

PROPOSAL NAME:

ApeChain Developed with Arbitrum Technology with Growth Led by Horizen Labs

PROPOSAL CATEGORY:

Brand Decision

TEAM DESCRIPTION:

- Nina Rong

, Head of Ecosystem Development

at The Arbitrum Foundation

- Robert Viglione

, Co-Founder and CEO

at Horizen Labs

- Hervé Larren

, Senior Advisor

at Horizen Labs

- Steven Goldfeder

, Co-Founder and CEO

at Offchain Labs

- A.J. Warner

, Chief Strategy Officer

at Offchain Labs

ABSTRACT:

The ApeCoin community is highly engaged in the discussion of launching its own dedicated chain. We have been excited to see the community rally around this idea and agree that launching ApeChain would substantially increase ApeCoin DAO's value proposition while also creating new revenue opportunities for the DAO.

We are motivated to build ApeChain as an Arbitrum Orbit chain developed with AnyTrust technology that uses \$APE as the native gas token and request that ApeCoin DAO provide:

1. Branding Authorization
2. The permission to use the phrase "powered by ApeCoin," as well as all relevant APE marks, for the branding of ApeChain.
3. The permission to use the phrase "powered by ApeCoin," as well as all relevant APE marks, for the branding of ApeChain.
4. Governance Oversight
5. The ApeCoin DAO to serve as the primary governing body for ApeChain.
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In short, we have identified the following as key characteristics for ApeChain that we recommend the ApeCoin DAO should prioritize:

1. \$APE as the native gas token
2. ApeChain will be an extension of the Ape community and will quickly become a cornerstone of the Ape brand. Naturally, this means that ApeChain should leverage \$APE as the native gas token.
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4. Attractive for a wide range of use cases, with a primary focus on gaming
5. If ApeChain wishes to house the next generation of consumer-facing applications and games, it must provide a stellar user experience - that begins with low fees and fast transactions.
6. Yuga Labs is publicly leaning into gaming as a primary vertical for its strategy, including bringing on new partners [1](#)) and setting up dedicated communication channels for its gaming efforts [2](#)). With ApeChain, the DAO should seek to create a natural home for its ecosystem.
7. If ApeChain wishes to house the next generation of consumer-facing applications and games, it must provide a stellar user experience - that begins with low fees and fast transactions.
8. Yuga Labs is publicly leaning into gaming as a primary vertical for its strategy, including bringing on new partners [1](#)) and setting up dedicated communication channels for its gaming efforts [2](#)). With ApeChain, the DAO should seek to create a natural home for its ecosystem.
9. Remain aligned with Ethereum
10. BAYC, MAYC and the broader APE community are a driving force within the Ethereum NFT ecosystem and should seek to retain that alignment.
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MOTIVATION:

Horizen Labs is committed to being a long-term holder and supporter of ApeCoin. Over time the company has helped the community launch major initiatives, including ApeCoin, Otherside, and ApeStake within the Ape Ecosystem. As such, the company is committed to enhancing the utility of ApeCoin and guiding successful decisions on the technical, economic, and ecosystem growth aspects of any ApeChain proposal.

In alignment with these objectives, Horizen Labs strongly believes that an ApeChain built on Arbitrum's technology with expert guidance and support from Horizen Labs is the best path forward to bring more users into the Ape community.

BENEFIT TO APECOIN ECOSYSTEM:

Horizen Labs will leverage its deep industry experience to advise and guide the ApeCoin DAO and community on the initial development of ApeChain's ecosystem. These efforts will result in a coherent strategy for ApeChain's growth, primarily focused on gaming. This proposal marks the initial steps toward realizing that vision.

Horizen Labs, in collaboration with other contributors including Yuga Labs, helped launch ApeCoin and the Otherside. Following these releases, the Ape Foundation chose Horizen Labs to build ApeStake ([AIP-21](#) and [AIP-22](#)). Horizen Labs continues to provide management services related to the contracts for ApeStake today.

These initiatives resulted in:

- On March 30th, 2021 ApeCoin launched at an \$8b fully diluted market cap, making it the biggest token launch of 2021.
- On April 30th, 2022, Otherside NFTs launched, at a combined value of \$285m, making it the largest NFT release in history.
- Horizen Labs advocated for and supported the process for token distribution to community members, all unlocked for claim at launch, with:
 - 150m tokens reserved for BAYC and MAYC holders:
 - 10,094 tokens going to each holder of BAYC
 - 2,042 tokens going to each holder of MAYC
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Furthermore, Horizen Labs recently served as a technical service provider supporting Horizen DAO, establishing governance of the Ethereum Virtual Machine (EVM) powered platform, Horizen EON, demonstrating Horizen Labs' expertise in creating new ecosystems.

