

# Scaling Bid Success with AI: Automating Eligibility, Analysis, and Proposal Creation



## Client Overview

A leading procurement intelligence platform supporting enterprises in discovering, evaluating, and responding to public and private sector tenders. The platform aggregates thousands of RFPs daily, helping users identify high-potential opportunities and streamline bid participation.



## What The Client Needed?

To empower pre-sales and procurement teams with an AI-powered automation engine that reduces manual effort, accelerates bid response cycles, and increases the success rate of submissions. The solution was designed to:

- Automatically extract and summarize critical requirements from lengthy and unstructured RFPs.
- Validate bidder eligibility based on internal qualification data.
- Generate RFP-compliant draft proposals for faster and more consistent bid responses.

## Key Challenges

### Lengthy Tender Discovery

Daily influx of new tenders made it difficult to identify relevant ones that aligned with an organization's capabilities and focus areas.

### Information Overload & Document Complexity

RFPs typically exceed 80 pages, combining legal, financial, and technical content—often in mixed formats like scanned PDFs, tables, and annexures. Evaluating such a large volume of data manually is time-consuming and prone to errors and inaccuracies.

### Scattered Eligibility Criteria

Key qualification criteria (e.g., certifications, turnover, experience) are buried deep within documents, requiring exhaustive manual review.

### Strict Proposal Formats

Responses must align with specific templates and formats (e.g., Form A-D, executive summaries, compliance checklists), demanding repetitive effort under tight deadlines.

### Risk of Non-Compliance

Missing key clauses or incorrect formatting can disqualify a bid, especially in government and large enterprise tenders.

## Solution Features

DRC Systems developed an AI-driven platform that integrates Retrieval-Augmented Generation (RAG), Large Language Models (LLMs), Web Scraping, and Advanced Data Processing to streamline bid analysis, automate eligibility checks, and generate tailored proposal drafts, empowering stakeholders to compete effectively in high-stakes tenders.

## RFP Evaluation Engine

### Automated Data

Leveraging the web scraping capabilities (**Scrapy + Selenium**) to crawl and extract bid-relevant content from a wide range of documents available on multiple portals.

### OCR & NLP

Parsing and indexing documents (image-based and scanned PDFs) using OCR (**Tesseract**) and **layout-aware NLP models**.

### Relevance Filtering

Shortlisting of high-potential and organization-relevant RFPs, based on pre-set organizational filters (sector, budget, location, keywords).

## Eligibility check



Custom-trained NER models scan documents for hidden qualification criteria like certifications, revenue thresholds, and past experience.



Only tenders where the organization meets all eligibility conditions are routed for review—reducing time spent on non-viable bids.

## Proposal Automation

The solution automates RFP-compliant proposal draft creation:

### RFP REQUIREMENT MAPPING

LLM models analyze RFP documents and identify key required sections and formatting guidelines like executive summary, technical approach, past use cases, page limits, font specifications.

### CONTENT GENERATION

Generates draft content for general sections while keeping in mind RFP requirements.

### FORMAT COMPLIANCE

The solution generates a proposal that complies with RFP-specified formatting requirements.

### PROPOSAL

A downloadable draft proposal that can be shared and edited by the stakeholders.

## Tech Stack

### AI/ML Frameworks

LangChain for RAG orchestration

### LLMs

Fine-tuned Mistral and GPT-based models

### OCR and Text Processing

Tesseract for OCR, spaCy for semantic tagging and preprocessing

### Programming Language

Python

### Web Scraping

Scrapy for scalable data extraction, Selenium for dynamic content handling

## Business Impact

The solution gives a paradigm shift to the organizations and pre-sales team in the areas of bid evaluation, eligibility checking, and proposal drafting.

### Faster Document Analysis

Automated data aggregation and text extraction helped stakeholders to reduce bid analysis time up to 60 to 70% and increase bid submissions by 82%.

### Improved Accuracy

RAG-powered question-answering offers precise and highly relevant insights to make accurate decisions.

This enabled faster bid response cycles, better compliance, and reduced manual workload for procurement and pre-sales teams. Hence, average monthly RFP submissions increased by 82% as the solution not just improves operational efficiency, but also enhances the organization's ability to compete for high-value tenders under tight deadlines with a high level of accuracy and speed. This solution is adaptable to any industry managing complex document-based bidding workflows.

### Intelligent Decision-Making

Make informed go/no-go decisions with quick document analysis and accurate, context-relevant answers.

### Proposal Automation

Improved efficiency of RFP responses by 80% by leveraging the automated RFP-compliant proposal draft creation feature.