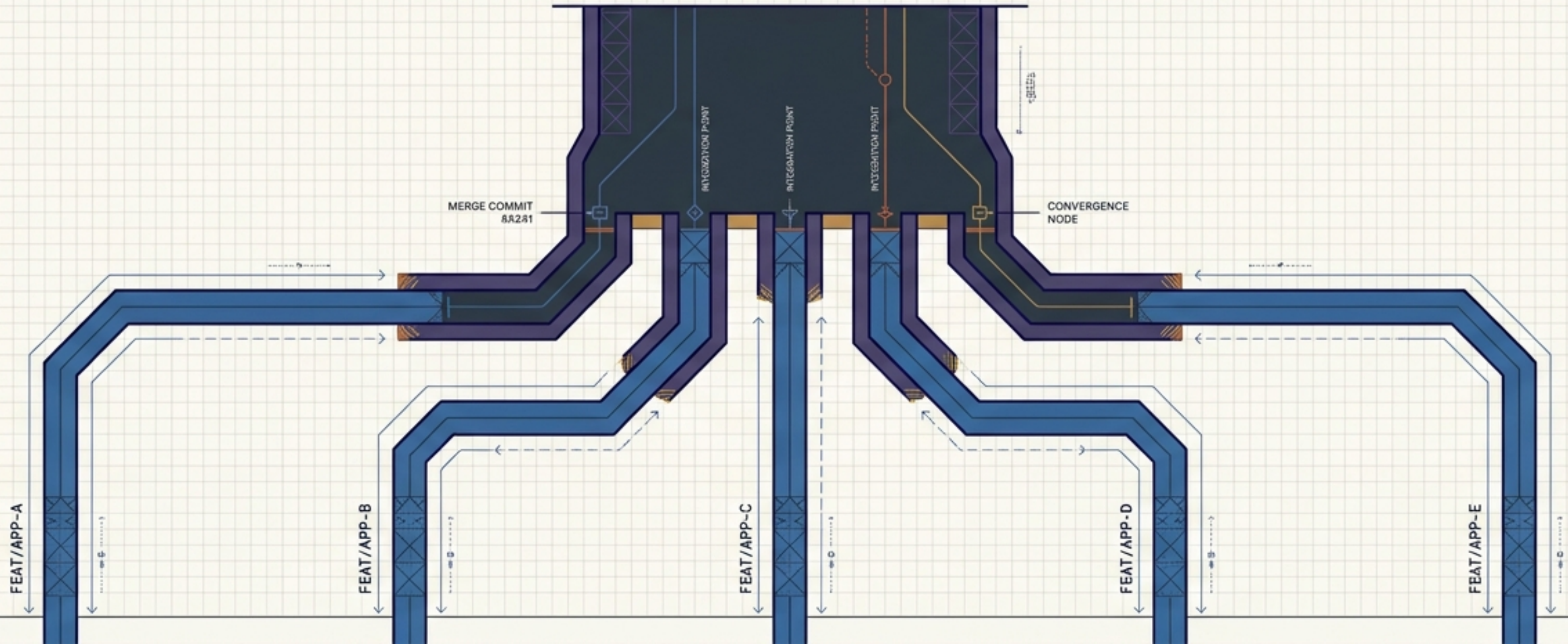


The Architecture of Velocity

From 5 standalone apps to a unified platform in 29 days



ACTIVITY_METRICS

commits: **1,134**
(Average 39/day, Peak 98)

CODEBASE_SCALE

lines_of_code: **~284,000**
(Across 16 shared packages)

API_STRUCTURE

endpoints: **85**
(Includes 19 SSE streaming routes)

DOMAIN_COVERAGE

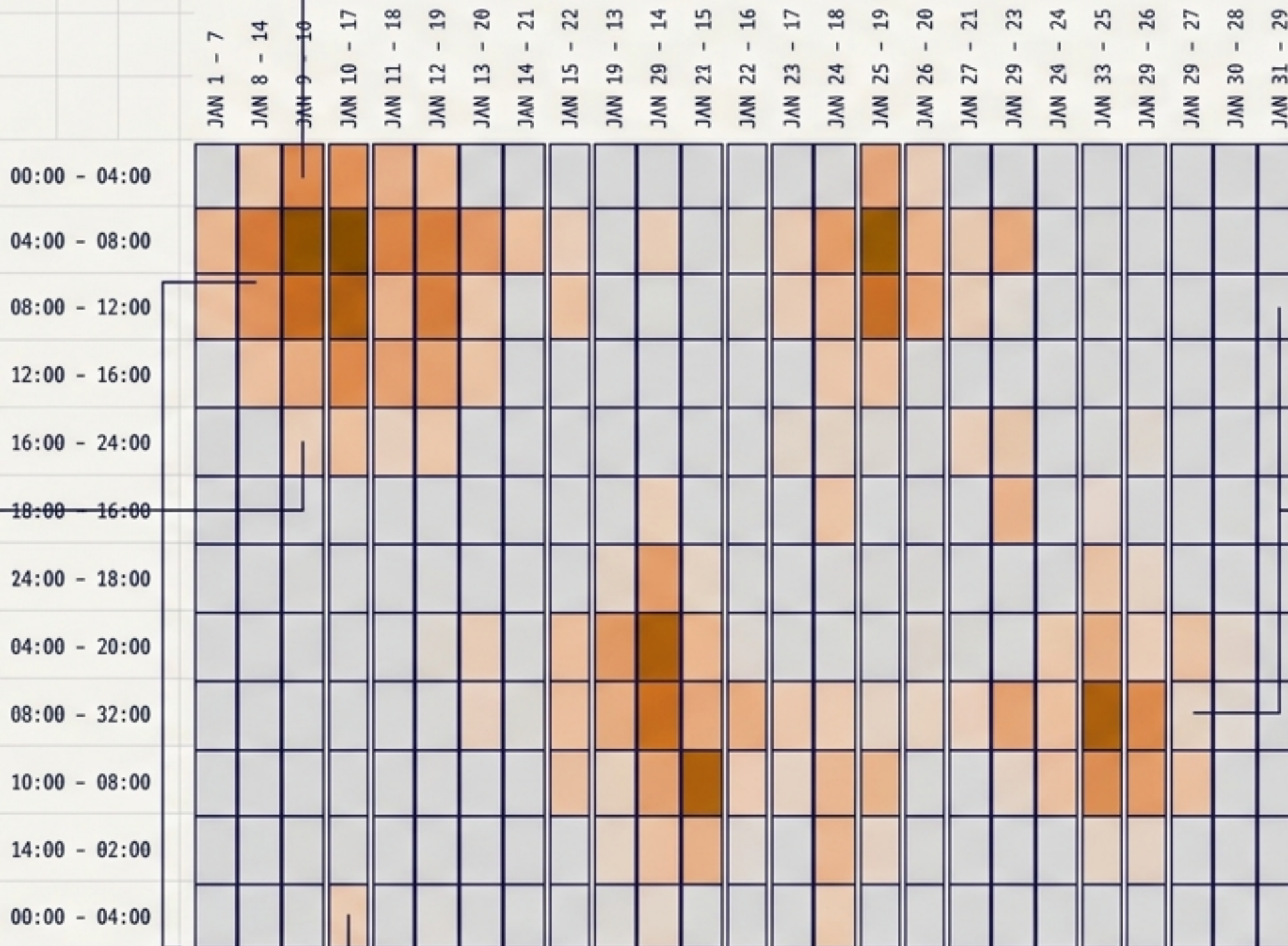
verticals: **9**
(Fully functional product domains)

