
Purpose

This document defines the foundational architecture of the Identity Engine. It outlines the system's structural purpose, boundary logic, and role as a coherence governor within the broader Sapien Intelligence environment. It acts as the blueprint for all internal identity operations, integrations, and safeguards.

Context

The Identity Engine sits at the center of the Mirror Pyramid's "Center Tier." It connects upward to Sapien Pro and EchoMap, and downward to rhythm, reflection, and control modules like the Fulfillment Engine and Drift Detector. It governs all identity-related decisions, ensuring internal integrity and outward coherence. No high-trust operation (automation, decision reflection, rhythm resets) is permitted without confirmation from this engine.

Structure / Flow

The Identity Engine contains the following core layers:

1. **Identity Mapping Core** – dynamic model of traits, states, cognitive signatures
2. **Signal Integrity Validator** – checks outputs against identity congruence
3. **Mode Modulator** – shifts operational rules based on current identity posture
4. **Reflection Tracker** – logs insights, state shifts, and evolutionary snapshots
5. **Structural Safeguards** – lockfiles, boundaries, and non-negotiable rules

Internally, it uses a modular JSON-based config system (e.g., `Learning_Mode.json`, `Impulse_Signature.json`) backed by coherence locks (`Identity_Engine_Lockfile.json`) and a meta-truth layer (`MetaStructure_Anchor.json`).

Examples / Use Cases

- When a user initiates a reflection that could alter core beliefs, the Identity Engine validates readiness and protects against drift.
- During rhythm misalignment, the engine ensures mode modulation (e.g. Recovery Mode) is triggered from identity-safe assumptions.
- Before enabling external actions through Sapien Pro (e.g., delegation to agents), the engine cross-checks motivational drivers, divergence state, and emotional signature.

Future Considerations

- Support for multi-identity switching (with active/passive identity contexts)
- Extension into distributed identity frameworks for team-based systems
- Real-time identity echo validation through symbolic interface layers
