InsightAI

CLIENT STORY

Accelerating Complex Configuration Migration With Targeted AI Tools



Software & IT Services

Story Snapshot

A leading UK software and IT services provider needed to accelerate a highly complex configuration management migration for more than 170 customers. Their semi-automated, consultant-driven process was projected to take seven years, creating significant cost and resourcing pressures. Insight AI delivered a set of bespoke Windows and AI-driven tools, backed by a retrieval-augmented generation database, to streamline previously manual steps and make migration consultants' work easier, enabling faster progression towards a more easily supported end state.

The Challenge

The client faced long timelines and high costs to migrate more than 170 customers to target configurations using a semi-automated, labour-intensive process. Each customer migration typically took around 16 days, and projections indicated the full programme could take seven years, which the client considered unacceptable. Their complex legacy configuration management system, built in-house, was difficult to analyse and automate, and existing tooling only partially supported the work.

Regulatory and compliance pressures added further constraints, increasing the need for reliable, well-understood solutions.

The client lacked clear options to significantly reduce migration time and needed creative, commercially viable ideas that could be applied organisation-wide without disrupting ongoing operations.





The Solution

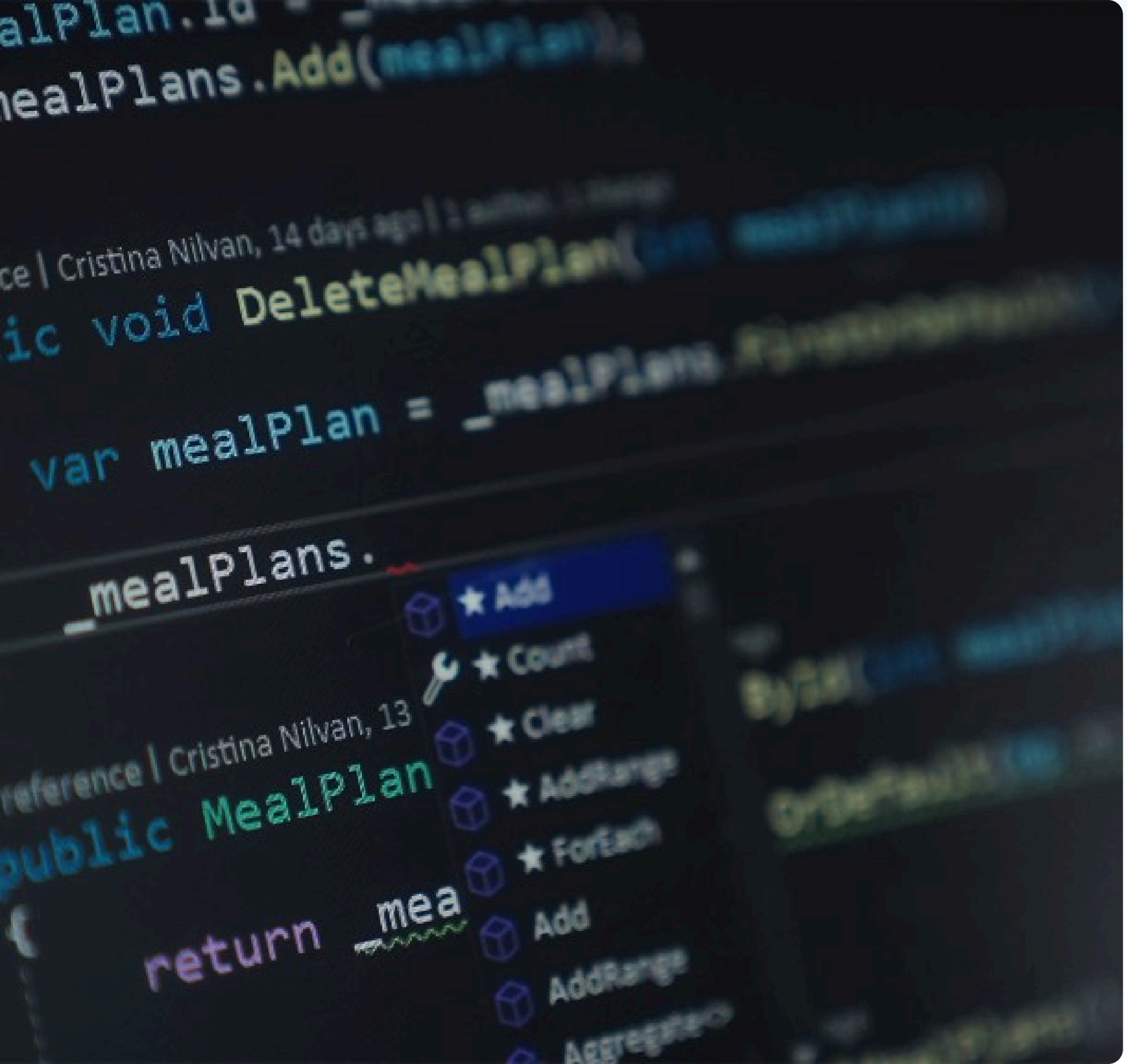
Insight AI engaged as a consultancy and discovery partner, operating as an independent delivery unit alongside the client's migration consultants. They began by listening to the consultants performing the work, then analysing the configuration management landscape in depth, including the complex legacy and home-grown systems. Based on this analysis, Insight AI proposed multiple candidate solutions targeting different parts of the migration process, triaged these with the client, and focused on those with the highest potential return on investment in terms of time reduction.

