

ethereum foundation report

April 2022

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* All dollar figures in this report are USD.

Message from the Executive Director

The last few years have been very eventful, both globally and in the Ethereum ecosystem. While we have no control over some of the difficulties we were forced to face, these years of traveling less finally gave me an opportunity to breathe and reflect. With this time of reflection and feedback from the community, we have had a chance to clarify the EF's vision and principles. The vision of the Infinite Garden, the expression I have been using in the community, was born through this journey.

This report is not just about what we did in 2021. More importantly, we want to explain the reasoning and philosophy that help us decide where to prioritize our efforts. The philosophy we describe here provides our community of EF teams with guiding principles. Since we are not a normal top-down organization, these principles help us stay aligned.

This report also shares more information on how we allocated resources in 2021. I want to clarify that these numbers of course represent only a small glimpse of all the exciting work done by the Ethereum community. We also believe that more decentralized funding is important for the future of the Ethereum ecosystem. We continuously try to allocate resources to third parties that we believe can make better decisions than us within certain domains. It is exciting to see more and more groups becoming involved in deciding how the EF should allocate resources, and we discuss several examples in this report.

Beyond allocating financial support, there are many important stories to tell about how EF teams contribute to the ecosystem. There is a lot of non-financial work that EF community members do behind the scenes as well. The support and coordination of conversations related to core protocol development, connecting EF Fellows' projects from emerging economies with the rest of the Ethereum community, and coordinating with educational groups and efforts are just a few examples.

I appreciate everyone in the Ethereum community that has supported us and given us feedback, both positive and critical. Your voices have given us inspiration to constantly improve. We can never say we are perfect, but we are always trying to better serve the community – just like Ethereum does. Thank you for your understanding, patience and support so far. I look forward to doing more kaizen work together to grow the Ethereum ecosystem and to create a better world.

Aya Miyaguchi
Executive Director, the Ethereum Foundation

Ps. If you have feedback, please send it to questions@ethereum.org.

An aerial photograph of a rural landscape. The terrain is a mix of dense green forests and lighter green agricultural fields, separated by thin lines of roads or fences. In the lower right quadrant, a small town or village is visible, with a cluster of buildings and a road network. The overall scene is peaceful and scenic.

What is the Ethereum Foundation?



The Ethereum Foundation (EF) is a non-profit that supports the Ethereum ecosystem. We are part of a larger community of organizations, individuals, and companies that fund protocol development, grow our community, and advocate for Ethereum.

Behind that simple description, the EF is hard to categorize. We are not a tech company, or a “normal” non-profit. Just as Ethereum requires new concepts and technologies, it has spawned new kinds of organizations.

We are at the frontier of a new kind of organization: one that supports a blockchain, without controlling it. Every day we learn more about what kind of organization the EF needs to be, to support Ethereum’s long term growth.

One key thing to understand is that the EF is more like a **community of teams** than a **traditional organization**.

All of the teams that are part of the EF community share a common vision and passion for helping Ethereum make a positive contribution to humanity. But the EF contains many different teams that can be quite independent from each other. Teams have their own processes, goals, budgets, and products. The EF is a community of teams that are highly aligned, but loosely coupled:

- Some teams are focused on the development and maintenance of important pieces of the Ethereum technology stack.
- Some teams explore the technical frontiers of what Ethereum and its ecosystem can become.
- Some are focused outward, on the ecosystem itself, trying to understand it and looking for challenges and opportunities.
- And others are focused internally, ensuring that the EF's resources are allocated well, that we are working on the right problems, and that the teams and groups that make up our community have the support they need to achieve their own goals.

What is the EF's philosophy?

In the years since the EF was first established, we have learned more about our special role in the Ethereum ecosystem. Certain key ideas or principles have become foundational guides for how the EF thinks and acts.

These core principles guide the decisions of EF leadership, and are an important influence throughout the EF's community of teams.



1. Long term thinking

The EF community's impact will be measured in decades and centuries - not quarters and fiscal years. Ethereum is a protocol for human coordination, and if it continues to be a useful protocol, its lifespan will stretch long into the future.

This means that the EF naturally has a long-term mindset. We care for not only the interests of the community as it exists today, but for the community that will exist in the future. Like a gardener, we are planting seeds that we may not live to see grow.

2. Subtraction

We resist the natural tendency of organizations to grow and accumulate power. Instead of capturing opportunities for ourselves, we distribute those opportunities to the community. Instead of pulling everything in-house, we push our resources out to teams across the ecosystem. We don't compete with the ecosystem — we are thrilled when other organizations create value because that means Ethereum is becoming more decentralized and sustainable.

This is one reason we are relatively quiet. If we did not follow the philosophy of subtraction, the EF would be a natural schelling-point for attention, prestige, and influence as Ethereum grows and becomes more widely used around the world. The story of the Ethereum ecosystem should not become the story of the Ethereum Foundation.

As a result, we try to work with the community as much as possible. Instead of asking “how do we solve this problem?” we ask “**how can the Ethereum community solve this problem, and how can we help?**”

3. Stewardship of values

Ethereum has a soul. The values of our community have helped make Ethereum what it is. This includes values like open-source, decentralization, open-access, privacy, and many more. This isn't an exhaustive list, and the EF doesn't get to decide what the Ethereum community's values are. But we care about nurturing the ones we think are most important.

