



# ARAGON

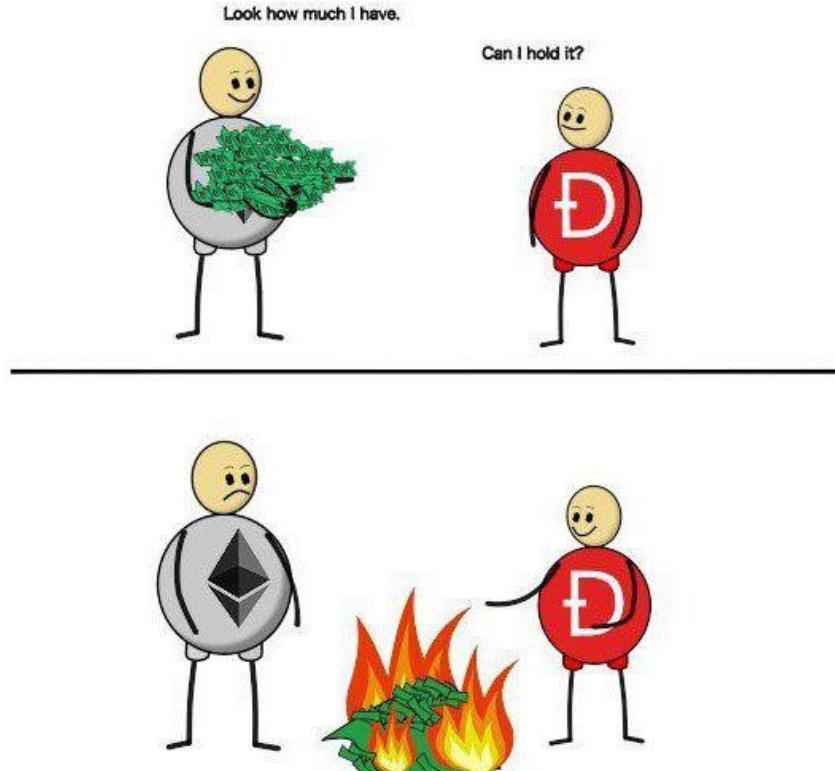
Tatu Kärki  
Communications Lead at Aragon / Aragon One

**Aragon is a project to empower  
freedom by creating tools to  
enable *decentralized governance*.**

# Unstoppable Organizations

Create value  
without borders or  
intermediaries

# The DAO



# Aragon v0.1-0.3

The image shows the Aragon application interface. On the left is a sidebar with icons for Home, Ownership, Voting, Roles, Fundraising, Accounting, Bylaws, and Settings. The main area has a header with a search bar, a transfer tokens button, and a notifications icon. Below the header is a table showing ownership details:

Shareholder	Stock class	Shares
Company reserves	CVS	0
Me	CVS	10000000
Holy Water	CVS	50001

A modal window titled "Shareholder details" is open for the shareholder "Holy Water". It shows a profile picture, the address 0xe70e303026bd9d3f1ecbfdsed8f1584397876ec025, and a section titled "Stakes" with the entry "CVS: 50001 (Transferable: 50001)". Below this is a graph titled "Transferrable shares (vesting)" showing a curve starting at zero and increasing linearly over time, with labels for 3 days, 7 days, 10 days, 13 days, 17 days, 20 days, 23 days, and a month.

- **Decentralized company**
- **Your own bank**

# Aragon Core v0.5 - The Architect

[app.aragon.one](https://app.aragon.one)



Welcome!

APPS

Home

Token Manager

Voting

Finance

Permissions SOON

Apps SOON

Settings

## Welcome to Aragon 0.5 – The Architect

What do you want to do?



Assign Tokens



Vote



Check Finance



New Payment



APPS

Home

Token Manager

Voting

Finance

 Permissions SOON Apps SOON

Settings

## OWNER

0x772080b0D48De808dbE0F4050083B0f9205F6D29

YOU

...

0x15bdCb6651f5a5e9Cef07b2a981dd270BA505051

...

0xC43B0C4b6d227536238f071fBa7e624b2A632830

...

## TOKEN INFO

Total Supply

3

## OWNERSHIP DISTRIBUTION

## Token Holder Stakes

● 0x772080b0D48De808... 33%● 0x15bdCb6651f5a5e9Ce... 33%● 0xC43B0C4b6d227536... 33%



## Vote

[New Vote](#)

APPS

[Home](#)[Token Manager](#)[Voting](#)[Finance](#)[Permissions](#) SOON[Apps](#) SOON[Settings](#)

### Opened Votes 1

TIME REMAINING	QUESTION	TOTAL VOTES	PROGRESS	ACTIONS
⌚ 00 D 23 H : 58 M : 14 s	Should we fund disaster relief for victims of hurricane Irma?	33.33%		<a href="#">View Vote</a>

### Closed Votes

STATUS	QUESTION	TOTAL VOTES	RESULT	ACTIONS
✓ Approved	Token Manager (ngo): Mint 1 tokens for 0xC43B0C4b6d227536238f071fBa7e624b2A632830	50%		<a href="#">View Vote</a>
✓ Approved	Should we help reimagine democracy in the United States of America?	50%		<a href="#">View Vote</a>
✓ Approved	Finance: Create a new payment of 753 BCC. It will be executed 1 times at intervals of 0 days	50%		<a href="#">View Vote</a>
✓ Approved	Token Manager (ngo): Mint 1 tokens for 0x15bdCb6651f5a5e9Cef07b2a981dd270BA505051	100%		<a href="#">View Vote</a>



## Finance

[New Transfer](#)

APPS

[Home](#)[Token Manager](#)[Voting](#)[Finance](#)[Permissions](#)

SOON

[Apps](#)

SOON

[Settings](#)

### Token Balances

BCC	ETH	ZRX	DNT	ANT	MANA	SPANK	SNT	MKR
26	3.14	453	137	0	0	0	0	0
\$340,358.69	\$1,613.52	\$319.01	\$9.26	\$0	\$0	\$0	\$0	\$0

### Transfers

TOKEN:

All ▾

TRANSFER TYPE:

All ▾

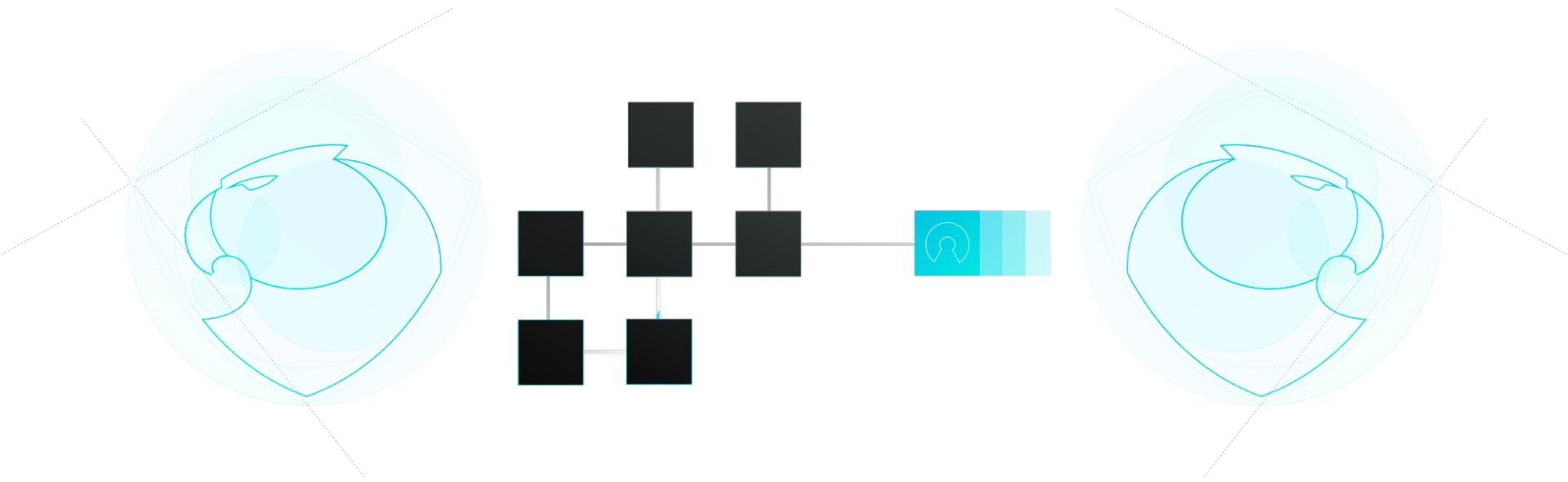
DATE	SOURCE / RECIPIENT	REFERENCE	AMOUNT	
13/04/18	<a href="#">0x61D463f2613F04053bc875C72aA9dA22348Da2b5</a>	Food aid	-753 BCC	...
13/04/18	<a href="#">0x39a4D265db942361D92e2B0039cae73Ea72a2ff9</a>	Requested airdrop (test tokens)	+453 ZRX	...
13/04/18	<a href="#">0x772080b0D48De808dbE0F4050083B0f9205F6D29</a>	Ether transfer to Finance app	+3.14152 ETH	...
13/04/18	<a href="#">0x39a4D265db942361D92e2B0039cae73Ea72a2ff9</a>	Requested airdrop (test tokens)	+137 DNT	...

# survey.aragon.org

A screenshot of a web browser displaying a blog post from the Aragon blog. The title of the post is "Aragon launches Survey app on Mainnet". The post is by Tatu Kärki, Communications Lead @AragonProject, published on May 31. It has a 5-minute read time. The post discusses the launch of the Survey app on Ethereum Mainnet for community sentiment signaling. A modal window is overlaid on the page, asking "Would you like to participate in the decision making process of DAOs?". The modal includes a slider for token allocation and shows the following data:

Allocation Option	Percentage
Nah	0 %
Yes, I would love to	70 %
Sometimes	30 %

# Development



blog.aragon.one

Edit    

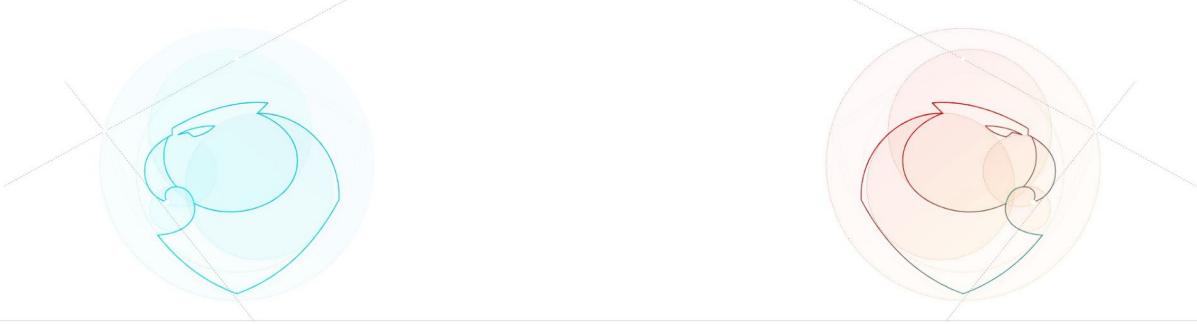
HOME TECH BLOG PRODUCT

Applause from Alberto Elias and 104 others

 Luis Cuende  
Project Lead @AragonProject. Cofounded & Advisory Board @StamperyCo. @Forbes 30under30.  
HackNow Winner. Former Advisor to the VP of the EU. Freedom lover  
Feb 14 · 5 min read

# Decentralizing Aragon's development

Splitting the Foundation from the core devs, and kickstarting funding for other teams to work on Aragon



 1K

 2    | Next story  
The key to massive innovation...

blog.aragon.one

Sign in Get started

HOME TECH BLOG PRODUCT



Luis Cuende [Follow](#)

Project Lead @AragonProject. Previously cofounded @StamperryCo. Advisor to a few crypto projects that awake my curiosity. @Forbes 30u30. @MIT TR35.

May 16 · 3 min read

## Introducing Aragon One

The first company contributing to Aragon's development



# ARAGON ONE



Luis Cuende

Follow

Project Lead @AragonProject. Previously cofounded @StamperyCo. Advisor to a few crypto projects that awake my curiosity. @Forbes 30u30. @MIT TR35.  
May 17 · 5 min read

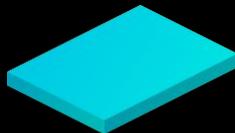
## Decentralizing Aragon's development III: Onboarding new teams

Incentivizing new teams to work on common Aragon infrastructure

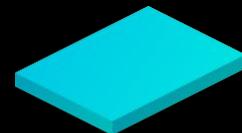


<https://blog.aragon.one>

DOM



Wrapper UI



App UI

JS

UI Framework

UI Framework

Script

Aragon.js server

Aragon Client

Aragon Client

Cache

Msg handler

Messenger

Messenger

Web3

Messenger

EVM

Kernel

ACL

EVM Scripts

App 1

App 2

App 3

# Aragon UI

Aragon UI Aragon UI

STYLES

Colors Aragon UI allows you to develop apps that look and feel like Aragon apps.

