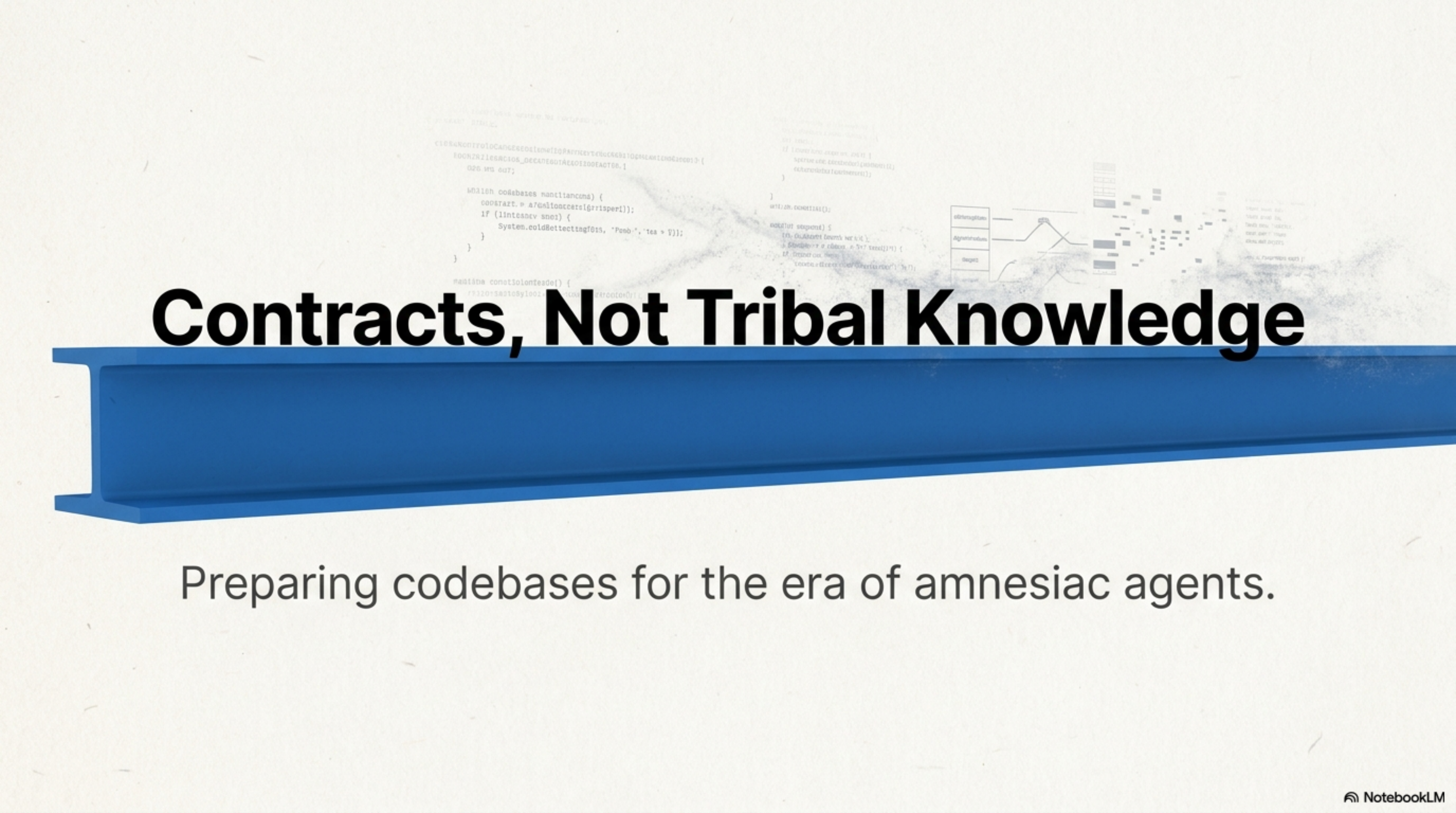




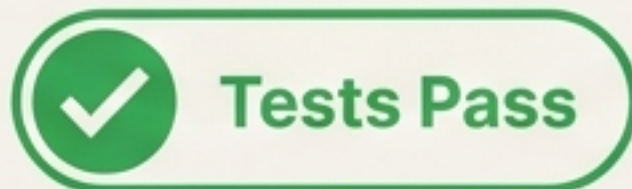
