Basic Details

Project name:

Infinity Keys

Author name and forum name (please provide a reliable point of contact for the project):

Andy Boyan, [andy@infinitykeys.io], @andyboyan, magic#4311

L2 recipient address:

0x37c752aA952CFb62cc403fd810F2a01801675Bcc

Which Voting Cycle are you applying for?:

Cycle 11

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

Yes, confirmed.

Project Details

What are you going to build?:

Infinity Keys is a platform for fun, DaVinci Code-style challenges that create community engagement. There are 3 "Keys" to the platform.

1. A mystery puzzle game: Secret society-themed challenges, story, and community.

2. Play h ttps://www.infinitykeys.io/puzzle/the-society to advance to level 1 in IK Discord (claim reward NFT on Optimism).

3. This build proposal is to create a number of Infinity Keys core quests that exclusively mint rewardable NFTs on Optimism with an aim to create gameplay specific to the Optimism, BASE, and Superchain ecosystem.

4. Creator Tools: Infinity Keys is a no-code, user-generated content platform for anyone to build casual/puzzle games with web3 validation and rewards. Combined with our OSS strategy, creator tooling and community are how Infinity Keys achieves network effects, and how we are positioning IK for massive growth.

5. We use this platform to build and feature challenges with partners across web3, and are in talks with Fortune 500 brands to use IK as a game engine for experiential games. This is how the core Infinity Keys business generates a majority of revenue.

6. Example: Play live partner challenge from RaidBrood h ttps://www.infinitykeys.io/pack/raid-brood.

7. This build proposal would aim to work with other Optimism ecosystem partners at a discounted rate in order to focus on retention in the Optimism ecosystem.

8. The no-code, self-service component of Infinity Keys is not yet live. We will use this grant to assess how Infinity Keys and the Optimism and Superchain ecosystem are aligned as we build the platform and community.

9. Public Goods: Infinity Keys intends to release the game engine (validation and achievement logic) as an OSS package depending on public goods funding partnerships. This part of the project is not intended as part of this proposal.

Here is a video demo of the Infinity Keys platform. h ttps://youtu.be/YiwDqrZGDLY

We are proposing

to modify the Infinity Keys application to default to Optimism for NFT minting. We currently allow players to mint rewardables to Avalanche, Ethereum, Polygon, or Optimism with Polygon mints taking up a significant majority of the mints. By moving the core gameplay NFT minting to Optimism by default, Infinity Keys is staking a claim on a home base within the Superchain ecosystem, and ideally bringing a significant number of players from other chains to Optimism as IK grows.

Why is what you are going to build going to succeed?:

It's going to succeed because it already has, and we have done zero paid marketing. We have demonstrated success by building a number of initial partner challenges, demo MVP challenges, and the start of an Infinity Keys lore across the application and Discord community. As a scrappy team of builders we have achieved ~100,000 mints and our incentives have been under $1000 worth of airdrops or giveaways. People are already playing the games just because they are fun games. They are described as addicting, fun, clever, and people report feeling like they need to complete them all.

The core hypothesis of Infinity Keys is that there are additional effective incentives that can be used alongside bribery/token emissions. Games showcase many of these incentives, but to tap into gaming incentives you need to give players more than gamified achievements and leaderboards. You can't just call a list of tasks a quest. You need actually fun games.

DaVinci Code-style puzzle games provide these mechanics without demanding constant time spent farming in action games, and allow for a partnership model across a native game and various digital partners that result in authentically fun digital experiences.

We are a passionate and experienced professional team with deep roots in web3 and game research and industry. We've been involved web3 since 2017, working in the industry since 2018, building together since 2021 with dedicated focus on Infinity Keys since April of 2022. We have successfully deployed Infinity Keys challenges with mints on mainnet Ethereum, Polygon, Avalanche, and Optimism. The roots of our game design strategy and philosophy come from a decade+ of research in game mechanics and learning, which allows us to tap into a wide variety of alternate gaming motivations compared to typical web3 gaming projects.

We are building towards an exponential number of community created and curated games, which will incentivize more creators and players to join, play, and create across the Infinity Keys network, including developers that wish to integrate puzzle games in their own applications.

