

COMPLIANCE INTELLIGENCE INFRASTRUCTURE

A cognitive architecture for regulated data compliance.

Atlas defines the structural foundation for intelligent systems that reason about, manage, and enforce regulatory compliance — across any domain that governs how organizations handle data.

5

COGNITIVE
COMPONENTS

3

COMPLIANCE
LAYERS

3

ACTION
DOMAINS

3

DEPLOYMENT
MODES



01 THE UNIVERSAL PROBLEM

Every compliance function — privacy, security, AI governance — solves **three fundamental problems**.

Problem 1	Problem 2	Problem 3
<p>Determine what applies</p> <p>Given an entity, a data processing operation, or a system — determine which norms, requirements, and obligations apply. Cross-reference regulatory corpus with factual context.</p>	<p>Assess current state</p> <p>Given the applicable requirements, determine current compliance: what is met, what is not, where the gaps are, and what risk exists. Requires evaluation criteria, evidence, and expert judgment.</p>	<p>Define what to do</p> <p>Given current state and a target, determine what actions to take across the full lifecycle: design, build, maintain, verify, respond to events, and improve continuously.</p>

02 WHAT THIS LOOKS LIKE TODAY

Organizations solve these problems **manually, slowly, and expensively** — creating a bottleneck that slows down every team that touches data.

<p>A product team ships a new feature</p> <p>They need to know if it has data protection implications. The compliance team takes days — sometimes weeks — to respond. The feature ships anyway, or the launch stalls.</p>	<p>A new regulation takes effect</p> <p>The legal team reads 80 pages of new law. Then manually maps which internal processes are affected. The process takes months. Gaps slip through.</p>
<p>An auditor asks for evidence</p> <p>The compliance team scrambles to assemble records scattered across spreadsheets, emails, and shared drives. Evidence is incomplete or outdated. Every audit is a fire drill.</p>	<p>The organization scales</p> <p>More products, more data flows, more jurisdictions. The compliance team doesn't grow at the same rate. Coverage degrades. Risk accumulates invisibly.</p>

03 THE THESIS

These problems can be solved at scale — with the right cognitive architecture.

Intelligent systems can support compliance professionals, operate under their supervision, or act autonomously — depending on the task, the risk, and the organization's maturity. What they need is structured regulatory knowledge, formalized reasoning, and clear operational boundaries.

Atlas is the architecture that provides this foundation. It defines what the system knows, how it reasons, and how it operates alongside humans — so compliance scales at the speed the organization requires.

LAYER 1 — GOVERNANCE

The compliance program

Does the organization have the policies, roles, structures, and processes to manage compliance? Atlas structures requirements at the program level.

LAYER 2 — PROCESSING

Each data operation

Does this specific processing operation meet applicable requirements? Atlas provides structured requirement frameworks for evaluating individual operations.

LAYER 3 — ASSET

Systems and infrastructure

Do the tools, applications, and databases meet technical and regulatory requirements? Atlas maps controls to the infrastructure that processes data.

04 THE COGNITIVE ARCHITECTURE

Five components that enable intelligent compliance reasoning.

The cognitive architecture defines the knowledge infrastructure underneath Atlas. Each component is stored in external intelligence repositories — independent, versionable, and consumable by any AI tool or interface the organization uses.

KNOWLEDGE

01

Regulatory Knowledge Base

The structured corpus of applicable norms. Every article stored as a discrete, tagged unit — classified by jurisdiction, topic, role, lifecycle phase, and obligation type.

MODEL

02

Compliance Model

A meta-structure that hosts evaluable requirements from any compliance framework — organized across the three compliance layers. Framework-agnostic by design.

LOGIC

03

Reasoning Rules

Formalized expert knowledge expressed as evaluable decision rules. Rules that compliance experts carry in their heads — structured for machines.

EXECUTION

04

Implementation Orchestration

The knowledge of how compliance is managed across its full lifecycle: designing, building, maintaining, verifying, responding to events, and improving continuously.

