AI-generated Quantity Surveyor reports for a real-asset investment portfolio

Automated ingestion, RAG classification and burndown analysis of QS reports — so analysts spend their time on decisions, not data entry.

Private Credit · Real Assets | Document AI pipeline | Explainable RAG engine | Private-cloud deployment

THE CHALLENGE

- Analyst teams were reviewing hundreds of QS reports per quarter across residential, PBSA, BTR, hospitality and logistics schemes.
- Reports arrived in inconsistent formats — PDF, Word, Excel, scanned - from dozens of different QS firms.
- Cost overruns, programme slippage and contingency drawdowns were flagged inconsistently, delaying tranche release decisions.
- Every decision had to be auditable for investors, lenders and internal credit committees.

TECH STACK

- Document AI pipeline with OCR, layout parsing and table extraction.
- Foundation-model-backed extraction with a domain-tuned rubric for construction finance.
- Configurable rules engine for RAG thresholds and tranche-release criteria.
- Python services and a Next.js analyst dashboard; deployed to the client's private cloud with SSO and RBAC.

WHAT WE BUILT

- Automated ingestion of QS reports including scanned submissions, with layout-aware extraction of cost lines, variations, contingency movement and programme status.
- AI-generated report summary with RAG classification of every issue, configurable per fund and facility type.
- Burndown analysis: actual vs planned spend per cost line, with projected cost-to-complete and contingency headroom.
- Recommendations to analysts - hold, release, request more information or escalate - linked to the underlying report lines.

COMPLIANCE & OUTCOME

- Full audit trail of every AI decision, recommendation and analyst override.
- Explainability: every RAG classification links back to its source line in the original report; challenger-model comparisons supported.
- Analyst time per report reduced by ~70%; faster and more consistent tranche release decisions across the portfolio.
- Earlier detection of cost overrun and programme slippage - before it hit credit committee papers.

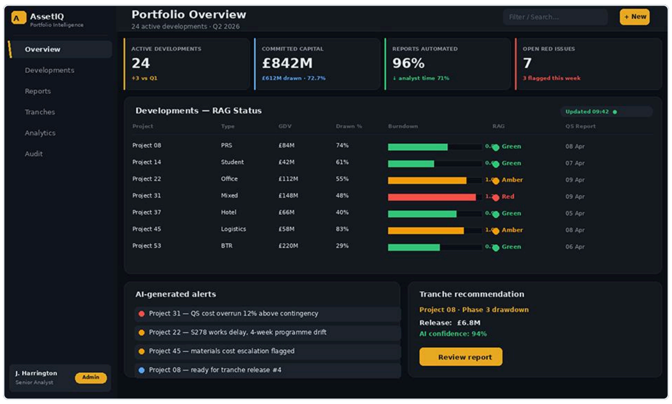

Figure 1. Portfolio risk overview with AI-generated alerts

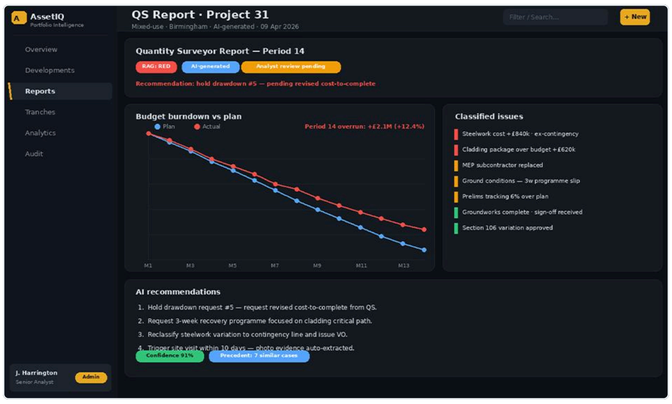

Figure 2. QS report summary with burndown against plan