QUALITY_ASSURANCE

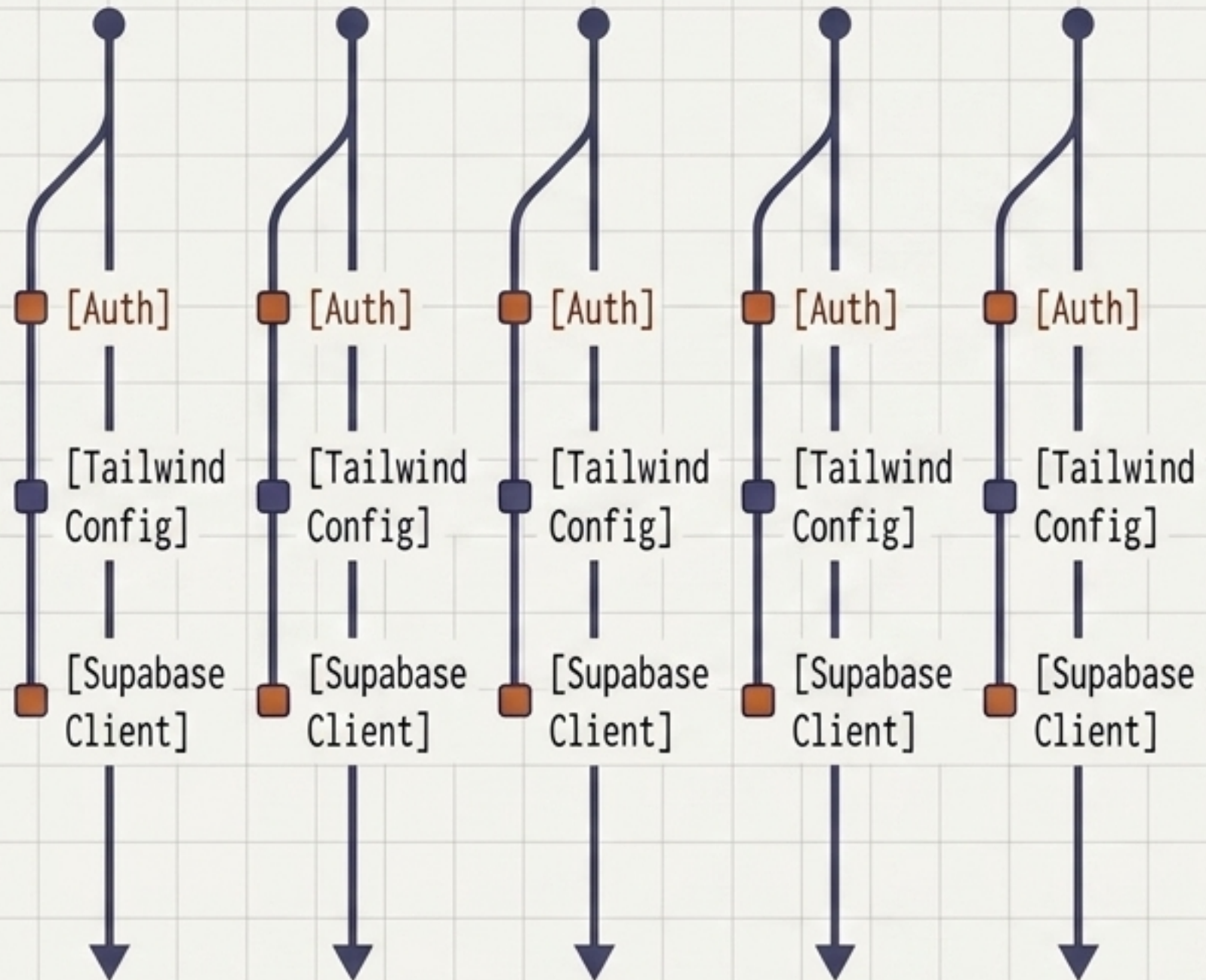
tests_passing: **2,021**

CONSISTENCY_TRACKING

zero_commit_days: **0**

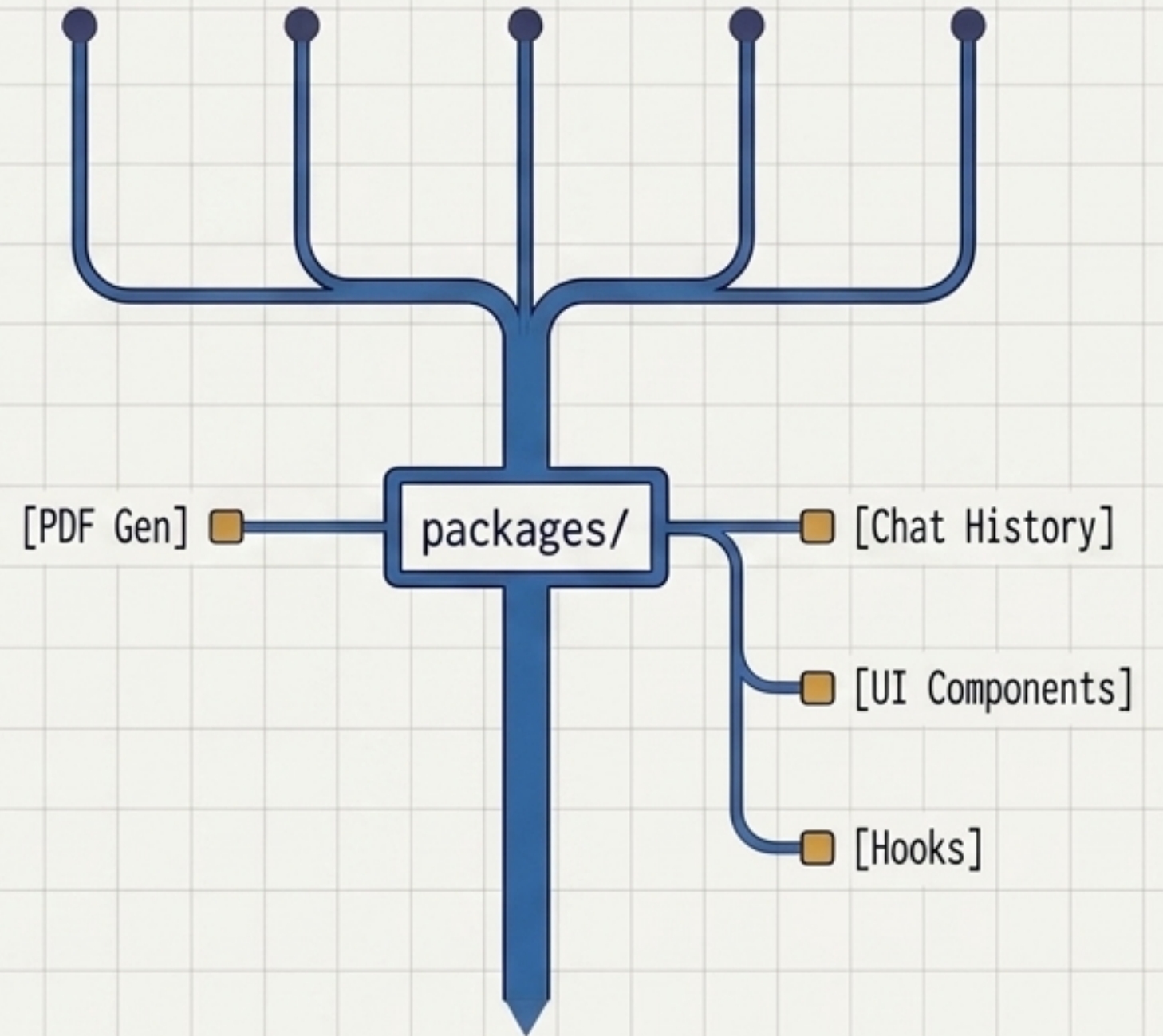


Day 0 - The Chaos



5 apps, 5 logins, 5 duplicated codebases.

Day 4 - The Monorepo



Duplicated code across 5 apps collapsed into a single source of truth.

THE FRICTION OF REFACTORING

```
user@machine ~/project $ yarn start
```

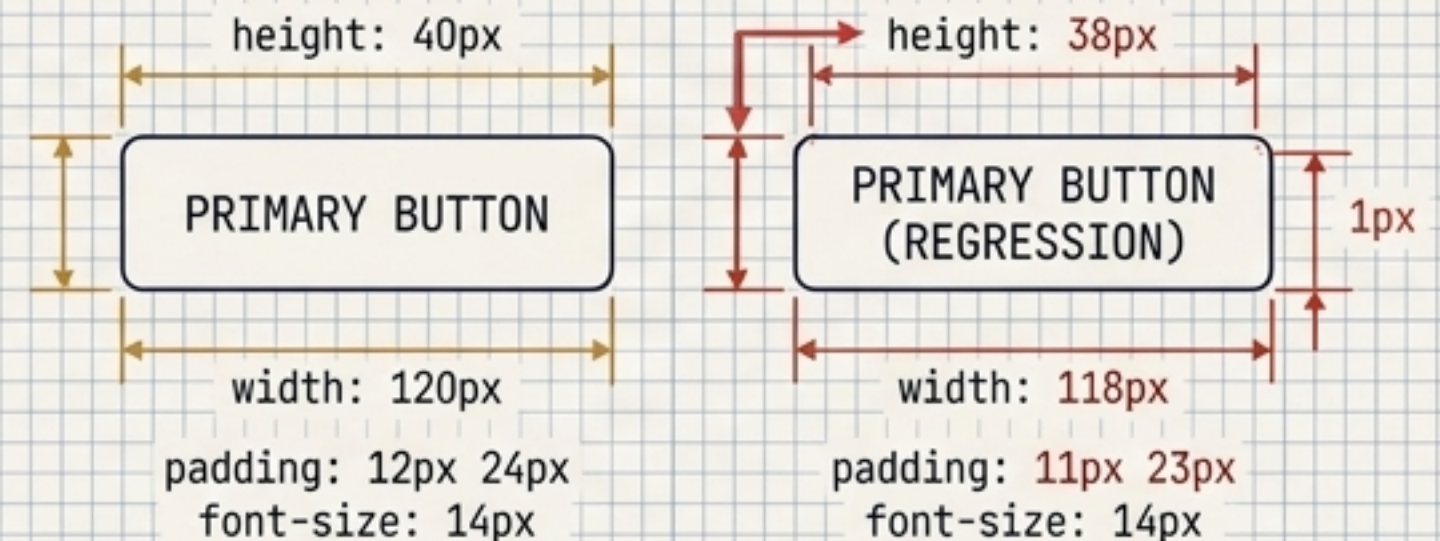
```
ERROR in ./apps/web/src/App.tsx
Module not found: Error: Can't resolve
'@/components/Button' in '/project/apps/web/src'
```

```
ERROR in ./packages/ui/src/index.ts
Module not found: Error: Can't resolve
'../styles/global.css' in '/project/packages/ui/src'
```

```
Compilation failed due to 89 module not found
errors.
```

