

Whitepaper

PIONECHAIN



1. Introduction

Blockchain technology has been bringing revolutionary changes to many industries. However, the practical application of blockchain still faces many significant challenges. These issues are not limited to technical aspects but also include legal barriers, costs, scalability, and user trust. Pione Chain was born with the mission to thoroughly solve these problems, opening a new era for blockchain deployment in diverse areas of life.

Pione Chain is an environmentally friendly blockchain platform, developed since 2017 through many research and upgrade iterations, and officially launched in 2025, aiming to connect and expand globally. Designed to support future technologies such as Web3, AI, IoT, Metaverse, Pione Chain offers a decentralized, secure, and easily integrated ecosystem.

- **Industry:** Finance, Agriculture, Healthcare, Supply Chain, E-commerce, Gaming, NFT, Real Estate, Tourism, and many other fields.
- **Decentralized:** Pione Chain is a decentralized, open, and customizable blockchain, integrating unified information, providing an ecosystem that helps you optimize and protect your investment accounts most securely.
- **Scalability:** We combine leading blockchain development tools, talented teams, and resources to create sustainable and long-term products.
- **20+ Ecosystems:** Together with partners, developers, and the community, Pione Chain is continuously building and developing its ecosystem.

2. Current Problems in the Blockchain Market

In recent years, blockchain technology has demonstrated enormous potential in decentralizing data, increasing transparency, and reducing reliance on intermediaries. However, in practice, the current blockchain market still faces many barriers that prevent this technology from being widely adopted:

- **Difficult to apply in practice due to technical and legal barriers:** Many blockchain projects are technically complex, requiring in-depth knowledge to develop and operate. At the same time, unclear legal frameworks in many countries also make it difficult to deploy large-scale blockchain applications.
- **Lack of transparency & traceability:** Data on many blockchains is not clearly verified, leading to fraud and information falsification, especially in healthcare, agriculture, and real estate.

- **High costs, slow speed:** Many current blockchain networks have high transaction fees and slow processing speeds, making businesses hesitant to deploy them in real systems.
- **Difficult to access & integrate:** Blockchain is still difficult for general users to understand and hard to integrate with traditional enterprise systems.
- **Lack of practical applications:** Most blockchain projects are limited to financial tokens, not truly connecting with real-life, legal, and social needs.

3. Pione Chain's Solutions

Introduction to Pione Chain

Pione Chain is a next-generation strategic blockchain infrastructure platform, developed with the vision of bringing blockchain technology into real-world applications. With its high-performance architecture, robust security, and flexible integration capabilities with specialized ecosystems, Pione Chain is not just a standalone blockchain, but a multi-layered infrastructure model that supports both digital asset management and transparent data traceability.

The Pione Chain ecosystem comprises two independent yet complementary blockchain networks, designed to optimally handle diverse real-world use cases:

1. Pione Chain – The Main Blockchain Network

Developed as the official Layer 1 blockchain by Pione Group, Pione Chain serves as the core network for managing digital assets and value transactions. It integrates several key capabilities:

- **Digital Asset Management:** Supports native token \$PIO, NFTs, virtual assets, and decentralized wallets.
- **Decentralized Finance (DeFi):** Enables functionalities such as DeFi protocols, staking, NFT marketplaces, airdrops, and more.
- **Flexible Smart Contracts:** Allows developers to build customized decentralized applications (dApps) tailored to specific industry needs.
- **PoAT Consensus Mechanism (Proof of AI Tracing):** Leverages artificial intelligence (AI) to automatically trace, verify, and detect data anomalies in real-time, ensuring data integrity across the blockchain.

Pione Chain is the main environment for on-chain value-driven activities, serving as the core digital economic infrastructure of the entire Pione ecosystem.

2. Pione Zero – A Gas-Free Blockchain for Data Traceability & Identity

Pione Zero Chain operates in parallel with Pione Chain and is specifically designed for data verification, decentralized identity (DID), and non-monetary use cases. Its key features include:

- **Zero Gas Fee:** Users can write or retrieve data on-chain without paying gas fees. In some cases, they may even receive gas as an incentive mechanism.
- **Identity & Data Verification:** Used to verify real estate ownership, medical records, agricultural provenance, and other administrative or regulatory data.
- **Transparent & Public Data:** Ideal for sectors like healthcare, education, finance, agriculture, and real estate, where information must be easily verified, tamper-proof, and accessible.

Pione Zero acts as a bridge between the physical world and the Web3 ecosystem, transforming traditional data into secure, transparent, and cost-free on-chain records.

A Dual-Chain Model for Real-World Applications

The synergy between Pione Chain and Pione Zero Chain creates an optimal dual-chain architecture:

- Pione Chain handles digital asset management and value transactions
- Pione Zero handles real-world data traceability and verification at zero cost

This is an ideal blockchain structure for enabling practical, efficient, and sustainable adoption of blockchain technology by enterprises, institutions, governments, and everyday users.

4. Technical Architecture

The architecture of Pione Chain is built on a layered model, ensuring modularity, scalability, and security with four main layers [1]. This layering allows each component to operate independently yet integrate closely, optimizing performance and manageability.

