



## Designing a DAO

<LEARN/> ALL JUNE . <HACK/> JULY-MID AUGUST . <CELEBRATE/> REST OF AUGUST

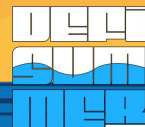
# Recap: What is a DAO?

- A Decentralized Autonomous Organization is a group of people participating in a system where the rules of engagement and incentivisation are written in code. Enforcement, and moderation can be difficult.
- What can be “codified”?
  - The Constitution?
  - Not everything
- How can DAO's help add to the governance conversation?



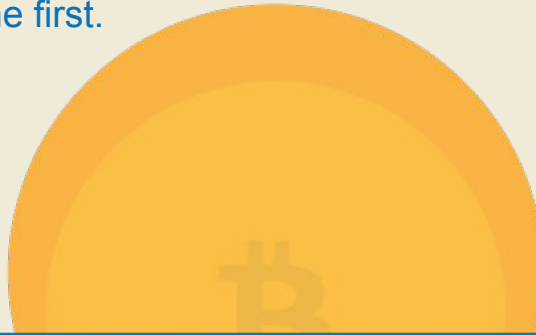
# Why DAO's are worth the headache

- Building a DAO business plan from scratch is much harder than a normal business plan.
  - **Legally:** Participants can be anonymous and anywhere with a wifi/cell signal.
  - **Enforcement:** You can't punish, you can only kick people out or not disperse funds to them.
  - **Technically:** You need to get most of it right the first shot with the ability to make amendments.
  - etc.
- Potential:
  - Proliferation of a social to societal hackerspaces at a global scale.
  - Help in pioneering the potential for a new era of governance that works very differently than much of what came before.



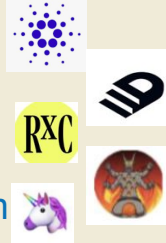
# Where are we now?

- It is **still very early** being barely 5 years(30 April 2016) since the first DAO was launched.
- The space has seen a significant development and growth since then and has sprouted many DAOs and seen a broadening in the scope of use cases.
- There is no standard for a fully decentralized organization. There are only companies with **eventual decentralization** plans.
  - DEVxDAO may be the first.



# DAO Ecosystem

- Catalyst: Cardano
- DEVxDAO: Casper
- RadicalxChange
- Moloch DAO: Ethereum
- Uniswap DAO: Ethereum



# How Are DAOs Started?

- Ethereum DAO Templates (aka. DSaaS):
  - [Aragon DAO](#) is by far the most developed DAO infrastructure project. It hosts over 1700 DAOs and \$900M crypto assets under management.
  - [Moloch DAO](#) also have proposal, voting and fund management template with a unique “rage-quit” function. It is used by Meta cartel DAO and LAO.
  - [DAOstack](#) is also open source project advancing the technology.



# Other Useful Infrastructure for DeFi DAO's

- [Sourcecred](#) - A tool for communities to measure and reward value creation.
- [Collab.land](#) - A bot helping manage memberships in token curated communities.
- [Uniswap](#) - An automated market-maker, for making your token tradeable.
- [Balancer](#) - An automated market-maker with more options.
- [Gnosis Safe](#) - A multi-signature wallet/treasury for DAOs.
- [Etherize](#) - Summon a legal wrapper for your DAO.
- [OpenLaw](#) - Summon a legal wrapper for your DAO.
- [Otonomos](#) - Otonomos helps the crypto community form offchain and onchain legal entities.
- [Open Esquire](#) - Enabling The Next Generation of Legal Services.
- [Kleros](#) - Act as a decentralized court to arbitrate smart contracts





