SER Ecosystem Architecture (SER + EWCEP + SER-FED)

Scope
This repository is the canonical home of **SER v1.3.0**.
It may also host adjacent protocol documents that extend SER at higher layers
without modifying the SER core specification.

Protocol roles (do not confuse)
SER v1.3.0
- **Role:** Individual entity ontology & responsibility
- **Layer:** L4 (Reality Boundary) / Individual
- **Question:** "Can a sovereign entity exist responsibly under real constraints?"

EWCEP v0.1
- **Role:** Experience-weighted co-evolution (multi-entity ecology)
- **Layer:** L2/L3 (Federation / Social dynamics), aligned with L4
- **Question:** "How does experience-weighted influence stabilize a plural system?"

SER-FED (Draft RFC)
- **Role:** Federation extension for evolutionary stability & anti-oligarchy
- **Layer:** L2 (Federation dynamics) + L4 (Reality Boundary)
- **Question:** "How does a long-lived ecosystem avoid oligarchic stagnation?"

Important: SER-FED is an extension, not "SER v2.0".
SER v1.3.0 remains canonical and unchanged.

Closed metabolic loop (system-level)
Experience → Authority → Reality (L4) → Decay → Renewal

Terminology split (critical): EA vs LA
The term "Experience" is overloaded in AI literature. This ecosystem uses two distinct objects:

Experience Artifact (EA)
- **Source:** L4 Impact Attribution layer
- **Shape:** case → pattern → constraints → uncertainty markers
- **Use:** attribution, reputation weight, authority, accountability
- **Property:** derived from lived / L4-bound outcomes, privacy-preserving by design

Learning Abstract (LA)
- **Source:** federated learning / confidential aggregation literature
- **Shape:** gradients, updates, DP sketches, aggregated learning signals
- **Use:** model improvement (updates), not authority
- **Property:** does not carry L4 responsibility context

Hard rule:
- **Learning does not imply Authority.**
- **Experience does not imply Learning.**

Arbitration topology (critical): external vs internal
Two different "arbitrations" exist and must not be mixed:

Arbiter (external, federation layer)
- inter-entity conflicts
- budgets / access / routing policies
- protocol enforcement (e.g., exploration budget, bonds)
- ecosystem-level regulation

SER arbitration core (internal, entity layer)
- modes (normal / stressed / degraded)
- fatigue / drift / safe state transitions

- enforced rest / shutdown logic
- survival physiology of one entity

Hard rule:
- **Arbiter governs interactions.**
- **SER core governs survival.**

Earth paragraph (grounding)
SER is the organism. EWCEP is the ecology of influence. SER-FED is the aging/metabolism of authority.
Without decay and pain signals, authority becomes a permanent monopoly (like uncontrolled tissue growth).
L4 is not a policy. It is physics: heat, energy, downtime, supply chains, bankruptcy.
Reality overrides reputation.