**Xode White Paper**

**Introduction**

The developers that won [**3rd place in the DeFi category of the 2022 Polkadot Hackathon North America Edition**](https://devpost.com/software/humidefi-b70ito) build the first Filipino-built blockchain within the Polkadot ecosystem (Kusama Parachain Id: 3344), are revolutionizing the decentralized technology landscape. The Philippines, recognized as the [**fifth-largest cryptocurrency holder per population in the world (13% / 15M)**](https://www.visualcapitalist.com/countries-with-the-highest-rates-of-crypto-ownership/), offers immense opportunities for blockchain adoption, making Xode a pivotal player in this high-potential market. Designed with scalability, interoperability, and inclusivity at its core for game developers and enterprises, Xode has rapidly gained traction as a high-performing blockchain platform, underpinned by its native utility token, **XON**.

With over **15 million Filipino crypto holders**, the Philippines represents a thriving market ready for innovation. Xode Blockchain is uniquely positioned to meet this demand by providing a robust platform that supports and empowers these users. As the [**largest Web3 play-to-earn market**](https://www.coingecko.com/research/publications/web3-gaming-interest-countries) globally and with widespread social media engagement, the country is well-equipped for a blockchain solution that can bridge this gap and create unprecedented opportunities.

**Why list XON in your exchange?**

**Growing Community and Market Demand**

1. **100,000+** followers across all major social platforms. (See social media links)
2. Strong grassroots community in the Philippines and expanding globally.
3. Consistent engagement and adoption metrics demonstrating user confidence.
4. [Partnerships with notable media platforms such as Sun Star Media boosting regional visibility](https://www.sunstar.com.ph/cebu/xodes-milestones-signal-major-advancements-for-philippine-tech-scene).

[**Certik Security AA Rating**](https://skynet.certik.com/projects/xode-blockchain)

1. Top-tier security validation ensuring trustworthiness and reliability by **Certik**.
2. Enhanced safety measures attracting institutional and retail investors alike.
3. As part of the security findings, XON will be managed through **Xode Foundation, a decentralized autonomous (DAO)** organization based in Panama.
4. Listed in [CoinMarketCap](https://coinmarketcap.com/currencies/xode-blockchain/) while awaiting exchange price signifies project confidence.

**Built on Polkadot (**[**Kusama Parachain Id: 3344**](https://polkadot.js.org/apps/?rpc=wss%3A%2F%2Frpcnodea01.xode.net%2Fn7yoxCmcIrCF6VziCcDmYTwL8R03a%2Frpc#/explorer)**)**

1. Leveraging Polkadot’s **Subtrate Blockchain Framework** for robust interoperability in connecting with other blockchains across the ecosystem.
2. Xode Blockchain uses an eco-friendly consensus mechanism (Delegated Proof-of-Stake) aligning with sustainable technology goals.
3. Xode Blockchain uses Polkadot’s governance module to guarantee full decentralization across the ecosystem.

**Innovative Ecosystem:**

1. The [XGame](https://xgame.live/) platform is a cornerstone of the Xode ecosystem, facilitating Web3 onboarding for games while featuring its own integrated NFT marketplace.
2. Comprehensive Web3 integration through HRMP and XCM across the Polkadot ecosystem to bring in liquidity.
3. Multi-wallet compatibility offering through [Nova](https://novawallet.io/), [Talisman](https://talisman.xyz/) and other wallets in the Polakdot ecosystem.
4. Built its own wallet, the Xterium, to meet the demand of meme token holders and other needs of the local market.
5. [Built its own Delegated Proof-of-Stake protocol to meet the demand of local node operators and stakers](https://github.com/Xode-DAO/xode-blockchain/blob/main/pallets/staking/src/lib.rs).

**Strategic Benefits for your exchange.**

**Tap into a Niche Market:**

1. Lead the adoption curve in the burgeoning Filipino blockchain market.
2. Strengthen presence in Southeast Asia’s growing crypto ecosystem.
3. Polkadot integration: This will open up other assets within the Polkadot ecosystem to be available in the market.

**Amplify Trading Volume:**

1. High engagement rates from XON holders and enthusiasts promise active trading on your exchange.
2. Backed by Certik’s rating, XON attracts both retail and institutional traders.
3. Xode Blockchain use cases, e.g., Web3 gaming, play-to-earn, meme token wallet marketplace, NFT marketplace, etc., all use tokens through the asset pallet or smart contract on the chain that may be listed in the future on the exchange.

**Partnership Opportunities:**

1. Collaborate with Xode for co-branded campaigns and developer incentives.
2. Explore potential synergies with Xode’s innovative staking and governance models.
3. Community co-marketing on trading and financial products and services between your exchange and Xode Blockchain.