# Aragon Walkthrough

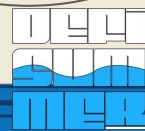
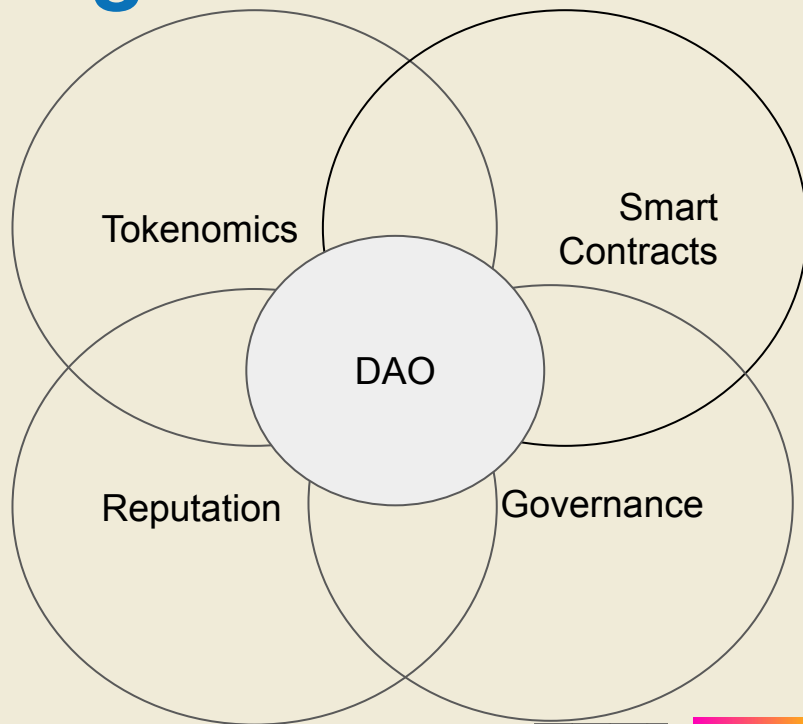
- Aragon Rinkeby
  - Rinkeby Faucet
- Using a template, it is not hard to start a DAO the difficulty is how to get people to come, stay, work/contribute, get paid without the system collapsing.
- **What new interactions can you design?**





# Key Concerns in Designing A DAO

1. What do you want?
2. How many people?
3. What kind user-base?
4. How do you want people to engage short-> long term?
  - Will you need bonding curves?
5. What blockchain would best facilitate your needs?
6. How is your tokenomics system protected against attacks?
  - Do you need to make your rules more dynamic to prevent corruption?
7. What safeguards do you have to prevent centralization?
8. Is your legal wrapper working synergistically with your internal governance structure?
9. How to develop a sense of community with core underlying values?
10. What kind of voting system, and tokenomics supports the governance and social dynamics you want to encourage and sustain?
11. What level of moderation is at play before it is considered censorship?
12. Anonymity of members and maintaining decentralization?
13. An efficient and resilient engine for collective management at scale.
14. ...



# General Steps to Designing A DAO

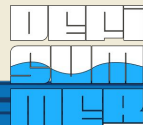
1. **Establish your token utility**
2. **Build your token mechanics**
3. **Legal advice and framework**
4. **Technical design**
5. **Testing at each stage**

Say you want to create a “Good Ideas” DAO and you want it to embody the following principles:

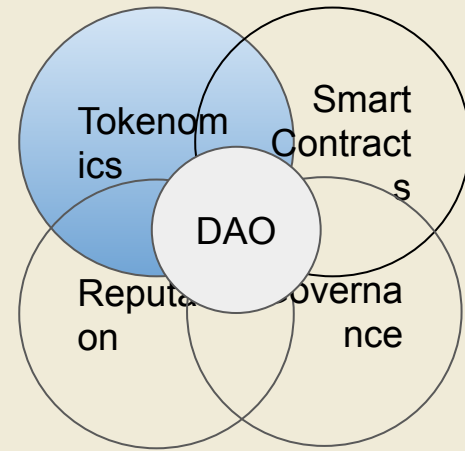
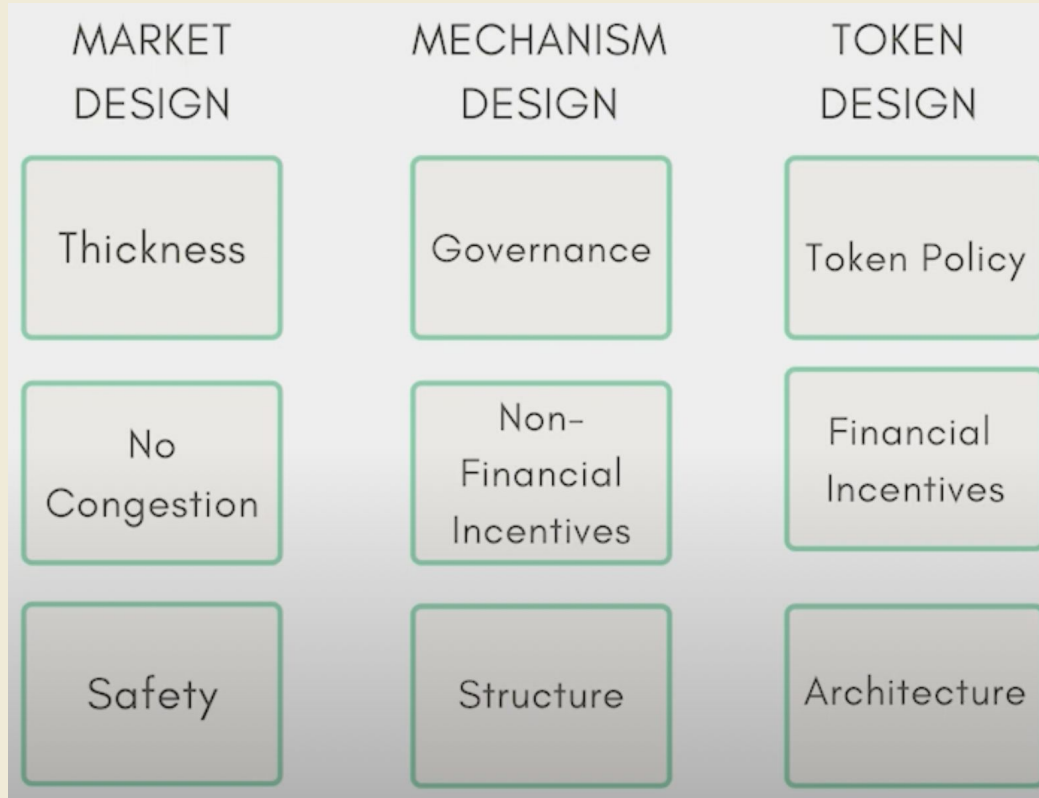
Discursive Guidelines/Principles:

- \*Radical Non-pettiness
  - \*Radical Self-Expression
  - \*Radical Integrity
  - \*Radical Use of First Principles Reasoning
  - \*Radical Constructive Criticism
  - \*Radical Constructive Contrarianism
  - \*Communal Effort
  - \*Civic Responsibility
- ... +/-

[\[Tokenomics Series | Medium\]](#)



# Tokenomics Design



# Maker DAO

- The MKR token- the governance token of the Maker Protocol- allows those who hold it to vote on changes to the Maker Protocol.
- Polling and executive voting process ( <https://vote.makerdao.com/> )
- Risk parameters are controlled by maker governance
  - Debt calling \Stability Fee
  - Liquidation ratio
  - Liquidation penalty



# Compound DAO

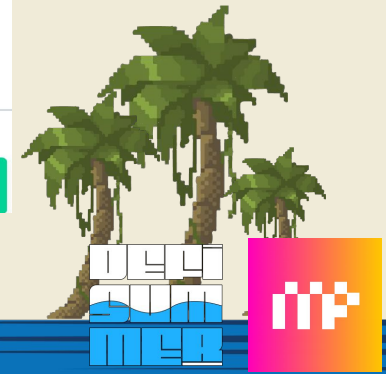
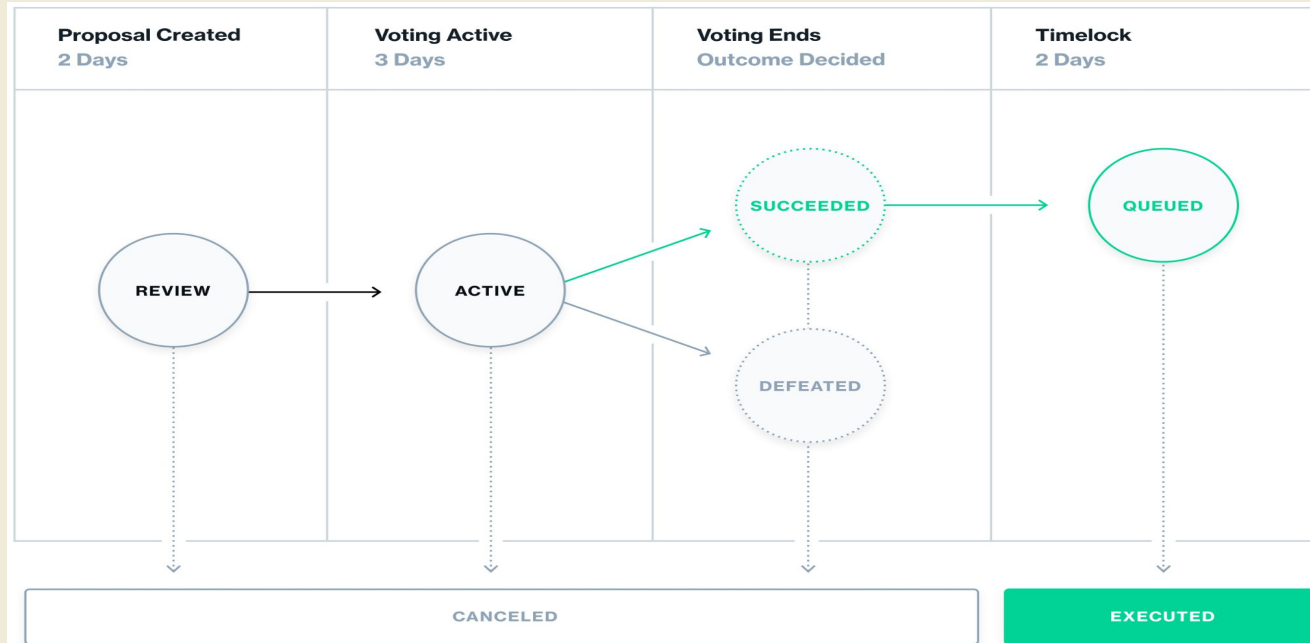
The Compound protocol is governed and upgrade by COMP token-holders.

