A Deep Dive into Berachain: The Next Ethereum?

1. Project Overview

Berachain is a Layer 1 technology built on the Cosmos SDK which uses a novel Proof of Liquidity consensus. Berachain is EVM-Compatible and looking to act as a "drop-in" for Ethereum, with lower transaction fees, better security, and increased liquidity. Let's take a dive into this novel Layer 1 protocol.

Key Insights:

- The Proof of Liquidity consensus has been introduced by Berachain as a novel way to combat issues with Proof of Stake, particularly seen through protocols like Ethereum and Solana

- Berachain has received $142 million in investments between a Series A round and Series B round

- In early 2024, Berachain launched its testnet called Artio. Since then, 47 projects have been deployed on the chain and over 2 million transactions have taken place.

- Native Token Launch $Bera confirmed

2. Market Opportunity

Layer 1 Scaling:

Layer 1 (L1) protocols are an integral part of building high-level Blockchain protocols. Layer 1 protocols such as Ethereum (ETH) and Solana (SOL) set the foundation and framework for DeFi protocols, dePIn protocols, NFT's, and much more within blockchain.

The increased number of users in Web3 in recent times has shown some failures in these industry standard Layer 1 protocols however. For example, increased congestion on the Solana network due to the recent meme-coin frenzy had Solana transactions failing left and right.

Solana Failed Non-Vote Transaction Rate
Share Solana Successful vs. Failed Transactions
Non-Vote Transactions: Txns by Users; Vote Transactions: Txns by Validators

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● failed_non_vote_percent   70.9%
● successful_non_vote_percent   29.1%
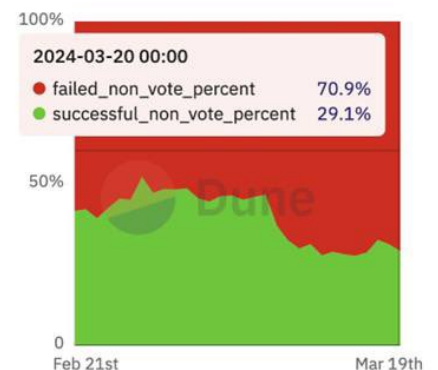
Similarly, while Layer 2 protocols have taken some of the stress and congestion off of the Ethereum network, there is no doubt that periods of high-congestion on the Ethereum network have resulted in exorbitant gas fees. Even in the recent dip, people were seeing fees as high as $350!

Current Layer 1 Needs:

A Layer 1 protocol should be able to handle high-congestion, yet still perform all of the necessities needed in a blockchain framework. Instead of Layer 2's having to manage lower transaction fees, this will allow Layer 2 protocols to focus on more innovative blockchain developments.

3. Utility & Technology

The novelty that Berachain presents to fix these L1 issues is a Proof of Liquidity consensus coupled with EVM-Compatibility.
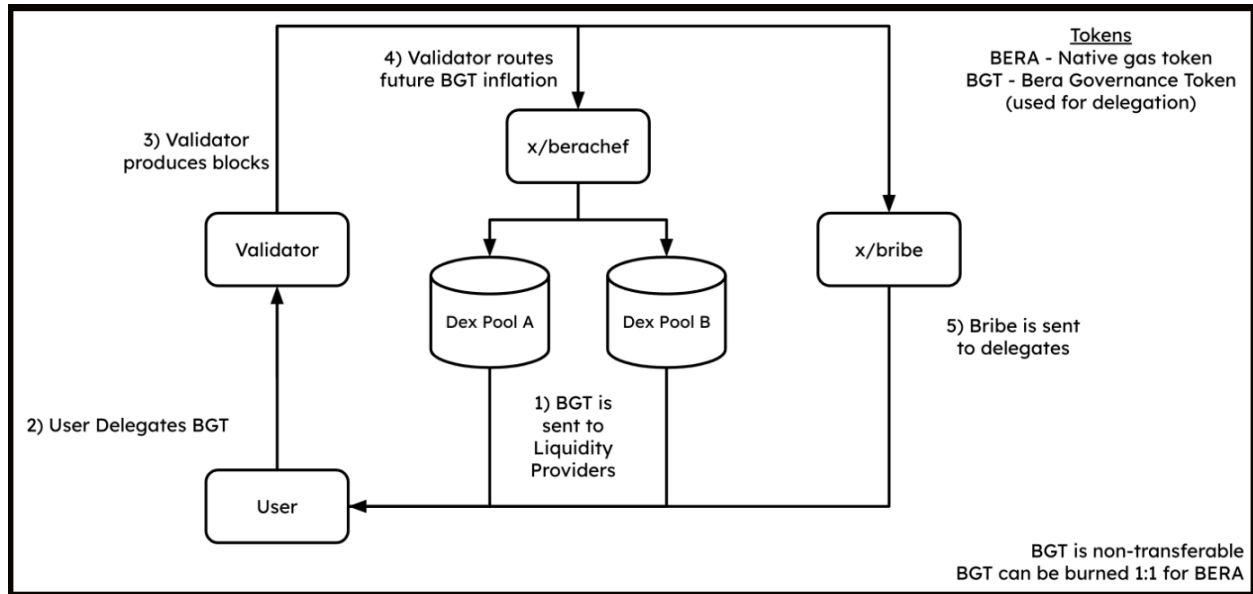
Proof of liquidity vs. Proof of stake