Pione Chain

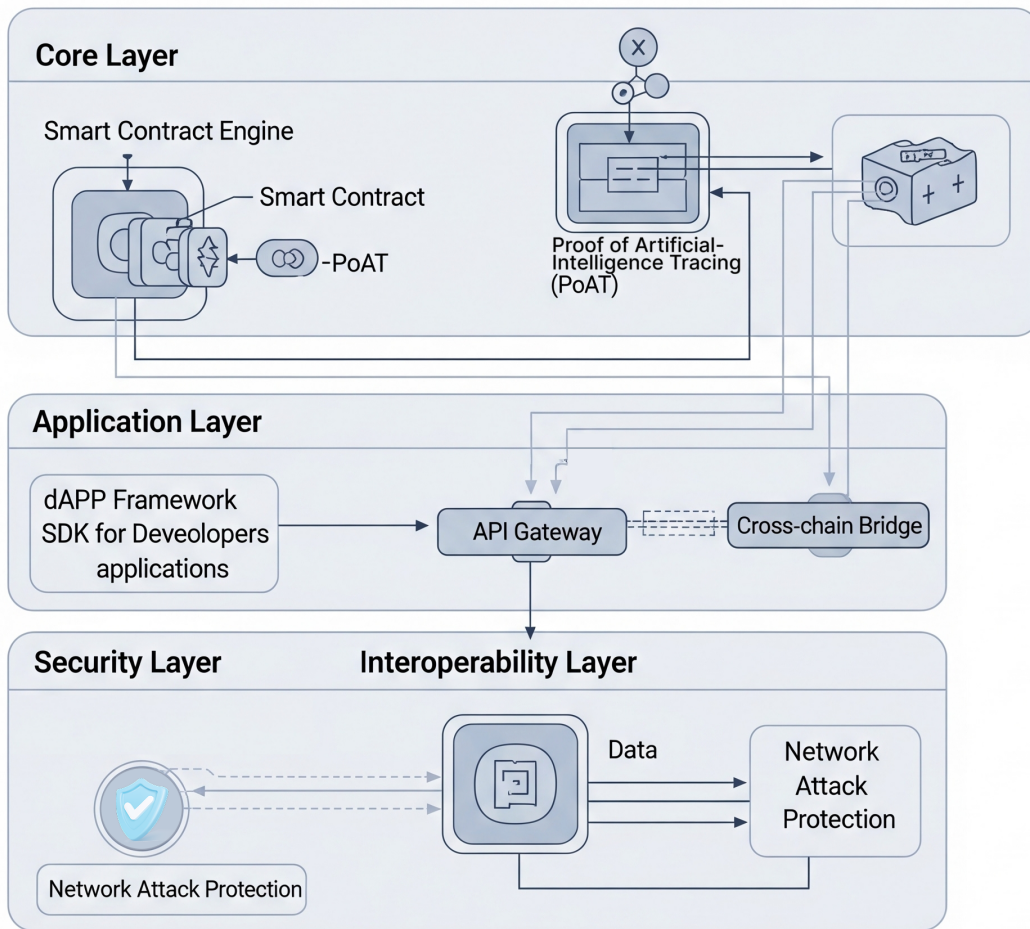


Figure 1: Structural diagram

4.1. Core Layer

The Core Layer is the fundamental foundation of Pione Chain, responsible for the basic functions of the blockchain. It includes:

- **Smart Contract Engine:** Pione Chain's smart contracts are designed to support many popular programming languages, allowing developers to deploy complex decentralized applications (dApps) with high security. Pione Chain will focus on optimizing smart contract execution performance to meet the needs of high-throughput applications.

- **Consensus Mechanism:** Pione Chain uses the PoAT (Proof of Artificial-Intelligence Tracing) Consensus Mechanism – integrating AI to monitor and verify data in real-time, preventing fraud and falsification of chain data.

4.2. Application Layer

The Application Layer is the main interface for users and developers to interact with Pione Chain. This layer provides tools and development frameworks to build and deploy dApps easily:

- **dApp Framework:** Pione Chain provides a comprehensive development framework for dApp developers, helping them build applications quickly and efficiently. This framework will include libraries, code templates, and tools to simplify the development process, from designing user interfaces to integrating smart contract functions. The goal is to reduce technical barriers, allowing both experienced developers and beginners to contribute to the Pione Chain ecosystem.
- **SDK for Developer:** A Software Development Kit (SDK) with detailed libraries and documentation will support developers in integrating and interacting with Pione Chain. This SDK will provide easy-to-use APIs to access core blockchain functions, manage accounts, execute transactions, and interact with smart contracts, aiming to democratize the application development process.

4.3. Interoperability Layer

The Interoperability Layer focuses on Pione Chain's ability to connect with external systems and other blockchains, a crucial factor in promoting the development of a comprehensive blockchain ecosystem:

- **API Gateway:** The API Gateway allows external applications and other blockchains to interact with Pione Chain securely and efficiently. The API Gateway will act as a single access point for Pione Chain's services, managing authentication, authorization, and request routing. This ensures that external applications can easily integrate with Pione Chain without needing a deep understanding of its internal structure.
- **Cross-chain Bridge:** Bridges allow the transfer of assets and data between Pione Chain and other blockchains, promoting cross-chain interoperability. This capability is crucial for Pione Chain to become part of the broader blockchain ecosystem, enabling users and applications to leverage assets and services from other chains. Pione Chain will develop secure and reliable bridges to ensure the integrity of data and assets during transfer.

4.4. Security Layer

The Security Layer is a comprehensive protection layer for Pione Chain, ensuring the integrity, security, and privacy of data and transactions:

- **Data Encryption:** Pione Chain will apply advanced encryption algorithms to protect on-chain and off-chain data, ensuring the privacy and integrity of information. This includes encrypting data during storage and transmission, using strong encryption standards to prevent unauthorized access and data leakage.
- **Anti-cyberattack Protection:** Implements multi-layered security measures to combat common cyberattacks such as DDoS and smart contract vulnerabilities. Pione Chain will conduct regular security audits, using static and dynamic analysis tools to detect and fix vulnerabilities. Additionally, the PoAT (Proof of Artificial-Intelligence Tracing) consensus mechanism integrates artificial intelligence (AI) to automatically trace, verify, and ensure data integrity on the Blockchain.

This layered architecture allows Pione Chain to build a powerful, secure, and scalable platform, ready to meet the requirements of future blockchain applications.

