Terra Wallet

TERRA WALLET

WHITEPAPER

VERSION 1.0

TERRA Wallet Web3 portal, one is enough

Shaping the Future of SocialFi

Preface

Entropy represents the level of disorder in the universe, and any energy transformation inevitably leads to an irreversible increase in it. Discreteness and disorder will be the ultimate fate of the universe. Since the birth of humanity, we seem to have never experienced lasting peace and prosperity. We have painstakingly built one civilization after another, only for them to crumble in an instant due to a lack of trust and coordination.

Throughout the cosmic evolution, humanity has walked the Earth for millions of years. Yet, despite facing countless hardships together, we have still been unable to understand one another. Humans have begun to accept this as our reality, believing that this lack of organization, fragmentation, and division might be the true nature of the world. Although we have longed for a better future countless times and occasionally found brief moments of cooperation driven by great ideals or calls to action, it is only through the fictional stories of passionate religions and artistic fragments that we can truly feel the shared fate of humanity, hand in hand.

At a time when we were about to lose all hope, the emergence of blockchain reignited our optimism. The greatness of decentralized consensus lies in its ability to counter the cruel laws of the universe, bringing order and permanence to the development of civilization. It allows independent thoughts to shine like countless stars, while enabling billions of individuals to reach rare consensus on rules and trends, bringing human collaboration to unprecedented heights and expanses.

With blockchain as its underlying technology, Bitcoin, Ethereum, and various digital asset markets have experienced explosive growth. Currently, there are over 1,300 types of digital assets traded in the market, with an economic scale exceeding $600 billion, and it is still growing at an exponential rate. The market's potential is vast.

TERRA WALLET is building a blockchain ecosystem that includes digital assets, digital identity, and digital social interactions. It serves as a wallet, an identity ID, a social tool, and a transaction link—acting as the value router of the digital economy era. Based on TERRA WALLET's long-term technical reserves and market operation experience, the team aims to integrate various behaviors such as payments, transfers, activities, and social interactions into a single application, ensuring the security and privacy of user communications, assets, transactions, and identities. TERRA WALLET combines blockchain, mobile internet, biometric recognition, and machine learning to provide revolutionary distributed digital financial services to people worldwide. Regardless of background, location, or income, everyone can join the digital asset network. Based on TERRA’s products and main chain, it is even expected to help some developing countries build next-generation financial infrastructure.

TERRA WALLET is designed to serve the future "crypto-digital economy society," where the digital economy society equals digital assets + digital identity + digital social interactions. Within the next year, TERRA expects to gain over 20 million participating users in this field and activate hundreds of billions in digital assets.

1.Project Background

1.1 Maxwell's Demon Theory Insights

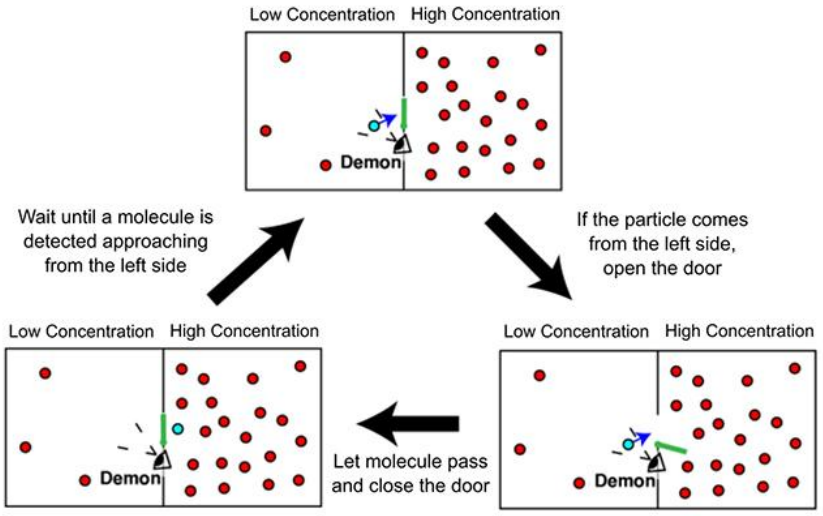
The Maxwell's Demon Theory originates from a thought experiment by James Clerk Maxwell. He imagined the existence of a "demon" in a system, capable of driving molecules in a closed box, which were originally in thermal equilibrium, from one side to the other, thus causing a thermodynamic system to undergo a spontaneous decrease in entropy. To put it simply, the Maxwell's Demon theory suggests that a certain amount of energy must be consumed to convert information from an uncertain state to a certain state.

In a thermodynamic system at equilibrium, the temperatures on both sides are the same, but there is a partition in the middle. The demon controls the switch of the partition, allowing atoms with velocities above a certain threshold to pass to the right, while those below this threshold can pass to the left.

Entropy, denoted by S in thermodynamics, is one of the parameters that represents the state of matter. Its physical meaning is a measure of the system's level of disorder. The "Maximum Entropy Principle" states that any system at equilibrium will eventually reach the state of maximum disorder, where the temperature is most evenly distributed.

We can observe this phenomenon in many everyday situations, such as when cold and hot water mix, or when a box is divided into two parts: one side with gas and the other without. When the partition is removed, the gas will eventually reach an even density, and any system that reaches thermodynamic equilibrium will eventually tend toward balance, with energy more evenly distributed and entropy maximized.

The Law of Entropy Increase is the most despairing law, stating that any material's infinite increase leads to destruction. If any reversible cycle is divided into many small Carnot cycles, the equation (6Qi/Ti)r = 0(1) can be derived. Scientists have continuously sought ways to mitigate this destruction. The same applies to finance—since the dawn of human civilization, no business model has been solely profitable without losses, and no commercial empire can endure indefinitely. However, the emergence of blockchain technology provides a solution by eliminating centralization. It applies the entropy increase, which physics cannot resolve, within the internet, thereby offsetting it and entering the Euclidean space. This allows the energy consumption in the physical world to be offset within the time-space dimensions of the internet.



1.2 Entropy - Exploring a Century of Civilization

Temperature represents the average kinetic energy of the atoms in a system. If the "demon" is considered part of the closed system, wouldn't the system naturally cause heat to flow from the cooler side to the warmer side? Essentially, without the need for additional energy, the system would behave like a refrigerator, potentially violating the Second Law of Thermodynamics. According to the Second Law of Thermodynamics, a closed system must ultimately reach a state of maximum entropy, where the temperature within the system is always balanced, and the energy distribution across the degrees of freedom of the atoms must be uniform. This experiment has been a subject of human exploration for over a century.

High-tech inventions and the use of new energy sources are essentially ways of suppressing the accumulation of entropy. We need energy to ensure the world develops in a stable and orderly way, but this comes at a cost. For example, issues like waste pollution, global warming, and species extinction, among others. Physicists tell us that entropy can never be eliminated; we can only transfer the chaos to other domains in order to bring order to the situation. From the moment scientists made their discovery, it signified that life could never achieve immortality, and that all things tend towards disorder.

Members of the TERRA Laboratory, through a chance encounter on the internet, came across the Bitcoin whitepaper written by "Satoshi Nakamoto." Following this, the TERRA Laboratory collaborated with numerous physicists, thermal energy researchers, internet security specialists, biologists, mathematicians, economists, and many other experts to spend several years combining blockchain technology with the "Theory of Market Institutions" to apply entropy in internet finance and derivative product trading.

The principle of entropy is relevant to everything. By utilizing blockchain technology with transaction rules approaching zero, we can counteract the increase in entropy, enabling the market economy to prosper infinitely and sustainably.

1.3 TERRA -- Innovator of Entropy Civilization

The TERRA platform offers a better solution for financial and derivative product trading. The TERRA ecosystem coin deployed on TERRA emerges, using an entropy increase and decrease mechanism to maintain ecosystem stability. Its goal is to expand TERRA's ecological applications, promote the prosperity of the TERRA community, and solidify TERRA's role as a pioneer in the crypto asset field. This asset, deployed on TERRA, features transparency, immutability, and decentralization. All global users and participants can independently cycle their asset allocation contracts. It redefines the "Theory of Transaction Costs" and "Market Failure Theory."

TERRA carries the beginning of a new era, creating an unprecedented "blockchain self-circulating application system" and a natural "perpetual motion machine for wealth" – a transparent "perpetual motion machine for funds." TERRA, in homage to the pioneers, opens up a new future for blockchain. By developing decentralized technology

that allows users to interact directly, it establishes a true global network. The newly built TERRA blockchain explorer will make financial services completely reliable and transparent, as they run on an online blockchain system. With encrypted systems, your asset management and contracts are guaranteed.

We do not follow the paths others have walked.
No reasons,
Because we come from TERRA.
We despise tricks and schemes.
We advocate for openness, fairness, justice, and transparency.
We are dedicated to the true implementation and application of blockchain.
We follow scientific principles.
We pay homage to Satoshi Nakamoto's coin.
We are the blockchain business and finance experimenters—TERRA.

1.4 Industry Background

The cryptocurrency market continues to grow, with new coins emerging constantly. More importantly, the market is evolving, creating various new opportunities for the integration of blockchain technology. At the same time, an increasing number of countries are legalizing cryptocurrencies as a means of payment. As cryptocurrencies are widely accepted as an asset (for example, as a digital substitute for gold) and investor interest grows substantially, institutional investors are also actively joining the cryptocurrency market.

Major traditional financial systems such as PayPal, Visa, Mastercard, and Facebook have provided opportunities for their clients to access the market. Leading service providers like Amazon, Google, IBM, Intel, Microsoft, and Samsung are integrating blockchain technology, including but not limited to supporting cryptocurrency payments.

A major driving force behind the development and expansion of crypto technology comes from DeFi (Decentralized Finance), which removes any intermediary from transactions and allows users to directly lend and borrow from each other. As a result, users and markets no longer rely on centralized market makers to control trades and enforce their own rules.

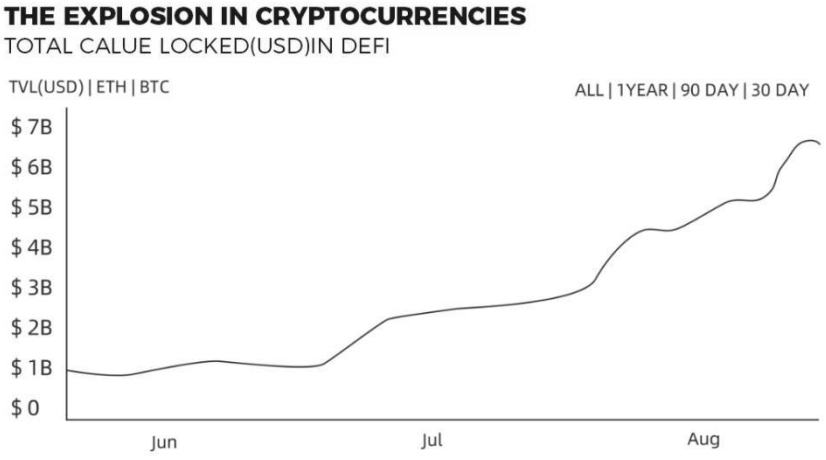


Figure 1. Changes in blockchain digital asset types and economic volume

Challenges

As technology progresses, the challenges continue to grow. Blockchain technology was originally conceived by Satoshi Nakamoto as part of a decentralized financial system, but it has gradually deviated from its initial vision. Decentralized exchanges have started to follow the traditional banking system again, exposing users to potential threats and risks of financial losses. The drawbacks of the traditional banking system are becoming more apparent, particularly:

- **Potential sanctions**: A range of potential sanctions that users may face.
- **Privacy loss**: The requirement to share personal information when creating custodial service accounts, leading to a loss of privacy.
- **Operational risks**: Risks such as hacker attacks, system failures, and software malfunctions, where account owners may suffer financial losses. Network attacks against major crypto services have already occurred, such as those targeting exchanges, mining platforms, and exchanges using hot wallets.
- **Reputation risks**: These may arise due to public distrust of services or inefficient customer support.