Is your project likely to bring new builders to the Optimism ecosystem? If so, please describe how:

Yes, creating stuff to do for users after OP emissions from growth grants is critical to the long term retention of users on Optimism. Infinity Keys is a system for creating long-term engagement. By using web3 assets as required game pieces, challenges can stay up indefinitely. This means that builders who come to Optimism have a native community of players that are ready to pursue new challenges leading to new projects. This is a long-term, native onboarding system with a focus on engagement and retention.

In a future objective, Infinity Keys will release our game engine (questing and achievement logic and gating) as an OSS spec, providing a guide for any developer that wishes to integrate gamification into their own apps. This is a highly desired toolset for developers who often wish to make games for their own products, but realize the task of building out a system is a dangerous scope creep situation. By giving devs a spec with a home base on Optimism, this will exposure developers to the idea of gaming, NFTs, and building on Optimism.

Additionally, as a featured and dedicated partner, Infinity Keys would become a vocal Optimism evangelist and showcase how projects can leverage new and interesting incentive mechanisms within an ecosystem of L2s on mainnet.

Is your project likely to improve the quality of developers in the Optimism ecosystem? If so, please describe how:

See below

Is your project likely to improve the commitment of developers in the Optimism ecosystem? If so, please describe how:

Yes, having native ecosystem games that feature genuine growth instead of token emissions will attract serious builders who want to create applications with curious and loyal users. Optimism already established a culture of curiosity with the Quests, but can now extend that beyond a few campaigns and into a focus on engagement and retention.

Also in our anecdotal experience, the smartest developers like clever puzzles. Good developers want to participate in systems where there are many types of support, token emissions grants, good documentation, and also a clear growth and retention strategy.

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

Sorry for the links in this format, the forum only let me post a couple as full hyperlinks.

Demo: h ttps://youtu.be/YiwDqrZGDLY

Website: infinitykeys.io

Twitter: h ttps://twitter.com/infinitykeys

Discord/Discourse/Community: Infinity Keys

Other: h ttps://lenster.xyz/u/infinitykeys

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.):

Holders = unique wallets

Transfers mostly = mints

mainnet

polygon

avalanche

optimism

totals

holders

2,305

14,780

146

1,141

18,372

total transfers

7,544

86,721

563

7,499

102,327

Who are your competitors?:

Galaxe

Premint.xyz

Quest.xyz

What differentiates you from your competitors?:

- Actually fun games
- Players that play for the sake of fun, and not for airdrops
- Sybil protection
- Composable gates and rewardables
- Focus on community game development
- Open source game/questing engine

Will your project be composable with other projects on Optimism? If so, please explain:

Yes, our technology follows the ERC-1155 standard.

Team

Who are your founders?:

Andy Boyan, PhD. Former professor of Communication with research focus on digital game mechanics and effects. Formerly @ Status, Chainlink Labs, Ava Labs.

What makes your founders well-positioned to accomplish your goals with this project (1-2 sentences on each)?:

Demonstrated history of deep understanding of social, technical, and operation requirements for delivering a project that spans engineering, social dynamics, and game mechanics. Andy founded Infinity Keys because of a desire to see a platform for game creation and questing live in the world. His social science study into media effects with a focus on game effects informs the team's data-centered approach to design and strategy, and his wealth of web3 experience with highly technical projects helps bring a thoughtful and sophisticated understanding of on- vs off-chain technical features and the structure of decentralized networks. This combined with his study into human social dynamics is a perfect storm for creating an ambitious platform like Infinity Keys.

Tell us about the rest of your team (if there are more teammates):

Our full team is here h ttps://docs.infinitykeys.io/infinity-keys-docs/team/team-members

Is this your first Web3 project?:

No

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

Among other web3 experience mentioned above, founder and technical PM worked on Rainbow Rolls. Solidity lead was instrumental in building Velodrome on Optimism. Numerous investors and advisory roles are in highly technical roles.

I understand that Builders grants are subject to a 1 year lock-up, as explained further in this post :

Yes.

