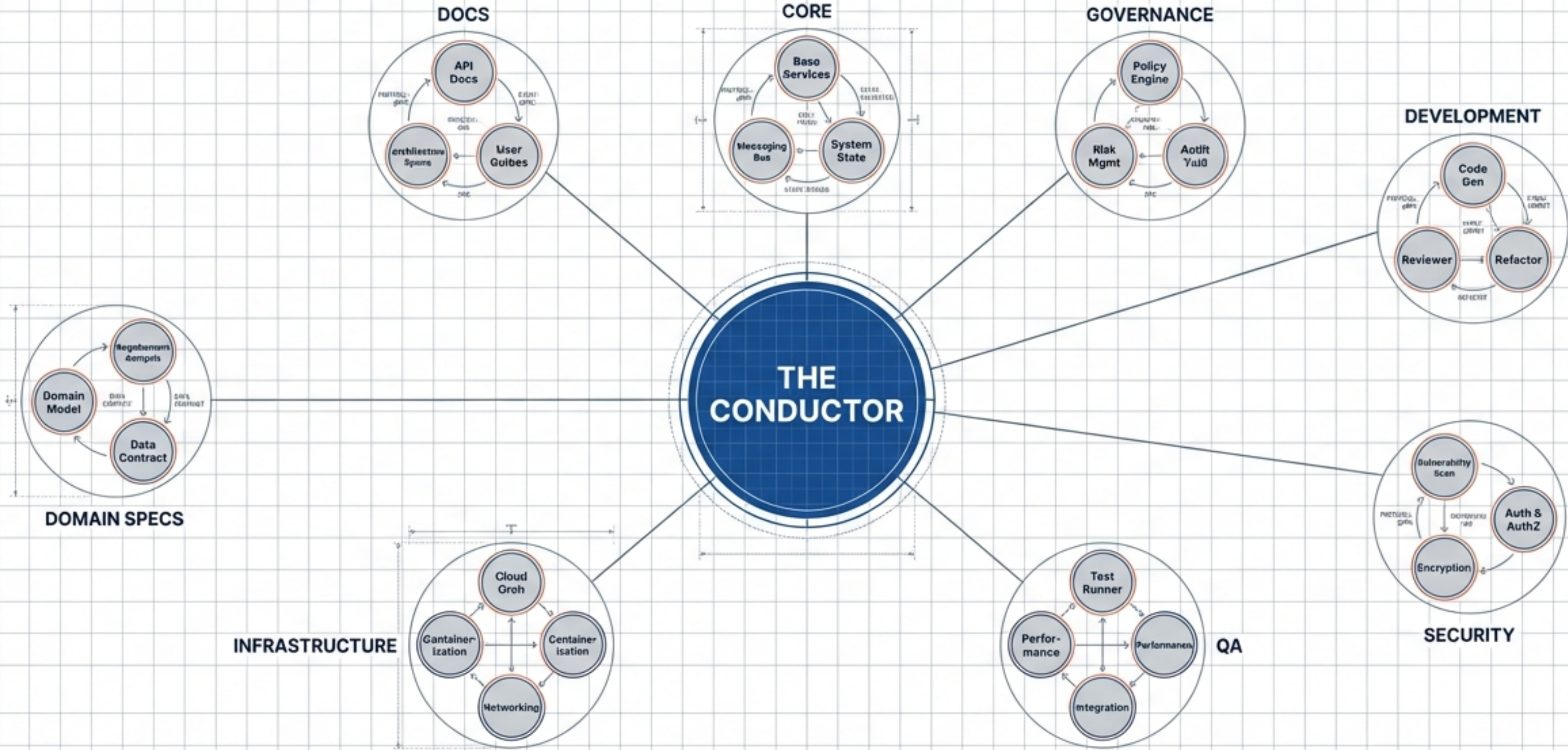


# Claude Code Orchestration Agent System

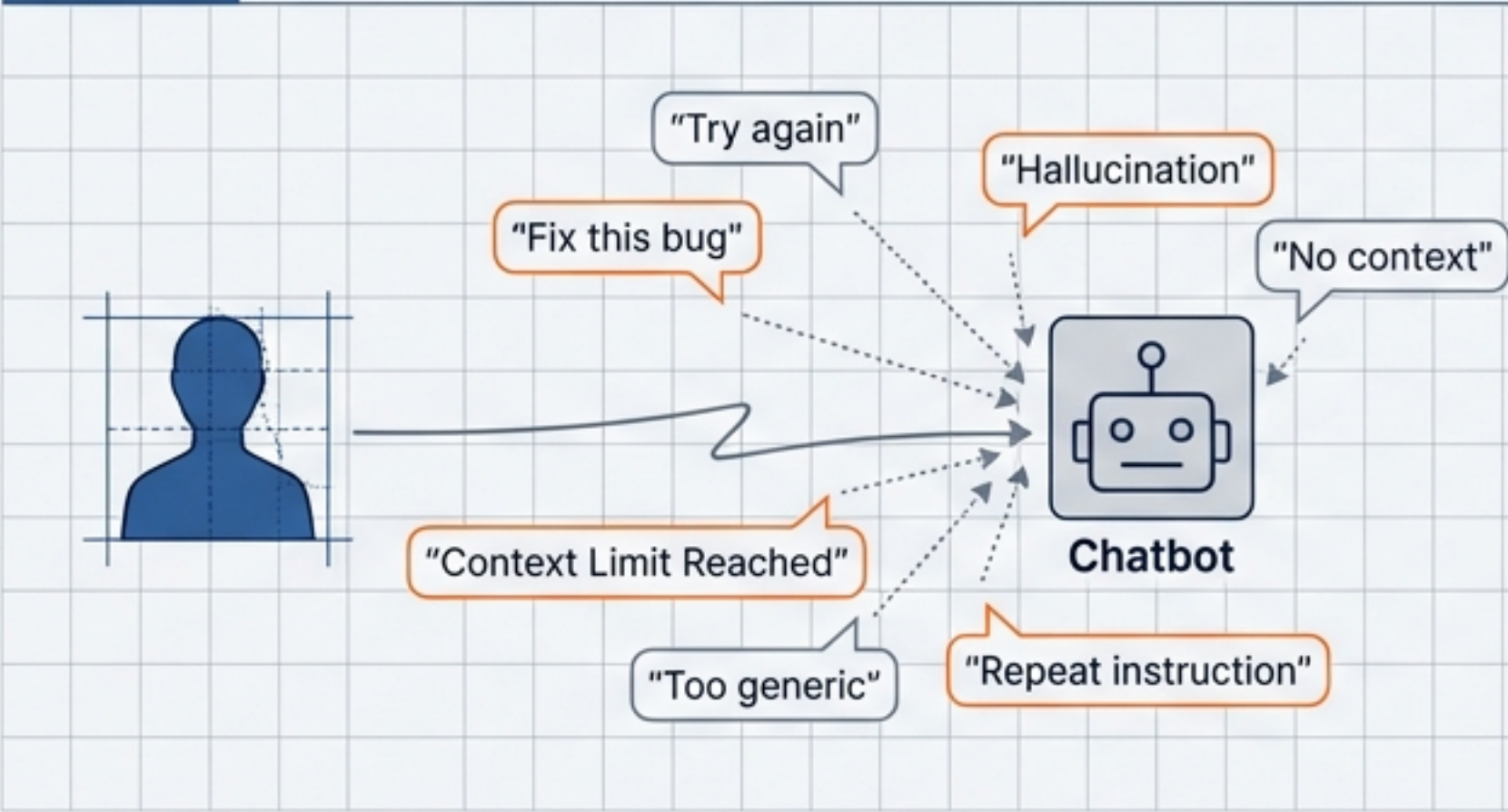
A Multi-Agent Architecture for the 2026 Software Development Lifecycle