5. Outstanding Application Ecosystems on Pione Chain

Pione Ecosystem is a diverse blockchain ecosystem, seamlessly connected within a sustainable network. This ecosystem includes many mutually supportive components, aiming to apply blockchain technology to real-life areas such as agriculture, healthcare, and decentralized finance:

5.1. Pione PoAT (Proof of Artificial-Intelligence Tracing)

PoAT (Proof of Artificial-Intelligence Tracing) – a breakthrough consensus mechanism integrating artificial intelligence (AI) to automatically trace, verify, and ensure data integrity on the Blockchain.

5.2. Pione Super App

- Pione Super App is a comprehensive digital financial platform, combining blockchain technology, NFTs, and cryptocurrencies to build a decentralized, secure, and accessible transaction ecosystem for everyone.
- With Pione, each store or partner will have a unique identifying NFT with a unique QR code. Users only need to scan the QR code using PIO tokens or stablecoins like (USDP, USDT, etc.) to convert. The system will support

conversion and execution directly on the blockchain – transparent, instant, and without intermediaries.

- Pione is built to overcome barriers in the financial industry, helping to reduce cross-border transaction costs, allowing users in any country to convert without relying on traditional banking systems or geographical limitations.
- Pione's goal is to bring digital assets into daily life, helping users convert, store, and minimize transaction costs – supporting F&B businesses to reach global users.

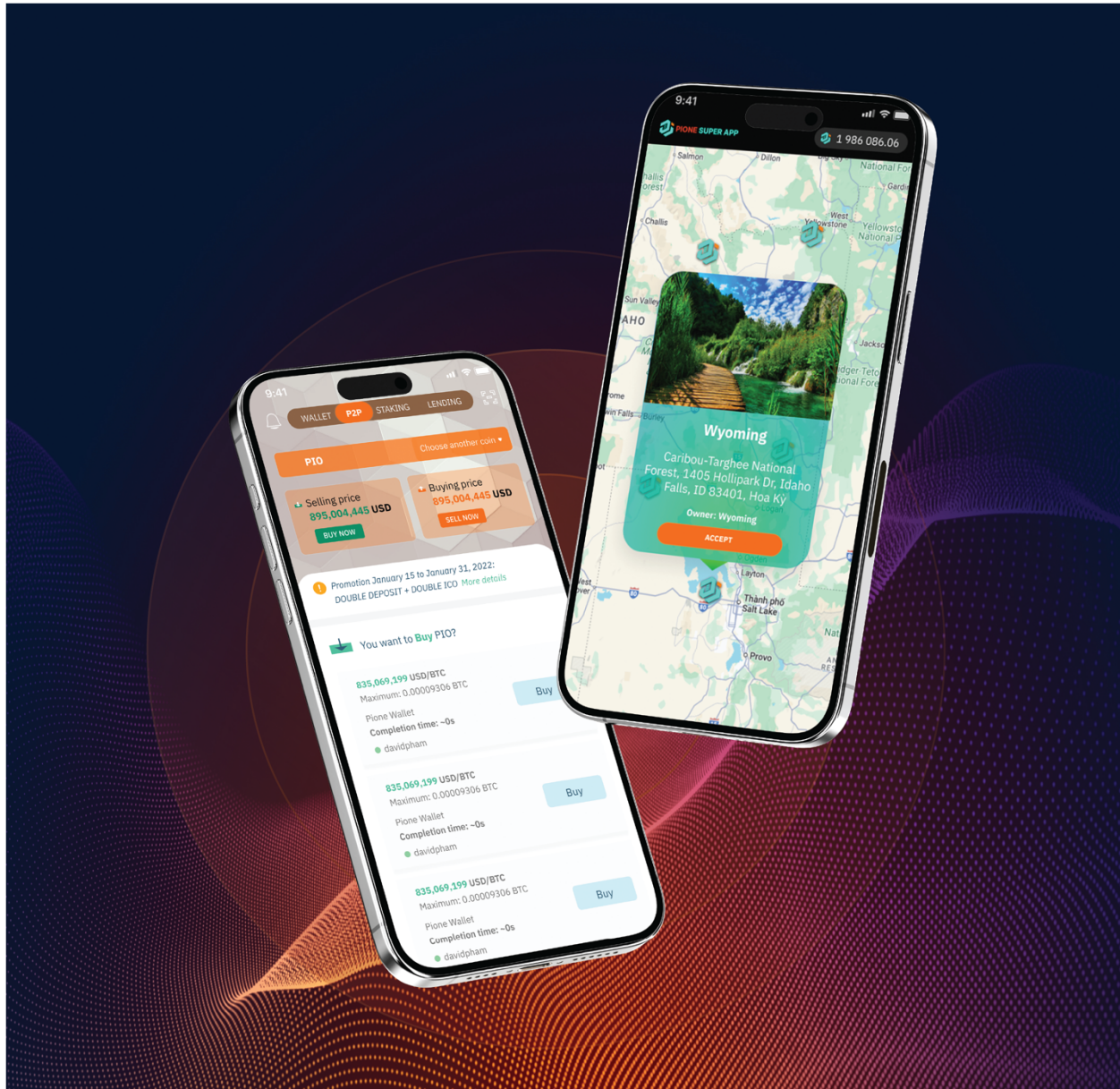


Figure 2: Pione Super App

5.3. Pione Wallet

Manage digital assets securely, quickly, and protect privacy. PioneWallet is your gateway to connect with the global decentralized financial world, and also the core platform linking other ecosystems.



Figure 3: Pione Wallet

5.4. Pione House

A platform providing comprehensive solutions for real estate management and transactions, leveraging blockchain to ensure transparency, security, and efficiency. The

system integrates specialized KYC (Know Your Customer) processes for the real estate sector, ensuring legal compliance in each country.