Horizen Labs brings its deep understanding of the ApeCoin Ecosystem and web3 expertise to the overarching vision of ApeChain. To that end, Horizen Labs will assist with three distinct phases:

Phase 1: Preparing \$APE for a Cross-Chain Future

- Horizen Labs will provide technical support for the launch of cross-chain \$APE using the OFT (Omnichain Fungible Token) standard on top of the LayerZero protocol, including:
- Developing the initial OFT contracts and user front-ends for \$APE across multiple ecosystems, including Arbitrum and Horizen EON, increasing accessibility to \$APE.
- Researching and developing cross-chain voting for the ApeCoin DAO in preparation of allowing community members holding ApeCoin, including on ApeChain, to have a voice no matter where they hold their \$APE.
- Expanding the utility of \$APE across multiple chains with ApeChain serving as a hub.
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Phase 2: Initial Roadmap and Preparation for Launch

- Horizen Labs will provide initial recommendations around the design and execution of the ApeChain roadmap with a start as a game-focused chain through:
- Working closely with partners to bring best-in-class web3 gaming experiences to the ecosystem.
- Bringing additional on-ramps for the chain and spearheading other \$APE accessibility initiatives.
- Assisting with the setup of on-chain governance to ensure equitable and fair decisions can be reached consistently.
- Analysis of revenue and revenue distribution models.
- Setting up and advising on protocol acquisition funnels, allowing the ApeCoin DAO to make informed decisions on key initiatives.
- Setting strong, achievable KPIs.
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Phase 3: Launch and Ongoing Efforts

- Horizen Labs will work closely with the community and the ApeCoin DAO on a plan for executing ApeChain's mission by:
- Advising, on an ongoing basis, on decisions around attracting and assisting projects to on-board to ApeChain.
- Creating connections between multiple foundations and other DAOs to continuously expand the ecosystem.
- Helping potential contributors navigate the onboarding process with a focus on both AAA and community-driven

games, along with beneficial NFT or DeFi projects.

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We believe that leveraging Arbitrum's market-leading technology will best position ApeChain to succeed as an independent governed chain in the Ethereum ecosystem. Key Benefits of Developing ApeChain with Arbitrum Technology include:

- \$APE as the gas token:
 - An ApeChain powered by Arbitrum would enable \$APE to be used as the native gas token, and the use of AnyTrust will serve to limit the resulting sell pressure of \$APE. Sell pressure is relevant because, with gas fees paid in \$APE and ApeChain rolling up to a chain with fees paid in \$ETH, it will be a requirement to perform treasury management to make payments in \$ETH. This may result in the selling of \$APE by the ApeCoin DAO to cover block posting costs. The use of an alternative data availability solution makes it dramatically cheaper to post new blocks, thus making AnyTrust a more sustainable option when compared to a traditional rollup structure (either ZK or Optimistic). Using a custom gas token could foster the formation of a native economy with \$APE being used for gas, staking, governance, and more. Arbitrum's AnyTrust technology is mature having been in production use for well over a year on Arbitrum Nova and is uniquely capable of simultaneously (1) enabling the use of \$APE as the gas token while (2) reducing sell-pressure on APE compared to other designs, and (3) remaining aligned with and deriving security from Ethereum.
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- ApeCoin DAO Revenue:
 - ApeCoin DAO has the option to add a transaction (tx) margin to generate a revenue stream for the DAO whilst remaining magnitudes cheaper per tx in comparison to other tech stacks. As an example, if ApeChain added \$0.02 per tx as transaction fee margin, and the chain processed 1,000,000 tx per day, ApeChain could generate over \$7M per year in revenue for the DAO.
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- Low Fees:
 - One of the biggest hurdles for blockchain game developers is the impact of gas fees. Arbitrum Nova and AnyTrust were developed specifically with that pain point in mind. By using a DAC, AnyTrust chains are able to deliver gas over 10x more cheaply than traditional rollups, making typical transactions cost on AnyTrust chains today less than a cent for users.
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- Customizability:
 - As the governing body of ApeChain, ApeCoin DAO will have the option to customize the codebase as it sees fit. As an example, ApeChain could work with a technology partner to implement hardcoded creator royalty enforcement.
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- Self-executing Governance
- The ArbitrumDAO is uniquely decentralized among L2s inasmuch as the DAO can directly, via on-chain vote, control all aspects of the chain's governance including fee structure and margins, transaction capacity, software updates, and all chain features and parameters. The DAO's on-chain vote is self-executing meaning that the successful vote itself enacts the desired result and does not rely on any centralized actors or multisigs. We propose to replicate this structure for ApeChain giving the governance power to the ApeCoin DAO, and we believe that this fits well with the decentralized ethos of the DAO and also provides additional utility for APE.
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KEY TERMS:

Data Availability Committee (DAC)

: AnyTrust takes advantage of a DAC to store data and provide it on demand. This represents a significant opportunity for ApeChain to align with key strategic partners and bootstrap its infrastructural resources, ensuring an excellent user and developer experience on Day 1. The following members have agreed to participate in ApeChain's DAC:

- Magic Eden
- Darewise Entertainment (subsidiary of Animoca Brands)
- Horizen Labs
- LayerZero Labs
- Offchain Labs
- With additional members joining in the near future

Additionally, we propose including Yuga Labs as a member of the DAC considering its important role in the community. We envision an inaugural DAC of roughly 11 members and together with community input will add additional members. Crucially, the ApeCoin DAO as the governing body of the chain will be empowered to add or remove members of the DAC at any point as it sees fit.

ApeChain Security Council

:

- We would recommend that the ApeCoin DAO utilize much of the on-chain self-executing governance structures for control of ApeChain that the ArbitrumDAO utilizes for their public chains.
- Arbitrum chains have the option to utilize a Security Council as an additional layer of security. The purpose of such a Security Council is to thwart critical risks associated with the chain's protocol and its ecosystem, recognizing that requiring a full DAO vote would be impractical when facing a critical emerging risk. Notably, Arbitrum's Security Council has never had to take any emergency actions, but it is there to do so if an extreme edge case presents itself.
- Arbitrum's Security Council is democratically and transparently elected on-chain by the ArbitrumDAO, and we propose a similar structure where the ApeCoin DAO elects a security council for ApeChain. Long-term, if ApeCoin DAO decides that it is better off without a Security Council, the DAO is empowered to remove the Security Council via an on-chain vote. That said, we strongly believe in its merits at the current time and have identified the following individuals to serve in its inaugural cohort:
- Sébastien Borget, Co-Founder & COO

at SandBox

& President

at Blockchain Game Alliance

- Robert Viglione

, Co-Founder and CEO

at Horizen Labs

- Bryan Pellegrino

, Co-Founder

at LayerZero

- Hervé Larren

, Senior Advisor

at Horizen Labs

- Ed Felten

, Co-Founder & Chief Scientist

at Offchain Labs

- Harry Ng

, Software Engineer

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The Arbitrum Foundation

is excited to explore opportunities for the ApeCoin DAO to get involved with the ArbitrumDAO

. With a treasury valued at over \$3B, the ArbitrumDAO is one of the most well-resourced DAOs in the world.

- The Arbitrum Foundation is happy to connect the two communities, organize governance calls, and help identify the most effective ways for the two DAOs to come together in a mutually beneficial manner.

- Horizen Labs will co-lead the moderation of these discussions and drive the initiative forward.

Offchain Labs

will provide technical assistance for this initiative, including recommendations of features to implement to ApeChain and work with a Rollup-as-a-Service provider to assist with the related development and deployment of the network.

A Rollup-as-a-Service

provider will be utilized to manage ongoing chain operations and maintenance.

PLATFORMS & TECHNOLOGIES

Since the launch of Arbitrum One in August 2021, Arbitrum has been dedicated to the singular mission of scaling Ethereum. While other teams and projects have opted to compete with Ethereum via the creation of alternative Layer 1s or sidechains, Arbitrum has not strayed from its commitment to deliver secure and robust scaling solutions for the betterment of Ethereum.

Arbitrum is the most technically mature and decentralized Ethereum scaling solution on the market today. Arbitrum technology is currently the only general purpose tech stack to have achieved Stage 1 status as demonstrated by [L2Beat](#). Additionally, all Arbitrum chains come equipped with fully functional fraud proofs. Earlier this year Offchain Labs announced BOLD, a dispute protocol that enables permissionless validation on Arbitrum chains, paving the way for broad participation in Arbitrum's security.

