

# An Introduction To DAOs

Why they exist, their purpose, and how to participate



# DAO: Decentralized Autonomous Organization

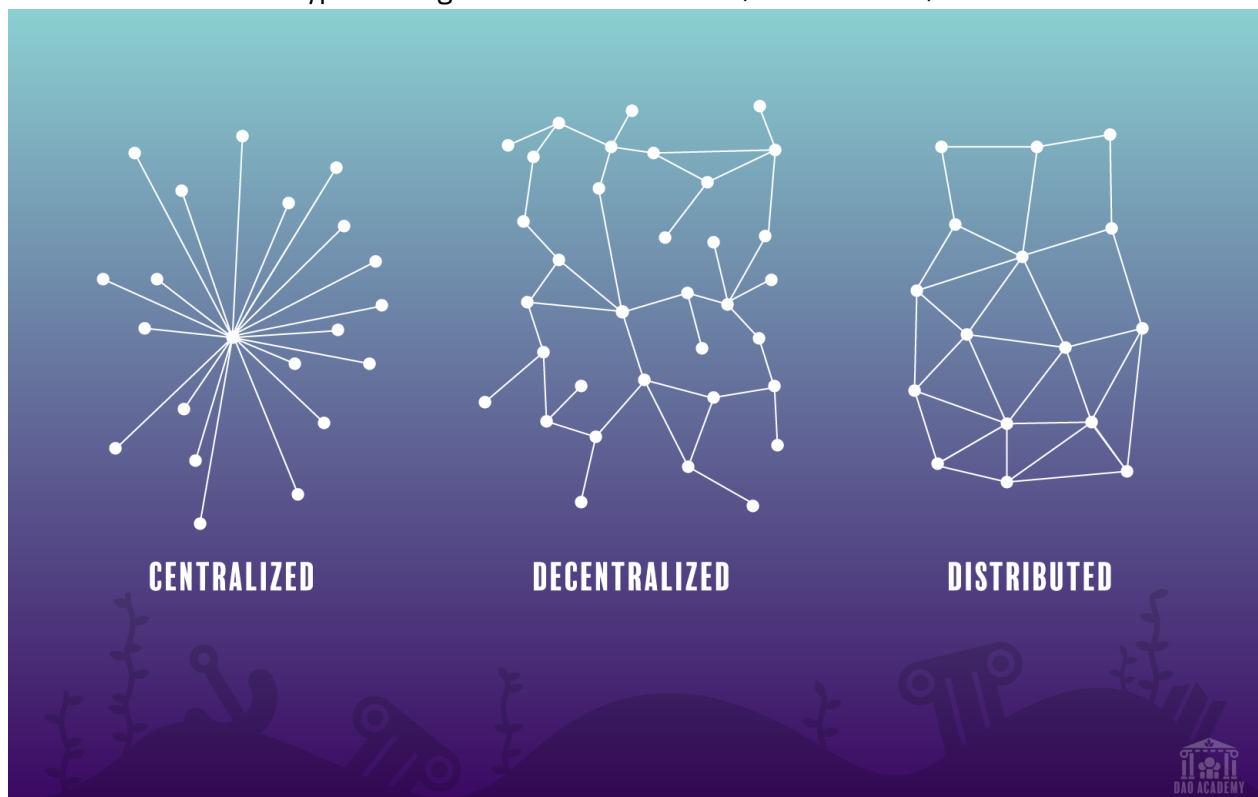
Let's Break it down

## Decentralized

As denoted in the name, DAOs are decentralized entities of operation. But what does that mean? This means they have no central authority, but rather rely on the authority of consensus (majority agreement) in some form, by design.

To better understand what decentralization is, let's go over the main types of organizations/networks to understand the differences.

There are three basic types of organizations. *Centralized, Decentralized, and Distributed.*



**Centralized:** An organization or network with a centered entity of operation. This organization is reliant on this central functioning owner or authority to govern its operations overall. This is the most common type of organization in existence today. Most corporations, banks, or businesses are considered centralized.

