



**ARCLAIM**

# Arclaim Litepaper

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# **Disclaimer**

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## 01 Executive Summary

The market capitalization of Proof-of-Stake (PoS) coins is \$325 billion (USD). In comparison to Proof-of-Work (PoW), PoS has numerous advantages which position it to grow manifold.

Across PoS blockchains, the three main stakeholders face several challenges:

1. **PoS networks** face stake-centralization issues.
2. **Delegators** face complexity surrounding discovery and stake management.
3. **Node Operators** struggle to get the right visibility and delegations.

While solving the above challenges is paramount for the PoS ecosystems, there are several multi-billion dollar opportunities on top of staking in the short- to mid-term including:

1. L1 tokens safely staked and strategies like Launchpads, DeFi, etc. built with rewards.
2. Liquid staking and its associated DeFi possibilities.
3. Gaming powered by staking rewards.
4. Customized staking for Institutions, VCs, Crypto exchanges and Fintechs.

Arclaim is building the key staking middleware infrastructure layer for multiple PoS networks that will power the above staking-related opportunities while solving the key challenges. We are taking an extremely modular approach to building our contracts so third parties can leverage our components to build several staking solutions on top of it.

In the short term, Arclaim is building native staking smart contracts across multiple chains including Arbitrum, Optimism, among others, and building an economic ecosystem to grow and develop solutions like YFI-style farming with rewards, launchpads, gaming with rewards, liquid staking solutions, and more.

In the long term, Arclaim is focused on unlocking the platform approach and nurturing third parties to develop several staking-related applications on top of Arclaim infrastructure.

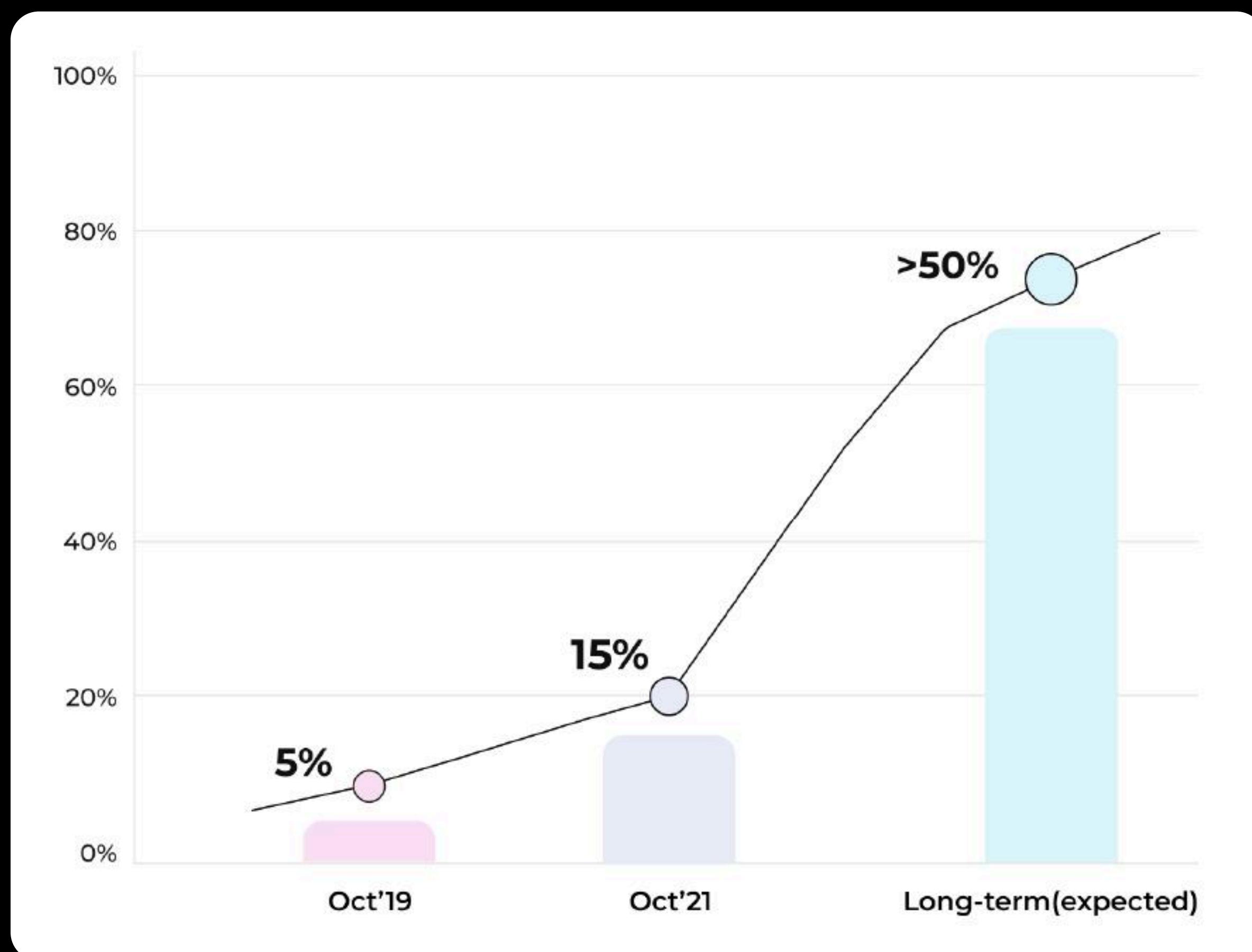
Several notable venture funds, blockchains and angel investors have supported Arclaim in this journey.

