



Free TON Open Governance Proposed Solutions

Ideas for community consideration

INFORMAL SPEC FOR DGO

@itakura1

DGO Contest Specification

- agile methodology
- clear, simple specification - describe clearly how the DGO system functions
- concepts should support future implementation contests
- the main elements of the system
 - organization
 - what smart contract functionality is expected at a high level (SMV and Jury voting smart contracts are out of scope)
 - members of the community can vote with their tokens using SMV smart contracts
 - support a sub-governance model
 - support jury selection and voting
 - allocate budgets to sub-governments
 - facilitate discussion of proposals
 - enable on-chain submissions and jury voting
 - create a community feedback loop
 - scalable
 - decentralized
 - trust-less
 - support high load use
- It can incorporate any logic of interactions between the above elements

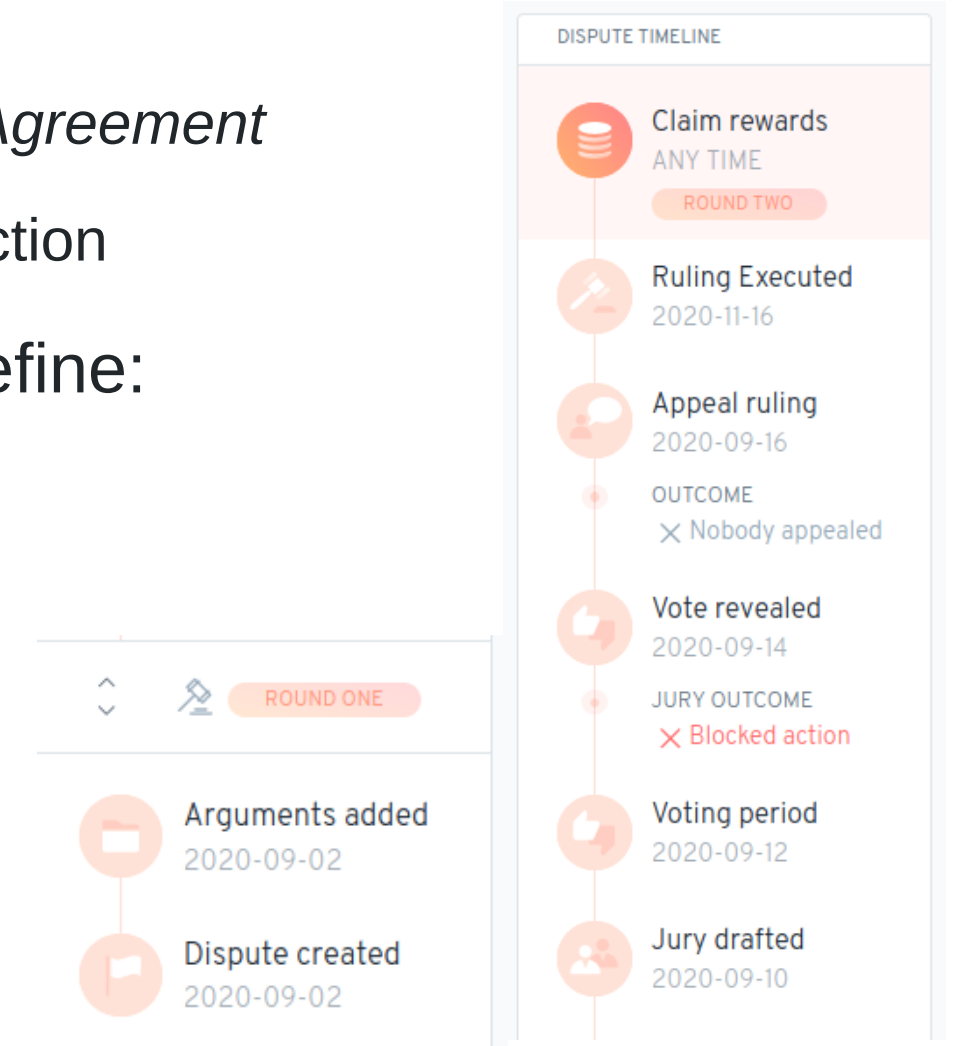
Open Governance - System Design Objectives:



- All governance actions must be consistent with Free TON values, goals and objectives
- All Crystal holders have equal opportunity to participate, contribute, and influence Free TON Governance
- All levels and functions of Governance must implement efficient meritocracy
 - (a system or organization in which people are chosen and moved into positions of power and influence on the basis of their demonstrated abilities and merit)
- All "state changes" (agreements, contests, transactions, distributions, etc.) must be "signed" on-chain by MasterGov
- Multiple layers of checks and balances for significant actions
- Any Crystal holder(s) can form a WorkGov or ShardGov (and may compete with existing Govs)
- WorkGovs and ShardGovs should have flexibility to experiment with different organization, compensation and other strategies
 - The primary evaluation metric should be WorkGov performance and value added to Free TON
- WorkGov members must stake personal or delegated funds - maximum monthly budget is proportional to amount staked
 - Irresponsible or corrupt WorkGov actions can be penalized with slashing (all WorkGovs must have "skin in the game")
- New WorkGovs must request and justify budgets received from MasterGov on a monthly basis
- Systems for evaluating WorkGov and member performance and efficiency (reputation rating systems)
 - High rated WorkGovs can be rewarded with more trust and benefits
- Use existing, proven systems and code/contracts as much as possible (minimize development scope and new, unproven systems)
 - Aragon, 1Hive, MakerDAO, Snapshot, etc.

Agreements + Court = Foundation for Free TON Open Governance

- **Aragon (the leading DAO developer) arrived at this solution after over 5 years of DAO experience**
 - Many concerns cannot be defined in code - natural language Agreements and subjective judgments are more appropriate
 - Court is a human-powered arbitration system - jurors enforce the human-readable rules established in Agreements
- **Example: Declaration of Decentralization**
 - In the proposed *Open Governance* system, the DoD would be approved/formalized as an *Agreement*
 - If a proposal or action is approved that conflicts with DoD, it can be rejected with a *Court* action
- **Free TON Open Governance requires additional foundational agreements that define:**
 - Free TON values, goals, and objectives
 - MasterGov, WorkGov, and ShardGov rules
 - Systems for evaluating WorkGov and member performance and efficiency
 - Reputation rating systems and scales
 - Off-chain rules and best practices
 - As the community grows and evolves, there will be more agreements and amendments



**Agreements and Court code/contracts
are existng, free software)**



**ARAGON
COURT**



Dispute #21: Aragon Network Cash Agreement

CLOSED

0xa47d...9c41

FINAL JURY OUTCOME

✗ Blocked action

DISPUTED ACTION

Finance : Create a new payment of 100 DAI to 0xA1d4...caAA for "

ORGANIZATION

0xa233...4c1e

DESCRIPTION

[Read more](#)

PLAINTIFF

0xd593...e34d

LINK TO AGREEMENT

[Aragon Network Cash Agreement](#)

DEFENDANT

0x0090...73b6

CURRENT RULING



Argument #1

SUBMITTED BY	DATE
Plaintiff	2020-09-02

DATA

This proposal provides funding for an integration with Google Analytics, a tool that feeds data into a global mass surveillance system owned by Google. For further information about Google's connection to mass surveillance see this article about recent complaints filed by privacy group noyb against multiple companies due to mass surveillance concerns about using Google Analytics:

DISPUTE TIMELINE

- Claim rewards ANY TIME
- ROUND TWO
- Ruling Executed 2020-11-16
- Appeal ruling 2020-09-16
- OUTCOME ✗ Nobody appealed
- Vote revealed 2020-09-14
- JURY OUTCOME ✗ Blocked action
- Voting period 2020-09-12
- Jury drafted 2020-09-10
- ROUND ONE
- Arguments added 2020-09-02
- Dispute created 2020-09-02

Example Court Dispute

- Plaintiff believes an approved proposal is not in accordance with an applicable Agreement (in this case, the Aragon Manifesto)
- Plaintiff creates dispute (stake required)
- Plaintiff drafts/submits arguments
- Jury is randomly selected from pool(s)
- Jury votes (in this case, for plaintiff)
- Opportunity to appeal (in this case, no appeal)
- Plaintiff and Jury collect rewards
- (If jury votes against plaintiff, stake is slashed)
- The above is a simplified description, there are other innovative elements including futacracy **code/contracts for a complete court system has already been developed by Aragon (free software)**