Theme

Text

CONTROLS

Button

DropDown

ContextMenu

TextInput

Field

SafeLink

CONTAINERS

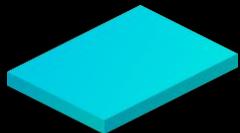
AragonApp

AppBar

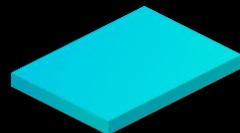
SidePanel

The screenshot displays the Aragon UI application interface. On the left, a sidebar lists components under three main sections: STYLES, CONTROLS, and CONTAINERS. Under STYLES, Colors and Theme are listed. Under CONTROLS, Button, DropDown, ContextMenu, TextInput, Field, and SafeLink are listed. Under CONTAINERS, AragonApp, AppBar, and SidePanel are listed. The main content area shows three cards: 'New Voting' (with a search icon and a teal 'New Voting' button), 'New Payment' (with a search icon and a teal 'New Payment' button), and a pending voting proposal for proposal 19102. The proposal details show a quorum of 1002, with 40% Yes, 50% No, and 10% No. Below this, a line chart tracks monthly activity from January to September. A side panel on the right is partially visible, showing some text and a close button.

DOM



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App 3

# Vote

[New Vote](#)

APPS

- Home
- Token Manager
- Voting
- Finance
- Permissions SOON
- Apps SOON
- Settings

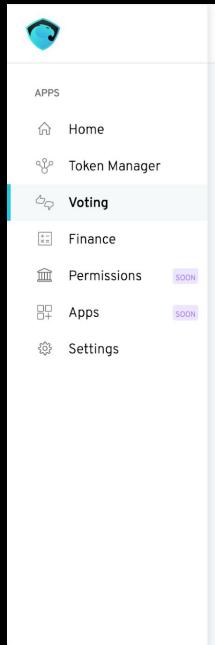
## Opened Votes 1

TIME REMAINING	QUESTION	TOTAL VOTES	PROGRESS	ACTIONS
00D 23H : 58M : 14S	Should we fund disaster relief for victims of hurricane Irma?	33.33%	<div style="width: 33.33%;"><div style="width: 100%;">✓</div></div>	<a href="#">View Vote</a>

## Closed Votes

STATUS	QUESTION	TOTAL VOTES	RESULT	ACTIONS
✓ Approved	Token Manager (ngo): Mint 1 tokens for 0xC43B0C4b6d227536238f07ffBa7e624b2A632830	50%	<div style="width: 50%;"><div style="width: 100%;">✓</div></div>	<a href="#">View Vote</a>
✓ Approved	Should we help reimagine democracy in the United States of America?	50%	<div style="width: 50%;"><div style="width: 100%;">✓</div></div>	<a href="#">View Vote</a>
✓ Approved	Finance: Create a new payment of 753 BCC. It will be executed 1 times at intervals of 0 days	50%	<div style="width: 50%;"><div style="width: 100%;">✓</div></div>	<a href="#">View Vote</a>
✓ Approved	Token Manager (ngo): Mint 1 tokens for 0x15bdCb6651f5a5e9Cef07b2a981dd270BA505051	100%	<div style="width: 100%;"><div style="width: 100%;">✓</div></div>	<a href="#">View Vote</a>

# Wrapper



# Sandboxed app

A screenshot of the Sandboxed app's "Vote" interface. At the top right is a "New Vote" button. The main area is divided into two sections: "Opened Votes" and "Closed Votes".  
  
**Opened Votes**  
TIME REMAINING: 00 D 23 H : 58 M : 14 S  
QUESTION: Should we fund disaster relief for victims of hurricane Irma?  
TOTAL VOTES: 33.33%  
PROGRESS: 33.33% (green bar)  
RESULT: Approved  
ACTIONS: View Vote  
  
**Closed Votes**  
The table below lists four closed votes, all of which are approved and have a result of 50%:

STATUS	QUESTION	TOTAL VOTES	RESULT	ACTIONS
✓ Approved	Token Manager (ngo): Mint 1 tokens for 0xC43B0C4b6d227536238f071fBa7e624b2A632830	50%	✓ 50%	View Vote
✓ Approved	Should we help reimagine democracy in the United States of America?	50%	✓ 50%	View Vote
✓ Approved	Finance: Create a new payment of 753 BCC. It will be executed 1 times at intervals of 0 days	50%	✓ 50%	View Vote
✓ Approved	Token Manager (ngo): Mint 1 tokens for 0x15bdCb6651f5a5e9Cef07b2a981dd270BA505051	100%	✓ 100%	View Vote

# Sandbox RPC

↔ events

↔ call

↔ intent

↔ cache

→ notification

← context

# **aragon.js**

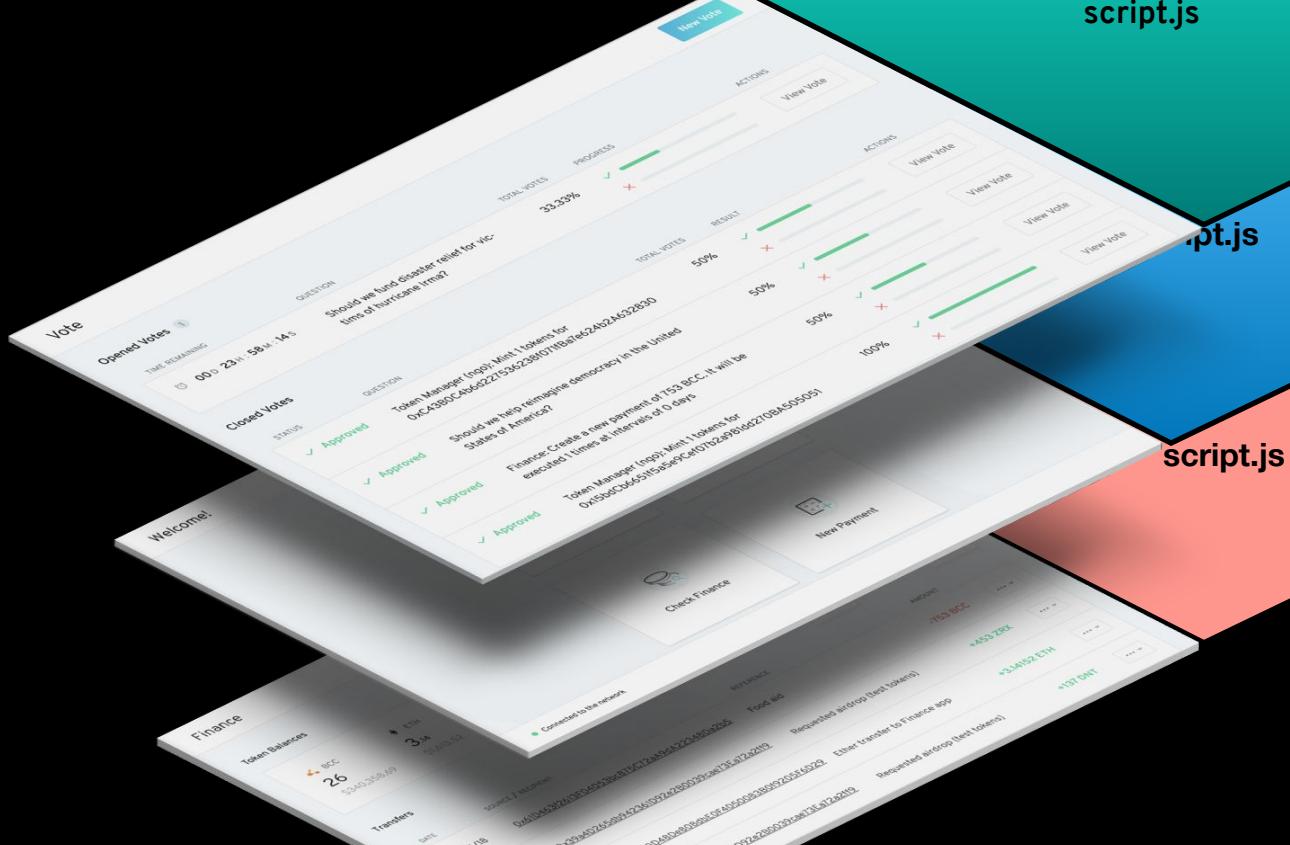
**Toolkit for Aragon applications,  
including:**

