RUGAZE_

PRODUCT ROADMAP · V1.0

Dependency-sequenced, not calendar-scheduled.

Five completed phases, one named next direction, and a clearly separated long-term vision. No dates are promised anywhere in this document.

Document	Version	Audited state	Source of truth
RUGAZE_ROADMAP.pdf	1.0	HEAD 5555ec1	docs/MILESTONE_REGISTRY.md

HOW TO READ THIS ROADMAP

Dependencies, not dates

RUGAZE does not publish target dates because none are credible yet at this stage. Every phase below is instead ordered by what it structurally depends on — Phase 3 could not exist before Phase 2's evidence layer did, for example. Status is reported using the same vocabulary as the project's own internal milestone registry, so this document and the underlying engineering records can never quietly drift apart.

● COMPLETED ● COMPLETED — MOST RECENT PHASE ● NEXT (UNSCOPED) ● LONG-TERM VISION

"Most recent phase" marks the latest completed work, not work in progress — every phase through Phase 4 is finished, not active.

Phase 0 ● COMPLETED

↓ enables

Phase 1 — Static Engine ● COMPLETED

↓ enables

Phase 2 — Stateful Engine ● CORE COMPLETED

↓ enables

Phase 3 — Product Surface ● COMPLETED

↓ enables

Phase 4 — Foundation Hardening ● MOST RECENT PHASE

↓ required before

Phase 5 — Pre-Signature Protection ● NEXT DIRECTION, NOT YET SCOPED

↓ unlocks (exploratory)

Long-Term Vision ● EXPLORATORY

PHASE 0

Foundation Research & Specification

● COMPLETED

Objective: Establish the architectural discipline everything since has been built against, before writing product code.

Major deliverables

- Threat model — the specific attack patterns RUGAZE is designed to surface evidence for
- Security architecture — the ten-layer pipeline (A–J) and the fail-closed discipline
- Attack taxonomy — the rule-ID system used to track individual security findings
- Milestone 1 specification — the exact scope of the first real implementation slice

Dependency: none — this is the starting point.

Source: `docs/PHASE_0_SUMMARY.md`, `docs/THREAT_MODEL.md`, `docs/SECURITY_ARCHITECTURE.md`, `docs/ATTACK_TAXONOMY.md`.

PHASE 1

Static Engine

● COMPLETED · DEPLOYED

Objective: Prove the deterministic decode → rule → risk pipeline end-to-end, with zero network dependency — the smallest real, non-toy vertical slice of the core product.

Major deliverables

- `analyzeTransactionStatic()` — legacy + v0 decode, fully offline
- 5 recognized programs: System, SPL Token, Compute Budget, Associated Token Account, PumpSwap
- 5 deterministic Family-A rules (mint/freeze authority, account ownership, unlimited approvals)
- A frozen, honestly-reported real-corpus result: 6/21 SAFE, 15/21 UNKNOWN, zero findings observed to date

User/product impact: the deterministic core every later layer builds on — not itself the product mission. This phase deliberately does not simulate, read state, or call any RPC.

Dependency: Phase 0.

Evidence: `docs/M1_FREEZE.md` (frozen release record), `evidence/RUGAZE_V1/`.

PHASE 2

Stateful Engine

● CORE COMPLETED

Objective: Add real on-chain evidence — CPI interpretation, confirmed balance deltas, authority-transition evidence, and Token-2022 extension detection.

Major deliverables

- Solana RPC/state access layer (`m2/chain`) — standard JSON-RPC, provider-agnostic
- CPI / inner-instruction interpretation from confirmed execution evidence
- Real SOL + SPL token balance deltas, computed from confirmed pre/post balances
- Authority/ownership/delegate-transition evidence from decoded instructions
- Token-2022 extension detection: `PermanentDelegate`, `TransferHook`, `MintCloseAuthority` (A-06/07/08)

> IMPORTANT NUANCE — NOT EVERYTHING IN THIS PHASE IS DEPLOYED
>
> **Token-2022 `TransferFeeConfig` (A-09)** is implemented and committed to a local commit, but has **not been pushed or deployed**. It is marked separately below rather than folded into this phase's "completed" status.

ITEM	STATUS
CPI, balances, authority events, A-06/07/08	● DEPLOYED
A-09 (TransferFeeConfig)	● IMPLEMENTED · NOT DEPLOYED

Dependency: Phase 1.

Evidence: `evidence/TOKEN_2022_EXTENSIONS/`, `evidence/TOKEN_2022_TRANSFER_FEES/` (committed, not deployed), `docs/MILESTONE_REGISTRY.md` A-09 row.

PHASE 3

Product Surface

● COMPLETED · DEPLOYED

Objective: Make the engine's output legible to a non-engineer and reachable outside the repository — the first externally usable version of RUGAZE.

Major deliverables

- `TransactionUnderstanding` — plain-language translation layer over existing evidence
- Public Cloudflare Worker API: `GET /health`, `POST /signup`, `POST /analyze`
- Public landing page with real, working pricing (Free + Developer tiers)

User/product impact: before this phase, RUGAZE existed only as a local CLI. This is the point a real external user could sign up and get a real answer.