## 02 Background

### a. Staking Today

The staking economy has exploded with over \$240 billion (USD) currently staked in the market. In the last year alone, the PoS market cap has grown by more than 15x from \$21 billion (USD) to \$325 billion (USD) in October 2021\*, which has resulted in PoS market cap increasing significantly as a percentage of the total crypto market cap.

*Figure 1: PoS market cap as % of total crypto market cap*



Staking is primarily available as “plain staking” in which the assets are locked-up and “liquid staking” in which users receive a liquid token against their staked assets, further enabling participation in DeFi.

## b. Outlook & Opportunities

Over the next five years, staking is expected to proliferate even more. The cryptocurrency landscape will have hundreds of blockchain networks across L1s, L2s, NFTs, gaming, and metaverses. PoS and staking will be the fundamental layers that power these networks. There will be explosive growth in innovative staking solutions built on top of the PoS chains.

On the demand side, we are already seeing multiple segments emerge within the crypto space:

1. Retail (crypto-native and users on exchanges).
2. Institutions and venture funds with a long-term holding horizon.
3. Hedge funds.

**Figure 2: Opportunity size across different customer segments**

Customer Segment	Potential Opportunity Size	Risk Tolerance
Retail (Crypto native)	Medium	Medium-High
Retail (Exchange/Mainstream)	Large	Low-Medium
Institutions/Funds	Very Large	Low-Medium
Hedge Funds	Medium	High

The “next billion” entering crypto would demand access to convenient and innovative staking solutions embedded in apps they are already using. However, the risk appetite, goals, and aspirations of these segments are different. Hence, the staking product features that appeal to these segments would be equally diverse.

Arclaim envisions five major groups of staking products that can cater to the majority of the demand:

1. Protect principal assets and build an ecosystem around rewards.
2. Decentralized Liquid staking tokens of various types.
3. Leverage staking rewards for entertainment.
4. Staking platforms for institutions.
5. All-in-one staking APIs for exchanges.

**Figure 3: Opportunity size across different product groups**

Product Group	Potential Opportunity Size
Protect principal in base asset and build an ecosystem around rewards	Medium - Large
Decentralized Liquid staking tokens of various types	Large
Leverage staking rewards for entertainment	Medium
Staking platforms for institutions	Large
All-in-one staking APIs for exchanges	Large - Very Large

Below mentioned are further details about each opportunity.

### **1. Principal protection in base assets and ecosystems built around staking rewards**

\$12.5 billion (USD) worth of rewards will be paid in 2021 alone. Most crypto users would like to hold and stake their PoS assets long term while leveraging rewards to either fund expenses or amplify yields.

- **Passive income** strategies (e.g., funding expenses, subscriptions, etc.).
- **Launchpads** for new projects, NFTs, and games, built on staked assets using rewards, and preferential allocations for stakers.
- **Amplify yields** via liquidity/yield farming of rewards on DeFi.
- **Derivatives strategies** to hedge base token price and yields.

## 2. Decentralized liquid tokens of various types

- Basic **high** liquid tokens (e.g. LINK, UNI).
- Liquid token on **principal** assets while rewards are directed towards other DeFi strategies (e.g., Anchor-style liquid token).
- Liquid tokens that increase in price (e.g., stake pool tokens on BNB Smart Chain).
- Liquid tokens **based on refraction** of base token into principal and yield token.

