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Deep Research

# Horizen Builds Toward Goal Of Secure, Private & Scalable Ecosystem

November 29



FSInsight Team

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Horizen is a blockchain platform structured as a cross-chain network that provides infrastructure and tools to support the creation of third-party decentralized applications (“dApps”) with elective privacy features. At the beginning of Q4 2020, we released our primer report *Horizen: Web 3.0 Platform Targeting Big Tech Super App Disruption*, followed by an update note at the end of Q4 2020 *Horizen Update: ZEN Moving Higher As Halving Approaches*. Since our last note’s publication, Horizen has witnessed consistent growth in nodes deployed and a substantial increase in the number of wallets holding Horizen’s native ZEN token. Horizen is now entering a new development phase as *Zendoo*, Horizen’s sidechain solution, is launched on a public testnet and prepares for a mainnet launch.

- **Horizen’s unique sidechain architecture aims to bridge scalability with privacy and security.** Horizen utilizes modular Proof-of-Stake (PoS) sidechains to institute custom sets of rules on top of a central, secure proof-of-work (PoW) public mainchain. The custom sidechains are interoperable and can transfer value without requiring verification from the public mainchain, thus introducing a unique element of privacy and scalability to the ecosystem. The public mainchain is a PoW blockchain that

verifies that sidechains abide by their respective predetermined sets of rules and provides a standard token of value (ZEN) (Slide 3).

- **Zendoo is Horizen's next significant platform development.** Zendoo is a customizable sidechain protocol that allows dApp developers flexibility in building products. The scaling solution was recently moved into the production environment testnet, the last step before going fully public. Zendoo is expected to bring new products to the Horizen ecosystem (Slide 6). As a demonstration of its capabilities, Horizen launched zkAudit, the first application built on Zendoo, in partnership with crypto-lending firm Celsius.
- **Horizen's native token ZEN has realized positive price action since its most recent halving event in December 2020.** The Horizen halving event reduced the reward for mining or creating new blocks by 50%. This occurs every 840,000 blocks, or approximately every four years, meaning the next halving is targeted for December 2024. In addition to network-specific developments and industry tailwinds, such favorable supply dynamics have likely contributed to recent price increases (Slide 9).
- **Horizen continues to expand its node network. Holders of ZEN can operate Secure Nodes and Super Nodes to ensure network security and earn a portion of the block rewards.** Secure Nodes ensure security, privacy, and integrity of communication between nodes on the mainchain, and Super Nodes allow for sidechains and platform applications (Slide 4). Compared to other PoS blockchains, Horizen's hardware requirements for validators are among the least expensive, lowering the barrier to entry for node operators and encouraging decentralization (Slide 5). Since January 2020, the network has achieved a 19% increase in Super Nodes and a 30% increase in Secure Nodes (Slide 10).
- **Key partnerships support the expansion in critical business areas and provide a greater level of access to investors.** Recently, the ZEN token was listed on several top exchanges, including Binance, OKEx, Bithumb, Gate.io, and Coinbase (Slide 10). The world's largest digital asset manager, Grayscale, added its Horizen Trust (HZEN) to the OTCQX market, allowing investors to buy and sell freely-tradeable HZEN shares through investment accounts (Slide 15). Such liquidity avenues provide a new crop of investors access to the ZEN token. Horizen has also forged technical and R&D partnerships with entities that will enable unique applications and accrue value to the Horizen platform (Slide 14).
- **Key Risks:** Failure to achieve developer adoption upon public rollout of Zendoo, lack of lock-up period among staking entities may result in outsized price decrease in the face of any macro headwinds, inability to capture market share from existing layer 1 competitive landscape.

**Bottom line:** Horizen's platform is unique and offers developers a level of data privacy that most other smart contract platforms do not. The following months will serve as a

critical litmus test for the Horizon ecosystem as the network readies itself to fully deploy its sidechain capabilities and start to welcome blockchain and dApp developers to the platform.