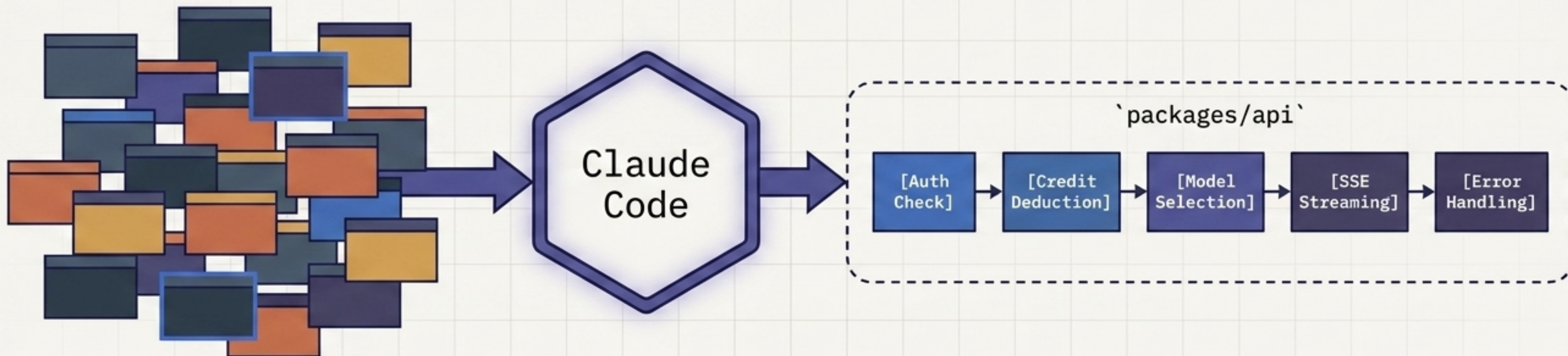
Day 1: Moving to apps/ and packages/ is conceptually simple, but every import path breaks. Fixing imports took 80% of the time.

CSS REGRESSION HELL



Day 2: 38 commits dedicated purely to fixing subtle visual regressions after unifying design tokens.

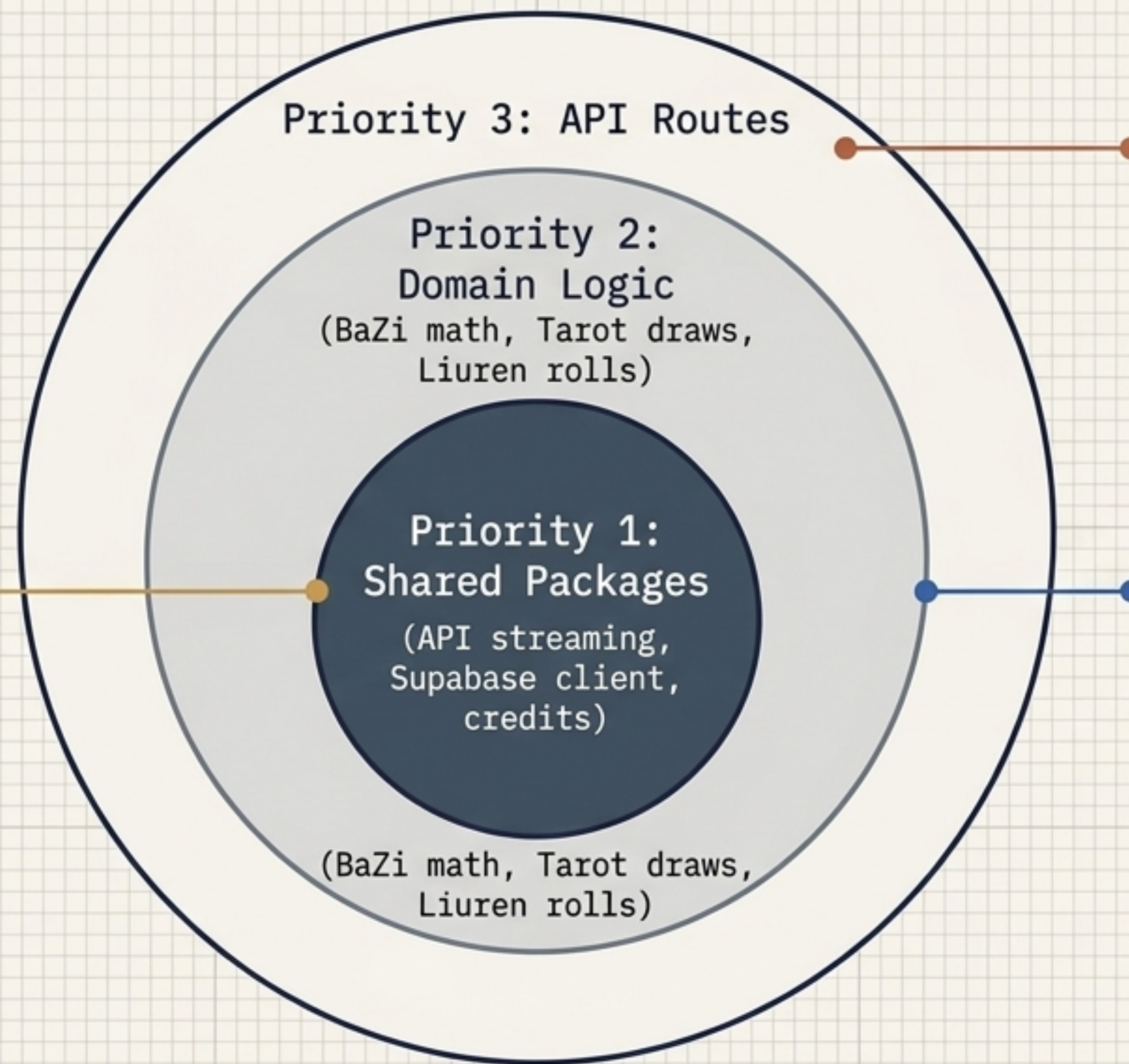
52 fragmented API routes



The 1-Hour Migration

By defining the unified pattern once, Claude Code migrated all 52 existing API routes in one hour of wall-clock time—a task that would have taken a full manual day.

The load-bearing walls.



Integration tests with
mock auth tokens.

