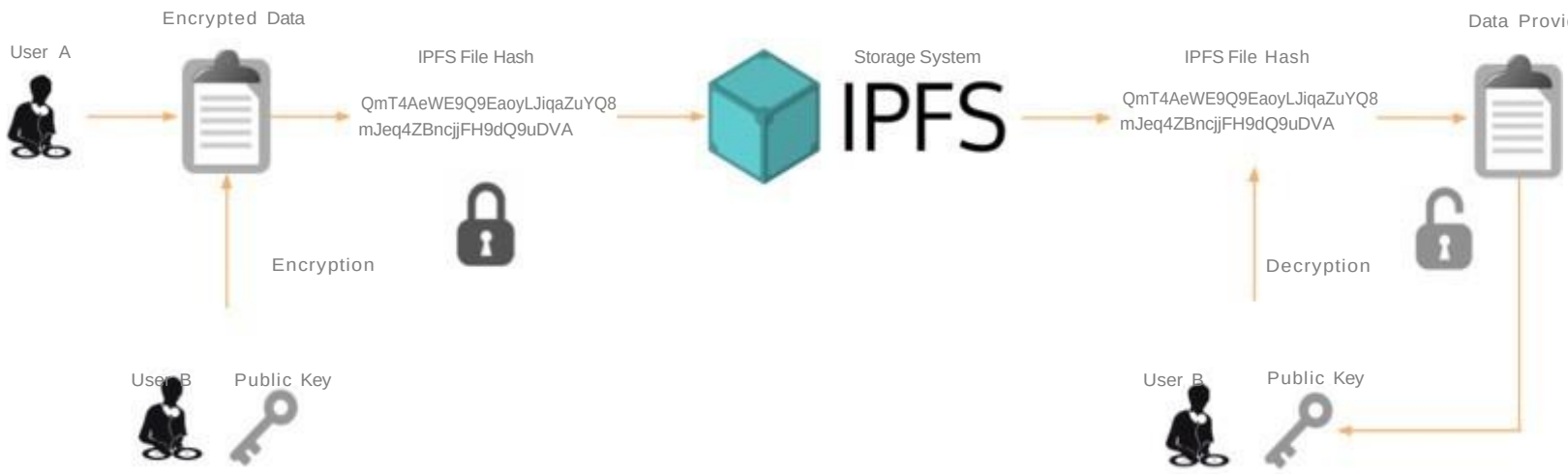


[RPC Operation]

The IZE platform communicates with Ethereum using RPC. Since smart contracts run on the main chain of Ethereum, all IZE user operations enter the Ethereum network through RPC. This can ensure normal interaction of the IZE smart contract.

2) IZE Data Storage

IZE allows user data and files to be stored and shared in a distributed storage system called InterPlanetary File System (IPFS). IPFS is an encrypted blockchain-based database, or distributed blockchain file system. Data files such as videos may be stored through encryption and shared with selected users. Specifically, a user can encrypt data using his key pair (asymmetric encryption) and store the encrypted data in IPFS. Asymmetric encryption allows IZE users to encrypt data using the public key of another user to share the data. The selected users can then decrypt the file using their private key to view the files, such as shared media. Unauthorized users cannot decrypt the file because their private key and the public key used to encrypt the data do not match, which ensures the privacy of the users.



The above diagram illustrates the how data is selectively shared with the user's consent.

Details: User A wishes to share the information he submitted only with User B.

IZE uses User B's public key to encrypt User A's media data. IZE uploads an encrypted data file to IPFS to get a hash of the encrypted file.

User B has the private key associated with the public key used to encrypt the file, so he can access the file and decrypt it. However, other users cannot decrypt the file because they do not have the private key of User B.

IPFS can be seen as a data storage protocol similar to BitTorrent, with a variety of operations on files via hash references for more diverse program interactions using fully distributed interactions. Usually, blockchain has a dedicated BPM module that can store simple text records very efficiently, making cryptocurrency a suitable module to run on the blockchain. In the cryptocurrency application scenario, the BPM module only records the sender, recipient, and cryptocurrency of the transaction, making it easy for the BPM module to run efficiently. However, in the case of storing a large amount of data, such as text or personal information, the efficiency of blockchain storage becomes very low because all the data hashes must be calculated and verified each time a block is created. Maintaining chain integrity causes very inefficient block creation.

To solve this problem, recent approaches utilize a combination of IPFS and blockchain. IZE stores only the hash value of the IPFS-generated storage file, or the user data, on the Ethereum blockchain instead of the BPM. This ensures the simplicity of the data required for the blockchain, while achieving the benefits of fully decentralized IPFS simultaneously.

