
DAOs

# A community built on code

February 2022

# Table of Contents

# 1.

# Introduction

From memecoins to NFTs, 2021 proved to be a year of innovation and exponential growth for the cryptoasset industry. Although the boom came as a surprise to many, others continue to believe that crypto will continue to disrupt virtually every industry imaginable in one form or another. One of these industries is traditional finance, where decentralization, incentives, and computer code enable the development of more efficient and "fair" products and services that disrupt legacy financial products, services, and capital structures. In order to effectively manage these disrupting products, a clear governance mechanism is needed—one that is agnostic to participants' locations and allows sufficient discourse to take place. This is where Decentralized Autonomous Organizations (DAOs) come into play.

Decentralized entities, or an organization where no single person or group makes the decisions or controls the entity's operations, saw explosive growth in 2021 thanks to rapid DeFi expansion. Currently, the crypto space consists of at least 188 DAOs that exercise control over $12.8B in their respective treasuries to pursue whatever they choose, whether that be dictating policies over a decentralized finance (DeFi) protocol, attempting to purchase esteemed collector items, or even purchasing land.[1] DAOs create low barrier opportunities for participants around the globe to coordinate assets and ideas to pursue any causes they desire. DAO growth has been so strong that these organizations are beginning to generate value that places them near levels that one sees in tradfi markets. For instance, Olympus DAO formed in March 2021 with a market cap of roughly $200,000 before blasting towards a peak of around $4B in only seven months. Since then, its treasury has amassed $650M worth of assets that are controlled via DAO governance processes.

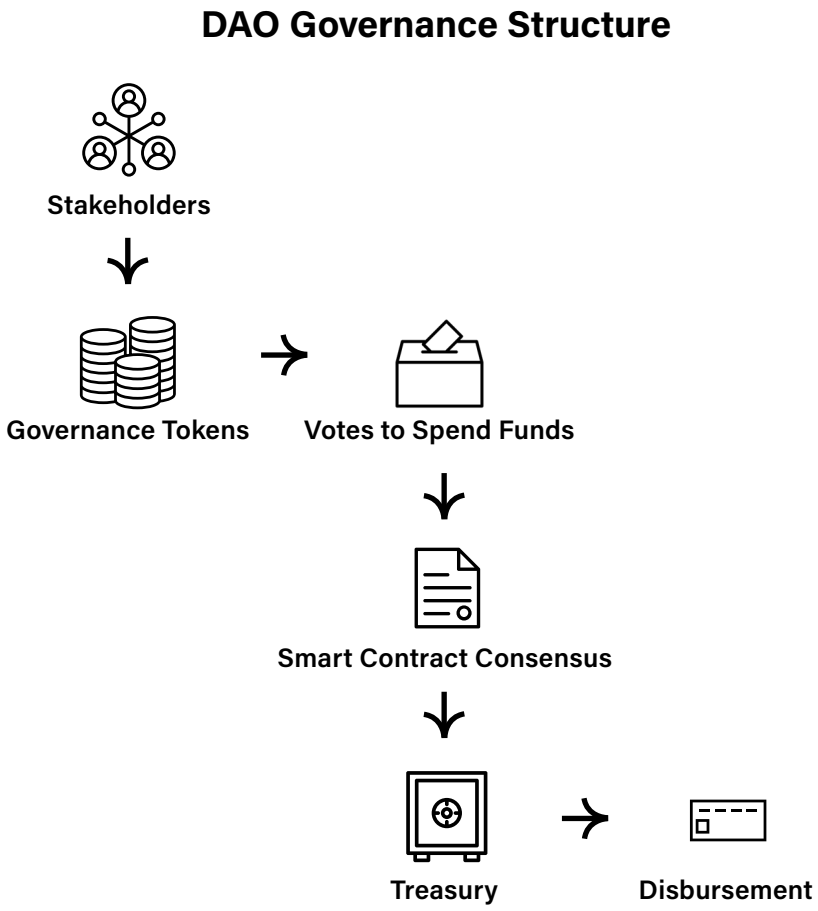
But while DAOs are proving to have incredible momentum, disruptive potential, and impact, they remain in their infancy. Not only that, but few understand how and why they work. Given their rise, increasing importance, and disruptive potential, Kraken Intelligence breaks down in this report what exactly a DAO is, why they exist, how they're structured, and which DAOs are currently making waves.

# 2.

# What is a DAO?

A Decentralized Autonomous Organization (DAO) is an internet-native entity that is collectively owned and managed by its members.[2] Think of a DAO as an informal foundation, where the organization sources assets from a variety of contributions and votes on how to utilize these funds. DAOs have their own treasuries that are often secured by a multi-signature wallet, which prevents unsanctioned use of the funds by splitting the private key between multiple parties so that they must collaborate to unlock funds. Decisions in a DAO are governed by proposals and voting mechanisms to ensure that everyone within the organization has an equal voice in the governance process. This process allows participants to vote on key decisions on how to manage DAO resources, whether that be funding an NFT art collection, seeding a new DeFi protocol, or purchasing a golf course. Further, it fosters a sense of community among participants to accomplish collective goals. Membership in DAOs is usually proven by wallet snapshots, where a record of a stakeholder's crypto wallet address is recorded to prove that the individual or entity in question owns the governance tokens associated with the DAO itself.

The cornerstone of a DAO is its smart contract. That is, a conditional coded contract that defines rules of the organization while also maintaining custody of the DAO's treasury. Smart contracts consist of self-executing computer code that enforces pre-set conditions and actions on a blockchain. They permit trusted transactions and agreements between anonymous parties without the need for third-party arbitration.[3] Once the DAO's smart contract goes live on the blockchain, the contract can only be amended with coordinated votes among the DAO's token holders. If a bad actor tries to withdraw funds from the treasury, act maliciously, or alter the contract in any way, the predefined rules written in computer code will prevent these actions from happening. If the contract is exploited, the open source nature of the smart contract means that any & all users can see the bad actor's activity.