Is your project funded? If so, provide an estimate of how many months of funding runway your project has:

Yes funded, but runway depends on how we focus our efforts. We currently have revenue and can increase revenue to build more runway for ourselves. However, doing this would be a focus on building partnerships and business development instead of product and ecosystem development. We have between 3-6 months of runway for this, with a conservative strategy to move us into revenue neutral territory in that time.

Our preference is to solicit additional investment and public goods funding to invest in team expansion and platform expansion in order to build upon our successes and prepare Infinity Keys for a significant impact in onboarding, retention, and network effects through the next cycle of web3 fascination.

Grant Request

What is the size of the grant request? (50k OP max):

25k OP negotiable

How do you justify the size of the grant?

This grant is intended to align Infinity Keys with Optimism and Superchains. We anticipate using OP after the vesting unlock to reimburse Infinity Keys treasury for development and operations costs for 2 months of work. Additionally, the remaining portion of this grant we intend to use for governance participation in the Optimism Foundation (and depending on the size of the grant, allied partner governance).

In the short term, approval means that Infinity Keys can approach Optimism angels and funding partners for venture funding. An allocation by the grants committee would show that there is alignment between the Foundation and Infinity Keys, which would give these efforts more weight. Simply put, the larger the grant amount, the greater impact these efforts will have.

That said, the size of the grant was calculated based on the approximate costs of building for 2 months (spread over 4-6 months). This includes team costs for building the application with Optimism defaults, and team efforts in focused Optimism ecosystem games and partnerships.

Roadmap

Describe in discrete steps your plan for accomplishing your project:

1. Redesign the Infinity Keys UI/UX to guide new players to mint Infinity Keys rewardables on Optimism.

2. Update account abstraction systems (magiclink, but converting to keyp) to default to Optimism.

3. Design and launch new Infinity Keys core games exclusive to Optimism

4. Recruit 10 -15 Optimism ecosystem partners for discounted game development and design

5. Develop challenges for/with each partner

6. Launch partner challenges in a strategic rollout

7. Build a self-service/create-your-own challenge MVP with default settings to mint on Optimism

8. Draft a community governance home on Optimism

Infinity Keys as a project has a roadmap that extends beyond the scope of this grant. These details have been added in the milestones sections below.

Does your plan depend on the receipt of OP tokens?:

Yes. Infinity Keys is looking for ecosystem alignment. We are currently chain-agnostic, and Optimism Foundation taking a funded and dedicated interest in Infinity Keys would allow IK to build in a more exclusive manner. We will continue to generate revenue from applications and partners across ecosystems, but this grant will allow us to focus our efforts to an aligned L2.

We are currently most successful on polygon with both mints and paid partnership relationships, so we anticipate that without focusing efforts on Optimism and mainnet, we will end up focused on a side chain with a strong existing gaming presence.

Along with this grant are also seeking Optimism-friendly funding vehicles such as funds, angels, or public goods funding to help keep our lights on as we expand. The signal from this OP grant would allow us to commit fully to building our own structures on Optimism and solicit funding that is also aligned with this mission.

What is your plan for the use of the OP token after the 1 year lock-up?:

The first use of the OP tokens at unlock will be to reimburse the Infinity Keys treasury for work. This is approximately $35,000 per month, with an estimate of this work taking approx 2 months. Depending on the size of the grant and the price of OP, we will delay selling the OP until a strategic time in the market because we wish to retain a significant amount of OP for additional objectives in the ecosystem.

As a member of the Optimism ecosystem, Infinity Keys plans to participate in governance with OP token reserves. We see a future where Infinity Keys hosts home governance and gameplay on Optimism exclusively, or in combination with Ethereum and other superchains such as Base or our own. As a long-term partner these OP will help establish IK as a dedicated partner in the larger governance of the L2 within an aligned ecosystem. Since IK is predicated on succeeding via network effects, it makes the most sense to maintain aligned interests.

For Infinity Keys, the OP Grant would signal to other funding organizations that we are committed to ecosystem participation and development, and that ecosystems are aligned with our mission as well. We would use this grant as a signal for other funders to invest in Infinity Keys as a project, and bring our eventual token launch to Optimism as well.

