Governance Proposal Link (submit by 4/28 6:49pm EDT)

Summary:

Dear Uniswap community,

A few weeks ago we (Blockchain at Michigan in partnership with theCelo Foundation and the Celo Climate Collective) submitted a proposal to deploy Uniswap V3 on Celo to launch “Green Asset” Liquidity Pools and expand access to Uniswap to the 6B smartphone users around the world.

We initiated the Temperature Check and Consensus Check on Snapshot, where the proposal received strong support from the Uniswap community (~100%) voted yes for the proposal. Before putting forth the formal on-chain governance proposal, we wanted to ensure we worked closely with Uniswap Labs and the Uniswap community to put forth clear documentation on the cross-chain governance bridging. We believe this proposal is a first step in a long and fruitful collaboration between the Celo and Uniswap communities—a journey we are particularly excited to embark on.

We’re excited to initiate the formal governance proposal. We’d love to receive your support in this proposal.

NOTE: Based on community feedback and conversations with Uniswap Labs we’re also adding the following items in the proposal since the consensus check version. This serves to add additional transparency mechanisms to the proposal based on what has been a highly engaging process with the Uniswap community, well as provide more information on the deployment itself:

- Up to 1% of the $10M in financial incentives ($100K) will be directed towards funding an investigation into Uniswap protocol’s climate impact, followed by a (potentially partial) mitigation phase. This funding will be part of the portion of financial incentives placed in a multisig (approximately one-third of the $10M) with 2-4 key members of the Uniswap community, including both individuals and institutions.
- The Celo Foundation will provide quarterly/semi-annual updates through Mirror or another source that is preferred on the incentive program, including stats of use of funds and overall impact
- Governance at deployment will be facilitated by messaging bridgeOptics. We’ve added additional technical information regarding the Optics bridge below after discussing with Uniswap Labs and reviewing this forum post to ensure that the messaging bridge meets appropriate security standards.

Temperature check discussion

Consensus check discussion

Updated Proposal:

Deploy Uniswap V3 on Celo to Launch “Green Asset” Liquidity Pools and expand access to Uniswap to the 6B smartphone users around the world

Description:

In partnership with the Celo Foundation and theCelo Climate Collective, we propose to authorize the deployment of the Uniswap protocol to Celo on behalf of the community.

Celo is a mobile-first, carbon-negative, EVM-compatible blockchain. Specifically, we propose launching Uniswap on the Celo platform to:

- Increase Uniswap’s presence through $10M in financial incentives to Uniswap users, as well as additional grant funding provided by the Celo Foundation to utilize Uniswap as a financial building block
- Bring Uniswap V3’s increased capital efficiency to the 6B smartphone users around the world
- Create green asset liquidity pools with natural capital backed assets such as tokenized carbon credits (e.g. MCO2, TCO2, and GNT) and future nature backed assets issued on Celo like land and forests
- Use Uniswap as a decentralized mechanism to rebalance the Celo Reserve with nature backed assets rather than relying on centralized exchanges
- Foster pathways for future green use cases on Uniswap

Overall, we believe the Uniswap community’s mission of creating a trustless and decentralized financial infrastructure accessible to anyone aligns with Celo’s vision of tackling climate change and achieving prosperity for all.

About Celo:

Celo's mission is to build an open financial system that creates the conditions of prosperity for all. To execute this mission, Celo's technology features include:

- A mobile-first EVM-compatible layer 1 blockchain that is accessible to anyone with a smartphone
- Carbon negative by allocating 0.1% of epoch rewards to offset carbon—to date,3,007 tons of carbon has been offset, which is over 8 times Celo's carbon footprint
- Algorithmic Celo stablecoins (currently cUSD, cEUR, and cREAL) with a smart-contract based expansion and contraction platform called Mento
- An overcollateralized basket of crypto assets called theCelo reserve, currently made up of CELO, the network's native asset, as well as BTC, ETH, DAI, and MCO2

Celo is one of the fastest growing DeFi ecosystems with2.8M addresses, up to 1.1M daily transactions, and over 111M transactions. Additionally, Celo has been chosen by Kickstarter for its upcoming decentralized product (to date, Kickstarter has successfully supported over 214,000 projects with over $6B in funding and 20M backers) which will attract new users to the ecosystem.

The Celo Reserve includes almost $1M of MCO2 tokens, and Celo community members have proposed to add more natural capital assets moving forward as part of the Climate Collective. By including more natural capital assets, the Celo community has the vision of creating natural capital backed currencies. If, as a society, we were to denominate our economic activity in natural capital backed currencies, any economic growth—increase in money circulation—would lead to a growth in preserved natural resources. Celo aims to be the layer 1 blockchain for natural capital assets, and Uniswap can be the natural capital DEX for these assets on Celo.

