

THE GOVERNANCE MEMORY SYSTEM

AI-AUGMENTED DECISION SUPPORT INFRASTRUCTURE

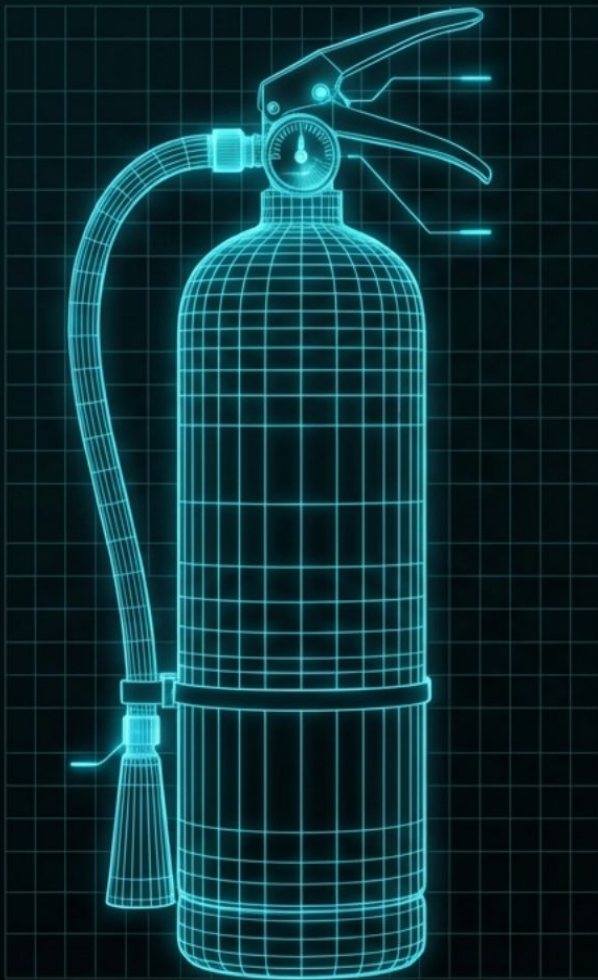


Governance is a Fire Extinguisher

“Governance is like a fire extinguisher: Ignored until a crisis erupts. Imagine funding a fire department, then asking if it was worth it only after the building has burned down.”

This analogy frames governance not as a process to be optimized, but as critical infrastructure that prevents catastrophic failure. Most DAOs treat governance as a box-ticking exercise (e.g., quorum) while ignoring systemic stressors like delegate burnout or latent power concentration.

This presentation introduces the Governance Memory System (GMS), a form of preventative governance designed to build institutional resilience **before** a crisis ignites.



The Core Problem: Governance Amnesia

Decentralized systems suffer from institutional memory failure. DAOs and protocols repeatedly debate the same issues, pass proposals without tracking outcomes, and lose critical context as contributors rotate. The result is Governance Amnesia: systems that appear functional while gradually losing their capacity to learn.



Procedural Fatigue:

Engagement declines as complexity increases.



Informal Power Concentration:

Influence flows through off-chain channels, invisible to on-chain metrics.



Legitimacy Fractures:

Trust erodes long before quantitative metrics deteriorate.



Redundant Decision-Making:

The same problems, conflicts, and frictions reappear in cycles.

THE HUMAN COST OF AMNESIA: VOICES FROM THE FIELD

Surface metrics obscure deeper dysfunctions like procedural fatigue and legitimacy fractures.
The problem isn't theoretical; it's a lived experience.



On Losing Knowledge

Projects often repeat the same problems... spin up another working group when there has already been one in the past.

— Prof. Ellie Rennie



On Shallow Accountability

Most DAO governance... stops at 'did the vote pass?'

— Daniel Hwang



On Uninformed Voting

Validators often blind-vote with no commentary... Governance should be led by those who move the protocol forward.

— Park



On Hidden Power

You go into a Discord and feel like, unless you are a top-tier engineer, you should not speak... People start to use governance to push an agenda...

