



How KeyValue led Cyber Sierra's AI transformation, from first prompt to AI analysts in production

Report type
Case study

Domain
Compliance · Cybersecurity

Headquarters
 **Singapore · United States**

CLIENT REQUIREMENT

Make compliance work AI-first, without lowering the bar

Founded in Singapore in 2020, Cyber Sierra helps banks, insurers and other regulated organisations prove they follow security and compliance rules — known as governance, risk and compliance (GRC). Every rule (a “control”) must be backed by proof (the “evidence”), and someone has to check it. The goal was to have AI analysts do that checking, with people approving every decision.

THAT MEANT SOLVING THE PROBLEMS EVERY COMPLIANCE TEAM KNOWS



Weeks of manual review

A single ISO 27001 certification covers 93 controls, each with documents someone must read and sign off by hand.



Repeated questionnaire work

Enterprise buyers send hundreds of questions whose answers already exist in approved evidence.



Samples, not coverage

Teams review a sample, and gaps surface at the next audit — after the certificate is already signed.

OUR ROLE

An AI engineering team, side by side with the product

KeyValue’s AI engineering team works alongside Cyber Sierra’s developers on the platform’s AI features, from research and prototypes through to production. A new AI agent typically reaches its first release about six weeks after the first commit.

 Research & prototypes Proving what AI can do before it reaches customers	 AI analysts Audit, answering, search and dashboard capabilities	 Data & search Document understanding and unified search	 Quality & trust Evaluation, monitoring and audit trail	 Platform & cloud Integration and enterprise-grade delivery
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OUR ROLE

From research to production



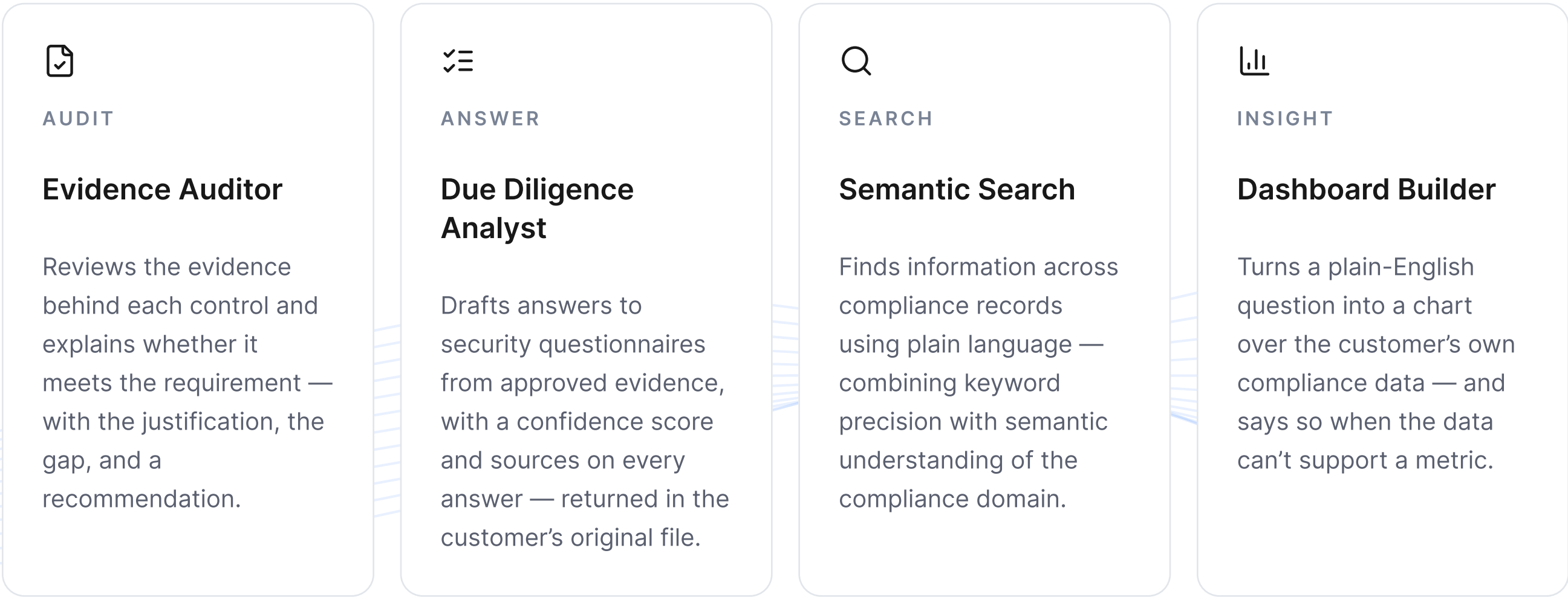
“The hard part was never getting a model to answer. It was getting one to abstain, to repeat itself exactly, to cite only what it used, and to stop safely when something is missing.”

