

Contract Lifecycle & Obligation AI Copilot

1. Problem We ' re Solving

Financial services companies manage thousands of contracts with clients, vendors, partners, and regulators. Each contract contains obligations, conditions, deadlines, and financial triggers (e.g., rebate clauses, SLA reporting, discount caps). Today, these are manually tracked in spreadsheets, creating inefficiency and risks. Issues include missed deadlines, revenue leakage, SLA breaches, and compliance penalties.

2. Proposed Solution

An AI Copilot that automatically ingests contracts, extracts obligations and deadlines, tracks compliance in real time, monitors financial conditions against operational systems, and proactively alerts teams. This transforms contracts from static PDFs into living, actionable intelligence.

3. Key Features

- - Contract Understanding: OCR + LLM extraction of clauses, deadlines, and financial triggers.
- - Obligation Tracking Dashboard: Calendar view of obligations, filters by department or risk.
- - Real-Time Monitoring: Matches obligations with live data (rebates, discounts, limits).
- - Proactive Alerts: Notifications of upcoming deadlines or breaches with clause references.
- - Natural Language Copilot: Query contracts with plain questions and receive cited answers.
- - Reporting & Audit: Automated reports with audit logs for compliance and finance teams.

4. Real-World Value

- For Ops Teams: Eliminates manual trackers, reduces firefighting.
- For Compliance: Ensures regulatory readiness, reduces penalty risk.
- For Finance: Prevents revenue leakage, ensures billing compliance.
- For Leadership: Clear visibility, audit confidence, and direct ROI from cost/time savings.

5. Solution Architecture (Simplified Flow)

Contracts (PDFs) → OCR + LLM Extractor → Obligation Knowledge Base (JSON store). Obligations are indexed in Vector DB for retrieval (RAG). MCP connectors fetch live ops/transaction data. Monitoring Engine compares obligations vs. data. Alerts & Reports Engine sends results to the Dashboard/Copilot interface. The dashboard offers calendar views, alerts panel, natural language Q&A, and exportable reports.

6. Demo Scenarios

- 1. Obligation Reminder: “ Quarterly SLA report due Sept 30 ” → Alert generated with checklist.
- 2. Financial Trigger Breach: Discount cap exceeded in live data → System flags breach with revenue risk.
- 3. Quarterly Review: Generate a report showing all upcoming/missed obligations with clauses and risks.

7. Technology Stack (Suggested)

- - Contract Ingestion: OCR + LLM (LangChain/Transformers)
- - Vector DB/RAG: Weaviate, Pinecone, or Milvus
- - MCP Connector: For querying ops/transaction DBs
- - Monitoring Engine: Custom rules for deadlines and financial caps

- - UI/Dashboard: Streamlit or React
- - LLM Layer: Self-hosted Gemma/LLaMA3
- - Audit Logs: ElasticSearch or TimescaleDB

8. Long-Term Potential

- - Extend to full Contract Lifecycle Management (CLM)
- - Integrate with Jira, ServiceNow, Teams for workflows
- - Multi-language contract support
- - Predictive analytics: forecast potential breaches
- - Scalable into a RegTech product for wider markets