The COMP token holders can delegate their voting right to themselves or an address of their choice. ( <https://compound.finance/governance> )

Any address which can lock 100 COMP tokens can create an autonomous proposal and it becomes governance proposal after being delegated 100000 COMP tokens.



# Compound DAO Governance Process

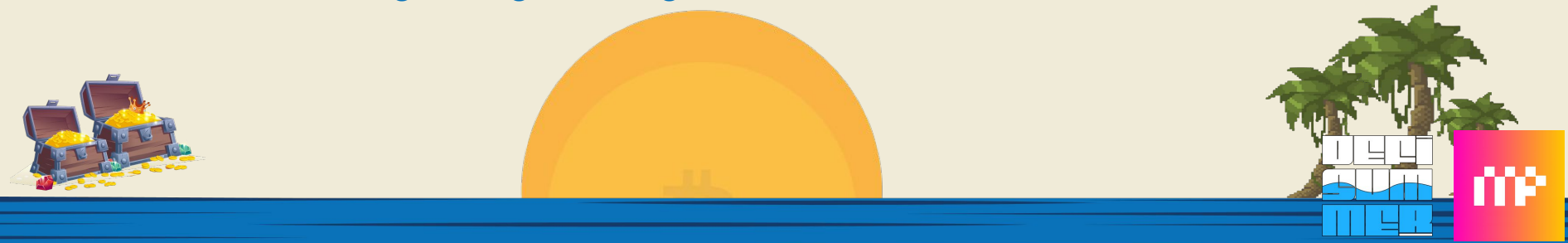


# The LAO

The LAO provides a legal structure to enable members to not just give grants, but to invest in blockchain-based projects in exchange for tokenized stock or utility tokens.

Projects or Ethereum-based projects are able to receive funding for their projects in days once submitted to the LAO.

Members are able to purchase interests in the LAO and the proceeds from the purchase will be pooled and allocated by members to startups and other projects in need of financing, using a voting mechanism and tools similar to Moloch DAO.





# The LAO

The LAO Dashboard ( <https://www.thelao.io/> )

Open Law can be used to set up DAOs as legal entity ( <https://www.openlaw.io/> )

Smart Contracts to handle mechanics related to voting, funding and allocation of collected funds ( <https://github.com/openlawteam/TheLAO> )



# Law Surrounding DAOs

- In the Wyoming (US State), DAOs can also adopt legal framework of LLC, a limited liability company.
- It will allow them to operate them with same protections of legal corporations for both DAO and their members.
- Open Law provides blockchain based tools to rapidly build legal templates to deploy “Limited Liability Wrappers” for DAOs. Because “code is not law” anywhere outside of the DAO.

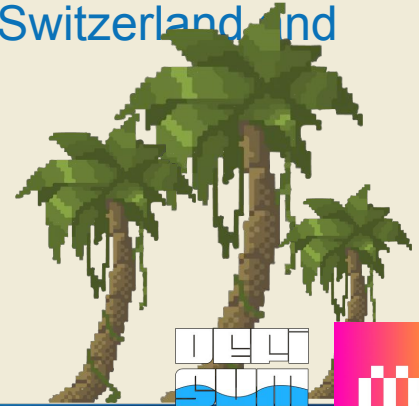


# DEVxDAO

The DEVxDAO is a place where protocols, projects, and engineers work together to push forward the frontiers of emerging technology.

