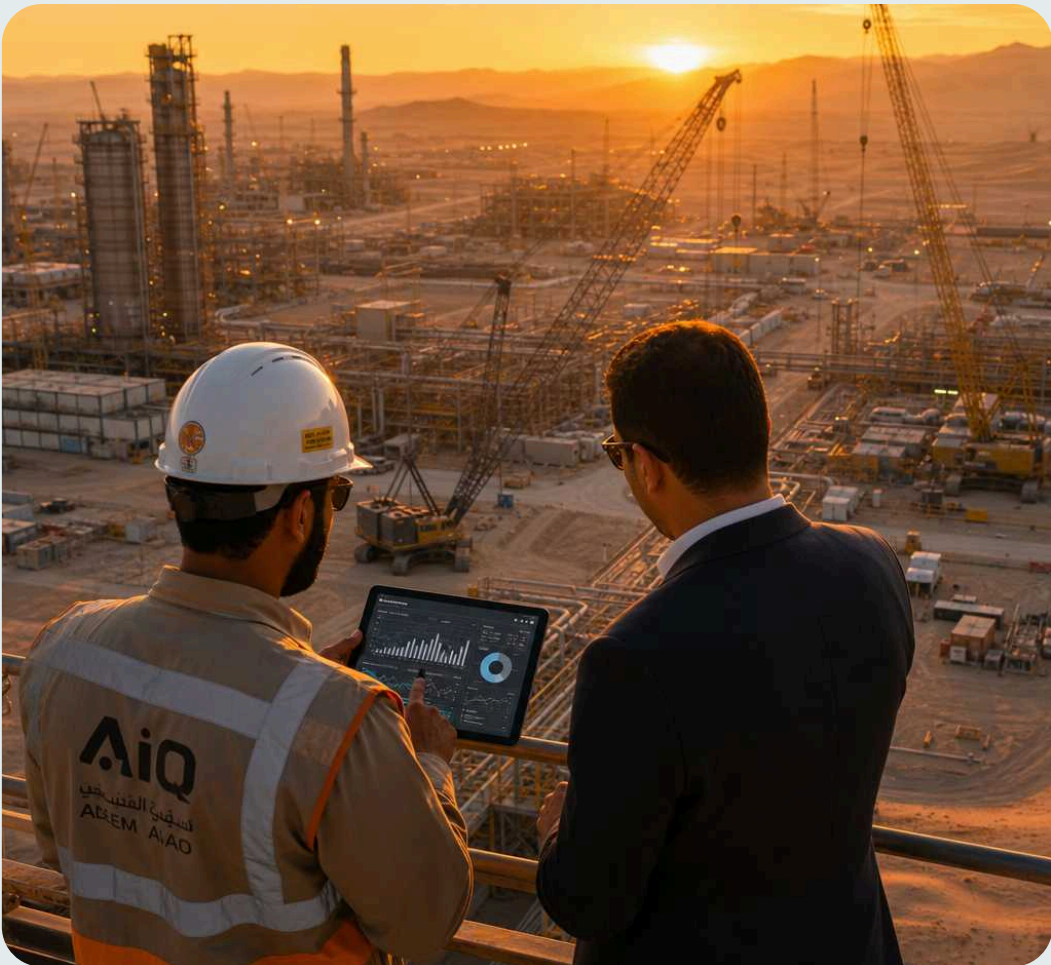


Case Study

Post-contract AI-powered technical review solution for an EPC contractor

Client:

A leading MENA-based EPC and modular construction enterprise, operating across key GCC markets including the UAE and Saudi Arabia.



Challenges

The company faced major inefficiencies during post-contract project initiation, where manual data verification delayed execution and created substantial operational risks:

High administrative overhead

Engineers spent 70% of their time during the first three months on manual cross-referencing instead of design optimization.

Severe labor loss and prolonged review cycles

Manually cross-referencing drawings, specifications, and bills of quantities (BOQs) to validate compliance, pricing, and scope for around 50 subcontractor packages resulted in 150 man-days lost per project, leading to inconsistent packages and overlooked items.

Operational redundancy

Identical feedback was repeatedly provided across multiple vendor revision cycles, creating duplicate loops and delaying project mobilization.

Solution

ZONE3000 developed an AI-powered post-contract technical review product designed around a minimal number of layouts, where the user operates within a continuous, single persistent working environment instead of navigating between multiple screens:

Package structuring

AI-driven logic standardizes procurement packages using modular parameters.

Document analysis

Automated extraction from drawings, specs, and BOQs into queryable data allowing “talk to your data” scenarios.

Bid & submittals alignment

Technical cross-referencing to instantly flag scope deviations and compliance gaps.

Clarification tracking

Linked subcontractor queries to relevant contract documents.

Expert verification

Discrepancy dashboards for critical risk mitigation.

Ready handoffs

Verified bid packages for supply chain integration.

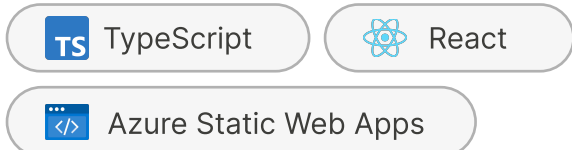
Knowledge capture

Technical memory ensures consistent standards.

3. Technology used

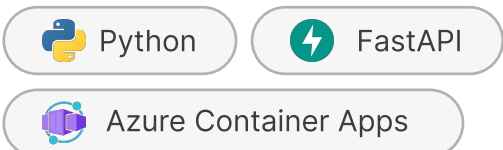
1 Frontend UI

React, TypeScript, Azure Static Web Apps.



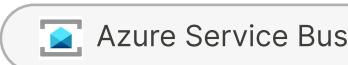
2 Backend API & workers

Python, FastAPI, Azure Container Apps.



3 Eventing & messaging

Azure Service Bus.



4 Database & file storage

Python, FastAPI, Azure Container Apps.



5 AI / Machine Learning

Azure OpenAI (GPT-5.2), LangChain to ensure AI model agnosticism and future-proofing.



6 Integration

Autodesk Platform Services (APS) API.



4. Results



The target AI impact a 70% reduction in procurement package preparation time and a 60% reduction in technical review cycles for technical document reviews and bid alignments.



AI handles routine tasks, allowing senior experts to focus on high-value engineering and strategic oversight.



Securing processing speed and data confidence to outperform competitors in high-stakes environments

This case study demonstrates how ZONE3000 developed an AI-powered technical review solution that automates routine engineering workflows, allowing experts to focus on higher-value engineering tasks while improving processing speed and data confidence.