- 1. Messaging**
- 2. Transaction forwarding**

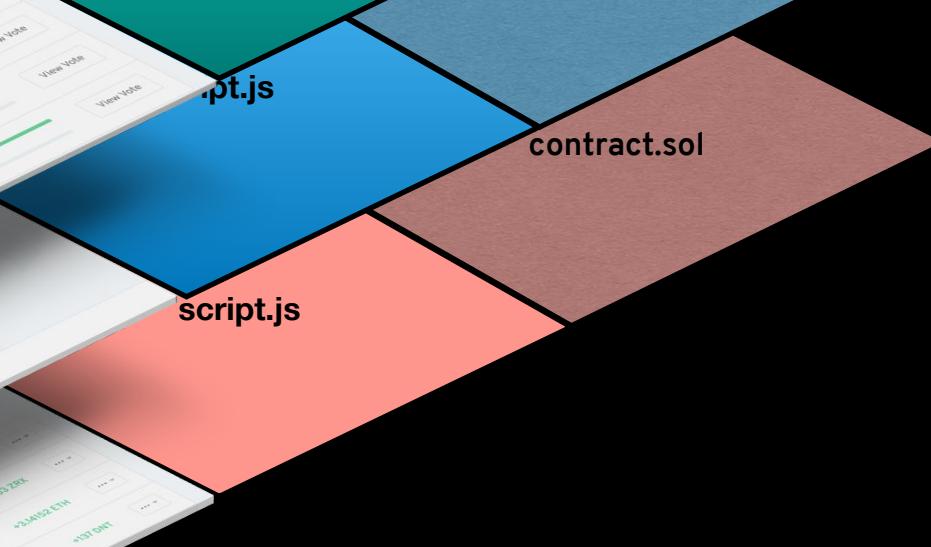
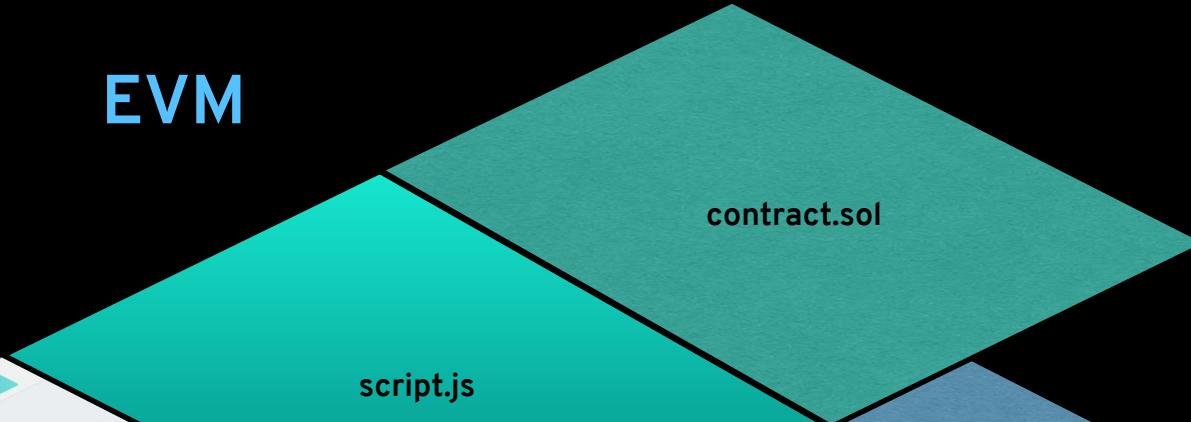
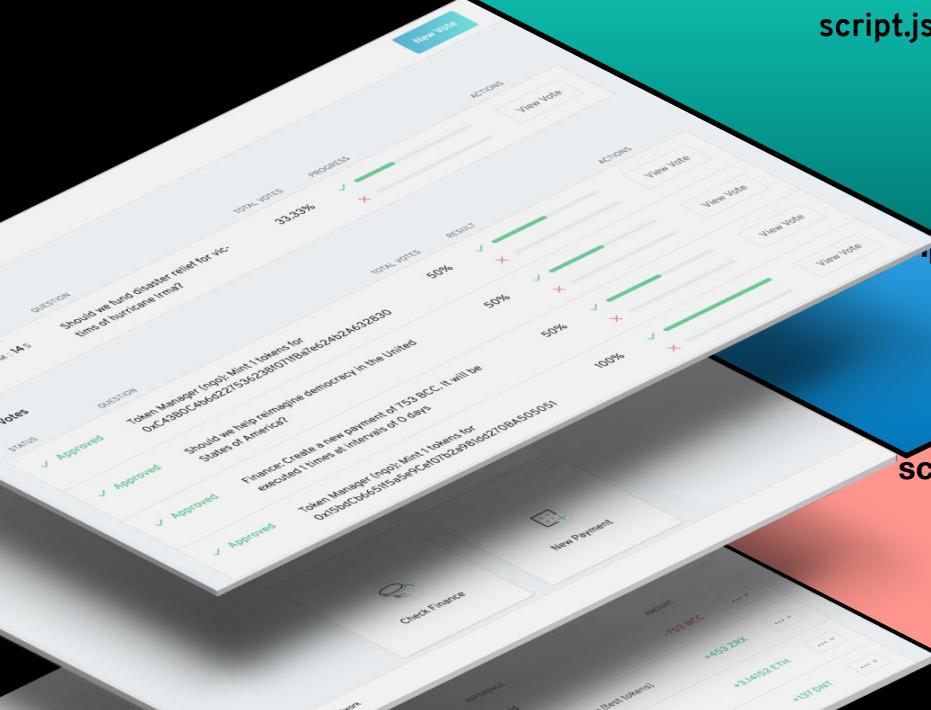
# iframe