— Prof. Ellie Rennie

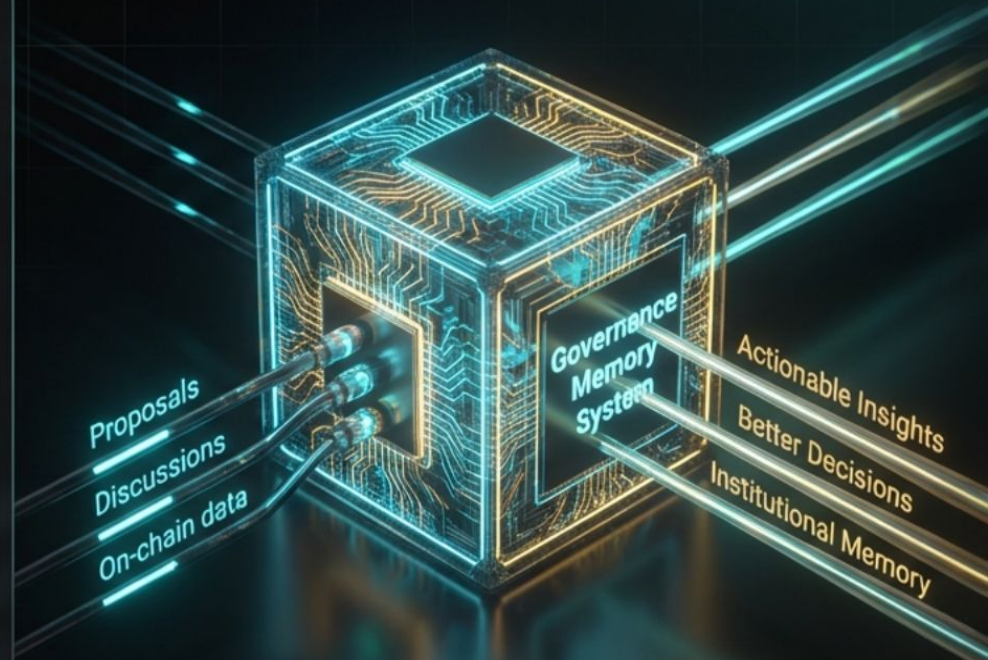
The Solution: A Governance Memory System (GMS)

GMS is a five-layer framework designed to transform governance from a series of isolated votes into a system of cumulative institutional knowledge.

Methodology:

- Document decision context and rationale.
- Analyze outcomes and their unintended consequences.
- Surface patterns from past governance decisions.
- Map the informal power dynamics that shape outcomes.
- Strengthen adaptive capacity and institutional resilience.

It is a system for preventative governance health.



The Five Layers of Governance Memory

GMS is composed of five interlocking layers that provide a comprehensive view of governance health and history.

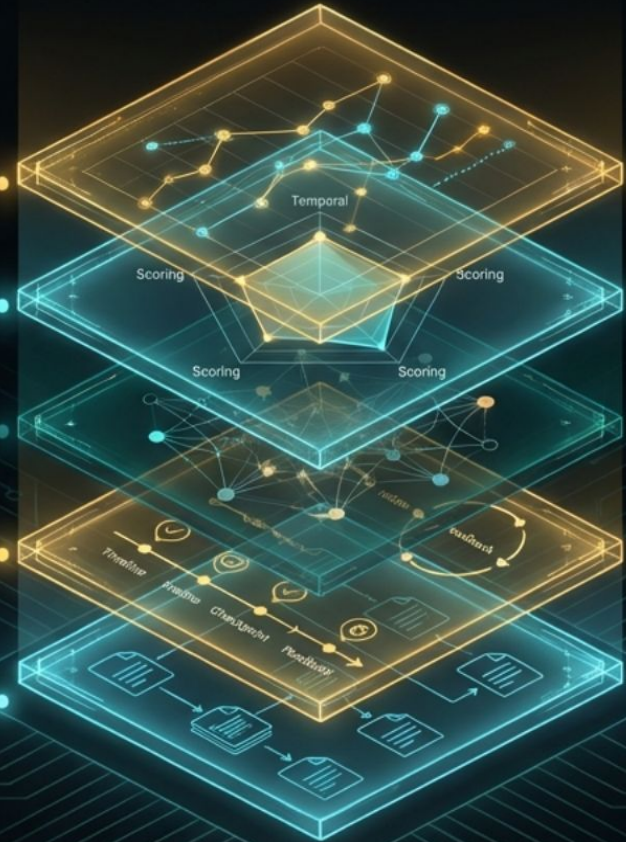
5. **Recurring Themes & Frictions (RTF):** Longitudinal synthesis of persistent governance tensions.