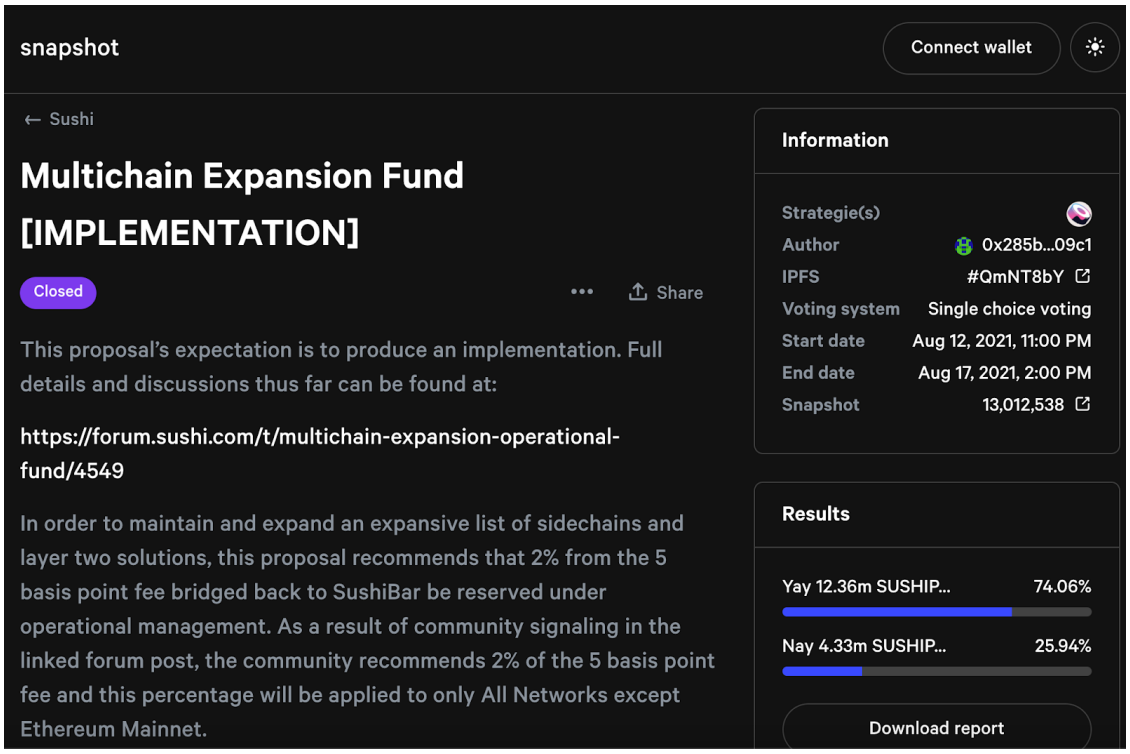

Most DAO governance actions occur on internet forums, like Snapshot, where public discourse is welcome and encouraged. A DAO stakeholder can submit a proposal for virtually anything within the rules of a smart contract, such as voicing public support for another protocol or altering fund management methods. A proper DAO proposal includes a summary of the desired action, a background on why the proposal is necessary, and a formal action plan on how to implement the proposal. Proposals are often put through a sufficient contemplation period of at least a few days so that all DAO members can view the proposal and vote for or against it.

For example, on May 6, 2021, Ethereum-based decentralized exchange (DEX) SushiSwap's governance DAO voted in favor of adding SUSHI token incentives on the Polygon blockchain to enhance cross-chain liquidity. SushiSwap is a popular automated market maker (AMM) where users can purchase and sell assets in a decentralized setting. The protocol tokenizes governance power and fee sharing incentives through its Sushi token. The proposal passed with 84% acceptance and now SushiSwap is the fourth leading DEX on the Polygon network with over $330M total value locked (TVL).[4] Unlike the traditional financial world, a pivotal change was made to the SushiSwap protocol in a completely decentralized and autonomous manner.

Because proposals are often shared on internet forums, the public can see in real time discussions surrounding a DAO's policy procedures and vote results. Also, anybody can view the wallet address that is responsible for a policy proposal and the wallet addresses of all parties that vote in a proposal. These wallet addresses can generally be referred to as a person's Web3 account, which allows a user to interact with any decentralized applications (dApps) without entering traditional login credentials, such as an email address and password. In figure 1, one can see a policy proposal that is live in the governance process for SushiSwap. The proposal presents SushiSwap's opportunity to expand DEX operations to blockchains other than Ethereum so that users could leverage Sushi's protocol to trade assets with lower gas fees than what the Ethereum network requires. It outlines the purpose of the proposal, the implementation of the proposal if passed, and the potential fee opportunities for SushiSwap.

*Figure 1*

**SushiSwap Proposal**



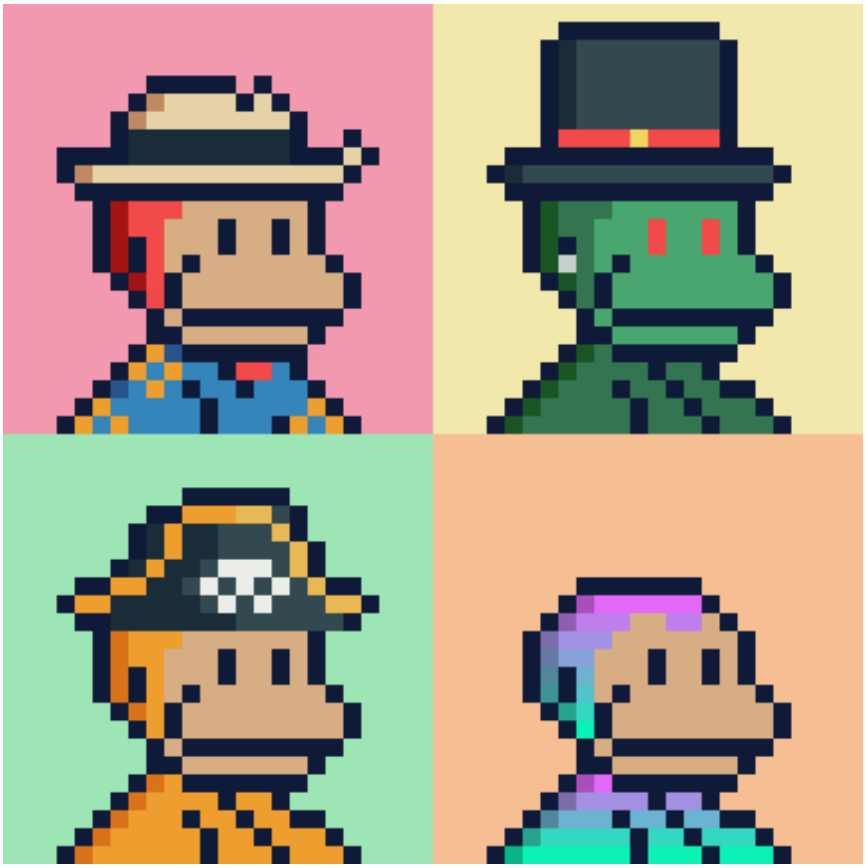

Source: Snapshot

Although DAOs can, in theory, exist on any smart contract enabled blockchain, most DAOs currently operate on Ethereum due to the network's first-mover advantage as the first widely used smart contract-enabled layer 1 blockchain. As smart contract activity expands on other blockchains, one can expect DAO structures to continue to multiply—especially for blockchains with increasing developer activity and interest, such as Harmony, Fantom, Cardano, and Polkadot ecosystems. As an example, Mango DAO has emerged on the Solana blockchain,which allows MNGO token holders to vote on governance procedures concerning the Mango Markets DEX. Mango DAO utilizes its own landing page in lieu of Snapshot that operates in essentially the same manner. On November 1st, 2021, Mango DAO voted with a 99.99% majority to list a Cardano futures market on its DEX, allowing users to open leveraged long and short positions tied to Cardano.[5]