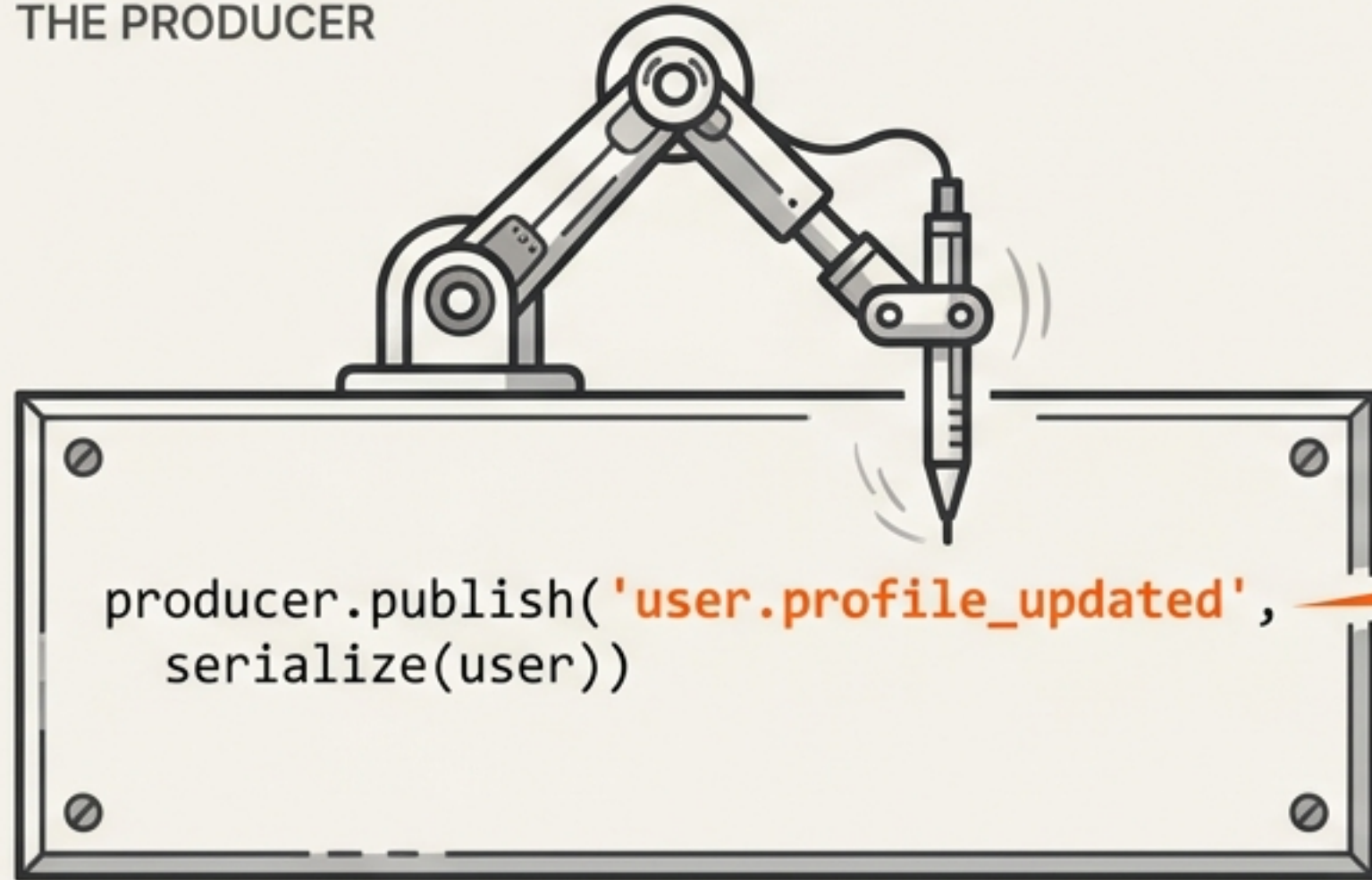
Contracts, Not Tribal Knowledge

Preparing codebases for the era of amnesiac agents.