Through tokenization, real estate assets are represented by digital tokens, reducing investment barriers, increasing liquidity, and expanding access opportunities for small investors.

Tokenized assets can be issued as security tokens equivalent to traditional stocks, providing a transparent, legal, and efficient way within the financial regulatory framework.



Figure 4: Pione House

5.5. Pione Farm

A farm-to-table traceability solution, helping farmers and businesses optimize supply chains, ensuring transparency and food safety by tracking products from cultivation to consumption.

Collaborating with biology doctors to encode plant gene sequences using Blockchain technology to protect national food security sovereignty.

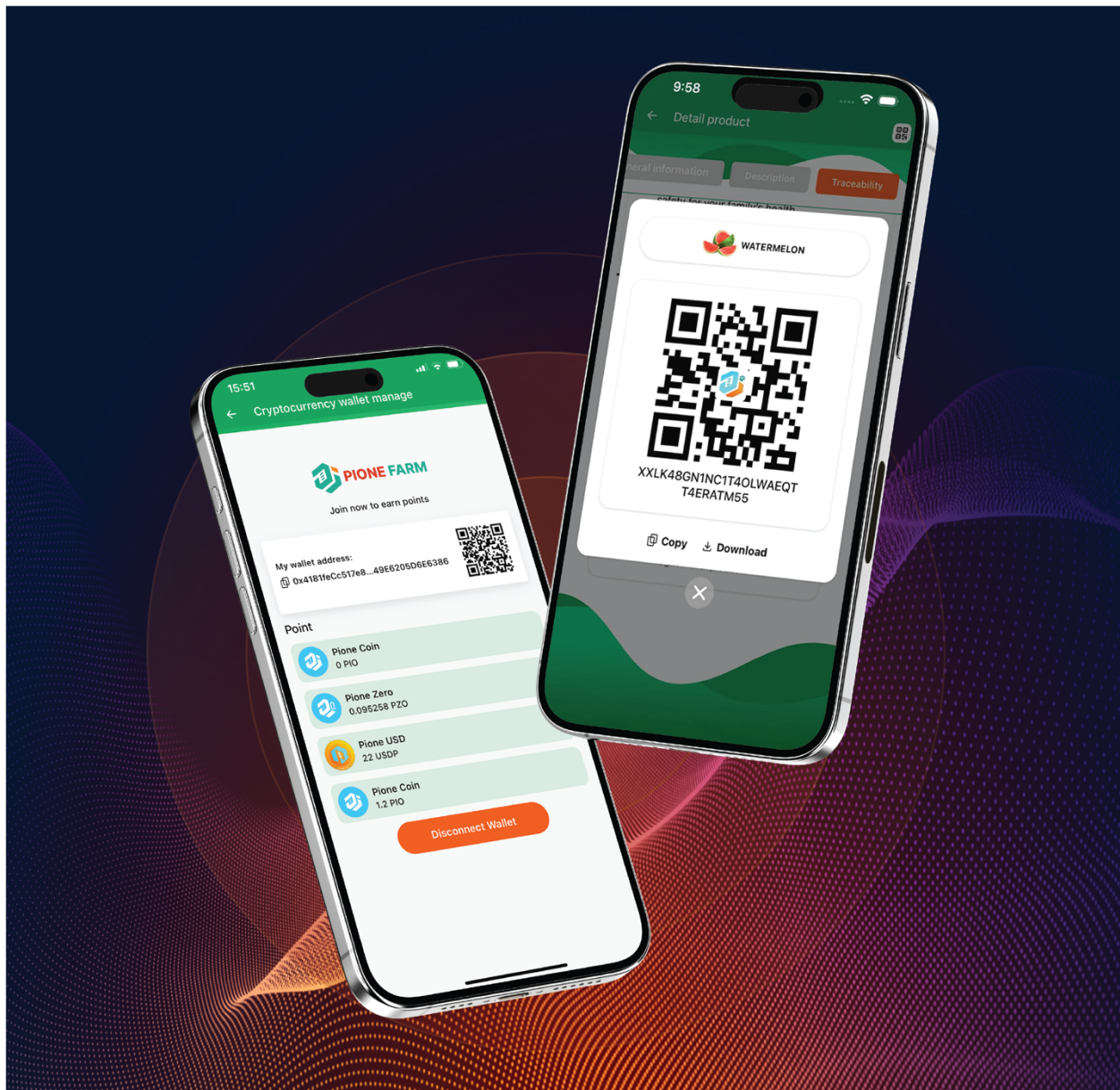


Figure 5: Pione Farm

5.6. Pione Care

Pione Care provides a system for searching and booking medical appointments, managing health records and charts, and allowing users to control personal health data and access modern medical services easily and securely.

