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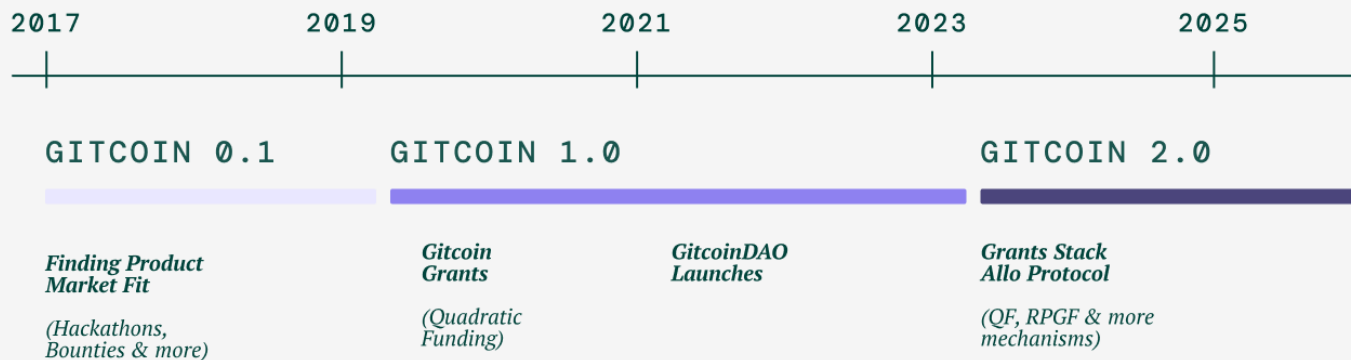
## Abstract

As a leading figure in the Ethereum ecosystem, Gitcoin stands out for championing public goods through its pioneering Gitcoin Grants program. Launched in 2019, the program has funneled over \$59M into public goods enriching the Ethereum ecosystem. Notably, it spearheaded the groundbreaking Quadratic Funding model, making the Gitcoin Grants program the largest QF event in web3 to this day.

Gitcoin, like many tech startups, explored a number of different products and models – including a tech accelerator, launching hackathons, and a bounty platform. In 2019, we found traction with funding public goods through Quadratic Funding. We refer to this stage as “Gitcoin 1.0” – we had gained momentum, but had not yet recognized the potential and scale of grants.

Gitcoin 1.0 was used by many top leaders in the space including Ethereum founder Vitalik Buterin and major protocols like Walletconnect, Uniswap, Yearn, and 1inch exchange. Gitcoin has been an early source of funding (and validation) for many prominent ecosystem contributors: David Hoffman (Bankless), Austin Griffith (Build Guild), Anish Agnihotri (Ritual), Carl Cervone (OSObserver), and many others.

### Gitcoin's Evolution Over Time



Gitcoin has recently completed a transformation from 1.0 to its 2.0 stage. This transformation was driven by many changes in the market, including the expansion of the Ethereum ecosystem with L2 launches, the growth of open-source development, and increasing adoption of grant programs. Gitcoin's transformation breaks down as the following:

- Transformation from a centralized, Gitcoin-operated platform to a suite of **modularized products and protocols** that anyone can use and build on top of.
- Transformation from only Quadratic Funding to **many types of capital allocation** mechanism (Quadratic Funding, Direct Grants, Retroactive Public Goods Funding, and more).
- Transformation from Ethereum-only to being deployed across **many EVM-based networks** (Optimism, Arbitrum, Base, Polygon, zkSync, Scroll, Avalanche, and more).

Gitcoin 2.0's innovative approach, detailed in this whitepaper, positions it as a pivotal force in reshaping public goods funding and fostering ecosystem growth. This initiative is not just an advancement in technology but a beacon of social progress, heralding a new era of community empowerment in the crypto space. Gitcoin is committed to defining and evolving the category of capital allocation, especially public goods funding, in the coming onchain era.