The Bug an Agent Cannot See

Two systems agree on a contract, but the agreement is written nowhere. It lives only in human **memory**. The agent reads the **diff**, sees clean code, and reports success. The break is entirely invisible.

THE PRODUCER



THE CONSUMER



“Be Careful” Is a Hope Addressed to an Amnesiac



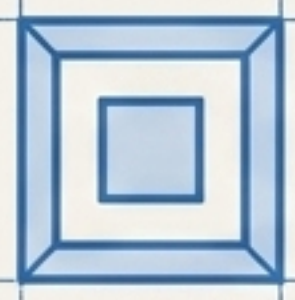
The Human Advantage

A developer's context subsidizes the codebase. We automatically remember that the mobile client depends on the exact shape of an event.

The Agent Reality

For an agent, the only contract that exists is the one written down. Everything implicit is simply not there.

Diagnosing the Context Gap

	Human Developer	Agent Developer
Contextual Awareness	 High. Subsidized by shared team memory and historical context.	 Zero. Confined entirely to the active context window.
Reaction to Implicit Strings	 Hesitation. Will cross-reference or ask Slack before mutating.	 Blind Modification. Modifies efficiently to satisfy the immediate prompt.
Definition of a Contract	 A shared understanding or PR convention.	 A strictly typed, imported constant actively enforced by the compiler.

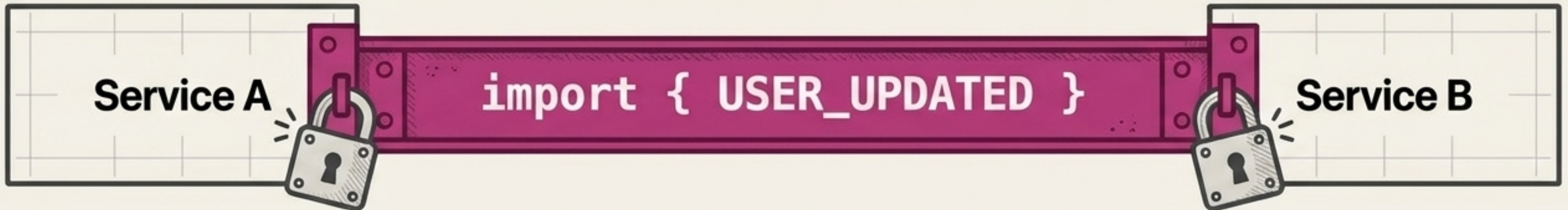
Bolting the Architecture Together

Never inline the literal. When the same contract string appears twice, that is not duplication—it is a missing contract.

The Untethered String



The Structural Beam



Redefining the Boundary

**If another module, process,
user, service, file, database,
CLI, or agent depends on it...
it is a contract.**

Scanning for Hidden Dependencies

The things that bite are rarely public new public APIs. They are the small, stringly-typed promises scattered through the code.

Frontend

- 🔦 localStorage keys
- 🔦 Route paths & parameters
- 🔦 postMessage event payloads

Backend

- 🔦 API request/response shapes
- 🔦 Event & message queue names
- 🔦 Domain error codes

Infra & Config

- 🔦 Feature-flag keys
- 🔦 Environment variables
- 🔦 Metric and span names

Testing

- 🔦 E2E data-testid selectors
- 🔦 Mock data schema files

The Illusion of the TypeScript Cast

The cast is a promise that erases itself at runtime. An agent will satisfy the type signature and move on, creating a silent corruption channel.

