

Knowledge Graph

Building code clauses become structured entities with applicability, thresholds, exceptions, jurisdiction, evidence requirements, and citations.

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Rule Engine

Every rule is expressed as explicit logic with deterministic outputs. LLMs never determine pass/fail.

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Human in the Loop

Reviewers inspect evidence, accept or override findings, provide comments, and generate audit records.

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Cybersecurity

Role-based access, encryption, immutable audit logs, least privilege, Canadian hosting, monitoring, disaster recovery.

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Evaluation

Measure precision, recall, false positives, runtime, reviewer productivity, explainability, repeatability, and scalability.

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Project Plan

Phase 1 prototype; Phase 2 code digitization; Phase 3 municipal integration; Phase 4 pilot; Phase 5 commercialization.

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Appendix A: Example Workflow

Applicant uploads PDF, CAD, or IFC. AI extracts entities. Deterministic engine evaluates encoded rules. Reviewer validates. System exports signed compliance report.

Appendix B: Deliverables

Source code, API documentation, rule authoring toolkit, knowledge graph schema, deployment guide, validation datasets, benchmark report, user manuals.