4. **Governance Health Index (GHI):** A qualitative diagnostic scoring system across five dimensions.

3. **Informal Power Mapping (IPM):** Analytics surfacing hidden influence.

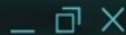
2. **Outcome Review Anchors (ORA):** Scheduled checkpoints evaluating whether decisions achieved intended results.

1. **Proposal Lifecycle Metadata (PLM):** Structured records of authorship, rationale, discussion, and context.



Layer 1: Proposal Lifecycle Metadata (PLM)

Terminal



The Problem: Proposals are treated as standalone events. Once a vote concludes, critical context is lost. There is no persistent trace of authorship, intent, evolution, or precedent.

The Solution: PLM embeds structured metadata into every stage of a proposal's journey, transforming one-off votes into a cumulative, queryable governance memory.



Author Credibility: Role, past proposals, off-chain reputation.



Rationale: The "Why" —problem statement, referenced issues.



Thematic Tags: Technical, Financial, Meta-Governance.



Evolution: Edit history, amendments, voting outcomes.



Discussion Venues: Links to forum threads, Discord, X.



Implementation Status: "Fully Implemented", "Partially Implemented", "Abandoned".

ADVANCED DIAGNOSTICS: SURFACING IMPACT, INFLUENCE, AND SYSTEM HEALTH

Layer 2: Outcome Review Anchors (ORA) - The Feedback Loop

Evaluates if a decision achieved its intended result.

Key Question: Did the proposal solve the targeted problem? Did it introduce new risks?

Layer 3: Informal Power Mapping (IPM) - The Influence Ledger

Uncovers hidden influence dynamics beyond on-chain voting.

Key Question: Who **really** calls the shots? Are decisions shaped by technical gatekeeping or private collusion?

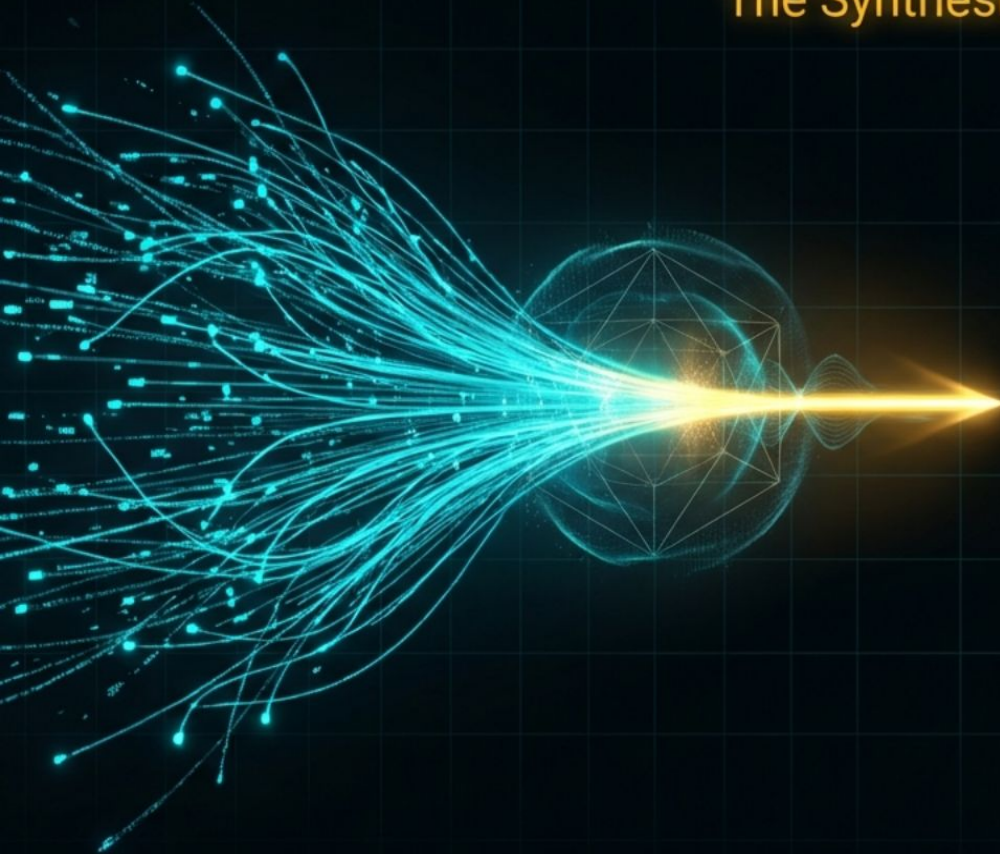
Layer 4: Governance Health Index (GHI) - The Systemic Pulse Check