Please provide benchmark milestones for this project. These milestones should guide the Optimism community on the progress of your project during the 1-year lock-up period.

Here are some metric outcomes that we expect for Infinity Keys within the first year on Optimism given funding targets are met and we can deploy resources.

NFT Mints

: Target 10,000+/quarter. As Infinity Keys partnerships increase in frequency and visibility, we anticipate a flywheel effect for participants entering our game and minting across various puzzles and games from the native IK hunts through the partner challenges.

- Potential date of completion: November 30, 2023, then each 3 month period afterward

- Objective to be accomplished: 18,000 Infinity Keys NFT mints on Optimism, and 10k additional each quarter following

- Source of truth: Contract Address 0x54b743D6055e3BBBF13eb2C748A3783516156e5B | Optimism

Live Puzzles

: Target 26/quarter. We aim to launch two new puzzles per week, with a goal of at least one partner and one new IK puzzle weekly. This results in ~20-60 min of gameplay per week provided by the core team, with no upper bound on the amount of content once build-your-own is live.

- Potential date of completion: November 30, 2023, then each 3 month period afterward

- Objective to be accomplished: 26 Infinity Keys Challenges that default NFT minting to Optimism, and 26 additional each quarter following

- Source of truth: https://www.infinitykeys.io/play

Socials

: Target 25k Discord, 100k Twitter, 25k Telegram. Infinity Keys has engaged in no paid marketing promotions to this point. Our current funding round, bolstered by signal from this Optimism Grant, will allow us to lean into promotions across all social platforms, most notably the big3 for web3.

BYO Puzzles

: Target 125+. Build-Your-Own Puzzles are due live in fall 2023, and will allow anyone to create puzzles to be submitted to the Infinity Keys library. We aim to make this part of our revenue strategy in SaaS model. With Galaxe as an estimate, we anticipate the market for BYO is significant, however, as an upstart competitor there is training for our platform, especially as

we focus on gameplay and not social promotion. Therefore we have a scaling monthly target for self-service/BYO puzzles as part of the revenue model, but no real way of knowing how many organic freemium or premium puzzles that users will create.

- Potential date of completion: May 1, 2024

- Objective to be accomplished: 125 Infinity Keys Challenges created by IK users

- Source of truth: https://infinitykeys.io/play

Optimist Secret Society

: Target 10k. The Infinity Keys Discord features "Secret Societies" as subsections gated by completing special tasks within particular communities. This is one way we build partner identity in our own Discord and do outreach across platforms such as guild.xyz. As the Infinity Keys Discord grows we aim to feature an Optimist Secret Society to help reinforce the home for minting and governance.

- Potential date of completion: May 1, 2024

- Objective to be accomplished: 10,000 members in the Optimist Secret Society in the IK Discord

- Source of truth: Infinity Keys

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.

We are presenting the following technical milestones as the major sections of our development roadmap. * indicates where these milestones are critical in relation to this grant. Note: Timeline for these milestones are dependent on team funding.

- *Keyp

Account Abstraction Login: We are currently using magic.link, but are converting very soon to Keyp for our login. This is an important step in simplifying onboarding for muggles (non-web3 people) as it permits Infinity Keys to give anyone an account with an integrated wallet. This integration is a critical component in bringing people from our traditional web2 campaigns into an invisible web3 world. As people play the game, they have the option to retain their progress within our database, or they can mint their progress on Optimism via their wallet. We also have a Gelato grant under consideration that will fund gasless minting on Optimism and further simplify the onboarding process.

- Potential date of completion: June 1, 2023

- Objective to be accomplished: Use Keyp as an account abstraction and login service that creates default user wallets on Optimism.

- Source of truth: https://www.infinitykeys.io/profile

- Critical for this grant: Yes

- UX

: There is a UX/UI overhaul underway currently, which will simplify the progression, minting, and profile experience, as well as update branding to be more secret society-themed and feature Optimism as a home base for our community.