The DEVxDAO supports open source and transparent scientific research for emerging technologies.

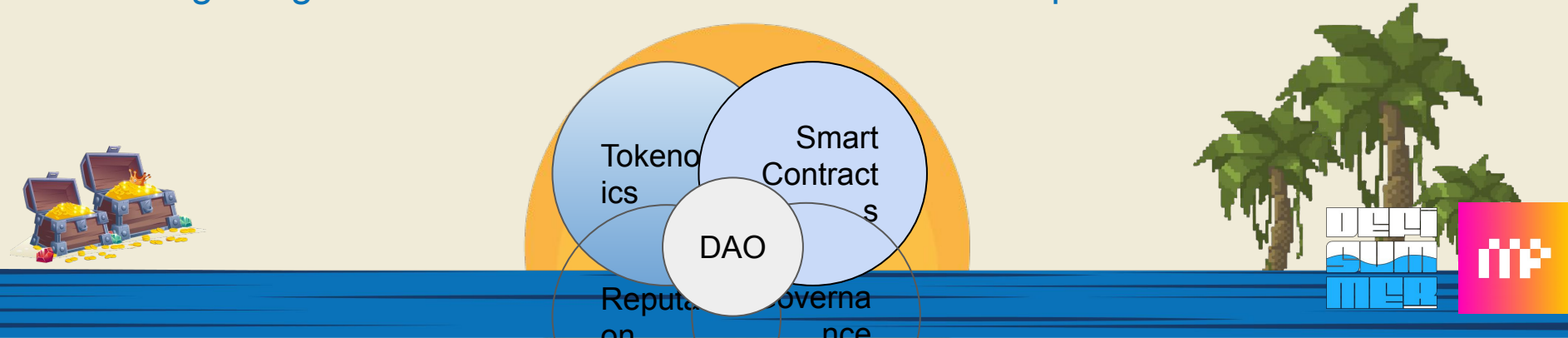
The DEVxDAO provides grants to developers and scientists in Switzerland and around the world.



# DEVxDAO

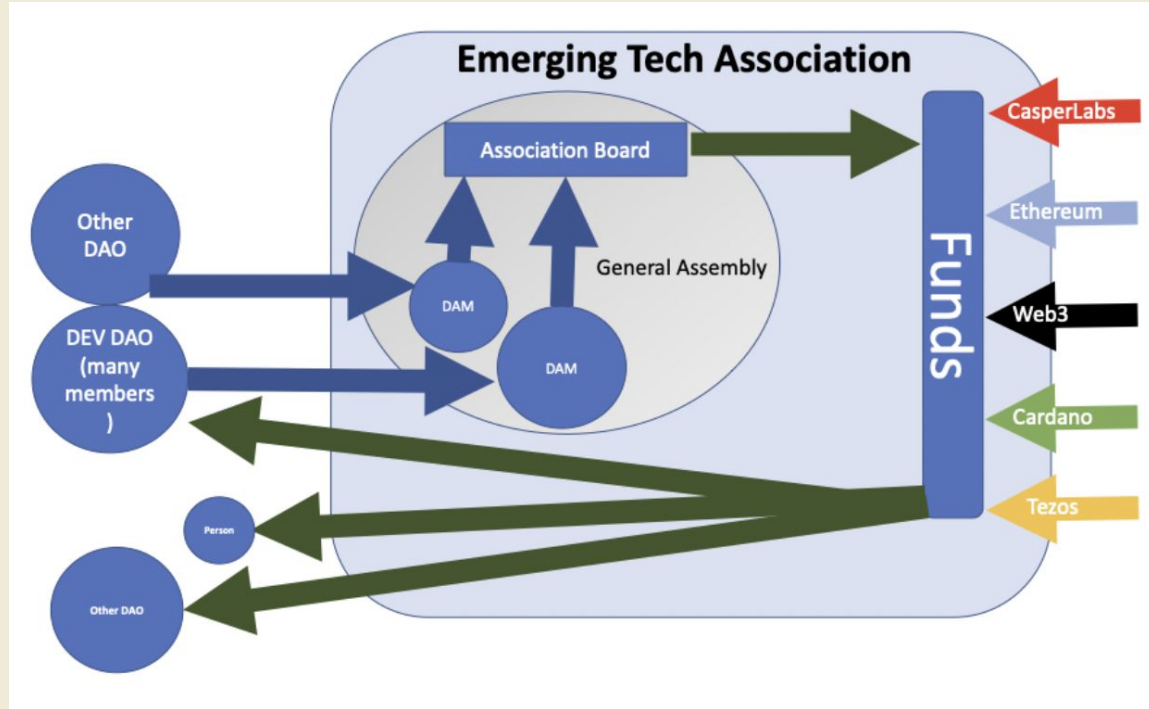
## Creating the standard for DAO infrastructures.