Furthermore, the integration of blockchain technology also brings its own challenges:

- **Technical complexity**: The complexity of blockchain technology creates a higher barrier for ordinary users.
- **Issues with implementing and supporting decentralized system functionalities**: The technical issues involved in fully supporting decentralized systems.
- **Need for regular updates**: Ongoing development and integration of blockchain infrastructure.
- **High network fees**: Popular blockchains often face high transaction fees.

Opportunities

Despite these challenges, blockchain-based systems offer unprecedented opportunities to create new financial systems. Even with these obstacles, such systems will provide users with complete freedom in financial transactions. They will eliminate the need for additional intermediaries and the constraints of traditional service and payment systems, such as the complexities and inefficiencies of international transfers.

Here are some of the traditional financial system drawbacks that blockchain can address:

- **Transaction limits**: In a decentralized system, there are no limits on the amount that can be sent or received.
- **Required details**: Only the recipient's address is needed to complete a transaction.
- **Limited working hours**: Blockchain can enable 24/7 transaction signing.
- **Opaque fees**: In traditional finance, fees can vary greatly, while network fees on the blockchain are always transparent and calculable.
- **Cross-border payments**: Traditional financial systems require currency exchanges, whereas cryptocurrency payments do not require conversion within a specific blockchain.

In addition, blockchain provides several innovative solutions that were previously unfeasible:

- **Elimination of intermediaries**: In traditional centralized financial systems, lenders and interest providers require intermediaries. However, in the decentralized era, DeFi protocols using smart contracts can directly connect them.
- **Identity theft and digital ownership proof**: Non-fungible tokens (NFTs) provide transparency and sustainability of ownership.
- **Stable digital currencies**: The Web3 era offers financial institutions and traders currencies with smaller exchange rate fluctuations.

DeFi (Decentralized Finance) is a rapidly developing decentralized financial protocol, which has led to the creation of decentralized exchanges, lending services, savings, and more. Compared to centralized systems, DeFi is controlled by smart contracts, simplifying processes and enhancing security. Today, with the development of DeFi, financial interactions can be organized without the need for intermediaries. The introduction of NFTs is equally important. NFTs simplify the sale and purchase of digital goods, ensuring transparency in transactions between parties. Unlike regular tokens, these tokens are unique and can serve as proof of asset ownership. They function similarly to transportation tickets: individually issued and tamper-proof (e.g., the issue date cannot be altered).

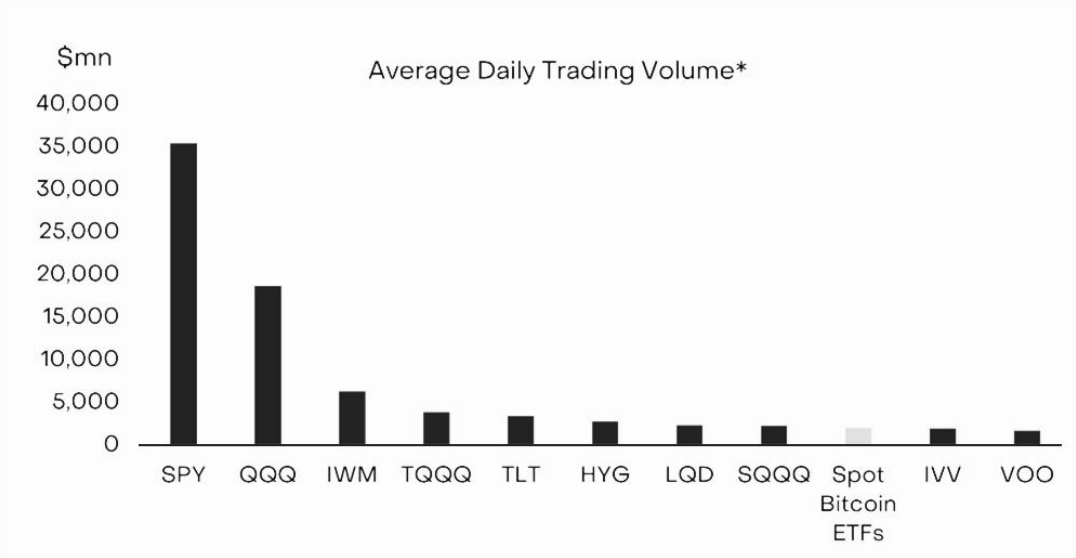
Another notable blockchain invention is stablecoins. Stablecoins are currencies pegged to another currency (either cryptocurrency or fiat). Stablecoins can mitigate the financial risks associated with volatility, particularly the price fluctuations of cryptocurrencies. One of the most prominent examples is Tether USDT, which is pegged to the US dollar. Tether is currently one of the top 5 most in-demand cryptocurrencies.

Meanwhile, many countries have started actively testing and preparing to launch their own digital currencies, and several nations have already legalized the issuance and circulation of digital currencies. On January 11, 2024, the U.S. Securities and Exchange Commission (SEC) announced the approval of 11 companies to issue Bitcoin spot ETFs, signaling that the cryptocurrency industry is moving toward a broader future.

ETF NAME	TICKER	ASSETS UNDER MANAGEMENT (AUM)IN DOLLARS	NUMBER OF BITCOIN UNDER MANAGEMENT	ANNUAL FEE (EXPENSE RATIO)	FEE WAIVER DETAILS
Grayscale Bitcoin Trust	(GBTC -0.18%)	$28.6 billion	619,187	1.5%	N/A
VanEck Bitcoin Trust	(HODL -0.14%)	$75.2 million	1,629	0.25%	N/A
Fidelity Wise Origin Bitcoin Trust	(FBTC -0.21%)	$20 million	433	0.25%	Waived until August 1.2024
iShares Bitcoin Trust	(IBIT -0.16%)	$10.4 million	228	0.25%	0.12% for frst 12 months or unti! S5 billion AUM
Ark 21Shares Bitcoin ETF	(ARKB -0.26%)	$10.3 million	223	0.21%	Waived for frst 6 months or until S1 billion AUM
Invesco Galaxy Bitcoin ETF	(BTCO)	$5.0 million	108	0.39%	Waived in frst 6 months for the frst $5 billion AUM
Hashdex Bitcoin ETF	(DEFI -0.10%)	$5.0 million	108	0.9%	N/A
Bitwise Bitcoin ETF	(BITB -0.17%)	$2.5 million	54	0.2%	Waived in frst 6 months for the frst $1 billion AUM
Franklin Bitcoin ETF	(EZBC -0.04%)	$2.7 million	58	0.29%	N/A
Wisdom Tree Bitcoin Fund	(BTCW -0.15%)	$2.4 million	52	0.3%	Waived in frst 6 months for the frst $1 billion AUM
Valkyrie Bitcoin Fund	(BRRR -0.08%)	$523,000	11	0.25%	Waived in frst 3 months

Since its launch on January 11, the daily average trading volume of the Bitcoin spot ETF has reached $2.1 billion. Compared to the typical trading volumes of all ETFs listed in the U.S., the new Bitcoin product ranks eighth in terms of trading volume since its inception, alongside products that provide exposure to U.S. stocks and bonds. For further comparison, since January 11, the largest non-crypto commodity ETF ($GLD) has had a daily average trading volume of approximately $1.1 billion, while the largest Bitcoin futures-based ETF ($BITO) has had a daily average trading volume of $570 million.

Although there are various ways to hold Bitcoin, including self-custody, the successful launch of the Bitcoin spot ETF suggests that many investors and financial advisors may value the liquidity and convenience of this product structure.



The approval of the Bitcoin spot ETF marks a significant step in creating a broader stage for Bitcoin in the financial market. The U.S. government is also reviewing Bitcoin futures filings and related activities. Once Bitcoin is fully legalized, it will be treated like ordinary securities, providing investors with a more stable and transparent investment channel.

The surge in Bitcoin's price signals the full arrival of the digital asset era. Traditional financial systems and asset forms are undergoing profound transformation. Digital assets like Bitcoin, with their unique advantages such as decentralization and high security, are gradually gaining recognition and popularity. This shift not only changes investment strategies and perspectives but also signals a major transformation in the future financial system.

1.5 AI and Cryptocurrency Synergy

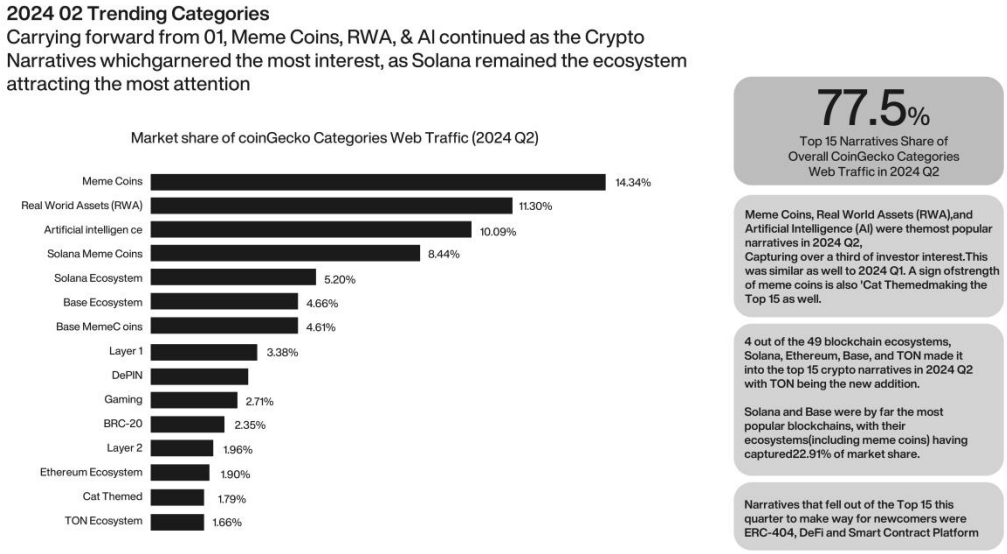
With the approval of the Bitcoin spot ETF in the U.S., Bitcoin has taken center stage. However, the remarkable performance of AI-related crypto assets serves as a reminder that the applicability and relevance of public

blockchain use cases are expanding beyond just payment forms. The development of the intersection between artificial intelligence (AI) and cryptocurrency could help address future societal issues related to AI, such as the rise of deep fakes, concerns over privacy breaches, and the concentration of power.