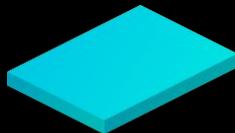
# webworker



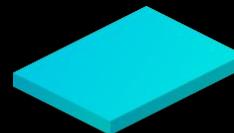
# EVM



DOM



Wrapper UI



App UI

JS

UI Framework

UI Framework

Script

Aragon.js server

Aragon Client

Aragon Client



Cache



Msg handler



Messenger



Messenger

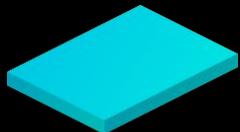


Web3

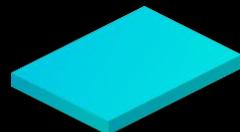


Messenger

DOM

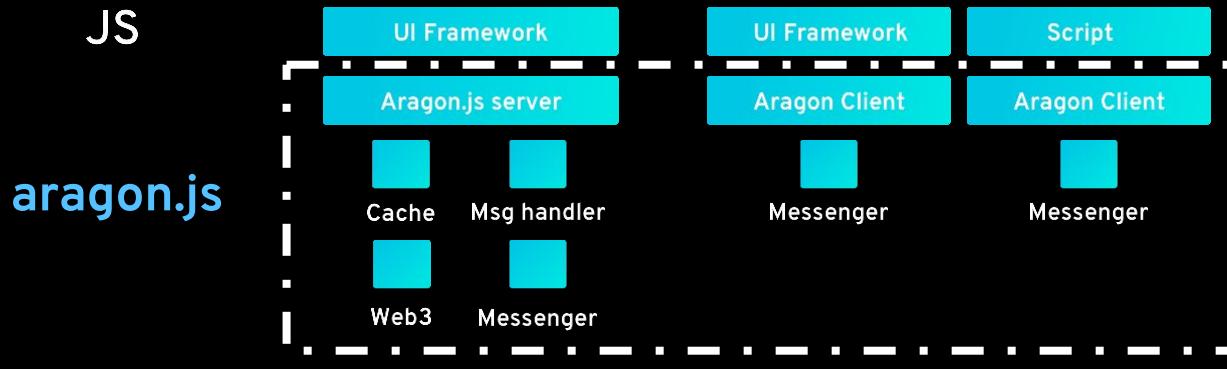


Wrapper UI



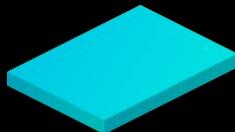
App UI

JS

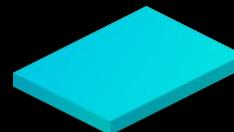


aragon.js

DOM



Wrapper UI



App UI

JS

UI Framework

UI Framework

Script

Aragon.js server

Aragon Client

Aragon Client

Cache

Msg handler

Messenger

Messenger

Web3

Messenger

EVM

Kernel

ACL

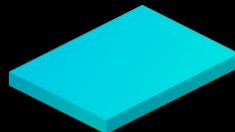
EVM Scripts

App 1

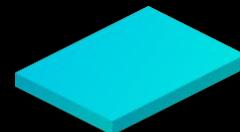
App 2

App 3

DOM



Wrapper UI



App UI

JS

UI Framework

UI Framework

Script

Aragon.js server

Aragon Client

Aragon Client

Cache

Msg handler

Messenger

Messenger

Web3

Messenger

EVM

aragonOS

Kernel

ACL

EVM Scripts

App 1

App 2

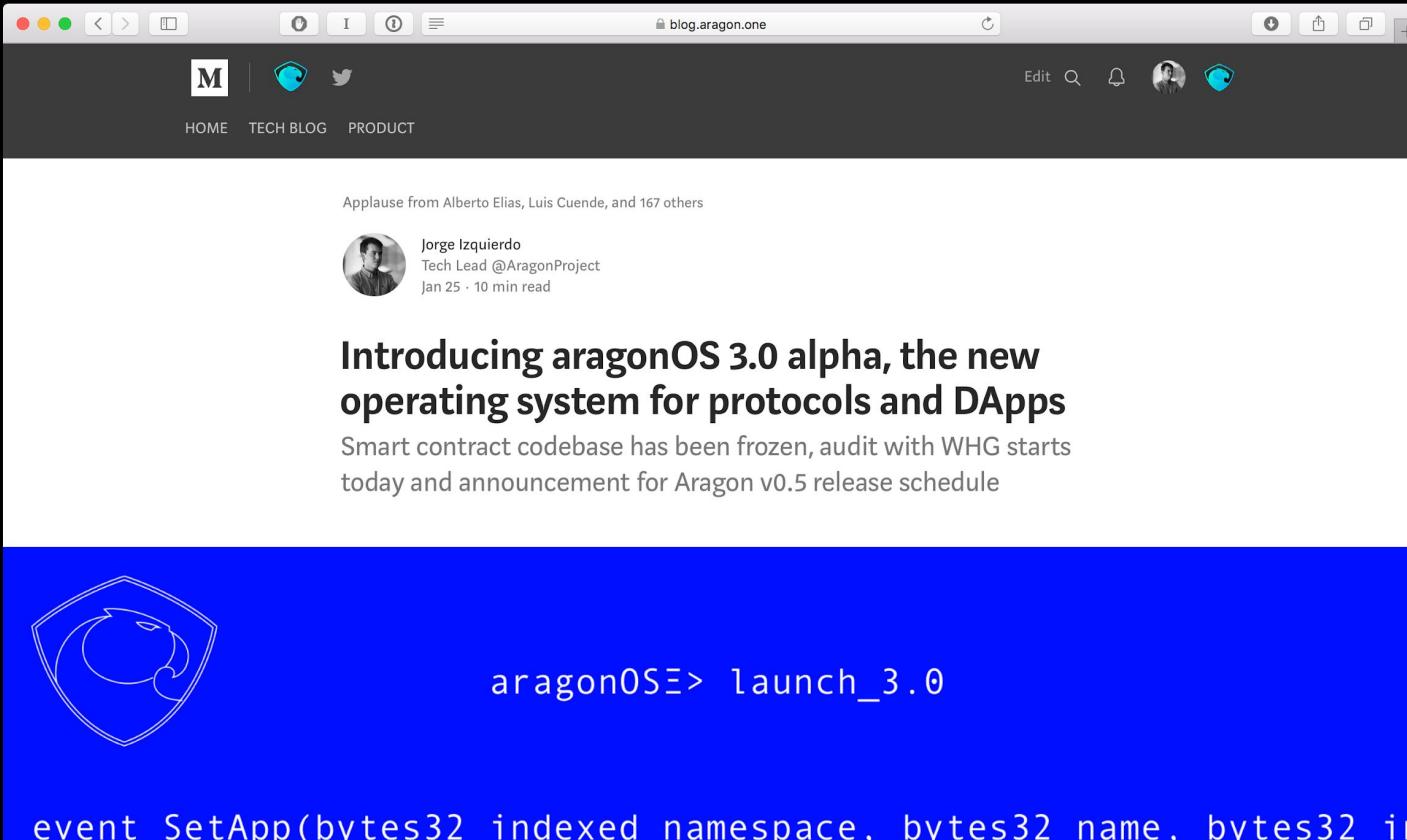
App 3

# aragonOS

A framework for programming governance

[github.com/aragon/aragonOS](https://github.com/aragon/aragonOS)

# aragonOS



A screenshot of a web browser window showing the aragonOS blog at [blog.aragon.one](https://blog.aragon.one). The page has a dark header with navigation links for HOME, TECH BLOG, and PRODUCT, along with social media icons for GitHub, LinkedIn, and Twitter. The main content features a post by Jorge Izquierdo, Tech Lead @AragonProject, published on Jan 25, which is a 10-minute read. The title of the post is "Introducing aragonOS 3.0 alpha, the new operating system for protocols and DApps". Below the title, it says "Smart contract codebase has been frozen, audit with WHG starts today and announcement for Aragon v0.5 release schedule". At the bottom of the page, there is a blue footer section featuring the aragonOS logo (a stylized 'A' inside a hexagon) and the text "aragonOSE> launch\_3.0". A snippet of smart contract code is also visible at the very bottom.

Applause from Alberto Elias, Luis Cuende, and 167 others

 Jorge Izquierdo  
Tech Lead @AragonProject  
Jan 25 · 10 min read

**Introducing aragonOS 3.0 alpha, the new operating system for protocols and DApps**

Smart contract codebase has been frozen, audit with WHG starts today and announcement for Aragon v0.5 release schedule

aragonOSE> launch\_3.0

```
event SetApp(bytes32 indexed namespace, bytes32 name, bytes32 in
```

# WHG audit results

We were very impressed with quality of the code.

**It is without question one of the most advanced smart contract systems in the space...**

and makes extensive use of many new functionalities within Solidity and at the EVM level.

Kernel



ACL



EVM Scripts



App 1



App 2



App 3



# Out of the box

1. Upgradability
2. Complex permissioning
3. Transaction forwarding

# Proxies

# Implementations

(Proxy)

Kernel



Kernel  
▪  
New Kernel

(Proxy) ACL



ACL

(Proxy) EVM Scripts



EVM Scripts

(Proxy) App 1



App 1

(Proxy) App 2



App 2

```
contract DelegateProxy is ERCProxy {
    uint256 constant public FWD_GAS_LIMIT = 10000;

    /**