Figure. Block Unit of IPFS File Hash

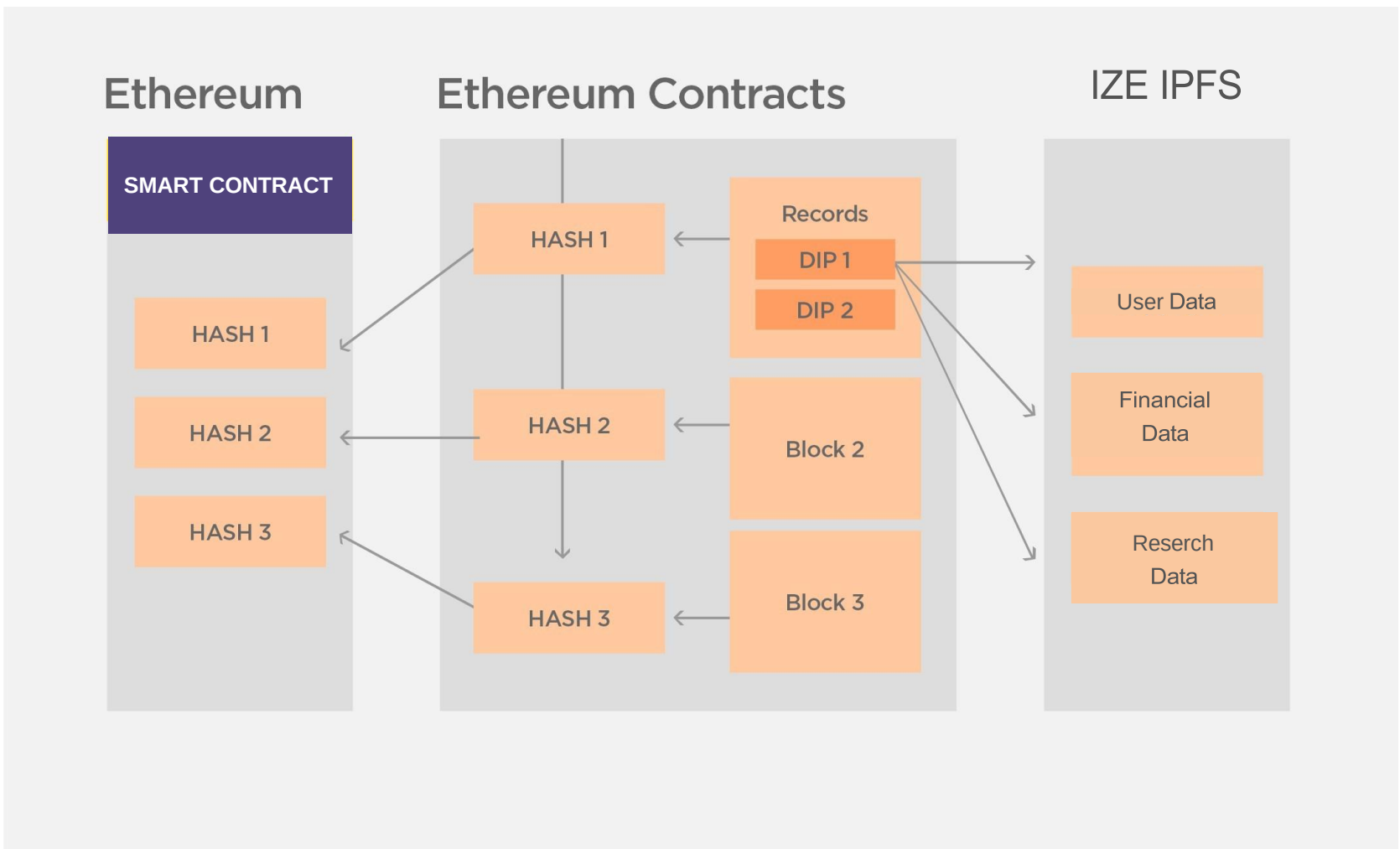
3) IZE Data Traceability

At the same time, encrypted data hash can be stored on the blockchain to track all records.

Below is a detailed explanation of how IZE tracks the stored information:

A project configuration file (DIP file extension) is provided that specifies all unique numbers stored in IZE, and is stored in the encrypted blockchain-based database, IPFS. The hash value of DIP is mapped onto Ethereum network and blockchain (sidechain).