- Potential date of completion: Sept 1, 2023

- Objective to be accomplished: Update Infinity Keys user experience to default to Optimism as the home chain for NFT minting and updated branding for all Infinity Keys digital properties.

- Source of truth: https://infinitykeys.io

- Critical for this grant: No

Social API Integrations

: IK checks passcodes, assets in a user's wallet, contract function calls from a user's wallet, and soon data from connected APIs. Several social APIs are being integrated so that Infinity Keys games can require Twitter follows, Discord joins, etc, to promote social growth within the gaming wrapper.

- Potential date of completion: Oct 1, 2023

- Objective to be accomplished: User can connect their Infinity Keys profile to social accounts including Discord, Twitter, and Lens.

- Source of truth: https://www.infinitykeys.io/profile

- Critical for this grant: No

- *Optimism Home Mints

: Optimism-first minting for Infinity Keys home games. When Players complete challenges on IK, they currently have the option to mint the IK contract NFT to Ethereum, Avalanche, Polygon, or Optimism. We would change this to be an Optimism-first, and possibly Optimism-only mint. It greatly simplifies our technical requirements to restrict minting to one contract, and then referencing other contracts via API for partner projects. For example, for the Aavegotchi hunt we would reference whether they completed function calls on Polygon, and then require that players mint the IK achievement on Optimism (or Optimism and Ethereum with Optimism as the first presented option - this needs to be further scoped).

- Potential date of completion: July 1, 2023

- Objective to be accomplished: When the player mints an Infinity Keys achievement NFT, the default option for them to mint is Optimism (with scoping for OP as the only option or Ethereum/Superchain minting)

- Source of truth: https://infinitykeys.io/play

- Critical for this grant: Yes

- *Optimism Partnerships

: With this grant we would be able to focus our efforts in web3 partnerships across the Optimism ecosystem and bring additional engagement and staying power to the many DeFi and NFT projects already building on Optimism. Linking these together in a broad Optimism hunt as a follow-on to the Galaxe onboarding "quest" would create a sense of community for further exploration on Optimism and would be a natural onboarding for cross-chain Infinity Keys players to explore Optimism in more detail.

- Potential date of completion: Dec,1 2023

- Objective to be accomplished: 20 Optimism projects featured as partners among Infinity Keys challenges

- Source of truth: https://infinitykeys.io/play

- Critical for this grant: Yes

- Muggle Partnerships

: Infinity Keys aims to partner with ~one major traditional brand per quarter in experiential marketing events. These events provide massive reach outside of the standard web3 user base. We intend for Infinity Keys wallets and mints from these partnerships to end up on Optimism as a "Home Mint".

- Potential date of completion: Dec,1 2023

- Objective to be accomplished: 1 major traditional brand project with an Infinity Keys challenge mints NFTs on Optimism

- Source of truth: https://infinitykeys.io/play

- Critical for this grant: No, but if we get it would be really amazing for all

- Gaming API Integrations

: IK checks passcodes, assets in a user's wallet, contract function calls from a user's wallet, and soon data from connected APIs. By summer 2023 IK games will have the ability to require specific achievements from other gaming platforms such as Steam, XBOX Live, Battlenet, and more.

- Potential date of completion: Nov,1 2023

- Objective to be accomplished: Infinity Keys challenges can reference Steam API data (or equivalent) as requirement for challenges

- Source of truth: https://infinitykeys.io/play

- Critical for this grant: Yes

Yield Pools Rewards

: When IK players complete a puzzle, they are assigned a "rewardable", which allows the game creator to give them assets or access to particular features. We will create special yield pools via PoolTogether, Aave, and other Optimism-based DeFi partners. The incentive is that yield pool rewards will be greater for those who complete the games first, a competitive environment for gaming and a natural integration of existing secure DeFi.

- Potential date of completion: Feb,1 2024

- Objective to be accomplished: Infinity Keys rewards as yield pool on Optimism featuring partnership with Optimism DeFi project such as PT, Aave, Velodrome

- Source of truth: https://infinitykeys.io/play

- Critical for this grant: No

- *BYO Puzzles

: Infinity Keys will launch a native Build-Your-Own puzzle builder within the app that defaults NFT minting to Optimism. This should result in significant creator activity as IK users build their own ideas from scratch to develop cross-project marketing initiatives, fan service games, or new creative pursuits.