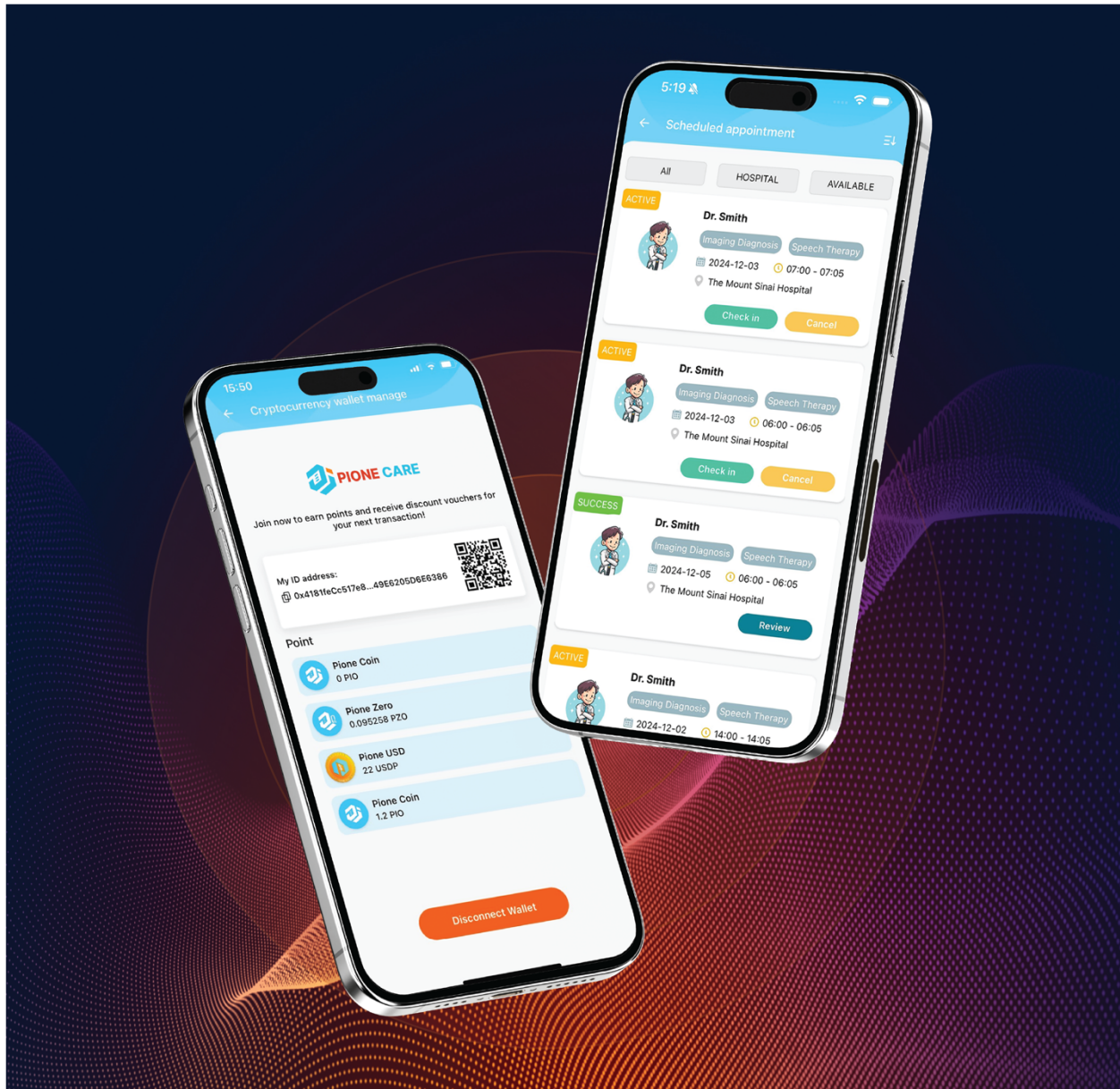


Figure 6: Pione Care

5.7. Pione Zero

PIONE Zero is an advanced blockchain solution that eliminates gas fees, providing smoother and more accessible transactions than ever before. With a gas-free environment, PIONE Zero allows developers and users to build and expand the PIONE Chain ecosystem without financial barriers. Our mission is to promote widespread adoption and develop a comprehensive, decentralized ecosystem for everyone.

5.8. Pione AI

Pione AI is an intelligent virtual assistant developed by Pione Group, applying advanced AI technology. Integrated into Pione Chain's ecosystems, Pione AI helps answer information quickly, providing personalized, transparent, and efficient experiences for both businesses and users.

5.9. Các hệ sinh thái khác

Other application ecosystems leveraging Blockchain and Artificial Intelligence (AI) in real life have been and are being developed, such as:

- PioneMart: Decentralized e-commerce, safe and convenient shopping.
- PioneSwap: Cross-chain exchange gateway helping to exchange cryptocurrencies between different blockchain platforms, reducing transaction costs and optimizing convenience for digital asset users.
- ExPione: A secure, transparent DEX exchange, applying AI and blockchain identification.
- Pione Dapps Store: A hub for decentralized Dapps, helping Web3 grow strong.
- Pione Dream: A startup incubator for students, supporting the transformation of creative ideas into successful businesses. Provides a comprehensive ecosystem with expert mentorship, skill development programs, financial support, and investor connections.



