

Governance Mechanisms Spec

The Governance Mechanisms Spec defines the precise rules under which proposals are counted, quorum is measured, votes are weighted, delegations are registered, working groups operate, and emergency powers are invoked. These are the rules the voting infrastructure enforces — not aspirational principles but machine-checkable conditions that determine whether a proposal passed or failed. Every mechanism in this spec derives from the decision-rights assignments in c9-decision-rights-matrix; this spec translates those rights into exact thresholds and procedures. Changing any threshold requires a parameter-update proposal except where noted; changing the quorum or approval-threshold structure itself requires a contract-change proposal.

1. Quorum Rules

Quorum is the minimum participation threshold that must be met for a vote to be valid. It is separate from the approval threshold (what fraction of participating votes must be "yes" to pass). A vote can clear quorum and still fail approval; a vote that does not clear quorum is void regardless of the approval ratio.

1a. Quorum Definition

Quorum is measured as the fraction of eligible voting weight that participates (casts a vote or explicitly abstains) during the voting window.

$$\text{quorum_met} = (\text{votes_cast} + \text{abstentions}) / \text{total_eligible_weight} \geq \text{quorum_threshold}$$

"Total eligible weight" is the governance-token supply eligible to vote on the specific decision class at the moment the voting period opens. Tokens locked in active proposals or under dispute are excluded from the denominator until resolved.

1b. Quorum Thresholds by Decision Class

Decision Class	Quorum Threshold	Notes
treasury-allocation	20% of eligible weight	Low threshold to prevent gridlock on operational decisions
contract-change	35% of eligible weight	Higher participation required given meta-governance stakes
working-group-charter	15% of eligible weight	Minimal; working-group scope is contained
membership-change	30% of eligible weight	Membership changes affect all participants
parameter-update	35% of eligible weight	Changes to governance parameters must reflect broad engagement

Decision Class	Quorum Threshold	Notes
retroactive-reward	20% of eligible weight (excluding nominee)	Nominee's weight excluded from both numerator and denominator
platform-partnership	20% of eligible weight	Board gate is the primary control; token vote is ratification
emergency-ratification	Steward Council majority (not token-weighted)	Emergency measure; full token vote follows for any expenditure exceeding \$5,000 (illustrative)

1c. Quorum Failure

If quorum is not met by the close of the voting period, the proposal fails with outcome quorum-failed. The proposal may be resubmitted in the next cycle without modification; a resubmitted proposal restarts the review and voting period clock. Quorum failure is logged in the C11 provenance record with outcome: quorum-failed — it is a governance outcome, not an error.

2. Approval Thresholds

The approval threshold determines what fraction of participating votes (those cast, not including abstentions) must be "yes" for the proposal to pass.

```
approved = yes_votes / (yes_votes + no_votes) >= approval_threshold
```

Abstentions count toward quorum but do not count in the approval ratio. A voter who abstains is participating (counts for quorum) but is not expressing a directional preference (does not affect the yes/no ratio).

Decision Class	Approval Threshold	Notes
treasury-allocation	> 50% (simple majority)	Standard operational decision
contract-change	≥ 67% (supermajority)	Meta-governance; high bar intentional
working-group-charter	> 50%	Simple majority
membership-change	≥ 67%	Supermajority; changes affect collective
parameter-update	≥ 67%	Governance-parameter changes require broad consensus
retroactive-reward	> 50% (excluding nominee weight)	Nominee excluded from denominator and numerator
platform-partnership	> 50% for token ratification (Board gate separate)	Two-gate structure; both must pass
emergency-ratification	Steward Council majority	Immediate; full token vote follows for large amounts

2a. Veto Exercise

A veto by the Vetoer (named in c9-decision-rights-matrix) overrides a passed vote if exercised within the veto window. Veto is logged as a governance-vote event with outcome: vetoed in the C11 provenance record. After a veto, the proposer may submit a revised proposal; the revised proposal restarts the full review and voting clock. A veto does not expire a proposal's concept — only that specific proposal instance.