     * @dev Performs a delegatecall and returns whatever the delegatecall returned (entire context execution will return!)
     * @param _dst Destination address to perform the delegatecall
     * @param _calldata Calldata for the delegatecall
     */
    function delegatedFwd(address _dst, bytes _calldata) internal {
        delegatedFwd(_dst, _calldata, 0);
    }

    /**
     * @dev Performs a delegatecall and returns whatever the delegatecall returned (entire context execution will return!)
     * @param _dst Destination address to perform the delegatecall
     * @param _calldata Calldata for the delegatecall
     * @param _minReturnSize Minimum size the call needs to return, if less than that it will revert
     */
    function delegatedFwd(address _dst, bytes _calldata, uint256 _minReturnSize) internal {
        require(isContract(_dst));
        uint256 size;
        uint256 result;
        uint256 fwd_gas_limit = FWD_GAS_LIMIT;

        assembly {
            result := delegatecall(sub(gas, fwd_gas_limit), _dst, add(_calldata, 0x20), mload(_calldata), 0, 0)
            size := returndatasize
        }

        require(size >= _minReturnSize);
    }
}
```

# Permissions

## Access Control List (ACL)

```
1 - interface IACL {  
2     function initialize(address permissionsCreator) external;  
3     function hasPermission(  
4         address who,  
5         address where,  
6         bytes32 what  
7     ) external view returns (bool);  
8  
9     /* Non-interface suggestions for implementations:  
10    function createPermission(address who, address where, bytes32 what) external;  
11    function grantPermission(address who, address where, bytes32 what) external;  
12    function revokePermission(address who, address where, bytes32 what) external;  
13    */  
14 }  
15 }
```

Interface: <https://github.com/aragon/aragonOS/blob/dev/contracts/acl/IACL.sol>

Implementation: <https://github.com/aragon/aragonOS/blob/dev/contracts/acl/ACL.sol>

# Permissions

## Using the ACL: auth()

```
/**  
 * @notice Create a new vote about ``_metadata``  
 * @param _executionScript EVM script to be executed on approval  
 * @param _metadata Vote metadata  
 * @return voteId Id for newly created vote  
 */  
function newVote(bytes _executionScript, string _metadata) auth(CREATE_VOTES_ROLE) external returns (uint256 voteId) {  
}
```

```
1 contract DAOFactory {
2     function newDAO(address root) public returns (Kernel) {
3         Kernel dao = new Kernel();
4         dao.initialize(root); // Assume this also creates an ACL for the DAO
5
6         ACL acl = ACL(dao.acl());
7
8         Vault vault = Vault(dao.newAppInstance("vault"));
9         Voting voting = Voting(dao.newAppInstance("voting"));
10        Finance finance = Finance(dao.newAppInstance("finance"));
11        TokenManager tokenManager = TokenManager(dao.newAppInstance("token-manager"));
12
13        acl.createPermission(finance, vault, vault.TRANSFER_ROLE());
14        acl.createPermission(voting, finance, finance.CREATE_PAYMENTS_ROLE());
15        acl.createPermission(voting, finance, finance.EXECUTE_PAYMENTS_ROLE());
16        acl.createPermission(voting, tokenManager, tokenManager.MINT_ROLE());
17        acl.createPermission(voting, tokenManager, tokenManager.ASSIGN_ROLE());
18
19        return dao;
20    }
21 }
```