## 3. Leverage staking rewards for entertainment

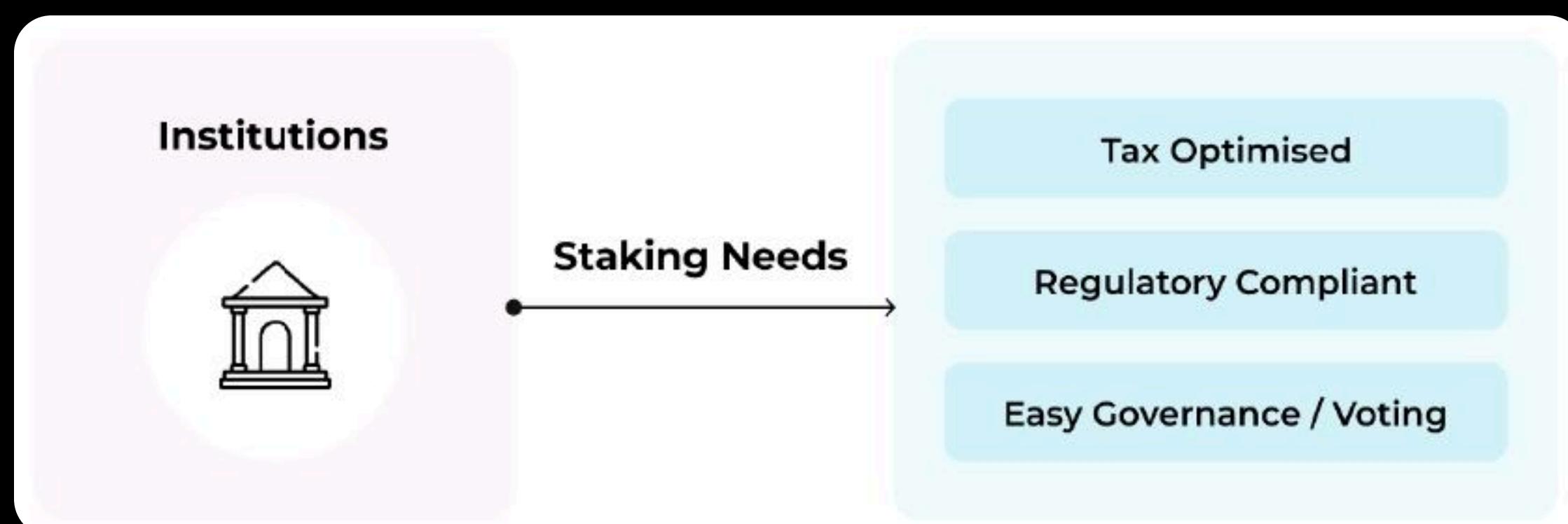
Crypto games today don't have an inherent way to generate yields. People can participate in crypto games while maintaining their principal position in crypto assets. Meanwhile, gaming protocols can leverage staking yields to fund prizes and rewards. Examples of types of games that could be powered include:

- No-loss lotteries
- Prediction markets
- Fantasy leagues
- Complex games

## 4. Staking platforms for institutions

Adoption of crypto by the institution segment will skyrocket in the next few years and they will need a simple staking platform that is optimized for taxation and regulatory compliances while helping them manage governance and voting.

*Figure 4: Institutional staking landscape*



## 5. All-in-one staking APIs for exchanges

As the next billion consumers enter crypto via mainstream apps and exchanges, they would like to get the value-added services right in these apps. There emerges an opportunity for an API service that provides access to all staking solutions with a single integration.

Lastly, there will emerge a need for a staking infrastructure layer that enables **multi-chain** staking with several staking applications being built on top which can cater to these different segments of delegators. In the long run, Arclaim aims to be the platform that will enable users to discover these opportunities while empowering third parties to build applications on top of Arclaim's infrastructure.

### c. Problems Today

Arclaim has deeply assessed the problems faced by the three key stakeholders of the PoS networks - Delegators, Networks, and Validators.

1. **PoS networks** face stake-centralization issues.
2. **Delegators** face complexity surrounding discovery and stake management.
3. **Node Operators** struggle to get the right visibility and delegations.

While focusing on solving the ecosystem challenges was the starting point, we now firmly believe that the addressable market opportunity for staking is easily multi-trillion USD in the next few years.

Our belief is that though individual solutions might address some of the challenges in the staking ecosystem, there is a need to take a holistic view across the three stakeholders to create products that can drive the adoption and sustainable growth of PoS ecosystems in the long run.

