

DAOs & Governance

A Five-Minute Overview

BSc Blockchain Course

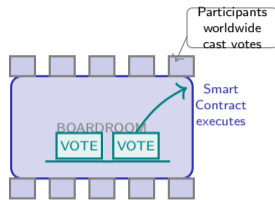
What If a Company Had No CEO, No Board, and No Headquarters?

Every organisation we know has a chain of command. A CEO approves the budget. A board votes on strategy. A legal entity anchors the enterprise to a jurisdiction. Remove any one of those, and the organisation is supposed to collapse. **Three recurring problems with traditional governance:**

- **Concentrated power** – a small board overrides thousands of stakeholders
- **Opaque decisions** – resolutions passed behind closed doors, published later
- **Rent-seeking insiders** – executives capture value at the expense of contributors

What if rules were encoded in software, and every token-holder could vote directly?

A DAO – Decentralized Autonomous Organization – replaces the boardroom with a smart contract: rules are public, votes are on-chain, and execution is automatic.



Proposal passed. Treasury released. No CEO required.

Source: Buterin, V. (2014). "DAOs, DACs, DAs and More: An Incomplete Terminology Guide." ethereum.org/blog

What Makes a DAO Different from a Traditional Organization?

Four organisational forms – four different governance models:

Property	Corporation	Cooperative	Foundation	DAO
Control	Board / CEO	Member vote	Trustees	Token holders
Rules	Corporate law	Bylaws	Charter	Smart contract
Transparency	Low	Medium	Medium	Fully public
Treasury access	Management	Elected reps	Trustees	On-chain vote
Jurisdiction	Required	Required	Required	None / global
Membership	Shareholders	Members	Beneficiaries	Token owners

Pattern to notice:

Read right to the DAO column. Every traditional safeguard – legal entity, appointed leaders, private accounts – is replaced by a cryptographic equivalent: governance tokens, on-chain voting, and a publicly auditable treasury. The trade-off is coordination speed: on-chain consensus is slower than a CEO's signature.

A DAO is the first organisational form whose rulebook is enforced by mathematics rather than by courts, contracts, or social norms.

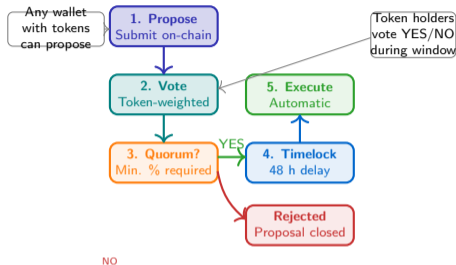
The key question each structure answers:

- **Corporation:** "Who owns the shares?"
Shareholders elect a board that hires management.
- **Cooperative:** "Who uses the service?"
One member, one vote – regardless of capital contributed.
- **Foundation:** "Who guards the mission?"
Trustees oversee assets in service of a stated purpose.
- **DAO:** "Who holds the governance token?"
Any wallet holding tokens may propose, vote, and trigger execution – without permission from any authority.

Only the DAO makes governance rules tamper-proof by design.

Source: Hsieh, Y.-Y., Vergne, J.-P., & Wang, S. (2018). "The internal and external governance of blockchain-based organizations." Cambridge Handbook of Smart Contracts.

How Does a Smart Contract Count Votes and Execute Decisions?



Why each stage matters: 1. **Propose** – anyone holding

governance tokens submits a transaction describing the desired action (e.g., transfer 500 ETH from treasury). 2. **Vote** – token

holders signal YES or NO during a fixed window (typically 3–7 days). Voting power is proportional to token balance. 3. **Quorum**

check – the contract verifies that a minimum percentage of all tokens participated; low-turnout votes are rejected to prevent minority capture. 4. **Timelock** – a 24–72 hour delay before

execution gives the community time to exit if a malicious proposal slipped through. 5. **Execute** – the smart contract runs the agreed

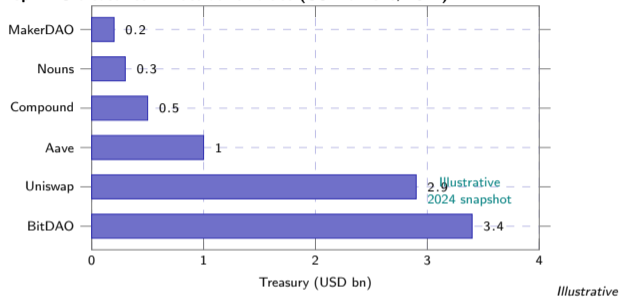
action autonomously. No human co-signer required.

The governance pipeline is itself a smart contract: every step – proposal, vote count, quorum test, timelock, execution – is code that runs without a trusted intermediary.

Source: Compound Finance. (2020). “Compound Governance.” compound.finance/governance; OpenZeppelin Governor documentation. docs.openzeppelin.com/contracts

How Are DAOs Managing Billions of Dollars in Shared Treasuries?

Top DAO treasuries – illustrative values (USD billions, 2024):



values based on published on-chain treasury reports. Figures fluctuate with token prices.

What these treasuries actually do:

- **Protocol grants:**
Uniswap has funded dozens of developer teams via on-chain votes to grow the ecosystem.
- **Liquidity incentives:**
MakerDAO allocates DAI from reserves to reward liquidity providers and stabilise the peg.
- **Security bounties:**
Aave and Compound fund audits and white-hat bug bounties through governance votes.
- **Buybacks & burns:**
Some DAOs vote to reduce token supply by buying back and burning governance tokens from the open market.
- **The key insight:**
Every dollar spent required a public proposal, a token-holder vote, and an on-chain transaction – the most transparent budget process in corporate history.

DAO treasuries demonstrate that communities can collectively govern nine-figure asset pools without a CFO, a board, or a bank account – relying solely on cryptographic consensus.

Source: Illustrative values derived from DeepDAO treasury tracker (deepdao.io) and individual protocol governance forums, 2024.

Three Questions That Reveal Whether a Community Really Needs a DAO

Before choosing a DAO, ask these three questions in order: **Q1 – Do multiple**

parties need to govern shared resources, and do they distrust any central administrator?

If one organisation controls all assets, a multisig wallet or a cooperative is simpler and faster. DAOs earn their overhead only when *no one* should have unilateral access to the treasury. **Q2 – Must**

governance decisions be publicly auditable by anyone without relying on the founders?

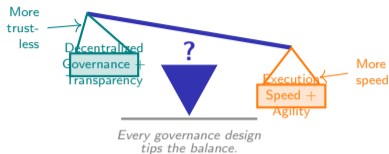
If regulators, contributors, or investors need independent verification of every budget decision, on-chain voting provides a tamper-proof audit trail. No traditional board can match that transparency guarantee.

Q3 – Can the community tolerate the trade-offs?

DAO governance is slow (days per vote), vulnerable to low participation, and can be captured by large token holders (plutocracy risk). If speed and agile execution matter more than decentralisation, choose a simpler structure. *YES, YES, YES – you have a genuine DAO use case.*

Otherwise – a co-op with a shared multisig may serve you better.

A DAO is not better or worse than a corporation – it is the right tool for communities where trustless coordination matters more than execution speed. Knowing the difference is the skill.



The DAO

Governance Trilemma:

No DAO simultaneously maximises decentralisation, participation, *and* speed. Every design is a deliberate point on this balance.

Source: Voshmgir, S. (2020). Token Economy, 2nd ed. BlockScience. Ch. 8; Buterin, V. (2021). "Moving beyond coin voting governance." vitalik.ca