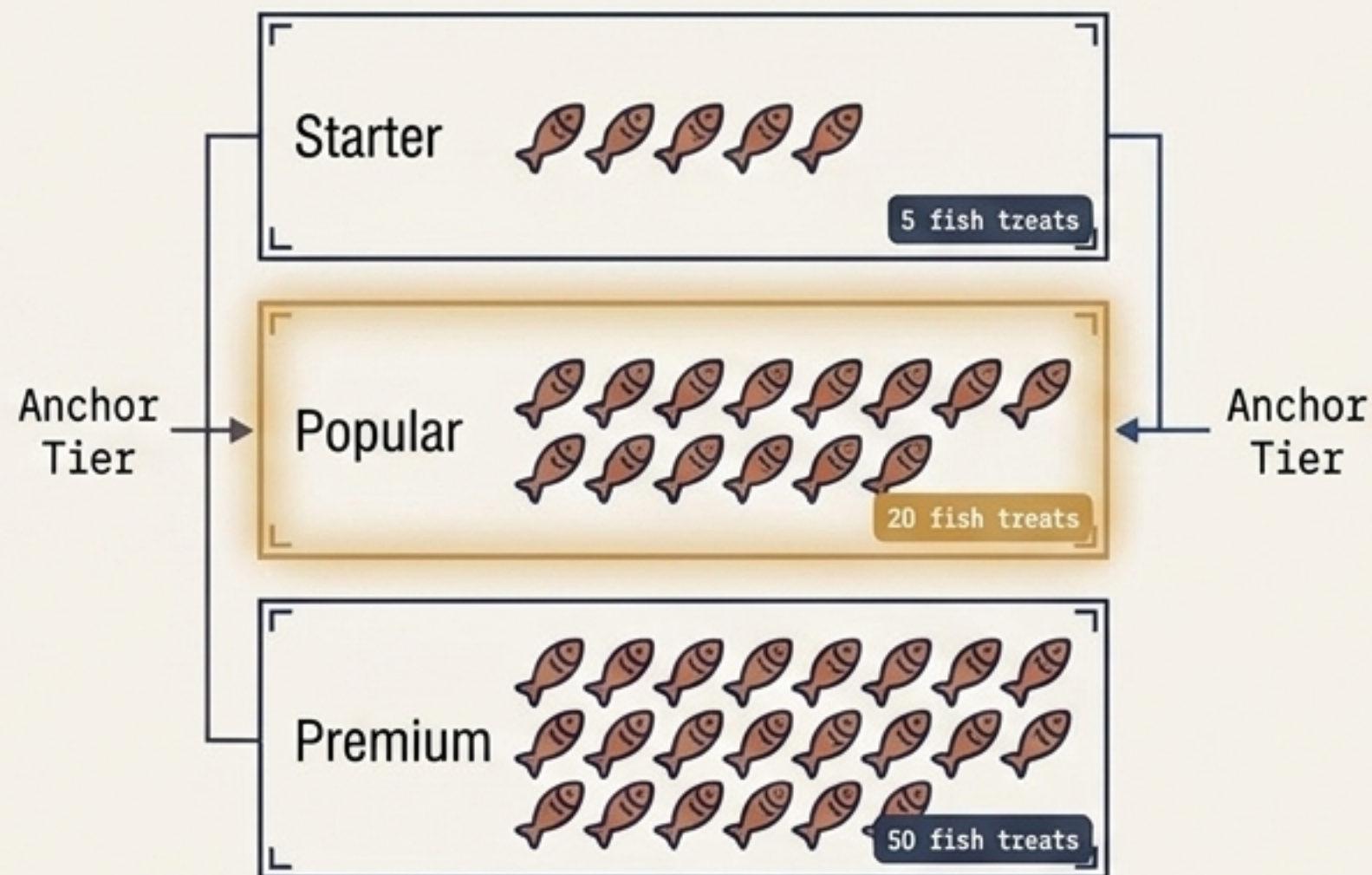
Deterministic input =
expected output
(requires zero domain
knowledge).

Automated GitHub Actions CI running on every PR, reaching
1,922 tests before formal milestones even began.

PanPanMao: The Fortune-Telling Cat



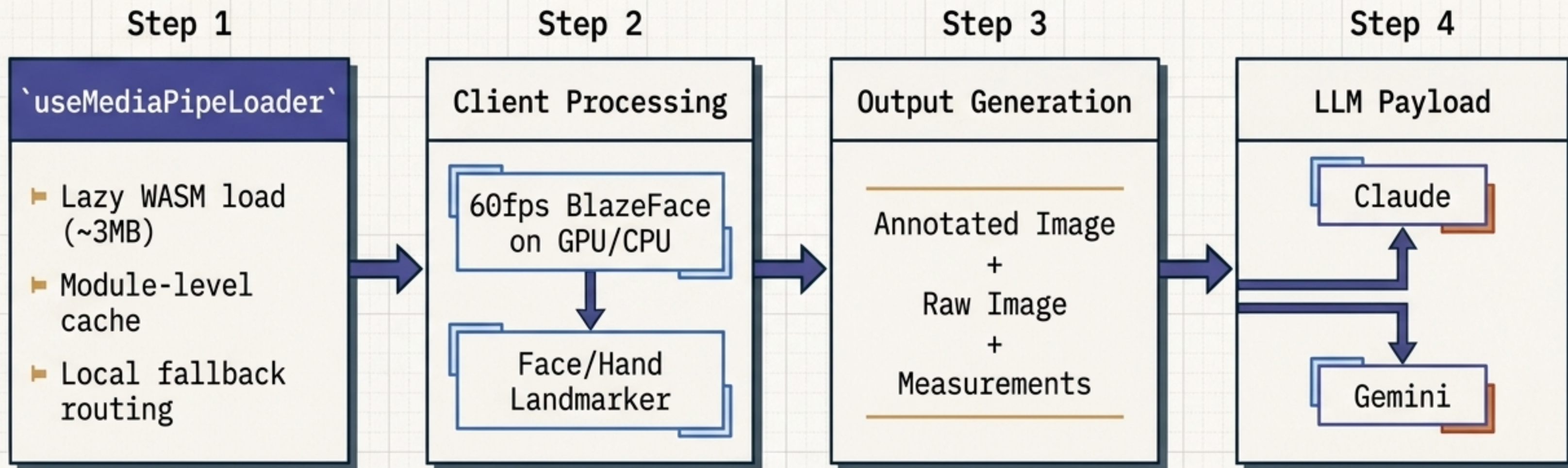
The Economy



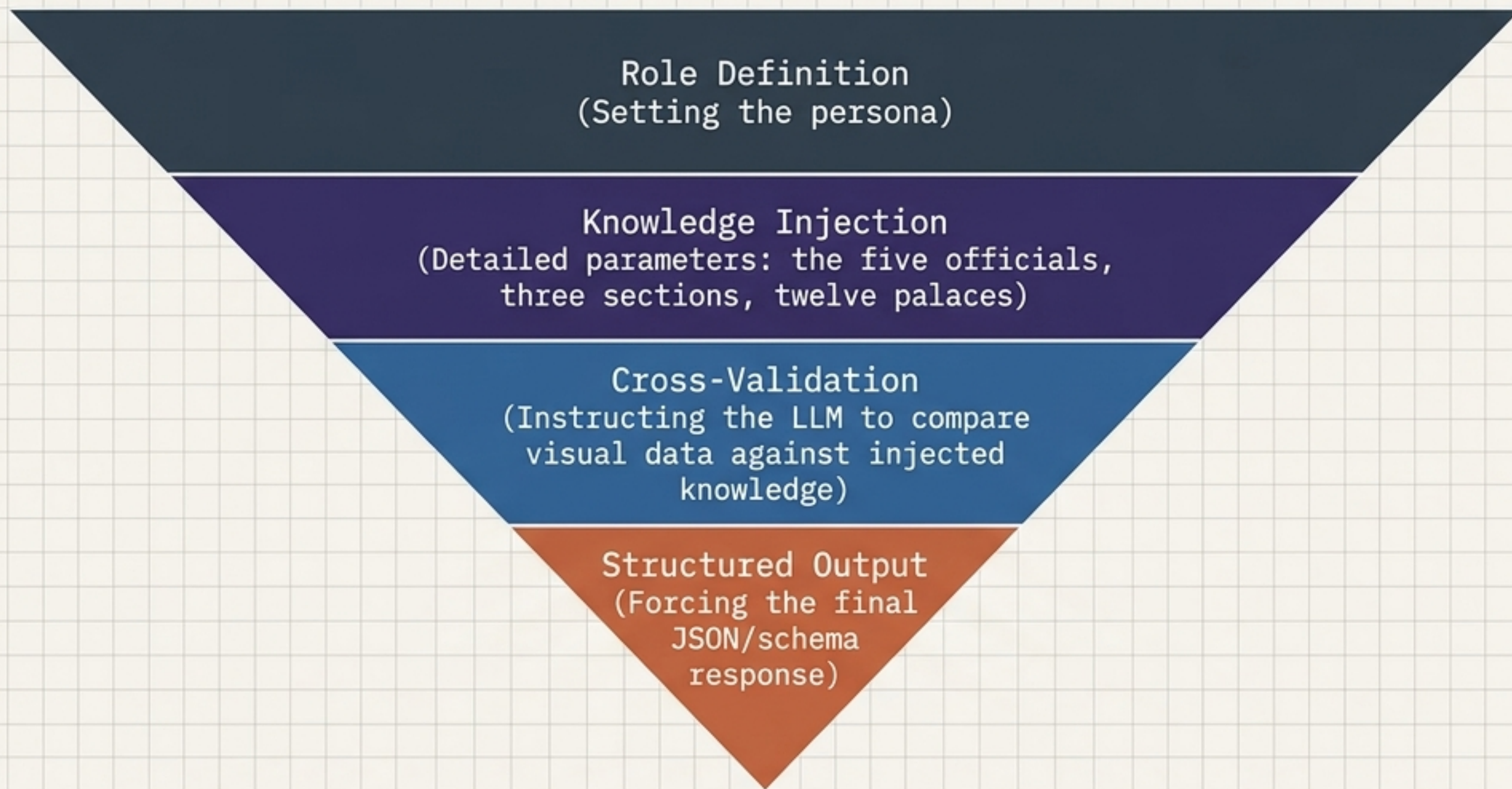
The Credit Abstraction

- Users are significantly more willing to spend "5 fish treats" than a specific dollar amount.
- Technical Detail: Pre-inserted inactive CNY packages built into the Stripe integration for a seamless future China market launch.

