



White paper · V1

TEAF — Temporal Enterprise Architecture Framework

A synthesis of the framework: genesis, eight-component loop, central thesis, and what remains to be validated.

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Where TEAF comes from, and why this name

TEAF wasn't born in a research lab.

It was born in steering committees, architecture reviews, and diagnostics of industrial organizations and financial firms trying to understand why their technical debt kept growing despite sustained investment. The pattern is always the same: executive committees fund digital transformation, IT departments deliver projects, and the gap between strategic intent and the reality of systems keeps widening — a gap generative AI accelerates more than it resolves, by writing code, deploying services and changing configuration at a pace no classic governance cadence can keep up with.

The word "Temporal" in the name doesn't refer to scheduling or deadlines. It refers to continuity: an architecture that evolves with time and accumulated experience, rather than one frozen between periodic review cycles. This word choice has no connection to Temporal, the commercial software workflow orchestration platform — two independent uses of the same word.

The paradox of modernization through technology alone

Replacing an aging system with a modern one doesn't fix the root cause if that cause is organizational. A new platform often hosts the same decision silos as the old one, only faster. Technology moves the problem without solving it: it accelerates execution, but doesn't accelerate coordination among the teams that decide.

Generative AI amplifies this paradox rather than correcting it. An AI agent can produce a working service from incomplete context — it can't guess an undocumented regulatory constraint, an internal political trade-off, or a hidden dependency in a legacy system. The more AI accelerates execution, the more it exposes the absence of upstream governance.

The central thesis

"An organization stays governable as long as its governance speed matches its execution speed. Below that condition, architecture debt grows faster than the value produced."

TEAF, Book I — The Digital Nervous System Manifesto

TEAF formalizes the conditions of this equality — not as a new documentation framework, but as a digital nervous system: a layer that continuously connects strategy, knowledge, decision and execution.

This thesis is TEAF's founding principle. It isn't yet a result empirically validated on comparative data: it rests on repeated field observations. It's a working hypothesis argued from experience, not a theorem already proven.

The TEAF loop: eight components, one closed cycle

TEAF's most distinctive contribution is this closed loop: no existing framework links these eight steps in a single, end-to-end instrumented cycle.

01 Intent	The board's objective translated into actionable language, traced through to the decision.
02 Capability	The business, technical or compliance capability mobilized to serve an intent.
03 Knowledge	Data, past decisions, dependencies and constraints — a single source of truth.
04 Decision	The choice made from available knowledge, formalized as a Living ADR.
05 Automation	The automated execution of a decision, overseen by the AI Control Plane.
06 Execution	The change actually produced in the information system.
07 Observation	The measured gap between the result obtained and the original intent.
08 Learning	The lesson drawn from observation, fed back into the next intent.

What TEAF contributes, precisely

TEAF doesn't claim eleven isolated terminological inventions. This distinction protects the framework's credibility with a demanding reader.

Inherited

TOGAF, ArchiMate, ITIL, COBIT and SAFe remain the foundations. TEAF doesn't replace them: TOGAF remains the methodological backbone, ArchiMate the reference notation. None of these frameworks needs TEAF to be valid; it's TEAF that needs them to function.

Adapted

The Living ADR adapts the Architecture Decision Record practice, popularized by Michael Nygard in 2011, with a permanent link to the Knowledge Backbone. The Digital Twin, already widespread in industrial engineering, is applied here to enterprise architecture.

Combined

Knowledge Graph, continuous governance and AI supervision already exist separately, in the literature and in market tools. No published framework brings these three building blocks together in a single enterprise architecture system tied to named governance roles.

Unique to TEAF

The closed eight-component Loop — from Intent to Learning — and the five named governance roles that run it: Architecture Owner, Decision Steward, AI Control Officer, Capability Owner, Compliance Liaison.

One year of field experience

TEAF has been implemented in real organizations — IT, human resources, industry, logistics, business consulting, real estate. Names aren't disclosed: some organizations asked for anonymity, others prefer to wait until TEAF is more established before being publicly associated with it. This is a common constraint in architecture consulting, not an evasion.

Proven, in the field

- The feasibility of a TEAF loop on a limited scope (TEAF Light's 1-1-1 principle).
- The relevance of the initial diagnostic — governance/execution desynchronization — across varied sectors.
- The usefulness of shared vocabulary to get COMEX, architects and technical teams speaking the same language.

Not yet proven

- A generalizable, measured result with a public, reproducible measurement method.
- Scalability beyond a limited scope.
- Independent, academic or third-party validation of the method.

The collection is one year old; V2 will incorporate constructive feedback from other organizations, with no release date announced yet.

Going further

TEAF Full — the complete collection (Manifesto, Framework Specification, Practitioner's Guide), available in paperback and Kindle on Amazon.

TEAF Light — the open source reference implementation of the 1-1-1 principle, on GitLab, to start on a limited scope in a few weeks.

Maturity diagnostic — free, anonymous, six minutes, at teaf-site.pages.dev/en/diagnostic.

TEAF certifications — a program in preparation, by role, at teaf-site.pages.dev/en/certifications.

TEAF — Temporal Enterprise Architecture Framework. Synthesis document, no contractual value. Designed and documented by Mathieu URBITSCH. teaf-site.pages.dev