

# Resonant Knowledge Lab - Mission Overview

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**Organization:** Resonant Knowledge Lab (RKL) | **Status:** Virginia 501(c)(3) Nonprofit (est. 2025) | **Website:** resonantknowledgelab.org

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### Mission

Resonant Knowledge Lab (RKL) develops **open, verifiable methods and reproducible infrastructure** that let **large-scale reasoning systems (like GPT and Claude)** and **locally hosted models** engage responsibly with **curated, governed knowledge domains**—without exposing or transferring data.

RKL provides tools that help organizations **select, curate, and govern which knowledge domains** to make accessible to reasoning systems—whether **peer-reviewed literature, institutional data, operational knowledge, or community experience**—maintaining full agency over what is exposed and how it can be used.

### Vision

A world where every organization, practitioner, and community can reason with both its own knowledge and the most current, authoritative understanding in its field. Reasoning systems bridge scientific evidence and lived experience to deliver trustworthy, up-to-date insights while keeping sensitive information under local control.

# Approach

- **Protocols over platforms:** Open standards (e.g., MCP, RAG+) define secure AI-data interaction
- **Natural-language reasoning:** Enables intuitive yet governed access to curated knowledge domains
- **Decision support & research:** Applied pilots help organizations use existing knowledge; research partnerships study responsible co-creation

## Program Areas

1. **Open Protocols for Contextual AI** – Apply and refine public-interest protocols (MCP, RAG+)
2. **Reference Implementations & Toolkits** – Open-source adapters and reproducible on-prem stacks
3. **Decision Support & Knowledge Access Pilots** – Real-world deployments (healthcare, archives, municipalities)
4. **Governance & Stewardship Frameworks** – Templates for consent, licensing, and policy-based access
5. **Research & Applied Inquiry** – Aspirational research partnerships (NSF-funded)
6. **Education & Public Engagement** – Workshops, curricula, and training labs

## Year 1 Focus (2025–2026)

**Closed RAG Reference Stack:** Reproducible, privacy-preserving context environment | **Field Pilot:** Real-world deployment and validation | **Governance Toolkit v1:** Templates for consent and policy-based access

# Illustrative Use Cases

Sector	Challenge	RKL Solution
Healthcare	Clinicians need GPT/Claude-level reasoning without PHI exposure	MCP gateway to EHR + peer-reviewed sources with on-prem auditing
Public Admin	Cities must use historic records without exposing sensitive data	Policy-aware retrieval + auto-redaction + context synthesis
Archives	Need role-based access with consent controls	Role-gated RAGs + community governance policies
Education	Teachers need current, verified knowledge	Context brokers linking repositories + reasoning systems
Environment	Regional groups hold distributed land-use data	Federated RAG integrating local + regional knowledge

## Taglines

*Helping the world use what it already knows. | Context in. Custody stays. | Trusted reasoning for living knowledge.*

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