At the core, Arclaim aims to solve the staking ecosystem challenges in its **modular architecture**, which allows us and third-parties to seamlessly build staking products and rapidly increase the pace of innovation.

## 03 Introducing Arclaim

Arclaim's vision is to onboard the "next billion" into the staking ecosystem.

Serving several segments that have varied staking needs and aspirations isn't possible for a single application to do. Hence, Arclaim will build the **staking lego blocks** to be the **infrastructure middle layer** that enables anyone to build staking and related products.

As a starting point, we have built our staking smart contracts on Ethereum. Arclaim's smart contracts, to be launched in a few weeks, have the following capabilities:

As a starting point, we have built our staking smart contracts on Ethereum. Arclaim's smart contracts, to be launched in a few weeks, have the following capabilities:

1. Staking with any group of validators (validator index) in a single transaction; monitoring validators' performance and rebalance across validators for optimal performance.
2. Deploying staking rewards on any protocol, claim rewards with one click.

As we successfully capture market share on Ethereum, Arclaim will focus on unleashing the platform play by:

1. Enhancing contract modularity that can be leveraged by third parties to build further applications on Arclaim.
2. Building robust validator monitoring and rebalancing infrastructure to help networks and other protocols manage their staked assets well.
3. Enabling staking lego blocks on other PoS blockchains. In the future, we imagine a world where every upcoming blockchain will leverage Arclaim to build their staking infrastructure, unlocking several applications on top of staking from day zero.

## 04 Arclaim Modular Approach

Given the countless possibilities on staking, Arclaim is building a modular platform which allows anyone to use Arclaim's pre-existing components to build their own staking solutions.

As staking evolves over the next few years, our architecture allows flexibility to grow and incorporate new features day in and day out. Extensibility is woven into Arclaim technical blueprint, with a system of highly-interactive smart contracts. Incorporating a new strategy or pool would just require a few changes in a specific independent contract.

Arclaim separates the base capital and the rewards with different contracts. This ensures that the **base capital staked is always isolated** from the interactions with other protocols.

Here's a look at a few core smart contracts that are the building blocks of Arclaim infrastructure currently:

1. **Delegator Contract** - Delegators' funds will be deposited and can be withdrawn from this contract.
  2. **Validator Contract** - Stakes the delegator funds. Claims rewards and airdrops.
  3. **Pools Contract** - Overseer of validator contract. Manages stake across each validator pool and supports multiple pools.
  4. **Arclaim Contract** - Leverages staking rewards and synthetic assets to interact/integrate with other DeFi/ Gaming protocols to amplify yields.
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- A third party can leverage Arclaim Pools' contract to build their own pool with validators of their respective geography for tax and regulatory compliance, while enabling one-click staking to their users.
  - Venture funds can create customized Arclaim contracts that deposit staking rewards into their LP wallets to avoid multiple taxation.
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1. Creation of customized products to meet requirements of specific delegator groups, such as institutions, can be rapidly built.
  - A third party can leverage Arclaim Pools' contract to build their own pool with validators of their respective geography for tax and regulatory compliance, while enabling one-click staking to their users.
  - Venture funds can create customized Arclaim contracts that deposit staking rewards into their LP wallets to avoid multiple taxation.

2. Networks can leverage the **Pools contract** and include a very high number of validators (e.g. Ethereum stake pools) in the pool and incentivise Arclaim to delegate to this pool by potentially paying higher staking rewards.
3. Fintech applications (e.g, Robinhood, Revolut) can use Arclaim's **Delegator contract** to enable one-click staking right within their app, opening up Staking as a service to all their users.
4. Any DeFi protocol or gaming app can integrate with the Xoub **contract**.

**Figure 5: Modular design of Arclaim Smart Contracts**



With the ability to interact with individual contracts, we envision an explosion of applications built on top of Arclaim contracts in the near future.