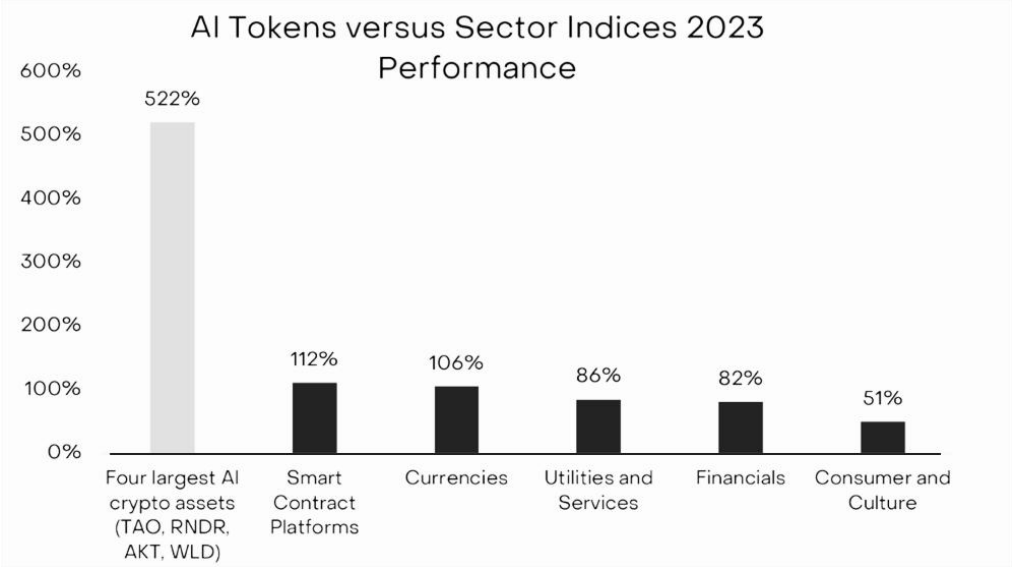
While many tokens may simply be riding the "AI hype wave," crypto protocols linked to AI project development have already shown early signs of adoption. Specifically, the four largest AI-related crypto tokens by market capitalization (TAO, RNDR, AKT, WLD) rose by 522% last year, outperforming the utility and services crypto sector (+86%) during the same period.

According to Sheila Warren from CCI, cryptocurrency will "play a key role in counterbalancing AI." Similarly, venture capitalist Fred Wilson believes that AI and cryptocurrency are "two sides of the same coin," and "Web3 will help us trust AI."

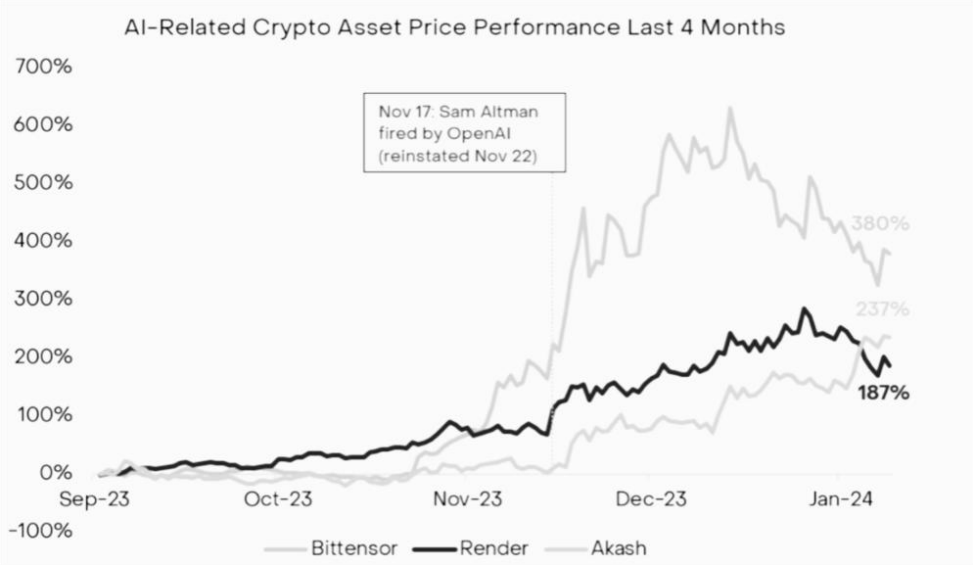
Although many use cases are still in the early stages, the market remains optimistic about the importance of this crossover. According to Coingecko network traffic data, AI was the most popular "cryptocurrency narrative" of 2023. Additionally, the latest report for Q1 2024 shows that AI continues to hold the top spot.



In addition, the Grayscale Cryptocurrency Industry Index reflects that certain AI-related crypto assets have outperformed both the utilities and services sector and the overall cryptocurrency industry, highlighting their superior performance compared to these sectors.



Today, much of the progress at this intersection is occurring within the context of cryptocurrency protocols, with decentralized GPU markets helping democratize and accelerate the development of artificial intelligence. These markets provide the necessary computational power for AI development, making it more accessible and efficient.



Other opportunities may exist in the following areas:

1. **Zero-knowledge proofs to verify the integrity of AI model outputs:** Zero-knowledge proofs (ZKPs) can be used to verify the accuracy and validity of AI outputs without revealing sensitive data or internal processes, ensuring transparency and trust.
2. **Cryptocurrency as a seamless payment track for AI agent interactions and automation:** Cryptocurrencies could enable frictionless transactions within automated systems and interactions with AI agents, enhancing the efficiency of digital economies.
3. **AI-generated content in crypto games and the role of NFTs:** Artificial intelligence can generate dynamic content in decentralized gaming ecosystems, while NFTs serve as unique assets within these games, adding value and fostering new economic models.

Whether there is an inherent connection between AI and cryptocurrency or not, both rapidly developing technologies have the potential to support each other's growth, expanding use cases and their relevance to the broader public. This synergistic effect is still in its early stages, and platforms like TERRA WALLET—a comprehensive Web3 payment platform integrating payment technology, AI, and application scenarios—will push the collaborative development of AI and cryptocurrency to new heights!

2.TERRA WALLET Overview

Based on research into industry trends and demands, the future development of the cryptocurrency world and its integration with real-world payments is an inevitable direction. The support for ETFs in the Web3 user community and the optimistic attitude toward the crypto industry in various countries/regions have made the TERRA team realize the need for a new, trusted product that upholds decentralization and inclusivity. This product will offer users immediate access to blockchain systems, empowering them with complete control and responsibility over their financial management.

With the rapid development of the global blockchain industry, TERRA Crypto Lab has officially launched with innovative technology and a powerful ecosystem. Backed by major investments from renowned institutions like BITDU Exchange, and in collaboration with leading organizations such as 49DAO and MSG, TERRA is driving the construction of the Web3.0 computing power ecosystem and bringing new decentralized financial opportunities to users worldwide!

Key product launches, building a multi-dimensional blockchain ecosystem:

1. Terra Wallet — An innovative multi-chain ecosystem wallet supporting mainstream public chain assets like BTC, ETH, BSC, and TRON. It integrates asset management, cross-chain payments, social interactions, and wealth management into one, providing a safer and more efficient digital asset management experience and offering global users a one-stop Web3.0 financial gateway.
2. Terra Planet Computing Power Ecosystem Coin — Empowering the global computing power economy and promoting decentralized computing power sharing. It makes computing power a truly tradable, high-value asset, creating a new decentralized computing resource network and supporting the construction of global Web3.0 infrastructure.

TERRA Crypto Lab is committed not only to building a comprehensive blockchain financial ecosystem but also to partnering with multiple renowned institutions through the Terra Planet computing power platform to create a decentralized computing power market. It aims to promote the fair and transparent allocation of global computing power resources. Leveraging the TERRA ecosystem, users can earn rewards through node mining, traffic sharing, and smart contract incentives, while the deep integration of exchanges and wallet ecosystems will further enhance the market value and liquidity of TERRA ecosystem coins.

As a key strategic partner of the TERRA ecosystem, Bitdu Exchange will continue to promote the market circulation and value appreciation of TERRA ecosystem coins, supported by its global trading network and premium resources. At the same time, TERRA's powerful wallet payment system, node mining mechanism, and rich Web3.0 application scenarios will bring continuous user and market activity to Bitdu Exchange, forming a mutually beneficial and win-win cycle. Bitdu Exchange will regularly repurchase TERRA ecosystem coins and eventually enable conversions with platform tokens, further consolidating the long-term value of the TERRA ecosystem.

With the ongoing development of the blockchain industry, TERRA Crypto Lab will continue to increase investment in technology research and development, expanding its global ecosystem and providing users with safer, more efficient, and intelligent blockchain services. Whether it's decentralized finance, smart contracts, NFTs, the metaverse, or computing power sharing, TERRA will remain at the forefront of the industry, leading the wave of change.

TERRA's mission is to bring more economic freedom to over 1 billion people. We provide a trusted platform that updates the century-old financial system, enabling individuals and institutions to easily participate in the cryptocurrency asset economy, including trading, staking, custody, consumption, and fast, free global transfers.

TERRA Crypto Lab has launched a revolution in decentralized finance and computing power ecosystems! Join us in sharing the blockchain dividends and embracing the new wealth wave of Web3.0!

2.1 TERRA WALLET

TERRA WALLET is a blockchain-based decentralized wallet that uses cryptocurrency social features as an entry point, with powerful blockchain technology at its core, creating value through the aggregation of digital asset traffic. It also safeguards your digital assets and fully builds a DAO community governance framework, ensuring member confidence and benefits.

It allows users to securely store, send, and receive a variety of digital currencies. Unlike traditional centralized wallets, TERRA WALLET locks control of private keys entirely in the hands of users, ensuring the security and autonomy of assets. The wallet focuses on user experience, with a clean, intuitive interface and easy-to-understand operations. Whether you're a beginner or an experienced player, you can quickly get started and easily manage your digital assets.

TERRA WALLET was created to meet the diverse needs of crypto users, supporting storage on dozens of mainstream blockchains and cross-chain transactions. It offers a comprehensive multi-chain management experience, enabling users to easily manage their digital assets. It is suitable for all types of crypto players, including high-frequency traders, DeFi enthusiasts, NFT collectors, and newcomers to the crypto world. With its rich functionality, support for hardware wallet integration, high security, and risk protection fund, TERRA WALLET is the best choice for exploring the Web3 world.

01 Multi-Chain + Cross-Chain

Supports multiple mainstream blockchains such as Ethereum, Binance Smart Chain, Tron, etc. Users can manage digital assets across different chains within one wallet, making it easier to participate in various blockchain ecosystems without the need to download separate wallets for each chain.

02 Asset Management

Securely stores users' digital assets, including cryptocurrencies, tokens, NFTs, etc. Provides a clear asset list and balance display, allowing users to easily check their asset status at any time.