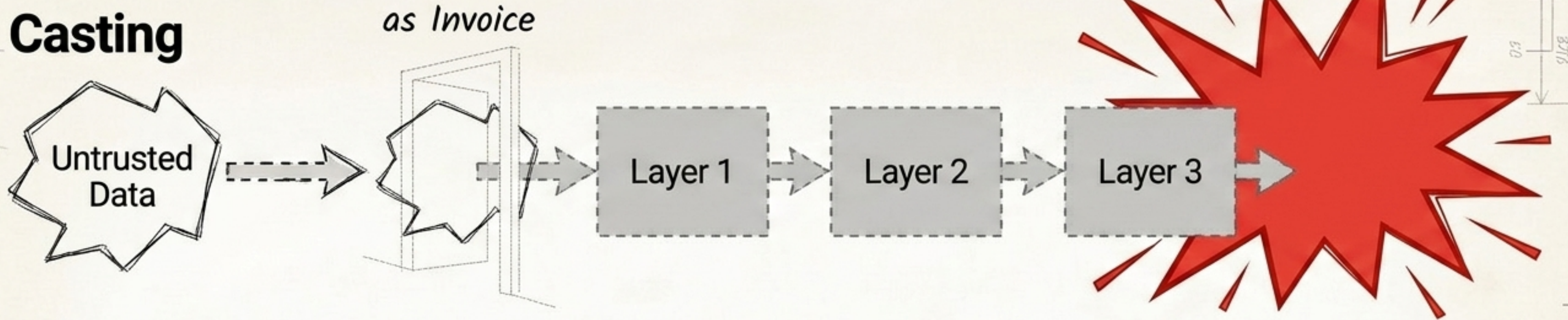
```
const data = await response.json() as Invoice;
```



