Micro-Autopsy Template & Framework — The Fix Loop

A repeatable, auditable template for every Micro-Autopsy (500–700 words). Use this to brief, research, draft, review, and package one micro in under a day. Times are Asia/Kolkata.

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0) Purpose & Outcomes

Purpose: Deliver a fast, reproducible postmortem with one actionable fix and a small asset. **Outcomes:** - Readers can apply the fix in < 60 minutes. - We ship one diagram and a mini asset (checklist/config/script). - We capture evidence and a single **Metric to Watch** that proves the fix.

Constraints: 500–700 words. Fix appears by paragraph 3. 1 diagram per micro. ≥2 primary sources + ≥1 internal artifact.

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1) Anatomy & Word Budget (target)

1. **Header metadata** (front-matter) – *N/A words*
2. **Hook** (failure + cost) – *20–40 words*
3. **Failure Snapshot** – *60–100 words*
4. **Root Cause (FAILSAFE summary)** – *90–130 words*
5. **Fix (3–7 steps)** – *200–280 words*
6. **Checklist / Asset** – *40–120 words*
7. **Metric to Watch** – *1 line*
8. **References** – *1–4 lines*
9. **CTA** – *1 line*

   Keep total between **500–700**. Move long notes to the evidence folder.

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2) Front-Matter (YAML)

Use on every micro file (Markdown or MDX).

```
---
slug: <kebab-case-slug>
title: "<Specific failure + fix>"
thesis: "One-sentence promise of the fix"
word_target: 600
parent_anchor_slug: <week-anchor-slug>
```

```
  tags: ["Agentic Reliability", "RAG", "LLM Ops", "Automation", "Runtime",
  "Climate Ops"]
  complexity: S|M|L
  asset_path: "asset/<file>"
  metric_to_watch:
    name: <e.g., pass@source>
    target: ">=0.85"
    formula: <how measured>
  sources:
    - "<primary source 1>"
    - "<primary source 2>"
  diagram:
    path: asset/diagrams/<slug>.svg
    alt: "<what this shows>"
  authors:
    researcher: <name>
    writer: <name>
    tech_reviewer: <name>
  ---
```

3) Section-by-Section Template (with prompts)

3.1 Hook (20–40 words)

Template:
<System/Component> failed because <specific cause>, costing <impact>. Here's the minimal fix you can ship today.

Prompt yourself: If the reader stops here, do they know the cost and the fix's promise?

3.2 Failure Snapshot (60–100 words)

Template:
What users/operators saw; the exact symptom; one number (error rate/latency/$$). No theories.

Checklist: time window • scope • severity • single graph/log line (optional) • no blame.

3.3 Root Cause — FAILSAFE (90–130 words)

Bullet the core why using the lens below (2–3 bullets total; be surgical): - **Failure:** exact module/line/signal that broke. - **Assumptions:** the invariant that wasn't true. - **Inputs:** the data/request that triggered it. - **Loops:** cascades (retries, timeouts, rate limits). - **Safeguards:** missing/weak (validation, policies, breakers). - **Experiments:** minimal test that confirmed the diagnosis.

Keep details tight; the Fix section expands remediation.

3.4 Fix (3–7 steps, 200–280 words)

Template: Numbered, imperative steps. Include exact commands/config/diffs. Mark risky steps.

Example step pattern: 1) Add guardrail/check (code/config snippet)
2) Change system behavior (fallback/timeout/retry logic)
3) Validate (how to test locally/CI)
4) Rollout (canary, alerts)
5) Monitor (which dashboards/thresholds)

Rule: Every step must be testable and reversible. Prefer smallest change that works.

3.5 Checklist / Asset (40–120 words)

Template: Short, scannable list or link to a one-pager/config/script. - [ ] <Action 1> - [ ] <Action 2> - [ ] <Action 3>

Asset types: PDF checklist • JSON/YAML config • tiny script • prompt pack.
Naming: `<slug>-asset-v1.0.ext`.

3.6 Metric to Watch (1 line)

Template: *<metric_name>* — target *<value>*; measured as *<formula/window>*.

Example: *pass@source — ≥0.85; #answers citing correct passage / #answers in nightly eval (100 Qs).*

3.7 References (1–4 lines)

Primary sources only (docs/specs/repos/papers) + internal artifact link (evidence folder). Add dates/versions.

3.8 CTA (1 line)

Point to Friday's asset or ask for specific replies ("Reply with your #1 failure in agents using files").