A DIP file consists of digital containers that store reference information for digital documents and records. All events can be collected and tracked and the records in the DIP are stored in chronological order. The time stamps and hash values of the previous records form smaller blockchain groups that constitute the transactions within each DIP. The record also requires that the signature of the creator's private key to increase the verifiability of each record.



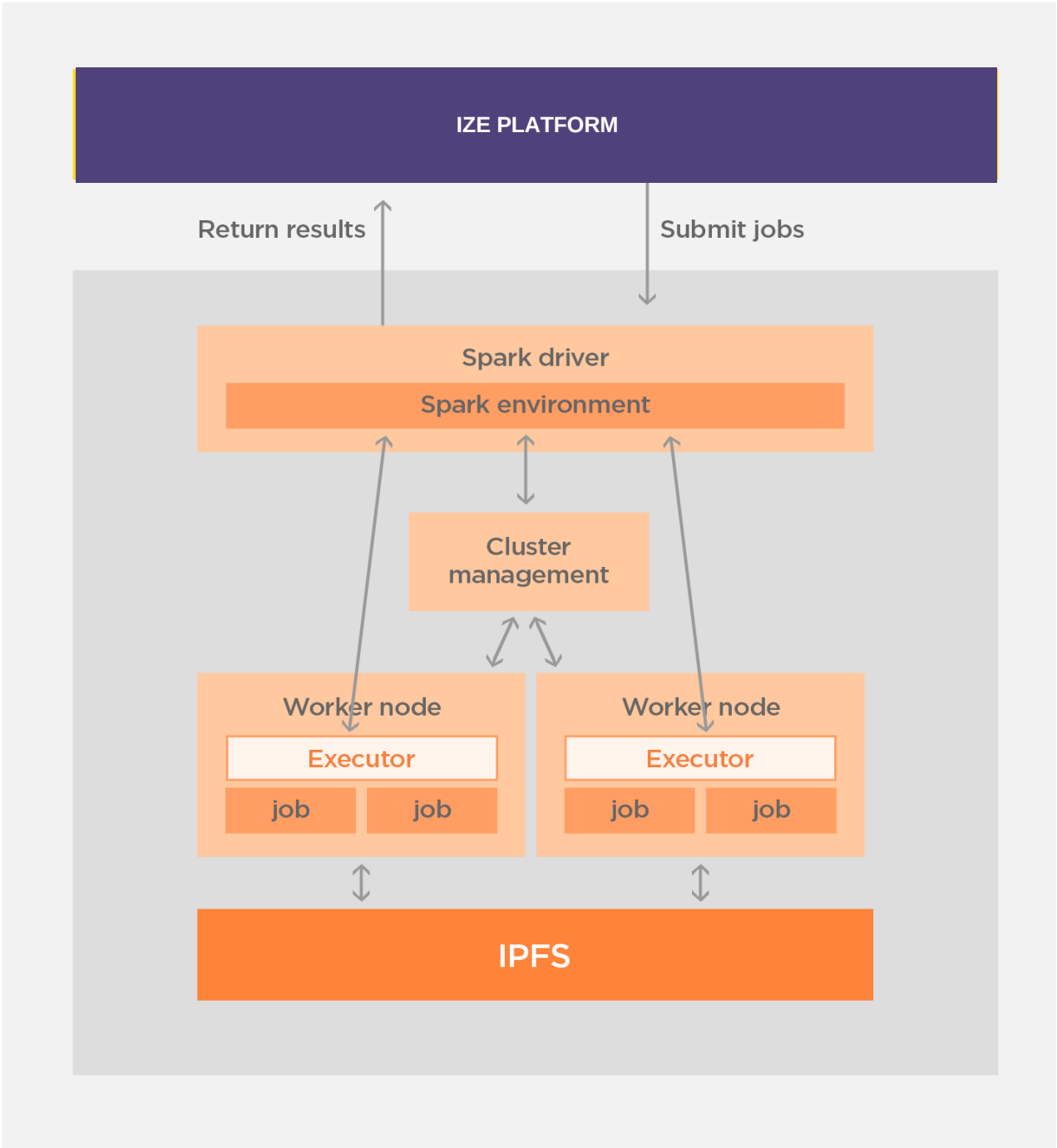
[Blockchain Data Traceability]

4) IZE Data Processing

IZE uses Spark to build a Big Data processing platform. Spark is ideal for building large-scale, low-latency Big Data analytics and machine learning applications and is the required technology of the IZE platform.

The platform can be used to perform machine learning tasks on data related to the user actions in different events. For example, the IZE Big Data Processing Platform can be used to examine the behaviors of users accessing specific files to better understand their interests for more accurate marketing.