We often speak of the EF as a kind of gardener, nurturing Ethereum's "natural ecosystem". Like a gardener, we do not try to control or force the direction of natural processes - our role is to nurture and support. And when we walk through the landscape, we are careful about where we step.

How does the EF support the ecosystem?

Over the years we have experimented with many different ways of supporting the Ethereum ecosystem. This has led to a “layered” model where we involve many different groups in decision making about where to allocate resources.

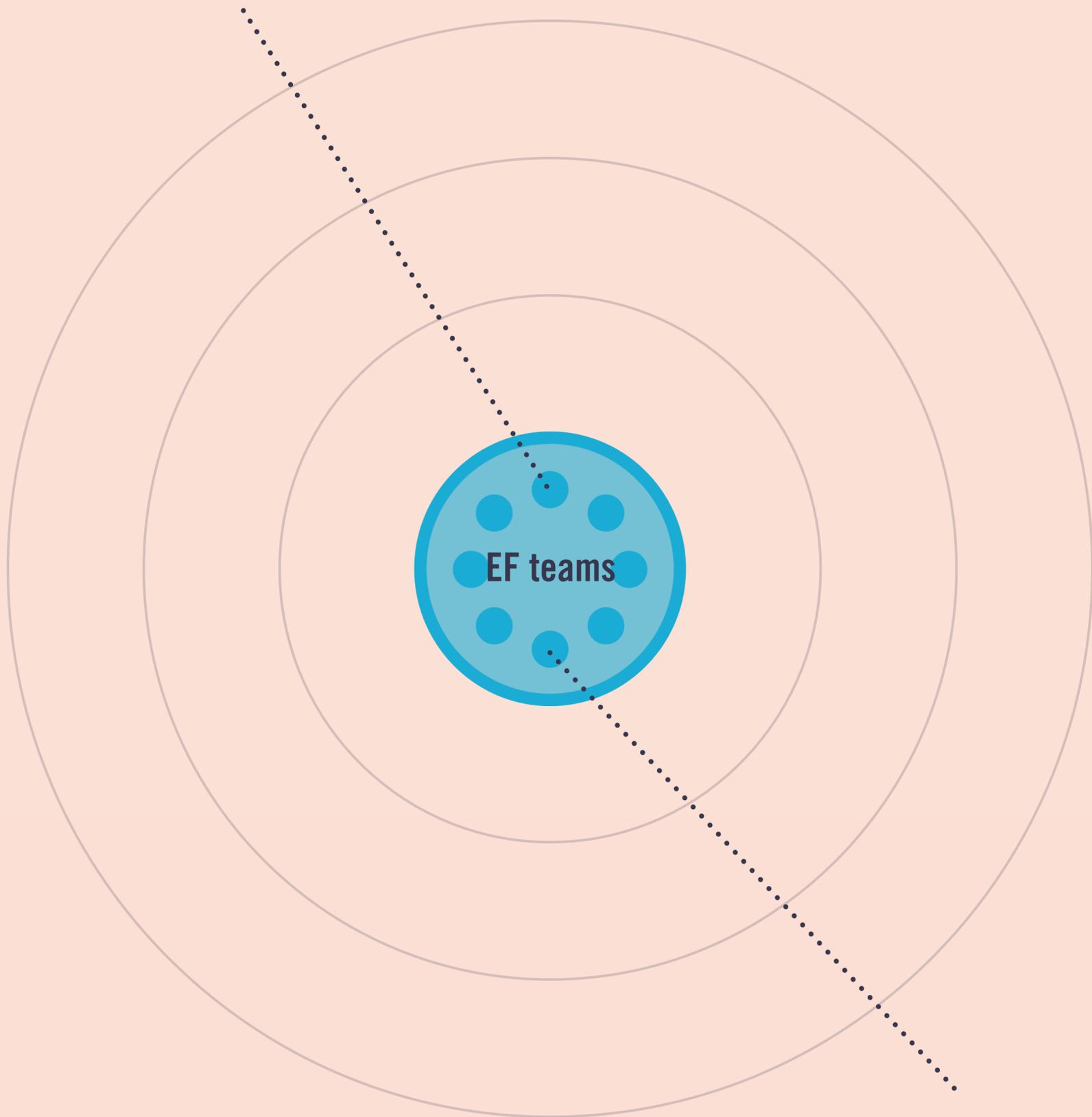
The first layer are **EF teams** - groups working within the EF who contribute directly to the ecosystem. The second layer are **Grants**, where we fund teams outside of the EF. The third layer we call **Delegated Domain Allocators**, where we work with outside groups who help make decisions about what to fund within specific domains. And the final layer is **Third Party Funding**, where we give money directly to outside groups and let them decide how to allocate it effectively.



Example:

Devcon

The Devcon team's goal is to support the ecosystem through events. This includes hosting Devcon, the annual Ethereum developers conference, as well as new initiatives like Devconnect. The team also supports community Ethereum events throughout the year, and works to grow the Ethereum community around our events.