## Gitcoin 2.0

As of January 2024, Gitcoin has run 19 rounds of its [Quadratic Funding](#) grants program, distributing over \$59M to early-stage builders and other grantees. Some of Gitcoin's earliest grant recipients, like Uniswap, Optimism, and Bankless, have since graduated from the grants program and funded and run grants rounds themselves. Gitcoin's brand and impact have grown significantly over the years, establishing it as one of the most recognized organizations in web3. Gitcoin has partnered with a host of household names that include crypto-native organizations, like Coinbase and the Ethereum Foundation, and crypto-curious organizations, like UNICEF and American Cancer Society.

Throughout these 19 rounds, we've witnessed the immense impact of capital allocation in action. Organizations that are able to make effective funding decisions to invest in their ecosystem see higher builder activity, user onboarding, and transaction volumes – in short: grants create growth.

Capital allocation is a simple concept: it's the act of deciding how to distribute funding or resources. If you've ever paid bills, taxes, or repaid friends for a meal, you've allocated capital. Capital allocation is a task for most individuals but a full time job for many: governments and grant-making organizations spend vast amounts of time and money figuring out the process, logistics, and decision-making involved in allocating capital. At scale, capital allocation inevitably becomes mired in gatekeeping, rivalrous decision making, and lack of transparency and accountability.

Blockchain and crypto, with their programmable smart contracts, present incredible advantages towards allocating capital in an efficient, effective, and transparent manner. Gitcoin has seized this advantage by moving the entirety of our grants program onchain: from governance, creation, management, and disbursement. Moving the grants program onchain and it being open source also allows us to build a network of developers, grants programs, and capital allocators in web3 – which all ultimately benefit the Gitcoin ecosystem.

Gitcoin has previously experimented deeply with a few forms of grantmaking, primarily focused on fair and effective ways to implement Quadratic Funding. We've created a market for this grants mechanism and scaled it from \$0 to \$millions distributed per year. We're now starting to see traction with new mechanisms, like Direct Grants and Retro PGF, and are poised to scale those as well.

The crypto ecosystem has [funded over \\$1B across 5,900 grants](#) and is continuing to scale in order to support blockchain's enormous growth goals. The potential of capital allocation extends beyond grants and represents a game-changing category that Gitcoin and its extended network of partners and protocol builders is poised to lead. Our north star of funding \$1B in grants is both an aggressive growth target for Gitcoin, and only the start of what's possible.

### Capital Allocation: the next growth frontier

One of the most recognizable forms of capital allocation is government spending. It also perfectly depicts many of the limitations of traditional capital allocation.

Governments accumulate funds through levying taxes – something each individual is obligated to participate in. The funds collected are, in theory, spent in order to benefit the collective group of taxpayers. This system also illustrates many of the problems that traditional capital allocation methodologies suffer from:

1. **Gatekeeping:** small groups of decision makers, who may become power brokers, and are unwilling or unable to be democratic.
2. **Not scalable:** not taking advantage of the primitives the internet (easy access, direct to consumer interfaces) and Ethereum (credible neutrality, composability, transparency, democratic decision making, censorship resistance) have to offer.
3. **Not precise:** without the ability to programmatically manage large amounts of information at scale, they are not able to precisely allocate capital resources.

Over the past 30 years, advancements in technology have created the opportunity to solve previously intractable problems of capital allocation. The internet has introduced the ability to communicate at a scale that was formerly infeasible. Blockchains have created a transparent ledger to report on activities and create accountability through easy data availability and the immutability of onchain actions. By combining internet-speed innovation and blockchain-level transparency, we will unlock a new frontier of capital allocation – one where communities can fund what matters to them in ways that are not only more effective, but more aligned to their values.

Ethereum-based capital allocation can be:

1. **Democratic:** the ability to easily create and run onchain voting enables governance that reflects the will of the people.
2. **Accessible:** anyone with an internet connection can participate through web or mobile applications.
3. **Transparent:** leveraging blockchain's core feature of an incorruptible public ledger, with audit trails available to anyone.
4. **Powerful:** using programmable smart contracts able to precisely allocate resources at scale.
5. **Evolutionary:** anyone working with open source software can easily fork and modify existing methods to evolve according to their own needs.

**The time to solve the problems of capital allocation is now.** We can build capital allocation systems that solve the constraints noted above. We can remove barriers to adoption by emphasizing the transparency and extensibility of these systems. We can build more effective, efficient or novel capital allocation methodologies by using democratic voting and creating accessible systems of participation.