3. Voting Mechanics

3a. Voting Weight Model

Default: linear token weighting. One governance token = one vote.

Alternatives (require a parameter-update proposal before use):

- Quadratic voting: vote weight = $\sqrt{\text{tokens committed to that vote}}$. Reduces concentration of influence; requires token lockup per vote. Not default.
- Reputation-weighted: vote weight is a function of on-chain contribution history. Requires a defined reputation oracle. Not default.
- Multi-class voting: different token classes have different weights or vetoes. Requires membership-class definition. Not default.

3b. Vote Casting Window

The voting window opens and closes at the timestamps declared in the proposal header. Late votes are not counted. The voting platform must enforce the window; manual overrides of the close timestamp are a governance violation and require a contract-change proposal to permit.

3c. Vote Finality

Once the voting window closes, the tally is final. No corrections or additions may be accepted. Any dispute about vote eligibility (e.g., token transfer during voting) must be raised before the window closes. Post-close disputes are resolved by submitting a new proposal to reverse or modify the outcome.

4. Delegation

Token holders may delegate their voting weight to another participant for a defined scope.

```
delegation_record:  
  delegator: <address or identifier>  
  delegate: <address or identifier>  
  scope: <all | specific_decision_classes: [...]>
```

```
valid_from: <ISO 8601>
valid_until: <ISO 8601 or "until revoked">
registered_at: <ISO 8601; must be before the voting period opens for votes in scope>
```

Delegation rules:

1. A delegation must be registered before the voting period opens for any vote it covers. Retroactive delegation is not permitted.
2. A delegate may not sub-delegate without an explicit new delegation record from the original holder.
3. A delegation may be revoked at any time before the voting period opens. Revocation after the voting period opens takes effect in the next voting cycle.
4. A delegate who holds their own tokens votes their own tokens directly; their delegated weight is additive.
5. A delegate may not split the delegated weight across multiple "yes" and "no" positions — delegation is all-or-nothing per proposal.

5. Working Groups

Working groups are sub-units of the DAO authorized to act within a defined scope and budget by a passed working-group-charter proposal. They are the mechanism for delegating ongoing operational authority without a vote on every action.

5a. Working Group Charter Requirements

A working-group-charter proposal must define:

```
working_group:
  id: <kebab-case, e.g. infra-wg>
  mandate: <one-sentence scope of authority>
  lead: <role>
  members: <list of roles; minimum 2>
  budget_ceiling: <currency amount per period from c9-resource-allocation-framework>
  budget_period: <quarterly | annual>
  authority_level: <operational | advisory> # operational = binding execution; advisory =
recommendations only
  renewal_required: <yes | no; if yes, frequency>
  reporting_cadence: <frequency of public reporting to full DAO>
  dissolution_trigger: <condition under which the working group is automatically dissolved>
```

5b. Working Group Decision Authority

A working group with authority_level: operational may take actions within its mandate and budget without a separate DAO vote, provided:

1. Each action falls within the mandate scope.
2. The cumulative spend does not exceed the budget_ceiling for the period.
3. The action does not cross an irreversible-impact boundary defined in c9-governance-purpose-charter §3.

4. The action is reported to the full DAO within the stated reporting_cadence.

Actions that exceed any of these bounds revert to the full treasury-allocation proposal process.

6. Emergency Powers

Emergency powers allow the Accountable Steward to act before a vote when an immediate threat exists. They are deliberately narrow and subject to mandatory retroactive review.

6a. Trigger Conditions

Emergency powers may be invoked only when:

- Immediate threat to physical property, persons, or data at the governed site or platform.
- A regulatory deadline will be irreversibly missed within the window required for a standard vote.
- A critical infrastructure failure requires immediate expenditure to prevent larger loss.

"We could have voted but it was inconvenient" is not a trigger condition. The Accountable Steward invoking emergency powers must document the trigger condition at the time of action, not in retrospect.