## 05 Long-term Opportunities

Arclaim aims to integrate with the top 7-10 PoS blockchains over the next one-two years. In the long term, there are several multi-billion dollar opportunities Arclaim can explore, as detailed below:

- 1. Institutional-grade staking:** Many institutions and funds find it hard to manage their staked portfolio due to complex tax and regulatory issues. Arclaim staking infrastructure can be leveraged to build customized staking vaults for institutions and funds that are optimized for
  - Returns and risks while enabling easier Governance
  - Tax implications across geographies
  - Regulatory compliance
  - Institutional-grade security
- 2. API layer:** The next 500 million to 1 billion users will be onboarded to crypto via exchanges and mainstream fintech applications like Robinhood, Revolut, and others. These users will demand value-added solutions like staking, DeFi, etc. within these platforms. Arclaim's staking vaults can be used to build the Web-3 equivalent of an API layer to connect these applications.
- 3. Staking infrastructure for upcoming blockchains:** Upcoming blockchain networks, including L2s and side-chains, desire to build their staking infrastructure already optimized for the Arclaim's experience. Arclaim can be the go-to provider of staking middleware for newer blockchains. Conversations with upcoming blockchains are ongoing.
- 4. Staking ETFs:** Investment-grade products like staking ETFs can be built leveraging native Arclaim vaults. For example a user can deposit 100 USD on Arclaim to get exposure to a staking ETF composed of 50% ETH, 20% OP, 20% ARB etc.
- 5. DApp Staking:** Arclaim staking infrastructure can be leveraged for DApp staking to enable easier staking, governance delegation, unlocking liquidity, and tax-efficient rewards management.

# Strategic Investors

## Funds:

SHIMA CAPITAL

MAPLE BLOCK

MIRANA

BIXIN Ventures

SPARTAN

LD CAPITAL

Jsquare

DFG

ViaBTC  
CAPITAL

## Blockchain Networks:

polygon

fantom

AVALANCHE

BNB CHAIN

ethereum

APTOS

OPTIMISM

ARBITRUM

BASE

MANTA  
NETWORK



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## Angel Investors:

### **Diogo Monica**

CEO, Anchorage

### **Tim Ogilvie**

CEO, Staked

### **Jaynti Kanani**

CEO, Polygon

### **Sandeep Nailwal**

COO, Polygon

### **Aayush Gupta**

Ecosystem lead, TFL

### **Jeff Kuan**

BD Head, TFL

### **Stanford**

Head of Research, TFL

### **S.J. Park**

Head of Special Projects , TFL

### **Chris McCann**

GP, Race Capital

### **Nemil Dalal**

Head of Crypto, Coinbase

### **Ahmed Al-Balaghi**

Co-founder, Bconomy

### **Aniket Jindal**

Co-founder, Bconomy

### **Akash Garg**

CTO, Afterpay

### **Harsh Rajat**

CEO, EPNS

### **Sumit Gupta**

CEO, Coin DCX



## The Team

1. **David, Founder & CTO:** Rocket Pool Founder, Ethereum Solidity Developer
2. **Darren, General Manager:** CTO, MBA, PMP, Result-oriented Project Manager, CPIT-PM, HKCS, MCDBA, FinTech, Blockchain
3. **Kane, Senior Solidity Engineer:** 5+ years of blockchain development experience with EVM Solidity Proven knowledge of Ethereum Standards such as ERC20 and ERC721
4. **Maverick, Marketing & Community Manager:** With 20+ years of expertise in building compelling, customer-facing, user-centric global products.
5. **Joe, Incoming Head of Strategy & Expansion:** 4+ years of experience in a senior engineering role with a Web2 or Web3 tech company. 1+ years experience with blockchain smart contract development with EVM, Solidity, and protocol development.



## **Validator Selection for pools (V1 and beyond)**

Arclaim places utmost importance to ensure users' funds are staked with the best-in-class validators in the ecosystem.

E.g. For Terra - Uptime, Oracle Sign %, and Commission % are the key parameters used to curate validators. Each pool has a unique characteristic based on which validators are selected for that particular pool.

During the initial launch planned in November, each validator pool would have 3-8 validators. In the long run Arclaim would select the validators programmatically and rebalance delegations based on performance filters. Additionally, as the Arclaim platform is decentralized, governance will determine validator selection criteria, policies, and so on.

## Research Insights on PoS ecosystem stakeholder challenges

### PoS networks:

1. High centralization of stake and voting power among top validators.
2. Networks struggle to decentralize the stake using their current staking infrastructure.

### Details by blockchain

Blockchain	Nakamoto Coefficient	Total Validators
Avalanche	26	1001
Solana	18	849
THORChain	10	37
BSC	7	20
Terra	7	130
Cosmos	6	125
Fantom	3	45
Polygon	2	100

### Delegators:

1. Limited awareness of staking-related metrics, such as Uptime.
2. Effort-intensive validator discovery and delegation process.
3. Manual tracking and management of staked assets and rewards.

### Validators:

1. Mid to long tail validators struggle to attract delegations, leading to high validator churn.



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