

## High Level Ratings

	Score & Rating Before Round 1	
1	Technical Metrics	9
2	Team	10
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4	Ecosystem Growth Metrics	6
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	<b>Overall Score*</b>	<b>7.7</b>
	<b>Overall Rating*</b>	<b>Green – Super Green</b>

### Executive Summary:

[Partisia Blockchain](#) is a blockchain protocol **which solves the extended blockchain trilemma using sharding for scalability, MPC powered / collateralized bridge for most secure interoperability, and zero-knowledge smart contracts for multi-party computation.** It is a fully functional permissioned blockchain and a transparent platform for orchestrating and delivering ZK computations on-chain, off-chain and across blockchains.

### Technological Features

The complete Layer 1+2 Blockchain that Partisia Blockchain provides is the result of the combination of seven primary features and proprietary innovations - **each feature to reflect the Greek god or goddess that the feature is modeled after and what they do.**

1. **Poseidon** — Provable Fast Track Consensus
2. **Iris** — Complete Sharding
3. **Hermes** — Collateralized Token Bridging
4. **Athena** — Zero-Knowledge Layer
5. **Demeter** — Zero-Knowledge MPC
6. **Apollo** — Unified Public and Private Smart Contracts
7. **Mithra** — Market for Trust

### Technical Metrics

**1. Node Processing Requirements:** minimum CPU/computational resources necessary to effectively operate a node. This will help us know if there are barriers for node validators.

**Partisia:**

- 10 GB RAM (8 GB allocated JVM, 4 GB is absolute minimum)
- 8 vCPU or 8 cores
- 40 GB SSD

**Financial Stake Needed:**

- Reader Node is free since it does not perform paid services.
- Baker Node \$10,000 in MPC Tokens.
- **ZK Node \$40,000 in MPC Tokens.**
- **Oracle Node \$100,000 in MPC Tokens.**

**2. Transactions per Second (TPS):** transactions processed and verified on-chain per second.

**Partisia:**

- **Partisia Blockchain is in theory infinitely scalable.** Each shard added to the network increases transaction throughput by about 1,000 transactions per second.
- [4 shards](#), or **about 4,000 transactions per second.**

**3. Time to Finality:** time from transaction submission to confirmation on-chain.

- **Transaction finality as low as 0.5 seconds.**

**4. Node Volume:** number of validators participating in consensus, execution, or both.

- [89 Validators](#)

## Technical Properties

**1. Scalability** - speed and ability with which a network can validate or process transactions.

- Partisia blockchain **can be infinitely scaled to any number** by adding additional shards on demand. **Each shard adds 1000 transactions per second.**
- The team states that it is feasible to run 30 shards within the first couple of years of the network, which **would allow for 30,000 transactions per second**, which in comparison is about how many transactions per second a centralized exchange **like Binance's order engine can process.**

**2. Nakamoto Coefficient** - one metric to measure decentralization. the number of validators (nodes) that would have to collude together to successfully slow down or block any respective blockchain from functioning properly. *The higher the better.*

***No data for this one but Partisia developed mechanisms to counteract collusions:***

- **Selection and rotation mechanism:** a protocol selects a subset of Partisia Blockchain nodes out of the total set of eligible Partisia Blockchain nodes. **These nodes would then have jobs following a rotation scheme with random replacement.**
- **Staking mechanism:** To further counteract any potential collusion, the node operators are required to stake MPC Token to operate a node and **participate in incentive schemes that**

reward BYOC and punish collusive behavior.

### Ecosystem Growth Metrics

1. **Total Value Locked (TVL)** - total value of assets on-chain.

- **No data for TVL yet.** They are still building this ecosystem.

2. **Total Transactions** – total transactions processed since the launch of Mainnet.

- [1,587,837 Total Transactions](#) since the Mainnet launch in December 2021.

**Note:** The current version of Partisia's explorer **is missing a lot of information on the current number of shards, daily transactions, volume** – that you would normally see in blockchain explorers.

### Ecosystem Properties (observations)

1. **User Experience** - ease with which an average user can understand and engage with applications on-chain, how accessible are the docs, SDKs etc.