Another emerging DAO trend exists in NFT communities, where NFT tokens authenticate membership instead of traditional fungible tokens. This trend has become popularized on Solana with the genesis of MonkeDAO, an exclusive club for holders of the Solana Monkey Business NFT collection. The MonkeDAO commissioned a treasury wallet in which 3% of all NFT revenues are sent for long-term staking to accrue value. The DAO also runs a Solana validator, where members can stake their SOL to support network security. The DAO utilizes a primitive voting system via the Discord chat application to decide on community events and how treasury funds are used.

*Figure 2*

**Solana Monkey Business NFTs**



Source: Solana Monkey Business

# 3.

# History of DAOs

## The DAO Hack

While the popularization of DAOs as an organizational structure is advancing rapidly, DAOs have not always been successful. In April 2016, the first DAO, known as "The DAO," launched on Ethereum and became almost instantly famous for it's revolutionary feat in achieving a crowdfunded venture capital firm on the blockchain.[6] Seed investors pooled ~$150M of assets, 12.7M ETH at the time, through the purchase of the DAO governance token, and individuals received 100 DAO tokens per ETH contributed. To prevent malicious members or unequal governance control, veterans of the Ethereum community verified the identity of each contributor to the DAO. In exchange for owning the DAO's token, token holders could propose for the funding of different projects and claim a pro-rata ownership share of the treasury according to their percentage of tokens held. If any proposal was approved by a quorum of ~20% of all tokens, the DAO contract would automatically transfer ETH to the proposal's respective smart contract. All revenue from successful proposals would feed the DAO's treasury fund and be eligible for proportional distribution among DAO token holders as rewards.

As revolutionary as it was, The DAO has one major fatal flaw; it's smart contract had a "split function" where a member could exit the DAO and receive their ETH back.[7] This function was intended for dissenting members to recover their ETH funds and burn their DAO tokens if the DAO majority approved a policy that a minority member objected to. The withdrawn funds would then sit in a split "child" DAO contract where they would be locked for 28 days before being claimable by the splitting party. On June 16, 2016, an attacking party exploited a flaw in the split function that allowed the attacker to call the split function multiple times in the same transaction ("recursively") before the contract

could check the attacker's updated DAO token balance. The contract did not recognize that the attacker was using the same allocated DAO tokens each time to split. As a result, the attacker stole 3.6M ETH ($70M) before the Ethereum community recognized what had happened. The hacker published a letter to the Ethereum community claiming that the drained funds were rightfully his since his actions were permitted by the smart contract's code.

After the attack, the ETH community had 27 days to decide on a course of action about the stolen funds.[8] While this was an issue that primarily affected the DAO, the majority of influential developers in the community were involved directly in the DAO and wanted to see it succeed for the advancement of Ethereum. The ETH community devised three options on how to move forward:

1. Soft fork the network, where any future calls to retrieve the stolen ETH funds from the child DAO contract would not be valid. This would require all ETH miners to download the software fork when made available if agreed upon.
2. Hard fork the network to overwrite the transaction history and make it to where the contract was never drained.
3. Do nothing and allow the hacker to claim his "rightful" funds.

This situation caused quite a debate in the ETH community as a fork of any kind would undermine the decentralized and immutable nature of the blockchain. On June 22, 2016, a vote to soft fork passed with the majority of miner support.[9] However, on June 30, 2016, the community decided to not implement it due to security risks. This led to a vote on a hard fork that passed with majority vote shortly after July 15, 2016. On July 20, 2016, Ethereum founder Vitalik Buterin posted to the Ethereum blog that the hard fork was completed at block 1920000, and the stolen ETH funds were recovered and returned to the DAO.[10] Any miners who opposed the hard fork continued to mine on the original version of the Ethereum network, which is now called Ethereum Classic.

Overall, the DAO hack served as a monumental event early in the history of the Ethereum network. The DAO demonstrated that proper precautions, such as contract audits and continual monitoring, are necessary to operate a DAO and became a primitive example for future DAOs.

## History of DAOs: Further Development

As a result of the smart contract failure in the DAO hack, the Ethereum community pioneered new frameworks to create DAOs, such as the Moloch DAO smart contract, Aragon governance protocol, Colony DAO, and Tribute DAO. Each governance framework varies with regards to on-chain activities, voting processes, token models, and exit mechanisms. The first of new DAO models after the DAO hack, Moloch DAO was conceived in February 2019 to incentivize developers to progress towards Ethereum 2.0, an upgraded Ethereum version that plans to solve scalability issues and transition towards a Proof-of-stake (PoS) validator system.[11] This would create a less energy intensive protocol when compared to Ethereum's current Proof-of-Work (PoW) validator system, where parties consume large amounts of electricity via computer-intensive mining. For more information about Ethereum 2.0, check out our **primer.**

Similar to the 2016 DAO, Moloch proposed a smart contract DAO structure where users can pool Ethereum funds into a treasury called the "Guild Bank" and receive votes proportional to their contribution to the total pool. Note that the initial Moloch contract only allowed users to join applicable DAOs via the contribution of ETH. Moloch's voting rights are not transferable in secondary markets. Similar to how members of the 2016 DAO could "split" from the DAO and receive their share of the treasury, members of the Moloch DAO are able to liquidate their votes utilizing a "ragequit" function, effectively burning their voting power, in exchange for funds from the Guild Bank. Since Moloch allows a "ragequit" function when parties disagree, quorum is not required for proposals to pass. Instead, proposals pass by simple majority.

In order to reduce the surface area for attacks, later DAO projects engineered their smart contracts with minimal on-chain functionality. Essentially, this means putting the treasury and voting verification on-chain but leaving discussion and coordination processes to take place through other channels. DAOs today follow this structure by placing most activity off-chain within a server on the chat app Discord. Notably, Aragon, Colony, and Tribute DAO frameworks perform voting processes off-chain. To further reduce attack potential, Moloch's contract is not upgradeable, even with a proposal. In

order to upgrade the contract, users must exit the DAO and deploy a new contract. Venture capital DAOs, including the LAO and MetaCartel Ventures, collaborated to create a Moloch v2 contract where users could contribute assets of their choice as an alternative to only Ethereum contributions. The new model also implemented a "guildkick" function that allows members to remove other members via a vote.