### Factory:

<https://github.com/aragon/aragon-apps/blob/master/templates/beta/contracts/BetaTemplateBase.sol>

# Transaction Forwarding

Voting > XVT

Open votings

TIME REMAINING	QUESTION	VOTES
01d 10h 23m 52s	Are you agree to share Lorem ipsum?	39201
00d 01h 08m 28s	Fusce vehicula dolor arcu, sit amet blandit dolor mollis nec. Sed sollicitudin ipsum quis nunc sollicitudin ultrices?	49201

Past votings

STATUS	QUESTION
✓ Approved	Fusce vehicula dolor arcu, sit amet blandit dolor mollis nec. Sed sollicitudin ipsum quis nunc sollicitudin ultrices?
✗ Rejected	Fusce vehicula dolor arcu, sit amet blandit dolor mollis nec. Sed sollicitudin ipsum quis nunc sollicitudin ultrices.
⌚ Time out	Fusce vehicula dolor arcu, sit amet blandit dolor mollis nec. Sed sollicitudin ipsum quis nunc sollicitudin ultrices.

### Sign Transaction

Permission note:  
You cannot directly perform this action. You do not have the necessary permissions.

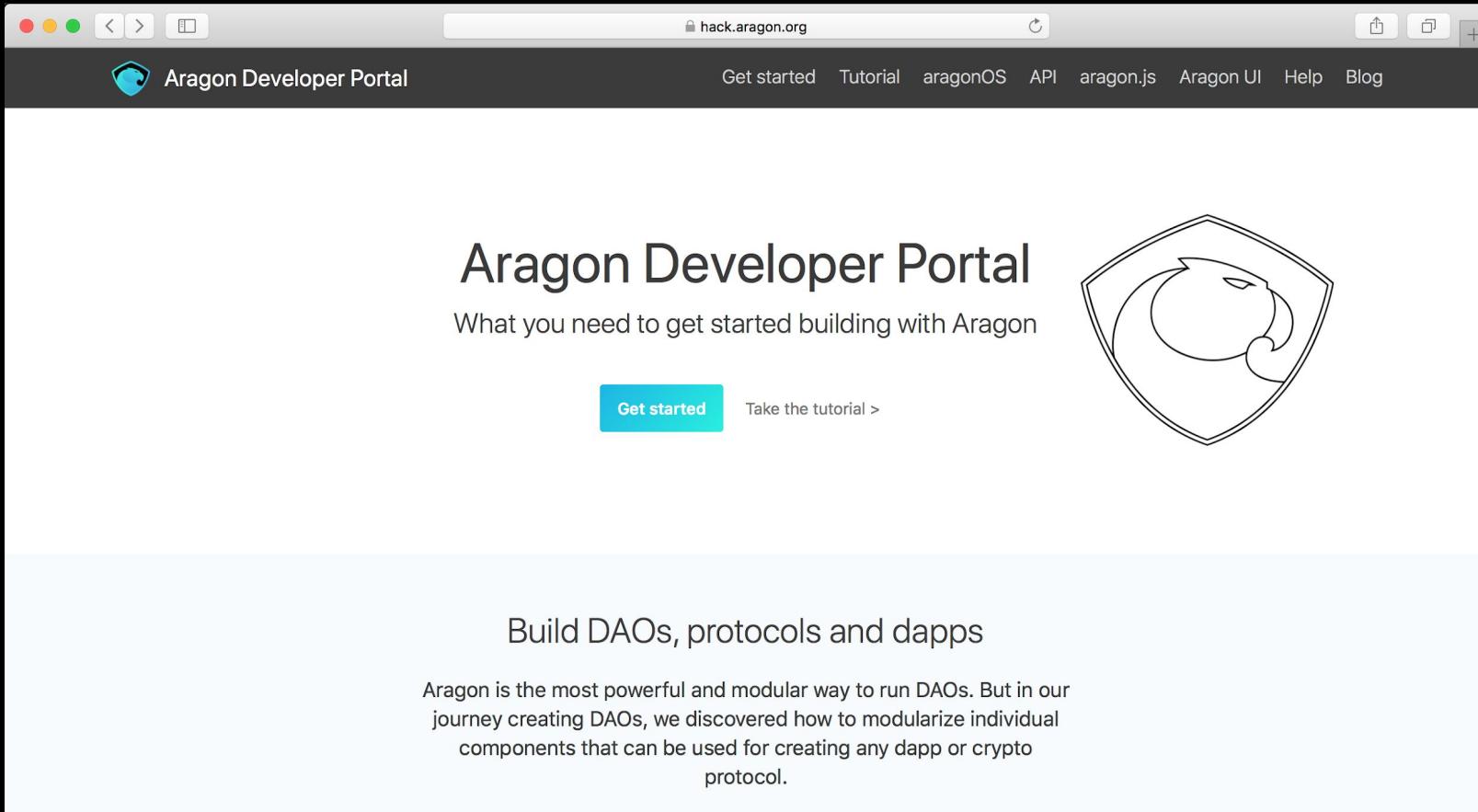
Action Requirement  
Here are some options that you can use to perform it:

- Voting (ANT)  
The Voting (ANT) app will create a new voting for ANT holders to decide whether to perform this action or not.
- Tokens (XVT) → Voting (ANT)  
1. The Tokens (XVT) app will forward actions requested by XVT token holders.  
2. The Voting (XVT) app will create a new voting for ANT holders to decide whether to perform this action or not.

Action to be triggered  
This transaction would eventually perform a payment to address [0x52b...1ka11](#) Estimated payment cost [?](#)

**Sign Transaction**

# hack.aragon.one

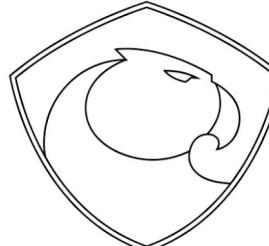


A screenshot of a web browser displaying the Aragon Developer Portal at [hack.aragon.org](https://hack.aragon.org). The page has a dark header with the URL in the address bar. Below the header is a navigation bar with links: Aragon Developer Portal, Get started, Tutorial, aragonOS, API, aragon.js, Aragon UI, Help, and Blog. The main content area features a large title "Aragon Developer Portal" and a subtitle "What you need to get started building with Aragon". It includes two buttons: a blue "Get started" button and a white "Take the tutorial >" button. To the right is a large, stylized logo consisting of a shield shape with a circular arrow inside.