**Partisia provides developers and users with the opportunity to gain access to a diverse selection of tutorials** on the Partisia Blockchain as well as the following resources:

- [Developer Documentation](#)
- [Research Papers](#)
- [Developer Chat](#)

### Notable Native Ecosystem Projects & Explanation

**Partisia:**

1. [Partisia Firefox Wallet](#) - an extension that was developed for the Firefox browser. This allows Firefox users access to the MPC token in addition to various DApps that have been developed on the blockchain.
2. [Instars.com](#) - allows users to join the community that features more than 200,000 verified members from around the world. The apps allow users to earn cryptocurrencies, benefit from their data.
3. [Partisia Blockchain Bridge](#) - is an application that was developed to connect to the user's Partisia native wallet. It allows for fast, cheap, and secure transfers which are bridged across to the Ethereum blockchain.
4. [Parti Pad](#) - This launchpad offers the user a ticket to early access to some of the best and most innovative new cryptocurrencies and Decentralised Finance (DeFi) tokens as they are released.
5. [The Nifty](#) - an NFT platform for creators, collectors, and coders, intending to reach all NFT and Digital Collectors, artists, and entrepreneurs who live off the rapidly expanding world of NFTs.

### Investors & Key (Refer to Investor Board)

**Total Funding:** \$20M

**Last Funding Round:** \$20M, Series B, May 17, 2021

1. [Ausvic Capital](#) - leading investment firm in biotechnology, digital economy, and AI+ cloud computing.
2. [Avalon Wealth Club](#) – a private fund that invests in the most innovative and promising projects in the crypto ecosystem.
3. [Bitscale Capital](#) - venture capital firm based in Switzerland. The firm seeks to invest in seed-stage, early-stage, and later-stage.
4. [Bluechips Capital](#) - consists of dozens of highly successful (international) companies in the space of SaaS, Real estate, Finance and E-commerce.
5. [Insignius Capital](#) - thesis-driven firm dedicated to the advancement of a better financial system achievable through decentralization.
6. Etc.: [Gate.io Labs](#), [Kosmos](#), [P2P.org](#), [Crypto Bazar Capital](#), [CRT Capital](#) and 8 more.

### Competitors & High-Level Summary

#### For Sharded Blockchains:

1. [Ethereum](#) - is a decentralized open source blockchain system that features its own cryptocurrency, Ether. ETH works as a platform for numerous other cryptocurrencies, as well as for the execution of decentralized smart contracts.
2. [NEAR](#) - is a sharded proof-of-stake blockchain, highly scalable, and their approach allows nodes to run on low-end hardware, giving the network access to billions of additional devices.
3. [Polkadot](#) - is an open-source sharded multichain protocol that connects and secures a network of specialized blockchains, facilitating cross-chain transfer of any data or asset types.
4. [Zilliqa](#) - a public, permissionless blockchain that is designed to offer high throughput with the ability to complete thousands of transactions per second through sharding.

### Asymmetrical Competitive Advantages (ACAs)

#### Partisia:

##### 1. Speed:

- **Partisia (4,000+ ATM: 4 shards) is currently faster than Near (10-50 TPS) and Ethereum (9-30 TPS) in Real-time Transactions per Second.**
- **Partisia (0.5 Seconds) is also faster than Near (1-2 Seconds) and Ethereum 2.0 (6 minutes) in terms of Time to Finality.**

#### Researcher's note:

To get the real time TPS of blockchains, one must divide the total 24-hour transactions over 86400 (no. of seconds in a day).

Theoretically, these sharded blockchains could scale so much faster: Ethereum 2.0 could scale at [100,000+](#) and [Near at 100,000+](#) and Partisia at Infinite TPS (1,000 TPS per shard).

## 2. Team:

The C-suite team is composed of a:

- University Professor
- Former Google and Paypal Crypto and Marketing Manager
- Y Combinator Alumni
- The man who built Secata (acquired by Blockdaemon). *See team.*

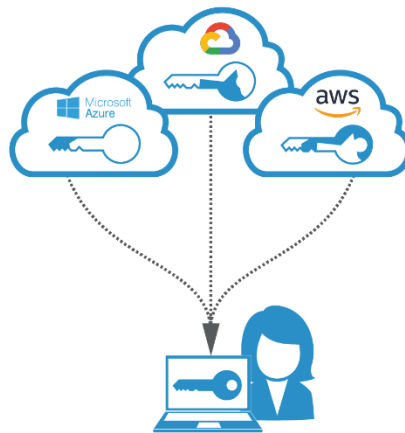
The team behind Partisia Blockchain is one of the most experienced teams in ZK computations, initially started in 1987 and the project features over 1022 research papers, with 54 different commercial applications developed and produced by 28 professional developers ([see research papers](#)).