Specifically, Spark is an open source cluster computing environment similar to Hadoop, but there are some differences between the two, making Spark better suited for some workloads such as Spark Big Data Processing Platform. In particular, Spark can activate data sets distributed in memory, provide interactive queries, and optimize repetitive workloads.



[Spark Big Data Process Platform]

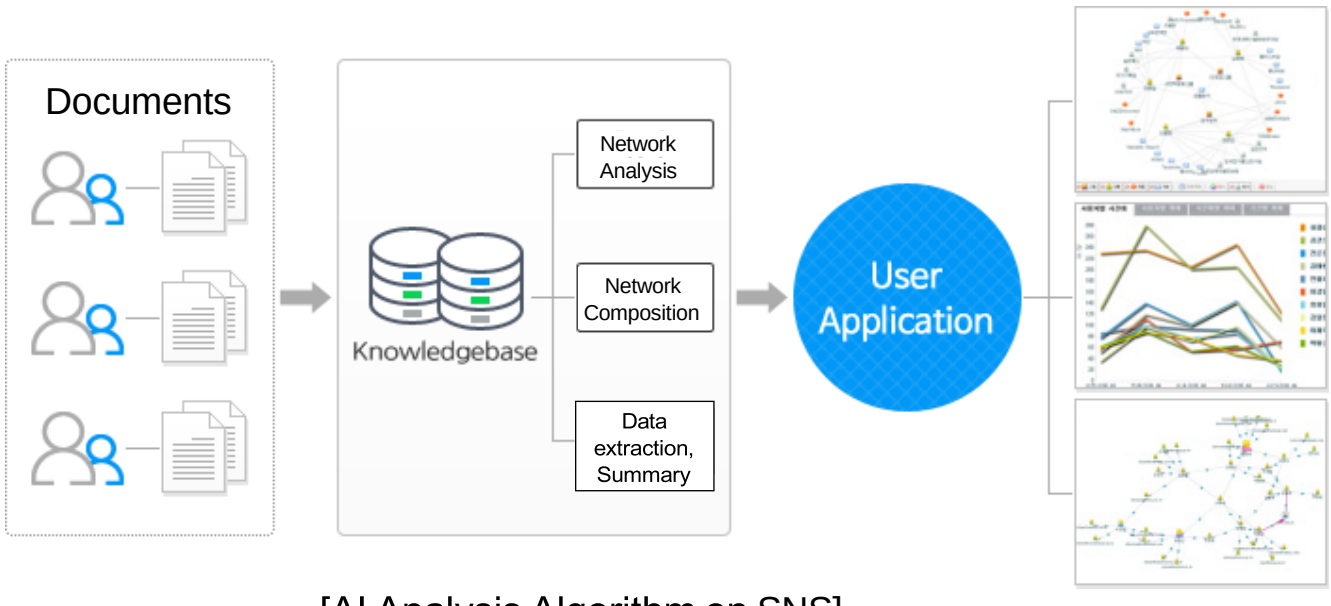
5) AI Technology Application Cases

Artificial intelligence solution is used for the IZE Application Data Targeting Algorithm and the IZE Add-On web browser, Add-On Data Analysis Algorithm.

- Targeted SNS Analysis

The development of the internet and mobile services has made connection among people more dynamic and complex. The connection among people not only serves a distribution channel for various data and contents, but also influences decisions, including purchasing activities. With the professional AI solutions, IZE will extract semantic nets from social media, email and massive number of corporate documents to analyze their structures to ascertain the knowledge and mutual influence interchanged throughout the network.

Such in-depth analysis based on machine learning enables diverse evaluation on core analysis, cluster analysis, shortest path analysis, key player analysis, core node analysis by subject, related node analysis by subject, and core node analysis by related subject. and many more. It aims to implement the real-time analysis function for the data circulated on the network.



[AI Analysis Algorithm on SNS]

-Object Recognition Analysis

Machine learning-based object cognitive analysis automatically extracts (boundary distinction) objects (such as company name, person name, area name, date, time, amount, etc.) from data and classifies the extracted objects. It aims to implement a function that enables automatic real-time analysis of correlations.

6) Mainnet Development

At the beginning of its development, IZE token will be an ERC-20 token, and the Mainnet will be developed to accommodate rapid data transaction, compensation, and AI analysis management.