KeyValue AI engineering team

WHAT WE BUILT

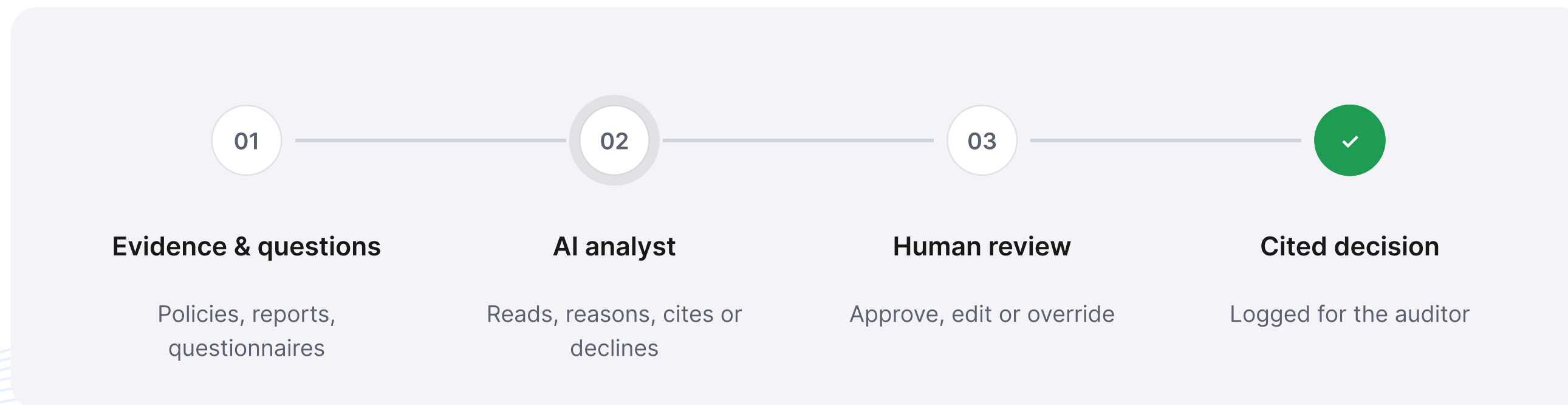
Four of the many AI agents we've built

KeyValue has built many AI agents across Cyber Sierra's platform. Here are four of them, each working from the documents the compliance team already maintains.



WHAT WE BUILT

The AI reads and reasons, a person makes the call, and every step is recorded.



FEATURES IN SPOTLIGHT

Built for how compliance teams actually work



Verdict per evidence file

Not one blended answer per control.



Cited justifications

Naming the documents and dates used.



Gap & remediation advice

On anything short of compliant.



Questionnaires in, same file out

Spreadsheet, document or PDF.



Plain-English dashboards

Read-only, on that customer's data.



Flags what it can't support

For a person to review.

CHALLENGES WE SURPASSED

Making AI decisions hold up in an audit

The hard part is making AI decisions consistent, explainable and safe to rely on.



Consistent, defensible decisions

AI interprets the evidence; clear rules make the final call, so similar evidence gets similar answers — with a justification an auditor can check.



No two audits look the same

A modular design gives each type of audit the right checks, and new capabilities can be added without a rebuild.



Real contradictions, not false alarms

Genuine conflicts between documents are separated from simple differences in wording, and uncertain cases go to a person.



Secure, offline deployments

The platform, AI included, can run in locked-down environments with no internet access — shipped behind a single CLI for a non-engineer to run.

TECH STACK

Built on a modern, cloud-native AI stack

AI

 OpenAI

 Claude Sonnet & Opus

 Gemini

 LangGraph

 LangChain

 Qdrant

 Semantic & keyword search · reranking

 Document parsing & OCR

PRODUCT

 React

 TypeScript

 Python

CLOUD

 Azure

 AWS

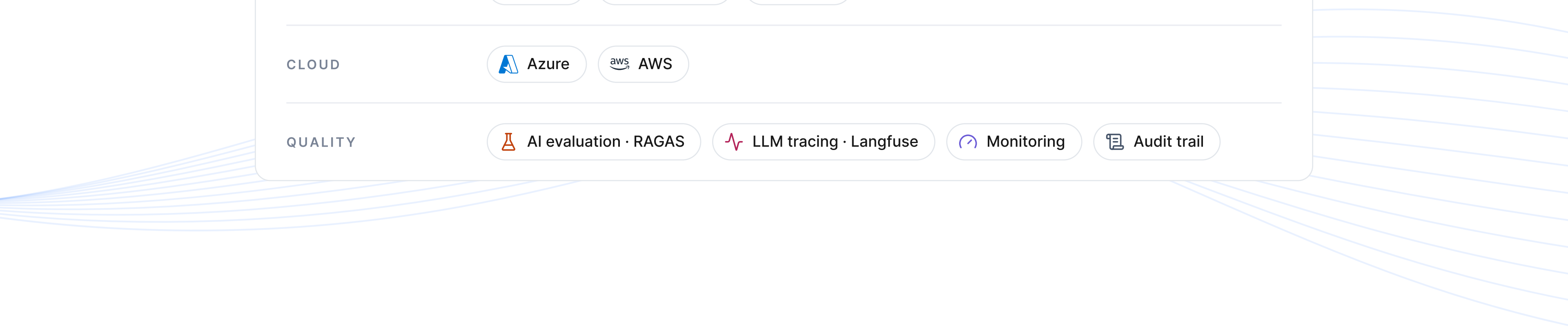
QUALITY

 AI evaluation · RAGAS

 LLM tracing · Langfuse

 Monitoring

 Audit trail



BUILT WITH CLAUDE · ANTHROPIC

Built with Claude



AI analysts built to support security teams at every stage of an investigation.

Claude powers how KeyValue builds them.

Claude Code

Our engineers use Claude Code day to day, and report higher-quality output and fewer review cycles.

Understanding the data

Claude helps our team document and make sense of complex data models underneath the compliance platform.

RESULTS

Results for Cyber Sierra and its customers

20 days
→ **2 days**

Semi-annual access review across 12 countries*

15 min

To answer a 150-question security questionnaire*

10× ROI

Within 12 months at a
Fortune 500 insurer*

Recognised

IMDA AI governance
framework contributor
(2026); available on
AWS & Azure
Marketplace

* Figures published by Cyber Sierra on cybersierra.co.