Basic Details

Project Name:

Pendle

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L2 Recipient Address:

0xa06C863fcf17cA6f24AA81aeA75E23953193fF6A

Which Voting Cycle are you applying for?:

Cycle 11

I confirm that I have read the landing pages for the Builders 13 and Growth Experiments 15 Sub-Committees and that I have determined my proposal is best suited to be reviewed by the Growth Experiments Sub-Committee:

Yes

I understand that Growth Experiments grants are subject to a "no sale rule," as explained in this post 6, and I have read the terms of the rule:

Yes

Project Details

What are you building?:

The Pendle protocol enables permissionless tokenization and trading of yield. Pendle allows anyone to purchase assets at a discount, obtain fixed yield, or long DeFi yield. The protocol enables this by taking yield-bearing tokens and then splitting them into their principal and yield components, PT (principal token) and YT (yield token) respectively, which allows them to be traded via Pendle's AMM.

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The Pendle AMM is purposely built for trading yield derivatives in a capital efficient manner with negligible impermanent loss due to the pool pair being strongly correlated.

Yields are often cyclical in nature and typically swing between highs and lows (much like a pendulum!). Typically, the floor and ceiling for the yield of a liquid asset are much easier to predict than its price. For example, the annual yield of staked ETH is likely to fluctuate in a band of 0.5–12%. Knowing the rough yield range of an asset enables us to concentrate liquidity within that range.

Given the previous example, our AMM can be optimized for such a range on staked ETH. The result is something conceptually similar to UniV3's concentrated liquidity whereby liquidity is utilized much more effectively, while still retaining fungible LP tokens.

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The AMM model's curve is specifically designed for yield trading. As time passes, PT and YT prices naturally shift as they
approach maturity. The AMM curve automatically shifts to account for these changes, such that one will only trade the
interest rate changes and not the prices of the individual assets.

The curve shifts also adjust the model to be more capital efficient as we approach maturity by taking into account the fact
that PT trades closer to the underlying asset price (for example, it becomes infinitely capital efficient at the maturity where
PT trades 1-to-1 against the underlying asset).

You can learn more on what Pendle enables you to do on our dedicated Learn Page.

Why do you believe what you are building is going to succeed?:

Pendle brings the TradFi interest derivative market into DeFi. In traditional finance, interest rate swaps are the biggest
market in the world at > $500T. PT is the equivalent of zero-coupon bonds while YT is the equivalent of coupon payments.
Pendle is positioning itself to become a core infrastructure for the next phase of DeFi.

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By creating a yield market in DeFi, Pendle unlocks the full potential of yield. Pendle enables users to execute advanced yield
strategies, such as:

- Long assets at a discount

- Fixed yield for low-risk, stable growth

- Leverage exposure to future yield streams without the need for collateral

- A mix of any of the above strategies

We have also been getting a lot of traction from the community, helping educate other users and covering unique yield
trading strategies, e.g.:

- Delta-neutral farming by 2Lambroz: https://twitter.com/2lambro/status/1630917100402532357

- Louis Cooper covering Pendle mechanics: https://twitter.com/LouisCooper_/status/1612743314092232706

- DeFi Made Here covering on-chain interest derivatives:
  https://twitter.com/DeFi_Made_Here/status/1628771658361196544

With various yield-bearing protocols already existing on Optimism such as Sonne Finance, Tarot, and QiDao to name a few,
it makes sense for Pendle to deploy there to create a market for yield trading.

How many users does your project have currently? Please include how you arrived at this estimate.:

We looked at all the transactions that has interacted with our contracts and filter out all the unique wallets.

Unique Addresses: 431

How will receiving a grant enable you to further the mission of maximizing the number of users interacting with Optimism?
Please include a step-by-step flow of how you imagine this grant can lead to a greater number of user interactions with
Optimism:

Our grant proposal outlines a two-pronged approach to incentivize the usage of yield-bearing assets on Optimism and to
deepen liquidity.

Specifically, we will incentivize:

1. Liquidity providers on Pendle's pools. This enables Pendle to acquire deposits that reflect back to the total value
   locked of the integrated underlying protocol, such as Sonne Finance, Tarot, QiDao, etc.