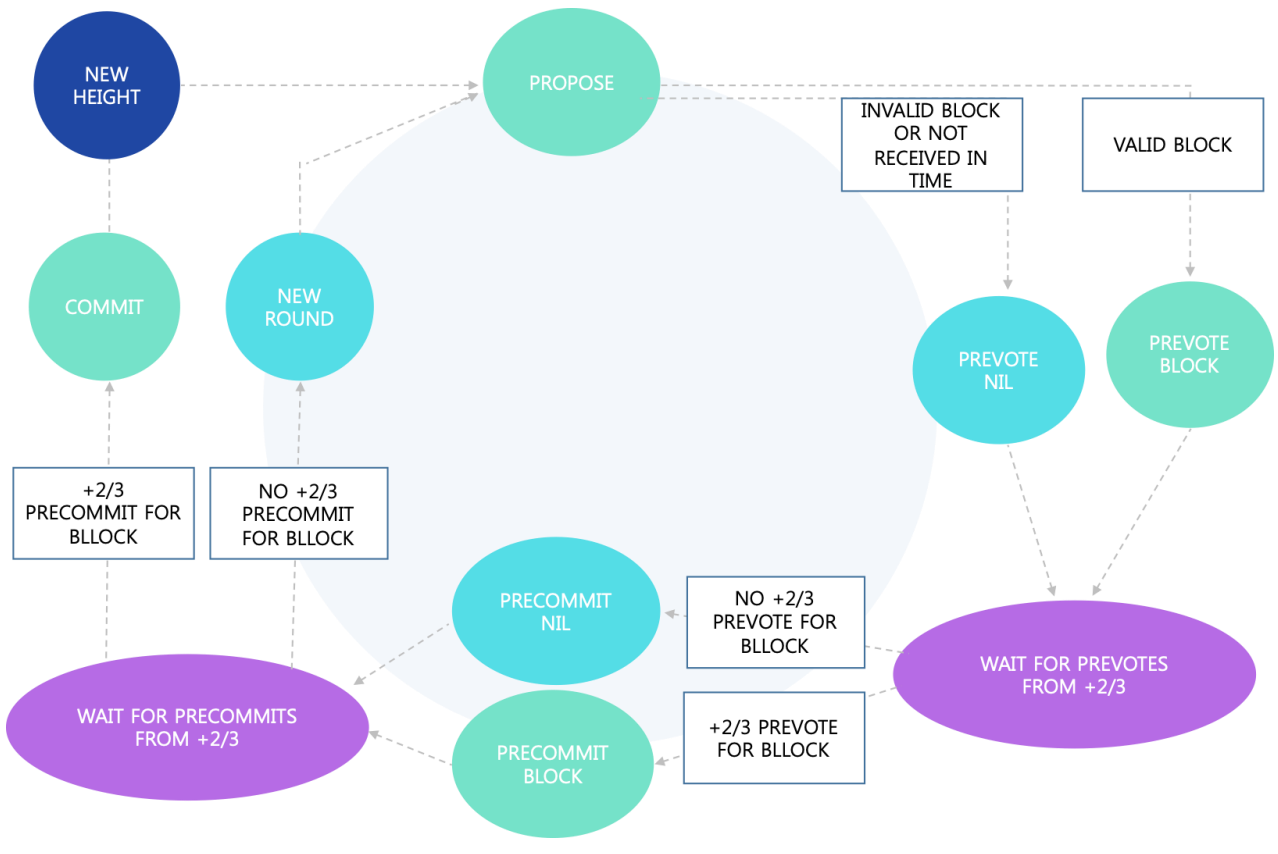
For the future of the platform, it would be necessary for the platform to integrate various blockchain projects. Also, a technical configuration to swap or exchange with other coins would be required to enable interaction in the data platform.

Currently, there is no unified protocol between Ethereum-type coins and other coins with each ecosystem being developed simultaneously. It is also ironic that the exchange of coins and tokens can only be done through a centralized exchange.

We aim to develop our blockchain technology to appeal to the current situation. This development would need to improve the scalability and interoperability of the business in the data exchange and reward ecosystems.

Considering various factors, the IZE blockchain platform will be based on the technology of Tendermint-Cosmos Platform, which has been making progress in the blockchain field for a long time.

Tendermint-Cosmos has a Tendermint consensus protocol with a partially synchronous BFT (Byzantine Fault Tolerant) consensus protocol. In other words, Tendermint is a consensus algorithm that blends the Delegated Proof-of-Stake (DPoS) concept with the PBFT concept. The characteristic of Tendermint-Cosmos is interoperability, and to maximize the potential of the blockchain, it is necessary to create an "internet where all the blockchains are connected on a unified protocol." For this purpose, the Cosmos team proposes IBC (Inter-Blockchain Communication) protocol.