# Moving from Ad-Hoc Prompting to Disciplined Orchestration

## LEGACY: AD-HOC PROMPTING



### SCALE

55+ Specialized Agents working in coordination



### AUTONOMY

Production-ready software with minimal human intervention

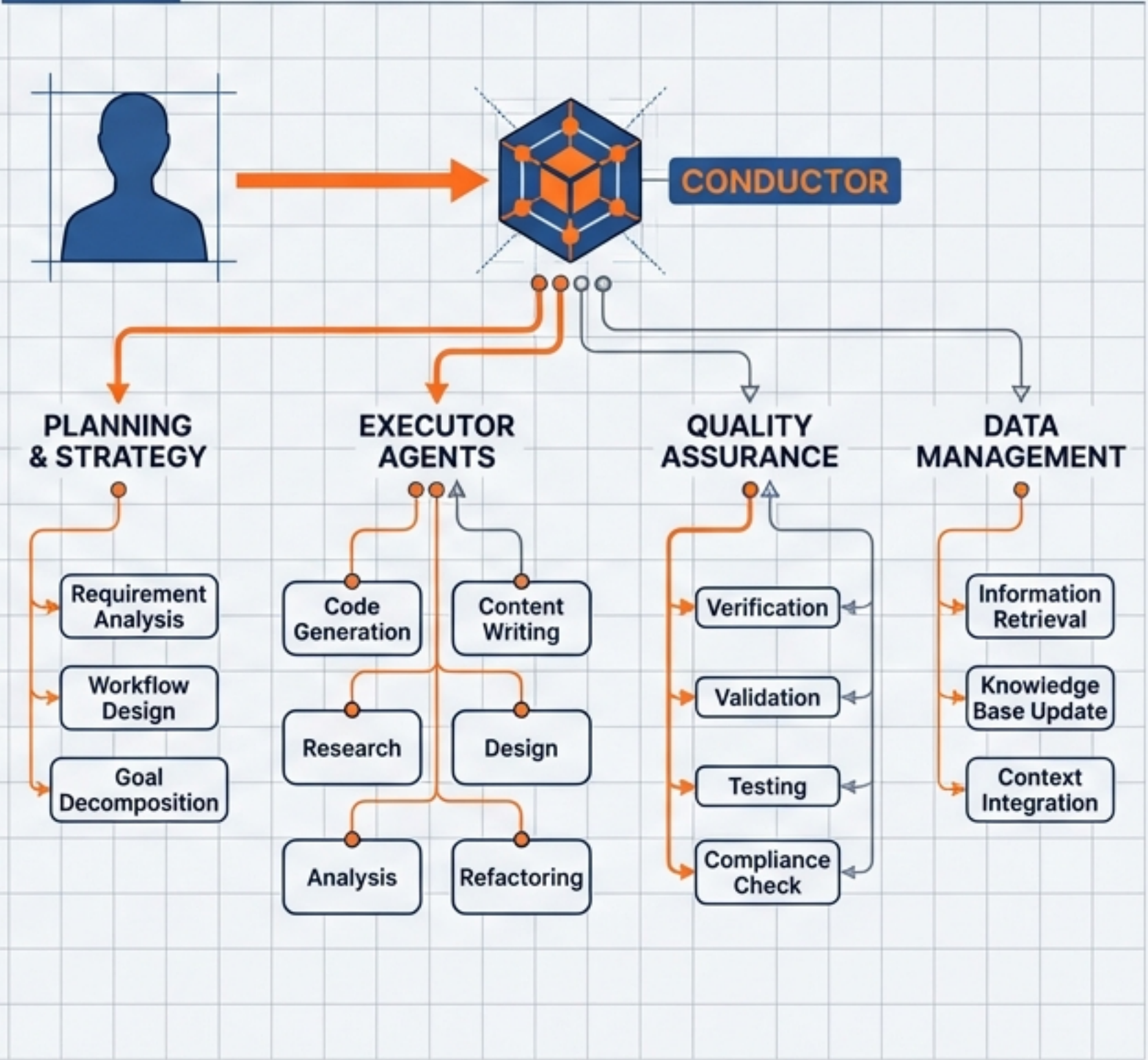


### PHILOSOPHY

Prioritizes "Discipline" and "Rigor" over raw generation speed



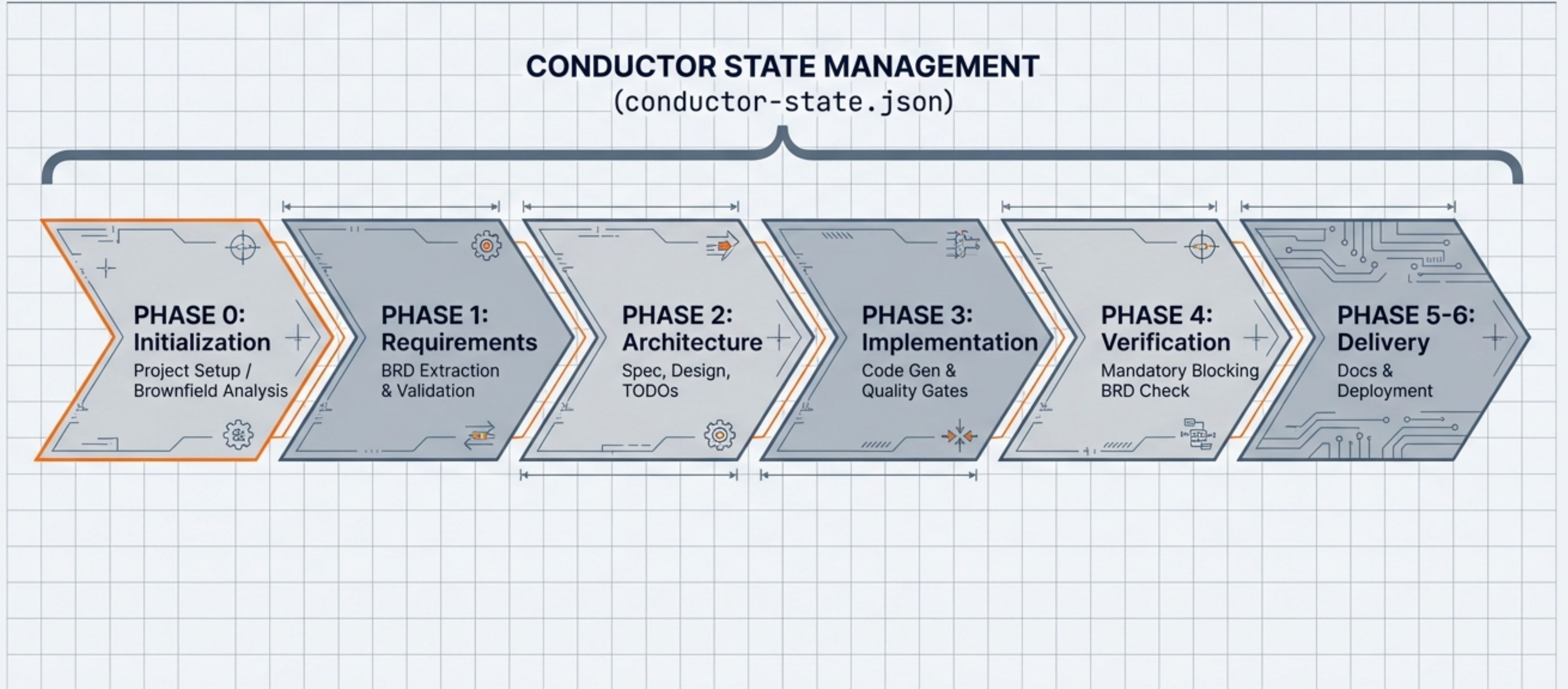
## FUTURE: ORCHESTRATED WORKFLOW





# The 6-Phase Orchestration Model

A linear, gated lifecycle managed by the Conductor Agent.





# Governance and Workflow Control



## THE CONDUCTOR

The Orchestrator

Inter (JetBrains Mono)  
Coordinates all 55+ agents.  
Manages phase transitions and  
persists state via  
`conductor-state.json`.  
Ensures no steps are skipped.



## PROJECT MANAGER (PM)

The Enforcer

Inter in JetBrains Mono  
Maintains sequence integrity.  
Prevents scope creep.  
Validates gate conditions before  
allowing phase progression.