Proposal

Blockchain technology can help address greenhouse gas emissions and promote sustainable practices by tokenizing carbon-sequestering assets such as rainforests. Those tokenized assets can then be purchased by individuals and businesses to democratize carbon offsetting and increase funding for environmental protection projects. We believe that together, Uniswap and Celo can lead the path to growing natural capital assets.

Uniswap on the Celo platform will:

- Allow for the launch of green asset liquidity pools: With the launch of theClimate Collective, Celo community members proposed to allocate up to 40% of the reserve over time towards natural capital backed assets. A natural capital backed asset (also known as "green" or "regenerative finance" asset) is a tokenized representation of natural assets in the "real" world. An example of a green asset is a non-fungible carbon-negative initiative quantified in terms of fungible CO2 sequestered (e.g. tokenized carbon credits).
- Advance the use of natural capital backed currencies: The Celo Reserve grows as demand for Celo stable currencies grows. And as the reserve grows, so does the allocation towards green assets. This creates a feedback mechanism: with increased adoption of Celo stable currencies the reserve programmatically generates demand for additional green assets, preserving rainforests, and other carbon-sequestering assets.
- Use Uniswap as a decentralized mechanism to rebalance the reserve: The Celo reserve will not only need to rebalance its BTC, ETH, etc. holdings but also a variety of natural capital backed assets, such as tokenized land, forests, and carbon credits. If approved by Celo's community governance, a 40% allocation at current reserve values would correspond to natural capital assets worth 200M USD held by the reserve alone, requiring an efficient and liquid trading counterpart. Currently, the reserve rebalances via centralized exchanges. Green assets are not held by centralized exchanges, and so a decentralized exchange is needed in order to rebalance the Celo reserve as demand for stable currencies increases.
- Increase capital efficiency: Uniswap v3's concentrated liquidity mechanism will be especially important for Celo's stablecoins that trade within a small price range.
- Create pathways for future green use cases: Market participants are actively exploring other use cases on Celo. A list of current projects is available on https://climatecollective.org/.

The Celo Foundation will commit $10M of CELO in Uniswap-specific user incentives & grants on Celo. The Celo Foundation has successfully delivered committed rewards in the past (e.g. Sushi) and intends to do so in this instance as well. As a good faith deposit, approximately one-third of the $10M of financial incentives to Uniswap users for green asset pools will be placed in a multisig with the Celo Foundation and 2-4 key members of the Uniswap community, including both individuals and institutions. Of the incentives placed in the multisig, up to 1% of the $10M in financial incentives ($100K) will be directed towards funding an investigation into Uniswap protocol's climate impact, followed by a (potentially partial) mitigation phase. In addition to the $10M in financial incentives for Uniswap specifically, the Celo Foundation will also focus on broader adoption of natural capital backed currencies and link this to ongoing efforts to making DeFi and crypto more accessible to the 6B smartphone users around the world through the following:

- Promote the development of a mobile-first ecosystem through developer programs such as hackathons with Uniswap

as a financial building block

- Lead pilots and user research to help make Uniswap more accessible, especially in markets that lack access to basic financial tools and services.
- Co-grant program to support projects that are launching and driving the growth of “green assets”

Uniswap V3 will be deployed on Celo by the Celo Foundation or cLabs through the Deploy Uniswap V3 Script.” contingent upon approval by the Uniswap community for a license exemption. Governance at deployment will be facilitated by the messaging bridge Optics. See below for additional information regarding the Optics bridge.

Bridge

Overview: Optics is a generalized message passing protocol inspired by optimistic roll ups and other optimistic systems. At a high level, the Optics protocol works by utilizing a network of agents to observe and attest to messages on a source chain and relay those attestations to a destination chain, where they are accepted as valid after a 30 minute fraud window. During that window, an application’s “watchers” can disconnect it from the protocol if fraudulent attestations have been detected… You can read more about Optics here. More info on the Optics protocol security:

- Does the bridge support arbitrary message passing? Yes. The Optics bridge supports generalized message passing for all supported chains.
- Is the bridge secured by a trusted entity, by a multi sig, or a protocol/set of incentivized nodes? Applications using Optics are secured by a set of watchers, responsible for detecting fraud in the network. Only one Watcher needs to be honest in order for the application to be safe. Watchers currently include a combination of key protocols on Celo and Celo validators. While the bridge itself is not secured by a multisig, key contract deployments are owned by a 4 of 7 multisig, with signers from the Celo community. In alphabetical order, the signers are:
- Celo Foundation: 0xa725898D6F73C512f803B564A89DFbd96cF298EC
- Celo Wallet: 0xeE2b1e23e71052860C14f69E84AAF78478606D63
- Censusworks: 0x7519Db53B63d72721470319A5F4462D587Bb3008
- cLabs: 0xd85DC9A21378EF738A248236E970c2e0be89C9c2
- Mobius: 0x63c079444e07D82d33399DE7D56d6E48740494c7
- Moola: 0x7d7cd2ED526F99D05A05a93CCf42C1ADdBe78552
- Ubeswap: 0xFCcD3516d6BB62b009088aDae1E349430dDF6e77
- Celo Foundation: 0xa725898D6F73C512f803B564A89DFbd96cF298EC
- Celo Wallet: 0xeE2b1e23e71052860C14f69E84AAF78478606D63
- Censusworks: 0x7519Db53B63d72721470319A5F4462D587Bb3008
- cLabs: 0xd85DC9A21378EF738A248236E970c2e0be89C9c2
- Mobius: 0x63c079444e07D82d33399DE7D56d6E48740494c7
- Moola: 0x7d7cd2ED526F99D05A05a93CCf42C1ADdBe78552
- Ubeswap: 0xFCcD3516d6BB62b009088aDae1E349430dDF6e77

The multisigs are deployed at the following addresses:

- Celo: 0x070c2843402Aa0637ae0F2E2edf601aAB5E72509 (Celo Safe 31)
- Ethereum: 0x2bb2a5a724170357cb691841f40d26a950d8c33d (Gnosis Safe 12)
- Polygon: 0x8A1405C70c8a45177b5ac71b1d22779272E5d48b (Gnosis Safe 12)
- Avalanche: 0x8a11d528d12ea09ccbf86e21B7813812b53a6900 (Pangolin Safe 7)
- Does the bridge leverage the security of the source or destination chain, or is security provided by another third party entity? Optics leverages two sources of security, the updater, responsible for signing message attestations, and the ‘Watchers’, which watch for fraudulent attestations by the updater. Watchers for the Uniswap governance bridge deployment will include 5 to 10 Celo validators and contributors to key protocols on Celo. Currently, 9 groups representing key protocols on Celo or current Celo validators have expressed that they can set up a watcher for the Uniswap governance bridge.

- Is it possible for a fraudulent message to be passed to the destination chain? If so, are there any recall mechanisms? In the event all watchers are byzantine, a malicious or compromised updater can result in fraudulent messages being passed to the destination chain. If even a single watcher is honest, the application will be disconnected from Optics before any fraudulent messages can be processed.
- What are the ramifications of fraud to the malicious actor? In the current state, Optics Updaters, which are the actors that could behave in a malicious manner to the detriment of the system, are not bonded. In the event they were bonded, their malicious behavior would result in their bond being slashed upon a fraud proof submitted by a Watcher.
- Has the bridge code been audited? By a third party? What attack vectors and vulnerabilities were identified, if any? Have the identified vulnerabilities been remedied?
- Optics Smart Contracts were audited, with the results publishedhere. The audit found no critical vulnerabilities, 2 'medium' issues, and 10 'low' issues. Where issues were substantive, patches were made prior to mainnet deployment.
- Optics Smart Contracts were audited, with the results publishedhere. The audit found no critical vulnerabilities, 2 'medium' issues, and 10 'low' issues. Where issues were substantive, patches were made prior to mainnet deployment.

While Optics will be fully sufficient for the needs of the deployment and ensure appropriate governance messaging as discussed with the Uniswap Labs team, we believe that it will be in the best interest of the Uniswap community to eventually migrate to Abacus, a new generalized cross-chain communication protocol inspired by and built upon the foundations of Optics. In this sense, Optics shall be used as a bridge into a future Abacus deployment, that can be decided upon through a future governance proposal to the Uniswap community. Similar to this process for Uniswap v3 deployment, we're happy to work closely with the Uniswap community to make sure any changes to the governance bridge addresses cross-bridge governance needs. Abacus is expected to launch on major EVM testnets by early May, and mainnets by June and will not require a re-deployment of Uniswap v3 on Celo. Abacus will be API compatible with Optics, and will have significantly improved security guarantees. You can read more about Abacus here, but for high level security implementation details we provide the following info regarding protocol security:

