



**Your keys. Your crypto. Your returns.**

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## Introduction:

We have entered a new and exciting phase in Ethereum's story with the advent of "The Merge". The Merge moved us away from mining and instead has us put assets at stake to secure the chain. Staking opens up a huge world of financialization, liquid staking protocols, and de-fi opportunities while drawing in more institutional players and widening adoption.

However; with Proof-of-Stake comes other issues:

- The merge significantly changes the complexity of the systems needed to successfully participate in securing the chain.
  - Several components such as execution layer clients, consensus layer clients, validator clients, slashing databases, and secure validator key storage are required to run a successful validator; which is a very high technical barrier to entry.

- There are penalties for being offline and slashing penalties that can entirely wipe out a validator's balance in some situations.
  - There is now great pressure on ensuring high availability of these systems, and high safety when dealing with running validator sets; requirements most would-be participants aren't able to accommodate sufficiently.
- Requiring 32 ETH to stake a single validator is a very high capital requirement for most would-be network participants.
  - The validator sets on the network today are heavily skewed toward early adopters, staking pools, large commercial node operators, and institutional players.
- Any rewards the validator gets for attesting and proposing blocks on the beacon chain are frozen until withdrawals are allowed via a future chain upgrade.

The market has come up with different solutions to the issues stated above:

- Large Node Operators have formed supplying institutional-grade staking infrastructure with high uptimes and precision control over active validator sets to avoid slashing.
  - These entities provide both custodial and non-custodial staking services
- Staking Pools have formed allowing participants to “stake” partial amounts of ETH instead of having to bring a full 32 ETH in order to start their own validator.
  - These partial ETH amounts are collected in 32 ETH chunks and deployed on pool-approved node operators.
- Liquid staking offerings allow users to “un-stake” their staked ETH, or gain access to validator rewards, before official ETH withdrawals are allowed.
  - A different token is minted in a one-to-one fashion for each amount of ETH deposited by the user. Once the token is accepted by exchanges, it can then be sold on the open market.

While innovative, these solutions have impacted Ethereum negatively at its most foundational level.

- Staking pools and Central Exchange Staking represent the supermajority of active validators on the Ethereum network today.
  - The network is not nearly as decentralized as it appears on the surface; a problem present during pre-merge Ethereum and is still present post-merge.

- Users have lost funds due to key mismanagement by node operators.
- Smart contract risks are real, representing hundreds of millions of dollars in losses due to bugs, hacks, and smart contract administrators abusing their power.
- The financialization of staked ETH and the push into de-fi, enabled by liquid staking derivatives, has begun to erode away some of the very basic tenants of proof-of-stake.
  - Allowing users to “un-stake” via liquid staking tokens, and divorcing themselves from the assets at stake, shifts the responsibility of staking to node operators. Placing the responsibility onto node operators further centralizes Ethereum onto a small number of commercial node operators, since they can handle the responsibility and requirements of running operations with high availability.
- There is general over-dependence on a technical minority to take care of things instead of users being enabled to exercise their own sovereignty over their assets.
  - While the present system may serve some well, it is a far cry away from serving everyone; which we consider one of the core ideals of Ethereum.

If Ethereum is to become what it should be, we can't simply continue to push the boundaries forward without looking back to make sure everyone else is able to keep up. We run the risk of building something only technically proficient users find useful.

Ethereum is meant to allow ANYONE control over their money, trust, interactions, agreements, etc. If we are to meet this lofty goal, we need to be sure we are bringing EVERYONE along for the ride and ensuring that ANYONE can participate at ANY level they choose to do so.

Our solution to this challenge is [Unpool.fi](https://unpool.fi).

## What Is Unpool.fi?

Unpool.fi is our answer to the question:

“How do we make it extremely simple for anyone to stake, deploy, interact, and control their on-chain experience without ever giving up their keys or having to trust someone else”

We want sovereign on-chain citizens, not dependents who must rely on central players, to gain access to the chain. The present reliance on central players is the root of the problems noted above. If the problems are to change, more individuals need to be involved at Ethereum’s most foundational level.

To accomplish our goal there are a few ground rules we must establish upfront. These ground rules will guide everything Unpool does going forward:

- Your Keys
  - Users will NEVER be required to expose, share, or otherwise hand over their keys, pre-signed messages, or the administrative control over their own tokens to use Unpool’s services.
- Your Crypto
  - Users will ALWAYS maintain control of their tokens, either in their own wallets or contracts they hold the exclusive administrative functions to. At no time will user funds ever be placed in a general “pool”.
- Your Returns
  - Unpool will ALWAYS strive to return as much profit back to the users as possible. Any service or offering provided by Unpool aims to return MORE VALUE to the user than similar offerings on the market.