Main Government

- A pure democracy where any crystal holder can vote on any ballot
- Voting is quadratic: $\text{Vote weight} = \text{Staked TONs}^{(1/2)}$
- Purpose: To provide final check on WorkGov approved proposals/actions

Work Government

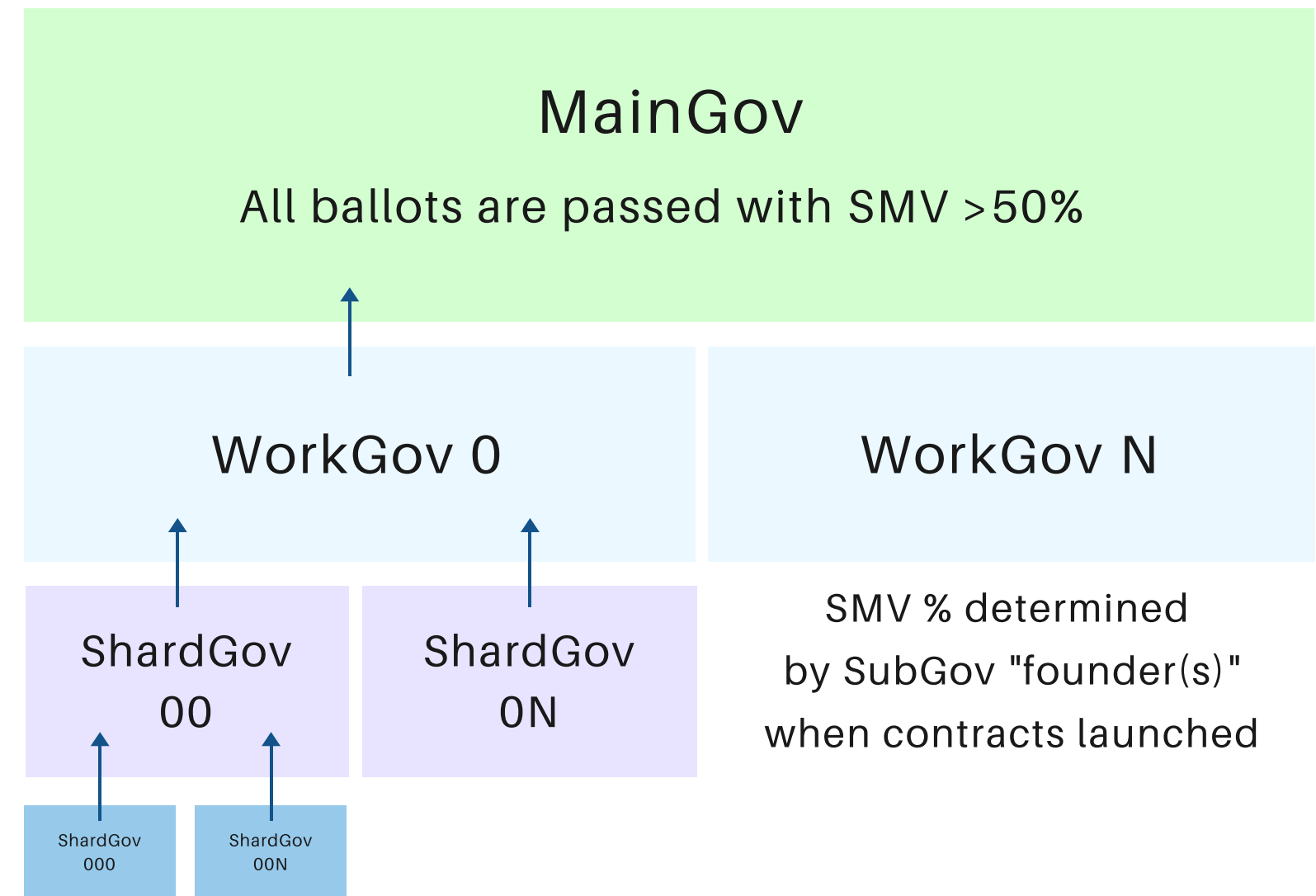
- Focused on specific function, discipline and/or skill set (e.g. DevOps, Marketing)
- Reputation is required to vote
- Voting is linear: $\text{Vote weight} = \text{Reputation Score}$ (Scale: 0 to 1)
- Reputation is assigned/increased/reduced via WorkGov vote
- Purpose:
 - Develop and pass high-quality proposals/actions to MainGov
 - Provide check on ShardGov approved proposals/actions, pass to Main