## Horizen Is a Zero-Knowledge-Enabled Network of Blockchains (Slide 3)

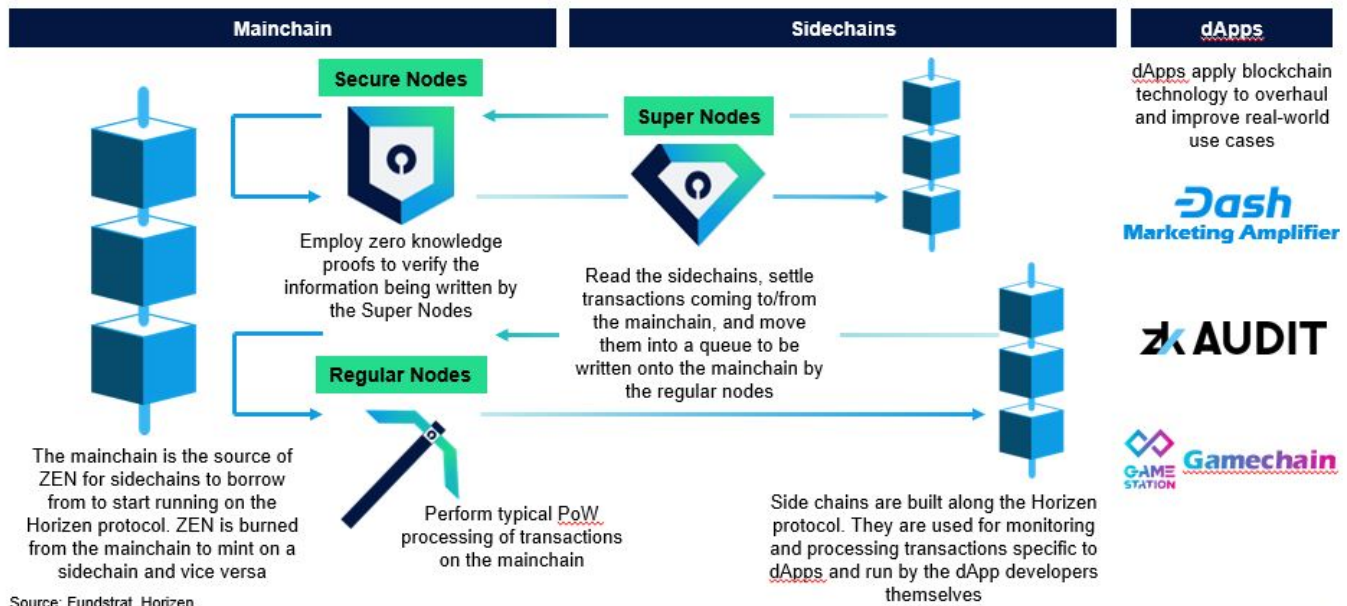


### Horizen Is a Zero-Knowledge-Enabled Network of Blockchains

Sidechain architecture improves scalability while ensuring data privacy

- The Zencoin sidechain platform allows for the creation of modular Proof-of-Stake (PoS) sidechains that can institute a custom set of rules. These custom blockchains are interoperable and can transfer value without relying on third party validation. Horizen has one of the largest validator node networks of all distributed networks.
- The public mainchain is a Proof-of-Work (PoW) blockchain that verifies that sidechains are abiding by their respective predetermined sets of rules and provides the platform with a standard token of value in ZEN.
- Secure nodes ensure the security of the network via point-to-point encryption, and Super Nodes validate the sidechain platform to increase scalability.