Unpool’s goal is to function largely as a collective of individual operatives at the validator level while solving some of the baselayer infrastructural issues stopping individuals from participating on-chain in a sovereign manner.

## Unpool’s Service Offerings:

Unpool intends on offering a wide array of services, all with the goal to increase our users’ crypto sovereignty. While not exhaustive, some of these services include:

- Staking Infrastructure Support Services

- A globally distributed set of endpoints providing low latency and high availability connectivity to execution and consensus layer clients for the support of user run validator clients anywhere in the world.
- MEV smoothing pool and sourcing.
- Dead simple validator client deployment and maintenance with first class Raspberry Pi 4 support.
- Distributed Validator Technology (DVT) support including SSV and Obol.
- An Unpool smart wallet hardware device providing the security of a cold wallet with the ability to operate as an active validator.
- Unpool dedicated MEV relays and searcher.
- Chain Data Services
  - A highly available data service with both historical and near real-time block data over Web3 API, Websocket, and REST API endpoints.
  - Execution layer and consensus layer client DB snapshots.
- Smart Contract Store
  - Battle tested and fully audited user-administered and deployed smart contracts with a click of a button.
  - A contract creator, allowing users to create their own contracts from verified snippets and other low/no-code options.
  - Support for verified community contracts.
- Co-ops
  - Fractional ETH staking for families, non-profits, small organizations, and underserved communities.
    - Utilizes DAO mechanics for decision making and multisig for administrative control.
    - Requires a portion (or all) of membership to actively run the validator(s) supporting the pool.
    - Limited in size to ensure against a co-op pool growing too large and becoming unhealthy for Ethereum.
    - Responsible liquidity mechanisms.
- Silos
  - Responsible liquidity mechanisms for solo stakers.
  - Like Co-ops but without DAO mechanisms since they are held by a single entity.

- Responsible Liquidity
  - Allow for users of Co-ops and Silos to exit their partial ETH holdings if approved to do so, or borrow against their share of the rewards.
  - Ensuring the the tenants of the proof-of-stake model remain intact.
  
- Transaction Support Services
  - TX pool for next Unpool block
    - Allow users of Unpool to subscribe their validators to the Unpool TX pool
    - Users submit transactions to the pool for the next block proposed by an Unpool backed validator
    - Transaction tips are paid back to Unpool users via MEV smoothing pool
  - Wallet integrations with Unpool’s smart wallet hardware device
    - Allows Unpool’s smart wallet to sign transactions remotely keeping keys safe
      - MetaMask support first, others to follow
  - Point of Sale support systems for underserved business
    - Make it easy for underserved business to transact with Ethereum
    - Utilizes Unpool TX pool and Unpool backed validator capacity to reduce costs for transactions and enhance everyday Ethereum adaption
    - Linked with staking support service allowing business to earn additional revenue on transacted Ethereum, and borrow against earnings via responsible liquidity options.
  - Support for ZK-RollUps allowing even lower cost transaction with majority of tips/fees returned to the Unpool users

## Unpool’s Roadmap:

Our service offering roadmap is split into phases. The first phase is focused on bringing the “keystone” services online. Other phases expand the platform’s service offerings.

The phasing is projected to look something like this:

- Phase 1 – Laying the keystones:
  - Deploy baseline infrastructure for Unpool Application and global Staking Support Services endpoints
    - Stake Support Services infrastructure deployed in a multi-provider fashion

- Application infrastructure initially deployed in AWS
  - Deploy MVP of application to allow for user sign-up and control of staking services configuration
  - Deploy MEV smoothing pool
    - Full security audit of contract code
    - Testnet release first followed by mainnet
  - Publish lightweight validator packages
    - Raspberry Pi 4 image
    - DAppNode and Avado packages
    - Docker images
    - Cloud Images
  - V1 validator performance monitoring
    - Measure validator performance and liveness
      - Determines percentage of MEV rewards apportioned to user
- Phase 2 – Smooth the path, add insights:
  - Deploy Chain Data Services infrastructure
    - Multi-provider with AWS for frontend components
  - Deploy client snapshot service
  - Application updates to support Chain Data Services
  - Launch of Unpool smart wallet hardware device
    - Kickstarter in 1H 2023
  - Deploy Unpool App for iOS and Android
    - Allow customers to manage their validators, check performance, and manage their hardware device when released
  - V2 Performance monitoring deployment
- Phase 3 – Tool-Up Users:
  - Deploy Smart Contract Store
    - Validated Unpool and community smart contracts available
  - Application and smart wallet device updates to support Smart Contract Store
  - Deploy Co-ops and Silos smart contracts on store
    - Full audit and testnet validation
    - Liquidity will not be provided in this phase
- Phase 4 – Expand Capabilities:
  - Deploy Wallet Integrations with Unpool smart wallet device
    - Metamask support first followed by others