**Decentralized:** An organization or network that relies on an undefined number of operators/holders without a singular central governing authority to operate. Instead, overall governance authority relies on the consensus of all collective holders/operators. These holders/operators must leverage their voting rights and/or equipment, to have a say (vote) in the process of how the organization operates and functions. Anyone with a "stake"(tokens, equipment, etc) in it has a right to vote using this vested interest.

**Distributed:** An organization or network that relies on numerous nodes/operators for

consensus, very similar to decentralization. However, these points of operation/governing are not selected in the same "natural" manner of distribution ("natural" meaning: incentives, voted token allotments, staking rewards, etc). These governing points are typically chosen based on certain criteria, and given the authority from an original central source. These organizations can become decentralized over time, depending on the distribution mechanism for the remaining consensus authority (voting rights).

Now that we have compared the differences between the basic types of organizations, we can better understand how decentralization stands apart from the others.

## **Autonomous**

Being capable of operating without direct human control. An autonomous application or organization is one built to accept certain inputs from vested/involved members and perform an action or function based on those inputs. These available inputs and actions are predefined within the program or contract. Inputs from people define which functions are executed, then are automatically performed.

DAO proposals, updates, and changes are all approved by the consensus of members (user input), then automatically executed.

## **Organization**

A body of people organized with a particular purpose, such as a business, society, association, or group. Even though DAOs are typically international, everyone associated with it is working together for a common purpose in an organized manner.

## **But, Why A DAO?**

So why use a DAO? What makes it desirable over a traditional centralized organization such as a bank, or corporation?

The answer is freedom of choice over what happens across the organization/network itself. Every person who participates can choose/approve actions taken that affect it. We approve or disapprove of these actions in an effort to be part of the evolving growth of this new technology. If your favorite application ran like a DAO, you would be able to vote on or approve any changes and updates to it. DAOs allow people to have direct input on important decisions that involve things they are passionate about.

Open-source coding is one notable feature of DAOs. Decentralization at its core requires this

to maintain its nature of not having any 1 entity controlling it, and participants being fully informed. DAO builders and contributors use public repositories such as Github to host, share, and submit changes to the code for public review and approval. A DAO-like structure can be formed using closed-source code, but in essence, this renders it centralized as one entity controls the source code it is built on.

An alternative view of why to use the DAO structure is simplicity and low-cost basis. From a business perspective, there can be many upsides to using this technology. DAOs can take the place of corporate-type structures that are complex and expensive, making the process cheaper and more intuitive.

## DAO Governance Participation

### How To Vote?

Now that we understand the basic types of organizations and what a DAO is, how do we participate (vote) in one? This depends on how the DAO is set up to govern itself.

### Node Consensus Model

In the node consensus model cases (Bitcoin for ex.), this happens with hardware supporters of the network. Bitcoin nodes follow consensus rules, which are rules that are agreed upon by the community. A change in the Bitcoin consensus rules or the protocol itself requires 95% of the operating node structure to approve and instate. "Voting" on any changes to the network is done by physically instating the proposed change to the software/parameters on each node. This means you must own hardware and run a network node on it. Once a minimum consensus of the node operators is reached, the change is solidified and then the rest of the remaining nodes need to update to the new rules/operating parameters to stay in sync with the network properly.

This original network consensus model is the root of the DAO structure, which requires a majority of participants to agree on any change made to the network or protocol to achieve "consensus". This majority requirement varies with each DAO.