MediaPipe Browser ML Pipeline

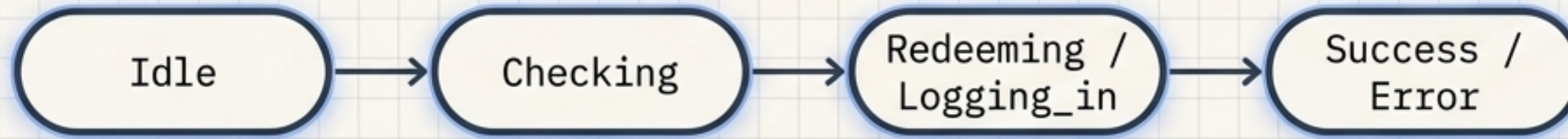


No server round-trips for detection.
Real-time ML runs entirely in the browser, failing gracefully to CPU when WebGL is unavailable.



You cannot simply prompt an LLM to read a palm. The raw image and annotated landmarks must be filtered through a four-layer structural prompt.

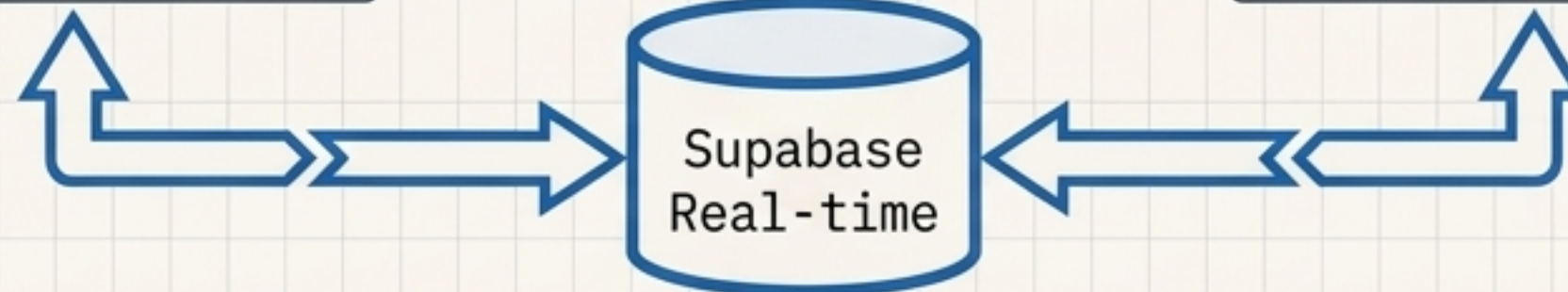
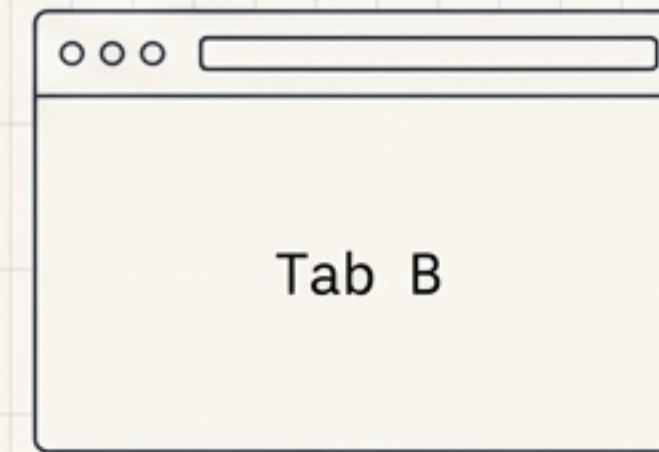
Engineer Sync Blueprint



Highlighting anonymous-to-authenticated account merging.



User buys in Tab A, switches to Tab B, sees old balance, double-purchases.



WebSockets push Database updates to instantly sync balance state across tabs in **<1 second**.

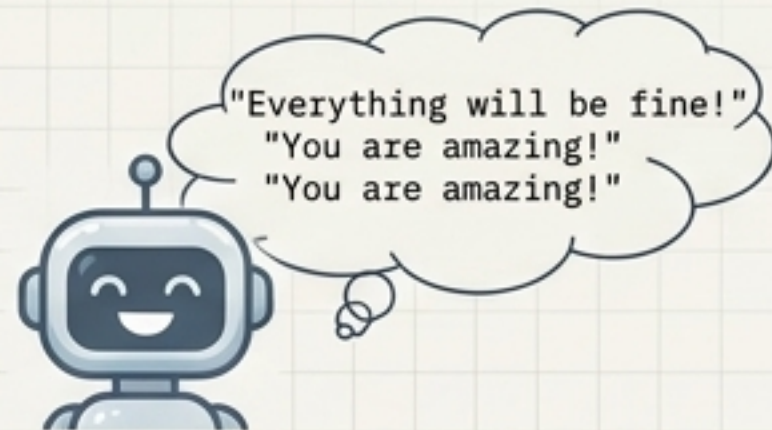
The AI Streaming Playbook

Approach	Use Case	Technical Implementation
Standard Route	15 endpoints	Shared <code>createAIStreamResponse()</code> helper with lifecycle hooks (<code>initEvents</code> , <code>onComplete</code> , <code>onError</code> , <code>refund</code>).
Custom: MBTI Chat	Signal stripping	Accumulated- buffer-delta pattern.
Custom: Dream Novel	Complex generation	Multi-step generation protocol.
Custom: Daily Fortune	Scheduled content	Non-streaming with server-side caching.

AI Tone Overhaul: The Calibration

The Problem

Real user feedback noted the AI was "people-pleasing"—too generic and positive for authentic fortune-telling.



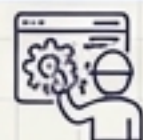
The Calibration

- **Overall:** Shifted from "Positive" to **"Direct"** (好的说好, 不好的明确指出).
- **Health:** Shifted from "Mixed analysis" to **"Neutral-negative direct warnings"**.
- **Indicators:** Forced the use of direct negative terms (凶/`不利), immediately followed by mitigation strategies (化解方案).



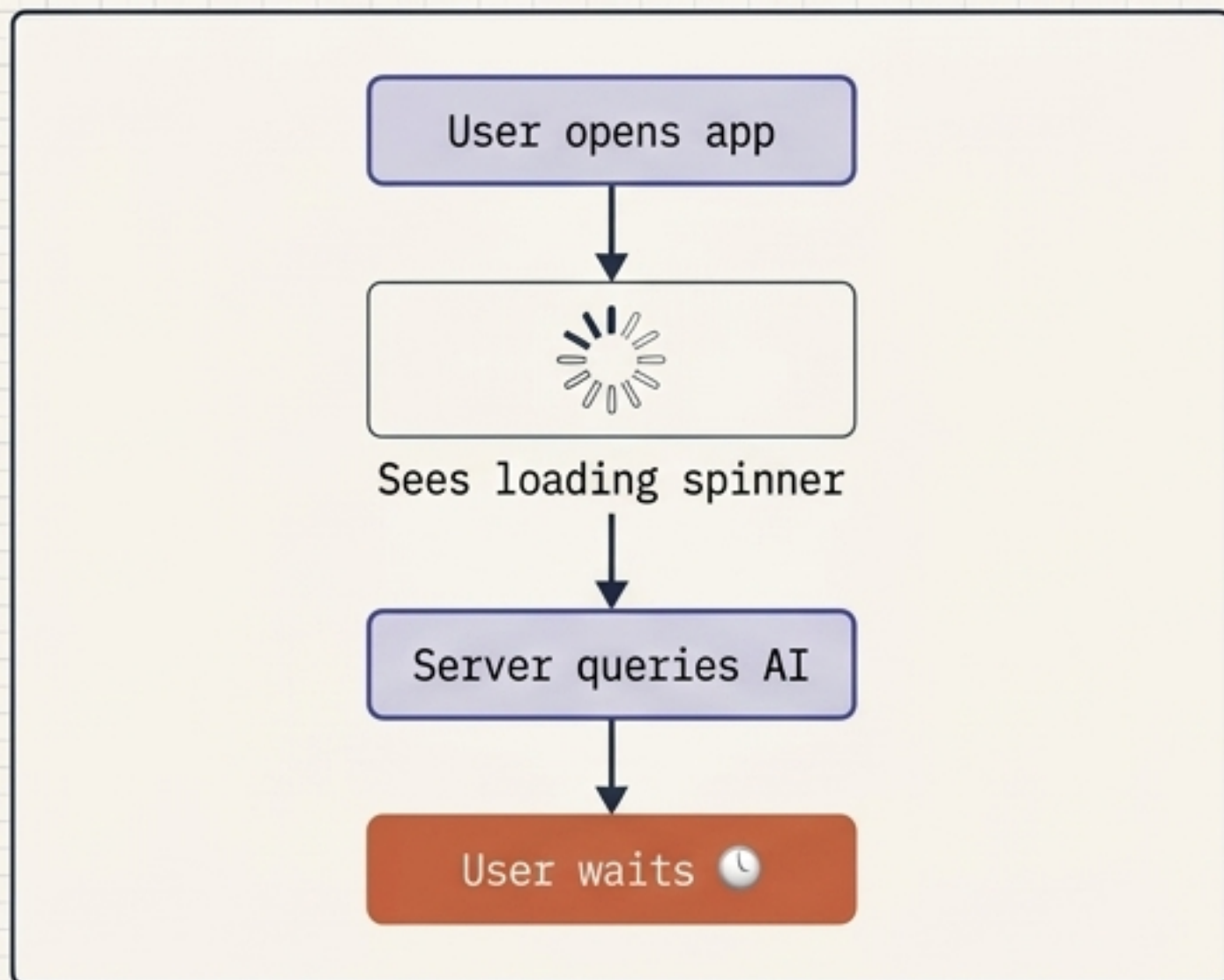
Analysis: Major challenge (凶`) indicated. Immediate **mitigation strategy** (化解方案) advised: Focus on...