03 DApp Browser

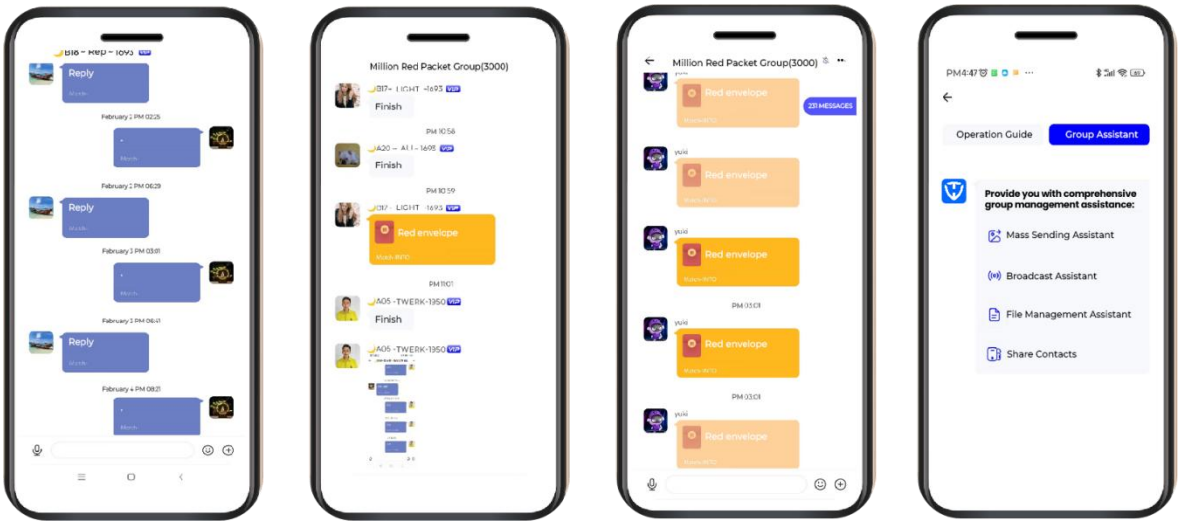
Built-in DApp browser enables users to access various decentralized applications directly within the wallet. Supports interaction with DApps, such as participating in DeFi projects, playing blockchain games, and more.

04 Trading Function

Supports the transfer and trading of digital assets. Users can conveniently transfer and exchange their assets. Some versions also support features like flash swaps, offering more trading options.

05 SOCIALFI

Integrates asset payment, storage, social interaction, finance management, digital marketplace, and mining alliances. Provides crypto social functions where users can earn rewards through social interaction, participate in social mining pools, and enjoy various financial benefits and value appreciation opportunities brought by crypto socialization.



On-chain messages | Digital red envelope | Group red envelope | AI Assistant

06 MPC

Uses advanced encryption technology and multi-layered security mechanisms to protect users' digital assets, ensuring the highest security of private keys, transaction data, and other sensitive information. Users can manage their assets and execute transactions with peace of mind.

07 DAO

Offers users a secure, convenient, and efficient blockchain experience, promoting decentralized community governance, assisting users in participating in ecosystem development and governance, and creating a fair and open digital economy space.

2.2 Vision

TERRA WALLET's goal is to create a product ecosystem that includes a full suite of crypto assets and financial tools. By combining these tools within TERRA WALLET, we aim to provide users with a new way to interact with finance that is decentralized, convenient, transparent, and free from the drawbacks of traditional services. Our principle is to develop and grow together with the financial industry.

TERRA seeks to create a world where anyone, regardless of their level of experience, can easily navigate the world

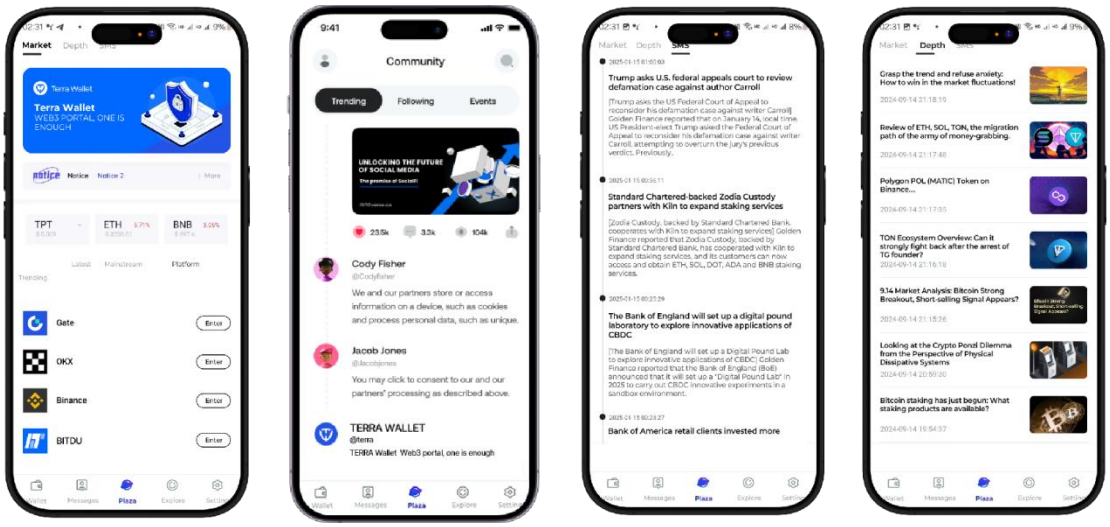
of digital currencies and access the Web3 ecosystem. TERRA Socialfi meets both on-chain and off-chain real-world social + financial needs.
Through DID (Decentralized Identity), TERRA ensures ownership of personal data, privacy, and convenience. By binding with TERRA tokens, we enable individuals to have a Web3.0 social identity. Ultimately, we aim to help people build meaningful connections in the Web3.0 world in an authentic and positive way. Our vision is to empower individuals to take control of their financial future, unlock the potential of blockchain technology, and enjoy the benefits of decentralized finance.

2.3 Mission

TERRA WALLET's mission is to provide a comprehensive "cold & hot" wallet that not only offers online multi-chain, cross-chain asset transfer payments and cryptocurrency storage, but also enables offline cryptocurrency asset protection. Additionally, it will facilitate seamless offline crypto payments, creating a new gateway for every user to step into the Web3 world. TERRA WALLET is dedicated to achieving this mission through the following key pillars:

User-Centered Simplicity: We are committed to providing a simple and intuitive platform that allows users to enjoy the digital asset world while experiencing the fun of socializing and the convenience of seamless asset transactions and mining. TERRA WALLET strives to make complex blockchain technology accessible to everyone, ensuring that the benefits of the Web3 era reach every individual.

Building a Social-Centered SocialFi Ecosystem: TERRA WALLET places great importance on the significance of social relationships, believing that social connections are not only the cornerstone of interpersonal interaction but also the foundation of the entire ecosystem. TERRA WALLET believes that the SocialFi social network will drive various blockchain applications and decentralized financial services.



Multifunctional Digital Asset Hub: As a multifunctional digital currency hub, TERRA WALLET will accommodate more blockchains, DApps, and connect to more DEXs in the future, enabling seamless cross-chain and multi-chain transactions without the need to switch between platforms.

In summary, TERRA WALLET firmly believes that everyone should have control over their digital asset resources and should have the opportunity to enjoy the convenience and opportunities brought by digital currencies. Whether you are a blockchain beginner or an experienced investor, TERRA WALLET is the ideal choice for exploring the world of digital currencies.

2.4 Team, Advisors, and Investors

Dexter Moonfield

Senior Blockchain Product Manager

Master's in Computer Information Science from McGill University, Canada, and an MBA from Rotman School of Management, University of Toronto. He has extensive experience in blockchain product development and project management.

Aria Starling

Renowned Internet Operations Expert and Senior Blockchain Expert

Former Senior Operations Manager at Baidu, with rich experience in internet operations. She has successfully managed products in the education and O2O sectors, growing them from 0 to millions of users. Graduate of a prestigious Australian university. She has also served as a guest instructor at several institutions, including 3W Eagle Academy, Mantou Business School, Sanzhe Course, Think Tank, and many others. She is also the author of "Operations Made Simple: Redefining Internet Operations."

Jaxon Emberstone

Blockchain Expert and Digital Asset Investor

Graduated from University College London, Jaxon has worked as a data scientist for Credit Suisse ETF products in London, a senior machine learning engineer at Flash Silver, and a partner at Dingming Financial. Over the past year, he has visited over 80 blockchain enterprises both domestically and internationally. He has rich knowledge and product experience in the blockchain space. His investment cases include Qtum, Scry, and VeChain.

Luna Wildhart

Senior Architect at IBM and Montreal Bank

Luna has over 20 years of experience in system integration and software development, including database technologies, risk control engines, core banking and insurance systems, financial fund platforms, big data, and blockchain technologies. She has a particular focus on underlying data communication protocols, blockchain communication protocols, consensus mechanism algorithms, and blockchain data synchronization and security technologies. She is also the founder of the Toronto Blockchain Technology Community.

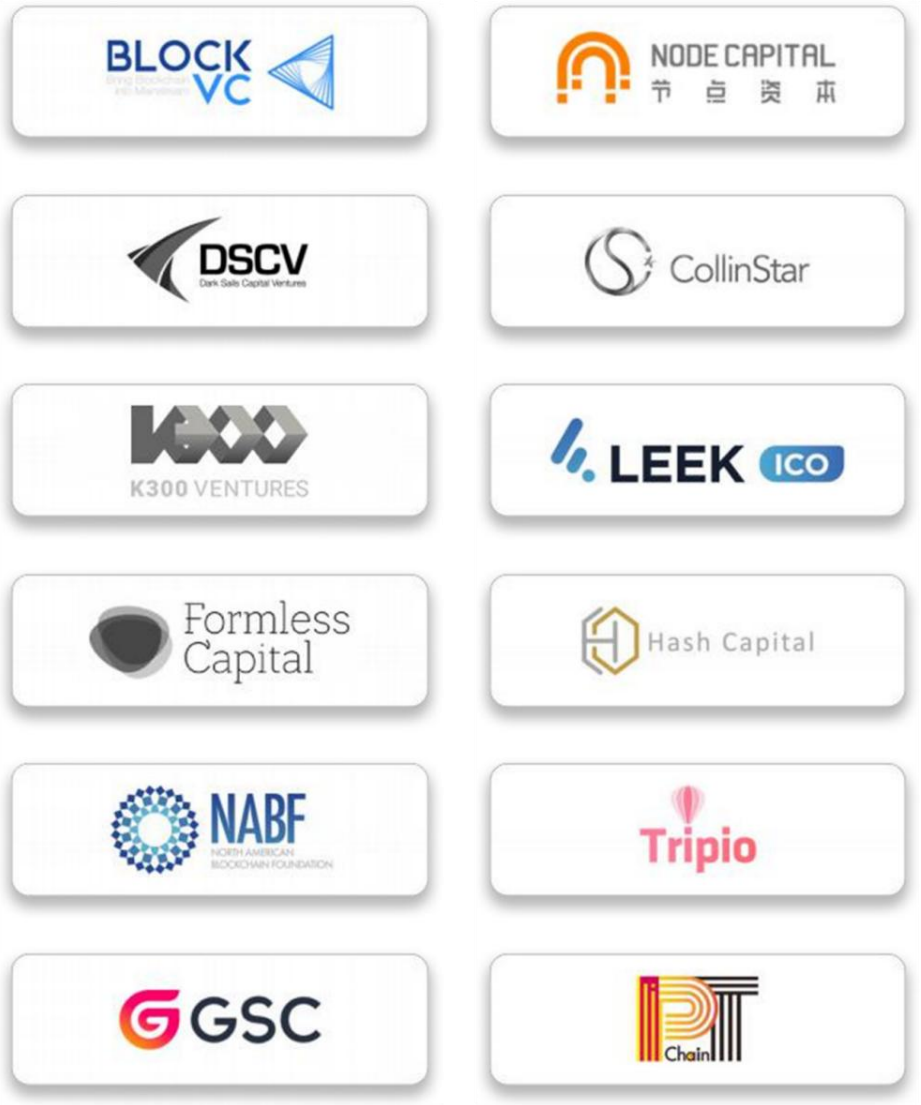
Finnian Brightvale

Researcher at the Blockchain Technology Center, University College London

Currently working at the Blockchain Technology Center at University College London, Finnian is engaged in research on the regulation of cryptocurrency trading and token issuance. He founded the China-UK Blockchain Association, which aims to foster research collaboration between China and the UK in the blockchain field. He is a PhD student in financial mathematics at University College London, focusing on algorithms and high-frequency trading. He has also led quantitative investment and big data projects at investment banks, including Credit Suisse.