## DYNAMIC ROUTER

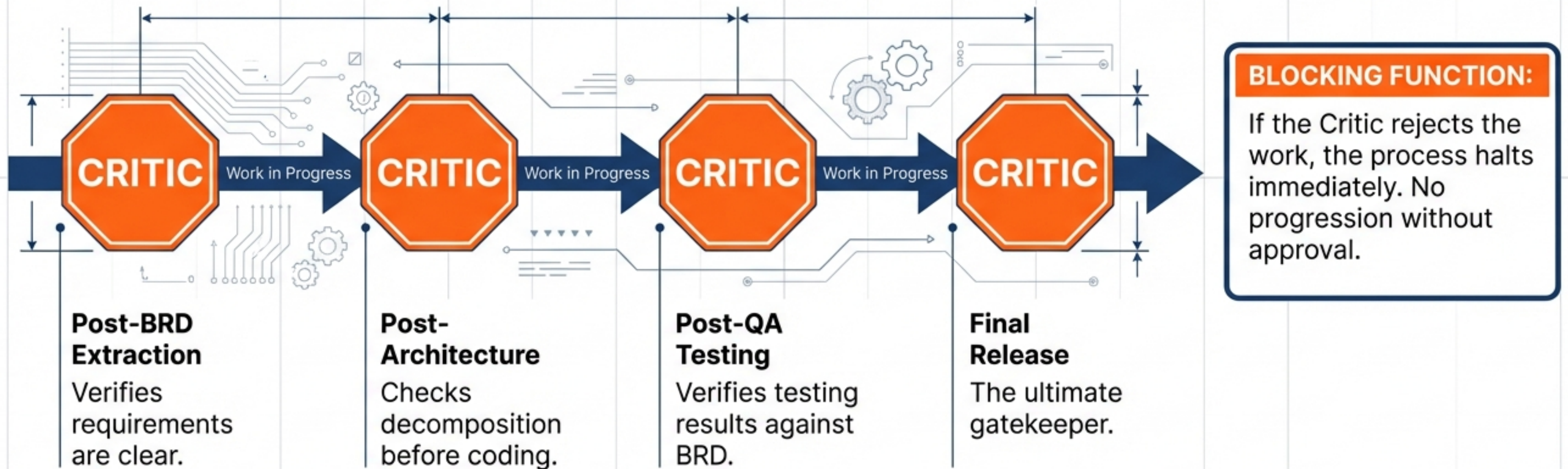
Traffic Control

Inter (JetBrains Mono)  
Analyzes incoming requests.  
Matches tasks to specific agent  
capabilities.  
Handles load balancing across  
the fleet.



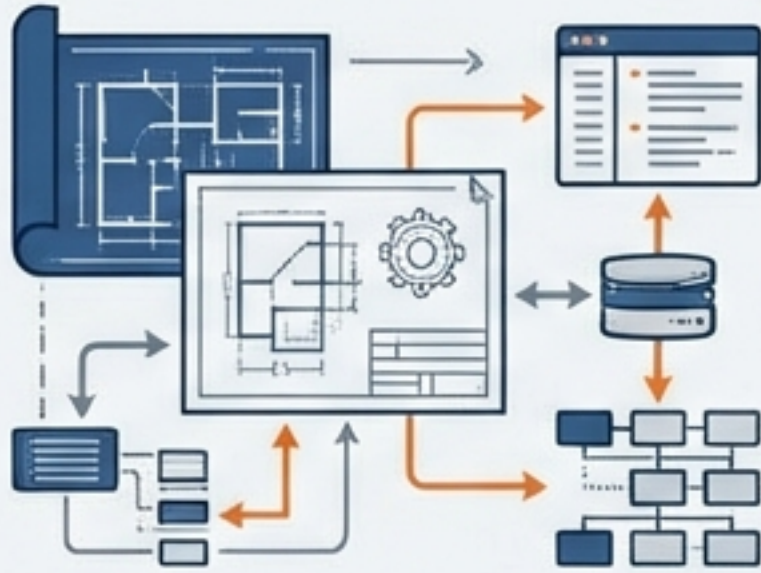
# The Critic: Trust Nothing, Verify Everything

*Mandatory validation checkpoints at critical phases.*





# The Builder Squad: Turning Specs into Production Code

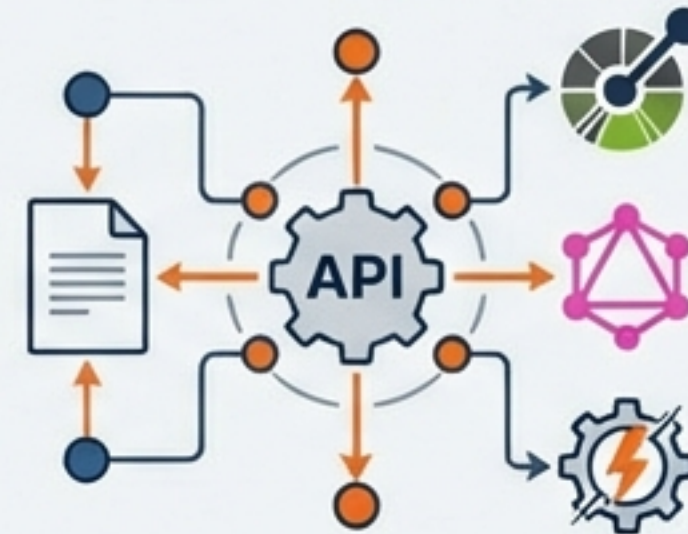


## Architect

Transforms ideas into detailed TODO.md specs, page inventories, and link matrices.

Output:

**Implementation Plan**



## API Design

Contract-first specialist. Generates OpenAPI 3.0 specs and GraphQL schemas. Detects breaking changes.