Layer 1 leaders like Ethereum and Solana use the Proof of Stake consensus. Ethereum moved to Proof of Stake in 2022 as a way to limit overall greenhouse emissions produced from mining and increase the Ethereum network's security. In Proof of Stake, all token holders have the opportunity to validate transactions and create new blocks based on the amount they have staked.

This allows for faster transaction processing, lower cost, and better security validation than traditional Proof of Work. However, there are drawbacks to this consensus mechanism:

- **Accessibility:** In order to become a validator, users must own the native currency. In the case of Ethereum, users must own at least 32 Eth (90,000 USD) to run a node and be a validator. This creates a similar issue to Proof of Work where only large users and corporations would have a good chance at validation/mining.

- **Centralization:** Stake will centralize since newly minted tokens are always going to the same validators (large corporations and whales).

- **Protocol security:** As larger nodes continue to become validators it gives less of a chance for the protocol to improve security of the chain.

This comes to Berachain's novel solution: **Proof of Liquidity**. Simply put, Proof of Liquidity is a way of solving stake centralization through systematically building liquidity and aligning the protocol and its validators. It can also be explained in the context of Berachain using the graphic below. There will be a more in-depth description of Berachain's native tokens later in this document, but for this visual all you need to understand is that Bera will be the native gas token, while BGT is a governance token that can not be bought and will be used for delegation purposes.

From Berachain Docs

Let's walk through this Proof of Liquidity graphic sequentially:

1. User provides liquidity to the DEX Pool and receive Bera Governance Token (BGT) for delegation

2. User delegates BGT to validators

3. Validators produce blocks based on the amount of BGT received from the user Delegators and validators then receive rewards from the chain

4. Validators vote on future BGT inflation across any of the liquidity pools

5. Validator sends bribes to delegates as a way of differentiating themselves from the rest, regardless of metrics like uptime

What are the upsides?

- **Liquidity Incentivization:** By separating the governance token and the chain gas token and making it so that providing liquidity to the BEX (Berachain Decentralized Exchange)

is the only way to receive BGT, liquidity is further incentivized, resulting in higher security as well through increased liquidity and validators.

- **Token Inflation:** Since stake is going to on-chain market participants, inflation of tokens is more evenly distributed than in traditional Proof of Stake mechanisms.
- **Protocol and Validator Alignment:** Protocols and validators are aligned through pool incentivization and bribes.