There are also some investors and advisors who prefer to remain anonymous, and we fully respect their wishes.

2.5 Partners



3.Technical Support

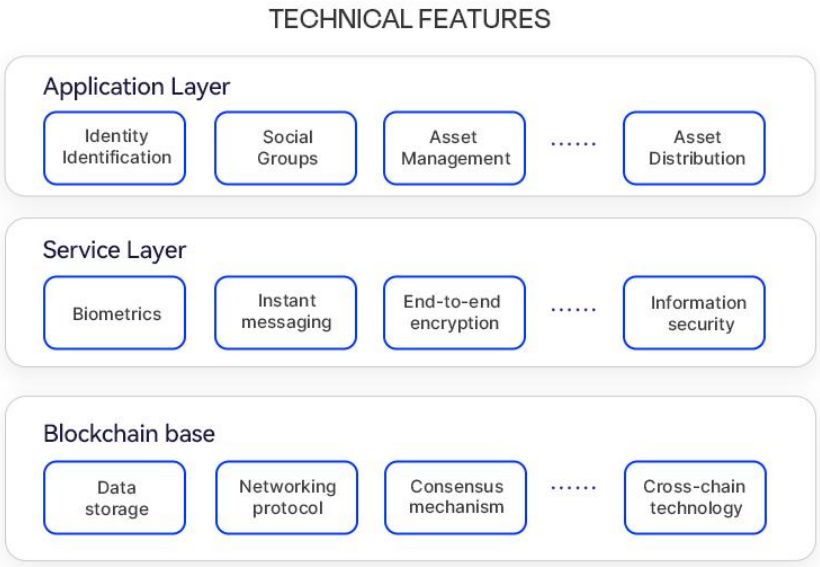
TERRA WALLET's underlying blockchain is a professional smart blockchain integrated with AI, achieving technological breakthroughs in the following four areas:

1. Formal Verification: AI computation elements are formally verified and their correctness is ensured through the Z3 prover, ensuring that all nodes in the system maintain consistent and accurate AI model inference results.
2. AI Computation Element Library: The underlying computation element library supporting AI models is further improved, enabling TERRA to perform inferences for more AI models.
3. Consensus Algorithm: The RandomAI proof-of-work algorithm is designed to further enhance the decentralization of the blockchain.
4. Main Chain Expansion: Zero-knowledge proof technology is employed to gradually package transfer transactions, smart contracts, and AI inferences, improving main chain performance.

Additionally, TERRA WALLET uses zkSNARK technology to separate the computation and verification processes. Each node merges the transactions to be packaged for computation, with the time-state Merkle tree root and transaction set before the transfer as input, and the time-state Merkle tree root after the transfer as output. This computation process is then submitted to the blockchain through zkSNARK as a proof. Blockchain nodes only need to verify the correctness of the proof to determine whether the state transition of the transactions is valid, greatly enhancing the performance of the entire blockchain. TERRA WALLET integrates cutting-edge zk-SNARK technology to ensure user transactions remain confidential and untraceable. This technology effectively hides user wallet addresses and public blockchain transaction data.

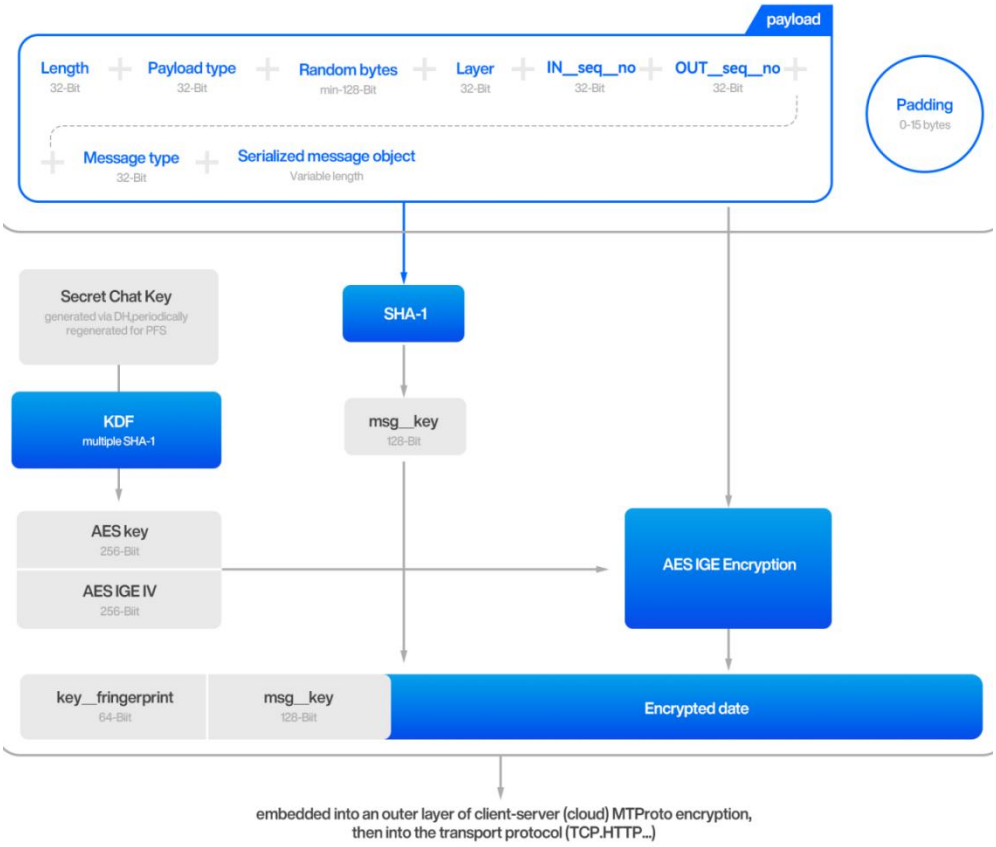
The dedicated AI components will support various business modules of TERRA WALLET. AI algorithms will power the TERRA WALLET transaction aggregator, helping you find the best prices across 60+ networks, 400+ DEXs, and 20+ cross-chain bridges. The AI components will automatically associate with all connected Web3 applications based on on-chain data, forming an effective relationship network diagram and opening up the Web3.0 Socialfi features for TERRA WALLET.

The overall technical architecture of TERRA WALLET consists of three layers: the blockchain layer, the middle service layer, and the upper application layer. Key technical highlights in this architecture include end-to-end encryption, biometrics, mobile LBS, and cross-chain technology.



3.1 End-to-end encryption

TERRA WALLET uses cryptography and other technologies to achieve end-to-end encrypted communication, which effectively protects the privacy and anti-theft of customer communication information, allowing our users to communicate in a secure network communication environment.



3.2 Biometric Identification

TERRA WALLET utilizes biometric technology by collecting biometric data such as fingerprints, voiceprints, and facial features through optical, acoustic, and pressure sensors. This data is closely integrated with artificial intelligence technology for personal identity authentication. By combining and applying these two technologies, the system can authenticate the user's identity without the need to know personal information such as passport numbers or ID card details.

3.3 Mobile LBS

TERRA WALLET leverages location-based services (LBS) technology to provide a wide range of localized, scenario-based, and social services. It enables applications such as treasure hunting, social networking, over-the-counter trading, and consumption payments.

3.4 Cross-Chain Technology

TERRA WALLET achieves cross-chain transactions for digital assets through innovative underlying blockchain technology, allowing users to freely exchange multiple digital assets using a specific TERRA WALLET address.

3.5 Technological Breakthroughs

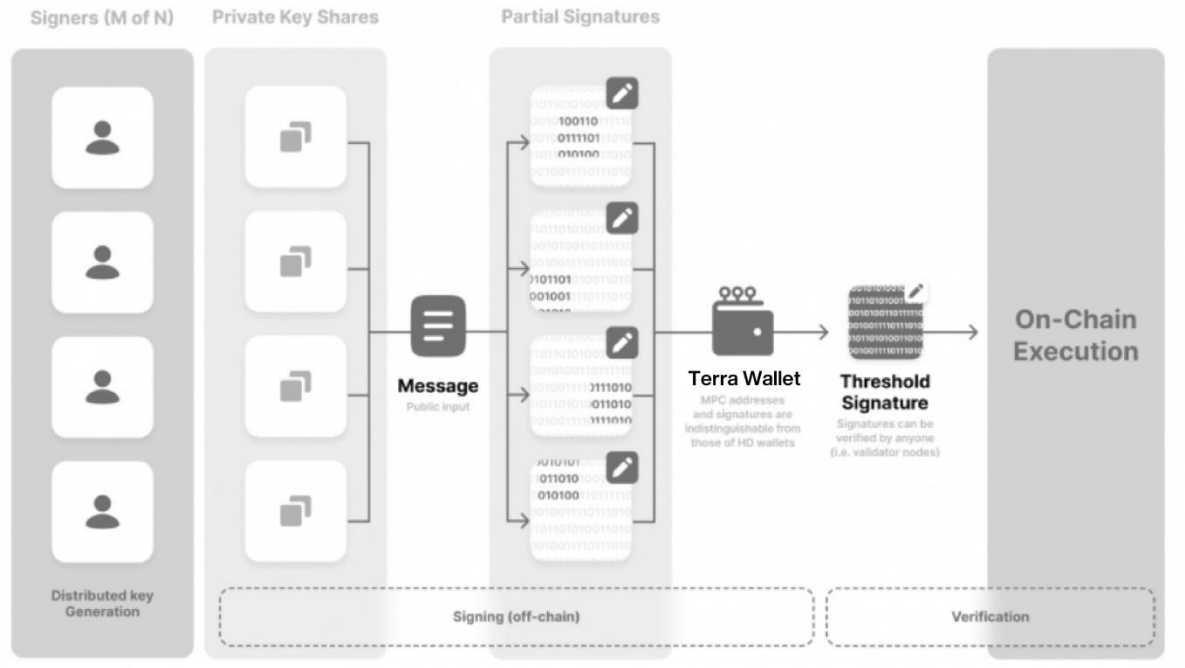
Since its inception, TERRA WALLET has been committed to building the best possible application. During this process, the team has made many technological innovations. It supports running validation nodes on 60+ blockchains without relying on RPC service providers. TERRA WALLET believes this will become a game-changer in the industry. By using advanced algorithms, it randomly selects nodes from potentially millions of candidates to form a "committee" that anonymously votes on valid blocks. This reduces many risks, including sandwich attacks, and we call this a truly trustless operation. Breakthroughs have also been made in security, decentralized computing and storage, network communication, and redundant network resource sharing/optimization.