Shard Government

- Focused on sub-discipline or sub-skill set (e.g. Validator, DApp Server, SMM, PR)
- Same features as WorkGov
- No theoretical limit on number of shards or sub-shards
- Purpose: provide high-quality inputs/proposals/actions to WorkGov

Court System

- Any approved proposal/action can be challenged by any crystal holder (requires staking, provides rewards, promotes fishermen)
- Jury is randomly selected from pool of volunteers (categorized by interest/expertise, provided rewards)
- Outcomes can be appealed to larger jury pools (requires increased stakes)
- Purpose: To provide an additional layer of checks/balances and to enable/enforce subjective agreements



Overview of Proposed Governance Structure

WorkGov Overview

Any Crystal-holder(s) can propose a new WorkGov

- stake (equal to requested monthly distribution) is required before a MasterGov approval vote is conducted
- if WorkGov proposal is rejected by MasterGov (or Court), stake is slashed (for example, by 10%)
- Monthly distributions to new WorkGovs should not exceed WorkGov stake (loans may be required near-term)

Any monthly compensation method(s) can be proposed by SubGovs

- Option: WorkGov can provide a detailed list of contests and tasks that will be accomplished with distribution
 - If these contests and tasks are not accomplished appropriately, additional distributions should not be approved
 - If a monthly distribution is irresponsibly wasted or fraudulently spent, the stake will be slashed (% determined by MasterGov vote)
- Option: A proven professional can support a WorkGov full-time in exchange for a flat monthly compensation fee
 - For example, a world-class solidity dev could propose a monthly fee to support DGO development full-time
 - Attracting and retaining top talent should be a priority for Free TON - any efficient compensation solution should be available
 - However, any direct compensation must be continuously justified with demonstrated value provided to the project
 - If adequate value is not provided, additional monthly compensation should be reduced or rejected

Each month, the WorkGov must present a summary of the value provided to the community (must justify all distributions received)

- This monthly performance will be rated by the MasterGov (community)
 - High-performing = high reputation rating - more trust and latitude for future proposals, shorter time delay for protest
 - Poor-performing = low reputation rating - less likely to receive future distributions, will encourage competing WorkGovs



WorkGov / ShardGov Organization Example #1

MainGov

DevOps WorkGov

- Develop high-level priorities, strategies and specifications
- Coordinate ShardGov activities to ensure development is consistent with priorities, strategies and specifications
- Responsible for performance of ShardGovs - can oversee competition between ShardGovs
- Responsible for monthly report that includes ShardGov performance
- Can provide stake for ShardGovs - WorkGov is financially incentiveized to recruit and maintain high-quality ShardGovs
- Carefully recruit and manage WorkGov membership / voting power

DApp Server
ShardGov

Rust Validator
ShardGov

C++ Validator
ShardGov

Availability
ShardGov

Docker
ShardGov

E2ED
ShardGov

Endpoints
ShardGov

- A technical hierarchy will ensure all development is compatible and consistent with larger network vision and goals
- Allows ShardGov members to focus on technical development (not organizational management and review)

WorkGov / ShardGov Organization Example #2

MainGov

Marketing WorkGov

- Develop high-level marketing strategies and messages
- Coordinate ShardGov activities to ensure consistent messaging and positioning
- Responsible for performance of ShardGovs - can oversee competition between ShardGovs
- Responsible for monthly report that includes ShardGov performance
- Can provide stake for ShardGovs - WorkGov is financially incentiveized to recruit and maintain high-quality ShardGovs
- Carefully recruit and manage WorkGov membership / voting power