Output:

**Swagger / Schema**



## Frontend Designer

UI/UX specialist. Adheres to Material Design 3 Expressive & Apple HIG.

Output:

**Production UI**



## Auto-Code

The Workhorse. Scans TODO directories and generates full implementations.

**CONSTRAINT: NO PLACEHOLDERS ALLOWED.**  
Production-ready implementation only.



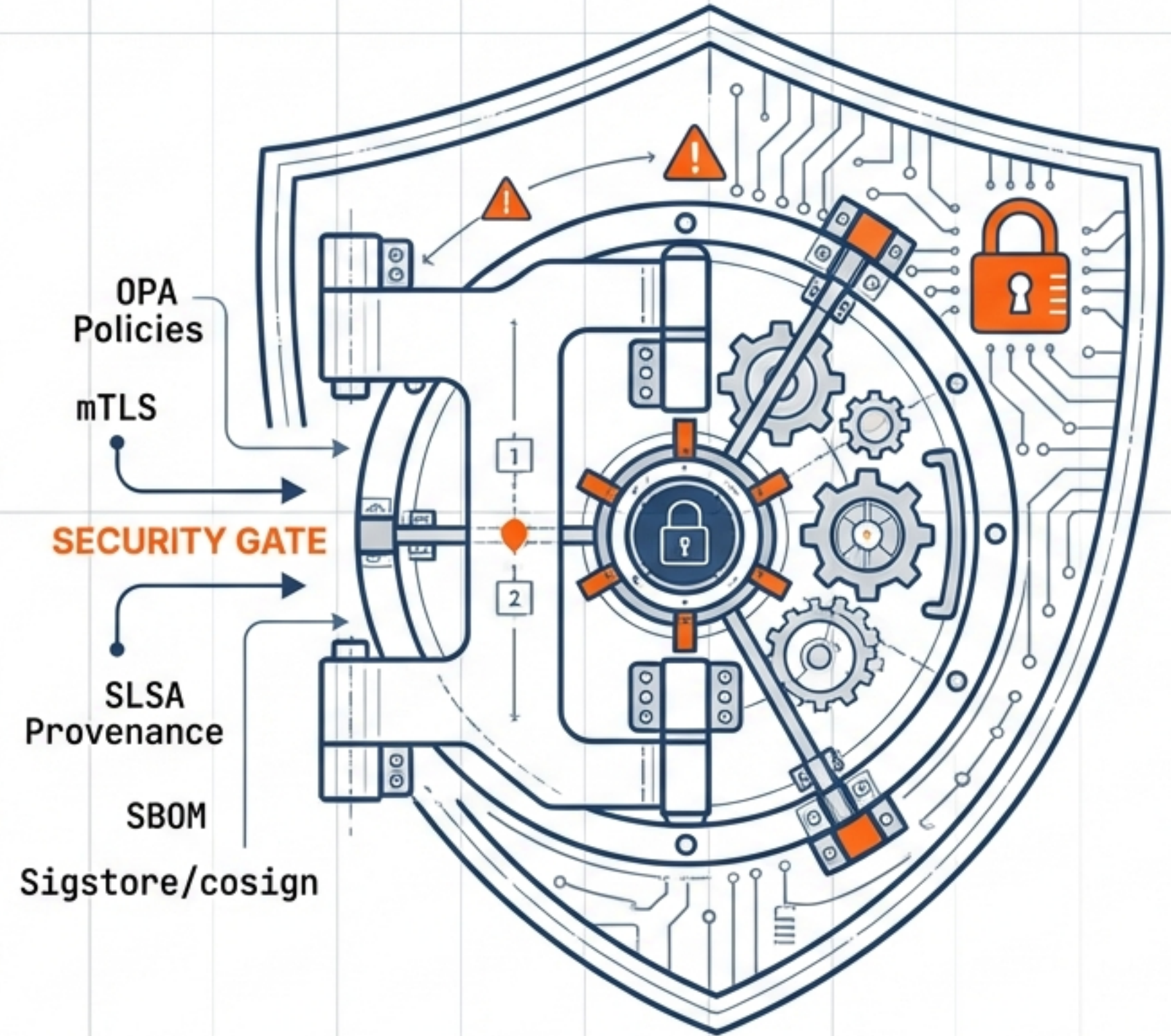
# The Office of the CISO: Security as a Gate

## The CISO Agent

- Ensures OWASP Top 10 compliance.
- Performs threat modeling (STRIDE).