The blockchain trilemma is the balance between four fundamental aspects of blockchain: decentralization, privacy, security, and scalability. TERRA WALLET has achieved breakthroughs in all four areas.

Security - MPC Technology

TERRA WALLET is a digital cryptocurrency wallet created based on Multi-Party Computation (MPC) technology. It allows multiple users to create a joint wallet to store digital assets without a single point of failure. During the use of TERRA WALLET, users can independently access, operate, and modify the wallet without exposing each other's identities or putting shared digital assets at risk.

MPC technology achieves this ambitious promise by dividing the wallet's private key into several units, often referred to as "shares," which are distributed to the respective wallet users. Compared to traditional single-point private key methods, this new private key distribution system offers several advantages.



First, no single party can compromise TERRA WALLET, because every action within the wallet must be verified by a certain number of users. To make this concept clearer, let's imagine an MPC wallet with ten private key holders. If a transaction is to be performed, permission from at least seven holders is required. In this case, no single user can access, modify, or damage the shared digital assets, as they would always need confirmation from the other six parties.

The use of threshold-based methods in TERRA WALLET is crucial, as it ensures that no party can obstruct transactions that are requested by the majority. Thus, the mechanism of TERRA WALLET is similar to a democratic system, where no decision can be made without the support of the majority. Through this method, TERRA WALLET

ensures the security of digital assets and mitigates risks, as disrupting the system requires substantial effort from multiple parties.

High Privacy

It is well known that central banks and other financial institutions closely monitor every transaction, restricting customers' freedom and invariably tracking sensitive data. After integrating MPC technology, TERRA WALLET allows users to operate anonymously without any restrictions. It does not require the centralized wallet system to monitor private data to enhance digital asset security, enabling users to maintain the privacy of their personal information at all times.

Efficiency and Speed

The MPC model uses a single private key to verify all transactions, so the blockchain network does not require extensive maintenance during the verification process. It can operate under full load without consuming large amounts of computational resources, thus reducing the cost and technical requirements of a single verification process. This makes transactions nearly instantaneous for users.

Better Security and Regulatory Compliance

The MPC method effectively eliminates the single-point failure issue, meaning no party can control or disrupt the entire TERRA WALLET. Even in the unfortunate event of phishing attacks or other malicious activities, the system ensures the integrity of the wallet.

Decentralization-DID Digital Identity

TERRA WALLET innovatively adopts decentralized identity management. It no longer emphasizes the centralized collection and storage of user information but strengthens the user's control over their identity data. In a decentralized identity verification approach, each user is required to own their identity information. Different users can store credentials and personal information within TERRA WALLET, and each user will have a unique DID (Decentralized Identifier) for identification.

During decentralized identity verification, the associated identity data will also be distributed in a decentralized computing system, such as a distributed ledger or blockchain, making digital identities resistant to tampering and theft. Even if a user's identity information is recorded electronically, it is difficult to alter, steal, or delete it. Moreover, the transparency inherent in decentralized identity management ensures that identity information can be verified instantly without relying on the identity issuer.

The decentralized identity management ecosystem involves several participants:

- **Holders:** Individuals who own and use identity information. These users can store various identifiers in their digital wallets and share them as needed.
- **Issuers:** Organizations or institutions that issue credentials and statements to users. This could be a government tax department, an employer, an academic institution, or any entity capable of issuing identity information.
- **Verifiers:** Third parties who require identity information to establish trust and grant access to services. For example, online stores may need proof of age or citizenship before allowing the purchase of certain items. Any information that proves identity must be verifiable.

TERRA WALLET's DID digital identity opens new possibilities for Web3, enabling users to have full control over the generation and use of their identities, allowing them to better manage their personal information.

- **Higher Decentralization:**

In centralized identity management, users must trust a central organization or company to protect their personal data and prevent misuse. However, with decentralized identity management, users control who can access their personal information and can revoke access as needed.

- **More Privacy in Identity Management:**

In centralized identity management, users are often required to provide a large amount of personal information, which may be used for targeted advertising or other purposes users might not be comfortable with. In TERRA WALLET, users only need to share the personal information they want to, keeping the rest confidential.

- **More Convenient Identity Verification:**

Decentralized identity management can eliminate cumbersome multi-factor authentication protocols, enabling passwordless authentication. This makes digital services more accessible and efficient, as users no longer need to enter long passwords or endure complex KYC processes.

- **Enhanced Trust Between Organizations and Users:**

When users face companies collecting their identity data, they often worry about identity fraud. TERRA WALLET's decentralized identity system establishes an unprecedented level of trust between users and service providers.

Privacy - Zk-SNARK Privacy Wallet Technology

Using zk-SNARK proof technology, TERRA WALLET has created an account abstraction wallet that can be accessed via password authorization. zk-SNARK is a cryptographic technology that allows the verification of information without revealing the information itself. This means users can prove they own something without disclosing what it

is. Compared to traditional Zero-Knowledge (ZK) proofs, zk-SNARKs are non-interactive, meaning no communication is required between the prover and the verifier after the setup stage. This makes them highly secure and efficient.

TERRA WALLET integrates zk-SNARK technology into its blockchain wallet, which allows users to enjoy the benefits of privacy and security when sending and receiving tokens.
When users send tokens using TERRA WALLET, the recipient cannot see the sender's address. This helps protect user privacy and prevents financial information from being exposed. TERRA WALLET also uses zk-SNARK to verify the validity of transactions, making it harder for hackers to steal tokens or compromise the blockchain network.

Another key feature of TERRA WALLET is its use of Shielded Wallets. Shielded wallets allow users to hide their wallet address and transaction details from the public blockchain. When users transfer funds to a shielded wallet, they are actually transferred to a collective pool. Users receive encrypted receipts as proof of ownership, and these receipts are stored in the user's personal encrypted storage on the blockchain. Only users with the private key to their shielded wallet can decrypt and access these receipts to view the wallet's value. The hash values representing these receipts are stored in a public pool, which contains hash values for all shielded wallets in the system.

When users wish to transfer funds from a shielded wallet to another wallet, they create a zk-proof containing information about the recipient's address and the token amount. This information is sent to the recipient's address, where it is verified using zk-proof and the transaction is signed on behalf of the user, ensuring the wallet address remains hidden on the public blockchain. After verification on the blockchain, the funds are transferred to the recipient's wallet without revealing any information about the transaction or the user.、

Scalability

TERRA WALLET was designed with performance and scalability in mind, delivering breakthrough throughput (transactions per second) at ultra-low costs.

Some key performance metrics for TERRA WALLET include:

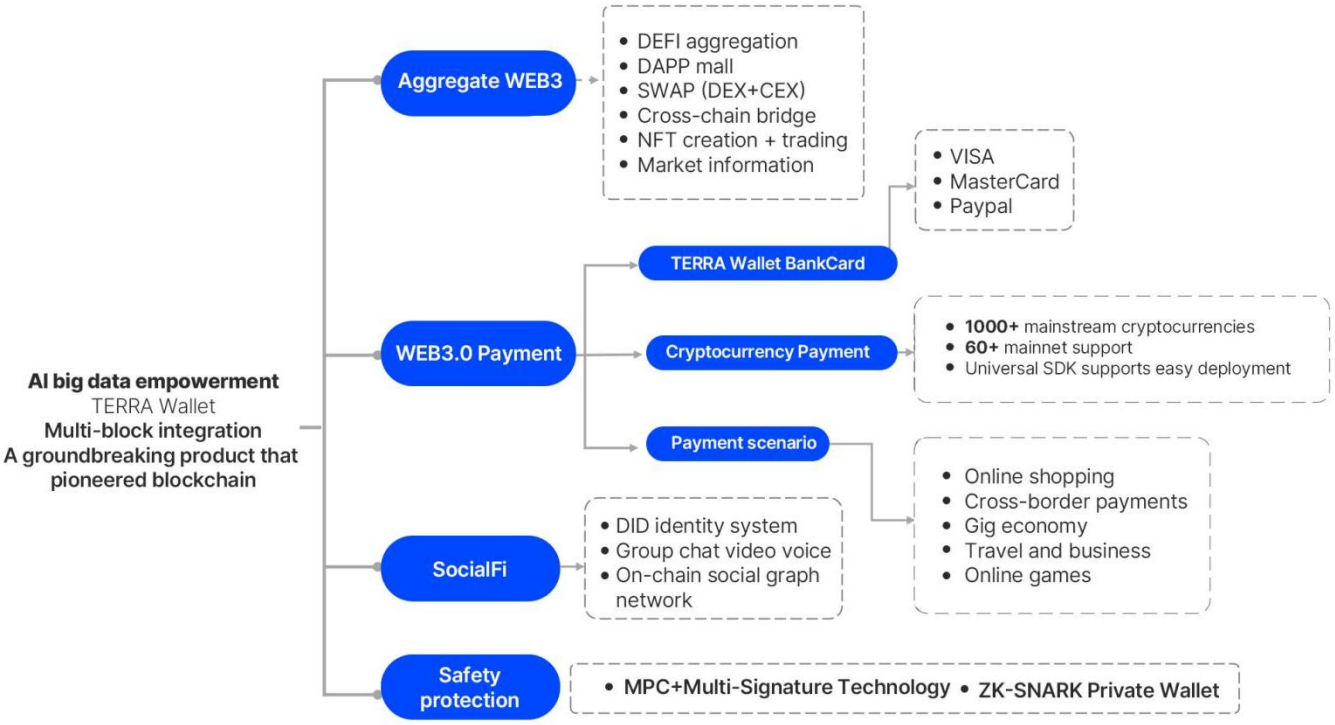
- **Average Transaction Time: Most transactions take just 3 seconds, and complex transactions take 10 seconds, such as making payments with cryptocurrency in supermarkets, international shopping, or other offline scenarios.**
- **Transactions per Second: > 1 million**
- **Total Transaction Fees: Ranging from $0.01 to $1 (for premium services)**
-
- **Security: Private keys are encrypted with 384-bit cryptography, compared to the 256-bit encryption used by other wallets.**
- **Data Transfer: Up to 100MB of images, videos, or audio via Wi-Fi**
- **Supported Blockchains: > 60, including mainstream blockchains like BTC, ETH, Polygon, BNB, Solana, xDAI,**

etc.