In the spirit of crypto's collaborative community, modern DAO frameworks are often designed to be forked, upgraded, and iterated on to further the DAO space as a whole. Aragon's governance protocol created a full suite of open-source DAO products to assist in the creation of DAOs. These products include Aragon Client, a user interface to create DAOs; Aragon Voice, a fee-less mechanism to vote on-chain; and Vocdini, a censorship-resistant anonymous voting protocol. Further, developers can now hire auditors to inspect and stress-test smart contracts to verify their safety. Note that these "audits," which are essentially attestations, do not guarantee that a smart contract cannot be exploited, but they do provide participants with an extra level of confidence in contract security. Whether using Moloch's smart contract or other models, DAOs continue to multiply and create avenues for collaboration in the crypto ecosystem. While the first DAO was conceived as a venture fund, DAOs today often coordinate to advance a mission, such as Moloch's vision for the advancement of the Ethereum network, NFT organization PleasrDAO's vision to promote digital creativity, or SushiSwap's vision to become a leading DEX in the crypto space. Further, a number of DAOs have recently formed with the goal of acquiring real world assets to benefit their members, such as LinksDAO, which is looking to purchase and run a golf course through NFT funding, or ConstitutionDAO, which raised $47M in an attempt to purchase an original copy of the U.S. Constitution in a Sotheby's auction.[12,13]

# 4.

# DAOs: A New Organizational Structure

DAOs serve as a formidable force in today's modern business ecosystem when compared to more traditional organizational structures, such as foundations. Consider a foundation, a legal entity that is separate from its owners and one that requires relatively significant capital to form and maintain due to startup costs, filing charges, ongoing fees, and general overhead costs.[14] Foundations also require extensive record-keeping, operational processes, and IRS reporting practices. Public foundations source their funding from the general public, but private foundations source their funding from wealthy individuals, families, or corporations. Foundations elect a board to make decisions that assist in furthering the organization's mission. It is common for these organizations to employ staff and directors that are paid for their efforts. While these organizations exist for the public good, they can suffer from a lack of transparency with donors, internal corruption within the board, and negligent spending.

On the surface, DAOs and foundations appear to be fairly similar, as many DAOs source funds for a treasury that is used to fund decisions in a manner that is similar to how foundations approve and disburse grants. Like foundations, DAOs organize around a specific set of goals. DAO membership closely ties with the organization's underlying community and vision, whether that be the advancement of a technology or the acquisition of a real world asset. However, DAOs do not necessarily pay staff. A common topic in governance is the principal-agent dilemma where an agent (elected officer) tends to act in their own best interests instead of those of principal stakeholders.. DAO governance structures attempt to circumvent this issue. Instead of electing officials to a board of directors to supervise a management team handling operations, DAO stakeholders have the opportunity to transparently vote on each and every action of the DAO as defined in the governing smart contract. In turn, this grants DAO stakeholders more control over the entire entity. However, the DAO governance process can sometimes yield slow results if a proposal is heavily debated.

While foundations adhere to structured reporting requirements, the absence of a blockchain record and the potential for misaligned powers in this task can yield detrimental effects for a foundation and its donors. This failure in top-down structured entities is most commonly found in corporate scandals, but scandals within charitable foundations are also prevalent. For example, William Aramony, president of the charity, United Way of America, served seven years in prison after fraudulently spending $1.2M of the organization's money to fund a number of personal ventures, including a relationship with a young woman.[15]

This proves to be one of the largest foundation scandals in recent history and demonstrates how DAOs can be a potentially safer organization model with their ability to prevent malicious activity, such as asset embezzlement, thanks to their underlying computer code that prevents unauthorized transfers of assets. In a foundation, typically a treasurer holds the duty of signing and co-signing checks, but the rest of the foundation does not necessarily get a transparent view of where these funds are going. With a blockchain record, DAOs benefit from complete transparency as to where funds are disbursed.

*Figure 3*

**DAO vs Foundation Comparison**

| | DAOs | Foundations |
|---|---|---|
| **Startup Process** | Token sale open to any participants | High net worth individuals pool funds |
| **Reporting Process** | All records shown on the blockchain in real-time | Quarterly reports, internal audits |
| **Governance Process** | All DAO stakeholders, sometimes divided into informal committees | Boards, committees, management teams, and paid directors |

Source: Kraken Intelligence

# 5.

# Use Cases and Notable DAOs

The DAO ecosystem is a vibrant space that flourishes with daily activity across at least 188 DAOs and 1.3M voters. To date, DAO treasuries have amassed nearly $12.8B AUM with nearly 80% of it being locked in the top 10 organizations.[16] Keep in mind that this is by no means all-inclusive, as tracking down DAOs across multiple blockchains in one data aggregation platform is no easy feat, and this also does not account for the market capitalizations of any DeFi governance DAOs' tokens themselves. An overwhelming majority of these DAOs exist primarily to govern their respective protocols. Shown in Figure 5, on-chain data indicates that DAO membership has continued to grow overtime.