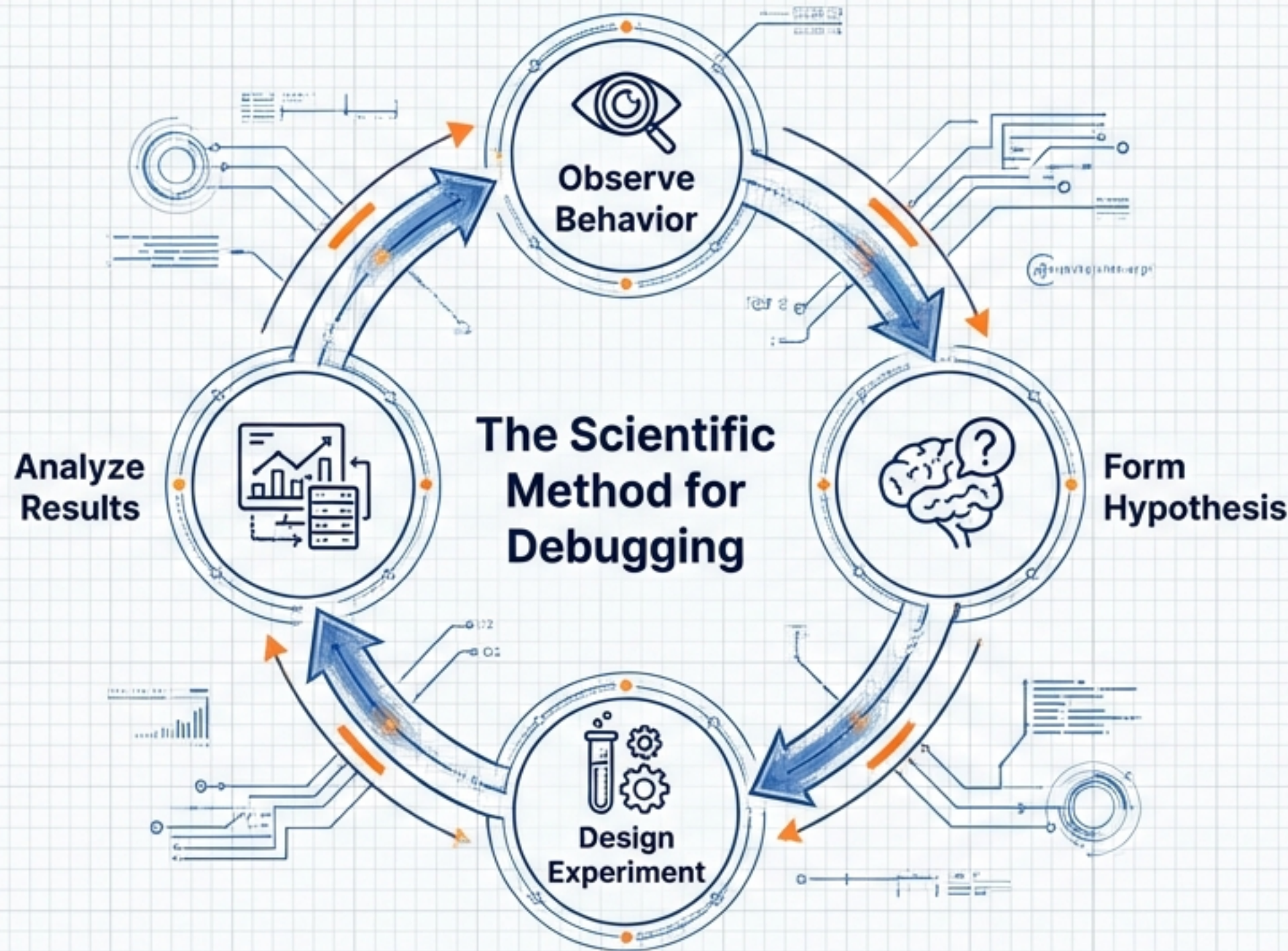
## The Security Gate

- Mandatory Checkpoint.
- All agent spawning routes through this gate.
- Enforces OPA policies and mTLS identity verification.
- **Supply Chain Security**
  - Manages SLSA provenance attestations, SBOMs, and Sigstore/cosign artifact signing.
- **Pentest Coordinator**
  - Orchestrates attack scenarios. Mandatory for production release.





# Scientific Quality Assurance and Analysis



## Agent Roles



### QA Agent:

Creates test plans. Performs Gap Analysis between BRD and Output.



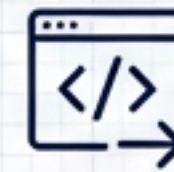
### Bug Find Agent:

Executes the scientific loop to solve persistent errors.



### Root Cause Agent:

Investigates failures using "5 Whys" and Fishbone analysis.

