Gravity: The Sovereign OS Technical White Paper

Executive Summary

Gravity is the control plane of the Sovereign OS. It provides deterministic routing, governed intake, and data-dignity controls for institutional WhatsApp communities.

The architecture was designed to satisfy fiduciary requirements where signal integrity, access traceability, and deletion guarantees are non-negotiable.

Core Principles

1. Native channel continuity: residents stay in WhatsApp while governance is enforced server-side.
2. Deterministic command routing: Level 0 command interception executes before AI triage.
3. Data dignity by design: ghost protocol and incineration controls remove residual identity state.
4. Audit-first operations: every intake and state transition can be evidenced.

Control Surface

- Edge Gate: `whatsappWebhookV2` receives Meta webhook events.
- Level 0 Interceptor: direct handling of sovereign control commands before NLU.
- Steward Layer: structured escalation, lead intake, and command acknowledgment.
- Ledger Layer: Firestore-backed state and immutable operational traces.

Routing Integrity

The Sovereign OS does not rely on intent classification for critical control commands. A dedicated command lane executes first and confirms state transitions directly to the resident.

This pattern eliminates command drift and prevents accidental classifier overrides.

Trust Telemetry

Public telemetry must never be synthetic in fiduciary contexts. Until production pilot metrics are live, the external trust surface should expose only real status primitives:

- System Status
- Active Estate Nodes
- Last Triage Timestamp

No fabricated counters are permitted.

Institutional Use Cases

- Heritage estates requiring evidence-based governance
- Retirement and silver-economy communities with high sensitivity communications
- Corporate community pilots requiring compliance-ready operational controls

Conclusion

Gravity is a production governance substrate, not a social media layer. Its purpose is to preserve context, enforce trust boundaries, and provide an auditable resident command path for sovereign communities.