Process Observability from Internal Messages

From raw Slack & email to live process state

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Motivation

The problem:

- Process updates are scattered across Slack & email
- Status is implicit, informal, and fragmented
- Leaders ask for updates → teams lose time answering

What we want:

- A live, trustworthy view of process state
- Without changing how people communicate

Core question we want to answer

How strong a signal can we extract purely from messages, end-to-end?

- No integrations
- No custom schemas per team
- No manual labeling upfront

Approach (intentionally simple)

1. Normalize raw messages
2. Extract structured “events” with an LLM
3. Cluster events into process instances
4. Infer current state per instance with an LLM
5. Show everything in a reviewable dashboard

Key principle:

Every inference is backed by evidence.

Each step produces inspectable output.

Strengths

- End-to-end works today
- Inspectable and auditable
- Handles ambiguity honestly
- No upfront process instrumentation
- Human-reviewable by design

Known limitations (by design)

- Mixed topics in long status threads
- Some ambiguity in step inference
- LLM cost not optimized
- No write-back to source systems

What can be optimized

- Deterministic clustering & timestamps
- Process-aware step inference
- Cheaper models or fewer calls
- Partial replacement of LLM steps

Next steps

- Evaluate accuracy on a small real process
- Add lightweight human review loop
- Bring back process definitions as constraints
- Decide scope: assistive tool vs system of record