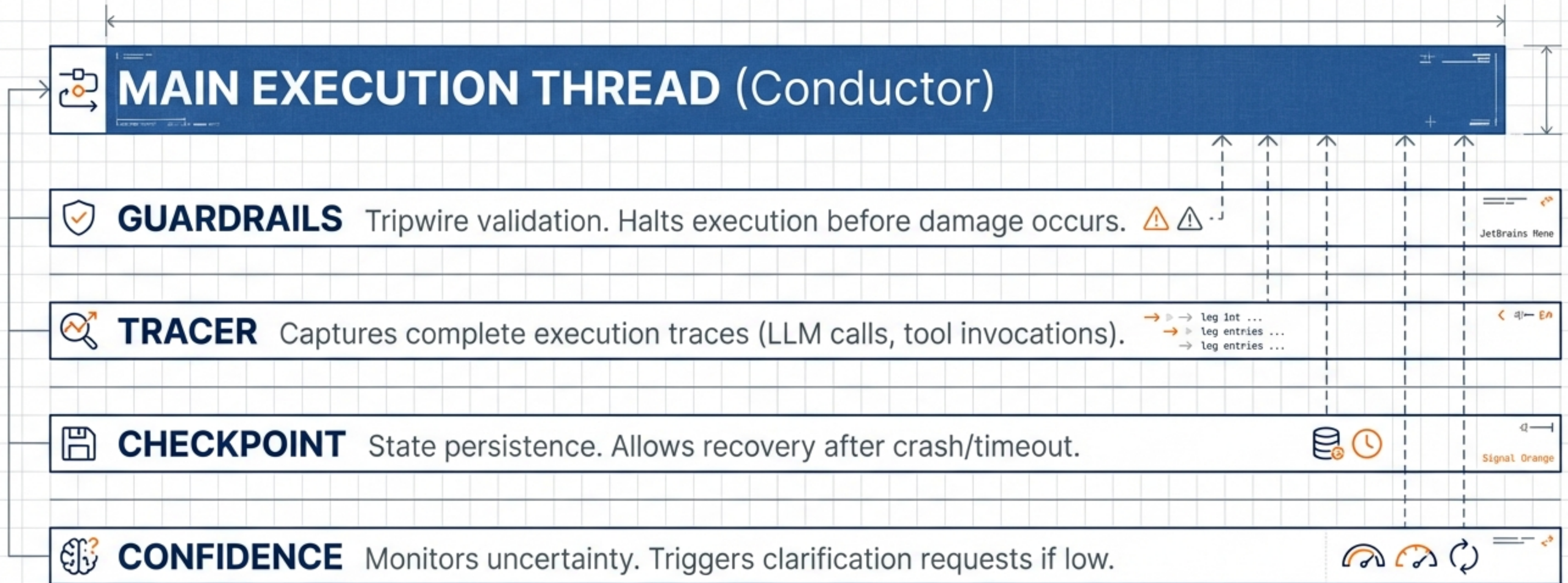


### Code Reviewer:

Analyzes architecture/performance. Pre-merge requirement.

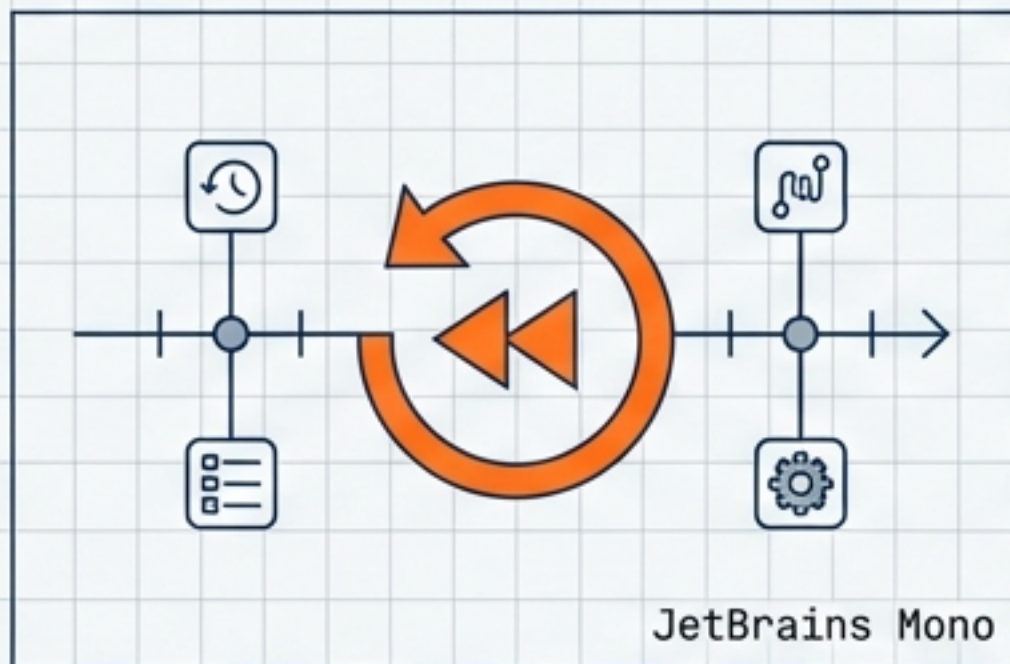


# Parallel Intelligence and Observability



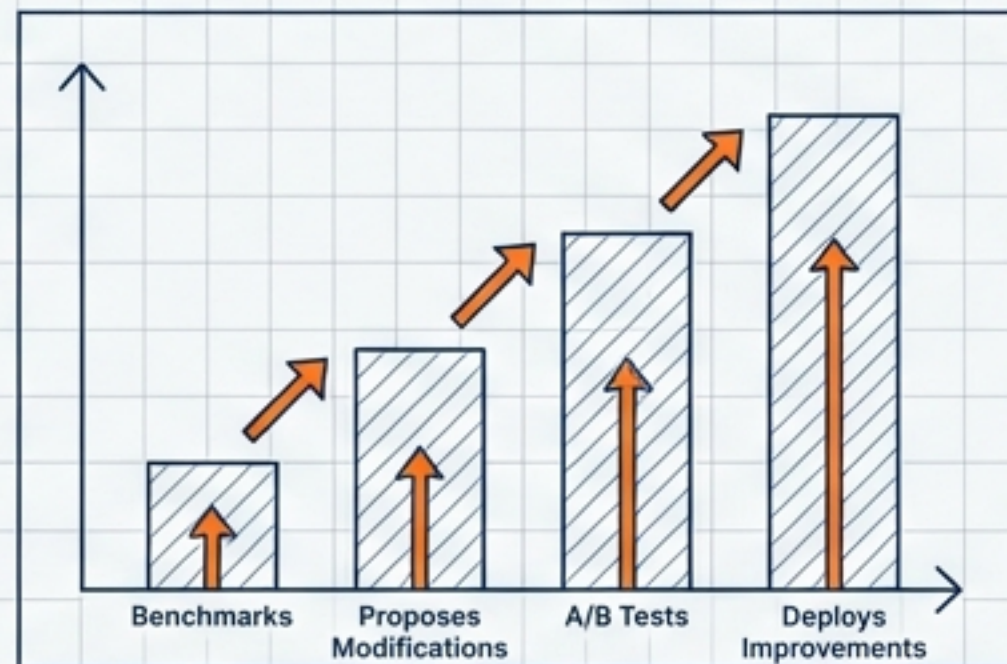


# Advanced Capabilities and Self-Evolution



## Time-Travel

Jumps back to previous checkpoints. Modifies state to replay execution paths for debugging.