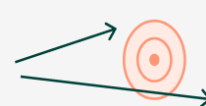
## Legacy Capital Allocation



GATEKEEPING



NOT SCALABLE



NOT PRECISE

Today in web3, there are hundreds of DAOs with millions of capital to distribute to fund growth in their ecosystems. These DAOs have unlocked new global markets to turn ideas and APIs into products and adoption so much faster than before.

Gitcoin is positioned to define and lead the new category of capital allocation, building on the success of Quadratic Funding and web3 grants. Through its grants program, Gitcoin has more experience with onchain capital allocation than anyone else. We believe in the potential so strongly that we spent two years architecting a protocol and product suite that will easily allow anyone in web3 to participate in new methods of capital allocation.

## Gitcoin = Grants = Growth

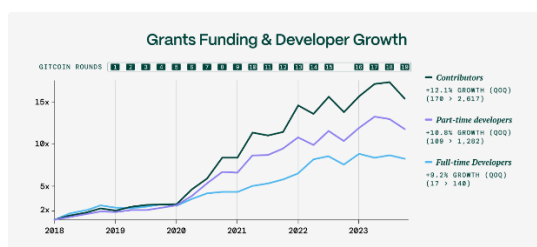
While the market for web3 capital allocation tools is currently limited to organizations with token treasuries, we expect this market will grow by many orders of magnitude. Over the coming decade, we predict that more assets will move onchain and become tokenized. This includes both financial assets (from fiat to investment vehicles) as well as non-financialized assets, like real estate, art, or other physical assets. As more assets become available onchain, the use cases for capital allocation will continue to grow both in breadth (common, simple-to-use systems) as well as depth (novel, unimagined methodologies).

However, 11 years after the invention of Ethereum, web3 is still in the early stages of growth. The technology still lacks key features that will make it more trusted and accessible. Only [4% of the global population](#) holds crypto. There's a chasm between blockchain's potential and today's actual usage and adoption.

Crossing the chasm means onboarding more builders and developers – those who develop the next generation of infrastructure and apps that attract future users and unlock next-generation use cases. Organizations looking to achieve hyper scale need to onboard new builders at hyperscale. That scale far exceeds the capacity of a traditional BD or investment pipeline, which is too slow and inefficient. Traditional web2 marketing, powered by walled-garden data collection, is also ineffective in a user-centric, onchain world.

Grants have emerged as a core driver of growth in web3 – both through builder onboarding as well as retention. Builders are onboarded through grants when tokens are distributed as incentives or compensation. These grants are often given in the early stages of a project and provide crucial funding to the project, as well as visibility and validation. Many early stage builders opt to apply for grants instead of raising traditional seed funding. Grants can be disbursed much more quickly than VC capital and come with added benefits, including publicity and connections to other grantees within the ecosystem. Unlike VC funding, they don't require builders to give up equity. Grants instead create positive-sum outcomes by distributing funding in the native currency of their ecosystem, where value may accrue if the project is successful.

The ability for grants to create positive-sum outcomes through token distribution is also key to builder retention. Not only do all organizations in the ecosystem share in its success, tokens distributed through grants give builders ownership and governance power in the ecosystem. This allows them to play key roles in policies and investments that directly impact their projects.



Grants = Growth isn't just theory – it's been empirically tested and proven over the previous four years of the Gitcoin Grants program. The chart above maps [strong correlations between grant funding received and value-additive activity for a given project](#). For every \$1M that has been paid out through Gitcoin Grants since 2019, there are seven full-time developers who are still active in the project. Factoring in the crowdfund multiplier, that ratio grows to 13 retained full-time developers for every \$1M put into the matching pool. These numbers are particularly impressive when you contrast them with the [\\$76B in venture funding](#) that has produced roughly .1 developers per funding dollar.

## **Beyond grants**

We believe the impact and reach of next-generation capital allocation will be felt across many industries – from web3 social and marketing to traditional industries like crowdfunding, real estate, scientific research, and more. Next-generation capital allocation represents not just a technological evolution, but an evolution in our social practices around how we organize, exercise buying power, and own assets.

