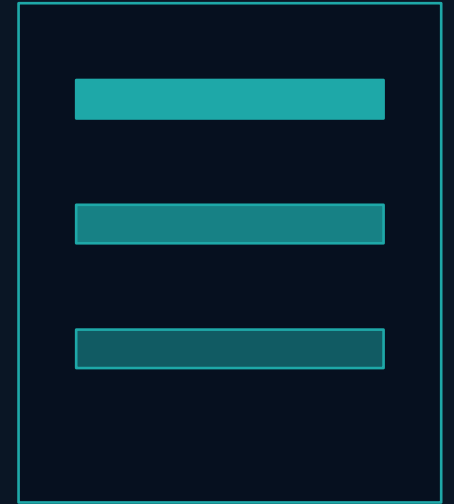


CAPSTONE PROJECT · AI APPLICATION DESIGN

Contract Intelligence

Role-aware risk surveillance for contracts and sub-contracts
.Private. Proactive. Routed to the right people at the right time



Concept brief · v0.1

Internal review document

Contracts hide risk in plain sight

And the people who need to act on those risks rarely see them in time

01

Risks are buried, not surfaced

A 60-page contract has 3-5 clauses that materially change risk exposure. They are scattered, cross-referenced and written to be .hard to find

02

The right people don't see them in time

Tender deadlines, retention release windows, bond expiries, defects liability cut-offs — all are time-bound. Email reviews and PDF mark-ups .don't trigger action

03

Each department needs a different lens

Estimation needs pricing risks. Procurement needs sub-contract protections. PM needs schedule and EOT triggers. Finance needs payment and retention terms. One PDF doesn't .serve them all

.The result: missed deadlines, unpriced risk, weak sub-contracts and avoidable claims

A risk surveillance system for contracts

Reads every contract; routes the risks; reminds before deadlines pass

READS

Continuous review

Every uploaded or watched contract is automatically reviewed against a .configurable risk library and the company's clause playbook

ROUTES

Role-based perspectives

The same contract is presented differently to Estimation, Procurement, PM, .Finance and Legal. Each sees the risks that matter to them

REMINDS

Proactive notifications

Time-bound triggers — tender clarifications, bond expiries, retention release .dates, NCR closure windows — push to the right person before the deadline

RECORDS

Decision trail

Every risk has an owner, a position (accept / qualify / reject) and a status. Audit- .ready record of who decided what, when and why

.Not a Q&A bot. A risk register that builds itself from your contracts and pushes to the people who can act

One contract, five perspectives

Each department sees only what matters to them — and is alerted only on what they own

ESTIMATION	PROCUREMENT	PROJECT MGMT	FINANCE	LEGAL
<p><i>Pricing risk before bid submission</i></p> <p>WHAT WE FLAG</p> <ul style="list-style-type: none"> ● Onerous LDs and damages caps ● Unpriced obligations (free issue, escalation) ● Material price escalation clauses ● Programme float risk ● Risk transfers needing qualification 	<p><i>Sub-contract protections that mirror main contract</i></p> <p>WHAT WE FLAG</p> <ul style="list-style-type: none"> ● Back-to-back payment terms ● Performance bonds and parent guarantees ● Insurance limits and coverage ● Indemnity and liability caps ● Step-in and termination rights 	<p><i>Time-bound triggers during execution</i></p> <p>WHAT WE FLAG</p> <ul style="list-style-type: none"> ● Notice periods for delays and EOT ● Variation order procedures ● Programme submission deadlines ● Defects liability period start/end ● Material approval lead times 	<p><i>Cashflow and commercial protection</i></p> <p>WHAT WE FLAG</p> <ul style="list-style-type: none"> ● Payment milestones and certification ● Retention amount and release windows ● Advance payment recovery ● Pay-when-paid clauses ● Currency, escalation, tax positions 	<p><i>Enforceability and dispute resolution</i></p> <p>WHAT WE FLAG</p> <ul style="list-style-type: none"> ● Governing law and jurisdiction ● Dispute resolution forum and seat ● Confidentiality and IP terms ● Force majeure scope ● Limitation of liability
<p>:ACTION Qualify, price, or reject and amend</p>	<p>:ACTION Secure protections; flag escalations</p>	<p>:ACTION Track, comply, escalate breaches</p>	<p>:ACTION Forecast, certify, collect</p>	<p>:ACTION Approve, redline, escalate</p>

Same source document · five filtered views · five distinct alert streams

.Risks become tasks. Tasks become decisions

Every flagged item has an owner, a deadline and a recorded outcome

HOW NOTIFICATIONS WORK

- 01 Trigger detected**
.AI identifies a risk, deadline or change in document state
- 02 Routed to owner**
Mapped to department and individual based on rule set (e.g. retention
→ Finance Manager)
- 03 Notified through channel**
.Email, MS Teams, or in-app — based on user preference and severity
- 04 Owner takes position**
Accept / Qualify / Reject / Escalate — with optional comment and
.attachment
- 05 Reminder until resolved**
If no response within SLA, escalates to the next level (Manager → HoD
→ CEO)