## Aragon Developer Portal

What you need to get started building with Aragon

[Get started](#) [Take the tutorial >](#)



### Build DAOs, protocols and dapps

Aragon is the most powerful and modular way to run DAOs. But in our journey creating DAOs, we discovered how to modularize individual components that can be used for creating any dapp or crypto protocol.

# npm install -g @aragon/cli

› aragon

aragon <command>

Commands:

aragon apm <command>	Publish and manage your APM package
aragon contracts	Execute any Truffle command with arguments
aragon dao <command>	Manage your Aragon DAO
aragon deploy [contract]	Deploys contract code of the app to the chain
aragon devchain	Open a test chain for development and pass arguments to ganache
aragon init <name> [template]	Initialise a new application
aragon ipfs	Start IPFS daemon configured to work with Aragon
aragon run	Run the current app locally

APM:

--apm.ens-registry Address of the ENS registry  
[default: "0x5f6f7e8cc7346a11ca2def8f827b7a0b612c56a1"]  
--eth-rpc

APM providers:

--apm.ipfs.rpc An URI to the IPFS node used to publish files  
[default: "http://localhost:5001#default"]

# Community

- 8,000 members @ [aragon.chat](#)
- 20,000 token hodlers
- 65,000 twitter followers

# Aragon Labs



0x



Decentraland



district0x

ETHFINEX ◀▶

GivETH



status

# Aragon Nest

The screenshot shows the GitHub interface for the `aragon / nest` repository. The top navigation bar includes links for Pull requests, Issues, Marketplace, and Explore. The Issues tab is selected, showing 6 open issues. A search bar at the top right allows filtering by 'is:issue is:open'. Below the search bar are buttons for Filters, Labels, Milestones, and a prominent green 'New issue' button. The main area displays a list of issues, each with a checkbox, a title, labels, and a comment count. The first few issues are related to Aragon Nest proposals.

Issue #	Title	Labels	Comments
#19	P2P Project Management application and data storage with Dat	ecosystem: aragon, proposal: review	0
#15	aragonOS-compatible encrypted datastore	ecosystem: aragon, proposal: review	4
#12	Aragon Nest Proposal: Secret voting infrastructure using Ring/Threshold signatures	ecosystem: aragon, proposal: approved	0
#6	Aragon Nest Proposal: Verifiable Off-chain Tabulation of Carbon-vote signaling	ecosystem: aragon, ecosystem: broader crypto, proposal: approved	0
#3	Aragon Nest Proposal: Open source incentivization app for Aragon	ecosystem: aragon, proposal: approved	22
#1	Aragon Nest Proposal: OS-level signing provider	ecosystem: broader crypto, ecosystem: ethereum, proposal: approved	0



# SOON™



# research.aragon.one

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## TOPIC

### Welcome to Aragon Research Discourse forum

Welcome to the Aragon Research forum! This is the space for long-form discussions about research topics related to Aragon, the Aragon Network and Governance. The first paragraph of this pinned topic will be visible as a... [read more](#)



0

42

17d

### Multi-chain contexts

[dispute-resolution](#)

Economics



2

22

1d

### TCR: MINORITY\_BLOC\_SLASH parameter

[tcr](#)

Oracles



4

24

9d

### TCR: get the result from a vote

[tcr](#)

Oracles



3

47

9d

### TCR: How to redistribute tokens after challenge is resolved

[tcr](#)

Oracles



4

63

10d

# Come hang out!

[aragon.one](https://aragon.one)

[aragon.chat](https://aragon.chat)

[github.com/aragon](https://github.com/aragon)

# Aragon One team



[aragon.one/about](http://aragon.one/about)

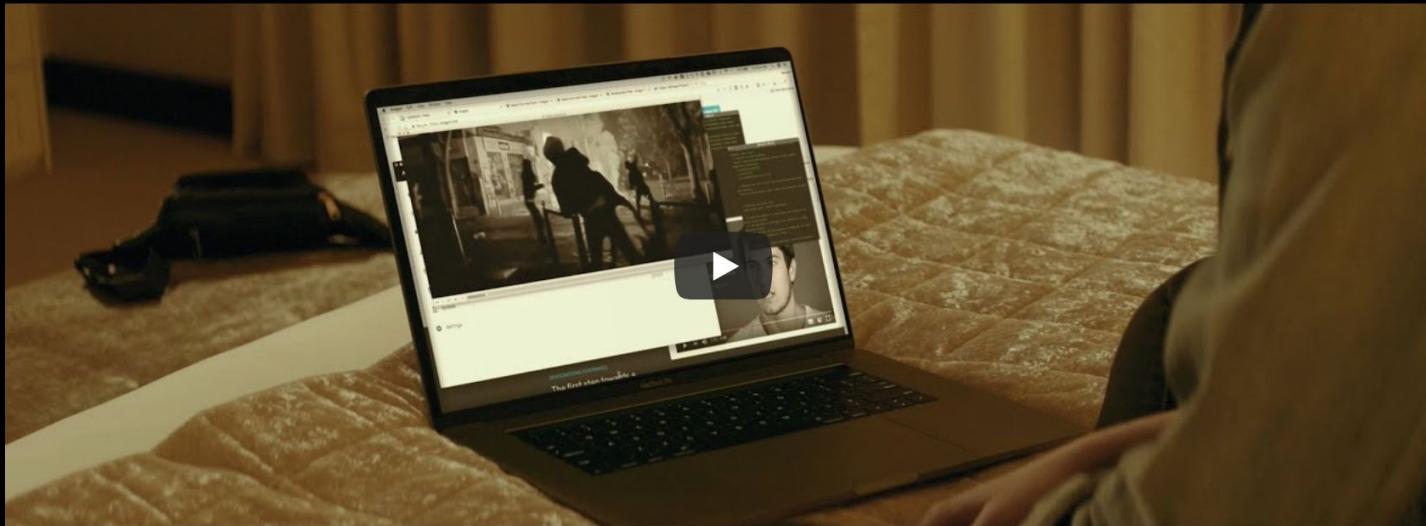
# Hiring

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- **Developer Relations** (fulltime)

[wiki.aragon.one/jobs](http://wiki.aragon.one/jobs)

# Aragon - The fight for freedom



5:51

<https://www.youtube.com/watch?v=AqjIWmiAidw>