2. Liquidity providers on the PENDLE/WETH pools on Velodrome, in order to deepen liquidity between the pairs.

All OP in the grant will be used on the two approaches above to distribute to Optimism users for their benefit.

Tell us about the users you plan to target with this grant. Include any defining characteristics that will help you identify and target them.:

Our UI has two modes: Simple and Pro. The Simple UI and Pro UI run on the same set of contracts and use the same set of yield-bearing assets.

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The Simple UI provides a simplified user experience that is more accessible to retail and new users. It has the same pools, tokens, and contracts, with a streamlined Dapp for two main functions: buying assets at a discount and providing liquidity.

The Pro UI, which targets more sophisticated and DeFi-native users, gives users the full suite of functions on Pendle, allowing users to execute any yield strategies by freely buying and selling PT and YT.

How would these users interact with Optimism? For how long?:

We will provide a platform for users to speculate on yield trading for yield-bearing assets in the Optimism ecosystem.

An asset in consideration is the sAMM-WETH/sETH pool on Velodrome Finance with $31 million of liquidity (https://app.velodrome.finance/liquidity/manage?address=0xfd7fddfc0a729ecf45fb6b12fa3b71a575e1966f).

Historically, we see on average of $4.8 million in trading volume in our first month of supporting a new ecosystem. With Optimism, assuming the same traction, we can expect at least $4.8 million in trading volume and $3 million in TVL.

Furthermore, we aim to attract users to interact with Optimism by offering a 26-week long incentives program on Pendle's pools. This program is designed to incentivize volume and deepen liquidity in the Pendle pools. We expect users to use and interact with Optimism through Pendle even after the end of the incentives program due to the financial opportunities available of being able to trade yield on Pendle.

Provide us with links to any of the following for the project:

- Dapp: https://app.pendle.finance/
- Website: https://pendle.finance/
- Twitter: https://twitter.com/pendle_fi
- Discord/Discourse/Community: https://pendle.finance/discord
- Github: https://github.com/pendle-finance
- Technical/Economic Documentation: https://docs.pendle.finance/

Do you have any metrics on the project currently? (TVL, transactions, volume, unique addresses, etc. Optimism metrics preferred; please link to public sources such as Dune Analytics, etc.):

Below are the following metrics as a measure of traction since launch of Pendle V2:

Transactions: ~1.8k transactions

TVL: $24 million

Volume: $21.6 million on Ethereum, 976k on Arbitrum (6 days since launch on Arbitrum)

Our contribution to Aura TVL since integrating their protocol on Ethereum (https://dune.com/cheeezzyyyy/pendle-market-

pool-liquidity):

1. 56% growth on Aura's rETH-WETH pool since launch (12th Jan 2023)

2. Aura liquidity grew by 7.4k LP; Pendle contributed 4.2k LP

3. Aura liquidity grew by 7.4k LP; Pendle contributed 4.2k LP

4. 13% growth in Aura's wstETH-WETH pool since launch (9th Feb 2023)

5. Aura liquidity grew by 30.8k LP; Pendle contributed 4.1k LP

6. Aura liquidity grew by 30.8k LP; Pendle contributed 4.1k LP

Unique Addresses: 431

Other protocol metrics can be found on our analytics dashboard: https://analytics.pendle.finance/

The recent Arbitrum launch grew the number of unique addresses significantly. When Pendle is launched on Optimism, we can expect the same or greater metrics in terms of unique addresses, TVL, and volume given the strong traction of some of the popular yield-bearing tokens there.