*Figure 4*

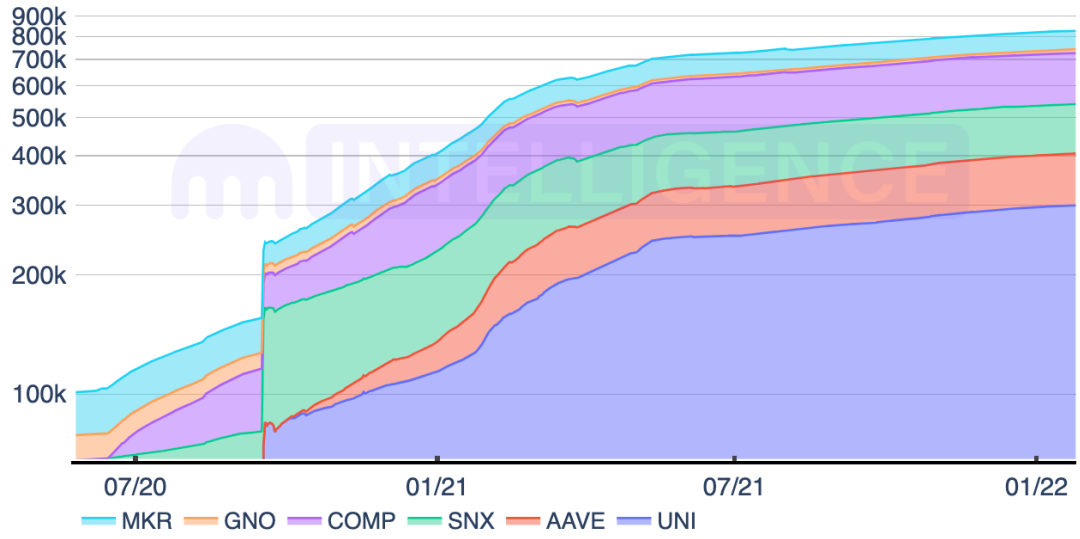
**Top 10 DAOs by Treasury**

| PROTOCOL | AUM | PROPOSALS | VOTERS | BALLOTS | TOKEN PRICE |
|---|---|---|---|---|---|
| Uniswap | 2.75B | 9 | 1,230 | 1,631 | $15.85 |
| Gnosis | 2.74B | 13 | 632 | 1,474 | $335.75 |
| Ethereum Name Service | 1.73B | 1 | 77 | 77 | $22.90 |
| Gitcoin | 676.46M | 14 | 106 | 217 | $11.25 |
| Compound | 511.1M | 82 | 1,028 | 3,377 | $175.72 |
| Lido DAO | 481.04M | 47 | 402 | 1,139 | $2.19 |
| Aave | 480.54M | 56 | 808 | 1,683 | $233.77 |
| dYdX | 456.52M | 6 | 804 | 1,295 | $6.83 |
| Radicle | 433.82M | 5 | 67 | 76 | $7.40 |
| Synthetix | 191.42M | 245 | 178 | 1,622 | $5.03 |

Source: Boardroom

*Figure 5*

**Number of Token Holders Across 5 Major DAOs**




Sourcee Kraken Intelligence, Etherscan

Common use cases for DAOs include NFT collection and incubation, protocol governance, investment management, social membership, and grant development. Beyond these use cases, DAOs continue to innovate with even more applications, such as play-to-earn (P2E) gaming DAOYield Guild Games and DeFi insurance provider Nexus Mutual. Below, we break down the five major categories of DAOs that exist today:

- **NFT DAOs** collect, curate, and incubate multiple NFT projects and emerging artists, often seeking to advance market accessibility for creators and promote censorship-free expression of opinions through art.
- **Protocol governance DAOs** allow participants to vote on proposals that influence the development and direction of a protocol.
- **Investment management DAOs** exist to pool assets together to invest in promising opportunities while splitting profits fairly across participants.

- **Social DAOs** exist as exclusive clubs and social communities that often require token ownership for access.
- **Grant DAOs** create a community for Web3 builders to network and collaborate to further the Web3 ecosystem.

These five types of DAOs are further divisible into narrower groups, but below we will provide a greater description of the major categories.

## NFT DAOs

NFT DAOs exist as art curator collectives with the vision of advancing NFT and art culture forward through digital art. Participants in these DAOs are often not concerned with profitability as much as their interest in driving cultural impact. In turn, NFT DAOs serve as a valuable part of the crypto ecosystem by drawing media attention and benefiting individual artists. According to its website, PleasrDAO is a collective of DeFi leaders, early NFT collectors, and digital artists who have built a formidable yet benevolent reputation for acquiring culturally significant pieces with a charitable twist. On March 26, 2021, the DAO formed when a group of anonymous buyers used smart contracts to pool money to purchase Taiwan-based artist pplpleasr's NFT, titled "x*y=k" for 310 ETH ($525,000).[17] The NFT was an animated Uniswap advertisement and proceeds went to charities that support minority representation. Pplpleasr considers herself a "high-quality meme generator" and has been commissioned by numerous DeFi projects, such as Yearn Finance and SushiSwap to create advertisements through art. The DAO lives on the Ethereum network and was started by Leighton Cusack, a co-founder of DeFi firm PoolTogether, which allows users to stake assets together for the chance to win large payouts.[18] According to PleasrDAO, there are 53 current members, including DeFi team members from Aave and Compound, famous electronic producer RAC, and 3 Arrows Capital's Su Zhu.[19] ETH contributors for the initial NFT purchase were distributed PEEPS token to represent their membership in the DAO. The general public cannot actively observe governance at this time.

PleasrDAO has since purchased and commissioned works of art that communicate movements and causes that the collective supports. On April 16, 2021, the DAO purchased NSA whistleblower and privacy advocate, Edward Snowden NFT, titled "Stay Free," for 2,224 ETH ($5.4M) on the Foundation NFT marketplace.[20] The NFT shows Snowden's face consisting of pages and words from a U.S. appellate court decision that the Patriot Act did not permit mass collection and surveillance of Americans' phone records by the NSA. Proceeds from the sale went to Freedom of the Press Foundation, a non-profit that creates open source communication and encryption tools. In July, PleasrDAO purchased the infamous Wu-Tang Clan's digital one-of-one NFT album, titled "Once Upon a Time in Shaolin" for 2,224 ETH ($4M) with the intention of releasing the tracks to the general public with the producer's permission. The DAO went on to fractionalize the original Doge NFT, purchased for 1,696.9 ETH ($4M), to allow the masses to participate in fractional ownership of the NFT through the purchase of tokens that represent a stake in the piece.[21] PleasrDAO's stance for freedom, community, and decentralization has successfully crowdsourced millions of dollars in ETH to generate positive media attention for the crypto community and to donate large amounts of money to charitable causes.

Other notable NFT DAOs include Fingerprints DAO, Flamingo DAO, and Jenny DAO. While total treasury balances are unknown, all of these DAOs have made media headlines and significantly advanced the NFT space through the collection and fractionalization of prominent "blue-chip" NFTs. In turn, these DAOs have set floor values for sought after NFT collections. One drawback of NFT DAOs is their potential role in concentrating ownership of sought after NFTs, detracting away wider ownership across a greater number of individuals.

*Figure 6*

**"Stay Free" NFT by Edward Snowden**

Source: Foundation

## Protocol Governance DAOs

Protocol governance DAOs exist primarily to govern their respective protocols' policies. Protocol governance DAOs generally focus on steering the developments and offerings on a protocol and enabling a structured improvement process. These DAOs often attract media attention due to their sheer scale. There are several multi-billion dollar DAOs, including: SushiSwap, Curve Finance, and Audius. All of these DAOs grant token holders governance rights to dictate protocol policies for the continued success of their respective platforms. Some governance DAOs offer fee-sharing through governance tokenization. For example, participants can stake Curve Finance's CRV governance token in a smart contract to receive their share of a 50% administrative fee derived from trading fees collected by the smart contract.[22]

However, Curve Finance's value proposition goes far beyond just sharing trading fees. Curve exists as a community-governed stablecoin DEX that emits a CRV token to anybody who provides stablecoin liquidity on the exchange. CRV holders can lock their tokens in exchange for veCRV, which grants them voting privileges over the emission of CRV tokens. Essentially, anybody who owns veCRV can vote to increase CRV token rewards on a stablecoin pool of choice, which brings in more liquidity and activity for a stablecoin and assists in maintaining stable price action. Throughout the DEX's existence, many other protocols, such as Convex Finance, have emerged to accumulate more veCRV tokens in an attempt to gain majority control over the DAO, a term that many players refer to as "The Curve Wars."[23] By controlling these tokens, smaller protocols engage in governance warfare to attract pooled assets and bring in more volume and fees for their respective tokens. Other DAOs, such as Lobis Finance and Redacted, have emerged to accumulate CRV tokens and grant participants larger voting power through holding their respective tokens, LOBI and BTRFLY.