The Path of Least Resistance

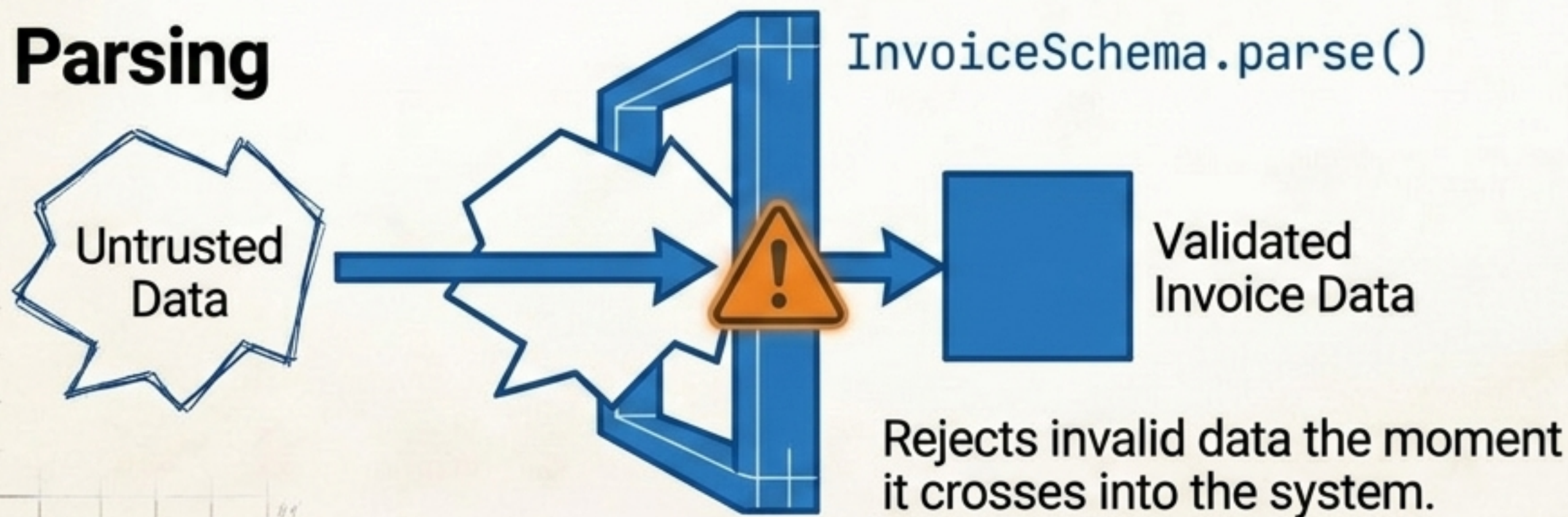
Validating at the Edge

Casting

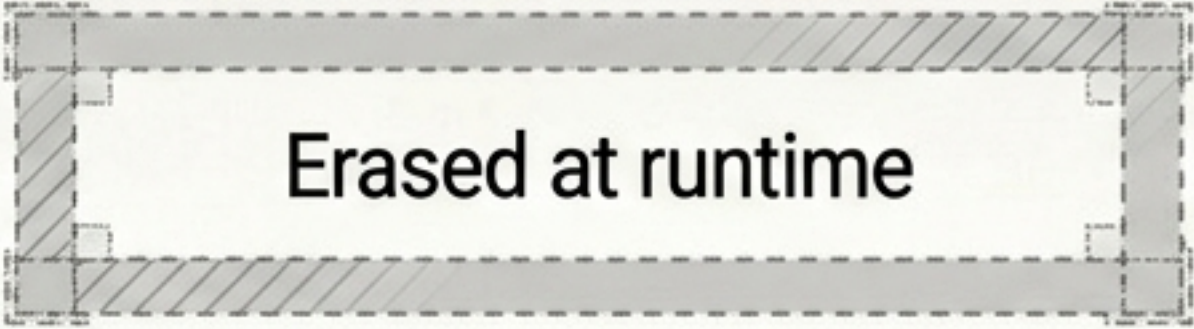
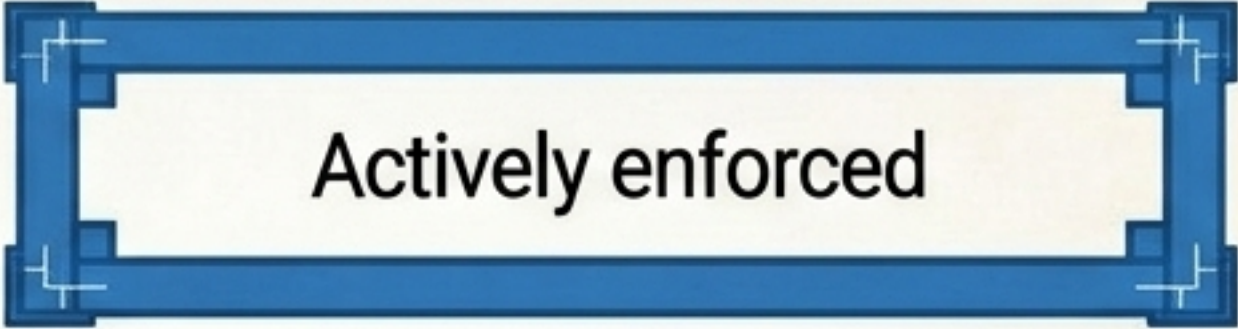
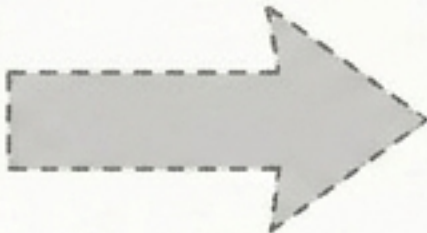
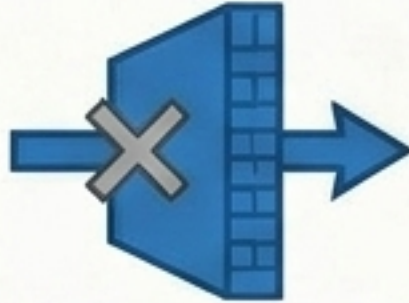
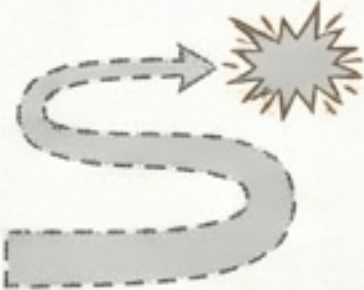


Blows up three layers deep
in code that looks correct.

