REFERENCE ARCHITECTURE · FOR ENTERPRISE ARCHITECTURE

No system owns the outcome.

Your estate is organized by domain. Your outcomes are not. This is a reference architecture for the layer that establishes operational truth across every system, then drives it to the outcome you declared.

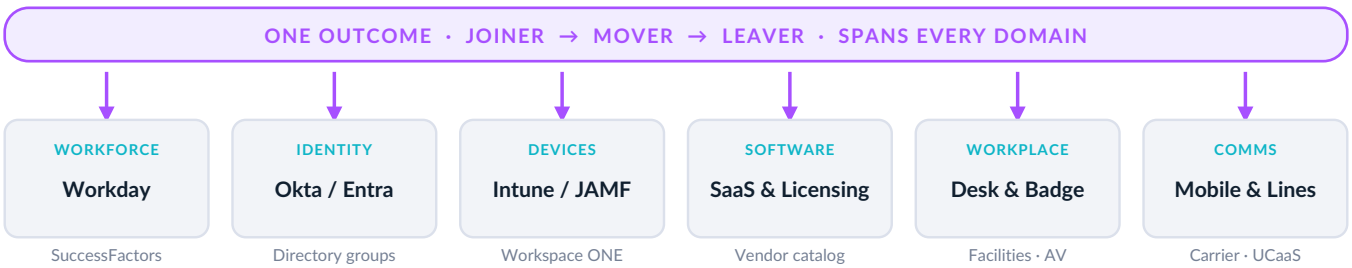
AUDIENCE	DOMAIN	DATE	CLASSIFICATION
Enterprise & Chief Architects	Digital Workplace	June 2026	For Public Distribution

THE ARCHITECTURAL GAP

Domains have owners. Outcomes don't.

Your digital workplace estate is partitioned into domains: workforce, identity, devices, software, workplace, and communications. Each domain has a dominant system of record whose authority stops at its own boundary. Workday owns employment; Okta and Entra ID own identity; Intune and JAMF own devices; ServiceNow owns service. Workflows and integrations operate inside or between those domains, always against the local truth of one domain at a time.

But the outcomes the business cares about, onboarding a person correctly, moving them between roles, offboarding them cleanly, span every domain at once. No system of record owns that cross-domain end-state, because each one's authority ends at its domain edge. That is the gap.



Each box owns its own domain. None owns the outcome that crosses them.

The work that decides Monday morning lives in the space between these systems, and no system of record is responsible for it.

WHY WORKFLOWS CAN'T CLOSE IT

A workflow is a script. An outcome is a state.

A workflow is an imperative encoding of how a person imagines a process should unfold, a sequence of steps frozen into branching logic. It fires the moment its trigger occurs and acts on whatever partial truth is locally available in that instant. It has no model of the converged end-state across domains, and no way to know whether the other domains have caught up.

So any divergence between the script and reality breaks the workflow, or worse, produces a confidently wrong action while reporting success. Workflows are brittle because they map how humans think about doing work, not the state the work is supposed to reach. This is why nothing fails and the outcome still fails.

A failure where nothing failed

A contractor converts to full-time the same week they relocate. Workday updates employment status; ServiceNow logs the new site and assets; Okta provisions access; Intune retires the contractor's device. Every workflow runs exactly as built. On Monday the new employee cannot work, IT opens incidents across several teams, and hours are lost reconciling what each system did. Nothing failed. The outcome did.

You already trust the alternative, inside one domain.

Identity governance is already declarative. You declare the entitlements a role should have, and the system continuously reconciles reality to that declaration: birthright access, certification, drift correction. Architects trust this model because it owns a desired state rather than scripting a path to it. Its only limitation is reach: that reconciliation has only ever existed inside the identity domain. The architectural question is what owns desired state across every domain at once.

THE MISSING RESPONSIBILITY

Establish what is true across every system, compare it to the outcome you declared, and drive every system until reality converges. Systems of record store facts. Integrations move data. Workflows automate the paths you define. None of them owns that responsibility. A System of Action does.