Social Media
ShardGov

Web Design
ShardGov

PR Agency
ShardGovs

Ambassadors
ShardGov

Graphic Design
ShardGov

Influencers
ShardGov

- A marketing hierarchy will ensure all promotion is consistent with project values and goals
 - Required to ensure consistent positioning and marketing messages across all disciplines and channels
- Allows ShardGov members to focus on specific tasks and areas (not organizational management and review)
- ShardGovs (or other crystal holders) are free to form competitive WorkGovs (participation in WorkGov is voluntary)

WorkGov Off-Chain (forum.freeton.org)

Proposals are posted, discussed and signaled off-chain. Once consensus is reached, a snapshot is taken for on-chain vote

- Proposals
- Agreements
- Contest specifications
- Action bounties
- Compensation proposals
- Miscellaneous

Best practices of off-chain proposals, discussion, and signaling should be adopted (MakerDAO, Snapshot, Aragon)

WorkGov On-Chain (workgov_name.gov.freeton.org)

Reputation Actions:

- initiate increase or decrease of member's WorkGov REP
(REP > 0 = voting power in WorkGov, Max = 1)

Finance Actions:

- initiate WorkGov Treasury deposits / withdrawals / payments

Voting Actions:

- approve / reject proposals and actions, vote weight = REP
- Approved = pass to MainGov for approve / reject

WorkGov REP holders maintain quality of membership with +/- REP:
+: responsible, constructive, useful discourse/proposals/actions
- : irresponsible, nonconstructive, wasteful discourse/proposals/actions

**code/contracts for all functions above
have already been developed by Aragon**

WorkGov with 5 members
proposal to add new WorkGov member
with maximum voting power (REP = 1)

1. Mint 1 REP and send to new address

2. >50% of REP holders vote "yes"

3. New WorkGov member with REP =1

WorkGov REP
Contract

- Mint or burn member REP

WorkGov Voting
Contract

- Vote on action initiated with WorkGov REP or Finance
- Create new vote (e.g. linked to proposal in forum)

Mint 1 REP and send to
new WorkGov member

WorkGov with 6 members

WorkGov with 6 members
proposal to remove inactive member with REP = 1

1. Burn 1 REP from member's address

2. >50% of REP holders vote "yes"

WorkGov with 5 members

WorkGov REP
Contract

- Mint or burn member REP

WorkGov Voting
Contract

- Vote on action initiated with WorkGov REP or Finance
- Create new vote (e.g. linked to proposal in forum)

Inactive member's REP reduced to 0
(voting power removed)
Any member stake should also be returned

Example WorkGov REP action: adding a (junior) WorkGov member by increasing REP from 0 to 0.1 (requires > 50% of REP holders to vote "Yes")

The screenshot shows the 'Tokens' page for the 'REP' token. The user's balance is 1 token. The token info shows a total supply of 1, non-transferable, and identified as 'DGO Reputation (REP)'. The ownership distribution shows 100% stake by 'YOU'.

HOLDER	BALANCE
0x4bd6...adf5 YOU	1

TOKEN INFO

Total supply	1
Transferable	NO
Token	DGO Reputation (REP)

OWNERSHIP DISTRIBUTION

Tokenholder stakes	Percentage
YOU	100%

The dialog titled 'Action Requirement' explains the process: 'Tokens → Voting'. It lists two steps: 1. Tokens: Execute desired action as a token holder; 2. Voting: Creates a vote to execute the desired action, and casts a support vote if possible. A preview shows the transaction: 'Mint 0.1 tokens for 0x8BAB...8C16 on Tokens.' A 'Create transaction' button is at the bottom.

The 'Voting' page shows the details of the open vote. The description is '#0: Tokens (REP): Mint 0.1 tokens for 0x8BABCe912BB278d96B4920d2C4Bd1F52eA068C16'. The current status is 'YES 0%' and 'NO 0%'. A timer shows 23 H : 59 M : 17 S remaining.