Example:

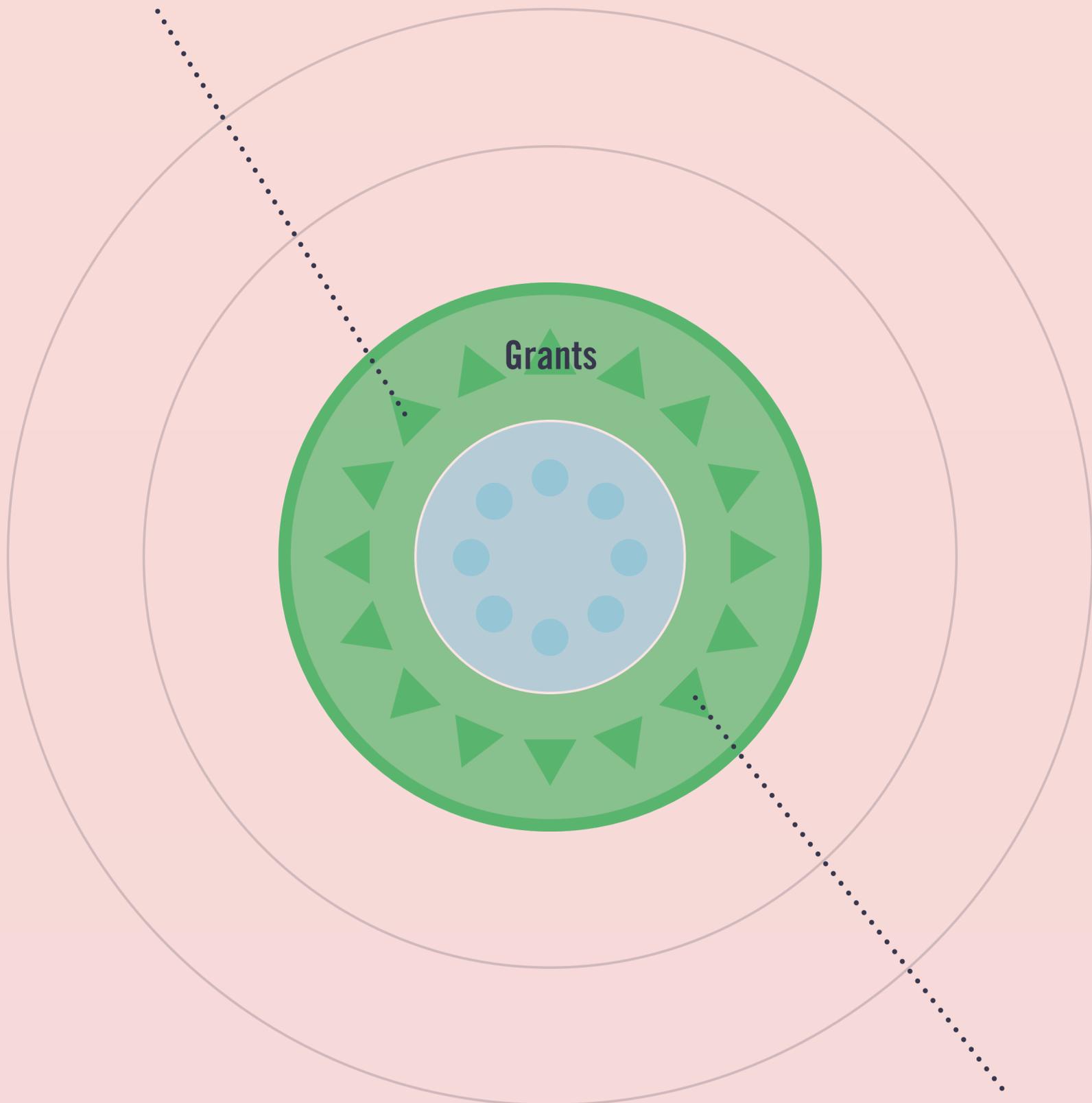
Geth

The Geth team is responsible for development and maintenance of go-ethereum (geth). People use the geth client and related libraries to access the Ethereum blockchain. Geth is the most popular Ethereum execution client and an integral part of the Ethereum software ecosystem.

Example: 2018

Uniswap

In 2018, the EF provided some of the first external funding to a self-taught Ethereum developer working on a new decentralized exchange called Uniswap. The EF provided a grant of \$50K and 120 ETH, which were used for an audit, documentation, and UI design before Uniswap's mainnet debut at Devcon 4. Since then, Uniswap has become key infrastructure for the Ethereum ecosystem, and the Uniswap community governs a treasury of \$4.8 billion - used in part to give grants to the ecosystem.



Example: 2018 to present

Consensus (“Eth2”) clients

Since 2018, the EF has provided grant funding to multiple teams working on consensus clients (previously referred to as “Eth2 clients”). We are proud of the teams who have made Ethereum’s transition to Proof of Stake a reality through years of work. The results of this multi-year collaboration speak for themselves: based on recent milestones, we expect there will be five consensus clients ready for the merge.

Delegated Domain Allocators

The EF works with domain experts to help guide allocations. This means identifying expert partners outside of the EF, and giving them the power to identify and make grants within a certain domain.