Further, in August 2021, Curve introduced "bribe" services whereby governance participants receive a payout from other protocols in exchange for voting in favor of their pools.[24] Abracabra, creator of the magic internet money (MIM) stablecoin, was one of the first successful bribers to utilize the services. It offered governance participants payouts of

its SPELL governance token in exchange for directing CRV emissions to its MIM pool.[25] DeFi participants undoubtedly place value in the governance control of Curve Finance, and this is evidenced by Convex's $17.67B TVL.[26] By locking CRV tokens into Convex Finance, users gain access to boosted CRV rewards without having to lock their CRV tokens. In exchange, Convex gained significant voting power over CRV emissions, which allows them to continue to provide token rewards to Convex participants.[27] While Curve Finance shows an interesting example of how DAO governance can play out, it raises a broader concern on how decentralized a DAO's governance process can be. If players like Convex can simply gain a majority share of a governance token, or protocols like Bribe can influence DAO participants to vote in favor of specific pools, where does the idea of equal and autonomous governance fall?

While the majority of protocol governance DAOs focus on DeFi related products, Audius utilizes a DAO structure to govern its blockchain-native music streaming platform. According to its website, Audius is a decentralized, community-owned and artist-controlled music-sharing protocol.[28] Its mission is to give everyone the freedom to share, monetize, and listen to music. The platform consists of three users: service providers, fans, and artists. Service providers can register content nodes to maintain the availability of users' content on its interplanetary file system (IPFS), a peer-to-peer storage network that grants creators complete ownership of their work. This is a key difference between Audius and other streaming platforms, where the content is uploaded to a server and maintained by a centralized entity. Service providers can also register discovery nodes, which index and store Audius smart contracts on the Ethereum network for clients to query via an API.

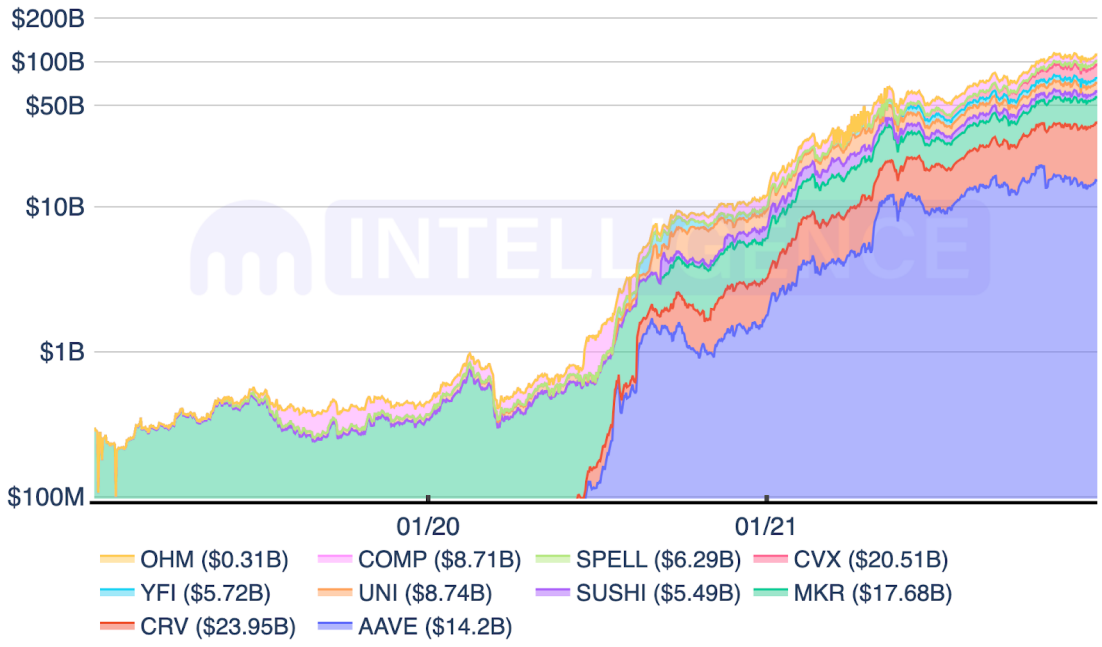
Audius nests the protocol's authority in its decentralized governance mechanism, where artists, music fans, and node operators can stake native AUDIO tokens to vote on control over the entire platform. The platform employs a "one token, one vote" governance framework for token holders. This grants users the power to govern platform features, royalty rates, token distribution, marketing campaigns, content storage, and more. Service providers and parties staking AUDIO for governance are incentivized with token emissions. In case of a vulnerability or exploit, Audius' governance model provides

a short-circuit process that allows urgent proposals to pass without broader vote. A community-nominated multisig address controls the short-circuit mechanism and is revocable at any time with a community proposal. Audius' DAO governance mechanism enables the protocol to potentially disrupt major streaming platforms, such as Spotify or Soundcloud, by creating more value and control for creators and fans.

From DeFi to music streaming platforms, DAOs prove to be a cornerstone of the success of these decentralized protocols. While Aave and Audius are just two examples of protocol governance DAOs, there are plenty of other DAOs that fall under this category, with some of the most prominent being Curve Finance, MakerDAO, and Compound Finance. Figure 6 below shows the total value locked ("TVL") across ten major DeFi protocols, capturing the scale of assets that their respective DAOs govern. These DAOs have proved crucial in the scaling of the crypto ecosystem by offering applications and services that adapt with stakeholder interests.