The 'Vote #0' page shows the current voting status. The description is 'Tokens (REP): Mint 0.1 tokens for 0x8BAB...8C16'. The current votes are 'Yes 0% 0 REP' and 'No 0% 0 REP'. A 'Yes' button is highlighted. A note states: 'Voting with 1 REP. This was your balance when the vote started (block 7562159, mined at 14:29 on 17th of Nov. 2020).'

The 'Vote #0' page shows the result: 'Your vote was cast successfully. You voted YES with 1 REP.' The current votes are now 'Yes 100% YOU 1 REP' and 'No 0% 0 REP'. The status is 'Passed (enacted)' with a timestamp of 2020-11-17, 14:32.

The 'Tokens' page shows the updated ownership distribution. The user's balance is now 0.1 tokens, and a new holder '0x8bab...8c16' has 0.1 tokens. The ownership distribution shows 'YOU' with 91% and '0x8bab...8c16' with 9%.

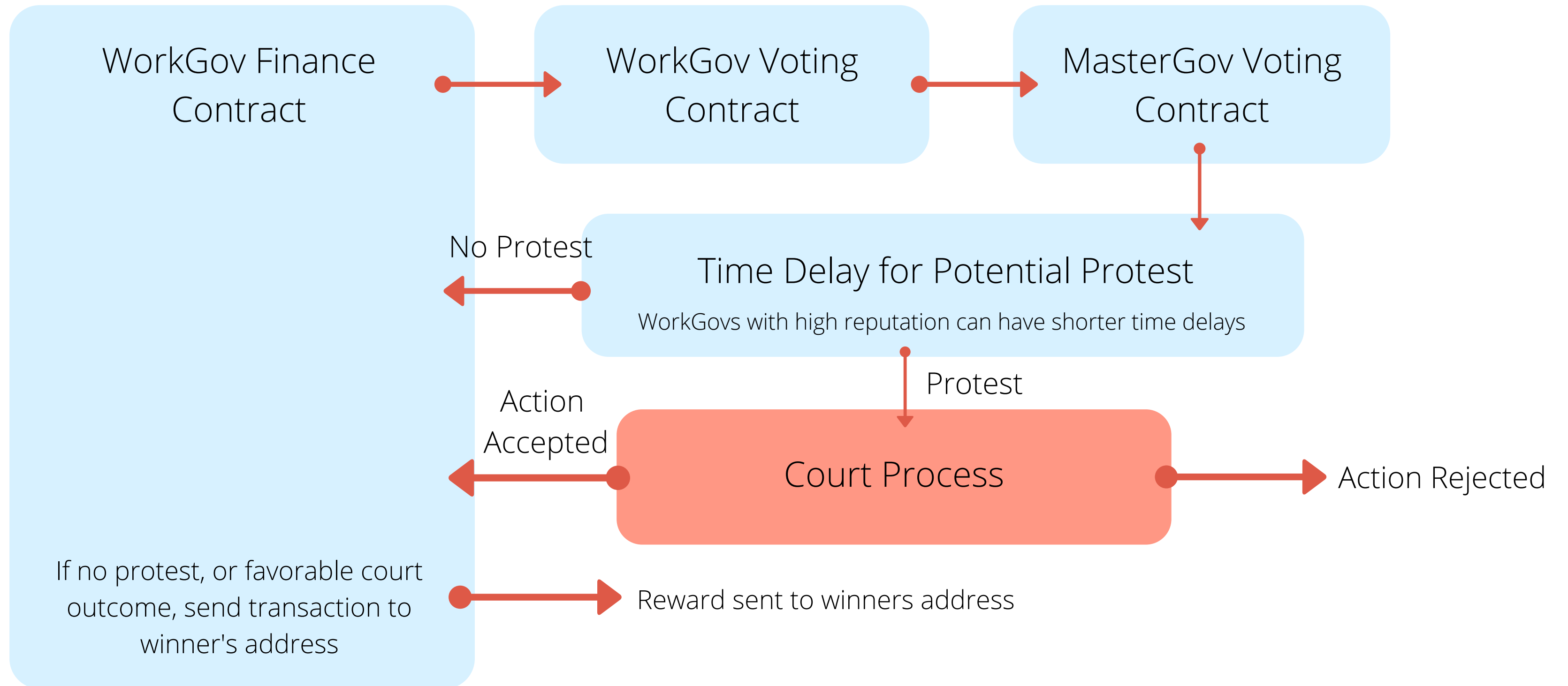
Tokenholder stakes	Percentage
YOU	91%
0x8bab...8c16	9%