EXAMPLE TRIGGERS BY DEPARTMENT

ESTIMATION

Tender clarification deadline T-3 days · Bid submission T-1 day

PROCUREMENT

Sub-contract clause weaker than main contract · Bond expiring T-30 days

PROJECT MGMT

Notice period for EOT closing T-7 days · Programme submission overdue

FINANCE

Retention release window opens · Certified invoice unpaid past due date

LEGAL

Indemnity cap exceeded · Force majeure event triggers contract review

.No more reading 60-page contracts in search of a deadline buried on page 47

Compared to your standard, not from scratch

Each contract is reviewed against your accepted positions and fallback language

PLAYBOOK

Your accepted clause positions

Captured once: what payment terms you accept, what indemnities you don't, what insurance limits are minimum, what bond percentages are acceptable

Example: 'Payment ≤ 60 days from certification' is accepted; '> 60 days' is flagged

FALLBACKS

Pre-approved alternatives

When a clause fails the playbook, the system suggests your accepted alternative wording —
.not generic AI-drafted text

Example: Counter-language pulled from your past accepted contracts, not invented

DEVIATIONS

Tracked across portfolio

Reports show which clients consistently push hardest, where you accept deviations, and
.which deviations correlated with later disputes

Example: 'Client X accepted 5 of 7 of our standard positions in 2024

.The system learns your standards. It doesn't impose someone else's

Built for privacy. Designed for the company

All processing local — no contract data leaves the company perimeter

.network

PROCESSING PIPELINE

- 1 **Ingest**
 .PDF, DOCX, scanned image — OCR fallback for images
- 2 **Structure**
 .Document chunked by clause and section; metadata extracted
- 3 **Classify**
 .Each clause tagged: payment, liability, schedule, IP, etc
- 4 **Compare**
 .Matched against playbook; deviations scored by severity
- 5 **Route**
 .Risk register populated; notifications dispatched per role
- 6 **Track**
 .Each item carries owner, status, deadline, audit trail

STACK

MODEL

Local LLM (Llama / Mistral / Qwen) · Ollama runtime

Open-source; runs offline

RETRIEVAL

RAG over contract chunks · ChromaDB vector store

Answers grounded in document, not memory

ORCHESTRATION

Python · LangChain or LlamaIndex

Mature pipelines and tooling

INTERFACE

Web app (Streamlit v1, React v2) · MS Teams bot

Meets users where they work

STORAGE

PostgreSQL · on-premise or VPC

Audit trail; never leaves perimeter

INTEGRATION

SharePoint / OneDrive / DMS folder watcher · Outlook

Contracts where they already live

.Privacy is not a marketing claim — it's an architecture choice. Nothing leaves the network

Five tangible benefits, ranked by impact

What a contractor or developer actually gains in the first 90 days

01

Risk caught before signature

risk items per contract surfaced and routed to the right owner before sign-off. Estimation prices what was previously invisible. Procurement 5-10
.secures protections that would otherwise be missed

MOST VALUABLE**02**

Deadlines never missed

Tender clarifications, EOT notices, retention release dates, defects period cut-offs — all tracked and pushed before deadline. Reduces avoidable
.claims and lost variations

HIGH IMPACT**03**

Subcontracts properly secured

Procurement confirms back-to-back terms, bonds, insurances and step-in rights mirror the main contract. Closes the most common source of
.contractor exposure

HIGH IMPACT**04**

Privacy by design

Contracts and sub-contracts never leave the company network. Removes the regulatory and confidentiality blocker that prevents most cloud AI tools
.from being used on real contracts

ENABLER**05**

Audit-ready record

Every flagged risk has an owner, a position, a timestamp and a comment trail. Defendable record of due diligence for management and external
.auditors

STRATEGIC

.Not a replacement for lawyers. A force-multiplier for commercial, procurement and project teams

Phased delivery — and what we explicitly defer

Build what's useful first; defer everything else honestly

DELIVERY PHASES

PHASE 1

Months 1-3

Estimation use case

Upload tender contracts. Risk register for Estimation department. Manual review and rule tuning. 10 .sample contracts as test set

PHASE 2

Months 4-6

Procurement and notifications

.Sub-contract review. Email and Teams notifications. Owner assignment workflow. Deadline tracking

PHASE 3

Months 7-12

Playbook and full deployment

Company playbook integration. Folder-watcher integration. PM, Finance, Legal views. Reporting .dashboard

OUT OF SCOPE

What we explicitly do NOT do (yet, or ever)

- Replace legal review
- Generate binding contract language
- Provide legal opinions
- Auto-sign or auto-approve
- Negotiate on behalf of users
- Predict litigation outcomes
- Cross-jurisdiction tax advice

.Honest scoping is the difference between a useful tool and an over-promised one

From Q&A bot

to risk surveillance system

***for the people who actually do
.contract work***

- **READS** every contract automatically
- **ROUTES** to the right department
- **REMINDS** before deadlines pass
- **RECORDS** audit-ready decision trail