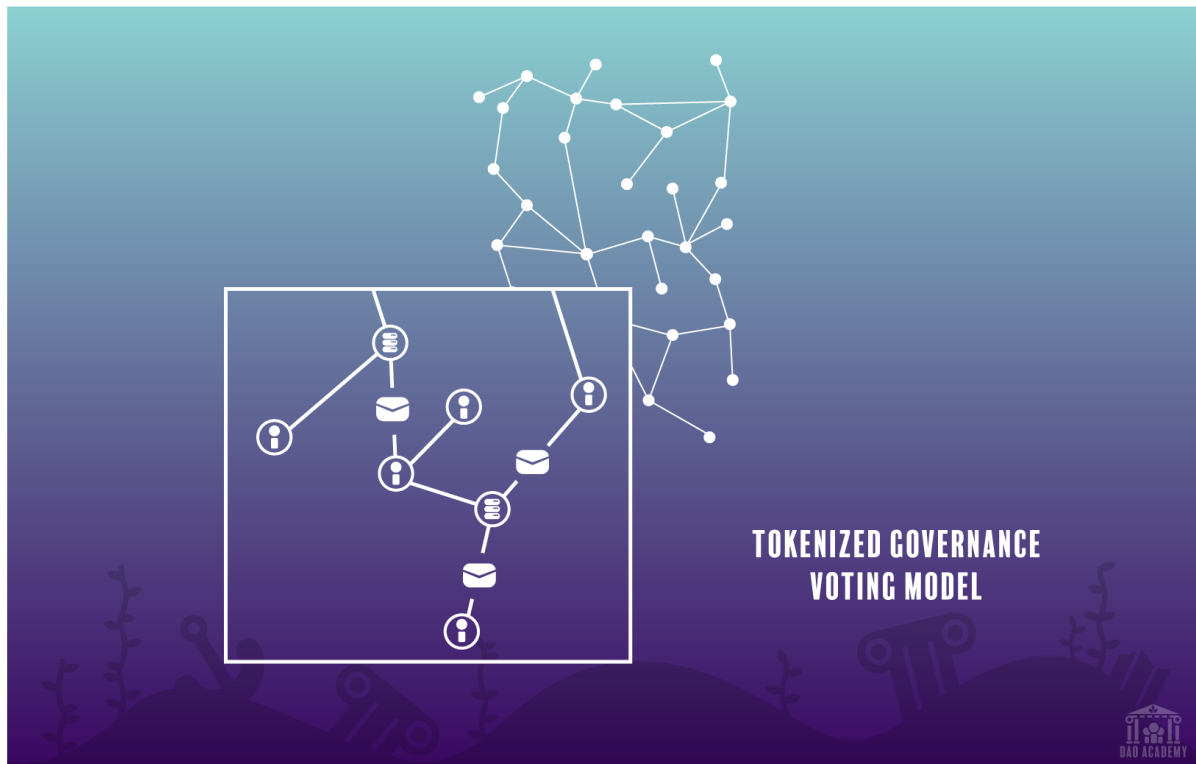
### Tokenized Governance Voting Model

Ethereum introduced a new type of DAO model that allowed developers to build token contracts and DAOs on top of the existing blockchain structure. These tokens/DAOs could create their own autonomous governance mechanisms, while the Ethereum blockchain itself is governed by a node consensus mechanism similar to Bitcoin's in the overall operation.

In the Tokenized Governance model, the holders of tokens called "voting rights" vote on any changes to the DAO organization or protocol. Each token counts as an equal vote to

another and the power of any one voter is determined by how many of the tokens they hold and will dedicate to this process(in most cases).

*Ex. If the total supply of tokens used for voting is 100, and 1 person holds 10 of these, then that person's voting power is 1/10, or %10 of the total available votes.*



There are three main types of tokenized governance voting. Staking weighted, holdings weighted, and delegation voting. All of these types cost "gas" to execute each action on-chain. All 3 types use the weight of the holder's tokens to vote with in some fashion. The difference is how the voting weight is determined and applied as votes.

*Note: Many tokens in DAO ecosystems can perform multiple functions of utility in addition to being used to vote with.*

**Holdings Weighted Votes:** This is the simplest form. A holder's voting weight is equal to the % of the total supply they currently hold. The holder only needs to connect to the DAO voting interface for that project/organization and vote with this weight.

In this case, you simply need to connect your wallet that holds your voting tokens and pay the gas fees to execute the vote you choose.

**Staking Voting Rights:** With staking to vote, a holder needs to lock their tokens into a contract, which “pledges” them as voting rights. A holder’s voting weight is equal to the % of the total staked tokens they currently hold (*staking %10 of the total staked pool = %10 of the voting power*). These tokens can be unlocked by the user who staked them, but then they are no longer leveraged for voting, unless re-staked. This system requires a user to be willing to pay the “opportunity cost” and gas to stake in return for the right to vote with them (this takes them out of circulation being staked). However, some protocols have a built-in incentive that pays out a yield on the staked tokens.