- The DEVxDAO is a place where protocols, projects, and engineers work together to push forward the frontiers of emerging technology.
- The DEVxDAO provides grants to developers and scientists in Switzerland and around the world.
- Migrating from the Ethereum Blockchain to the Casper Blockchain.



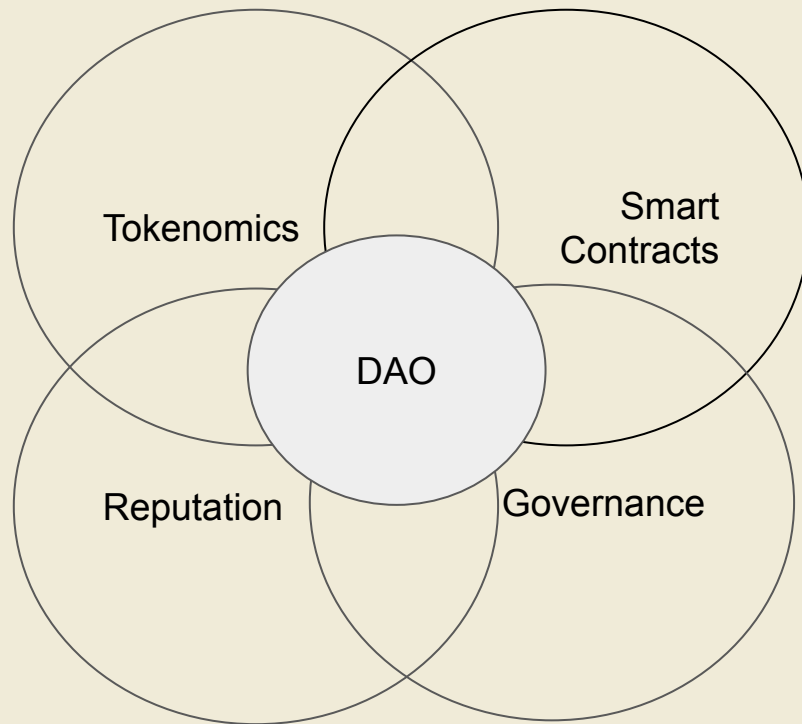
# DEVxDAO Mechanism

- Legal Wrapper
  - ETA LLC
  - Anywhere DAO's are considered LLC's is safe.
    - WY, US
    - Switzerland
- NFT Reputation Voting
  - Basis for sustained decentralization.
  - All DAO's built on network have to agree to this base structure.



# DEVxDAO Design

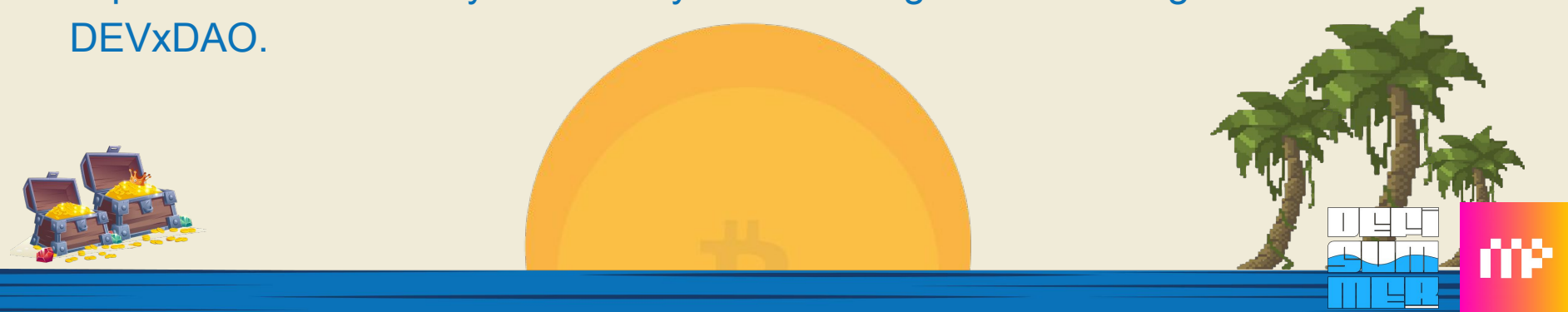
- What does DEVxDAO want?
  - To build a truly decentralized platform that can be used to proliferate decentralized governance without the normal problems of longevity and scale..
- What kind of voting system, and tokenomics supports the governance and social dynamics you want to encourage and sustain?
  - Reputation NFT vs. Fungible.
  - US Constitution:
    - Executive: Built into system
    - Legislative: Long-term gov
    - Judicial: Short and long-term