**4. EVM-Compatible:** [Partisia Blockchain Bridge](#) – a native Partisia dApp - allows for fast, cheap, and secure transfers which are bridged across to the Ethereum blockchain.

### Researcher's note:

This feature is very important as this allows Partisia and Ethereum developers/projects to bridge back and forth, inheriting both blockchain's network effects.

**5. MPC + Blockchain based:** Multiparty Computation (MPC) generates and uses keys in the form of distributed key shares - this eliminates existence of a complete key on any single device.



*Source: Sepia: Distributed MPC Keys*

**6. ZK + Blockchain based:** Partisia structured platform for ZK computation and as a vehicle for organizing accredited trustees to further strengthen the blockchain ecosystem on-chain and off-chain.



*Source: Towards Data Science: What are Zero Knowledge Proofs*

### Importance of ZK and MPC in blockchains:

- Authentication
- Key Management
- Privacy-Preserving Analytics
- Advanced Matching and Market Mechanisms
- Secure Blockchain Components

7. [Partisia is also funded by the European Union](#) - Next Generation Internet Trust (NGI Trust). This puts them in a more comfortable position to talk with Politicians on regulations and **in some ways could repel regulatory heat away from them.**

### Grants, Investments, or Incubation Opportunities

#### Partisia:

1. [Grants](#) from the Partisia Blockchain Foundation provide ambitious innovators with resources such as financial backing, expert guidance, publicity, and more such as:

- Developer Grants
- Feedback
- Technical Support
- Collaboration

### Tokenomics

#### Partisia:

- **Name:** Partisia
- **Ticker:** MPC
- **Token standard:** ERC20
- **Max supply:** 1,000,000,000
- **IDO Price:** \$0.40
- **FDMV:** \$400 million

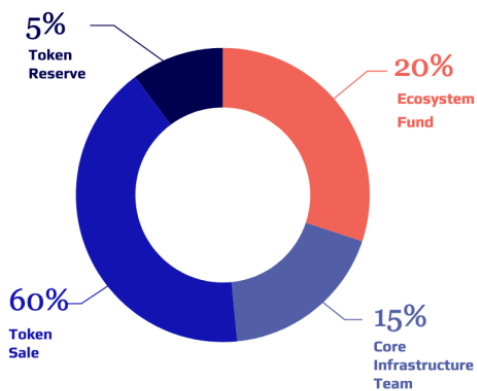


Figure 5: The distribution of MPC Tokens.

November 2020 Private Seed	January 2021 Seed Round 1	February 2021 Seed Round 2	March 2021 Presale Round 1	April 2021 Presale Round 2	May 2021 Presale Round 3	October 2021 Presale Round 4	December 2021 Presale Round 5	May 31, 2022 Public Sale
\$0.05	\$0.075	\$0.10	\$0.125	~\$0.15	\$0.175	\$0.20	\$0.25	\$0.40
4 years	4 years	4 years	4 years	4 years	4 years	4 years	4 years	2 years
62M tokens	25M tokens	80M tokens	38M tokens	30M tokens	37.5M tokens	44M tokens	30M tokens	40M tokens

- **20% Ecosystem Fund** - tokens assigned to grow and develop the ecosystem.
- **15% Core Infrastructure Team** - tokens assigned for the Partisia Blockchain founders and core developer team.
- **5% Token Reserve** - tokens saved for unforeseen future events
- **60% Token Sale** - tokens for node operators and other stakeholders.