- **TERRA WALLET will continue to update and optimize to build the most comprehensive on-chain and off-chain payment ecosystem.**

4.Core Functions

TERRA WALLET is built for everyone in Web3, from HODLers to traders, NFT enthusiasts, privacy-conscious individuals, DApp builders, miners, and more—it's a multifunctional crypto wallet.



4.1 Crypto Wallet for Storage, Payments, and DeFi Connectivity

With the self-custodial TERRA WALLET, users can securely store, send, and receive Coins/Tokens from the world's most popular blockchains, including Ethereum, Bitcoin, Avalanche, and more. TERRA WALLET supports over 60+ popular blockchain networks in a permissionless manner, meaning there is no need to connect to an RPC provider to download blockchain data when making transactions. Users have full control over their digital assets, and the private keys are solely held by them.

TERRA WALLET is capable of pulling real-time market information, allowing users to track the overall market and portfolio performance through a simple view, as well as individual digital assets' price, supply, volume, and more over time. However, this represents current market data, and given the nature of the crypto market, the actual results can be highly volatile. With TERRA WALLET's custom RSS feeds, users can browse the latest blockchain and crypto news directly within the app's browser to stay updated. Users can purchase cryptocurrencies through various methods, including credit/debit cards and bank accounts.

TERRA WALLET can also connect to BITDU, BHE, and Binance for market and limit order exchanges and connect to Uniswap, PancakeSwap, Compound, and any other DeFi protocols or exchanges. It provides opportunities for lending agreements and allows users to easily and securely buy and sell digital assets from the world's largest markets without incurring additional fees while accessing thousands of tokens.

Cryptocurrency Payments

TERRA WALLET also supports online shopping, enabling users to make payments with cryptocurrency on various online platforms, such as e-commerce sites, online travel bookings, online gaming top-ups, and more.

Cryptocurrency payments can transcend borders, making them especially convenient for international online shopping. Users can avoid exchange rates and international transaction fees while shopping on e-commerce platforms in different countries. Additionally, cryptocurrency payments typically involve lower transaction fees, which is highly attractive for small transactions or micro-payments, reducing the transaction costs between e-commerce platforms and consumers. Compared to traditional bank transfers, cryptocurrency payments are usually faster and do not require traditional financial intermediaries. This means e-commerce businesses can receive payments more quickly, while users can enjoy the products or services they purchased without delay.

For users purchasing NFTs, digital art, and other digital goods, TERRA WALLET directly supports these transactions, enabling users to easily buy and exchange digital assets on online marketplaces.

TERRA WALLET provides more payment options for online shopping and builds a more flexible and efficient payment ecosystem between consumers and e-commerce businesses. This offers consumers more choices and convenience while providing e-commerce businesses with a new payment option that expands their customer base.

4.2 NFT Minting and Marketplace

TERRA WALLET features an NFT marketplace that allows users to browse, buy, sell, and store various collectible digital assets. Our marketplace includes artworks and other NFTs natively created on-chain, and we have the technical capability to support multi-chain markets, including Polygon, Ethereum, Solana, BSC, TRON, and more. Users can also search and filter to discover great artwork through categories such as Art, 3D, Collectibles, Utility,

Audio, etc., and view recent sales in real-time. In the future, TERRA WALLET plans to integrate many brands and companies into our marketplace to enable use cases for practical NFTs like event tickets.

Users can also mint NFTs of various formats, including photos, audio, and video, up to 100MB, directly from their mobile devices in less than 30 seconds. With each asset exchange, these NFTs can earn resale commissions based on the royalty percentage set by the creator.

4.3 DePINscan

DePIN (Decentralized Physical Infrastructure Network) represents a revolutionary approach that leverages blockchain technology and cryptoeconomics to incentivize individuals to contribute resources to create transparent, decentralized, and verifiable infrastructure. Moving away from traditional, centralized methods to a more open, collaborative, and innovative model, it uses the appeal of cryptocurrency incentives to bring people together to collaboratively build and manage the infrastructure on which we all rely. DePIN spans six different sub-industries (computing, artificial intelligence, wireless, sensors, energy, and services), and this decentralized model redefines our approach to physical infrastructure development and future expectations.

DePIN is a significant trend for future development. To support this, TERRA WALLET has developed DePINscan, designed to provide crucial information for investors and DePIN enthusiasts before making important investment decisions (such as which projects to invest in or which DePIN hardware to purchase).

TERRA WALLET's DePINscan links include Web Stream Trusted Metrics API and third-party APIs like Coin Gecko, Who Loves Burrito, etc., aggregating all global DePIN projects. Users can query and search for DePIN projects that interest them and are worth investing in. In addition, users can invest in and trade DePIN tokens directly through TERRA WALLET.

- DePIN Token Swap: Allows users to exchange their existing DePIN assets for any other tokens they wish.
- DePIN Market Query: Users can easily access the latest and most efficient DePIN networks through DePINscan, gaining insights into global computing power resources and the latest DePIN market trends.

4.4 Not Just a Crypto Wallet, But a Social Tool

Most current SocialFi products primarily meet the on-chain social and financial needs of Crypto Native users. However, TERRA SocialFi can cater to both on-chain and off-chain real-world social and financial needs. By utilizing DID (Decentralized Identity), TERRA enables users to own their personal data, privacy, and convenience. The TERRA Wallet ecosystem token facilitates soul binding, giving each individual a Web 3.0 social identity. Ultimately, TERRA enables people to build genuine, active connections in the Web 3.0 world.

TERRA Wallet offers a DID identity certification system and TERRA framework, helping users quickly establish social connections. The AI components automatically link data on-chain and connect to all integrated Web 3.0 applications,

forming an effective relationship network.
For example, a social module could be added to Uniswap, allowing users to see detailed trading data of the people they follow. Similarly, a friends module could be added to OpenSea, letting users easily see what NFTs their friends are trading and quickly find designated communities.

TERRA Wallet ensures user privacy and anonymity by offering decentralized chat and communication features. Users can securely send messages and engage in private conversations with others over the network, without relying on centralized communication service providers. Unlike other messaging apps, TERRA Wallet will not collect user data or disclose information to corporations or governments.

TERRA Wallet prioritizes security and anonymity; communication between users is based on a decentralized architecture, rather than going through a single centralized server. This structure prevents TERRA Wallet or any other entity from collecting or storing user data, as communication data is transmitted and managed by a dynamic, constantly changing network of nodes, with connections being made and broken during conversations.
End-to-end encryption ensures that text, video, audio messages, and documents transmitted between users are secure from eavesdropping or any external interference.

Users can remain fully anonymous, as the only requirement for registering and operating on the platform is their wallet address, which serves as the unique anonymous identifier. TERRA Wallet does not request or attempt to retrieve any further details such as mobile IDs, geolocation, or phone data. We respect user security and anonymity and do not try to collect information about users, their app usage patterns, contacts, or communication methods.

5.Terra Planet ecosystem token

Terra Planet, as an ecosystem token jointly created by BITDU Digital Asset Exchange (BITDU.com), TERRA WALLET (TW Wallet), and several blockchain companies, demonstrates immense development potential backed by strong technical and resource support.

5.1 Terra Planet Token Information

Total Supply and Burning Mechanism
The total supply of TERRA tokens is 1 billion, with a deflationary burning mechanism in place to control the final supply to 50 million, thereby enhancing the token's scarcity and value stability.
Mining Pool Output: 984 million tokens

Seed Token Allocation

During the initial phase, Terra Planet allocated 16 million seed tokens to support community development and the activation of foundational computing power. The allocation details are as follows:

- **Foundation and Technical Team: 1 million tokens, released linearly**
- **Micro-miners: 620,000 tokens**
- **Node Miners: 4.98 million tokens**
- **Seed Token Subscription: 4.4 million tokens**
- **DAO Governance Tokens: 5 million tokens**

Terra Planet, as the native currency of the ecosystem, is the core asset of the entire TERRA blockchain. Its value is reflected not only in liquidity and ecosystem empowerment but also in its unique "foundational computing power seed" feature. By holding the native currency, users can activate the computing power seed, qualifying them to participate in early mining opportunities and seize high-return prospects.

Terra Planet Computing Power Economic Model

Terra Planet's computing power economic model is a key component of its Web3.0 ecosystem. Through innovative economic incentives and technical support, it has built an efficient, secure, and incentivizing blockchain ecosystem. By combining the advantages of the VRF hierarchical cyclic consensus algorithm and Byzantine protocol, TERRA has introduced a deflationary computing power mechanism, promoting the steady appreciation of token value. This brings long-term benefits to users within the ecosystem and introduces new breakthroughs to the Web3.0 ecosystem.

VRF Hierarchical Cyclic Consensus Algorithm

Algorithm Overview

TERRA's unique "VRF Hierarchical Cyclic Consensus Algorithm" (Verifiable Random Function) is an innovative consensus mechanism that combines randomness, security, and efficiency:

- **Hierarchical Cyclic Mechanism:** Nodes are divided into multiple levels, with each level's nodes dynamically selected based on their computational power contribution, ensuring fairness and stability in network operations.
- **Enhanced Randomness:** Based on VRF's random verification, it ensures the unpredictability of the block generation process, thereby enhancing attack resistance.

Technical Features

- **High Performance and Low Energy Consumption:** The algorithm improves node operation efficiency and reduces network energy consumption, providing a green and efficient operating environment for ecosystem users.
- **Deflationary Computing Power Mechanism:** Combining computing power with the deflationary token mechanism, users are incentivized to burn tokens through computing power, effectively reducing the circulating supply and steadily increasing token value.
- **Dynamic Incentive Model:** Incentive weights are dynamically adjusted according to user contributions, encouraging active participation in ecosystem building.

Breakthroughs for the Web3.0 Ecosystem

By using the VRF Hierarchical Cyclic Consensus Algorithm, TERRA optimizes blockchain network efficiency and security while constructing an ecosystem that balances fairness and incentives. This innovative algorithm lays a solid foundation for the decentralization and sustainable development of the TERRA ecosystem and provides technical support for the widespread adoption of Web3.0.

5.2 Terra Planet Development Plan

As the core token of the Terra Planet platform, Terra Planet Ecosystem Token serves multiple functions. It is not only the foundation for transactions, payments, rewards, mining, and governance within the ecosystem, but also plays a key role in driving the growth and prosperity of the entire ecosystem. The initial listing of TERRA on BITDU Exchange signifies the formal entry of the TERRA Ecosystem Token into the global circulation market. This move marks a further penetration of the TERRA ecosystem into the global crypto asset market, while BITDU Exchange, with its leading trading technology, rich trading pairs, and extensive user base, provides strong market support and liquidity channels for Terra Planet.

BITDU, as a globally leading crypto asset exchange, boasts strong technical capabilities, deep liquidity, and a global

presence. BITDU's global trading network can provide ample market liquidity for TERRA tokens, ensuring widespread recognition and trading across the globe. Whether in Europe, Asia, or North America, BITDU's extensive coverage and market influence will help TERRA tokens rapidly enter major trading platforms and attract the attention of global investors.