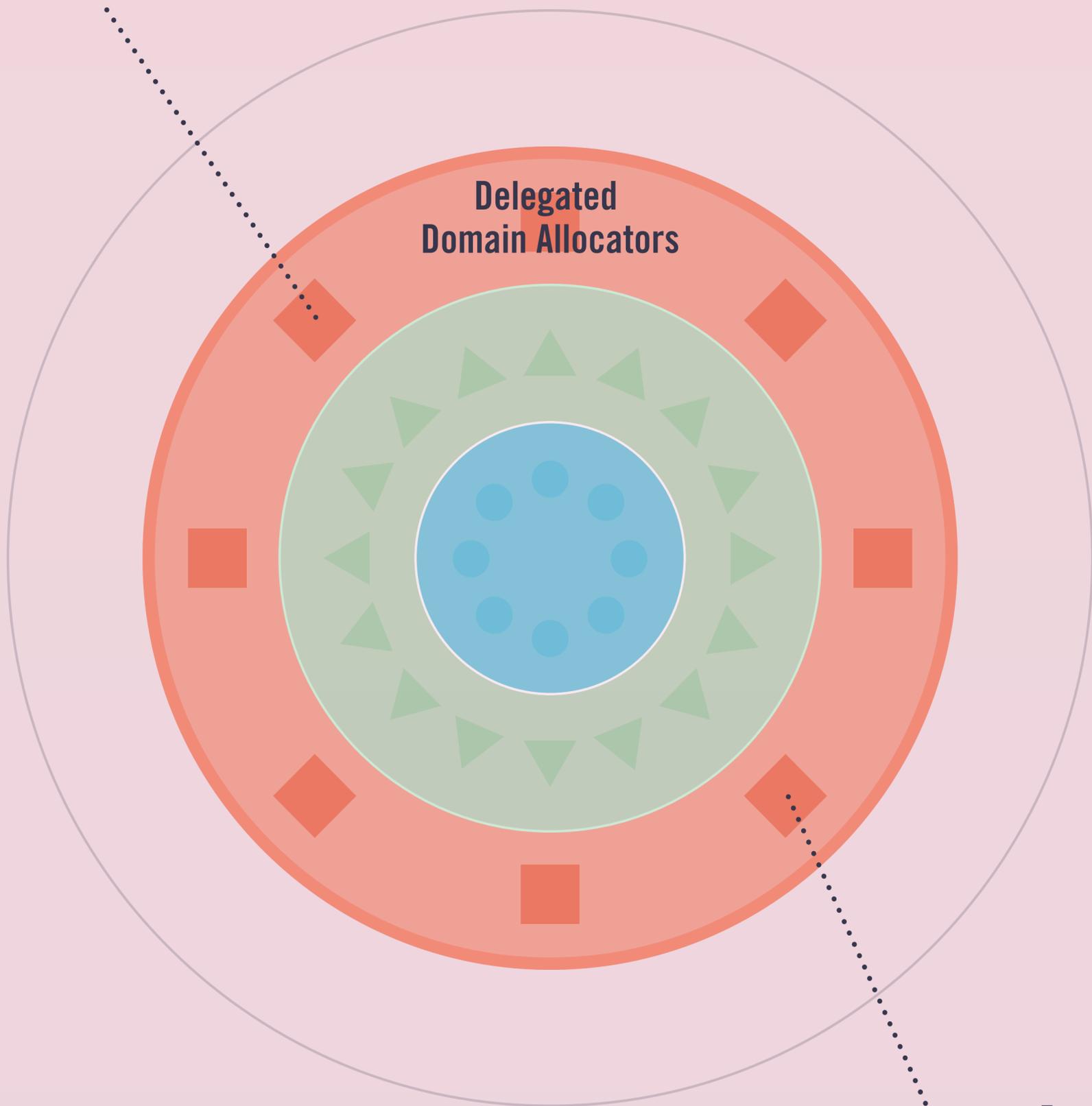
We have worked with delegated allocators in domains like zero-knowledge tech, developer experience improvements, staking infrastructure, developer onboarding, and various geographic or national regions.

The EF itself will always have blindspots, and this is why we need to work with the broader community to help allocate resources effectively to fund public goods in the ecosystem.

Example:

Nomic Labs

The EF began collaborating with Nomic Labs in June 2019. Initially we provided grant funding for Nomic Labs to work on key improvements to the Ethereum developer experience, and over time this relationship developed into having Nomic act as a delegated domain allocator. This meant helping us source opportunities and identify ways to allocate funding throughout the ecosystem to improve Ethereum's developer experience. [Read more.](#)



Example:

Devfolio

The EF has worked with the Devfolio team since 2019. Since then, Devfolio has helped guide our support for the Indian Ethereum ecosystem, giving grants, running a fellowship program, and supporting events to onboard developers.



Third Party Funding

As the ecosystem has matured, we've begun to redistribute greater and greater amounts of funding to independent third-party organizations. We give large amounts of funding to aligned organizations who share a commitment to supporting the ecosystem and funding public goods.