Competitors:

Element Finance, APWine, Sense, Swivel Finance

Audits:

https://github.com/pendle-finance/pendle-core-v2-public/tree/main/audits

Team

Who are your founders?:

TN Lee, CEO | previously Head of Business at Kyber Network | Twitter: tn_pendle

Vu Nguyen, CTO | previously Lead Smart Contract Developer at Digix | Twitter: gabavineb | GitHub: mrenoon

What makes your team well-suited to carry out the project described in this proposal?:

Pendle has pioneered yield-trading derivatives in the DeFi space and has been operational for 2+ years without facing any major vulnerability. Pendle V1's (launched last June 2021) traction has garnered $350 million in notional traded volume supporting a wide range of assets, from stablecoins to tokens with 80,000% APR. With our Pendle V2 launch last November, we have achieved $23 million in TVL and $22 million in cumulative traded volume. We have worked closely with other DeFi projects in the space such as Aave, Lido, Convex, LooksRare, Aura, Balancer, LayerZero, Celer, and many many more.

Is this your first Web3 project?:

No.

If not, what else have you built? (Share links, Github repository, or any other useful information.):

The team has history building in the Web3 ecosystem and has contributed to projects such as Kyber, Digix, imToken, DefiLlama, etc.

The team has also proposed EIP-5115 (https://eips.ethereum.org/EIPS/eip-5115) in order to standardize the fragmented yield market. Building on top of the ethos that inspired ERC-4626, EIP-5115 or SY is a new interface standard designed by Pendle, to wrap all yield-bearing tokens into a single standardized yield interface.

Grant Request

What is the size of the grant request?:

104,500 OP

How do you justify the size of the grant?:

- 3,673 OP per week will be used to distribute equally among the Pendle pools as incentives over a period of 6 months (26 weeks). A total of 95,500 OP will be used for this initiative. Aside from the underlying yield of the pool itself from swap fees underlying protocol yield, PENDLE incentives will be distributed as well as those pools are voted for to

channel incentives via vePENDLE.

- 3,000 OP per month will be distributed to the PENDLE/WETH pool on a DEX such as Velodrome over a period of 3 months. A total of 9,000 OP will be used for this initiative. PENDLE incentives will be matched as well to help deepen the liquidity in these pools.

Roadmap and Distribution Plan

Describe in discrete steps how you will successfully implement your grant plan:

Once the OP grant is received, we will:

1. Prioritize deployment of the Pendle protocol on Optimism;

2. Launch with a set of yield-bearing assets as launch partners in a similar vein to how we did it on Ethereum and Arbitrum;

3. Deploy a portion of the grant on an incentives distribution contract for the Pendle pool LPs on Optimism;

4. Work with a DEX on Optimism to set up liquidity for PENDLE/ETH, and deploy a portion of the OP grant along with matched PENDLE incentives in order to deepen liquidity;

5. Continue the cycle of supporting more yield-bearing assets to create more yield markets, and allocate a portion of the OP grant to those pools to deepen liquidity;

How will the OP tokens be distributed? (please include % allocated to different initiatives such as user rewards/marketing/liquidity mining. Please also include a justification as to why each of these initiatives aligns with the problem statement this proposal is solving. Distribution should not include the sale of any tokens by the grantee or the use of tokens for compensation, protocol expenses, etc. See the no sale rule here):

- 91.4% of the allocation will be for LP incentives on Pendle, targeting 3,673 OP distributed equally among the pools per week for 26 weeks. As it stands, LPs receive swap fees generated by the pool, PENDLE incentives, and protocol incentives emitted by the underlying asset. Having additional OP incentives would encourage users to deepen the liquidity of the Pendle pools on Optimism.

- 8.6% of the allocation will be used to incentivize PENDLE/WETH pools on a DEX on Optimism, such as Velodrome, targeting 3000 OP per month for 3 months.

Over what period of time will the tokens be distributed for each initiative?:

- 26 weeks for Pendle LP incentives for 91.4% of the OP allocation;

- 3 months for DEX LP incentives for 8.6% of the OP allocation;

Please provide benchmark milestones for this project. These milestones should guide the Optimism community on the progress of your project throughout your work on the project. Do not use distribution of the grant itself as a milestone:

We will be utilizing the Optimism Grant over the course of 26 weeks (~6 months). We start tracking the moment Pendle has deployed on Optimism (i.e. Day of deployment + 6 days = Week 1).