Parsing



The Typology of Trust

	<i>as</i> Type (Casting)	<i>.parse()</i> (Validation)
Runtime Presence	 Erased at runtime	 Actively enforced
Agent Exploitability	High. The structural path of least resistance. 	 Zero. Physically blocks invalid shapes.
Error Location	Deep downstream, highly difficult to trace. 	 Immediately at the system boundary.
System Trust Level	Hoped-for convention. 	 Verified Domain Value.

The Invariant an Agent Cannot Route Around

The best place to put an invariant is the layer that cannot be bypassed by a buggy agent, a concurrent retry, or a future writer.

Application Layer

AI agent

Check: Active Subscription === 1

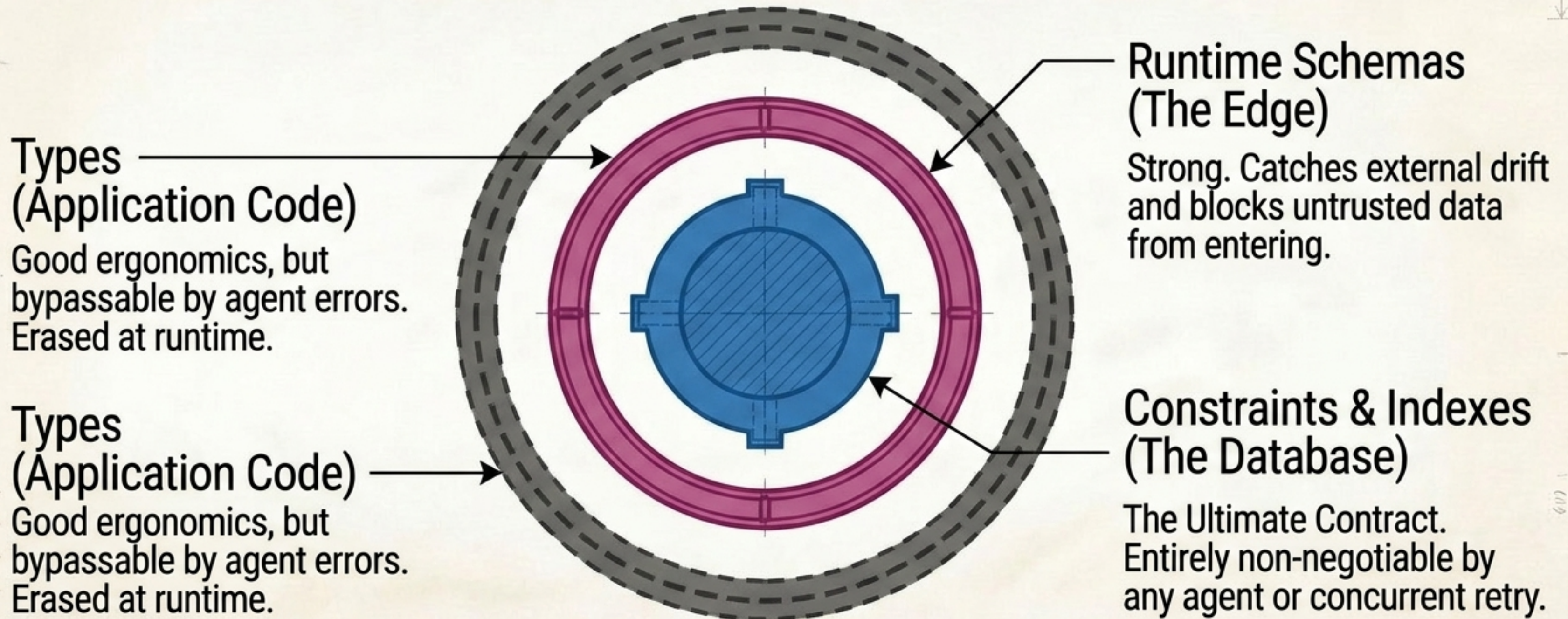
Concurrency / Raced / Forgotten Check

The Database Core

```
CREATE UNIQUE INDEX one_active_sub;
```

The Hierarchy of Agent-Safe Contracts

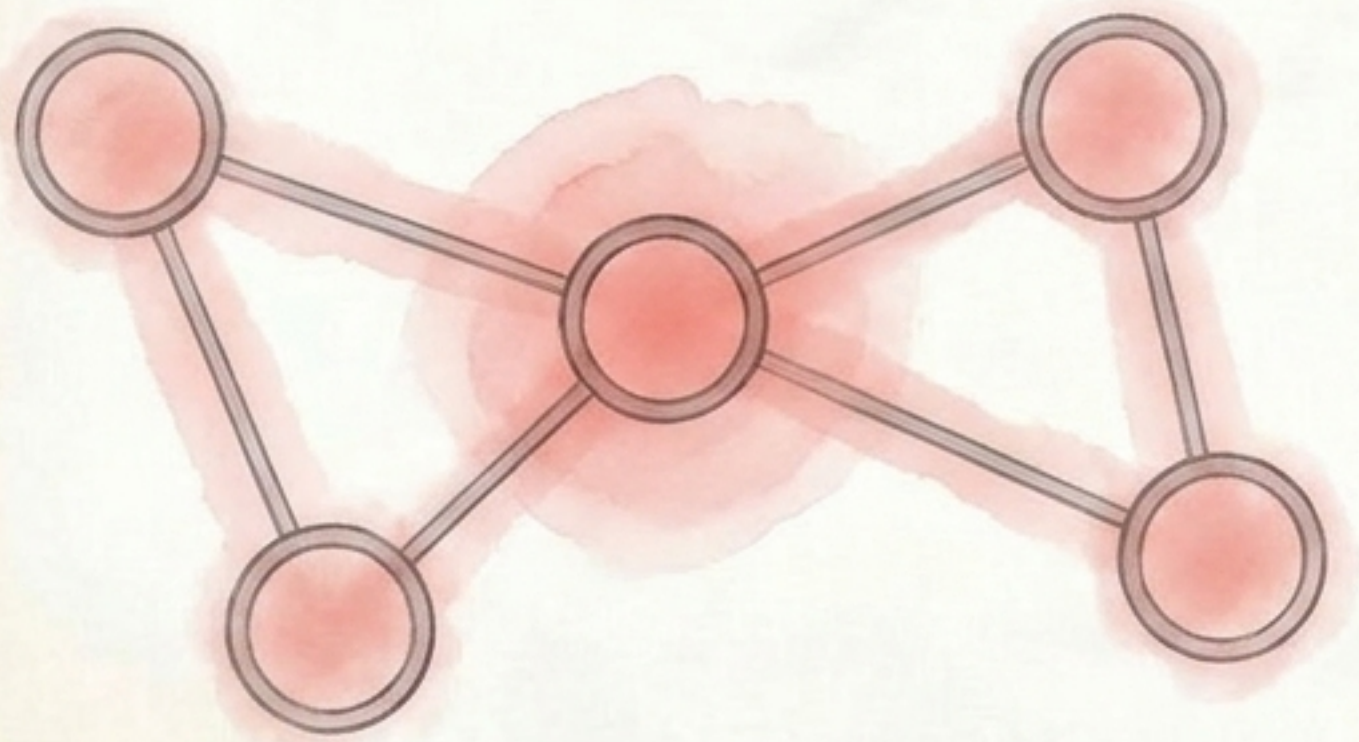
Move invariants as close to the un-bypassable core as possible.