`Dependency: Phase 2.`

Evidence: `evidence/B1B_TRANSACTION_UNDERSTANDING/`, `evidence/B1C_WORKER_API_DEPLOYMENT/`, `evidence/L1_LANDING_PAGE_DEPLOYMENT/`.

PHASE 4

Foundation Hardening

● COMPLETED — MOST RECENT PHASE

Objective: Make the now-public product surface trustworthy to keep running — signup integrity, contract regression protection, RPC reliability.

Major deliverables

- F-1: duplicate-signup prevention (normalized-email match, case-insensitive)
- F-1: public API response-shape regression lock (contract tests)
- RPC provider rotation to Helius — zero source code changed, confirmed via `git diff --stat`

> EXPLICITLY NOT A CLAIM MADE BY THIS PHASE
>
> This work does **not** create multi-provider failover. The architecture still resolves to exactly one configured RPC endpoint at a time; automatic fallback to a second provider does not exist yet.

Dependency: Phase 3 — nothing to harden before there's a public surface.

Evidence: `evidence/F1_SIGNUP_INTEGRITY_PUBLIC_CONTRACT/`, commit `4755e897` (implementation), `5555ec1` (registry + evidence, pushed).

PHASE 5

Pre-Signature Protection

● NEXT DIRECTION · NOT YET SCOPED · NOT YET APPROVED

Objective: move from "*here is what happened*" to "*here is what may happen before you sign.*" This is RUGAZE's documented core product mission, and the one capability every deployed phase so far still lacks.

What is actually true today about this phase

- Pre-signature protection is the major, repeatedly-documented product direction — not an invented one.
- A simulation engine (`SimulationCapable`, `m2/simulation/`) already exists and is tested at the code layer.
- It is **not** wired into the public product today — confirmed by direct source search: zero call sites in `worker/` or `cli/server.ts`.
- The product/API input contract is **not yet defined** — today's API takes a signature of something already on-chain; pre-sign analysis needs an unsigned transaction from the caller, a materially different integration point.
- A read-only audit and blueprint is required before any implementation begins, mirroring the process already used for the Transaction Understanding layer.
- **No release date is promised.**

> THIS IS DELIBERATELY NOT SHOWN AS AN ACTIVE IMPLEMENTATION MILESTONE
>
> No formally approved next milestone exists in the project's governance records as of this document. This phase names a direction the project has repeatedly pointed at, not a commitment with a scope.

Dependency: Phase 2 (the simulation engine already exists) + a new audit/blueprint step.

Source: `docs/MILESTONE_REGISTRY.md:87` ("a distinct, unstarted, unaudited future candidate"), this project's own roadmap audit.

LONG-TERM VISION

Exploratory — no committed scope

None of the items below have a blueprint, an audit, or an approval. They are directional only, carried forward from the project's own early roadmap sketch, and are listed here for transparency about where the team's thinking currently points — not as a promise.

DEX / aggregator-aware interpretation

IDL-driven decoding for Jupiter, Raydium, Orca and similar, layered on top of the already-correct generic transfer detection.

External reputation / registry integration

Program-identity provenance and trust-tier labeling, explicitly separated from RUGAZE's own deterministic findings.

Public SDK

A stable, versioned client library for wallet and dApp integrators — RUGAZE's stated primary near-term customer segment.

Wallet / dApp design-partner integrations

Real-world integration of the analysis engine into an existing signing flow.

Batch / portfolio scanning

Multi-transaction analysis beyond the current single-signature model.

Security teams, exchanges, custodians

A less latency-sensitive, more completeness-sensitive customer segment than today's primary focus.

Source: `docs/ROADMAP.md:135–141` (itself an explicitly stale "Phase 0 draft," carried forward here only as directional context), `docs/PRD.md:15–20`.

EVIDENCE STANDARD

How completed work is expected to be shown

Every major completed milestone in this roadmap should be supported by evidence an external reader can inspect — not internal terminal output alone. Where possible, completed work is demonstrated through:

- Live production interfaces — a URL a reader can visit themselves
- Real API responses — captured from the live system, not constructed
- Public blockchain explorers — independent of RUGAZE's own infrastructure
- Public transaction signatures — independently verifiable on-chain
- Public commits — where the repository hosting them is actually public
- Reproducible workflows — a reader can run the same call and get a comparable result

> THIS IS A FORWARD-LOOKING STANDARD, NOT A RETROACTIVE CLAIM
>
> Not every phase in this roadmap currently has a public URL or public commit attached to it — several were verified internally, before RUGAZE had any public surface at all, and this document does not pretend otherwise. This is the standard the project holds itself to going forward, applied fully starting with Phase 3 (the first phase with a public surface to verify against) and Phase 4.

The production API is live today. Its permanent public address is not yet published in this revision — see the companion RUGAZE Whitepaper's dedicated public-verification section for the real on-chain transaction, explorer links, and the exact API contract.

CLOSING NOTE

What this roadmap deliberately does not do

- It does not promise a date for Phase 5 or anything after it.
- It does not describe the long-term vision items as committed work.
- It does not describe A-09 or the simulation engine as deployed capabilities.
- It does not claim a formally approved next milestone exists where one does not.

This document will be revised as phases actually complete, using the same authoritative source — `docs/MILESTONE_REGISTRY.md` — that produced it.

RUGAZE. Evidence-based Solana transaction analysis.