Figure 7: Ecosystem

6. Tokenomics

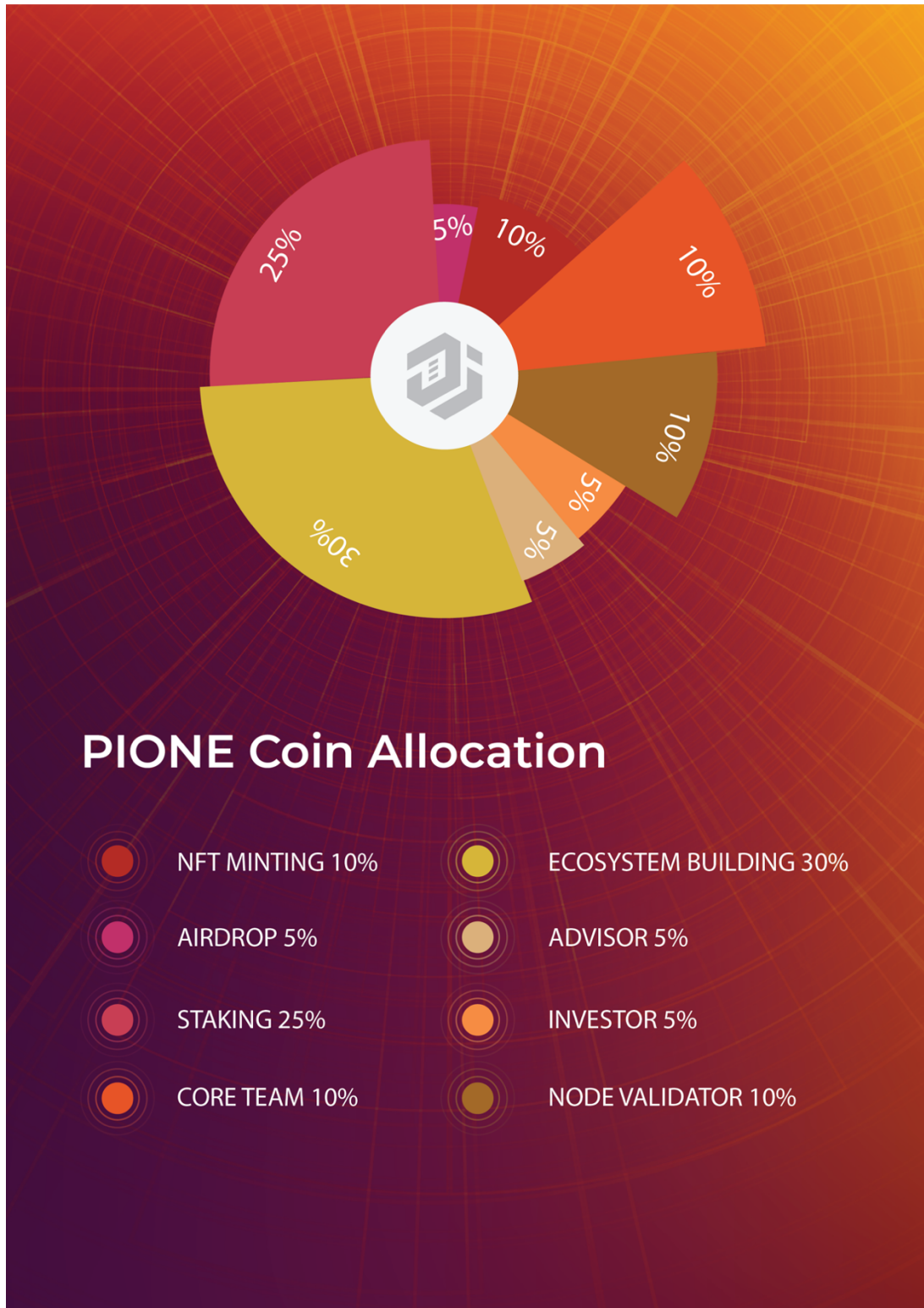


Figure 8: Chart Tokenomics

PIONE Coin (PIO) and PIONE Zero (PZO) are two native Layer 1 coins belonging to the PIONE Chain and PIONE Zero Chain platforms. Both tokens are designed to serve the operational mechanism and incentivize participants in the practical ecosystem.

6.1 PIONE Coin (PIO)

Name	PIONE Coin
Type	Native coin (Layer 1)
Symbol	PIO
Platform	PIONE Chain
General release	666,666,666 PIO
Explorer	pionescan.com

6.2 PIONE Zero (PZO)

Name	PIONE Zero
Type	Native coin (Layer 1)
Symbol	PZO
Platform	PIONE Zero Chain
General release	666,666,666,666 PZO
Explorer	zeroscan.org

6.3 Phân bổ token

Hạng mục	Tỷ lệ
Ecosystem Building	30%
Staking	25%
NFT Minting	10%
Core Team	10%
Node Validator	10%
Investor	5%
Advisor	5%
Airdrop	5%

» ***Ecosystem Building* (30%):** Dedicated to ecosystem development and expansion. Includes dApp project support, marketing, and partnership programs.

» ***Staking* (25%):** Incentivizes users to lock tokens and secure the network.

» ***NFT Minting* (10%):** For NFT minting activities on PIONE Chain.

» ***Core Team* (10%):** Ensures benefits and motivation for the core development team.

» ***Node Validator* (10%):** Supports the operation of validator nodes.

» ***Investor* (5%), *Advisor* (5%), *Airdrop* (5%):** Initial incentives, strategic advisors, and community distribution.

Conclusion: This tokenomics structure helps ensure financial resources for building and expanding the ecosystem, while encouraging participation and long-term commitment from the community, development team, and strategic partners.

7. Development roadmap (Roadmap)

The development roadmap of Pione Chain is clearly outlined with important milestones, demonstrating the team's commitment to building and expanding the ecosystem. This roadmap is divided into stages, each focusing on specific goals to ensure stable and sustainable development.