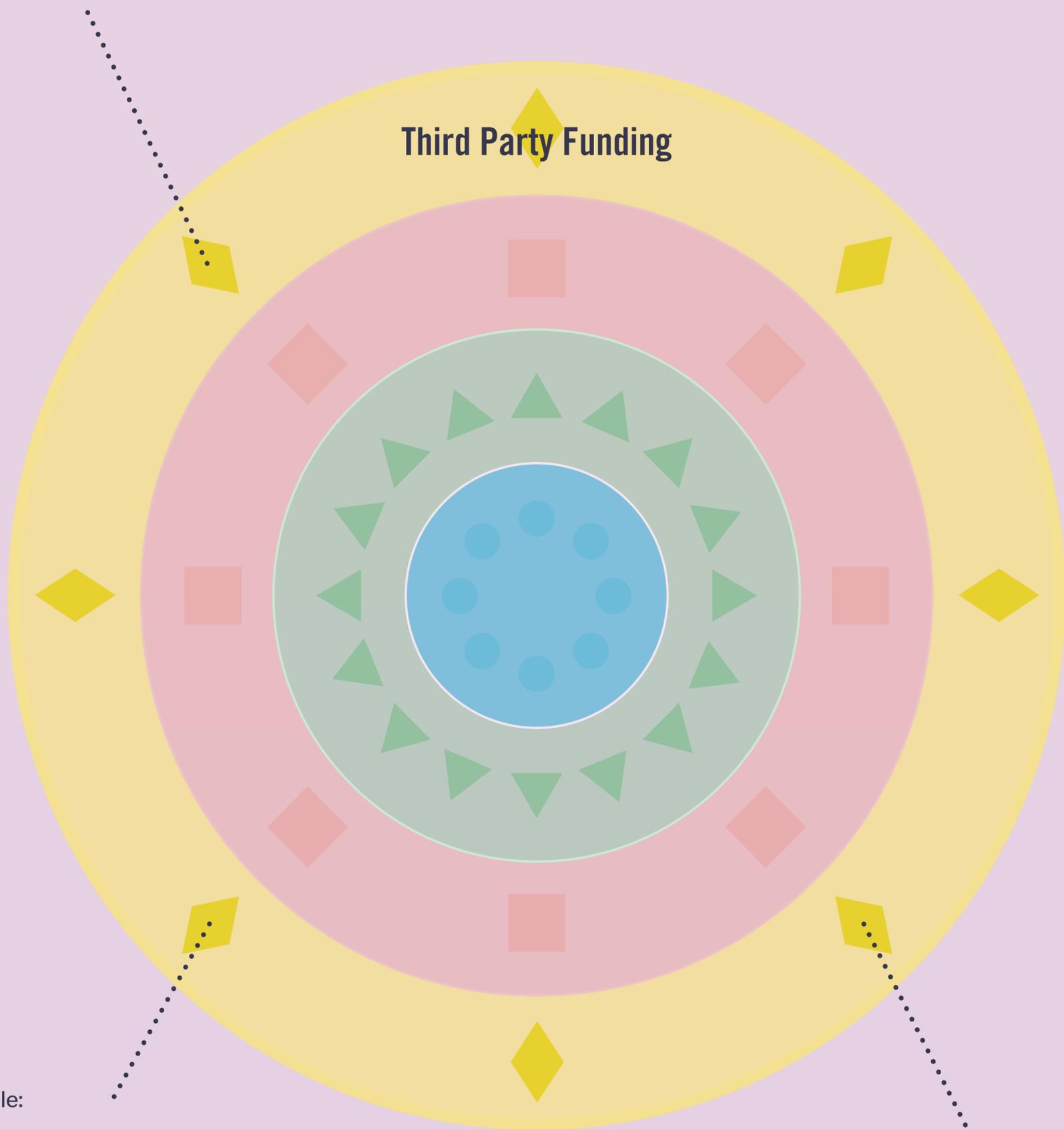
We do this by working with orgs like OxPARC, Nomic Foundation, ETHGlobal, and by using on-chain applications like CLRs / Quadratic Funding to put power in the hands of the community.



Example:

CLRs / Quadratic Funding

Quadratic Funding is a democratic mechanism for funding public goods. Since 2019, we have collaborated with organizations like Gitcoin and CLR.FUND, allocating significant funding which is then matched to individual donations from the Ethereum community. We are continuing to invest in making Quadratic Funding scalable and secure, so that these tools can be used by the community to allocate funding.



Example:

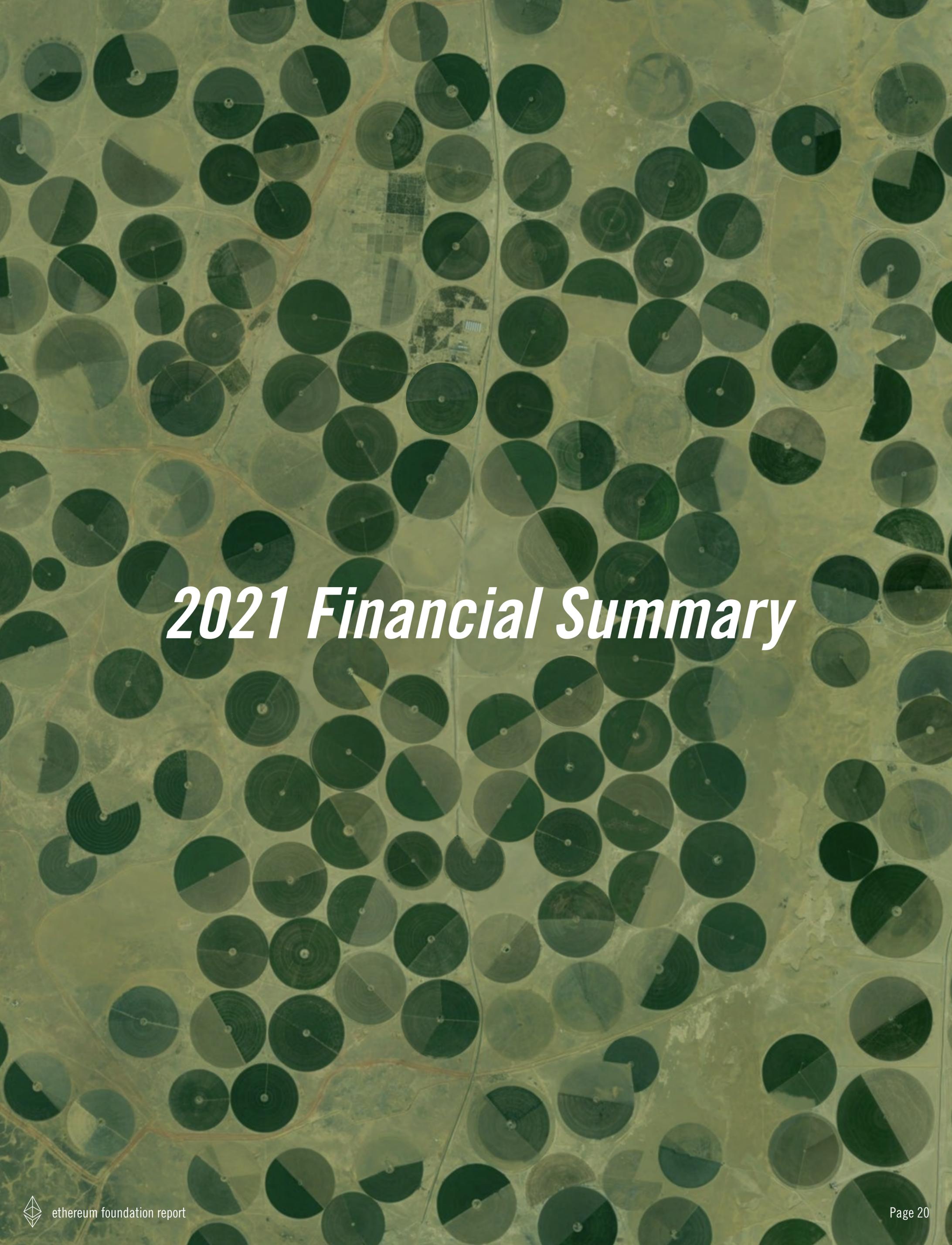
OxPARC

OxPARC is a new organization dedicated to supporting decentralized application development. In 2021 the EF provided a major grant to OxPARC, which the new org will use to fund its own activities as well as allocate out into the ecosystem through grants and other initiatives.

Example:

Nomic Foundation

In 2021, Nomic Labs announced their transition to the Nomic Foundation. This new non-profit foundation will work to improve the Ethereum developer platform by building tools and infrastructure. The EF is providing an \$8M grant to this new organization, which will also provide grants to serve its mission.



2021 Financial Summary

EF Treasury

As of March 31 2022, the EF's treasury was approximately \$1.6 Billion, split between \$1.3 Billion in crypto*, and \$300M in non-crypto investments and assets.

The vast majority (99.1%) of our crypto holdings are held in ETH. This ETH represents 0.297% of the total ETH supply on March 31 2022.

The EF follows a conservative treasury management policy that ensures we have sufficient resources to fund the EF's core objectives even in the case of a multi-year market downturn. This part of our budget is immune to changes in the price of ETH on a significant timeline.