The market has responded to the underlying tech with confidence, as Arbitrum One currently commands [over 50%](#) of L2 market share and [consistently ranks](#) amongst the top chains with respect to daily economic activity. To appreciate the extent to which Arbitrum operates as a true extension of Ethereum, consider the historical balance of \$ETH bridged into various ecosystems.

[

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](<https://global.discourse-cdn.com/apecoin/original/2X/4/4766608fe6ec4dd4a6177f7e20c7265a4d0cc1a1.png>)

AnyTrust.

In 2022, Offchain Labs introduced AnyTrust, a variant of Nitro that significantly lowers cost by introducing a mild trust assumption. While Rollup chains post full transaction data to Ethereum, AnyTrust chains rely on a Data Availability Committee (DAC) to store the data and provide it on demand. Under AnyTrust, chain remains secure even if a majority of DAC members collude to be malicious, and only two honest members are needed to deterministically prove what is correct. As a result, users of AnyTrust chains are met with a speedier and more affordable experience than competing alternate DA solutions and traditional rollups. A unique feature of AnyTrust is that if there are not enough committee members willing to store data, the chain will fall back to being a rollup, posting full transaction data to Ethereum until sufficient committee participation resumes.

Value Proposition:

- ApeChain will be deployed as an Arbitrum Orbit chain on top of Arbitrum One. Since its introduction earlier this year, the Arbitrum Orbit ecosystem has grown rapidly with over 15 chains publicly announced and 30+ in development. The case for Orbit is as follows:
- Low Fees: One of the biggest hurdles for onchain game developers is the impact of gas fees. By using a DAC, AnyTrust chains achieve significant gas savings. For comparison, indicative gas costs at the time of writing are as follows:
- Arbitrum Nova (AnyTrust-DAC)
- \$0.005 per tx [\[1\]](#)
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- Polygon ZKevm (rollup)
- \$2.47 per tx [\[2\]](#)
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- Quick, Easy On/Offramping:

By seeding liquidity on Arbitrum One, ApeChain can enable a seamless onboarding experience. Arbitrum One deposits and withdrawals are already integrated with the industry's leading CEXs, ensuring a strong onboarding flow for ApeChain on Day 1. This ensures that the customer acquisition cost (CAC) is low by onboarding via Arbitrum One (around 10-20c per transaction) in comparison to using Ethereum L1 as the host chain where transactions are \$5 to \$20.

- Fast withdrawals:

Using Arbitrum AnyTrust for ApeChain, the wait time for entrance and exit is a matter of minutes, not seven days like a typical optimistic rollup. This feature is currently in active development and is expected to be available in early 2024.

- Self-governance:

ApeCoin DAO will have the option to incorporate upgrades to its chain (see below for some upcoming upgrades) but there is no obligation. We believe in the autonomy of chains built on Arbitrum, and the governance model is designed to equip ApeCoin DAO to run ApeChain as it sees fit.

- Account Abstraction:

Predictable gas prices make it easy to model and predict business costs, which makes it easier to experiment with traditionally cost-prohibitive mechanisms like transaction fee subsidization. This makes it easier to further abstract the technical complexity of decentralized apps away from end-user experiences.

- Future Nitro Upgrades:

As the Arbitrum Nitro tech stack continues to evolve, the ApeCoin DAO will have the opportunity to incorporate those upgrades into ApeChain. This may include MEV-capturing updates to the transaction ordering policy via [TimeBoost](#), permissionless validation via Bounded Liquidity Delay (**BOLD**), and more.