Date	Milestone	Details
5/9/2029	IDEA PLANNING	Since 2014, EG Group has been active in information technology and software. Recognizing the potential of blockchain, since 2017 the team has implemented many outsourcing projects related to cryptocurrency and blockchain. From there, the idea of building a blockchain platform for real-life applications was formed, starting with a traceability solution and decentralized agricultural product transactions to connect the global market.
11/11/2021	LAUNCH OF SWAPTOBE (TOBECHAIN)	Launched the SwapTobe cryptocurrency exchange and TobeChain ecosystem, and initially experimented to create core values for Blockchain by applying blockchain to trace the origin of agricultural products, real estate, healthcare, etc.
01/2024	PROJECT TOBECHAIN RENAMED TO PIONE CHAIN	Officially established the core team of Pione Labs with 20 professional programmers to research and develop blockchain technology combined with artificial intelligence (AI), Metaverse, IoT into a more specialized Pione Chain ecosystem.
23/11/2024	PIONE GROUP ESTABLISHED	The core team of Pione Labs decided to establish a new company and rename the old EG Group company to the unified name PIONE LABS LLC and PIONE GROUP JSC, operating mainly in Vietnam and preparing to open representative offices in several other countries.
17/02/2025	PIONE CHAIN OFFICIALLY LAUNCHED	Pione Chain launched with the orientation of building a blockchain platform that brings practical value to users. PoAT-enabled application ecosystems have been deployed in many fields such as real estate (PioneHouse), AI (PioneAI), healthcare (PioneCare) and will continue to expand, with PioneWallet as the central hub connecting decentralized experiences.
01/04/2025	PIONE WALLET OFFICIALLY LAUNCHED	The official launch of Pione Wallet (Pione Chain's main wallet), a multi-chain decentralized wallet platform that helps harness the power of digital assets and exploit the potential of real-world applications of the Pione Chain ecosystem in real life: agriculture, real estate, electronic identification, traceability, etc. A leading multi-platform self-custody chain.
01/06/2025	REGISTER TO PARTICIPATE IN SANDBOX FOR PILOT DEPLOYMENT OF TYPICAL ECOSYSTEMS	Pione Group officially registered to participate in the Sandbox program with content related to the Blockchain Ecosystem, aiming to conduct pilot deployments in a controlled legal environment before widespread practical application. This is a strategic step to ensure transparency, security, and legal compliance for the core technology products that Pione Group is developing.
Q4/2025	EXPANSION INTO REAL ESTATE AND DIGITAL SECURITIES	Launch of PIONE HOUSE – a real estate transaction platform applying Blockchain technology, ensuring transparency and ownership verification. Development of Security Token Offering (STO) model, connecting real assets and digital markets, in compliance with current legal frameworks.
01/2026	DIGITAL HEALTHCARE & SUPER APP PAYMENT DEVELOPMENT	Deployment of PIONE CARE digital healthcare platform: managing medical records, booking appointments, integrating Blockchain and AI technology. Launch of integrated Super App: e-wallet, QR code payment, e-invoices, e-commerce transactions, supporting businesses in daily financial management.

07/2026	DEPLOYMENT OF PIONE FARM AGRICULTURAL ECOSYSTEM	Application of Blockchain in identification – agricultural product traceability. Integration of AI & IoT in agricultural production chain management. Collaboration with experts, biology doctors to encode plant gene sequences to protect national food security.
Q4/2026	OFFICIAL DEPLOYMENT OF PIONE CHAIN ECOSYSTEM INTO PRACTICE	Pione Chain ecosystems such as: Pione House, Pione AI, Pione Star, Pione Care, Pione Live, Pione Game, Pione Mart, etc., will gradually officially go into operation with business structures for each segment, with dedicated development teams or additional member companies of Pione Group to manage, operate, and develop each ecosystem to achieve the best efficiency, bringing sustainable and long-term benefits.
01/2027	LAUNCH OF MULTI-FIELD DIGITAL ASSET EXCHANGE	Development of a digital asset exchange: real estate, agricultural products, security tokens, digital assets, etc. Integration of Blockchain and PoAT (Proof of AI Tracing) algorithm ensuring transparency, high speed, and data security.
Q1/2027	PIONE CHAIN ECOSYSTEM OPERATES STRONGLY	The entire Pione Chain ecosystem will operate stably and bring good benefits to users, thereby generating good revenue for Pione Group and expanding the company to more countries.
01/04/2028	IPO - LISTING ON INTERNATIONAL STOCK EXCHANGE	Step-by-step IPO planning to list on international stock exchanges to continue developing Pione Group stronger.

This roadmap is not just a development plan but also a commitment to transparency and responsibility from the Pione Chain team to the community and investors. Each milestone is designed to bring specific value and contribute to the overall success of the project.

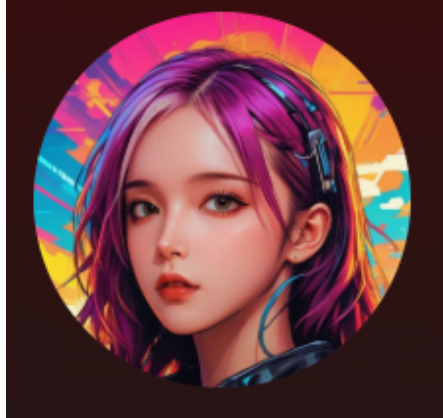
8. Development Team & Advisors

- Pione Chain is led by a team of experienced experts in blockchain, technology, and business, with the support of leading strategic advisors. The combination of extensive specialized knowledge and practical experience is a key factor ensuring the project's execution capability and success.
- **Founder:**



Mr. Nhien Vo - Chief Executive Officer (CEO)

- **Analysis:** The founder plays a guiding role in the overall vision and strategy for Pione Chain. The founder's experience in building and developing technology projects, especially in the blockchain field, is crucial. Leadership ability, strategic vision, and the ability to attract talent are decisive factors for the project's initial success.
 - **Quote:** “I started my career as a software programmer after graduating from university. Currently, I hold the position of CEO of PIONE GROUP, where I lead over 100 software engineers and oversee more than 1000 completed projects for clients. My team and I have received many awards in the field of information technology development. My work focuses on using and applying the most advanced technologies such as IoT, AI, and blockchain. I am a dynamic, visionary, and results-oriented executive. I have a creative mindset, a progressive spirit, and a strong desire to apply the latest technologies to solve many practical problems. Outside of work, I enjoy reading, researching new technologies, and spending time with family and friends.”
- **CFO:**



Ms. Trang Pham - Chief Financial Officer (CFO)

- **Analysis:** The Chief Financial Officer (CFO) is fully responsible for Pione Chain's financial strategy and capital management. An ideal CFO needs deep experience in budget management, long-term financial planning, financial report analysis, and cash flow optimization. They will ensure financial transparency and stability, build financial forecasting models to balance spending and investment, and oversee compliance with accounting standards and legal regulations.
- **Core Team:** Over 80 IT staff