**Traditional and Social Media Partner**

1. Facebook: <https://www.facebook.com/xodenet>
2. LinkedIn: <https://www.linkedin.com/company/xodenet>
3. Twitter/X: <https://x.com/XodeNet>
4. Youtube: <https://www.youtube.com/@XODEblockchain>
5. Discord: <https://discord.gg/V6DETUY7Cy>
6. Telegram: <https://t.me/Xodecom>
7. CoinMarketCap: <https://coinmarketcap.com/currencies/xode-blockchain/>
8. Medium: <https://medium.com/xode-today/aa-xode-blockchain-aces-certik-security-score-4122958b4063>
9. Sunstar Philippines: <https://www.sunstar.com.ph/manila/from-cebu-to-bangkok-xode-blockchain-pioneers-at-polkadot-sub0-reset-conference>
10. Wordpress Blog: <https://hgminerva.wordpress.com/>

**Source Code**

1. Github: <https://github.com/Xode-DAO/xode-blockchain>
2. Certik Security Audit: <https://skynet.certik.com/projects/xode-blockchain>

**Founders**

* **Gene Son**

Telegram: @leopardsrock

LinkedIn: https://www.linkedin.com/in/gene-son-wrak-702841311

A seasoned entrepreneur and visionary leader with a diverse portfolio of accomplishments across multiple industries. He earned his degree in Biotechnology from Gyeongsang National University in Korea, where his entrepreneurial journey began. During his university years, he established a web hosting service and design company, showcasing his innate ability to identify opportunities and create value through technology-driven solutions.

In 2000, he founded ADCAT Enterprise, marking the start of his successful career as a business leader. Over the years, he spearheaded multiple ventures, including BNI Enterprise, a web development company, and EVA (Evolution Vehicle Automotive), which specialized in importing cars and heavy-duty construction machinery. His ability to adapt and lead across industries continued with the establishment of 4Nexgen Enterprise Corp in 2020, a management and consultancy services firm based in Russia that also focuses on cryptocurrency mining and trading.

Beyond his corporate endeavors, he serves as the Chairman of Leopards Rock Property Holdings Inc., overseeing investments and property management since 2008. His passion for hospitality led him to establish Genesis Project Food Service and Hospitality Management Incorporated, operating restaurants and hospitality services. With a career spanning technology, automotive, real estate, and hospitality, Gene Son exemplifies the qualities of innovation, leadership, and resilience in today’s dynamic global marketplace.

* **Harold Glenn Minerva**

X: https://x.com/hgminerva

Telegram: @hgminerva

LinkedIn: https://www.linkedin.com/in/harold-glenn-minerva-1789a254/

Github: https://github.com/hgminerva

With a background in engineering complemented by a Master's in Business Administration, coupled with extensive experience as a software architect, this individual brings over two decades of expertise in software engineering and development. Having founded and successfully managed three software development companies, two of which were acquired, including one by a foreign investor, underscores his entrepreneurial acumen and industry recognition.

An alumnus of the Polkadot Blockchain Academy (PBA), he is proficient in blockchain engineering, game theory, and cryptography, alongside a wide range of programming languages and frameworks. These include C, PHP, Laravel, JavaScript, Angular, Python (specializing in machine learning and data science), and Rust for Web3 and Substrate platforms. His diverse expertise is well-suited to the complex demands of modern software and blockchain development.

Formerly serving as a Chief Technology Officer, his solid understanding of ITIL and process engineering enables him to navigate complex cloud infrastructures, such as AWS, Azure, and Google Cloud, alongside managing physical IT environments using ISO 9001/27000 procedures. Additionally, as the sole consultant in the southern Philippines for SYSPRO ERP, he brings specialized expertise in enterprise resource planning systems to the region.

* **Caesar Ditan**

X: https://x.com/JohnnyKawa

Telegram: @johnnykawa

LinkedIn: https://www.linkedin.com/in/caesarditan/

With over 40 years of top-level management, business development, sales, and marketing experience spanning multiple industries, including IT (information technology), academia, broadcast, advertising, and entertainment, this individual brings a wealth of expertise to the table. His extensive career has seen him navigate various domestic, regional, and global markets, providing strategic leadership and driving growth initiatives across diverse sectors.

Beyond his professional achievements, Caesar is also recognized as an award-winning songwriter and record producer, notably credited for his pioneering work on Mango Jam: Best of New Cebu Music Volume One in 1992. This accolade underscores his creative talents and contributions to the music industry, highlighting his ability to excel in both business and artistic endeavors.