WorkGov payment to contest winner (3 checks: WorkGov vote, MasterGov vote, and protest/court opportunity)

1. Initiate transaction to winner's address
(link to contest, submission, and jury results)

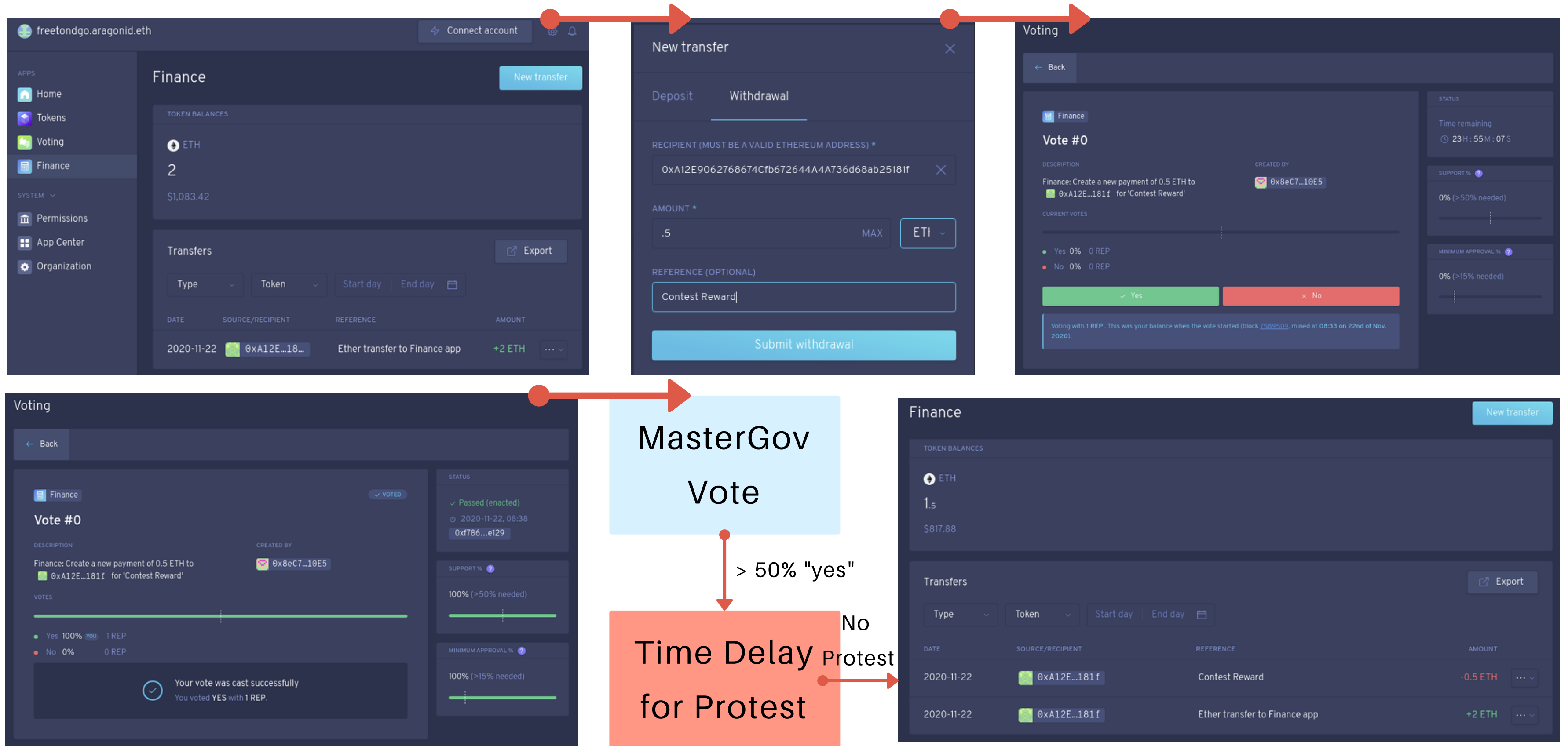
2. >X% of REP voters vote "yes"