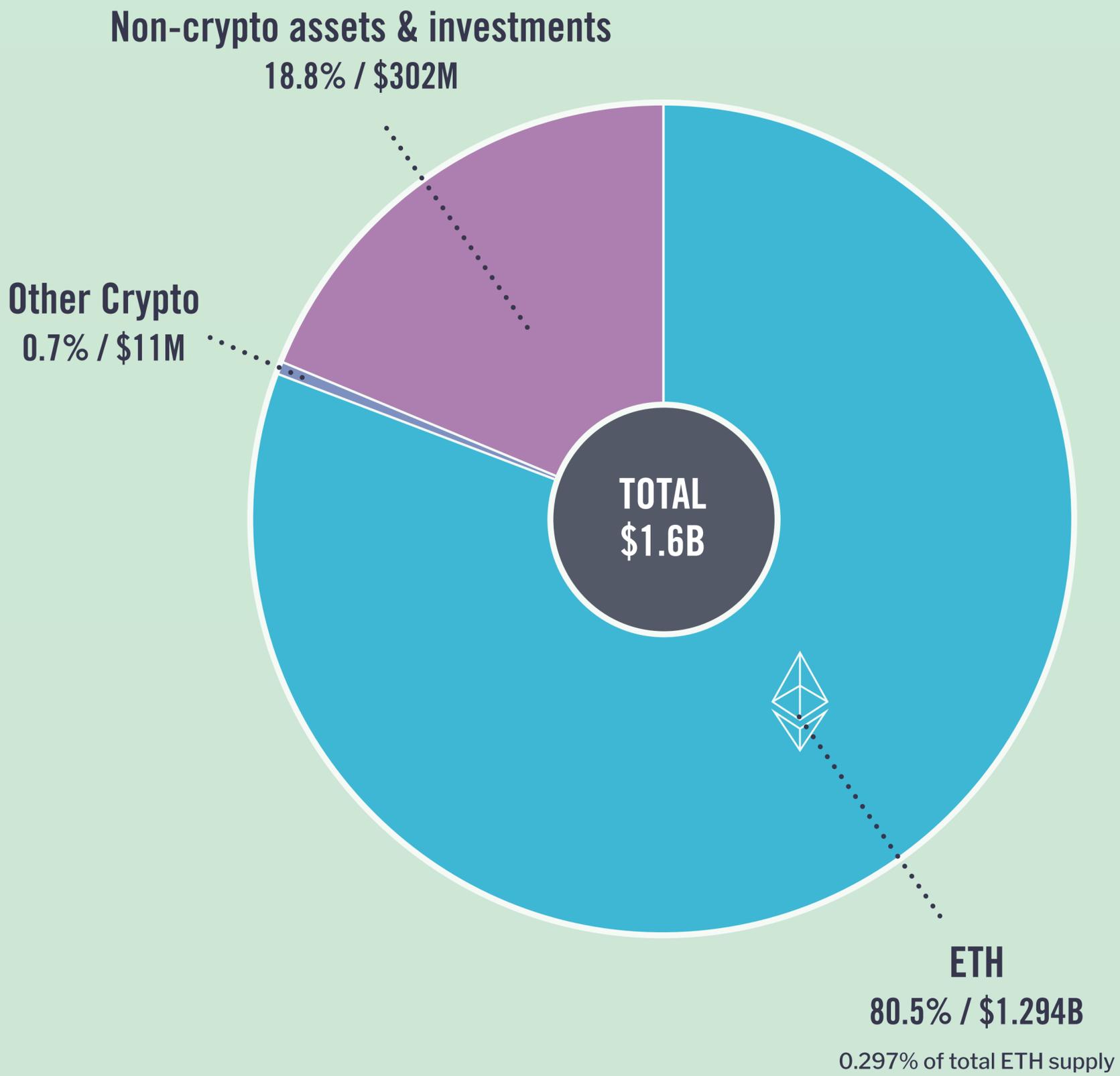
We also increase our non-crypto savings in response to rising ETH prices, which provides a greater safety margin for our core budget and would enable us to continue funding non-core but high leverage projects through a market downturn.

We choose to hold the remainder of our treasury in ETH. The EF believes in Ethereum's potential, and our ETH holdings represent that long-term perspective.

* These ETH figures include the 39,168 ETH already committed to the Client Incentive Program, which will be released over time to client teams, following the schedule described [here](#).

EF Treasury

As of March 31, 2022



2021 spending

In 2021, the EF spent approximately \$48 million. Approximately \$20 million of this total was in the form of external spending, which includes grants, delegated domain allocations, third party funding, bounties, and sponsorships.

The EF's grant activities are regularly published on the EF blog:

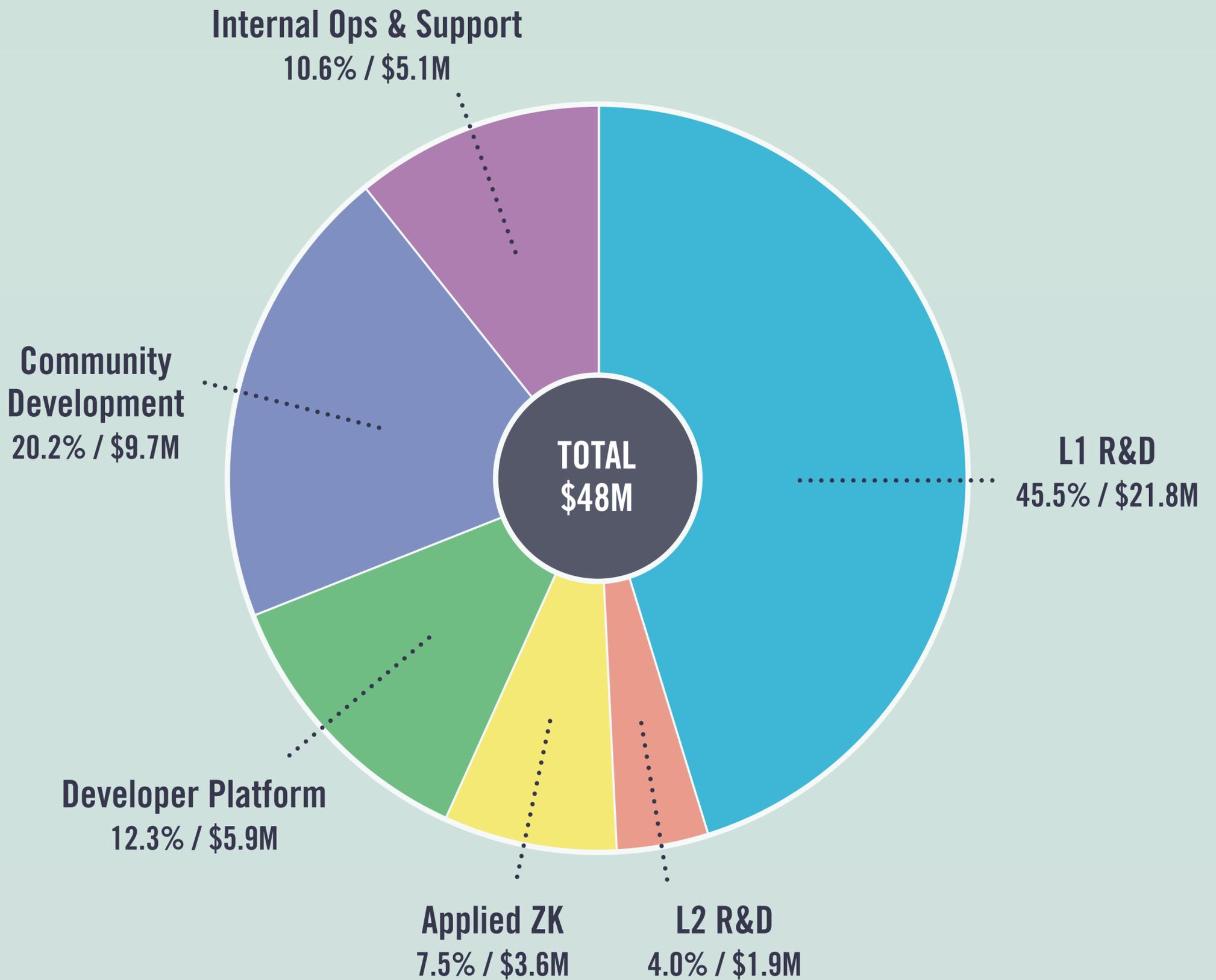
- [Allocation Update Q1 2021](#)
- [Allocation Update Q2 2021](#)
- [Allocation Update Q3 + Q4 2021](#)

The remaining \$28 million was used to fund teams and projects within the EF community.

The total \$48 million can be broken out into a few different categories, each of which includes both internal and external spending:

1. L1 Research & Development - \$21.8 million
2. L2 Research & Development - \$1.9 million
3. Applied ZK Research & Development - \$3.6 million
4. Developer Platform - \$5.9 million
5. Community Development - \$9.7 million
6. Internal operations & support - \$5.1 million

2021 spending



1. L1 R&D - \$21.8M

This category includes all R&D related to mainnet upgrades, Geth, internal security research, cryptography R&D, economic modeling and mechanism design, longer term research to achieve the Ethereum community roadmap, and grants to external execution & consensus layer clients.

This category also includes many grants to external parties, ranging from network stress testing to outside research on specialized cryptography.

This total does not include the [Client Incentive Program](#), which client teams will unlock in the future according to [this schedule](#). The CIP totals 39,168 ETH, valued at \$132.5 million as of March 31, 2022.

2. L2 R&D - \$1.9M

This includes internal teams who contribute to L2 research & development, as well as grants to external parties to improve the L2 ecosystem. These grants include educational resources, stress-testing and monitoring tools, L2 SDKs and other developer tooling, security reviews for external projects, and more.

3. Applied ZK R&D - \$3.6M

This includes funding for teams who work on projects like [MACI](#), ZKEVM, [UniRep](#), and other projects.

This category also includes many grants, ranging from ZK developer tooling, ZK ceremony design UX, ZK application proof of concepts, and more. It also includes the grant given to the [OxPARC foundation](#) in October 2021.

4. Developer Platform - \$5.9M

This category includes all work related to improving Ethereum as a developer platform. This includes EF teams like Solidity, Remix, and support for the Python ecosystem. It also includes Zokrates, and grants to third party allocators like Nomic Labs.

This total does not include the [\\$8M donation to the Nomic Foundation](#), which will be recorded in 2022.

5. Community Development - \$9.7M

This category includes various work to support different segments of the Ethereum community. This ranges from engaging with core protocol communities (e.g. support for staking community), Next Billion, Devcon, as well as Ethereum.org and other educational resources.

This category also includes many grants, ranging from grants to specific regions like [Honduras and Colombia](#), education, and more. It also includes the \$1M to advocacy organizations [announced in November 2021](#), and the \$1M in staking community grants [announced in February 2021](#).

6. Internal operations - \$5.1M

This category includes general expenses that support all teams at the EF. This includes all costs related to internal and external legal, accounting, and financial services, and org-wide subscriptions and service providers, ranging from data services, operational tools, and technical infrastructure. It also includes all fees related to individual investments within our treasury management strategy, as well as salaries of all operational and administrative staff.

Uluru, Australia

Berlin, Germany

Gifu, Japan

Merzouga, Morocco

Amazon, Brazil



ethereum
foundation

Tabora Region, Tanzania

Istanbul, Turkey

Serranía de Hornocal, Argentina

Phú Quốc, Vietnam

Wadi ad-Dawasir, Saudi Arabia