Insight: AI cannot calibrate cultural expectations alone. This required a systematic, human-driven prompt overhaul across all 6 domains.

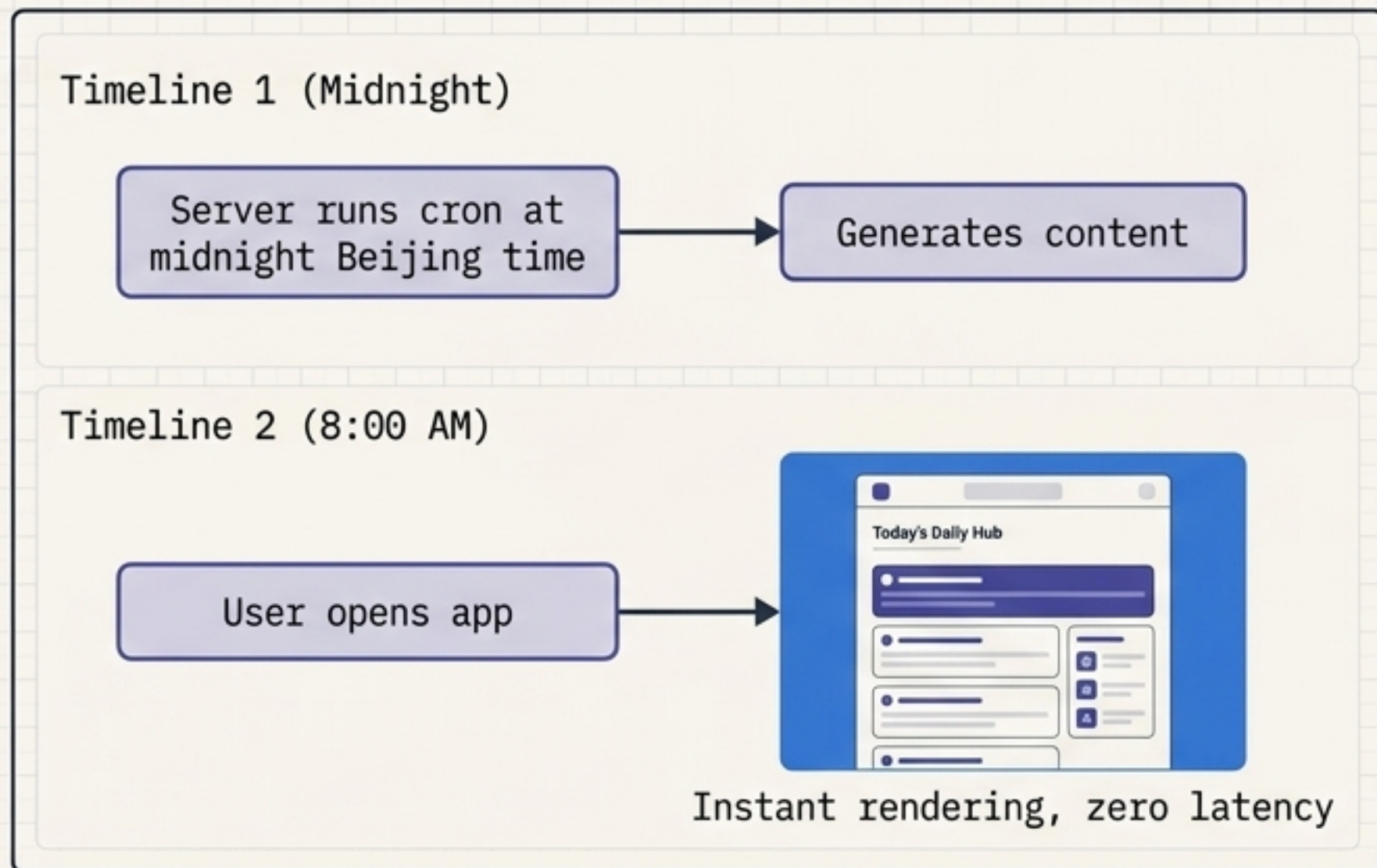


Daily Hub: Architectural Approach

Event-driven On-demand



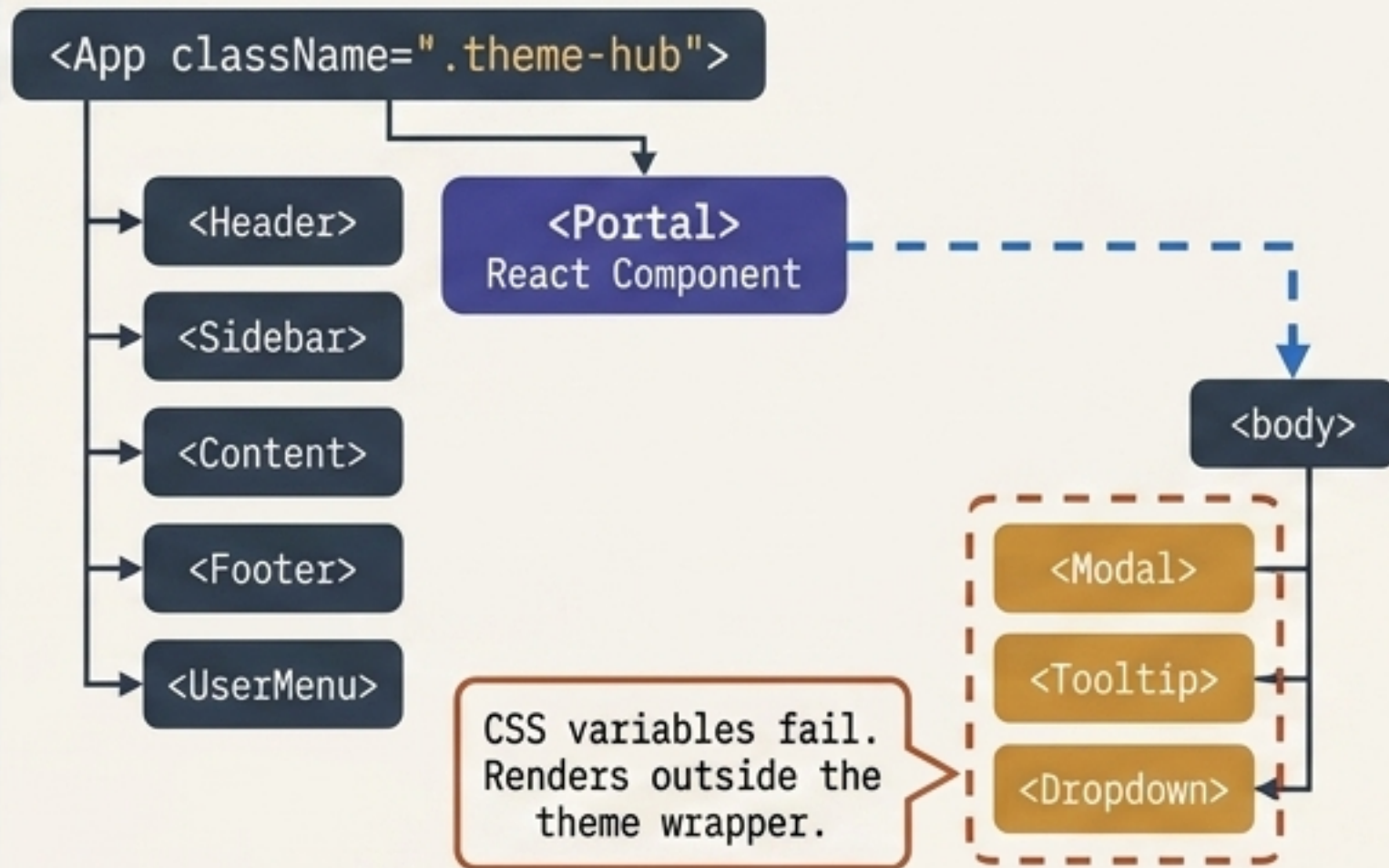
Midnight Cron Pre-generation



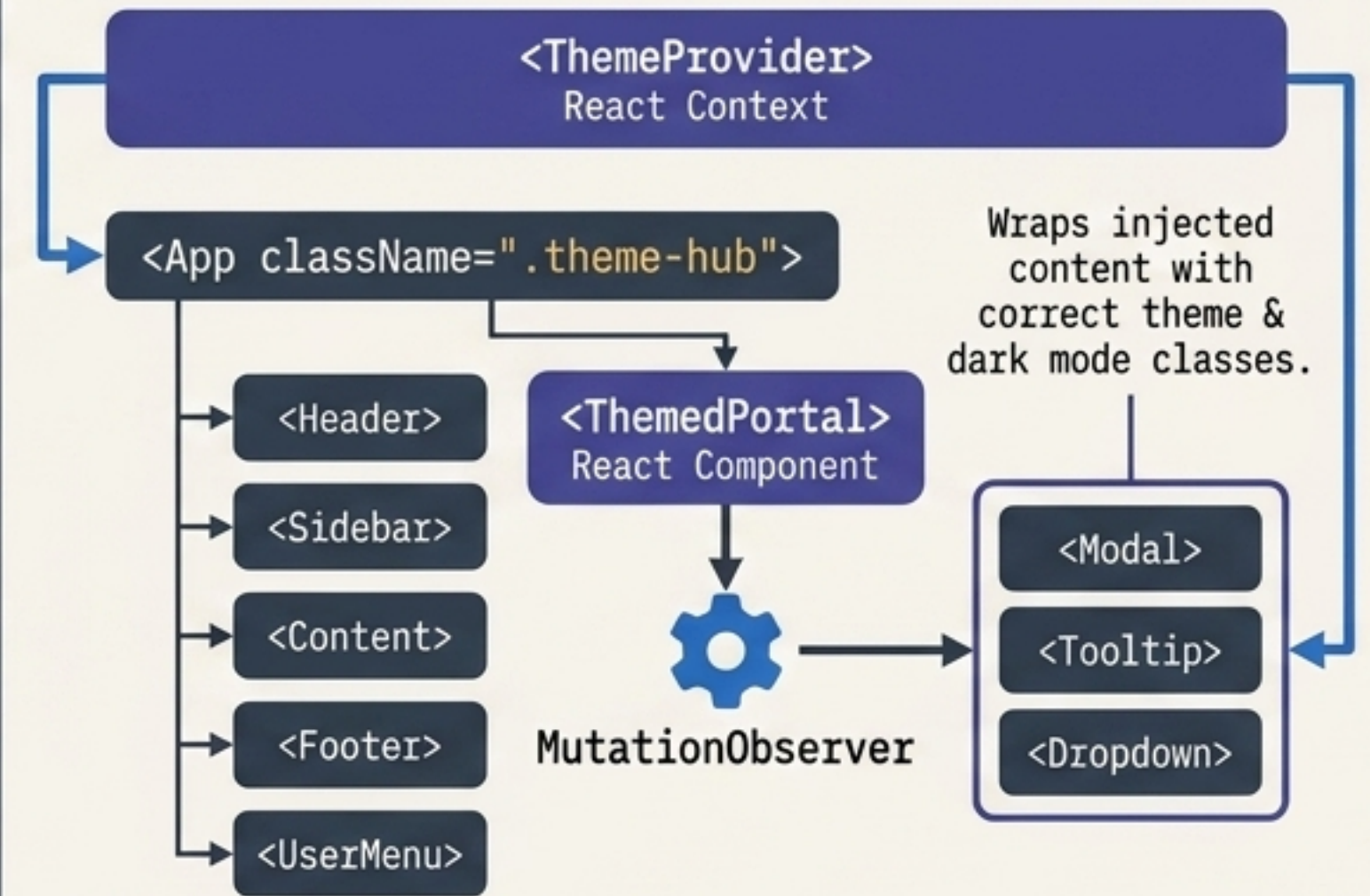
Fortune-telling apps are traditionally use-and-leave. The Daily Hub creates a reason to return, but only if the perceived quality is instant.