While Gitcoin's initial focus is on grant making for DAOs and other tokenized communities, we believe that as more assets become tokenized in various industries, a wide open design space will emerge to reimagine how capital allocation is done in various industries. These industries include but are not limited to:

1. Funding for DAO Ecosystem development
2. Funding for Scientific Research
3. Funding for Environmental & Social Impact
4. Funding for Philanthropic Initiatives
5. Funding for City, County, and State Development projects
6. Funding for Capital Formation and Economic Growth

Each of these industries will demand new levels of strategy development, thought leadership, constituent engagement, and new applications that serve their specific needs. The Gitcoin network has already run pilots in many of these industries, including collaborations with the American Cancer Society, DeSci projects, UNICEF, in Boulder Colorado, and more.

The potential of capital allocation in each of these industries feels underexplored, but transformative. One way to reason about it is by way of analogy to how email changed written communications. The average human sends 100x more messages now than they sent physical mail decades ago. We believe that the future of capital allocation will entail 100x higher volume and higher resolution funding decisions than are available now.

The evolution of capital allocation has evolved in a skeuomorphic fashion over the last few decades: physical cash was supplemented by physical checks, which were supplemented by virtual checks (credit cards.) Credit cards and the internet introduced a higher speed banking that enabled ecommerce and crowdfunding platforms like Patreon, Kickstarter, or Gitcoin Grants. The next horizon is hard to see today, but by exploring it through the Gitcoin network we will discover it together. And because it is built upon blockchains, we believe it will bring more transparency and accountability to organizations and more buying power to individuals through new methods of collective ownership. We can reason about what this frontier looks like by looking at the properties of blockchains that it will be built upon. It will be faster, more democratic, more emergent, and more powerful than what has existed in the past.