Figure: The Horizen Infrastructure Model



## Horizen Features Multiple Types of Nodes (Slide 4)

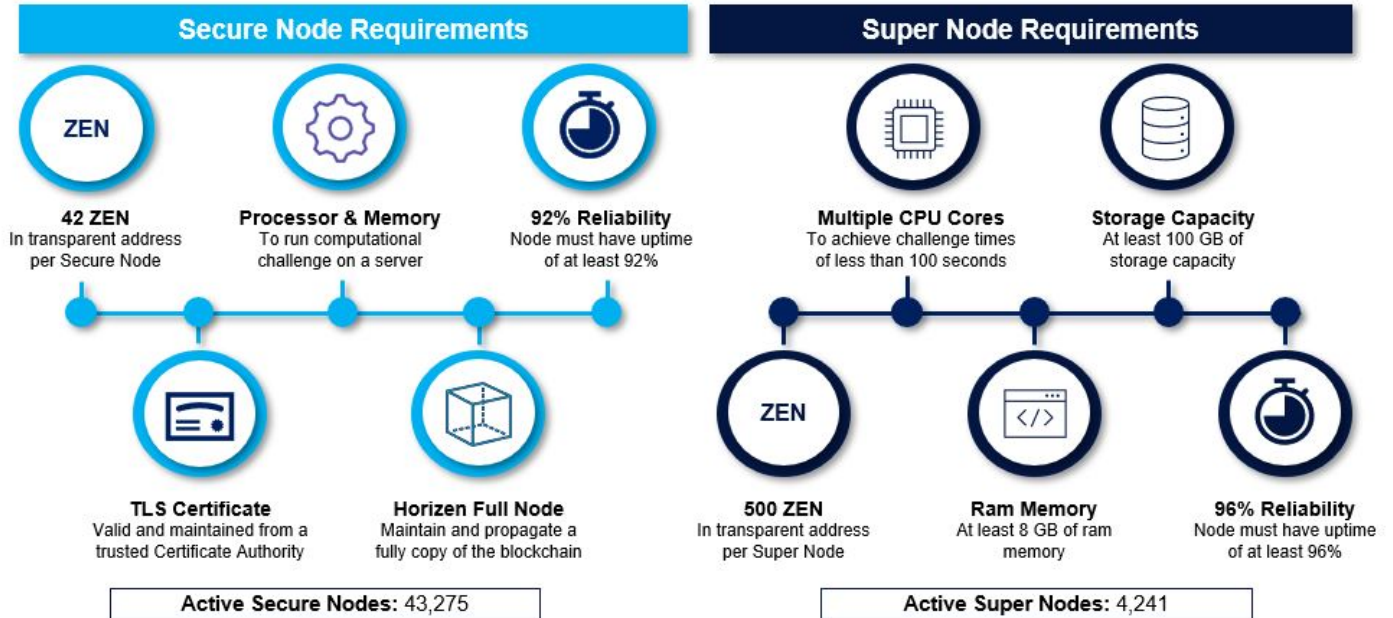


# Horizen Features Multiple Types of Nodes

Secure nodes and Super Nodes support sidechain functionality

- Horizen’s platform is comprised of Secure Nodes and Super Nodes, forming the basis of a unique compensated blockchain network that provides developers with privacy-enhancing encryption and sidechain functionality (for application optimization and customization).
- Secure nodes ensure security, privacy, and integrity of communication between nodes on the mainchain, and Super Nodes allow for sidechains and platform applications. Horizen’s minimum requirements will likely converge towards those of individual nodes in traditional cloud servers just as less powerful PCs disrupted mainframes.

Figure: Node Requirements for the Horizen Network



Source: Fundstrat, Horizen



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## Horizen Creates a Self-Sustaining Economic Network (Slide 5)