CSS Portal Bug Anatomy

The Bug

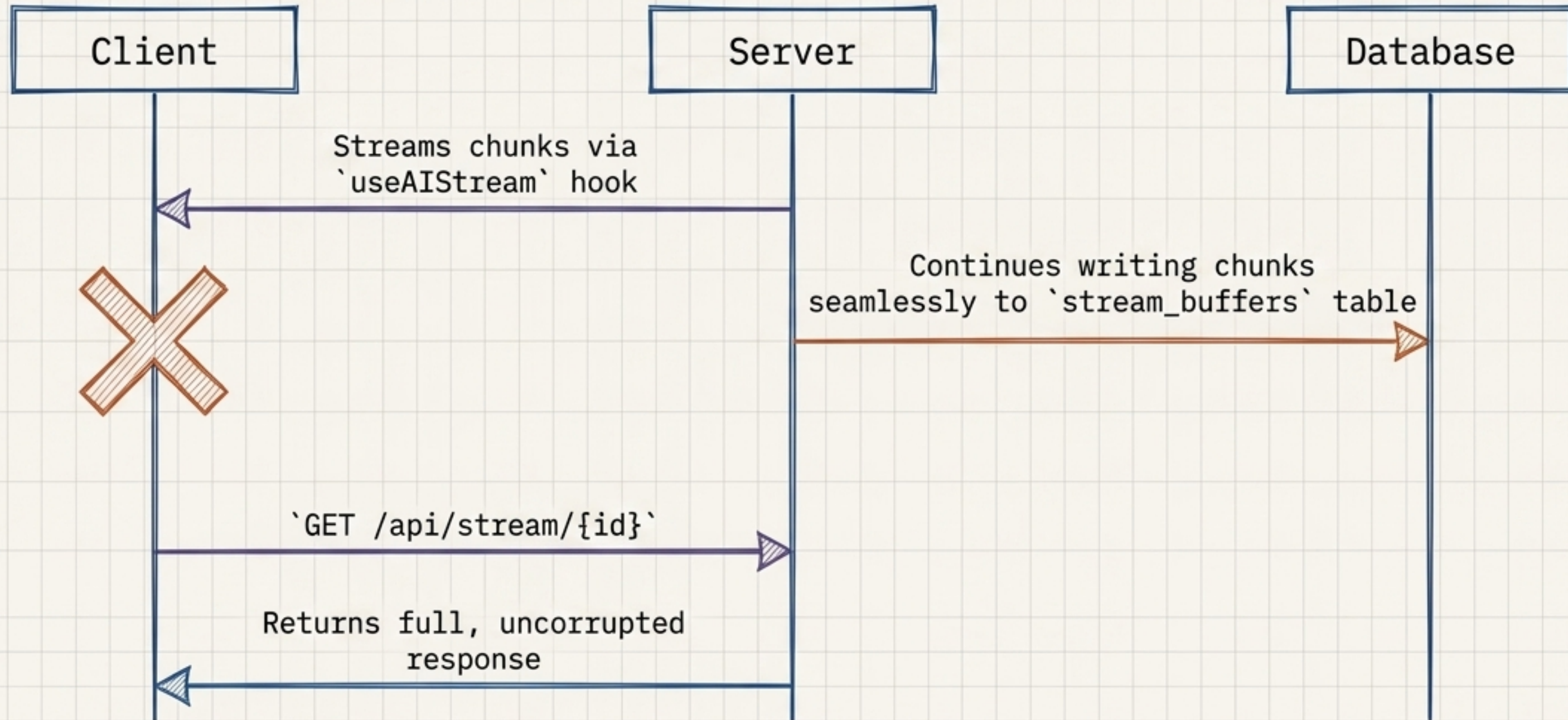


The Solution



Result: 9 app layouts updated, 13 portal components migrated.
Clean and scalable.

The Resilient Stream Buffer



⚙️ Note: A cron job silently cleans up expired buffers every 15 minutes.

Content Filter Evolution

V1 (Day 4)

Core:
DFA Keyword Filter

Action:
Blocks entire messages



UX Outcome:
Rigid, frustrating.