EVM-Compatibility

In order for Berachain to be able to keep up with Ethereum, it will be EVM-Compatible. This means that while Berachain does not replicate the entire Ethereum Virtual Machine (EVM) environment, there is a level of integration which allows for usage of EVM smart contract tools like Solidity, Hardhat, and Vyper. As stated in the Berachain docs, this would make a transition to usage of Berachain from Ethereum seamless.
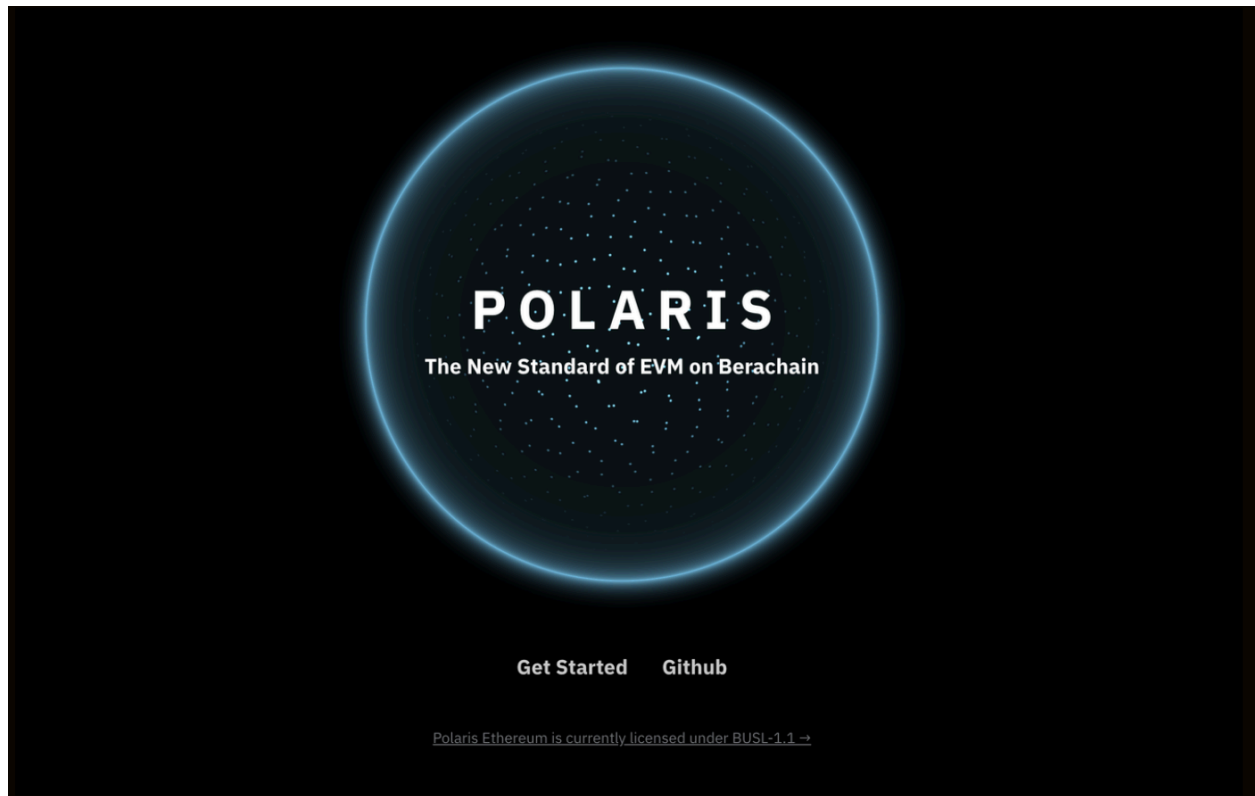
Polaris, developed by Berachain, is their way of making Berachain EMV-Compatible while still maintaining their architectural goals. This is built on top of the Cosmos-SDK, a technology which provides libraries, web-servers, and data-bases for blockchain applications written in any language.