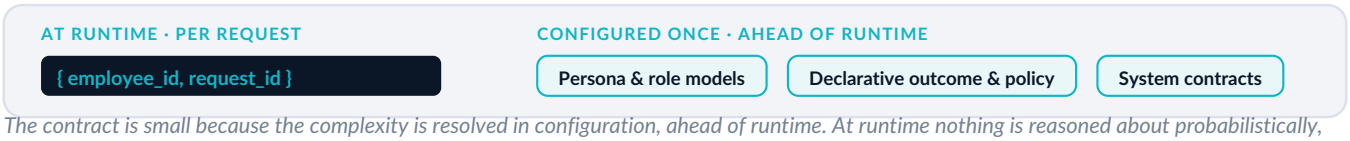
Why this isn't just orchestration

A Workflow	A System of Action
Event → Action Acts on local truth the moment it fires. Escalates exceptions to a person. Breaks when reality diverges from the script.	**Event → Truth → Desired State → Plan → Exception Handling → Convergence** Establishes what is true, plans the change, and resolves exceptions against truth before acting.

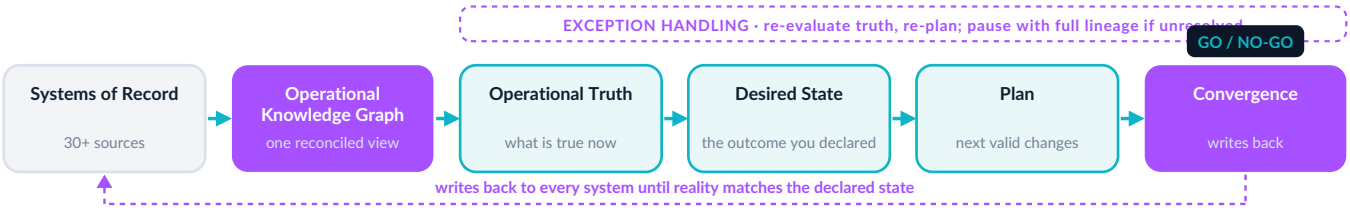
THE SYSTEM OF ACTION

Declare the outcome.
The architecture drives convergence.

A System of Action reads every system of record into a single Operational Knowledge Graph, establishes what is true right now, compares it to the outcome you declared, plans the next valid changes, and drives each system until reality matches the declaration.



The contract is small because the complexity is resolved in configuration, ahead of runtime. At runtime nothing is reasoned about probabilistically, which is what makes execution deterministic and auditable.



Actions execute through a declared route table. Models may assist reasoning; no model selects an action.

Work enters three ways

Requested on demand from an engagement surface, triggered by a system-of-record event, or scheduled, where continuous reconciliation detects drift and opens the work itself.

A go/no-go gate precedes every action

The system acts only on truth it has confirmed; exceptions re-plan against truth and pause with full lineage only when no valid plan exists.

Where it sits: responsibility, not rivalry

Responsibility	It answers	Examples
Systems of Engagement	What does someone want?	Slack · Teams · portals
Systems of Record	What happened?	Workday · ServiceNow · Okta · Intune
System of Action · XOPS	What should happen now?	Runs above the platforms you already have

Convergence is only as trustworthy as the truth beneath it. The graph reconciles 30+ sources into one continuously-updated operational truth, and every action is attributed to the records it came from. The intelligence is what makes the action safe to automate.

INSIDE THE SYSTEM OF ACTION

The Logical Architecture, Beneath the Control Plane.

The conceptual model rests on four logical layers. The hard parts, the graph, the declaration, and the planner, are where operational truth becomes deterministic action.

EXPERIENCE
Slack · Teams · Portal · API · MCP

SYSTEM OF ACTION
Intent · Policy · Planning · Convergence

OPERATIONAL KNOWLEDGE
Graph · Identity resolution · Reconciliation

INTEGRATION
APIs · Events · Connectors

SYSTEMS OF RECORD
Workday · Okta · ServiceNow · Intune · SAP

THE OPERATIONAL KNOWLEDGE GRAPH

A typed graph of people, identities, devices, software, vendors, locations, and policies, and the relationships among them. Identity resolution correlates the same entity across sources; each attribute has a declared authoritative source. Conflicts resolve through declared source precedence and reconciliation policy, and anything unresolved becomes an exception, not a guess.