The implemented solution comprised three bespoke Windows command line or Explorer-triggered tools and two AI-driven tools, all designed as point solutions to plug previously manual steps in a multi-step, human-driven process. Technically, Insight AI used Python and C#, TypeScript and other frontend technologies, PostgreSQL, and AI/ML engineering capabilities. A retrieval-augmented generation database backed a copilot implementation for image and document processing, enabling rapid ingestion and comparison of complex configuration data. Insight AI supported deployment of these tools, iterated with the client to reach production quality, and ensured the solution remained tailored to the client's unique environment rather than relying on off-the-shelf products.

Results

- **Operational efficiency:** The bespoke Windows and AI-driven tools replaced several previously manual steps, making migration consultants' work easier and reducing labour intensity in the semi-automated process.
- **Strategic impact:** The solution directly addressed a migration programme that was projected to take seven years, giving the client practical means to accelerate progress across more than 170 customers.
- **AI-enabled analysis:** Use of a RAG-backed copilot and AI research capabilities allowed rapid ingestion and understanding of an extremely complex legacy configuration landscape.
- **Innovation in tooling:** Multiple proofs of concept, both AI and non-AI, demonstrated how LLMs and targeted utilities could deliver commercial value in configuration comparison and data management.





Technical Highlights

Insight AI followed a structured listen-analyse-propose-agree-build-iterate approach rather than a formal named agile methodology.

Key milestones included initial discovery and deep analysis of the client's legacy configuration management system, proposal and triage of candidate solutions, development of selected tools, and iterative testing with migration consultants to reach production readiness.

The technical stack featured Python and C#, TypeScript and other frontend technologies, PostgreSQL, and AI/ML engineering. A retrieval-augmented generation database supported a copilot implementation for image and document processing, enabling AI-assisted research and comparison of configuration data.

The tools were built as Windows desktop and command line utilities, triggered from Explorer to integrate smoothly with existing workflows. Insight AI provided deployment support to roll the tools into production.



Why Insight AI?

Insight AI was chosen because they combined strong analytical skills, AI expertise and experience in evaluating approaches for highly bespoke problems in software and IT services. The client already knew Insight AI from previous work and trusted their reliability and capability. Insight AI demonstrated an ability to quickly ingest large amounts of information, make sense of complex legacy systems, and think creatively to suggest candidate solutions with clear commercial rationale. Their capacity to deliver prototypes and proofs of concept, draw on wider specialist resources when needed, and operate as an independent consultancy made them well suited to tackling an organisation-wide configuration migration challenge under regulatory constraints.

Insight AI

Thank you for reading

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