Tendermint Reference
https://tendermint.com/docs/ cosmos
https://github.com/cosmos/cosmos

7) IZE Blockchain Platform Solution

Tendermint-Cosmo blockchain based IZE Blockchain features the followings characteristics.

Fast Consensus

About 2,000 transactions are processed per second for fast transactions on the platform. Ultimately it aims to achieve the speed of 10,000 TPS.

Smart Contract

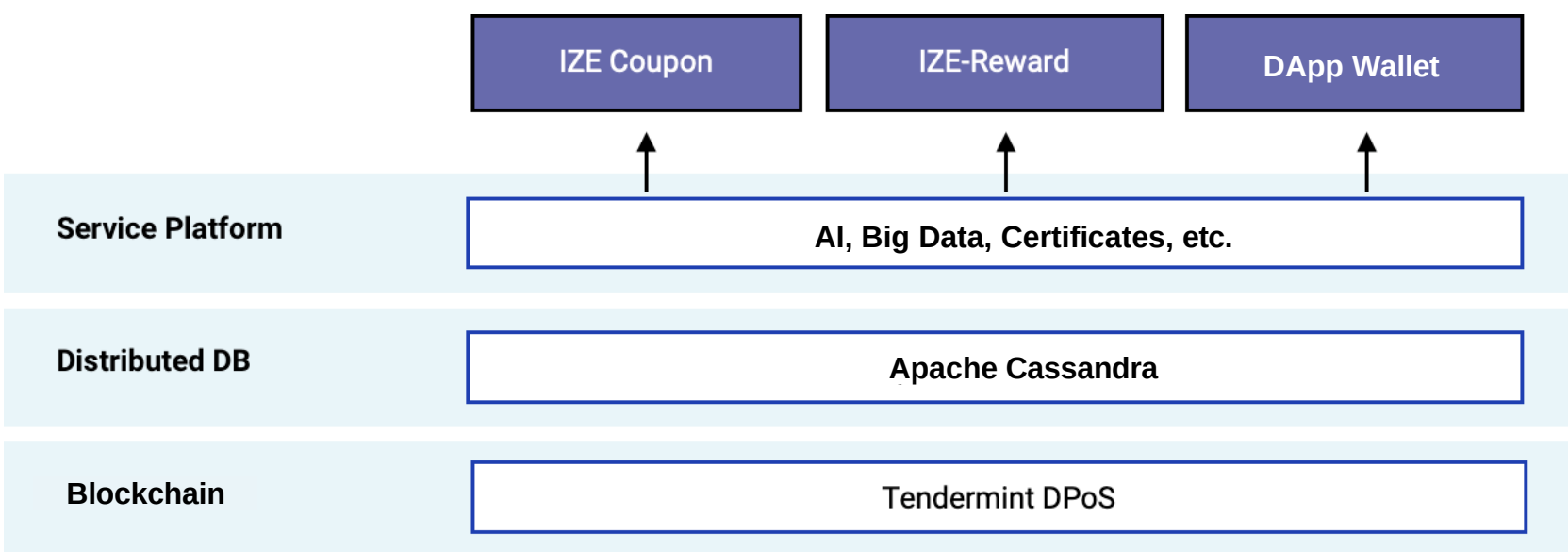
IZE blockchain supports smart contracts with data exchanging organizations, full compatibility with Ethereum, and full conversion of IZE blockchain with other smart contracts without any changes in the distributed application code.

Safety

Safe transaction of intangible assets such as cryptocurrencies and monetary assets between the data service providers and consumers is equally important as the fast transaction. IZE implements abnormality detection technology to prevent faulty transactions or hackings.

Low Fee

Low transaction fee enables businesses to activate IZE Blockchain ecosystem and protect their profit.



4. Tokenomics

1) Tokenomics

The circulation of IZE tokens is comprised of stages

A. Information Provision (IZE Acquisition)

B. Information Request (IZE Purchase)

C. Information Valorization (IZE Utilization)

As these stages continue to circulate, the tokenomics of IZE's ecosystem is completed.

A. Information Provision (IZE Acquisition)

Users of the IZE project can provide their information in various ways and earn IZE as a reward accordingly. They can provide information through various content within the metaverse. Users can also acquire IZE by directly providing specific information relevant to themselves through MyData Selling within IZEverse. Additionally, they can collect IZE by engaging in various activities such as enjoying educational content or creating NFTs within IZEverse, with the data collected being relayed to the IZE platform as a reward for the respective data.