Benchmark Milestones

TVL

Weekly Trading Volume

Unique Addresses

Deadline

$4.25M

$1.5M

1.6K

Week 4

$10.5M

$3.5M

2.7K

Week 16

$16.2M

$5.5M

3.6K

Week 26

Source of Truth:

We will prepare a [Dune dashboard](#) to track these metrics.

We will also further improve our own analytics page (https://analytics.pendle.finance) to show metrics per chain.

Please define critical milestones for this project. Critical milestones are meant to show good-faith efforts to accomplish the project. Non-completion of these milestones could lead to revocation of remaining grant rewards. Do not use distribution of the grant itself as a milestone:

Similar to the benchmark milestones above, we will be utilizing the Optimism Grant over the course of 26 weeks (~6 months). We start tracking the moment Pendle has deployed on Optimism. (i.e. Day of deployment + 6 days = Week 1)

Mileston Type

Milestone

Deadline

Critical

Deployment of the Pendle protocol listing of the first yield-bearing asset on Optimism

Week 1

Critical

$9.2M in TVL

Week 10

Critical

$3M in weekly trading volume

Week 10

Critical

14% TVL contribution on respective protocol's pool

Week 10

Critical

2,500 unique addresses

Week 10

We have extrapolated these numbers based on our past performance on Ethereum and Arbitrum. On average, Pendle contributes 14% of the TVL to the pools that Pendle is supporting. We should expect the same growth for Optimism pools.

Week 10 should be a good benchmark to measure Pendle's traction on Optimism and to review whether the remaining grant rewards should be given.

Source of Truth:

We will prepare a [Dune dashboard](#) to track these metrics.

We will also further improve our own analytics page (https://analytics.pendle.finance) to show metrics per chain.

If the OP tokens are for direct distribution to users, why will incentivized users and liquidity on Optimism remain after

incentives dry up?:

Pendle has devised a strategy to sustain usage on Optimism by:

1. Continuous listing of new yield-bearing assets to allow users to trade yield and hedge yield risk;

2. Create developer tools that allows anyone on Optimism to create markets on Pendle permissionlessly in the same vein of Uniswap;

3. Closely work with liquid lockers and bribe markets to continuously vote on the Pendle pools on Optimism for channeled PENDLE incentives;

There will be PENDLE incentives allocated to other ecosystem activities on Optimism beyond just liquidity mining. Pendle plans to grow and maintain long-term collaboration with the Optimism team and the various projects native to Optimism in order to grow the Optimism ecosystem.

Please provide any additional information that will facilitate accountability (smart contracts addresses relevant to the proposal, relevant organizational wallet addresses, etc.):

Pendle smart contracts have been audited by Ackee, Dedaub, Dingbats, and some of the top wardens from Code4rena such as cmichel, WatchPug, and leastwood.

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DefiLlama: https://defillama.com/protocol/pendle

CoinGecko: https://www.coingecko.com/en/coins/pendle

Optimism Relationship

Does your project solve a problem for the Optimism ecosystem? If so how?:

Since Pendle is a yield-derivatives protocol, it expands the use of any yield-bearing asset on Optimism.

Different strategies exist for various stakeholders:

1. Traders: able to leverage yield opportunities without locking up principle;

2. Arbitrageurs: profit by rebalancing the market inside Pendle's custom AMM engine;

3. Liquidity providers: provide liquidity on the Pendle AMM for yield (swap fees, protocol incentives, PT fixed-rate interest);

Why will this solution be a source of growth for the Optimism ecosystem?:

Aside from what's already been mentioned above, we plan to grow the Optimism ecosystem by:

1. Onboarding new users to Optimism through the support of popular yield-bearing assets on Pendle markets;

2. Exposing the Pendle and yield-trading communities to the greater Optimism ecosystem;

3. Aiming to be one of the top projects in terms of TVL;

4. Working closely with the most talented developer community;

Is your project Optimism Native?:

No. Ethereum native, but planning to deploy on Optimism.

Confirmations

I understand that I will be required to provide additional KYC information to the Optimism Foundation to receive this grant:

Yes

I understand that I will be expected to following the public grant reporting requirements outlined here:

Yes