*Figure 7*

**TVL in Ten Major DeFi Protocols**




Source: Kraken Intelligence, DeFiLlama

## Investment DAOs

Although the first community investment DAO, The DAO, ended in a infamous smart contract exploit, several other investment DAOs exist today. By crowd-sourcing capital among contributors who have a direct interest in building both their brand and portfolio, these organizations have the potential to drive innovation in the crypto ecosystem. MetaCartel Ventures, known as Venture DAO, is a for-profit DAO incubated to invest into early-stage decentralized applications. Investment DAOs provide crucial funding for promising early-stage crypto protocols, generate returns, and in turn help grow the crypto ecosystem overall. Venture DAO is nested in a Moloch-based smart contract and also registered as an LLC in Delaware.[29] Members of the DAO vote to admit new members and are free to exit at any time. According to its wiki, Venture DAO has three different member roles:

1. **Mages** are DAO members responsible for sourcing investment opportunities, conducting due diligence and participating in asset management. They are held to a higher participation standard than any other members.
2. **Goblins** are the DAO's passive members, who have no obligation to maintain operations or source opportunities.
3. **Summoners** are DAO members that handle all legal, financial, and operational tasks, such as coordinating public relations, hiring accountants and lawyers, and ensuring all members are aware of active proposals.[30]

According to the whitepaper, an applicant for membership to Venture DAO must send funds to the DAO's smart contract and wait for existing members to vote to approve membership. After admittance, a membership interest token, representing the member's share of assets, is minted and assigned to the new DAO member. All revenues and assets of the DAO are stored in its Guild Bank contract. During any proposal, dissenting members are allotted a grace period where they can leave the DAO without being affected by the DAO proposal. Outsiders can't view active governance or funding statistics of Venture DAO,

but its website shows any investments that it is willing to disclose to the public. Notable mages include Aave CEO Stani Kulechov, among other crypto product leads. Venture DAO participated in funding rounds for many popular crypto startups, including DeFi news outlet The Defiant, NFT marketplace Rarible, and DeFi stablecoin protocol Reflexer Finance.

Another significant player in the venture DAO space is the LAO, which has collected a whopping 15,119 ETH since inception. Through a crowd-sourced investment prospecting system, investment DAOs continue to serve ground-floor opportunities for crypto participants to access opportunities that were previously only available to a limited group of institutions. These DAOs collectively link proper funding and resources to ambitious Web3 developers to create new, valuable ventures within the crypto industry. Primary differentiators of investment DAOs in comparison with traditional venture funds include accessibility, scalability with minimal overhead costs, speed in decision making, and autonomy.

## Social DAOs

Social DAOs exist to create a community for like-minded individuals to interact with each other. Membership to these communities is often granted through a token, whether that be a fungible token or an NFT. As the community continues to gain traction, the price of its token can increase, but the tokenization primarily serves to represent a "buy-in," through which members commit to each other and the organization's broader vision. A prominent example of a social DAO is Web3 community *Friends with Benefits*. To join the DAO, prospective members need to first apply and gain approval from the DAO. Afterwards, the member must acquire FWB tokens. The DAO describes itself as "the ultimate cultural membership powered by a community of our favorite Web3 artists, operators, and thinkers bound together by shared values and shared incentives ($FWB)."[31]

Boasting an $18M treasury, the collective puts out weekly newsletters and articles that recap what the DAO has been working on and has even held token-gated events, such as a collaborative rave with crypto wallet manufacturer Ledger during EthCC, Europe's largest annual Ethereum conference.[32] The DAO primarily exists in Discord as a group

chat, where members have different channels to discuss topics, such as fashion, learning, parenting, and market info. Further, the DAO has its own NFT auction platform, where a piece called "Drink My Blood" sold for 89.69 ETH ($287,000).[33] A fairly recent project incubated within the DAO is music platform Sound.xyz, which raised $5M in seed funding from notable venture capital firms, including Andreesen Horowitz.[34] Friends with Benefits serves as just one example of the power of social DAOs and their broader impact on the crypto economy. While financial incentives can sometimes exist through token appreciation, these DAOs primarily foster a sense of community and vision among like-minded individuals.

## Grant DAOs

Grant DAOs coordinate Web3-minded individuals to create, incubate, and fund various initiatives for the expansion of crypto. These DAOs serve as a hub for contributors to learn, develop, and connect in a geographically borderless manner. Gitcoin is a prominent grant DAO that has funded over $53M in grants to thousands of projects and teams to push Web3 further through digital public goods projects.[35] Public goods projects can range from a Web3 equivalent of Wikipedia to a simple blockchain explorer. Developers can find work through hackathons and bounties within the DAO. DAO members vote quarterly on Gitcoin Grant rounds, where the organization utilizes its treasury to distribute grants to communally accepted projects. Grant DAOs differ from investment DAOs in the sense that they do not seek financial gain from the projects that they fund.

To date, the largest grant funded through Gitcoin was a $845,000 disbursement to Coin Center, a Washington DC-based non-profit research and advocacy center that plays a key role in crypto-related public policy issues.[36] The DAO has also funded open-source initiatives, such as Wallet Connect, which allows for the connection of decentralized applications to mobile wallets through QR scanning.[37] Further, Gitcoin launched a number of NFT fundraising projects in 2021, such as Moonshot Bots and NounBots, which pool proceeds to continue funding Web3 initiatives.[38] With Gitcoin serving as one example, grant DAOs incubate flourishing, amorphous ecosystems that truly push the frontier of the crypto space across a growing number of initiatives, such as climate change circumvention and decentralized global governance.

# 6.

# Innovation

We are witnessing the shift from legacy capital and governance organizations to crowd-sourced DAO communities. During 2021, a new application for DAOs sought to purchase real world assets. On September 28, 2021, Wyoming-registered CityDAO began the purchase process for a 40 acre land parcel in Wyoming.[39] The DAO raised over $250k for its treasury through NFT sales within 2 months of its inception by July 2, 2021 and voted to purchase its land on September 21, 2021. CityDAO proved to be just the beginning of this new front. ConstitutionDAO launched in November 2021 to crowdsource funds in an attempt to purchase an original copy of the U.S. Constitution in a Sotheby's auction. The initiative quickly gained traction on Twitter, and the organization consequently raised $49M worth of Ethereum from over 17,000 people by utilizing Juicebox, a DAO-incubated Ethereum community fundraising tool.[40] ConstitutionDAO issued contributors PEOPLE tokens, which signified both their membership and contribution to the effort. On November 18, 2021, hedge fund billionaire Ken Griffin purchased the Constitution copy in the Sotheby's auction for $43M. ConstitutionDAO did not outbid their competitor due to projected storage and transportation costs to care for the document. As a result, the DAO refunded funds to all contributors. While the DAO did not succeed in its original goal, it attracted media headlines worldwide and served as a testament to the organizational power of community-owned DAOs.

The use cases do not stop here. Perhaps the most exciting aspect of DAOs is the potential for an average individual to participate in the steering and development of initiatives that add tremendous value to the communities they are involved with. By spreading ownership equally among participants, DAOs foster innovation through unrivaled alignment to an organization's goal. This evokes a communal excitement across members because they have the opportunity to work towards a goal that doesn't disproportionately benefit members at the top of a traditional organization. For example, LinksDAO raised $10.4M in

48 hours by selling NFTs that will grant access to a community-owned golf course. The idea stemmed from a well known crypto investor and quickly gained traction on Twitter to the point where even NBA star Steph Curry purchased a membership.[41] DAO members will vote on all steps of the journey towards purchasing a golf course, including location and amenities.[42] Further, DAOs similar to Gitcoin will drive a new employment model, where a deep treasury can fund freelance contributors in a more flexible manner than the traditional employer-employee relationship. DAO contributors can browse a job board and coordinate efforts to receive splits of grant distributions in exchange for working on a web of open-source blockchain protocols.