B. Information Request (IZE Purchase)

Individuals, businesses, organizations, and governments seeking to purchase IZE project's big data or collect specific data must pay a fee for acquiring the information. The payment method for the fee is not restricted; however, ultimately, this fee is used to secure IZE to support the ecosystem and compensate information providers. Through this process, the circulation of IZE is reduced, allowing for a sustained increase in its value over time.

C. Information Valorization (IZE Utilization)

The earned IZE is used to purchase various items within IZEverse. It can be used to buy special NFTs available in the NFT market, listen to lectures by famous personalities, or learn about the culture and language of other countries. Additionally, users can purchase avatars to express their personality, explore various stores of companies within IZEverse, and make purchases using IZE First Pay, repaying the transaction amount with IZE.

If Insurance Company A wants to conduct a survey targeting men in their 20s for the launch of a new insurance product, they can conduct the survey through the IZE Foundation. In this case, the information fee is calculated based on the target scope and the number of participants in the survey, and the insurance company provides this fee. The IZE Foundation calculates the IZE required for compensation and secures it accordingly.
(Information Request, IZE Purchase)

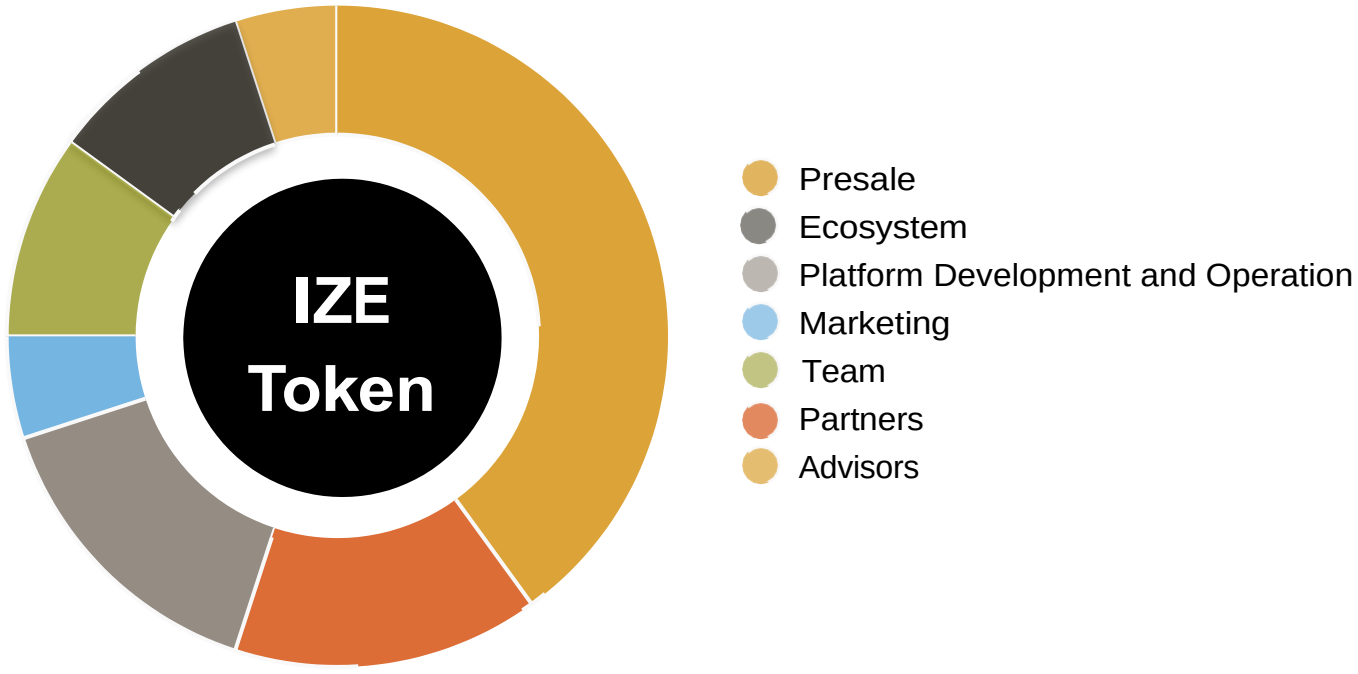
Subsequently, the survey will be posted on IZEverse's MyData Selling platform, and notifications will be sent to the target users. Target users interested in the survey will participate, and in addition to the base IZE reward, they can earn additional IZE from the MyData Integration Reward Pool based on their rating score (accuracy of information, participation, evaluation by information users).
(Information Provision, IZE Acquisition)

Users who receive rewards can use the earned IZE to purchase desired NFTs or limited avatars, among other activities, thereby utilizing IZE in various endeavors.
(Information Valorization, IZE Usage)

IZE utilized within IZEverse serves to either circulate within its internal economy or be transmitted externally through bridges for trading on exchanges. Externally traded IZE, acquired by the foundation during the information request phase to compensate information providers, is then reintroduced into circulation.