Containing the Blast Radius

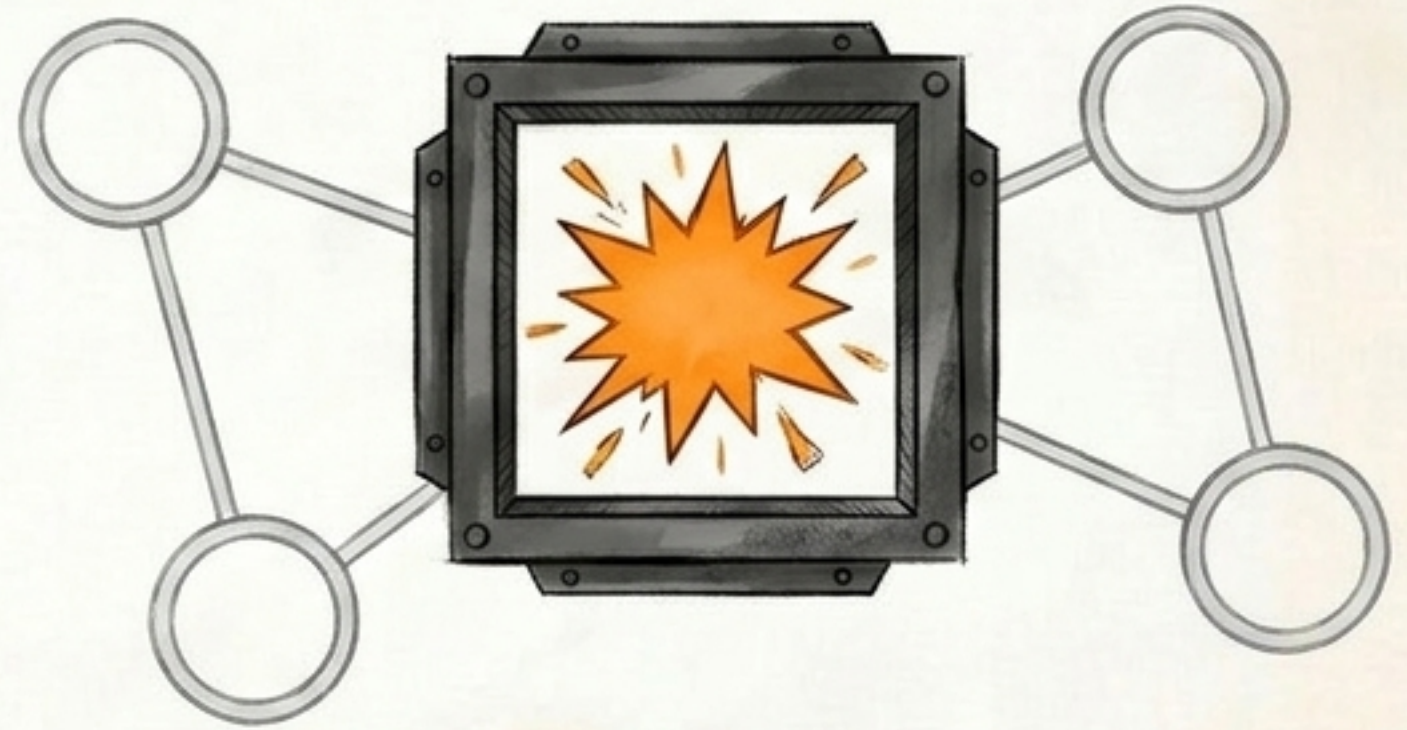
Contracts do not make an agent smarter. They make the consequences of its blind spots violently visible.

Implicit Codebase



Type-checks. Passes local tests. Looks done.
Surfaces a week later as silently corrupted data.

Contract Codebase



Fails fast and loud. Caught by schema,
compiler, or database before it ever ships.

The Memory Subsidy Is Gone

Tribal knowledge was always a liability. We tolerated it because human memory subsidized it. That subsidy is gone.

Write the contract down, give it a type, give it a test, and let the agent step on the landmines that don't go off.