In addition, BITDU's resources and technical support have been a crucial factor in the continuous growth of the TERRA ecosystem. By providing professional marketing, resources, and partnership opportunities, BITDU has helped the TERRA ecosystem achieve broader application and adoption. With the support of BITDU, TERRA has not only achieved value circulation in the trading market but has also gained more users and ecosystem resources in global decentralized finance (DeFi), cross-chain payments, and other areas.

To ensure the long-term value growth and sustainable development of the TERRA ecosystem token, the development plan for TERRA will focus on the following key directions:

Expansion of Diverse Application Scenarios

The primary goal of the TERRA ecosystem token is to provide users with a broader range of application scenarios. As the TERRA ecosystem continues to develop, the token's applications will expand from digital payments and asset management to decentralized finance (DeFi), cross-border payments, NFT trading, community governance, and more. The ecosystem token will be widely used in:

- **TERRA Wallet Payments:** Users can use TERRA tokens to make payments on merchants and platforms within the TERRA ecosystem, breaking the barrier between fiat and cryptocurrency for seamless payments.

- **DeFi Protocols and Liquidity Mining:** Users can participate in decentralized finance activities such as lending, liquidity pools, and yield farming within the TERRA ecosystem, staking, lending, and earning rewards using the TERRA token.

- **NFT Trading and Collection:** TERRA tokens will become the primary payment method in the NFT market within the TERRA ecosystem, driving the trade of digital assets such as artworks, game assets, and virtual goods.

Decentralized Governance and Community Participation

The decentralized governance mechanism of the TERRA ecosystem token will grant token holders more decision-making power. In the future, TERRA tokens will fully integrate into TERRA's DAO governance structure, allowing users to participate in major decisions of the platform, including:

- **Proposals and Voting:** Token holders can use TERRA tokens to participate in proposals and voting within the

ecosystem, determining the key directions for TERRA's future, such as product development, partnerships, and community rewards.

- **Community Incentive Mechanism:** TERRA will reward users for participating in community building, ecosystem promotion, content creation, and other activities through an incentive system, fostering a healthy and active decentralized community.

Deflation Mechanism and Long-Term Value Growth

To ensure the long-term value and stable growth of the TERRA ecosystem token, a deflationary mechanism will be adopted, gradually reducing the circulating supply in the market, thereby increasing its scarcity and value. Key aspects of the deflationary mechanism include:

- **Regular Buybacks and Burn:** The TERRA team and ecosystem partners will periodically buy back TERRA tokens using platform income and exchange fees and burn them to reduce market circulation and increase token value.
- **Halving Mechanism:** In the mining process of the TERRA token, a mechanism will be set in which the rewards decrease after reaching certain block heights, gradually reducing the number of newly issued tokens, enhancing the token's scarcity.
- **Holding Rewards:** Through regular holding rewards and staking mechanisms, users will be encouraged to hold TERRA tokens long-term, rather than frequently trading or dumping them, which will help stabilize the token price and increase its long-term value.

Global Ecosystem Layout

As the TERRA ecosystem expands, the TERRA token will gradually achieve global application, especially in cross-border payments and global trading:

- **Cross-Border Payments and Remittances:** TERRA tokens will support global users in making fast, low-cost cross-border payments and remittances through partnerships with global merchants and platforms.
- **Partnerships and Ecosystem Development:** TERRA will promote the global circulation and application of the token by collaborating with more blockchain projects, exchanges, and financial institutions, enhancing market demand and trading activity.

6.Governance Structure

6.1 Digital Alliance Background

The TERRA Digital Alliance (hereinafter referred to as the "Digital Alliance") is an operational entity established in Singapore, dedicated to the construction and promotion of TERRA. The TERRA founding team highly recognizes the essence of blockchain's distributed self-organizing structure, while incorporating elements of traditional corporate governance to improve the efficient implementation of TERRA's development and promotion strategies, avoiding situations that do not align with blockchain design principles. All operations of the Digital Alliance strictly comply with local laws, regulations, and supervisory requirements. After its establishment, the Digital Alliance will select appropriate community members to join its functional committees, participating in the actual management and decision-making processes.

6.2 Digital Alliance Governance Principles

The governance structure of the TERRA Digital Alliance is designed with principles of openness, sharing, and sustainability in mind. The following principles are proposed regarding governance:

- **Transparency and Supervision**
  The Digital Alliance discloses its operational status and development progress to the community participants through regular reports and periodic press releases.
- **Integration of Centralized and Distributed Governance**
  The Digital Alliance incorporates elements of centralized governance in its management structure, including the strategic decision-making committee's supreme decision-making powers and the centralized discussion powers on major issues. This approach aims to improve the operational efficiency of the community while balancing the impacts of efficiency and fairness.
- **Coexistence of Technology and Business**
  The Digital Alliance strives to gain recognition in the commercial world, with the profits earned being reinvested back into the TERRA community as much as possible.
- **Ecosystem-Centric Approach**
  The ecosystem envisioned by the Digital Alliance will enable value to be transmitted rapidly within an ever-expanding closed-loop, fueled by the activities taking place in the ecosystem.

Digital Alliance Organizational Structure

The structure of the Digital Alliance is inspired by traditional operational entities, setting up various functional committees, including:

- Strategic Decision-Making Committee
- Compensation and Nomination Committee
- Technical Review Committee
- Risk Control and Compliance Committee

- Public Relations Committee

These committees will handle daily operations and address special matters as they arise.

7.Future Value

TERRA WALLET is the leading crypto super app designed to securely and seamlessly connect one billion users to the crypto world. It provides a comprehensive and reliable ecosystem of essential services for global users, including but not limited to non-custodial, multi-chain NFTs and cryptocurrency wallets, built-in DEX, cross-chain bridges, DApp browsers, robust terminals, attractive earning opportunities, income generation, and activities.

TERRA WALLET is a core component for future multi-chain protocols/applications, serving as an entry point to access numerous DeFi services across different blockchains. Through continuous iterations of the wallet, we have laid a solid foundation to enhance our product suite.

TERRA WALLET has gained over 500K+ users globally and supports 60+ blockchain networks, available for use on mobile, browser extensions, and websites.

We believe that multi-chain and cross-chain interoperability will be the future of blockchain. As such, TERRA WALLET is the first non-custodial wallet product we have developed with an advanced multi-chain wallet engine. As the core of our product suite, TERRA WALLET allows our users to interact with DeFi protocols across various blockchains in the most convenient way.

8.Disclaimer

Regulatory Uncertainty and Risks

Due to the uncertainty and largely unregulated nature of cryptocurrency-related businesses and activities, the TERRA team has dedicated significant time and resources to considering its business approach and proposing both current and future operations. TERRA will comply with all applicable regulations and requirements in each jurisdiction. However, due to the current regulatory uncertainty worldwide, TERRA cannot guarantee the legality and/or future development capabilities of its business platform, nor the construction and approval of any future token functionality in each jurisdiction. Nevertheless, TERRA will make efforts to respond and comply with regulations in the face of any regulatory investigations.

Under no circumstances will the company, or any of its current or former employees, officers, directors, partners, trustees, representatives, agents, consultants, or builders (collectively referred to as “Company Representatives”) be held liable for:

- Any profit loss, savings loss, or incidental, indirect, special, or consequential damages caused by your use or inability to use TERRA services, products, or tokens, or any violation of these terms by you or any third party.
- Any security risks, such as hacking, loss of passwords, loss of private keys, or similar situations.
- Any losses caused by token price fluctuations in any country or market (regulated, unregulated, primary,

secondary, or others).

- Any losses or damages arising from the purchase, use, or sale of other tokens, or from failure to properly safeguard any private keys containing tokens, or any related matters (collectively referred to as “Exclusion Matters”).
- The TERRA team will reasonably utilize the digital assets raised in private placements as disclosed in the whitepaper and provide regular disclosures. However, there will always be risks, including those anticipated, such as policy risks, trading risks, coordination risks, and information security risks.

The TERRA team will continue to make reasonable efforts to ensure the authenticity and accuracy of the information in this whitepaper. During development, the platform may undergo updates, including but not limited to platform mechanisms, ecosystem application mechanisms, and reward systems. Some of the content may be adjusted in the updated whitepaper as the project progresses. The team will announce updates through the website or the new version of the whitepaper. Participants must obtain the latest whitepaper and adjust their decisions according to the updated content. TERRA explicitly states that it will not be responsible for any losses caused by:
(a) Over-reliance on the content of this document;
(b) (b) Inaccuracies in this document and any actions taken based on this document.

The team will spare no effort to achieve the goals mentioned in this document; however, due to the presence of force majeure, the team cannot fully guarantee the completion of these commitments.

This document is for informational purposes only and does not constitute an offer, request, recommendation, or invitation related to any company securities as described herein. This whitepaper is not an offering document or prospectus and is not intended to provide the basis for investment decisions or agreements. The information provided in this whitepaper is purely technical in nature and has not been audited, verified, or analyzed by any professional legal, accounting, engineering, or financial advisors.

All supporters of the TERRA project should carefully read the whitepaper and official website descriptions, fully understand blockchain technology, and clearly recognize the risks associated with the TERRA project. By participating in the investment, investors acknowledge and accept the project’s risks.

9.Risk Disclosure

1. Uncertainty in Regulatory Attitudes and Policies: The stance and policies of major countries regarding blockchain projects, including those involving cryptocurrency fundraising, are still unclear. There is a possibility of investor losses due to policy-related issues.
2. Regulatory Risks: Blockchain technology has become a major regulatory target in various leading countries. If regulatory authorities intervene or exert influence, applications or digital tokens may be affected. This includes

potential legal restrictions on usage, sales, or the development of electronic digital tokens, which may face limitations, hindrances, or even the termination of development.

3. Market and Demand Uncertainty: The value of TERRA depends on market dynamics and demand post-application deployment. It is possible that TERRA may not have any inherent value.
4. External Advice: We encourage recipients of this document to seek external advice. Recipients are fully responsible for evaluating the matters described in this document, including risk assessments and consultations with technical and professional advisors.
5. Core Protocol Risks: Digital tokens and applications are developed based on protocols similar to Ethereum. Any failure in the core protocol, unexpected functionality issues, or attacks could result in digital tokens or applications malfunctioning or ceasing to function as intended. Additionally, the value of accounts within the protocol may decrease in the same manner as digital tokens, or in other ways.
6. Development Stage and Expectations Risks: The project is still in the development phase, and significant changes may occur before the official release. Any expectations or assumptions about the functionality or form of the application or digital tokens (including participants' behaviors) may not meet expectations. Mistaken analyses or design changes could lead to such outcomes.
7. Private Key Risks: Loss or destruction of the private key necessary for accessing TERRA is irreversible. Only by possessing the unique public and private keys from a local or online wallet can one control the related tokens. Each purchaser must properly safeguard their private key. If a purchaser's private key is lost or leaked, the TERRA team cannot assist in retrieving or recovering the funds.
8. Additional Risks: In addition to the aforementioned risks, cryptocurrency investment is a relatively new field, and there may be various risks that we have not yet mentioned or anticipated.
9. Project Understanding and Risk Awareness: Fully understanding the project's development plans and the risks within the blockchain industry is crucial. If this understanding is not achieved, participation in the project is not recommended.