# 7.

# Conclusion

Crypto opened the door for the democratization of investing, banking, and finance. However, DAOs take these assets a step further through the coordination of both ideas and assets to mobilize towards real-world impacts on an internet-driven stage. Now that you have a base level understanding of how DAOs work via smart contracts and what sort of opportunities exist in DAO participation, perhaps you're ready to take the next step and start governing.

When taking a step back and observing that all DAOs are less than five years old, past growth and future potential proves to be an exciting spectacle for the world to witness. DAOs possess the potential to dethrone corporate leaders across rental and media industries by offering users and creators fairer pricing strategies, more lucrative compensation, and greater transparency. These organizations further challenge the current employer-employee structure through competitive funding of freelance work, whether that be through an individual's research efforts or a developer's contributions to an open-source protocol. Importantly, this may be a step forward in terms of compensating for value delivered, rather than based on geographic cost of living, time spent in an office, or other discriminatory practices.

Starting with the inception of The DAO in 2017, these organizations have undoubtedly come a long way in both the intricacy of their structures and the applications of their communities. Despite the original DAO's failure, the idea has proven its resilience over the past few years through the continual improvement of smart contracts and approach to governance. Through a fully decentralized and open governance structure, we have watched DAOs drive innovation through a number of efforts, such as NFT incubation, protocol governance, and grantmaking. However, Curve Finance and the Curve Wars serve as a warning on how decentralized governance can also spiral into a battle for control in any DAO. Looking to 2022 and beyond, DAOs are increasingly poised to play a more prominent role in the evolution of crypto and the broader Web3.

## *Endnotes*

1. https://app.boardroom.info/
2. https://ethereum.org/en/dao/
3. https://www.investopedia.com/terms/s/smart-contracts.asp
4. https://defillama.com/chain/Polygon
5. https://dao-beta.mango.markets/dao/MNGO/proposal/FcSmNVhKMfg2zQXRZsXfWC71JAt8maf1Tb3bg4EkjjjS
6. https://www.cryptocompare.com/coins/guides/the-dao-the-hack-the-soft-fork-and-the-hard-fork/
7. https://github.com/blockchainsllc/DAO/wiki/How-to-split-the-DAO
8. https://blog.ethereum.org/2016/06/17/critical-update-re-dao-vulnerability/
9. https://news.bitcoin.com/ethereum-miners-back-soft-fork/
10. https://blog.ethereum.org/2016/07/20/hard-fork-completed/
11. https://github.com/MolochVentures/Whitepaper/blob/master/Whitepaper.pdf
12. https://www.theverge.com/22820563/constitution-meme-47-million-crypto-crowdfunding-blockchain-ethereum-constitution
13. https://linksdao.io/
14. https://foundationsource.com/learn-about-foundations/what-is-a-private-foundation/
15. https://www.nytimes.com/1995/06/23/us/ex-united-way-leader-gets-7-years-for-embezzlement.html
16. https://app.boardroom.info/
17. https://decrypt.co/63080/an-ad-for-uniswap-just-sold-for-525000-as-an-nft-heres-why
18. PleasrDAO smart contract: https://etherscan.io/address/0x067b9bbbbc42d2ab9b9ab6bb62646daf7f344a76
19. https://pleasr.org/#
20. https://decrypt.co/66933/why-this-dao-bought-snowden-nft
21. https://www.cnbc.com/2021/06/11/iconic-doge-meme-nft-breaks-record-selling-for-roughly-4-million.html
22. https://resources.curve.fi/base-features/understanding-crv
23. https://kraken.docsend.com/view/qfg7sxsdfgfp2kg5
24. https://bribe.crv.finance/
25. https://t.co/Qlb08MuAqa
26. https://defillama.com/chain/Ethereum
27. https://docs.convexfinance.com/convexfinance/general-information/understanding-cvx

28. https://docs.audius.org/protocol/overview

29. https://github.com/metacartel/MCV/wiki/DAO-Membership-and-admission

30. https://github.com/metacartel/MCV/wiki

31. https://www.fwb.help/

32. https://www.fwb.help/wip/fwb-paris

33. https://gallery.fwb.help/pussy-riot-drink-my-blood

34. https://www.coindesk.com/business/2021/12/15/nft-music-startup-soundxyz-raises-5m-seed-round-from-a16z-21-savage/

35. https://gitcoin.co/

36. https://gitcoin.co/grants/explorer/?page=4&limit=12&me=false&sort_option=-amount_received&collection_id=false&network=mainnet&state=active&profile=false&sub_round_slug=false&collections_page=1&grant_regions=&grant_types=&grant_tags=&tenants=&idle=false&featured=true&round_type=false&tab=grants

37. https://gitcoin.co/grants/275/walletconnect

38. https://gitcoin.co/blog/gitcoin-2021-year-in-review/

39. https://www.wyomingpublicmedia.org/business/2021-11-12/blockchain-company-citydao-buys-40-acres-in-park-county

40. https://www.coindesk.com/tech/2021/11/19/after-being-foiled-by-a-billionaire-constitutiondao-faces-lingering-questions/

41. https://decrypt.co/90139/linksdao-ethereum-nft-prices-jump-steph-curry-purchase

42. https://www.cnbc.com/2022/01/05/linksdao-raised-millions-selling-nfts-to-buy-a-golf-course.html

We appreciate your feedback! Please visit **here** to participate in a brief survey. For all future Kraken Intelligence content, sign up **here**. For comments, suggestions, or questions related to this article or future topics you'd like to learn more about, you may also direct your communication to intel@kraken.com or to your account manager.

Kraken provides access to 115 cryptocurrencies spanning more than 435 markets with advanced trading features, industryleading security, and on-demand client service. With the acquisition of Crypto Facilities, Kraken now offers seamless access to regulated derivatives on 5 cryptocurrencies with up to 50x leverage. Sign up for a free account in minutes at **www.kraken.com/sign-up**. We look forward to welcoming you.

For multi-exchange charting, trading, portfolio tracking, and high resolution historical data, please visit **https://cryptowat.ch**. Create a free Cryptowatch account today at **https://cryptowat.ch/account/create**.

For OTC-related execution services or inquiries, please direct your communication to

## *Disclaimer*