Proposal Motivation

We [@AranaDigital](#) are proposing to deploy Uniswap v3 on Sei. In Q2, Sei v2 will go live on mainnet, and we believe that it's prudent for the DAO to introduce Uniswap to the parallelized EVM space.

Sei v2 introduces optimistic parallelization, enabling concurrent txn processing, thereby enhancing throughput and reducing fees. This, coupled with an optimized database, SeiDB, ensures that Sei can support high-volume applications without compromising speed or efficiency. Since Uniswap is yet to be tested in an alternative execution environment, it's worth exploring how this deployment will affect the DEX's usage and performance. No alterations to the Uniswap contracts will have to be made for this deployment as Sei v2 brings byte-code EVM compatibility–this mitigates concerns around security.

Sei Foundation has committed up to $1M of liquidity for bootstrapping Uniswap-specific pools (see "Liquidity Bootstrapping and Incentives" below), with a firm plan of introducing $400k across three initial pools on day-one of the deployment. The other $600k will be split into 2 tranches of $300k. Each tranche will be deployed on a quarterly basis, depending upon Uniswap's activity from the previous quarter. Sustained growth on Sei means that we will receive more liquidity. In 7 days, we will also post a vote that will allow the Uni DAO to determine whether or not we should use treasury $UNI to bolster incentives for this deployment.

This proposal will utilize Wormhole for cross-chain message passing, Oku Trade will act as the deployment's frontend, and GFX Labs will take care of the contract deployment.

Proposal Stakeholders

The following list of stakeholders is present to transparently communicate which entities and individuals are involved in proposal creation and implementation.

Proposer: [@AranaDigital](#)

This entity is responsible for authoring the proposal & managing the governance process

Deployer: [GFX Labs](#)

This entity is responsible for the technical deployment of the contracts on the target chain

- GFX Labs will help deploy the v3 contracts on Sei and has a track record of safely deploying Uniswap v3 on various EVM-compatible chains

Frontend: [Oku Trade](#)

The initial frontend where users can interact with the new Uniswap v3 deployment

- Oku is built and managed by GFX Labs

- Oku was seeded by a Uniswap Foundation grant in 2022

- Oku supports twelve chains and continues to aid Uniswap's expansion to new protocols

Note: Oku Trade has become the DAO's go-to third party front-end for Uniswap deployments since the canonical front-end is owned and operated by Uniswap Labs

Bridge Provider: [Wormhole](#)

This is the cross-chain messaging solution selected for this deployment

- Wormhole serves as the governance messaging provider to five Uniswap deployments: BNB, Celo, Gnosis, Rootstock, and Moonbeam. This would be their sixth integration

- Wormhole's summary from the [Uni Bridge Assessment Report](#): "The analysis of Wormhole concluded it satisfies the requirements of the Uniswap DAO's cross-chain governance use case…the set of validators includes many reputable entities, and both the number of validators and security thresholds are set at satisfactory levels. Moreover, the implementation of the protocol and operational security practices are well considered."

Target Chain: [Sei](#)

This is the chain that v3 contracts are deployed on

Proposal Sponsor: [Michigan Blockchain](#)

This entity has >1M UNI and is therefore eligible for administering the onchain vote

A Primer on Sei & How Uniswap Benefits

EVM-Compatibility

Currently, development on Sei is done using Cosmwasm, but with the introduction of Sei v2's EVM-based execution environment, many developers can default back to Solidity, and already existing dapps can fork their smart contracts into the Sei ecosystem without hassle–this is what we are proposing Uniswap does. The EVM and Cosmwasm contracts will be composable, able to communicate with one another, preventing liquidity and user fragmentation. Tooling for EVM-based dapps will also remain familiar, requiring no changes to RPC, wallet, and dev tooling setups.

Uniswap has previously discussed potential deployments on alternative VMs, however, these conversations have so far fizzled out due to the complexity of rewriting the existing Uniswap contracts. For instance, a proposal was created to deploy Uniswap on StarkNet, but to carry this through, the Uniswap code would need to be transpiled from Solidity to Cairo. Such a move is subject to security issues, which the DAO has currently elected not to contend with. The parallelized EVM environment is now introducing an opportunity for Uniswap to explore a "different" VM without rewriting the v3 contracts.