- Deploy Mobile App updates to support wallet function and integration with the smart wallet device.
  - Integrate with Point-of-Sale offering to allow for extremely low friction purchases
- Deploy Liquidity for Co-ops and Silos
- Deploy Point-of-Sale alpha for initial testing and customer onboarding
  - 10 customers selected and testing in alpha
- Phase 5 – Increase returns:
  - Deploy TX Pool, MEV relays, MEV searcher, and sourcing campaigns
  - Deploy Mobile App updates to allow for submitting TXs to Unpool TX pool
  - Move to beta for Point-of-Sale offering
    - 100 customers, much higher throughput
    - Use of Private TX pool if block production rate high enough
  - DVT support if mainnet available added to Unpool platform and smart wallet device.
- Phase 6 – Expand Adoption:
  - Point-of-Sale production launch
  - Deploy initial support for ZK-RollUps across App and smart wallet device.
  - Deploy low-code/no code smart contract creator

Timelines are scoped specifically to **phase 1** activities which will be the focus for the end of 2022 and thru 1H 2023. We expect many of these items to move around into different phases and change as we adjust our execution strategy according to user input. We are tackling chunks of work in themes in order to build the right thing for our users.

## How Do Users Pay for Services?

Two revenue models for Unpool are being explored.

The first model is a fee-based model applied to the MEV smoothing pool. The percentage of fee taken by Unpool is TBD, but this fee will be applied to the MEV smoothing pool balance as part of the distribution of funds that the oracle performs via smart contract functions at a specified cadence.

Additionally, a fee is assessed on Co-ops and Silos when they become available as well. This percentage is also TBD.



The second model is a subscription based model, allowing users to pay a nominal month fee for services. The monthly fee amount and applicable services is still TBD but we intend on taking a wide range of tokens as payment.

These payments will be orchestrated via smart contracts to ensure transparency.

## About The Team:

VeriHash, the creators of Unpool, are a group of individuals with decades of experience in running and writing highly available, secure, efficient, and scalable infrastructure and software for some of the most recognizable names in the world. Companies like Pinterest, Twitter, Apple, Intel, Boeing, and others have trusted us to build, manage, secure, and scale their infrastructure and software for years. Now we want to bring that same experience to Ethereum and we want EVERYONE to be able to operate on-chain just as well as we can.

We are die-hard believers of Ethereum's ethos and believe the only way to ensure Ethereum's success is to remove the barriers that keep everyday people from interacting with Ethereum themselves directly. Not interacting with Ethereum through a centralized exchange, or handing over keys and tokens to entities like pools and their node operators, but to be able to do things for themselves individually and under their sovereign control.

We have the experience necessary to build the highly scalable, secure, and efficient infrastructure required to support our mission and to up-level our users. We have the vision, focus, and unshakable belief in what we are doing; even going so far as to transition away from our role as a [node operator for StakeWise](#), where we operated Ethereum validators and approximately 10% of the Gnosis network. We exited StakeWise because we believe today's pools are part of the problem and Unpool is the answer.

## Project Financing:

Unpool's mission is focused on the user, their experience, and giving them an equal playing field with the likes of Coinbase, Kraken, Lido, and other large players. We are NOT intending on taking any funding from VCs or other "centralized" sources. We feel taking money from such parties only will harm our user focus.

Instead, we seek funding from the community and our future users because Unpool exists solely to service them.

We will be providing further details in another document around our funding efforts, but in short we intend on initially selling utility NFTs that provide the holder with various benefits, discounts, additional earning opportunities within the Unpool ecosystem. So long as you hold this NFT you get its benefits when interacting with Unpool's services.

The NFT can be transferred to any wallet if the holder chooses to dispose of the NFT. We will not be placing the NFTs on a marketplace like OpenSea as we do not intend these NFTs to be "investments". They represent coupons for the holder that unlock benefits within the Unpool ecosystem.

The NFT sale, combined with the KickStarter in 1H 2023, is intended to jumpstart funding for Unpool and enable operations sustainability for at least 24 months.

## How To Get Involved:

We want to hear from you because we want to build what YOU need to be successful. Ethereum is what WE make of it, and Unpool wants to make it as easy as possible for ANYONE to wield its awesome power.

[Come join us on discord](#)

We will be making frequent development announcements as we progress on Phase 1 items.

Most of all, keep an eye out for Kickstarter and NFT sales announcements. Invest in your future, and take a stake in Ethereum's future.

Regards,