Assesses vitality across Inclusiveness, Transparency, Feedback, Accountability, and Coordination.

Key Question: Is participation meaningful or performative? Are we at risk of contributor burnout?

Layer 5: Recurring Themes & Frictions (RTF)

The Synthesis Engine



Function:

The RTF layer zooms out to identify systemic governance patterns by analyzing data from all other layers. It transforms governance history into actionable, predictive insight.

Critical Questions:

- What issues keep coming up, cycle after cycle?
- Why haven't these frictions been resolved?
- Are old conflicts being reframed with new narratives?

How It Works:

1. **Track Proposal Recurrence:** Clusters similar proposals to analyze success/failure rates.
2. **Trace Fatigue:** Identifies patterns of disengagement.
3. **Detect Unresolved Frictions:** Surfaces persistent resentments.
4. **Archive Systemic Flashpoints:** Logs high-conflict proposals as case studies.

Key Insight: RTF helps a protocol learn from its friction instead of just repeating it.

GMS in Action: Case File #01 (Juno Protocol)



Juno

Presenting Condition: Proposal 16 (confiscating ~\$130M from a suspected sybil attacker) passed narrowly, leading to internal conflict, developer exits, and a crisis of legitimacy.

GMS Diagnostic Analysis

- **PLM Failure:** Authorship was misattributed to "Core 1," creating a false sense of consensus.
- **ORA Absence:** No feedback loops; downstream consequences were not anticipated.
- **IPM Insights:** Decision driven by vocal influencers on Twitter/private chats, not evidence-based process.
- **RTF Blind Spot:** Lack of cross-protocol learning (ignored Osmosis's earlier airdrop precedent).

Diagnosis: Panic-based decision-making in a system with no constitutional anchors and no institutional memory.



Gitcoin

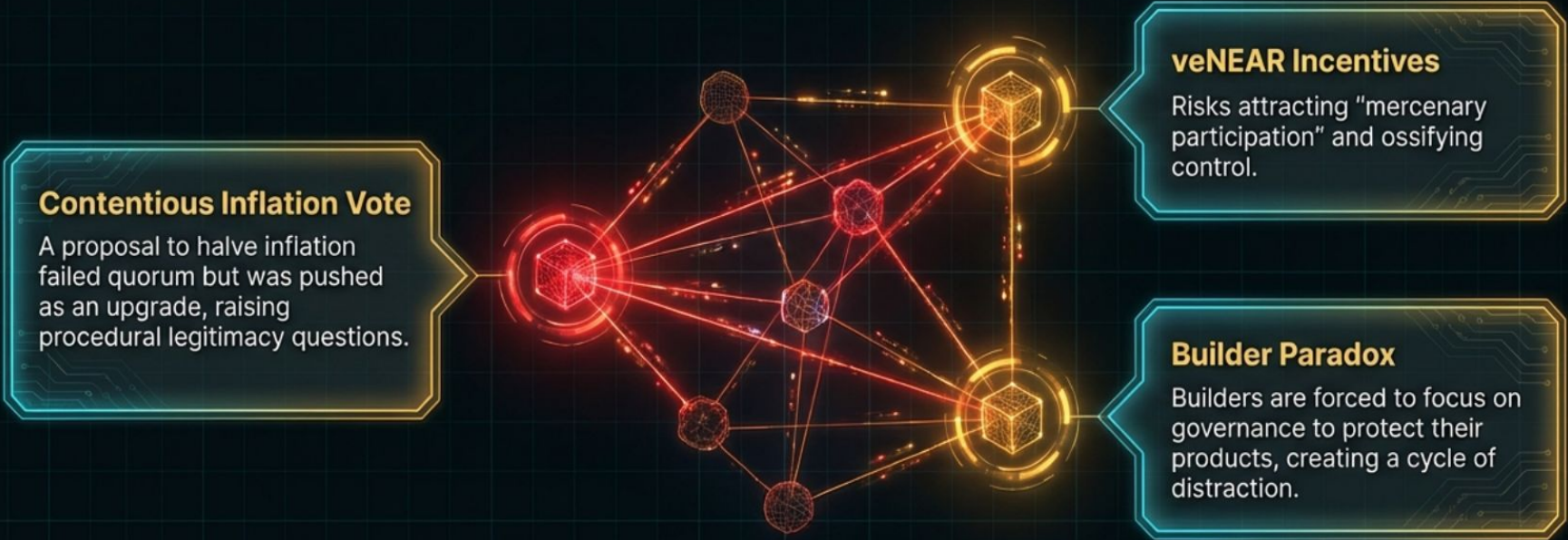
Presenting Condition: A slow decline from optimistic hyper-structure to 'lights-on' mode. Delegates tuned out, contributors burned out.