[

1238×688 240 KB

](https://global.discourse-
cdn.com/business6/uploads/uniswap1/original/2X/6/6e7efb941bd3b51a0c015d1d243f10636684eba8.png)

Source: Sei Blog

Optimistic Parallelization

To further elaborate on the execution environment, we must highlight Sei's rollout of optimistic parallelization. By enabling transactions to be processed in parallel rather than sequentially, Sei v2 enables significantly increased throughput and reduced txn fees. This architecture diverges from traditional, sequential blockchain processing seen traditionally with the EVM, where txns are confirmed one after another, leading to potential bottlenecks as the network's usage grows. Sequential transactions therefore present anti-network effects–parallelization alleviates such growing pains.

[

900×498 263 KB

](https://global.discourse-
cdn.com/business6/uploads/uniswap1/original/2X/5/58ebb1abd0b4ce4c63d1873458d3154384ce6918.png)

Source: SeiNetwork on X

What about types of parallelization? Here's where we need to mention the concept of state access, which is simply the ability for a txn to read/write to a blockchain's state. State access plays a vital role in the efficiency and reliability of a blockchain when considering different approaches to parallelization—optimistic and deterministic. Although both parallelization strategies aim to scale blockchains via higher throughput, their methodologies for handling state access significantly influence their performance, security, and complexity.

Sei v2 utilizes optimistic parallelization, where transactions are processed in parallel under the assumption that they will not conflict or interfere with each other's state changes. This approach optimistically assumes that concurrent transactions can access and modify the blockchain state without creating inconsistencies. If conflict arises, then sequential re-execution of the txns is needed. Deterministic execution requires developers to assign the parts of state that can be accessed, but these assignments require more developer overhead. Hence, for Uniswap, it's comparatively easier to deploy on an optimistically parallelized chain.

Visit this page to learn more about how Sei addresses conflict resolution via Optimistic Concurrency Control.

SeiDB

More txns also means more problems, specifically around state management. If a blockchain cannot effectively manage high throughput at the state/storage level, it encounters another bottleneck. This undermines the advantages initially gained from employing a parallel execution environment.

That's where SeiDB comes in.

Sei Labs has redesigned their database for high-performance storage, making sure that information is organized, stored, and accessed efficiently.

[

1034×896 47.7 KB

](https://global.discourse-
cdn.com/business6/uploads/uniswap1/original/2X/1/1a5f86a08d574302888ddddc2eaf25e9bae25a4d.jpeg)

Source: [@rhinostake on X](#)

Operationally, efficiency and performance is achieved by separating state store (SS) and state commit (SC). This bifurcation is designed to optimize Sei for two requirements: handling vast historical data and processing new transactions efficiently.

- SS pertains to historical data. By organizing data as raw key values while minimizing unnecessary metadata, SeiDB ensures that historical records–encompassing txns, state changes, and other relevant data–are stored in a compact and accessible manner. This makes it easier to conduct auditing, transaction verification, and node synchronization. Such storage efficiency helps mitigate potential issues related to state bloat, ensuring that Sei remains scalable and efficient as it grows, not falling subject to diminishing performance from scale.

- SC deals with the processing and validating of new transactions by performing state changes in-memory and streamlining access to the most recent state information. This way, SeiDB reduces the need for intensive Input/Output operations, enabling faster transaction validation and commitment.

The above architecture positions Sei in a place to aptly deal with high-volume applications.

The Sei Ecosystem

Sei v2's efficient design is meant to introduce an influx of applications that have not been previously possible due to the limited EVM design space. SVM and MoveVM chains will act as the direct architectural competitors to Sei going forward since they've been able to introduce unique applications like onchain order books. More parallelized EVMs will invariably be introduced in the coming months as well. Solana also has a parallelized EVM L2 called Neon, which has so far gained very little traction. This puts Sei in a strong position because it, ideally, enables high-throughput applications while simultaneously bringing forward a familiar developer environment.