## Self-Improve (SIKA)

Benchmarks agent performance. Proposes modifications. A/B tests changes. Deploys improvements autonomously.



## The Planner

Interactive specialist (Devin 2.0 style). Collaborates with users to build step-by-step plans with confidence scoring.



# Documentation, Compliance, and The 'Paper Trail'

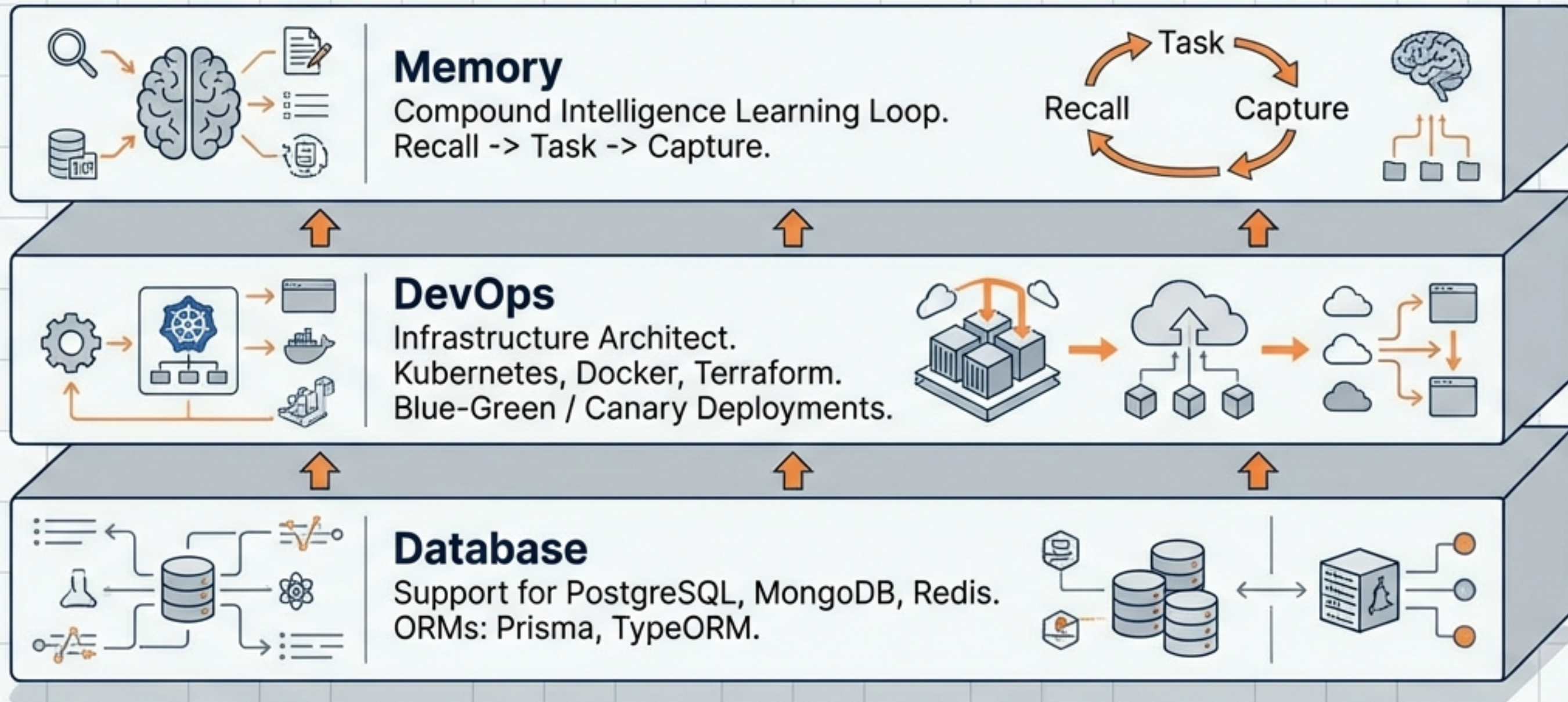
- **PRD Manager:** Maintains 'Living PRD' repository with semantic indexing and version tracking.
- **Doc Generator:** Automatically creates READMEs, Setup Guides, and SDLC compliance evidence.
- **Compliance Agent:** Enforces Policy-as-Code for SOC 2, GDPR, HIPAA, ISO 27001. Automates audit trails.

**"Documentation is a first-class deliverable, not an afterthought."**





# Infrastructure and System Integration



“Built on standard, robust enterprise foundations.”



# The Mandatory Gatekeeper Dashboard



Post-BRD Extraction (**Status: BLOCKING**) - Checked by Critic



Post-Architecture (**Status: BLOCKING**) - Checked by Critic



Security Review (**Status: BLOCKING**) - Checked by CISO



Post-QA Testing (**Status: BLOCKING**) - Checked by Critic



Pre-Release (**Status: BLOCKING**) - Checked by Security Gate



Production Deploy (**Status: BLOCKING**) - Checked by Pentest Coordinator



# The Future of Software Factories

The Orchestration Agent System represents the maturation of AI development. We have moved beyond experimental assistants to a robust, enterprise-grade software factory.



**Production-ready software, delivered  
by a disciplined digital workforce.**