LEARNING

05

Experience Store

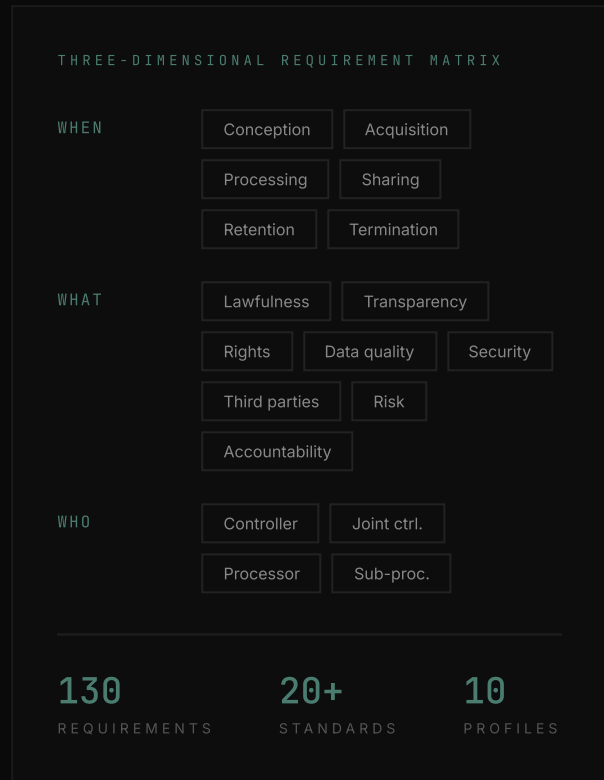
Structured records from real compliance engagements: assessment snapshots, decision logs, recurring patterns, and verified outcomes. Accumulated intelligence from practice.

Structured requirements for every data processing operation.

OPERA (Operational Privacy Exigency and Requirements Architecture) is a framework within Atlas's Compliance Model that structures data protection requirements at the processing layer. It answers three simultaneous questions for any operation: when does the requirement apply, what must be fulfilled, and who bears the obligation.

Grounded in 20+ international standards — including EN 17799, EN 17529, ISO 29101, and SDM v3 — OPERA transforms the question "is this processing operation compliant?" from an open-ended expert judgment into a structured, verifiable assessment.

Atlas hosts compliance frameworks at each layer. OPERA covers the processing layer for data protection. Other frameworks — for governance, for asset-level controls, or for other regulatory domains — plug into the same architecture.



Atlas powers three areas of compliance work — whether humans operate with AI support, or agents operate under human supervision.

<p>OPERATIONS</p> <p>Run the compliance program</p> <p>Manage the full lifecycle of the compliance program: build it, maintain it, update it when regulations change, respond to incidents, and improve continuously.</p> <hr/> <p>THIS ENABLES</p> <ul style="list-style-type: none"> ● Internal teams asking compliance questions via chat and getting accurate answers ● Automated data mapping from business documents (PRDs, user flows) ● Maturity assessments and gap analysis across jurisdictions ● Prioritized action plans that update as regulations evolve 	<p>CONTROLS</p> <p>Enforce at the point of processing</p> <p>Apply compliance rules where data is actually handled — in business processes, applications, and system integrations. Prevention, not remediation.</p> <hr/> <p>THIS ENABLES</p> <ul style="list-style-type: none"> ● Automated privacy assessments when new features are proposed ● Consent verification at data collection points ● Blocking non-compliant data transfers before they happen ● Retention enforcement and automated deletion workflows 	<p>ASSURANCE</p> <p>Verify and detect continuously</p> <p>Monitor compliance across the organization. Detect deviations. Generate evidence. Feed findings back into operations for correction.</p> <hr/> <p>THIS ENABLES</p> <ul style="list-style-type: none"> ● Continuous compliance monitoring instead of periodic audits ● Automated evidence collection and audit-readiness ● Real-time alerting when compliance status degrades ● Structured findings that trigger corrective action workflows
--	---	--

These three domains form a **continuous loop**: Operations produces rules → Controls enforces them → Assurance verifies them → findings feed back to Operations.