In the past few months, activity on the current Sei network has increased significantly, with organic growth around community-based NFT projects like [Seiyans](#) and the [Colony](#). In the last month alone, nearly [93k NFT sales](#) occurred. Similarly, DeFi activity also spiked during Q1 2024, with a recent jump in SEI-denominated TVL, now worth $48.58M.

[

1920×731 71 KB

](https://global.discourse-
cdn.com/business6/uploads/uniswap1/original/2X/1/11699e8692942ec1a93cbe5a7ed8972a3a73aa51.jpeg)

Source: [DefiLlama](#)

The current leading Sei exchange is Astroport, a Cosmos DEX deployed on four appchains, meaning Sei's top DEX isn't chain-specific nor was it incubated for Sei specifically. However, with the introduction of v2, we'll see more Sei-native DEXs, like [DragonSwap](#), most of which are currently on Sei Devnet. Therefore, by deploying Uniswap v3 on day-one of the Sei v2 mainnet launch, we have the opportunity to establish ourselves in the Sei ecosystem as a tried and tested DEX. We could, of course, see potential threats from more optimized dapps like order books, but it's worth running the experiment.

Liquidity Bootstrapping and Incentives

Sei's Commitment

Sei Foundation will commit up to $1M worth of liquidity to Uniswap pools on Sei. The tokens will be deployed on Uniswap through the Sei integration with Oku. A tranched approach will be used to bootstrap the liquidity. Each quarter, between Q2 2024 - end of Q4 2024, the Sei team and the Uniswap Accountability Committee will evaluate the TVL, volume, and activity of the Uniswap pools on Sei.

- Q2 2024: $400k guaranteed commitment

- $200k in SEI/USDC

- $100k in SEI/wETH

- $100k in SEI/USDT

- $200k in SEI/USDC

- $100k in SEI/wETH

- $100k in SEI/USDT

- Q3 2024: $300k tentative commitment

- Q4 2024: $300k tentative commitment

- Q3 and Q4 liquidity deployments will be based on Uniswap's volume/active users from the previous quarter and the TVL at the start of the given quarter. Lower traction will lead to lowered future commitments from Sei Foundation.

- Q3 and Q4 liquidity deployments will be based on Uniswap's volume/active users from the previous quarter and the TVL at the start of the given quarter. Lower traction will lead to lowered future commitments from Sei Foundation.

Once live, active pools, TVL, volume, and fee metrics will be available on Oku's analytics page.

Uniswap's Onboarding Package

The purpose of the Uniswap Onboarding Package is to allow new deployments of Uniswap v3 to get set up with three month's worth of liquidity incentives, a frontend, and an incentive distribution tool like Merkl. These resources will help position Uniswap to have a formidable presence on new EVM chains.

Criteria for Package Adoption:

After the 7-day RFC period concludes for this proposal, a temperature check will be posted via Snapshot. This off-chain vote will be used to determine how much in incentives–if any–the DAO would like to allocate to this deployment. The options are–

- $250k

- $500k

- $750k

- $1M

- No Incentives

A temperature check will be considered met as long as the total number of votes cast for the funding options is over >10M. If there isn't a clear winner for which level of incentives the chain should receive, a discussion can be had before the onchain proposal. All incentives will be distributed in terms of $UNI.

Deployment Details

If no major points of contention are posed by the DAO during the RFC, the Accountability Committee will

- Post the Uniswap Onboarding Package temperature check. If this passes, package authorization will be sent to an onchain vote–this vote will approve sending the elected amount of $UNI to the Committee's multisig

- Optimistically approve this deployment and consider the deployed contracts (once Sei v2 is live) on the target chain as canonical, and a comment will be posted on this forum with all the verified contracts

As is the case with all canonical v3 deployments, this deployment will be subject to Ethereum Layer 1 Uniswap Protocol governance and control. The text record of the uniswap.eth ENS subdomain titled v3-deployments.uniswap.eth will be amended by the Accountability Committee to include the reference to the stated v3 contracts on Sei.

Timeline

March 27- April 3:

RFC

April 3 - April 7:

Onboarding Package Temp Check

April 7 - April 13:

Onchain vote to approve onboarding package

Before End of Q2:

Sei v2 mainnet will launch and the Uni v3 contracts will be deployed by GFX Labs