- Arbitrum's Speed and Approach to Block Times
- Arbitrum Nitro chains produce blocks at a pace of around 0.25s. For comparison, most other EVM chains have slower block times of 2s and in some cases up to 10s.
- Another key differentiator between Arbitrum and other Ethereum tech stacks is that blocks are only produced when a user submits a transaction. In comparison, other stacks produce a block at fixed intervals, often leading to inefficient and frequently empty blocks. This can result in high fixed costs to post blocks to Ethereum - even during quiet periods for the chain. Arbitrum's approach will help ensure that the DAO's resources are productively utilized and will serve as a critical cost saver during the chain's early days.
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- Arbitrum Stylus = EVM+
- Stylus enables smart contracts to be written in popular programming languages like Rust, C, and C++. This is not new for some execution environments like Solana; however, Stylus contracts are fully interoperable with the EVM, making chains with Stylus the first of their kind. Rust-based contracts can make synchronous calls to Solidity-based contracts, and vice versa, and single applications can seamlessly weave together libraries and code written in various languages. This innovation is in part due to a WASM-based virtual machine, which runs alongside the EVM. The efficiency gains from more advanced compilers and the nature of WASM allow for far more performant smart contracts. Computation can be over 10x cheaper, while memory can be over 100x cheaper.
- There are estimated to be ~3M Rust developers and ~12M C/C++ developers, and Stylus will make it easy for them to build on ApeChain and even re-use code from their existing codebases.
- Not only will Stylus make ApeChain a more accessible platform for developers, it will also allow them to create unique use cases not feasible in the EVM and deliver additional gas savings to their users - on top of the significant savings already afforded by AnyTrust.
- ApeChain will have the opportunity to adopt Stylus as soon as it is production-ready, estimated for Q1 2024. This can be done out of the box or through an upgrade to an existing chain.
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- There are estimated to be ~3M Rust developers and ~12M C/C++ developers, and Stylus will make it easy for them to build on ApeChain and even re-use code from their existing codebases.
- Not only will Stylus make ApeChain a more accessible platform for developers, it will also allow them to create unique use cases not feasible in the EVM and deliver additional gas savings to their users - on top of the significant savings already afforded by AnyTrust.
- ApeChain will have the opportunity to adopt Stylus as soon as it is production-ready, estimated for Q1 2024. This can be done out of the box or through an upgrade to an existing chain.
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STEPS TO IMPLEMENT & TIMELINE:

Q1 2024:

Following the approval of this proposal, we will collect input from the community on the finer details of the chain's configuration and put those details to vote on the ApeCoin DAO Snapshot. In the first week, we plan to share a full recommendation and outline the various decisions that will fall to the DAO. We will outline some of the potential considerations and related tradeoffs, and organize community calls for interested community members to voice their opinions. We would expect these votes to be completed 3-4 weeks after our proposal's approval.

- Horizen Labs to commence its growth plan, establish a pipeline of teams to onboard to ApeChain, and make \$APE more accessible by improving its cross-chain presence.
- Horizen Labs to collaborate with the ApeCoin DAO and Ape Foundation to formalize ApeChain's governance structure.
- Horizen Labs to collaborate with the ApeCoin DAO and Ape Foundation to establish a revenue policy for ApeChain, including a %-share for DAC members, and a potential supplemental margin that would create a revenue stream for ApeCoin DAO.
- Offchain Labs and Horizen Labs to collaborate with ApeCoin DAO and Ape Foundation to gather feedback from the community for potential features to implement on ApeChain. For example, the option to hardcode creator royalty enforcement on the chain.
- Offchain Labs and Horizen Labs to collaborate with a RaaS partner to configure ApeChain and launch a testnet.

Q2 2024:

- Mainnet launch of ApeChain.

OVERALL COST

- Horizen Labs will not seek any form of compensation from the ApeCoin DAO for the scope of work outlined herein, with the exception of revenue generated from participation in ApeChain's DAC.

- Offchain Labs will not seek any form of compensation from the ApeCoin DAO for the scope of work outlined herein, with the exception of revenue generated from participation in ApeChain's DAC.
- If Arbitrum technology is adopted, the Arbitrum Foundation is happy to provide grant funding to go toward the following costs:
 - Rollup-as-a-Service Provider (3 Years)
 - ApeChain Security Council (3 Years)
 - Block Explorer (3 Years)
- As previously stated, the Foundation is also excited about the prospect of a collaboration between the ArbitrumDAO and ApeCoin DAO and is motivated to start a dialogue between the two organizations.
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We look forward to your thoughtful questions and appreciate your consideration. In order to kick this discussion off, we have carved time out for a couple of AMAs with your community on X account of Arbitrum. Please feel free to join us on:

- 12/11, 12 PM (Noon) EST: Senior leadership from The Arbitrum Foundation, Offchain Labs, and Horizen Labs
- 12/14, 12 PM (Noon) EST: Gaming-Focused Discussion w/ gaming and ecosystem partners of Offchain Labs and Horizen Labs

Going forward, any requests to be on-boarded to the ApeChain may be sent to apecchain@horizenlabs.io.