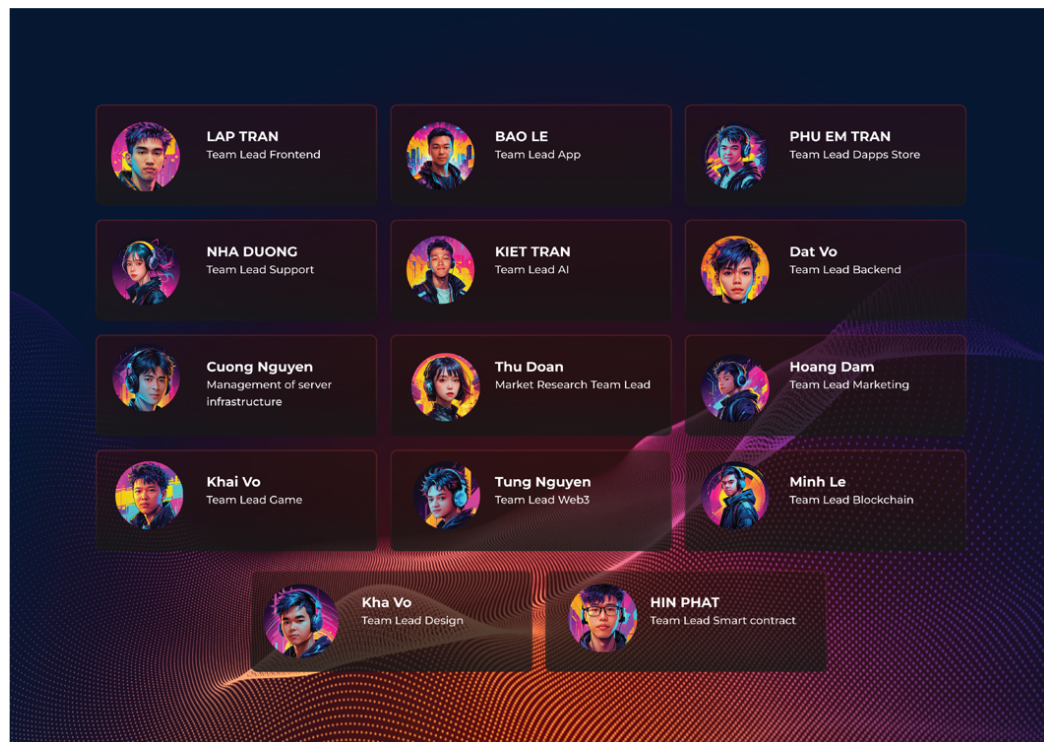


Figure 8: Core Team

- **Analysis:** Pione Chain's Core Team is a collection of leading technology experts, combining diverse fields to build a robust, secure, and user-friendly blockchain platform. Each member is responsible for a specialized area, sharing a common goal: to make Pione Chain an application platform serving real-life decentralized needs.

9. Commitment & Vision

Commitment:

Pione Group is committed to long-term companionship in the journey of building the digital economy era, through developing a strong Blockchain and AI infrastructure that meets the practical needs of the global digital economy.

Focus on building core technology platforms, expanding application scale, and connecting internationally, aiming for a transparent, efficient, and sustainable digital future.

Vision:

With over 10 years of development in Blockchain & AI application technology, Pione Group has a clear long-term strategic vision for each specific turning point:

- Pione Wallet officially launched (4/2025) – a strategic turning point.
- Expansion into real estate and digital securities (Q4/2025) – Launch of Pione House, a real estate transaction platform applying blockchain, ensuring transparency and ownership verification. Deployment of STO model, connecting real assets with digital markets.
- Deployment of Pione Farm agricultural ecosystem (July 2026) – Application of Blockchain in identification – agricultural product traceability. Integration of AI & IoT in agricultural production chain management.
- Launch of multi-field digital asset exchange (Jan 2027) – Development of a digital asset exchange: real estate, agricultural products, security tokens, digital assets, etc. Integration of Blockchain and PoAT (Proof of AI Tracing) algorithm ensuring transparency, high speed, and data security.
- IPO - Listing on international stock exchange (April 1, 2028) - Step-by-step IPO planning to list on international stock exchanges to continue developing Pione Group stronger.

10. Conclusion & Investment Opportunity

Pione Chain is not just a blockchain platform, but a strategic technology infrastructure, designed to fundamentally solve barriers in applying blockchain to real life.

With a sustainable multi-revenue business model, including:

- Transaction fees on the blockchain
- DApp deployment and system integration services
- Practical application ecosystems (healthcare, agriculture, real estate, AI...)
- Staking, digital identity, traceability services
- Revenue from security token (STO) model: including issuance fees, transaction fees, and management fees for digital securities on the Pione Chain platform – opening new financial opportunities for businesses and investors.

Together with breakthrough PoAT technology integrating AI, Pione Chain creates a sustainable – scalable – accessible ecosystem, targeting millions of general users in the near future.

INVESTMENT OPPORTUNITY:

The blockchain market is entering a phase of booming practical applications globally. As of July 2023, the cryptocurrency market capitalization in Vietnam has exceeded 120 billion USD in the digital asset sector.

This figure shows the enormous development potential of blockchain platforms with a practical application orientation, especially pioneering platforms like Pione Chain, which are connecting technology with core economic sectors.

Pione Group – recognized as one of the top 5 pioneering companies in applied blockchain in Vietnam, owns a multi-field ecosystem and the core technology platform Pione Chain. With a first-mover advantage, PoAT technology integrating AI, and a multi-revenue business model (including STO – security tokens), Pione Chain is positioned as the practical Blockchain platform for a transparent and sustainable digital future.

PIONECHAIN

Thanks for
watching !

Contact with us

Web: www.pionechain.com

Email: info@pionechain.com



x.com/pione_chain



facebook.com/pionechain



youtube.com/@pione_chain



t.me/pionechain