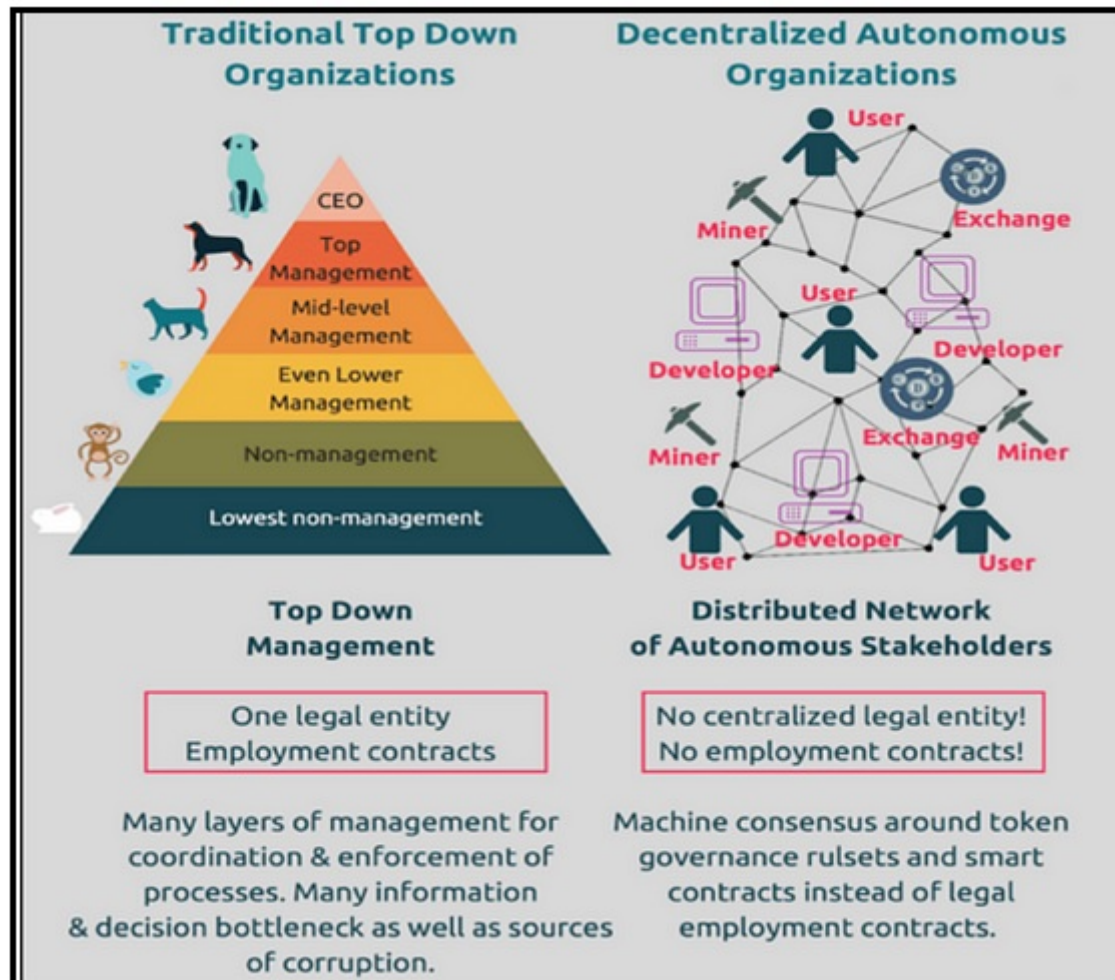# Decentralized Autonomous Organizations

Why in news?

Decentralized Autonomous Organizations (DAOs) represent a groundbreaking innovation at the intersection of blockchain technology and governance.

What is DAOs?

- **Legal structure**- It operates without centralized control and is governed by smart contracts and the consensus of its members.
- **Decision making**- It uses _blockchain technology_ and smart contract to take decisions in a _bottom-up management approach_.