The thing about this is this allocation also includes node validators tokens which is required to be locked to continue securing the network. **Despite that, that is still a very high token sales allocation and could put a lot of whale control in the MPC token, in the future.**

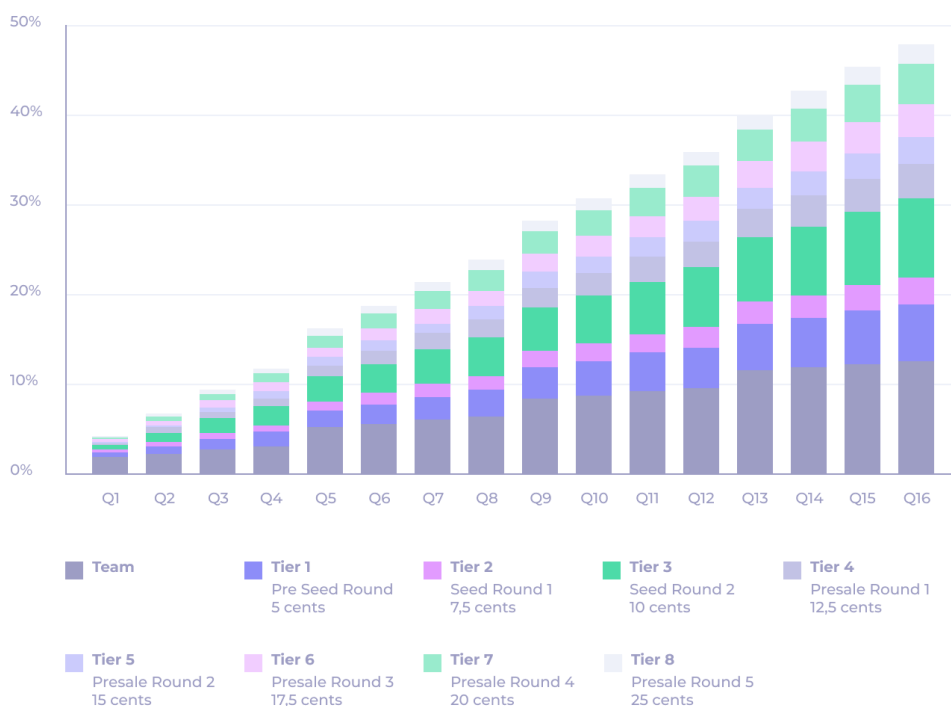


Figure 1: Schedule of token Unlock

## Token Utility

The MPC token is mainly used to stake and operate three types of nodes:

- **Baker nodes**, which validate transactions, create blocks, propagate information, execute transactions, and select smaller oracles.
- **Zero knowledge nodes**, which facilitate privacy preserving computation and run zero knowledge computations.
- **BYOC (Bring your own coin) Oracle Nodes**, which move data and assets across different chains, and hold staked values inside of epochs.

## Team (Highlight Relevant Experience & Use 3 Most Recent Experience)

Partisia:

1. Name & Title: [Kurt Nielsen - Co-Founder and CEO](#)

Overall Experience:

Engagement:

- President (Co-founder) - Partisia Blockchain - Oct 2020 - Present
- Associate Professor - [University of Copenhagen](#) - Jul 2007 - Present
- CEO, Partner (Co-founder and Investor) - Partisia - Dec 2008 - Present
- CEO, Partner (Co-founder and investor) - Secata - May 2018 - Present
- Board Member (Co-founder and Investor) - Sepior - Aug 2013 - Jul 2022

# LinkedIn Connections: 500+ connections

# LinkedIn Followers: 973 followers

Competence:

1. Economics
2. Benchmarking
3. Game Theory
4. Information Security Management
5. Software Design

Overall Comment: "[Partisia](#)" - before Partisia blockchain - is co-founded by world leading cryptographers and has provided state-of-the-art security solutions based on MPC across industrial and financial solutions since 2008. It also established companies focusing on specific domains such as Key Management through [Sepior](#) (acquired by [Blockdaemon](#)) and Privacy-preserving analytics through [Secata](#). Kurt Nielsen is leading all these companies as their CEO.