6b. Emergency Action Protocol

1. Accountable Steward acts immediately to address the threat.
2. Within 24 hours, the Steward submits an emergency-ratification proposal documenting: what was done, why, what evidence supports the trigger, and what the outcome was.
3. The Steward Council votes on ratification within 24 hours of submission.
4. If ratified: a C11 provenance record is emitted with decision_class: emergency-ratification, outcome: passed. The action is retroactively authorized.
5. If not ratified: the action stands (it cannot be undone if irreversible), but the Accountable Steward is subject to accountability review and the DAO may seek remediation through a new proposal.

6c. Emergency Spending Cap

Emergency spending without prior vote is capped at 3% of the treasury balance at the time of the action. Amounts above this cap must have Steward Council verbal approval before action and formal ratification within 24 hours.

7. Governance Review Cadence

The full governance system is reviewed on a defined schedule. These are not optional social events; they are the mechanism by which the DAO detects drift in governance health.

Review Type	Frequency	Scope	Output
Treasury health report	Monthly	Reserve ratio, unallocated %, overdue milestones	Published dashboard
Proposal pipeline review	Monthly	Open proposals, stale proposals (> 30 days in review), quorum-fail rate	Steward Council action log
Governance parameter review	Annually	Quorum thresholds, approval thresholds, tranche ceilings	parameter-update proposal if changes needed
Charter and rights matrix review	Annually (or on trigger)	Decision-class coverage, exclusion list currency, meta-governance rule	contract-change proposal if changes needed
Working group performance review	Per working-group period	Mandate delivery, budget utilization, reporting compliance	Renewal or dissolution recommendation

8. Worked Example — PP DAO Quorum and Vote Tally

Proposal: pp-dao-prop-2026-003 — AI inference hardware refresh (illustrative)

Decision class: treasury-allocation

Quorum threshold: 20% of eligible weight

Approval threshold: > 50%

Metric	Value
Total eligible weight (governance tokens eligible at voting open)	1,000,000 tokens (illustrative)
Votes cast ("yes" + "no")	218,000 tokens
Abstentions	12,000 tokens
Total participating	230,000 tokens
Quorum check	$230,000 / 1,000,000 = 23\% \geq 20\%$ — quorum met
Yes votes	168,000 tokens
No votes	50,000 tokens
Approval ratio	$168,000 / (168,000 + 50,000) = 77\% > 50\%$ — approved
Veto window	48 hours; Founding Steward Council passed with no veto exercised
Outcome	passed
C11 record trigger	c9-execution-accountability emits the C11 record before Treasurer executes M1 disbursement

9. Failure Modes in Governance Mechanisms

Failure Mode	Signal	Correct Behavior
Vote closed late by manual override	Tally timestamp differs from declared close	Void the vote; resubmit with correct timing; log as governance violation
Delegation not registered before window	Delegate casts vote on behalf of delegator without pre-registration	Disqualify delegated votes; re-tally; notify affected parties
Quorum denominator includes locked tokens	Quorum met only because locked tokens were excluded post-hoc	Re-tally with correct denominator; escalate if outcome changes
Emergency powers invoked for convenience	No documented immediate threat at time of action	Ratification fails; accountability review; remediation proposal
Working group exceeds mandate	Action outside defined mandate scope	Action void; working-group lead accountable; contract-change or new WG charter required

10. Cross-Reference Summary

Artifact	Relationship
c9-decision-rights-matrix	Per-class quorum and approval thresholds derive from the rights matrix rows
c9-resource-allocation-framework	Working-group budgets and emergency spending cap reference tranche rules
c9-proposal-design-template	Review period minimums in c9-proposal-design-template §8 must match this spec
c9-execution-accountability	C11 emitter; reads quorum and approval outcomes to determine outcome field value

Usage Notes

Set quorum thresholds conservatively at launch — a DAO with a thin token distribution cannot meet high quorum targets without coordinated effort. The thresholds in §1b are starting recommendations; use a parameter-update proposal to tune them based on observed participation rates after the first two quarters. Any change to the approval or quorum threshold structure (not just the numeric values but how the ratio is calculated) is a contract-change-class change, not a parameter-update.