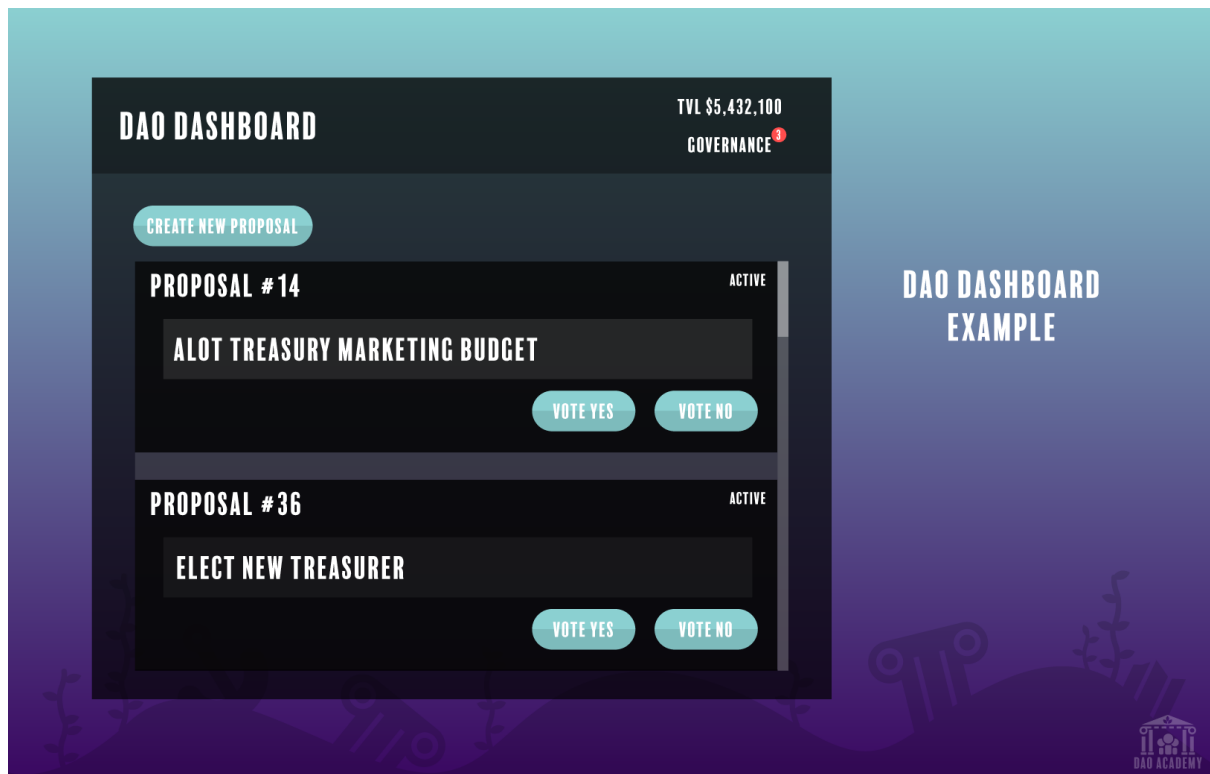
Each project that requires staked voting rights will typically have a dashboard set up for the purpose. You find this dashboard, connect your wallet, designate how many of the tokens you hold will be for voting rights, and sign the transaction (this costs gas) to stake them in the contract (this transfers them into the staking contract to hold). Once staked, these tokens can now be used by the staker as votes in the DAO. Anytime a holder wishes to get the tokens back, they can unstake them. The unstaking period varies by DAO protocol and can range from immediately up to 30 days in some cases.

**Delegation Voting:** Some DAOs allow or even require voting rights to be delegated to a delegate address to vote with. Addresses are elected as delegate staking pools in the voting process of the DAO. These are then delegated to by the other holders, to use their voting rights in the pool together. DAOs may allow it to be a choice, where you can delegate the voting rights to yourself, or to someone else. Voting weight is determined in the same way as staking (*delegate %10 of the total delegated pool = %10 of the voting power*).