- Does the protocol support arbitrary message passing? Yes. The Abacus protocol supports generalized message passing for all supported chains.
- Is the protocol secured by a trusted entity, by a multi sig, or a protocol/set of incentivized nodes? Abacus will be secured by a set of validators utilizing a proof of stake incentive mechanism.
- Does the protocol leverage the security of the source or destination chain, or is security provided by another third party entity? Abacus leverages two sources of security, a decentralized validator set secured by proof-of-stake on the source chain, responsible for signing message attestations, and "sovereign consensus", which allows for the provision of application-specific security rules. You can read more about "sovereign consensus" here.
- Is it possible for a fraudulent message to be passed to the destination chain? If so are there any recall mechanisms? While theoretically possible, it is unlikely given the multiple layers of defense. A quorum of validators would have to attest to a fraudulent message, for which they would be slashed, and an application's sovereign validators would have to accept the message.
- What are the ramifications of fraud to the malicious actor? Validators that sign fraudulent messages will have their stake slashed.

Measurement

Overall, we propose a transparent measurement of this project's success through the following success criteria and long-term goals:

- % of Celo Reserve allocated to green assets: 40% of the Celo Reserve (at current Celo Reserve levels this would correspond to $200M USD in green assets)
- $ total TVL and TVL of associated green assets: 10x of Celo Reserve green asset holdings in circulation as LP
- Impact of green assets in Celo Reserve: 17M tons of CO2 avoided or removed from the atmosphere (assuming an average price of $12 per ton and current Celo Reserve levels) , including all associated benefits (e.g. increase in biodiversity through protection of forests). This corresponds roughly to the annual absorption capacity of 1.7M hectares of forest area, or roughly the amount of forest area lost in Brazil in 2020.

License Exemption

We are requesting an exemption via an Additional Use Grant (license change enacted via the ENS domain uniswap.eth) that would allow the Celo Foundation and cLabs (Celo) to use the Licensed Work to deploy it on Celo, a layer 1 EVM compatible blockchain, provided that the deployment is subject to Ethereum layer 1 Uniswap Protocol governance and control. Uniswap V3 will be deployed on Celo by the Celo Foundation or cLabs through the "Deploy Uniswap V3 Script." Celo would be

permitted to use subcontractors to do this work.

Timeline

We anticipate deployment of the smart contracts on Celo to take a few weeks. Additionally, Uniswap Labs has noted that they will need to complete some front-end updates and add Celo to the auto router—this will take ~4 weeks and they are prepared to ramp up following Uniswap community approval of this governance proposal.

Governance at deployment will be facilitated by the messaging bridgeOptics. This deployment of the Uniswap governance application will take approximately 1 week—to be done simultaneously during the steps detailed above.

Conclusion

Celo and Uniswap together can serve as the foundation for the proliferation of natural capital assets across Web3. We believe that the vision to advance climate and regenerative finance on Celo aligns with the Uniswap community. Thank you for your consideration and we welcome questions and suggestions.

Additional note: Robert Leifke and Kyle Scott, members of Blockchain at Michigan, are co-founders of Mobius, a Celo stableswap protocol. To avoid any conflicts of interest, they have had no involvement in this partnership between Blockchain at Michigan and the Celo Foundation.

Simulation

The script, as well as the test script to simulate the proposal, can be foundhere. We have successfully tested the transaction on a mainnet fork. A console output of the test is shown below:

josh uniswap_proposal_simulation (main) >> npx hardhat test

No need to generate any newer typings.

Celo / Uniswap additional use grant simulation

timeLockAddressFromGovernor 0x1a9C8182C09F50C8318d769245beA52c32BE35BC

subnodeResolver 0x4976fb03C32e5B8cfe2b6cCB31c09Ba78EBaBa41

blockNumber OLD 14610481

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current number of proposals created: 15

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The Celo Foundation and cLabs (“Celo”) are granted an additional use grant to use the Uniswap V3 Core software code (which is made available to Celo subject to license available at v3-core/LICENSE at main · Uniswap/v3-core · GitHub (the “Uniswap Code”)).

As part of this additional use grant, Celo receives license to use the Uniswap Code for the purposes of a full deployment of the Uniswap Protocol v3 onto the Celo blockchain.

Celo is permitted to use subcontractors to do this work.

This license is conditional on Celo complying with the terms of the Business Source License 1.1, made available at v3-core/LICENSE at main · Uniswap/v3-core · GitHub.

subnodeResolver 0x4976fb03C32e5B8cfe2b6cCB31c09Ba78EBaBa41

✓ proposal simulation (32840ms)

1 passing (33s)