# Our solutions

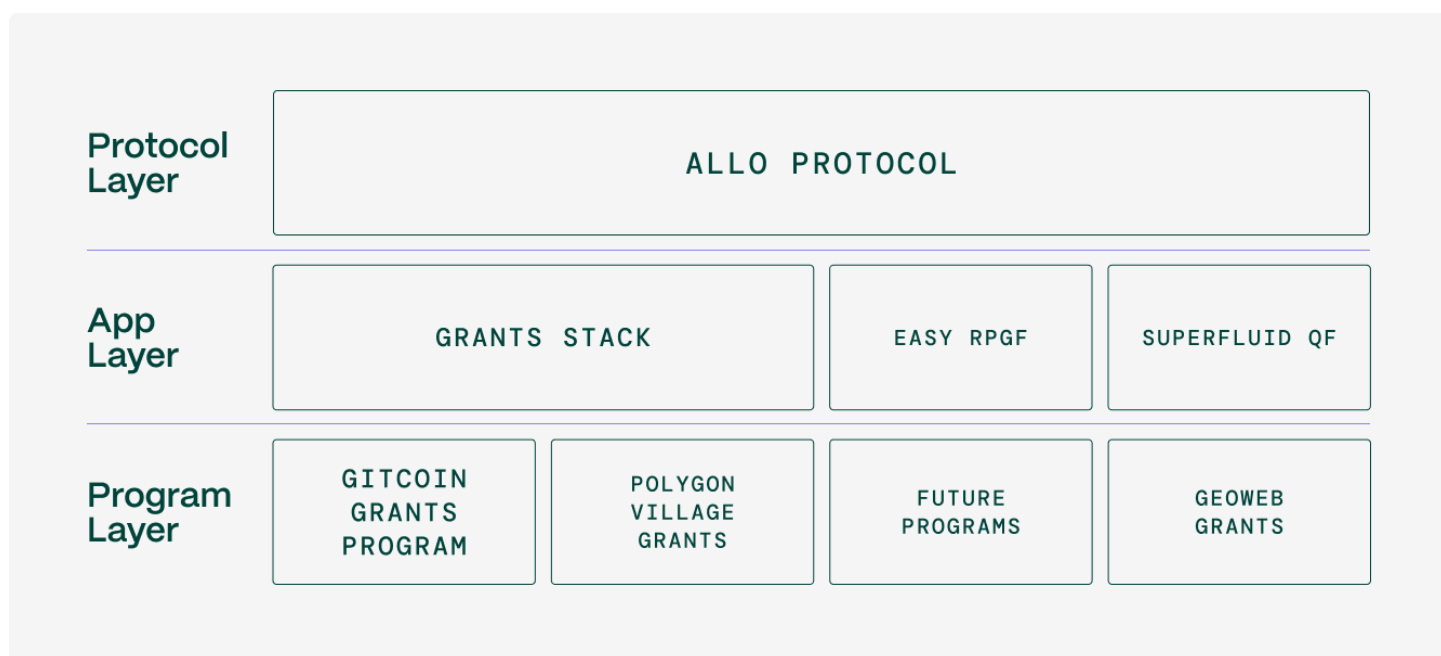
## Architecture

The design space of capital allocation is vast. Though our first and primary focus is solving the grants use case, we've designed a modular solutions stack that is intended to be extensible or repeatable across many different use cases.

The stack consists of three primary layers.

1. Protocol Layer
2. Application Layer
3. Program Layer

## Gitcoin Grants Offerings



**First, and most extensible, the protocol layer.** Allo Protocol, short for Capital Allocation Protocol, is designed to be an infinitely flexible and extensible but also trusted and precise method of capital allocation.

**Secondly, the application layer.** Gitcoin's Grants Stack is a no-code platform for running grant programs. The app currently provides the ability for grants managers to create, manage, and run Quadratic Funding, Direct Grants, and Retro PGF grants, with plans to extend into any grants mechanism with strong popular demand. Grants Stack is an open-source dApp, which allows communities to customize their experiences by creating companion applications or even forking the application to create their own version.

**Finally, the program layer,** which is the most long standing and Gitcoin-specific part of the stack. The Gitcoin Grants program is a powerful tool to onboard and educate communities on the power of grants programs. It has run 19 funding rounds to date and distributed over \$59M in funding to the Ethereum ecosystem.

In this whitepaper, we will start in depth with the protocol layer. We'll work our way to the application layer and then to the program layer.