The procedure for delegating tokens can vary in many ways as well. In most cases, delegation is very similar to staking your token to vote, except you typically still have physical possession of the tokens used to vote with.

A popular DAO voting delegation structure is a combination of staking and delegation. In this format, once your tokens are staked, you delegate them to an address to use for voting (in some cases you can delegate to yourself). The other primary way is delegation of holdings. You do not need to stake the tokens, but the voting power is still delegated to be used as votes in a similar manner while remaining in the user's possession.

Most tokenized governance DAOs have a dashboard or UI that allows users to create votes for, or vote on current changes and proposals. In DAOs with staking and/or delegation, there is a dashboard for that as well. Information on these can be found on the associated website or social platforms of the DAO you wish to contribute to.



DAO DASHBOARD  
EXAMPLE

## The DAO Proposal Process

All changes proposed with any DAO are made public and voted into enactment. There are two general categories of voting. Contract Executions or Protocol Improvement Proposals (Code Repository Submissions), and Signal Votes. Some variations can affect each other as well, but these are the main types of on-chain consensus mechanisms.

Protocol Improvement Proposal(PIP) Designation Example: *Ethereum Improvement Proposal 1559 aka EIP-1559*

### **Contract Executions(Transactions) & Protocol Improvement Proposals(PIP)**

There are many ways to propose changes to a blockchain or protocol, but the two most used are Protocol Improvement Proposals and Contract Executions. With a PIP, a change is submitted that will affect the base blockchain and/or protocol operation in the public code repository. This is true in the case of consensus networks where these changes are solidified by physical adoption across operating nodes. In other cases, proposals can be submitted that affect a protocol via an on-chain tokenized voting mechanism. This is a transaction that is prepared to execute once the voted proposal passes. These transactions can perform functions including treasury management (send/receive assets), on-chain contract updates, or even minting/burning tokens. The transaction can perform any on-chain action that the voting contract is capable (permissioned) to perform.

## DAO TREASURY

TREASURY	TVL \$5,432,100
NAME	AMOUNT
ETHEREUM	645.8 ETH
WBTC	45 WBTC
MATIC	364.4 MATIC

## DAO TREASURY EXAMPLE



## PROPOSAL DASHBOARD

## PROPOSAL EXAMPLE

PROPOSAL #57

WHAT DO YOU WANT TO PROPOSE?

PAYOUT COMPLETED BOUNTY

AMOUNT?

0.4 ETH

SUBMIT





## Signal Votes

Signal votes are not typically used for important changes to a protocol. These types of votes do not change or alter anything on-chain, but “signal” other voters and leaders that a certain change or decision is desired. Signal votes can also be used to poll voters prior to proposing a change.

## General Ending Pointers:

Here are a few helpful tips to keep in mind whenever you want to become a part of a DAO.

Probably, the best way to learn about working with DAOs and blockchains is to try a testnet. If the project or blockchain you wish to try out has a testnet, then use it! This gives you a chance to learn all the functions on-chain, but at no cost. This differs from the “mainnet” version in that it doesn’t have any cost, but operates the same way.

All interactions with a DAO cost “gas” to execute (connecting your wallet is not a transaction, so no worries there). For example, a DAO on Ethereum costs a small bit of ETH to interact with for gas. This includes submitting a proposal to vote on or casting a vote yourself. You can find many tools that help you keep track of the current cost of gas, and take advantage of when it is cheapest.

[MetaMask](#) is a basic tool, more than just a wallet, and a must-have for working with DAOs. Being familiar with this wallet browser extension helps with connecting to many different ecosystems.

Blockchain explorers like [Etherscan.io](#) for Ethereum, are really useful to get familiar with. You can use these to see information on the blockchain about any transactions you send or receive, see other addresses' transactions, and view contracts for tokens or protocols. Note that not all blockchains have a block explorer, but most popular ones do.

Thank you for taking the time to learn about DAOs and this amazing new technology. Now you are armed with a strong general understanding of what a DAO is, and how to be a part of one yourself.