07 DEPLOYMENT MODES

Atlas is designed to support organizations at every stage of AI adoption — from teams that need an intelligent assistant to organizations ready for autonomous compliance enforcement.

ASSISTED	SUPERVISED	AUTONOMOUS																		
<p>AI supports the human</p> <p>The compliance professional decides. Atlas provides the analysis, retrieves the applicable rules, generates drafts, and flags what needs attention.</p> <p>A consultant uses an Atlas-powered workspace to analyze processing activities, generate a diagnostic report, and draft policies. Every output is reviewed and approved.</p> <table border="0"> <tr> <td>Decision authority</td> <td>Human</td> </tr> <tr> <td>Atlas provides</td> <td>Intelligence & drafts</td> </tr> <tr> <td>Value</td> <td>10x productivity</td> </tr> </table>	Decision authority	Human	Atlas provides	Intelligence & drafts	Value	10x productivity	<p>AI operates, human oversees</p> <p>The system handles routine compliance tasks within defined boundaries. A human expert reviews flagged items and intervenes when needed.</p> <p>An Atlas-powered system continuously evaluates processing activities, flags non-compliance, and generates remediation recommendations. The DPO reviews flagged items.</p> <table border="0"> <tr> <td>Decision authority</td> <td>System + human override</td> </tr> <tr> <td>Atlas provides</td> <td>Execution + escalation</td> </tr> <tr> <td>Value</td> <td>Scalable operations</td> </tr> </table>	Decision authority	System + human override	Atlas provides	Execution + escalation	Value	Scalable operations	<p>AI decides and acts</p> <p>The system operates independently for well-defined tasks. Humans configure boundaries, review reports, and handle exceptions.</p> <p>An Atlas-powered engine classifies incoming data, applies retention rules, verifies consent at collection points, and blocks non-compliant transfers — in real time.</p> <table border="0"> <tr> <td>Decision authority</td> <td>System</td> </tr> <tr> <td>Atlas provides</td> <td>Full enforcement</td> </tr> <tr> <td>Value</td> <td>Real-time compliance</td> </tr> </table>	Decision authority	System	Atlas provides	Full enforcement	Value	Real-time compliance
Decision authority	Human																			
Atlas provides	Intelligence & drafts																			
Value	10x productivity																			
Decision authority	System + human override																			
Atlas provides	Execution + escalation																			
Value	Scalable operations																			
Decision authority	System																			
Atlas provides	Full enforcement																			
Value	Real-time compliance																			

Atlas provides the knowledge infrastructure that makes each mode possible: the structured regulatory intelligence, the formalized reasoning rules, and the compliance frameworks that AI tools need to operate reliably — whether assisting a consultant or enforcing rules autonomously.

08 INTEROPERABILITY

Built on open standards. No vendor lock-in.

Atlas intelligence is exposed through standard protocols, enabling any AI platform — Claude, Copilot, custom agents, internal chatbots — to consume the same regulatory knowledge and compliance tools. The intelligence layer is the product; the interface is a choice.

DPV

W3C Data Privacy Vocabulary

Standardized semantic layer for expressing compliance concepts across jurisdictions and systems.

MCP

Model Context Protocol

Standard connector protocol for AI tools to query intelligence repositories and invoke compliance tools.

JSON-
LD**Linked Data serialization**


Structurally JSON, semantically rich. Compatible with REST APIs and DPV-compliant systems simultaneously.

The architecture is built. See it in action.

Schedule a demo to see how Atlas connects regulatory intelligence to your organization's AI tools and teams.

[DATUM-ATLAS.COM/DEMO](https://datum-atlas.com/demo)

[DATUM-ATLAS.COM](https://datum-atlas.com)

ATLAS 

Compliance intelligence infrastructure