Hey community, I'm very excited to share the Arbitrum on Gitcoin Grant Programs results!

TL;DR

The goal of the Arbitrum on Gitcoin programs was to create a grant program that is co-designed with the Arbitrum community by leveraging Gitcoins protocols. This collaboration also brought Grants Stack to Arbitrum One, thus allowing anyone in the Arbitrum ecosystem to launch a grant program on it.

What's unique about the Arbitrum on Gitcoin Grant programs

is that we allowed the Arbitrum community to help us design a grant program from start to finish thus empowering it to be the key decision maker:

- on how to distribute funding to key domains - Domain Round

- on how to distribute funding to the projects - Grant Funding Fest

Another positive aspect is that QF(vote = a donation) also enabled the growth of the funding allocated from 100.000 DAI to 120.000 DAI.

The Arbitrum Domain Round

14 August-30 August

The Arbitrum Domain Round was the first Arbitrum initiative launched in partnership with Gitcoin. This move combined the size and power of the Arbitrum Community with the ethos of Gitcoin and the magic of quadratic funding.

Goal

To allow the Arbitrum community to decide how to allocate 100k $DAI in matching funds to five strategic grant funding domains by using QF(quadratic funding) as QV(quadratic voting)

About

This round had 5(4 corresponding to QB) domains and the Arbitrum community could vote(donate) for their favorite one using QF.The domains were:

1.Gaming: This will help Arbitrum encourage more developers to create innovative gaming experiences and thus onboard new users to its ecosystem

2.Developer tooling on Nova: This will help Arbitrum build essential infrastructure, tooling for Arbitrum Nova

3.New protocol idea: This will encourage more contributors to propose and run experiments for improving the Arbitrum protocol

4.Education, community growth & events:This will help Arbitrum attract quality builders through community growth activities such as education courses, bootcamps, hackathons and sponsoring events

5.Open TBD Round

This round was a unique experiment. Unique because the "grants'" in the Domain Round represented the future matching pools of the next funding round - The Arbitrum Grant Funding Fest.

We used Quadratic Funding as Quadratic Voting and the votes are calculated by looking at direct donations of DAI using the Gitcoin user interface. Only the $ARB holders' votes were counted in.

Sybil detection

Our analysis discovered 42 confirmed Sybil entities that were strategically distributed across 11 distinct clusters out of the 832 voters, equating to 5.04 % of all votes.

Sybil Vote Distribution: Surprisingly, the Sybil votes in this round were almost evenly distributed among the various projects. This distribution implies that the primary goal of the attack was to establish identities for these Sybil addresses rather than to manipulate funding allocation.

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Points scored

1200×742 43.4 KB

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Consistent Voting Patterns: We observed consistent voting patterns among Sybil entities within each cluster, confirming their collaborative efforts.

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Points scored

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Impact on Funding Allocation: The sybil activity had no significant impact on funding allocation during the Arbitrum domain round. We removed all the donations from the sybil accounts from the matching calculations.

This favorable outcome, however, raises concerns about Sybil entities' potential strategies in future rounds.

Results

The round was well received by the Arbitrum community and we received support from multiple organizations within Arbitrum! We raised 5000$ in donations from the Arbitrum community raising the matching pot to 105k $DAI. Over 420 Arbitrum community members voted(donated) and we had over 1600 contributions in total.

The matchings distributions voted by the community are displayed below:

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Insights:

- We were pleasantly surprised that the Arbitrum community embraced the program even with the high gas fees of the Eth main net.
- The Arbitrum community appears to value New protocol ideas at least 50% more than the other domains.
- The votes for the Open Round demonstrated that they are open and eager to support new types of projects.
- Over 420 $ARB unique holders voted multiple times totalling over 900 contributions

The Arbitrum on Gitcoin Grant Funding Fest[

](https://emojipedia.org/party-popper)

04 September - 30 September

The program was the first on-chain grant initiative within the Arbitrum ecosystem(run on Arbitrum One) and continued to build upon the success of the previous Domain Round held on Ethereum's mainnet. The matchings as voted by the Arbitrum community in the Domain Round became the matching pools of this round.

Goal

The goal was to empower the Arbitrum community to grow a sustainable, bottom-up and plural ecosystem in which everyone can contribute, either by building the future of Arbitrum DAO or donating to the projects that do.

About

The program had two phases:

The Grant Application Phase: the builders, creators and innovators could apply with their projects and if eligible approved into the program.

The Donation Phase: Arbinauts & donors decided how much money from each matching pool goes to each grant recipient, allowing for a more personalized and flexible distribution of funds based on the collective intelligence of the Arbitrum community.