THE DECLARATION MODEL

An outcome is the end-state a persona requires, declared once, not scripted:

```
outcome "MX Sales Rep":
  identity   role entitlements (policy)
  device     issued, enrolled, compliant
  software   Salesforce, Outreach, Gong
  workplace  desk + badge @ MEX-CDMX
  comms      mobile line active
```

THE PLANNING ENGINE

Given truth and desired state, the planner computes the difference, orders changes by the dependencies declared in the graph, and binds each to an entry in the route table. Plan generation is deterministic: a model may rank or summarize, but the executable plan is derived by policy, never chosen by a model.

AUTHORITATIVE SOURCE, BY ATTRIBUTE

EMPLOYMENT	MANAGER / ORG	GROUP ACCESS	DEVICE STATE	BADGE & SEAT
Workday	Workday	Okta	Intune	Facilities

Operational truth is assembled from declared authorities, one attribute at a time.

GOVERNANCE & FAILURE DOMAINS

Outcome definitions and policy are versioned and owned like code, with reviewed, audited changes and separation of duties. When a source is unavailable or records cannot be reconciled, the affected domain pauses with full lineage while unrelated convergence continues.

OUTCOME VALIDATION

The Outcome You Declared, and the Operational State It Requires.

Before the System of Action drives an outcome, the graph checks the declaration against what the role actually requires.

YOU

Here is the onboarding outcome we declared for new Mexico sales reps: laptop, identity, email, and CRM access. Is the declaration complete, or is the role missing something?

AI ASSISTANT *ChatGPT, Claude, or Gemini, connected to XOPS via MCP*

Operational Knowledge Graph · MCP Cortex

read: declared onboarding outcome, peer profiles for this title in Mexico, approved role policy, device and site requirements

Checked the declaration against the established profile for this title in Mexico, plus approved role policy and site requirements. Three items the role requires are missing from it:

REQUIRED OPERATIONAL STATE NOT DECLARED

Software the established profile for this title in Mexico includes Outreach and Gong seats; the declaration grants neither.

Mobile field reps in Mexico are issued a company mobile line by policy; the declaration has none.

Facilities a desk and badge at the Mexico City office are required for site access; neither is declared.

REVISED OUTCOME DECLARATION

```
outcome  "onboarding / MX Sales Rep"
   + software      Outreach, Gong
   + mobile        company line (MX field)
   + facilities    desk + badge @ MEX-CDMX
```

These are not part of the declared outcome, so the System of Action will not provision them. Add them and it drives them alongside the rest.

ARCHITECTURAL GUARANTEES

Deterministic, auditable, tenant-isolated by design.

Security is enforced at every layer, never at a single point of control. The System of Action never widens access, fabricates identity, or lets a model select an action, the answers an architect needs before anything writes to production.

Deterministic execution

Actions execute via a declared route table. No model selects an action, and every path is fully traced and auditable.

Identity is never fabricated

Credentials flow unchanged from authentication through to every system of record. No elevation, no impersonation.

RBAC at the data layer

Each system of record validates the credential and filters results. XOPS routes, it never widens access.

Tenant isolation

Every operation is scoped to the authenticated organization, enforced at the data layer of each system.

Graceful degradation

Per-system circuit breakers keep unaffected lifecycle domains live; an unavailable system never halts convergence. Partial results are marked, never silently dropped.

SCALE & PROOF

292
supported operations across six lifecycle domains

30+
integrated systems of record

100%
of actions traced to their source records

ISO 27001:2022 · ISO 27018 · SOC 2 Type II · GDPR Aligned · Zero Trust Native · AES-256 at Rest · Workday Silver Partner

ADOPTION PATH

1
Connected Intelligence
Query operational truth across every system in natural language, with zero change to existing workflows.

2
Connected Ecosystem
Extend across the estate for one operational picture, with dependency mapping and cost attribution.

3
Autonomous Operations
Declare an outcome; XOPS drives convergence under human-on-loop oversight.

Put a control plane above your estate.

Deploys on top of the systems you already run. Days, not months, to the first autonomous outcome.

Request a demo → sales@xops.io