**Nodes and Wallets Demonstrate Consistent Growth (Slide 10)**

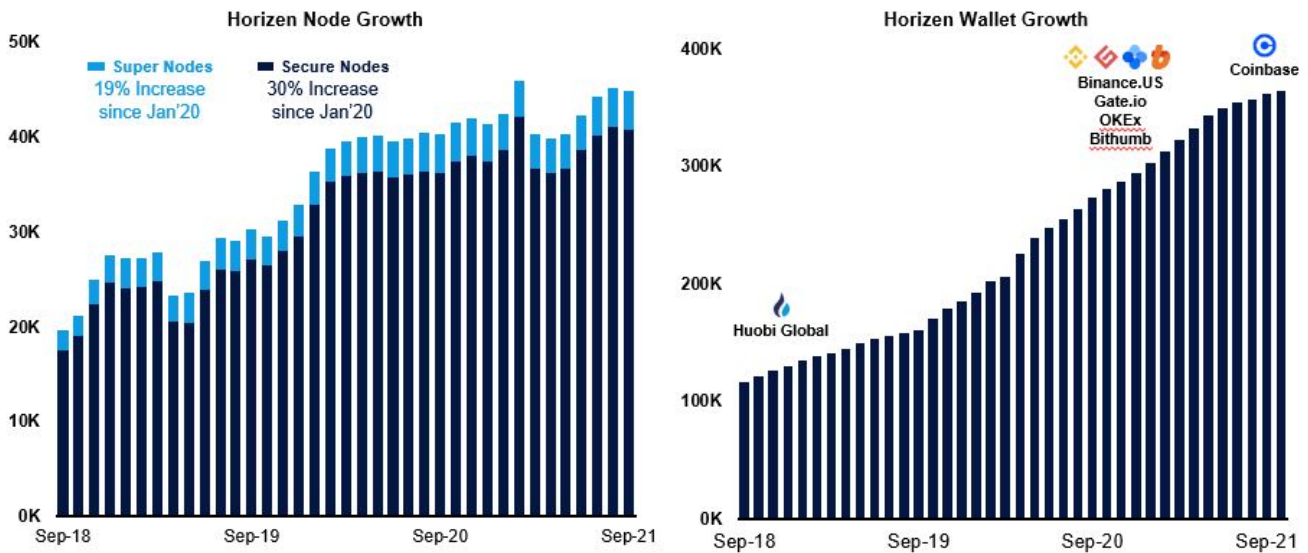


# Nodes and Wallets Demonstrate Consistent Growth

Recent exchange listings appear to have benefited token price

- The disproportionate growth in Secure Nodes over Super Nodes indicates that most interest is in ZEN on the mainchain as opposed to sidechain dApp development.
- The newest exchange listings have provided users responsible for ~20% of global crypto exchange volume with access to Horizen. ZEN was listed on Coinbase and Coinbase Pro, which comprise 7% of global centralized exchange volume, in September 2021.
- The price of ZEN jumped 22% the day it was listed on Coinbase. It will be important to observe how sustainable this growth is moving forward, and whether the listing will lead to wallet and development growth.

Figure: Horizen Node and Wallet Metrics



Source: Fundstrat, Horizen, CoinMarketCap, [https://metrics.zencash.com/blockchain\\_metrics.csv](https://metrics.zencash.com/blockchain_metrics.csv)

## Nodes Continue to Stake ZEN While Securing the Network (Slide 11)

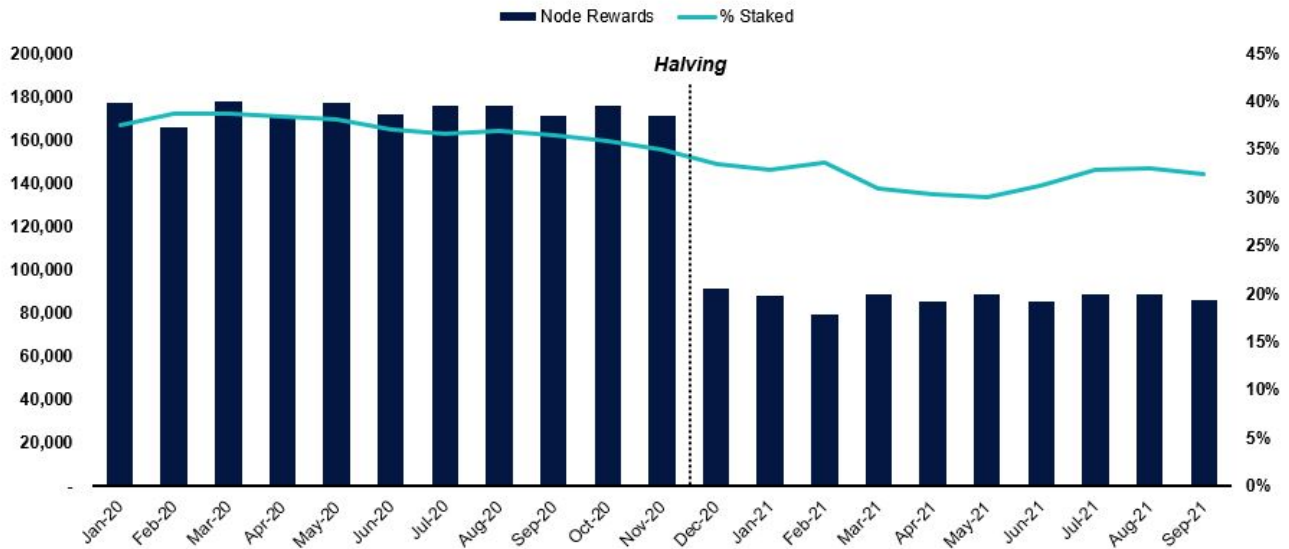


# Nodes Continue to Stake ZEN While Securing the Network

## Despite the halving, nodes remain committed to the network

- As the number of miners and node operators increases, network speeds are enhanced, security is boosted and flexibility to provide scalability in the network rises, benefiting the ZEN ecosystem and all participants involved.
- More miners validate transactions to earn ZEN token rewards, while the Secure Node and Super Node operators stake ZEN to earn interest. The percentage of staked tokens has remained relatively stable since the beginning of 2020.
- While rewards we're cut in half in December 2020, the token's price has increased substantially (as noted previously) providing further incentive for node operators to stake ZEN.

Figure: Total Monthly Rewards from Staking to Secure and Super Nodes and % of Circulating ZEN Supply that is Staked



Source: Fundstrat, Horizen, [https://metrics.zencash.com/blockchain\\_metrics.csv](https://metrics.zencash.com/blockchain_metrics.csv)



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