The program had four individual grant rounds, each with its own matching pool:

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](https://emojipedia.org/video-game)Gaming:…………………………………………………….……14.5k $ARB

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](https://emojipedia.org/laptop)Developer tooling:………………………………………………24k $ARB

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](https://emojipedia.org/light-bulb)New protocol ideas:…………………………………………… .50k $ARB

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](https://emojipedia.org/books)Education, community growth & events:………………………12.5k $ARB

By donating people decided how the matching pools were distributed via quadratic funding(QF). To ensure maximum fairness only votes from people that held $ARB in their wallets on 04.09.2023 were counted in. Self donations are also excluded.

Sybil detection

Multiple sybil detection mechanisms were used including cosine similarity. Because of its high detectability, the cosine similarity method excels at revealing scripted transaction patterns typical of Sybil wallets, rendering identical scripting patterns infeasible for subsequent grant rounds. This approach has been critical in identifying and comprehending Sybil attackers, particularly those who use blend-in strategies.

Sybil Vote Distribution

: The Sybil votes in this program were not evenly distributed across the 4 rounds. Some rounds have more sybil votes than the others, ranging from 5-9% per round. It is unclear if this distribution implies that the primary goal of the attack was to establish identities for these Sybil addresses or to manipulate funding allocations in certain rounds, our findings would indicate that both scenarios should be considered. There is also a probability that some of the sybil votes might be involved in "airdrop farming" activities.

Impact on Funding Allocation:

The sybil activity had low-low medium impact on funding allocation during the Arbitrum on Gitcoin Grant Funding Fest. The New Protocol Ideas round has been the most attacked round due to the nature of the projects.

In the following section, we present a summary of the results for every round.

Gaming Round: Sybil Attack Detection Results

- Non-Sybil: 671

- Sybil: ~35

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Education Round: Sybil Attack Detection Results

- Non-Sybil: 553

- Sybil: ~46

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Devtooling Round: Sybil Attack Detection Results

- Non-Sybil: 468

- Sybil: ~30

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1241×671 34 KB

](https://global.discourse-cdn.com/standard17/uploads/arbitrum1/original/2X/6/6a25a4d751ff2b53ed7c1e375ebddb2d7b066ce8.png)

New Protocol Ideas Round: Sybil Attack Detection Results

- Non-Sybil: 650

- Sybil: ~60

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After our on-chain data analysis, donations from addresses associated with these behaviors were excluded from match calculations. This includes the following:

- Flagging known sybil networks/addresses from Gitcoins 40k address blacklist

- Suspected bot activity based on anomalies detected in transaction patterns

- Suspected bot activity based on anomalies detected in donation patterns

Results

The Arbitrum ecosystem really embraced this program and the response from the community was overwhelmingly positive, over 2500 people donated and we also received a lot of support from Arbinauts!

The results(including non $ARB holder votes) are displayed below:

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Some key statistics that further illustrate the success of the Gitcoin Grants program:

- The Arbitrum community showed strong support for the grant fest, receiving 140+ applications and having 51 eligible projects.

- The total votes/contributions from $ARB holders can be seen below:

-220 voters and 654 total contributions in the Developer Tooling round

 -270 voters and 804 total contributions in the Education, community growth & events round

 -278 voters and 928 total contributions in the Gaming round

 -333 voters and 1142 total contributions in the New Protocol Ideas round

- Over 2,500 individuals made donations, resulting in more than 6,000 total contributions.

- Donations exceeded 16,000 $ARB, in addition to the initial 101,000 $ARB available in matching funds.This showcased the positive impact of the Quadratic Funding (QF) grant program in Arbitrum, allowing funds to be allocated based on community preferences while bolstering the initial matching funds.

The final matching amounts that will be paid out are shown

[here](#)

Insights

- This participation highlights the community's strong desire to support various projects and initiatives within the Arbitrum ecosystem.

- One key learning from the round was that the allocation of matching pools in the Domain Round did not precisely align with how people donated to projects in this round.

- Some rounds that received fewer votes in the Domain Round managed to attract significantly more donors in the Gitcoin Grants program. For instance, the Gaming Round, which received only 12% of the votes in the Domain Round, garnered approximately 2.5 times more in donations (amounting to $4,000) compared to the Developer Tooling Round, which received over 20% of the votes.This highlighted the effectiveness of certain rounds in promoting their grants within the Arbitrum ecosystem and engaging their respective communities.

- The results underscored the importance of tailored outreach and engagement strategies for different types of projects and communities within the Arbitrum ecosystem.