V2 (Mid-Sprint)

Core:
Stream-Aware Filter

Action:
Truncates stream upon sensitive word

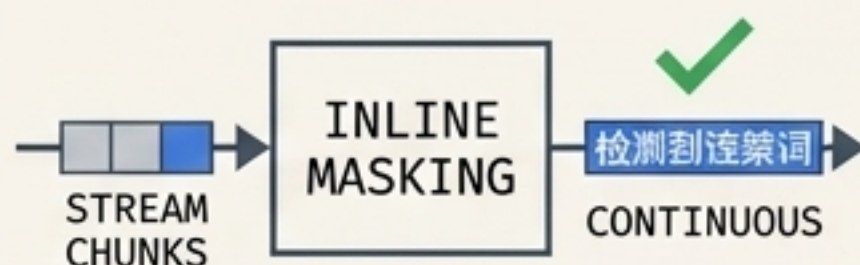


UX Outcome:
Users lose credits for partial readings.

V3 (Final)

Core:
Inline Masking

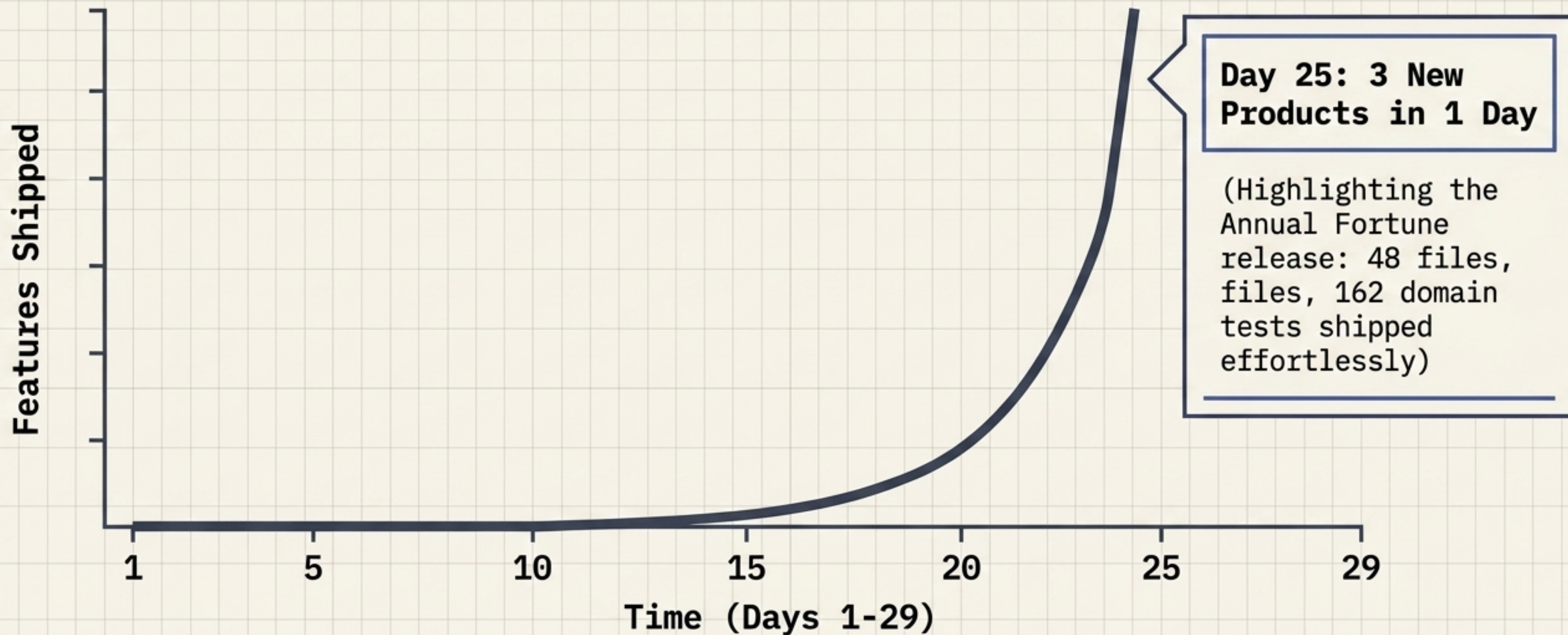
Action:
Replaces words spanning chunk boundaries with '**检测到违禁词**' without killing the stream



Architecture Note: V3 uses a Dual-Filter system. Aggressive on input (blocks ads/politics), relaxed on output (allows fortune-telling terms like 兼职/招聘 that trigger naive ad filters).

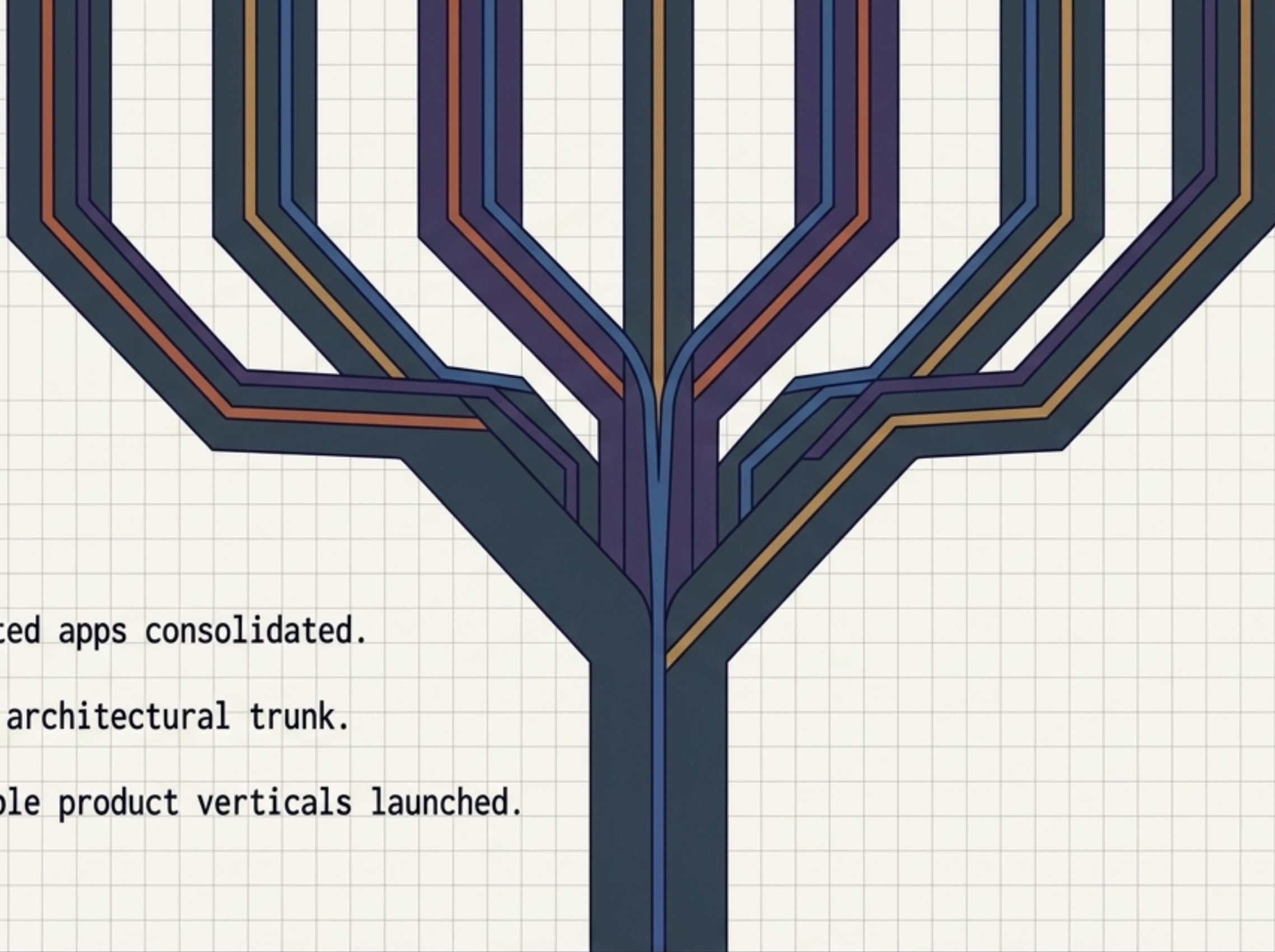
Infrastructure Trade-offs

The Friction Point	The Naive Fix (Rejected)	The Scalable Architecture
Multi-tab Credit Sync	Manual refresh button.	Supabase WebSockets syncing cross-tab state in <1 second.
Dropped AI Streams	Force user to repay/restart.	Server-side DB buffering + `GET` recovery route.
Themed React Portals	Hardcoding `.theme-hub-overlay` classes per component.	Unified `ThemeProvider` context + `MutationObserver`.



The Shared Package Velocity Multiplier.

With auth, credits, streaming, and UI solved in the monorepo, the marginal cost of a new vertical drops to nearly zero.



29 Days.

5 fragmented apps consolidated.

1 unified architectural trunk.

9 profitable product verticals launched.

Speed is not born from rushing. True velocity is the byproduct of rigorous, scalable architecture.