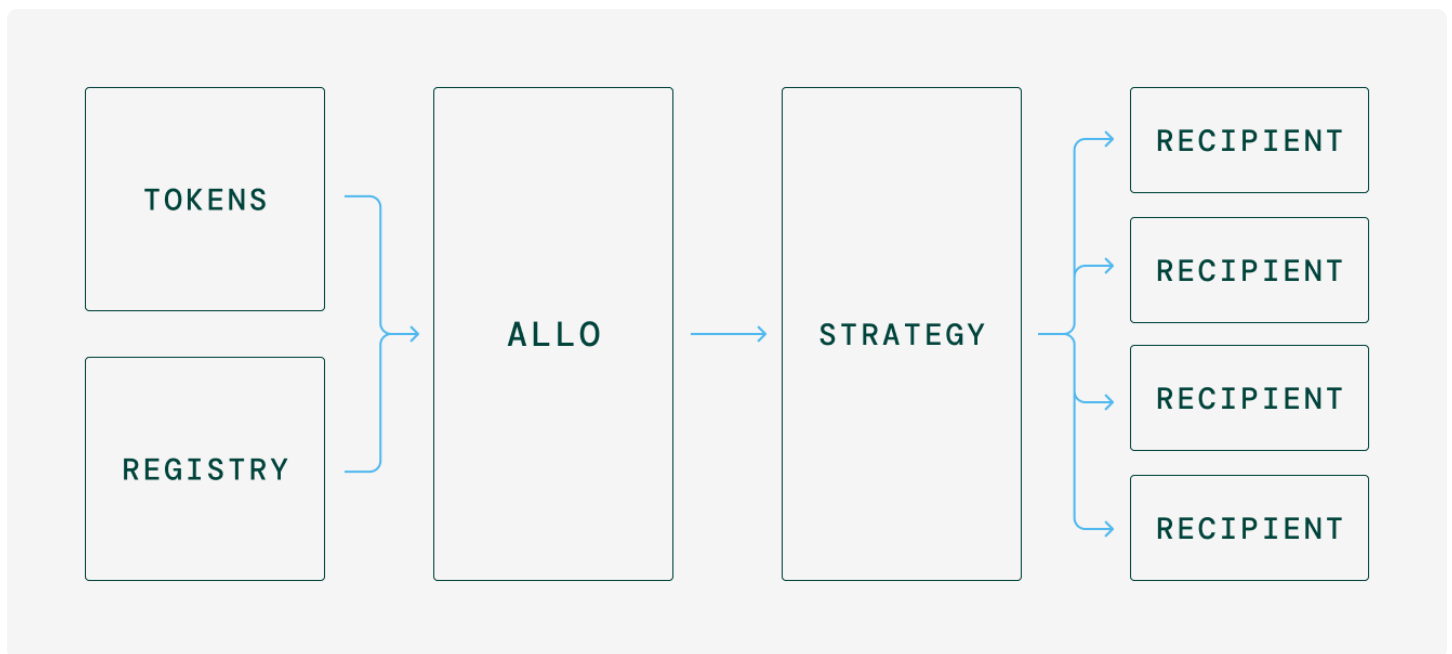
## Allo Protocol

Allo Protocol is a cornerstone of our investment in this design space. Allo Protocol has a simple, generalized architecture that allows it to be easily customized for a wide range of use cases. The protocol embraces both breadth and depth in its design.

- The **breadth** is found in its strategy library, allowing Allo Protocol to support many different types of capital allocation (QF, RetroPGF, Conviction voting, to start).
- The **depth** of Allo is found in the stable, secure, and strong core protocol that handles pools of capital and the permissions over those pools. Each pool is allocated via a specific strategy, customized to the developer's needs. The power of Allo is on display in its ability to deepen impact by precisely allocating capital at scale.

There are three key components to the protocol:

1. **Tokens:** Funding sources sending tokens into a pool.
2. **Registry:** A registry is structured data of possible participants that are eligible for distribution of tokens.
3. **Strategy:** A strategy designates how tokens will be allocated and distributed to recipients.



There are two inputs into the funding pools (labeled “Allo”). These inputs are tokens and the registry. The registry was developed to define what the things are that we want to fund and to collect information about those things. The registry of projects is a core foundation of data intelligence regarding what projects do, who is behind them, their reputation, and attestations about their impact. In addition to the registry, pools are funded by depositing a single token into a funding pool.

Funds are held in pools, which are heavily audited, simple and modular contracts. Strategies determine how and when funds are released from those pools. A strategy can determine whether funds are distributed all at once, at particular milestones, streamed over a specific time period and more. A strategy can also determine the decision-making process for releasing those funds: whether that's a single signatory, a voting council, or Quadratic Funding.

By building the Allo Architecture in a modular way, we will be able to accommodate many different types of capital allocation as the design space for capital allocation's evolution.

Over time, we believe that providing the deepest and broadest repository of capital allocation strategies will make the Allo contracts a powerful, but approachable, set of tools for building capital allocation anywhere in the world.

We hope to make Allo into a reliable resource and easy integration for developers who are building capital allocation into their applications. These integrators extend the Gitcoin network and serve as decentralized explorers and researchers of the capital allocation design space. They will have opportunities to align their incentives with Gitcoin's as they build – by rewarding them with our own Citizens Grants program (running on Allo, of course) .

*For a deeper understanding of our aspirations for what people will create using Allo, please read the design space-focused [Rainbowpaper](#).*

## **Grants Stack**

Grants Stack, built on top of Allo Protocol, is the primary application in the Gitcoin ecosystem. Grants Stack is designed to be a trustworthy, enterprise-grade tool that grants customers can rely on. It also serves as a reference app for Allo Protocol builders as it is open-source and forkable.

Grants Stack is built as an easily accessible tool that helps any grants manager create, manage, and run grants rounds. It productizes years of Gitcoin's learnings about how to run successful grants rounds, from grants setup to builder profile creation and application, to community-facing interfaces for donation or participation. Grants Stack recognizes the heavy coordination overhead between grants managers, builders, and communities – not to mention all of the tools and processes that they each use. We strive to make this as seamless as possible through automation, transparency, and modularity in our product that allows for optimal coordination. Additionally, as a fully onchain product, it comes out-of-the-box with high standards of transparency and accountability in funding decisions.