Intervention	Failure	GMS Fix
1. Steward Delegation	Concentrated power, narrowed participation.	PLM: Track role context and reputational accountability.
2. Steward Health Cards	Measured surface inputs (voting frequency) not quality.	ORA: Focus on impact outcomes.
3. Complex Frameworks	Over-architected without assessing capacity.	GHI: Score readiness, flagging low attention as risk.

Quote: "The system did not fail because it broke—it failed because people stopped caring."
— Rena O'Brien.

Live Application: Diagnosing NEAR's Governance Crossroads

NEAR is navigating a complex transition post-NDC collapse. Governance is under stress from multiple angles.



GMS in Real-Time: This is a classic example of what GMS makes legible: a web of interconnected issues involving procedural ambiguity (GHI), informal power (IPM), and institutional trauma (RTF).

From Theory to Practice: Piloting GMS in the NEAR Ecosystem

The Proposal

A formal proposal to implement GMS was submitted to the NEAR forum. It directly aligns with the House of Stake's stated Mission, Vision & Values, specifically:

- #5: **Transparency & Accountability**
- #8: **Data-Informed Decision-Making**
- #9: **Iteration, Adaptation & Feedback Loops.**

Community Response

The proposal received positive community engagement and was tagged for product-strategy consideration.



Outputs & Impact: Creating Public Goods for Governance

This work is designed to produce open, reusable assets for the entire governance community.

Key Deliverables



Structured Dataset: NEAR governance proposals using the GMS/PLM schema.



Open-Source Methodology: Tooling for replicating AI-based governance analysis.



Research Report: Assessing the reliability of AI-extracted governance health signals.

Broader Ecosystem Impact

- **Enables evidence-informed governance:** Tooling applicable to Gitcoin, Hypercerts, Octant, etc.
- **Lowers the barrier to institutional memory:** Demonstrates LLMs can reliably surface patterns.
- **Foundation for governance agents:** Critical step toward AI-augmented decision support.

The Frontier: Current Limitations & Future Research



Current Limitations

- **Governance-Attack Resilience:** GMS currently lacks predictive models for governance capture attempts.
- **Metric Subjectivity:** GHI and IPM rely on interpretive metrics that need calibration across different ecosystems.
- **Incentive Gaps:** The framework lacks embedded incentives to reward the labor of maintaining governance memory.
- **Attention Economy Modeling:** GMS tracks participation but does not yet model attention as a finite resource.



Future Research Directions

- **Anti-Capture Analytics:** Integrate quantifiable indicators like validator voting velocity and wallet correlation clusters.
- **Governance Attention Index (GAI):** Develop a model that measures cognitive load (e.g., thread length vs. read-through rates).
- **Memory-Driven Incentive Design:** Research mechanisms to reward contributors for outcome reviews, metadata tagging, and power-map audits.



An Invitation to Build the Governance Commons

The Governance Memory System is more than a framework; it's a proposal to build shared, open-source infrastructure for institutional learning in decentralized systems. This research aims to create a public good: a **validated methodology** and a set of tools that can help any DAO or protocol move from governance amnesia to **adaptive, evidence-informed decision-making**. We invite you to collaborate with us in building the **next generation of governance infrastructure**.



RESEARCH