4. Competitive Landscape

Layer 1 Competition:

Within 48 hours of its testnet launch, Berachain surpassed Ethereum's yearly transactions with over 1 million transactions; over 300,000 users utilized Barachain during that time. In addition to testnet security, the Layer 1 solution has already received over $140 million in funding between series A and B rounds.
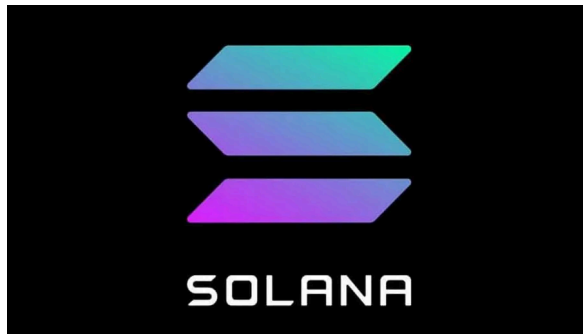
The most important Layer 1 competitors to name are Solana and Ethereum. The two protocols have seen measured success in the space, with >10x growth on their native currencies over the past 5 years, mass adoption by users, and many Layer 2 protocols being built on their chains.

Berachain Differentiator:

Berachain's Proof of Liquidity mechanism builds on top of pre-existing Proof of Stake mechanisms, offering promising fixes to many of the issues which have been seen in protocols like Ethereum and Solana. Berachain is currently the only Proof of Liquidity Layer 1 protocol in the space, making it a promising project with potential to break through.
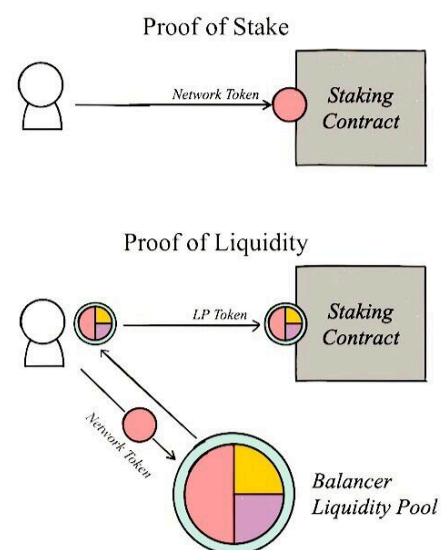
5. Adoption

Testnet Launch:

The testnet launch in early 2024 came with over a million users within the first 10 days. Transactions soared past Ethereum's yearly count with over a million. Congestion and transaction issues happened intermittently, however this is not unheard of for the testnet launch of a project.

Mainnet Launch?

There has not been an official date release for the mainnet. However, given the sheer amount of users and transactions taking place, it seems likely that the mainnet will be launched in Q3 or Q4 of 2024.

6. Growth Outlook

Proof of Liquidity:

As the Web3 space continues to grow, network congestion is inevitable. As a result, a new proof consensus such as Proof of Liquidity offers the potential for growth in what we consider to be a well-functioning Layer 1 protocol

The Numbers:

Berachain's project timeline has yet to be released. However, with numbers as illustrated in the picture below, it is a matter of time before mainnet launch.

Berachain Shoots Past One Million User Mark at Lightning Speed

Time it took for selected online services to reach one million users

7. Team & Alliances

Key Investors:

- Polychain Capital

- Sandeep Nailwal

- SamsungNext

- Hashkey Capital

These are some of the key investors, however Berachain has over 23 between their Series A and Series B investments.

Team Highlights:

While the team remains anonymous, below are the three main team members listed publicly:

- Smokey the Bera

- Homme Bera

- Dev Bear

It should also be noted that the team which developed Berachain also developed the NFT collection Bong Bears, with a total volume of 2,558 ETH and a current floor price of 229 Eth.
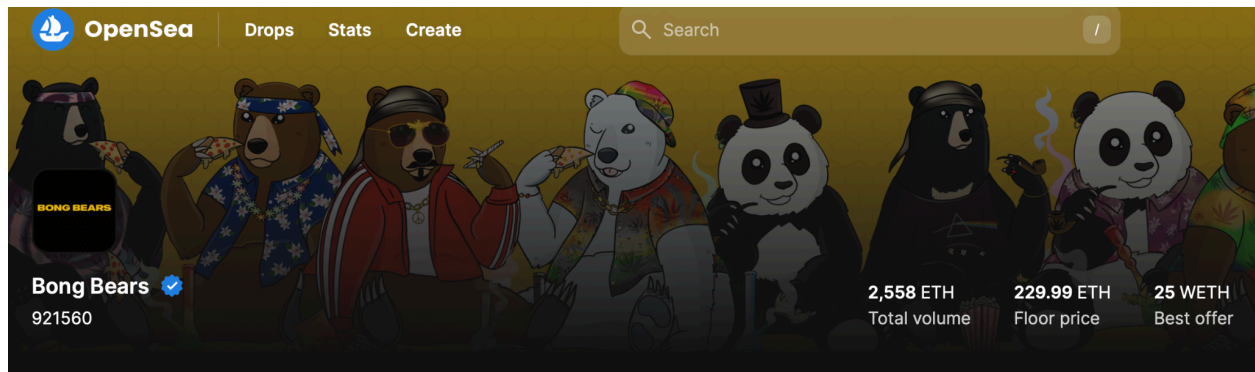
Community:

Another aspect of Berachain to keep in mind is its community. With over 490,000 members in its discord, many supporters on twitter, and many calling it a top project of 2024, Berachain seems to be backed by the masses.

8. Tokenomics

Triple Token Overview:

Bera Token:

- Bera is the token which is used to send transactions on the Berachain network. It also is referred to as the "gas token." In the likely case of an airdrop, Bera is what would be airdropped to supporters.

- Bera tokens are currently available on the testnet faucet for testing the dAPPs offered by Berachain.

Bera Governance Token:

- In traditional Proof of Stake blockchains, the governance token is also the main network token with economic value. However, since Berachain is Proof of Liquidity, this governance token will be strictly for creating and voting on governance proposals.

- There are three ways to get BGT's:

  - Borrowing honey on Bend

  - Providing honey in the bHoney vault for Berps (Berachain's perpetuals dAPP)

  - Depositing liquidity in the BEX (Berachain's decentralized exchange)

  Honey Stablecoin:

  - This is Berachain's stablecoin which is pegged to 1 US Dollar

  - BERA can be swapped for honey in BEX.

9. Key Risks

Despite a promising new proof consensus, high congestion threshold, and an large and supportive community, Berachain faces some clear challenges:

- **Tough Competition:** Solana and Ethereum not only lead the Layer 1 space, but lead the market in terms native token price, making them extremely difficult to compete with.

- **Success of Consensus Proof:** While Proof-Of-Liquidity seems to be an innovative consensus proof, the mainnet has not been launched with real money, real users, and

tangible success yet. As a result, the success of Proof-Of-Liquidity on Berachain is not "real" quite yet.

10. Final Thoughts
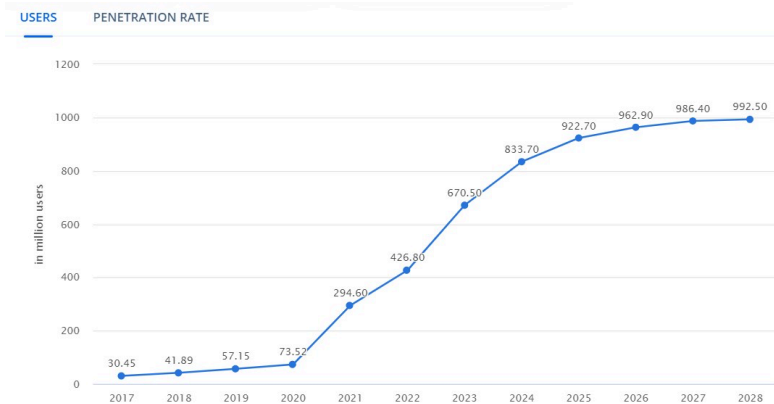
As seen in the graph above, the Web3 space continues to grow, with estimates of reaching 100 billion users by 2028. Network congestion will continue to rise, and the need for lowered gas fees and Layer 1 protocols which can handle heavy traffic will become more demanding. In addition, safety and high-liquidity become more and more necessary in all protocols.

Overtaking industry behemoths like Solana and Ethereum is a monumental task. That being said, Ethereum seemed like the best Layer 1 solution until Solana came along and established itself as a top Layer 1 protocol. While the competition should not be underestimated, Berachain has set itself up for potential mass adoption by aiming to solve frequent problems amongst the industry's top Layer 1 protocols.

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