Grants Stack is investing in several core areas to provide grants managers with the tools they need to run successful grants programs. We believe grants program success is driven by:

- Engaging communities in crowdfunding and identifying grants program needs
- Creating networks of the best and brightest builders
- Providing transparency and accountability into grants decision-making
- Measuring & improving impact of grants programs

Grants Stack currently supports multiple funding methods: Quadratic Funding and Direct Grants. We're also constantly experimenting with and scouring the industry for new types of funding mechanisms. As new funding mechanisms arise, we look to gain enough expertise in them to effectively productize them. A great example of this is EasyRetroPGF.xyz. Originally used by Optimism for RPGF3, we've now open-sourced the tool to be hosted and run by anyone in the web3 grants community. As we learn more about the efficacy and power of Retro PGF, we may incorporate these features into Grants Stack to make them easily accessible in a no-code, stable environment for grants managers.

We anticipate that there will be many experimental webapps built by the community, including both complimentary tooling (like reporting tools or discovery tools) as well as novel capital allocation mechanisms (including conviction voting, allowlist voting, or EasyRetroPGF.xyz). These create a flywheel of innovation in the grants ecosystem that allows Grants Stack to remain a stable, trusted solution while staying at the forefront of grants innovation.



## Grants Program

The goal of the Gitcoin Grants program is to fund public goods that advance the growth and adoption of the Ethereum ecosystem, as well as to contribute towards our Gitcoin North Star of grants funded (GMV) through Allo. By focusing the program on growing the Ethereum ecosystem, we reap the benefits of learning from our own in-house experiments, as well as the fruits of funding public goods in our own Ethereum network.

In an early stage industry like web3, it's hard to overstate the speed at which trends emerge and new developments go live. Being practitioners of the craft of capital allocation allows Gitcoin to stay at the forefront of innovation and develop communities of expertise that inform both our grants program and our product.

The grants program also creates huge network effects for Gitcoin. Over the past four years, we have funded nearly 4,000 unique grants. Gitcoin now boasts the largest community of open-source software builders in web3, making our platform especially attractive for partners who are looking to recruit new builders, as well as builders who are looking for new grant opportunities. The grants program also feeds the grant manager side of the marketplace. Many of these grantees have graduated from their roles as grantees and are now partners of Gitcoin, running their own rounds through Grants Stack and building on Allo Protocol.

## Conclusion

The evolution from Gitcoin 1.0 to Gitcoin 2.0 marks a significant milestone in the field of capital allocation, especially in the realm of public goods funding within the Ethereum ecosystem and beyond. By transitioning to a more decentralized, modular approach and expanding its funding mechanisms beyond Quadratic Funding, Gitcoin has positioned itself at the forefront of a movement towards more democratic, efficient, and transparent capital allocation practices. The expansion into various blockchain networks signifies a broadening of Gitcoin's impact, offering a scalable and flexible platform for funding public goods across the web3 space.

This transition not only enhances Gitcoin's capability to support the growth of the Ethereum ecosystem but also explores a new frontier in how public goods can be funded and supported in a decentralized world. Moreover, the implementation of Gitcoin 2.0 embodies the potential of blockchain technology to revolutionize traditional methods of capital allocation. By leveraging the advantages of programmable money, smart contracts, and decentralized governance, Gitcoin demonstrates how capital allocation can be made more accessible, precise, and scalable.

As tokenization eats the world, the TAM for capital allocation tools is likely to grow by several orders of magnitude. Gitcoin's commitment to refining and expanding the possibilities of capital allocation, particularly through grants, highlights the transformative power of web3 technologies in addressing longstanding challenges in funding and resource distribution. As Gitcoin continues to explore and develop this vast design space, it paves the way for a future where capital allocation is not only more efficient and transparent but also more aligned with the values and needs of the communities it serves.

## Disclaimer

Not financial or tax advice. This whitepaper is strictly educational and is not investment advice or a solicitation to buy or sell any assets or to make any financial decisions. Additionally, Gitcoin contributors hold crypto assets.

This document is not officially a Gitcoin strategy until it has been ratified by Gitcoin Governance.

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