  > Blockchain is a type of shared database that differs from a typical database in the way it stores information, it store data in blocks linked together via cryptography.

- **Community driven**-It is represented by rules encoded as a computer program that is transparent, controlled by the respective organization members, and not influenced by a government.
- **Smart contracts**- It executes predefined rules without the need for intermediaries, ensuring trust through code rather than traditional authorities.
- **Enhanced cooperation**- They enable global, borderless cooperation on an unprecedented scale.
- **Constructive engagement**-Participants, often referred to as token holders, can propose and vote on decisions related to the organization's goals and resources.
- **Self-executing systems**- This decentralized decision-making process ensures that no single entity holds undue influence.

Traditional Top Down Organizations

CEO
Top Management
Mid-level Management
Even Lower Management
Non-management
Lowest non-management

Top Down Management

One legal entity
Employment contracts

Many layers of management for coordination & enforcement of processes. Many information & decision bottleneck as well as sources of corruption.

Decentralized Autonomous Organizations

User
Miner
Exchange
User
Developer
Developer
Exchange
Miner
Miner
User
Developer
User

Distributed Network of Autonomous Stakeholders

No centralized legal entity!
No employment contracts!

Machine consensus around token governance rulsets and smart contracts instead of legal employment contracts.

What is the significance of DAOs?

- **Decentralization-** The authority of decision making is broad and made by a collection of individuals independent of third-party intermediaries.
- **Transparency-** In DAOs votes are cast via block chain and made publicly viewable.
- **Fosters trust-** As vote and their decisions will be made publicly viewable, this will incentivizes actions that will benefit voters' reputations and discourage acts against the community.
- **Inclusivity**-The concept of a DAO encourages people from all over the world to seamlessly come together to build a single vision.
- **Simplicity-**With just an internet connection, token holders can interact with other owners wherever they may live.
- **Versatility-** It demonstrates the potential to reshape industries across various sectors like finance, supply chain, governance etc.,

Applications of DAOs

> • **Finance-** Platforms like Compound and MakerDAO have introduced lending and borrowing services, enabling users to participate in the global financial ecosystem without relying on traditional banks.
> • **Intellectual property protection**-In the art world, artists are tokenizing their creations and utilizing DAOs to manage royalties and maintain control over their intellectual property.
> • **Supply chain management**- DAOs offer transparency and traceability in global supply chains, ensuring the authenticity and quality of products.
> • **Online governance**- DAOs have emerged as tools for decision-making, with platforms like DAOstack facilitating decentralized governance structures for internet communities

What are the challenges of DAOs?

- **Lack of regulation-** It is a new concept and there is lack of regulation and legal frameworks to govern their use, this can create uncertainty and expose to legal risks.
- **Technical complexity**- They are built on block chain technology which is difficult and complex to understand.
- **Forgery-** Malicious actors could exploit vulnerabilities in smart contracts as they are transparent, use DAOs to launder money or engage in illegal activities.
- **Security breach-**DAO hack in 2016 exposed vulnerabilities in the code, leading to a contentious hard fork in the Ethereum block chain.

  Hard fork refers to a change in a network's protocol that makes previously invalid blocks and transactions valid or vice-versa.

- **Lack of Accountability**- DAOs operate through a *consensus-based decision-making process*, which can lead to slower decision-making and potential conflicts among members.
- **Taxation compliance**- DAOs have to comply with various regulations such as Anti-Money Laundering and Know Your Customer further add layers of complexity to the legal framework
- **Dispute resolution-** It often rely on code-based solutions, present a unique challenge in the absence of traditional legal mechanisms.

What lies ahead?

- Stakeholders are working together to create legal frameworks that balance innovation with compliance for DAOs.
- DAO need to adhere to the complexities of the law while harnessing their transformative potential.
- It is crucial for regulators, developers, and participants to work collaboratively to harness the full potential of DAOs while addressing their evolving challenges.

Reference

The Hindu- DAOs shaping the future