# Reputation based Internal Governance (DEVxDAO)

The use of reputation staking and voting metrics in the DEVxDAO's internal governance design has key advantages over other decentralized voting mechanisms.

Because reputation is non-fungible, and ideally anonymous, it is much harder for DEVxDAO members and external participants to try to game the system to improve their own utility exclusively while hurting the common good of the DEVxDAO.













# How DAOs Fail

- The DAO attack in 2016 due to bug in the contract
- Reliance on the good will of people
- Code compatibility can be issue as the new code is added with the evolution of new systems.
- Voters will not always be expert in the subjects they are voting on and can lead to poor decision making.
- Becoming too centralized over time.
- Legal design interferes with internal on-chain governance
- Poor integration of values and tokenomics
- ...



Voting Systems	Premise	Usage
<u>Quadratic Voting</u>	Mathematically secure way to strongly limit the negative effects of 1 coin 1 vote by requiring a square or cubic etc. increase in price for each vote casted.	 RadicalXChange  Bitcoin
<u>Reputation-based voting using NFT's</u>	Staking non-fungible tokens that represent reputation of holder. NFT's are much less corruptible than fungible tokens. Weighted dem.	 DEVxDAO Colony
<u>Futarchy</u>	Democracy would continue to say what we want, but betting markets would now say how to get it.	NA
Liquid democracy	A token holder can delegate their vote to another person.	 Uniswap
<u>Conviction voting</u>	Track voter preferences over time vs. timestamp	 Commons Stack
1 Coin 1 Vote	Decisions favor the rich. Easily corruptible.	  
1 Person 1 Vote	Prone to imprecision.	US Citizens

# Comparing Voting Methods

1. Pragmatic concerns
2. Behavioral considerations
3. Information required from the voters
4. Axiomatic characterization results and voting paradoxes.



# The Code Behind DAO's

- The base layer used for DAOs is based on blockchain technology.
- Look at aragon or idle documentation for inspiration
- You can fork existing DAOs to create specific DAOs for your needs.
- DSaaS can be used to build DAOs (Aragon, Colony, DAOstack, [Moloch DAO](#)) and generally require Metamask.



Functionality	Aragon	Colony	DAOstack
Token	✓	✓	✓
<i>Reputation</i>	✓	✓	✓
<i>Funds</i>	✓	✓	✓
<i>Permissions</i>	✓	✓	✗
<i>Proposals</i>	✗	✓	✓
Voting system	✓	✓	✓
Tasks	✗	✓	✗
Organization templates	✓	✗	✗
<i>New governance models</i>	✓	✗	✗

# Coming back to Aragon

- Don't need to think about Blockchain and the complications and affordances that allows you; you're on Ethereum. Just focus on creating the mission, the desired social dynamics and how you can use tokenomics/incentivisation structures to handle as many problems as possible regarding “cat herding.”



# Summary

- Use DSaaS's like [Aragon DAO](#), [Moloch DAO](#), [DAOstack](#), to get started with getting a feel for the governance side.
- Study existing DeFi project tokenomics structures for inspiration via github.



Hack!



# Resources

- [DEVxDAO Whitepaper](#)
- [The LAO](#)
- [Compound Governance](#)
- [Maker DAO](#)
- <https://daotalk.org/>
- <https://limitedliability.me/>
- <https://plato.stanford.edu/entries/voting-methods/#QuadVotiLiquDemo>
- <https://learn.daomaker.com/tokenmetrics>
- <https://gitcoin.co/quadraticlands/>
- ...