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4) Evidence Bar & Repro

Must have: - Minimal repro (commands/env) or clearly labeled observational case. - One internal artifact saved in `/content/evidence/<slug>/` (logs/screens/diffs). - At least one before→after number.

Evidence pack structure:

```
/content/evidence/<slug>/
   repro.md
   logs/
   screenshots/
   diffs/
   metrics.csv
```

5) Diagram Spec (1 per micro)

Types: sequence • flowchart • architecture • annotated screenshot.
Export: SVG + 1600px PNG • include alt text & caption.
Style: consistent colors/labels; show before→after or failure→fix path.

File: `asset/diagrams/<slug>.svg`

6) Writing Rules (voice & style)

- Fix by paragraph 3. Numbers beat adjectives.
- Short sentences; active voice; delete filler.
- No passive blame; focus on mechanics.
- Use code blocks for commands/configs; annotate briefly.
- Date/version every claim that can drift.

Ban list: "leverage," "robust," "utilize," "game-changer." Replace with specific actions/results.

7) QA Checklist (pre-publish)

- [ ] 500–700 words; headings ordered; one H1
- [ ] Fix clear and testable; 3–7 steps
- [ ] 1 diagram (SVG+PNG) with alt text
- [ ] ≥2 primary sources + ≥1 internal artifact
- [ ] Evidence folder populated; links live
- [ ] Metric to Watch defined with target
- [ ] CTA present; parent anchor linked

- [ ] Proofed on mobile and desktop (web) or email shell (email)

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8) Web vs Email Packaging

Web (blog/MDX): Use full layout with diagram and code blocks. Include JSON-LD `BlogPosting` and canonical URL.
Email (send): Use the simple 600-px, inline-CSS shell (no custom fonts/animations). Keep only Hook → Fail Snapshot → FAILSAFE Summary → Fix (short) → CTA.

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9) Acceptance Criteria

A Micro-Autopsy is accepted when: - It solves one concrete failure with a reproducible fix and a mini asset.
- It includes one diagram and a measurable Metric to Watch.
- It passes TR accuracy review and the QA checklist.

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10) Skeletons (copy/paste)

Markdown Skeleton

```
---
slug: <slug>
title: "<title>"
thesis: "<one-sentence take>"
word_target: 600
parent_anchor_slug: <anchor>
tags: ["Agentic Reliability"]
asset_path: "asset/<file>"
metric_to_watch: { name: pass@source, target: ">=0.85", formula: "correct
cites / total" }
sources:
  - "<primary source 1>"
  - "<primary source 2>"
diagram: { path: asset/diagrams/<slug>.svg, alt: "<alt>" }
---

> **Hook:** <failure + cost>. Here's the minimal fix you can ship today.

## Failure Snapshot
<what was seen, when, how bad>

## Root Cause (FAILSAFE)
- **Failure:** <module/line>
```

```
- **Assumptions:** <violated invariant>
- **Inputs:** <trigger>
- **Loops:** <cascades>
- **Safeguards:** <missing>
- **Experiments:** <test that proved it>

## Fix (3–7 steps)
1. <step>
2. <step>
3. <step>

## Checklist / Asset
- [ ] <action>
- [ ] <action>

## Metric to Watch
*pass@source — ≥0.85; nightly eval (100 Q).*

## References
- <primary 1> (date)
- <primary 2> (date)

## CTA
Reply with <specific question> • Grab Friday's asset →
```

Email-Safe Block (for the send)

```
<!-- 600px table, inline styles only; include Hook, Snapshot, FAILSAFE summary,
short Fix, CTA -->
```

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11) Editing Passes (who does what)

- **Pass 1 (WE):** structure & clarity; fix by para 3.
- **Pass 2 (TR):** correctness; commands run; numbers verified.
- **Pass 3 (WE):** voice; trim to word budget.
- **Pass 4 (DO):** diagram check; links; schedule.

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12) Examples (Week-1 mapping)

- Micro-01: Prompt injection via tools/files → **Asset:** `pretool-filters.yaml`
- Micro-02: RAG chunking → **Asset:** `retrieval-config.json`
- Micro-03: JSON/tool-calling → **Asset:** `json-tooling.schema.json`

- Micro-04: Rate limits & cost → **Asset:** `cache-config.yaml`
- Micro-05: Observability & evals → **Asset:** `trace-event.schema.json`

Each micro contributes a section to the Friday Full-Scale checklist.

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13) Quick Prompts (to speed drafting)

- "State the failure in 12 words without adjectives."
- "Name the violated assumption as a falsifiable statement."
- "Show the smallest diff that fixes it."
- "Which metric proves it's fixed? Write the formula."