3. >50% of TON voters vote "yes"



**All WorkGov proposals that include the Finance contract can use this same process flow to minimize risk
(Can also be used for all agreements and proposals)**

Example WorkGov finance action: making a payment to contest winner (Requires WorkGov vote, MasterGov vote, and no protest or favorable court outcome)



(WorkGov vote and protest/court opportunity not included in Aragon DAO used for example)

This submission is not a complete specification for all possible governance structures

The primary purpose of this submission is:

- To promote the use of [Agreements and Court in Free TON's governance](#)
 - This provides more flexibility and more control
 - Ensures all governance actions are consistent with project values (these values must be defined in Agreements and accepted by voting)
 - These systems and associated code/contracts have already been developed by Aragon (mostly free software)
- To promote a system where [SubGovs \(WorkGovs and ShardGovs\) have few organizational restrictions](#)
 - This allows many new "sub-DAO" organizational structures and strategies to be tested and compared (competition is good)
 - Number of members, organizational structures, compensation structures, strategies etc. should be determined by individual WorkGovs
 - All SubGov actions must be consistent with project values and goals (or they can be rejected by MasterGov vote or Court)
 - All SubGovs must be efficient and honest meritocracies (or they will not get additional funds, or slashed via Court)
 - Staking equivalent (or proportional) to monthly budgets ensures WorkGovs have "skin in the game"
 - WorkGovs should submit monthly reports - community can rate WorkGov results (rating system needs development)
 - Higher ratings can lead to benefits (budgets larger than stake, quarterly budgets/reports, shorter delay times, etc.)
 - Low ratings can inform MasterGov voters when voting on proposed budgets and actions (less likely to be accepted)
 - Low ratings will encourage competition from other WorkGovs
- To promote the use of the existing [DAO code/contracts developed by Aragon and others \(1Hive etc.\)](#)
 - Free TON should not re-invent DAO governance - lessons learned and code/contracts should be re-used
 - There are many groups that are building on Aragon (e.g. [1Hive](#)) that we should try to recruit into the Free TON community and ecosystem
 - We can experiment with Aragon DAOs on Rinkeby network. These can be used by WorkGovs while Free TON is developing comparable on-chain systems

Useful references from my research:

- Aragon has developed many apps/contracts that could be useful for Free TON governance
 - <https://aragon.org/>
 - <https://wiki.aragon.org/>
 - [Aragon Manifesto](#) (Aragon shares many values with the Free TON community. Free TON should also have a Manifesto-type Agreement - this could be an improved DoD)
 - [Aragon Court](#)
 - <https://github.com/1Hive> (1Hive is a very advanced DAO developer that builds on top of Aragon)
- MakerDAO has done great work on developing off-chain best practices:
 - <https://forum.makerdao.com/t/makerdao-standard-governance-processes/4298>
 - <https://forum.makerdao.com/t/practical-guide-to-the-signaling-process/2623>
 - <https://forum.makerdao.com/t/maker-governance-analytics-dashboard/722>
 - <https://forum.makerdao.com/t/emergency-urgent-governance-process/3926>
 - <https://forum.makerdao.com/t/governance-forget-about-whales/4995>
 - <https://forum.makerdao.com/t/wanted-risk-domain-monitoring-tools/4168>
 - <https://community-development.makerdao.com/en/funding/development-grants>
 - It seems that one engaged "champion" is responsible for the effective operation of MakerDAO governance - Free TON also needs governance champions
- Snapshot (Balancer Labs) is an interesting concept that is getting a lot of traction (mostly due to high gas fees on Ethereum). Snapshot recently partnered with Aragon.
 - <https://snapshot.page/#/>
- There are other DAO development groups such as DAO Stack and Moloch DAO, but Aragon appears to be far more advanced
 - <https://daostack.io/>
 - <https://www.molochdao.com/>
 - DAO attack vectors and proposed solutions: <https://hackingdistributed.com/2016/05/27/dao-call-for-moratorium/>