2) Issuance Details

The total issuance of IZE token will be 10 billion.



Type	No. of Tokens	Ratio	Remark
Total issuance	10,000,000,000	100%	
Presales	4,000,000,000	40%	
Distribution in the ecosystem	1,000,000,000	10%	
Platform Operation and Development	1,000,000,000	10%	
Marketing	1,000,000,000	10%	
Team	1,000,000,000	10%	
Partners	1,500,000,000	15%	
Advisors	500,000,000	5%	
Total	10,000,000,000	100%	

5. Team Members

Yu Onodera Founder

- Managed and operated FX management system and IT consultant company
- Over 10 years of experience in various business consulting
- Began research on blockchain technology and drafted the IZE project in 2013
- Contacted several companies and organizations in 2017 to strengthen the foundation of this project.

Ricky Yujin Lohmeyer Chief Strategy Officer

- Served at American Airlines as operating agent at Narita International Airport from 1991 to 1996.
- Operated a chemical pumps and oil skimming equipment manufacturing firm from Jun. 1996 to Oct. 2005
- Has experience in sales and processing of chemical pumps used in chemical plants, automobile factories, oil refineries and other areas.
- Managed a general trading company specializing in industrial facilities in Japan from 2006 to 2013
- Has been managing a company that plans and sells prepaid travel cards and a travel agency specializing in inbound and outbound travels since 2014
- Established a joint management company in Sri Lanka to carry out urban development and environmental improvement projects to expand its business into Asia.

Kanchana Eric Sinharage Chief Marketing Officer

- Experience in public relations and welfare
- Experience in organizing and networking of various cultural and multinational groups
- Has been involved in various government, private sector, NGO projects
- Project chairman of the road development department of Sri Lanka
- President of Colombo Prison Welfare Association
- Coordinator in Social Service Sector
- Coordinating Officer of Special Project Department of Sri Lanka

Murilo Osamu Nobo Chief Technical Officer

- Self-taught cryptocurrency researcher since 2016
- Held private cryptocurrency seminars to spread the knowledge on cryptographic assets
- Participated in Keikoku activities in Cambodia
- Participated in ICE platform smart contract business for ICO related projects
- Appointed as the Director Bear Valley Holdings (blockchain technology developer for Comoros Association)
- Developed blockchain related services for payment service providers, wallet service providers, affiliation providers, etc.

2. Partners

Company: AlphaPrime Lanka (Pvt) Ltd.

Areas of business: private banking, fiat exchange, cryptocurrency exchange, cryptocurrency custody, E-wallet, gold trading, microfinance

Company: Bitwide Co., Ltd

Area of business: blockchain game, blockchain investment, cryptocurrency exchange platform development

Company: Ntoz Soft

Areas of business: educational software development, system engineering, mining pool development

Company: Blue Helix

Areas of business: blockchain, decentralized fintech, techFin, exchange

Company: Chain Up

Areas of business: blockchain technology, blockchain solution, R&D, wallets, public consortium

3. Roadmap

2019

- Finalized project concept and its components
- Finalize team members
- Created CI/BI
- Planning and Design
- Planned white paper
- Finalized basic coin policies
- Sought partner affiliations
- Formed legal and finance team
- Began Pre-Sale
- Reviewed exchanges
- Completed white paper
- Completed DApp planning

2020

- List IZE on exchanges
- Design IZE Application
- Design IZE Add-on
- IZE Application MVP developed

2021

- IZE Application alpha test
- IZE Add-on MVP developed
- IZE Application beta developed

2022

- IZE Application beta test
- Planning IZE Metaverse
- IZE Wallet developed
- IZE Application beta2 develped

2023

- IZEverse (IZE Metaverse) beta test
- IZE Application beta2 test
- IZE Wallet beta test

2024

- IZEverse open beta test
- IZEverse Grand OPEN

4. Disclaimer

This document is intended to provide information to the unspecified people who are interested in IZE Blockchain Project and its blockchain token ecosystem and technical details.

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5. References

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