In addition to his practical experience, Caesar holds a Master of Management post-graduate degree from the University of the Philippines, further enhancing his credentials and expertise in management and business administration. This educational background equips him with advanced theoretical knowledge and analytical skills, enabling him to effectively tackle complex challenges and drive strategic decision-making in his professional endeavors.

Overall, Caesar’s extensive professional background, creative accomplishments, and academic qualifications position him as a seasoned leader with a multifaceted skill set and a proven track record of success across various industries and market environments.

**Tokenomics:**

* **Staking Rewards (10%)**
  + Coin Quantity: 120 million (122,493,748.82724) XON
  + Annual Reward Rate: 4%
  + Purpose: To enhance network stability and security through staking participation
* **Private Sale (5%)**
  + Coin Quantity: 61 million (61,246,895.41362) XON
  + Purpose: To raise initial capital and involve strategic partners.
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* **Exchange Liquidity Provision (5%)**
  + Coin Quantity: 61 million (61,246,895.41362) XON
  + Purpose: To ensure liquidity for smooth trading on exchanges.
* **Team and Developer Compensation (2%)**
  + Coin Quantity: 24 million (24,498,749.765448) XON
  + Purpose: To reward the team and developers for their contributions and ongoing
  + support.
* **Marketing and Community Development (2%)**
  + Coin Quantity: 24 million (24,498,749.765448) XON
  + Purpose: To drive marketing initiatives and foster community growth.
* **Partnerships and Ecosystem Expansion (2%)**
  + Coin Quantity: 24 million (24,498,749.765448) XON
  + Purpose: To build strategic partnerships and expand the ecosystem.
* **Reserve Fund (2%)**
  + Coin Quantity: 24 million (24,498,749.765448) XON
  + Purpose: To provide a buffer for unforeseen circumstances and ensure stability.
* **Founders (2%)**
  + Coin Quantity: 24 million (24,498,749.765448) XON
  + Purpose: To reward the founders for their vision and leadership.

**XON Lockup (70%)**

* **Locked Coins:** 857 million (857,456,241.79068) XON
* **Purpose:**These locked tokens will be allocated for potential use cases of Xode Blockchain, with a burning schedule in place if those use cases do not materialize.
* **Burn Schedule:**Annually, 10% of the locked coins will be burned over a period of 8 years. The burn schedule can be dynamically adjusted based on governance decisions to respond to market conditions.

**Xode Network**

The Xode Blockchain network seamlessly integrated into the Polkadot ecosystem through a parachain. This integration allows Xode to leverage Polkadot's robust infrastructure, ensuring scalability, interoperability, and security for its decentralized applications and services. As a parachain, Xode benefits from Polkadot's shared security model, where the Relay Chain validators secure the entire network, eliminating the need for Xode to establish its own validator set. This design significantly reduces operational overhead while providing a high level of trust and security for transactions and smart contract execution within the Xode ecosystem. The network is tailored for diverse use cases, from decentralized finance (DeFi) and gaming to digital identity and enterprise solutions, fostering innovation and inclusivity in the blockchain space.

Xode Blockchain's integration with Polkadot also enhances cross-chain interoperability, enabling seamless interaction with other parachains and networks connected to the Polkadot Relay Chain. This connectivity allows developers and users within Xode's ecosystem to access a broader range of assets, functionalities, and user bases beyond the network itself. Additionally, Xode's strategic alignment with Polkadot's environmentally friendly consensus mechanism underscores its commitment to sustainability and efficient resource utilization.

**Staking (Simplified Delegated Proof-of-Stake)**

The staking process begins with generating node keys and setting the session keys, which are essential for the node to participate in the network. After ensuring the node has valid session keys, it is registered to begin its participation in block authoring and staking activities. Once registered, the node can be managed in various ways: it can be temporarily taken offline, brought back online, or permanently removed from the network if necessary.

Once a node is registered and active, it must be bonded in order to engage in the authoring process. If the node authors a block during a session, it remains active and continues to participate. However, if the node fails to author a block during its session, it will be slashed and automatically set to offline, reducing its chance to participate in future sessions. This mechanism ensures that only active and reliable nodes remain in the network.

Additionally, node operators can define a commission rate, which dictates how rewards are distributed between the node and its stakers (delegators). Stakers can delegate their XON tokens to a node, allowing them to earn rewards based on their stake. The rewards are given after deducting the node's commission. If stakers wish to change their participation, they can un-stake their XON tokens, removing their delegation and reclaiming their tokens. This process helps maintain a dynamic and secure staking system, where active nodes and participants are continuously rewarded.