2. Name & Title: [Julia Mihailescu Schlub - Chief Marketing Officer](#)

Overall Experience:

- Head Of Commercial Growth - Venmo - Feb 2022 - May 2022
- Head of Crypto GTM and Marketing, Head of Consumer Segment Western EU, etc.- Paypal - May 2013 - April 2022
- Product Marketing Manager, OSO New Markets Associate - Google - Nov 2008 - Oct 2010
- Co-Founder & Partner - Metromind Media - Aug 2004 - Sep 2008
- Business Consultant - uberVU - Nov 2007 - May 2008



**Engagement:**

**# LinkedIn Connections:** 500+ connections

**# LinkedIn Followers:** 1,903 followers

**Competence:**

1. Online Marketing
2. Growth strategy
3. E2E consumer experience
4. Marketing
5. Business Development

**Overall Comment:** Joined [PayPal](#) in 2013 in Paris, at their Western European headquarters. **Promoted 5 times in a span of 9 years at PayPal.** Joined [Google](#) in 2008 to develop the Eastern European market for Google's advertising business. **Promoted once at Google in a span of 2 years.** Before that, she Co-founded a media company that was acquired.

**3. Name & Title:** [Peter Frands Frandsen - CTO and Co-founder](#)

**Overall Experience:**

- CTO and Co-founder - Partisia - Dec 2016 - Present
- CTO and Co-founder - **Secata** - Apr 2018 - Present
- External examiner - Computer Science - **Aarhus University** - Jul 2007 - Present
- **Department Manager, Senior Consultant** - [Ramboll Management Consulting](#) - March 2005 - December 2016
- IT-architect - Dansk supermarked - Dec 2001 - Feb 2005
- System developer - Cotas A/S - Mar 2000 - Nov 2001

**Engagement:**

**# LinkedIn Connections:** 500+ connections

**# LinkedIn Followers:** 945 followers

**Competence:**

1. Software Project Management
2. Software Development
3. Computer Science
4. Project Management
5. Management Consulting

**Overall Comment:** He is responsible for the software and platform for application based on MPC computations in [Secata](#). Previously worked as a manager of both projects and people in the software development industry at **Rambøll Management Consulting**. Currently **spearheading the development** for planning and executing MPC computations at Partisia Blockchain.

Social Media Followers	Partisia
Twitter:	215K Followers
Telegram:	9,680 Members
TG Announcement:	6,912 Subscribers
Discord:	3,976 Members
Medium:	1.7K Followers
LinkedIn:	3,370 followers
Overall:	Great overall traction for an early stage blockchain project, decent engagements and has a very active Discord channel.

#### Public Code Repositories:

<https://partisiablockchain.gitlab.io/>

#### Red Flags \* Bottlenecks

##### Partisia:

1. **Node Validators:** Partisia's Node validator count is a bit low when compared to other sharded blockchains like Ethereum 2.0's ([222,000+](#)) and Near ([100+ Validators](#)). This might just be due to them being an early stage blockchain but **certainly the high financial entry barrier for node validators should hit.**
2. **Tokenomics:** Partisia's tokenomics might well have been adjusted to the fact that they are building a blockchain and the capital is much bigger than most narratives, but this is still a red flag. **This could put Partisia's MPC Token at a bigger risk of future downsides while the token sales unlock happen.**

### Final Remarks:

In order for us to determine whether or not a blockchain is suitable for projects to be built upon it, we frequently examine the existing data and analytics for that blockchain such as: **Developer Activity, Network Effects, TVL, Daily Transaction Count and etc.**

In the case of Partisia we had to focus on its technological capabilities and the tangible qualities that come with it.

1. **Risks:** There are centralization issues that we have to consider such as their low node validator count, high financial stake for validators and a sixty percent token sales allocation, but the probability of these risks is inverse with growth. As long we see growth, purchasing and locking tokens will be much more attractive both for early investors and future node validators.
2. **Leadership:** this is arguably one of the best teams I've seen for a blockchain project. Rich experience in Tech unicorns like PayPal, Google, and Y Combinator as well University professors who have been working on ZKs and MPCs for decades.
3. There is a lot of risk accompanied with building in an early stage blockchain, but the payoff can be substantial. In the case of Partisia the risk/reward ratio is extremely attractive for builders.
4. The grants are more focused on Privacy-narratives, but it would be utilitarian to be the first mover in DeFi and GameFi narratives in an early-chain – being the first one to build that substantial TVL or community within this promising ecosystem.

## Appendix

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