- Potential date of completion: April,1 2024

- Objective to be accomplished: 125 Infinity Keys Challenges created by IK users

- Source of truth: https://infinitykeys.io/play

- Critical for this grant: Yes

Open Source IK Game Engine

: We aim to release open source code for the core Infinity Keys game engine. The goal is to provide a spec model for the engine so that developers building can create composable puzzles and games to any on the main IK platform, including any user-generated content. The goal is to enable composable games using composable assets and standards of the EVM.

- Potential date of completion: April, 1 2024

- Objective to be accomplished: Open source repo of relevant Infinity Keys game engine code

- Source of truth: Infinity Keys · GitHub (will change as we release for a public repo)

- Critical for this grant: No

- *Infinity Keys Governance

: This initiative should begin within 1 year, although it is too early to determine if on-chain community governance will be delivered within 1 year as there is currently not an Infinity Keys token, nor a schedule for token release. Decentralized governance for Infinity Keys takes three forms 1) Community Game Governance where the community stakes to submit and provide QA for other community games, as well as determine which games are featured on the Infinity Keys core platform, including for partner games - this can also be thought of as product or content governance; 2) Foundation treasury governance where the community determines the use of foundation funds to pay for leadership, grants or rpgf; 3) Open Source Git Repo governance where an incentivized community of developers maintain and extend on open source Infinity Keys repo containing the game engine. We are currently talking to Tally to provide the UI for the Open Zeppelin Governor contracts on Optimism for these, and there are some models of token-gated open source repos that we will explore as we move closer to this goal.

- Potential date of completion: April, 1 2024

- Objective to be accomplished: a draft of a community-approved Infinity Keys governance charter with proposed Open Zeppelin Governor contracts (likely in partnership with Tally)

- Source of truth: TBD

- Critical for this grant: Yes, a draft of this is critical to show intent to continue building community on Optimism, although a final live governance home is out of scope for this grant.

Optimism Relationship

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

Yes. New user retention.

How does your proposal offer a value proposition solving the above problem?:

As shown in the foundation governance call on 3/14/23, retention from OP growth grants is struggling. Achievements and quests and yield programs offer the prospect of initial user excitement, followed by token dumping or hodling. Instead, by using a game format, Infinity Keys proposes to unite the dapp ecosystem on Optimism, and give users a reason to return and transact frequently.

This is a first step in building goodwill among players for games and engagement instead of bribery incentives. This is a key step, however, because emotional connection and satisfaction of gaming builds loyalty and brand connection to the optimism community and ethos. It will not be 100% of players that stay, but we have seen evidence that the number of far greater than zero, and that is with a small sample of games created as an MVP across Infinity Keys and various partner projects.

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

As Infinity Keys launches new games across various partner dapps and blockchains, a significant percentage of players will stay and complete additional games on the platform. This is the case in our metrics thus far. Wallets that mint an NFT from one project on Infinity Keys tend to mint from multiple projects on Infinity Keys, including the IK Core challenges.

This gives us reason to believe that as thousands of players from Aavegotchi and the surrounding Polygon ecosystem come play IK challenges, they will stay and play on Optimism. This would make IK an onboarding vehicle that can then direct players to more growth grants partners so that players can begin earning OP and feeling valued across Optimism.

How committed are you (and your team) to building on Optimism?:

It is our preferred L2 and home base. This is where we want to build. Optimism is a real L2 that has clear mainnet validation. We are highly aligned with the Ethereum roadmap and L2 thesis, and it is our preference to build on Optimism, Base, Superchains, and maintain our home on Ethereum.

However, given our funding needs, we will build where we need to in order to survive and prove out the expanded capabilities of Infinity Keys. If other ecosystems value the network effects that Infinity Keys is building we will make the best decision for our team to continue building.

Is your project Optimism Native?:

Governance and gameplay home base can be Optimism native.

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