Authoring

After registering your node and bonding an amount, it will automatically be assigned a Waiting status. In the next session, nodes with the Waiting status and valid session keys are added to the Aura validator queue. These nodes become eligible to author blocks starting in the subsequent session. However, queued validators that have not started authoring after two sessions will not participate in block authoring for the current session. This staged process ensures that only properly configured and active nodes contribute to block production.

When a node successfully authors a block, rewards are distributed among the Treasury, the Author, and the Stakers. Specifically, 20% of the reward goes to the Treasury, while the remaining 80% is shared between the Author and the Stakers. Stakers receive their rewards based on their proportional stake relative to the total stake, with the Author retaining the remaining balance after staker rewards are deducted from the Author’s commission. Conversely, if a node fails to author a block during its session, the slashedAuthors mechanism tracks its performance. Nodes that remain stale for a specified maximum period are automatically set to Offline. Offline nodes are progressively downgraded and eventually removed from the network to maintain the integrity and reliability of the staking system.

**Authoring Reward Computation**

// 22\_114\_400 \* 20% = 4\_422\_880

assert\_eq!(Balances::free\_balance(XodeTreasuryAccount::get()), 4\_422\_880);

// Starting: 22\_114\_400 \* 80% = 17\_691\_520

// Commission = 50%

// Staker 1 Ratio (1/15=6%) = 17\_691\_520 \* 0.5 \* 0.06 = 530\_746

// 90\_000\_000\_000\_000 + 530\_746 = 90\_000\_000\_530\_746

assert\_eq!(Balances::free\_balance(11), 90\_000\_000\_530\_746);

// Remaining = 17\_691\_520 - 530\_746 = 17\_160\_774

// Staker 2 Ratio (2/15=13%) = 17\_160\_774 \* 0.5 \* 0.13 = 1\_115\_451

// 80\_000\_000\_000\_000 + 1\_115\_451 = 80\_000\_001\_115\_451

assert\_eq!(Balances::free\_balance(12), 80\_000\_001\_115\_451);

// Remaining = 17\_160\_774 - 1\_115\_451 = 16\_045\_323

// Staker 3 Ratio (3/15=20%) = 16\_045\_323 \* 0.5 \* 0.20 = 1\_604\_533

// 70\_000\_000\_000\_000 + 1\_604\_533 = 70\_000\_001\_604\_533

assert\_eq!(Balances::free\_balance(13), 70\_000\_001\_604\_533);

// Remaining = 16\_045\_323 - 1\_604\_533 = 14\_440\_790

// Staker 4 Ratio (4/15=26%) = 14\_440\_790 \* 0.5 \* 0.26 = 1\_877\_303

// 60\_000\_000\_000\_000 + 1\_877\_303 = 60\_000\_001\_877\_303

assert\_eq!(Balances::free\_balance(14), 60\_000\_001\_877\_303);

// Remaining = 14\_440\_790 - 1\_877\_303 = 12\_563\_487

// Staker 5 Ratio (5/15=33%) = 12\_563\_487 \* 0.5 \* 0.33 = 2\_072\_976

// 50\_000\_000\_000\_000 + 2\_072\_976 = 50\_000\_002\_072\_976

assert\_eq!(Balances::free\_balance(15), 50\_000\_002\_072\_976);

// Remaining = 12\_563\_487 - 2\_072\_976 = 10\_490\_511

// 90\_000\_000\_000\_000 + 10\_490\_511 = 90\_000\_010\_490\_511

assert\_eq!(Balances::free\_balance(1), 90\_000\_010\_490\_511);

**Source:** https://github.com/Xode-DAO/xode-blockchain/blob/main/pallets/staking/src/tests.rs#L865

The reward distribution is calculated based on a total reward of 22,114,400. First, 20% of the reward (4,422,880) is allocated to the Treasury, while the remaining 80% (17,691,520) is distributed among the Author and Stakers. The Author's commission is set at 50%, leaving the other half (8,845,760) to be distributed among the Stakers based on their respective stake ratios. For example, Staker 1, with a ratio of 6% (1/15), receives 530,746, which is added to their starting balance of 90,000,000,000,000. Subsequent stakers receive their proportional share (e.g., Staker 2 with 13% receives 1,115,451, Staker 3 with 20% receives 1,604,533, and so on), with each calculation reducing the remaining amount for the next staker.

Finally, after all stakers are rewarded, the remaining amount of 10,490,511 is added to the Author’s balance, reflecting their commission share and any undistributed rewards. This ensures a precise and equitable distribution based on stake ratios while validating the results through assertions that compare calculated balances against expected values.