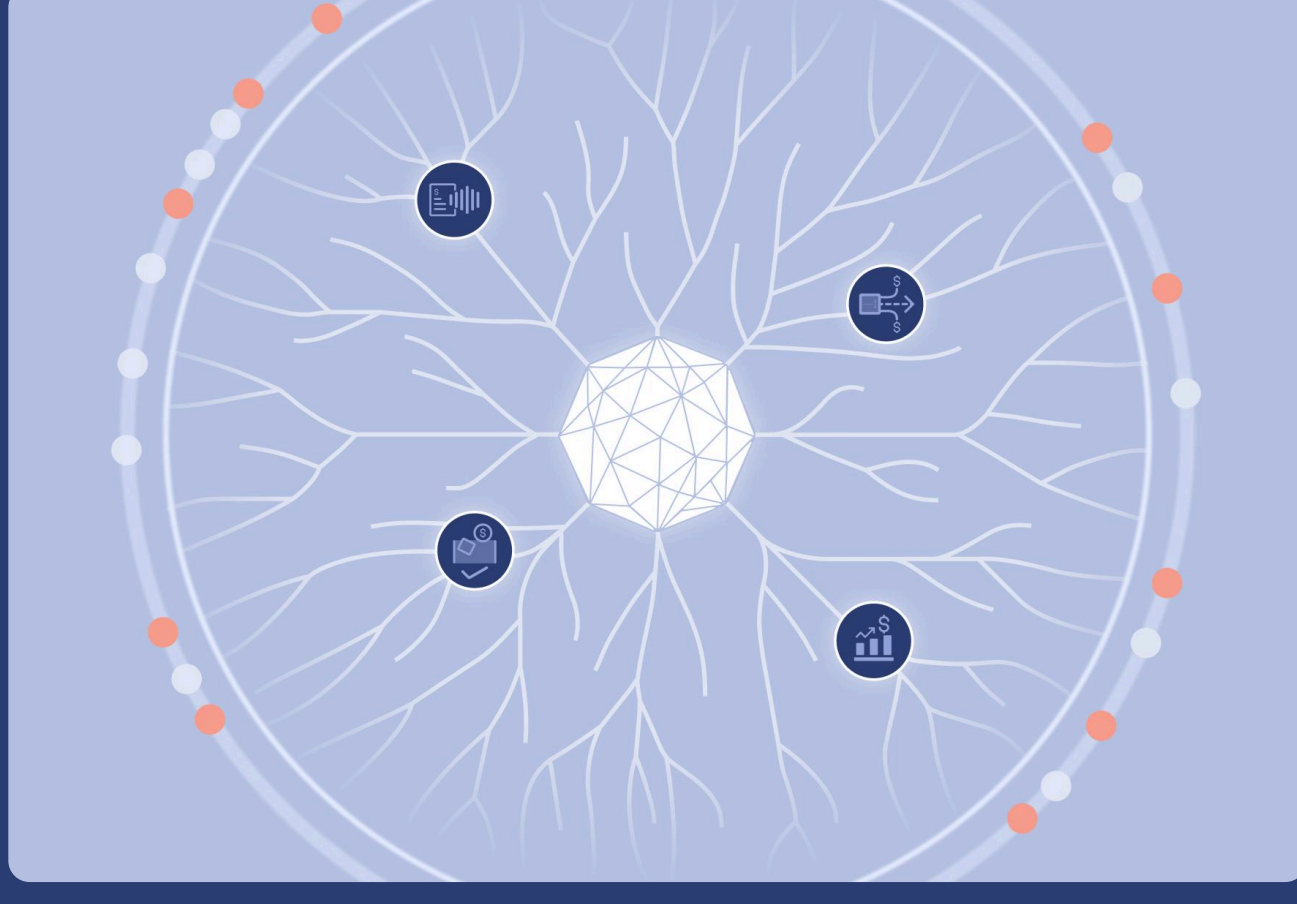


CASE STUDY

Accelerating Transactional Integrity with AI-Powered Automation



Introduction

In modern enterprises, financial data is often fractured across isolated ERPs, legacy systems, and disconnected spreadsheets. As transactions flow through these fragmented environments, data discrepancies emerge, reconciliation becomes a manual bottleneck, and visibility into real-time financial positions is severely delayed.

Zemoso partnered with a pioneer in AI-driven finance transformation to evolve their platform into a high-speed financial operating system. By engineering a scalable, intelligent data pipeline, we accelerated transaction velocity, eliminated data integrity blind spots, and empowered enterprise finance teams to shift from reactive operations to proactive liquidity management.



Industry challenge

Operational Friction and Capital Latency

Enterprise finance operations are routinely throttled by three core systemic inefficiencies:

- **Siloed Workflows:** Disparate data sources require manual re-entry, escalating operational costs and data-entry error risks.
- **Trapped Working Capital:** Sluggish invoice matching inflates Days Sales Outstanding (DSO), locking up vital capital that could otherwise fund strategic growth.
- **The AP Portal Trap:** High-value finance professionals waste critical strategic hours executing manual data uploads and payment tracking across dozens of disconnected customer accounts payable portals.



Zemoso's partnership challenge

To help the client's platform scale to meet enterprise demands, Zemoso had to architect solutions for four complex technical barriers:

- **Unstructured Data Processing:** Capturing and structured qualitative insights (such as payment promises and disputes) from multi-lingual collection calls.
- **Transactional Integrity:** Eliminating manual intervention by automated reconciliation across highly complex transaction ledgers.
- **Dynamic Forecasting:** Replacing rigid, static financial models with real-time, scenario-based cash flow predictions.
- **Data Latency:** Overhauling a legacy data architecture where dashboards took up to a minute to load, stalling real-time executive decision-making.



Impact created

Zemoso successfully compressed the reconciliation time for 12,000 complex transactions from 12 hours down to just 38 seconds, while simultaneously slashing executive dashboard load latencies from 60 seconds to under 10 seconds.

This massive optimization dramatically accelerates working capital velocity, unlocks trapped liquidity, and equips enterprise leaders with the real-time data integrity required to make high-stakes financial decisions instantly.



How did we do this?

Zemoso systematically re-architected the platform's data and analytics layer to drive automation across the entire transaction lifecycle.

- **Multi-Lingual NLP Engine:** We engineered an asynchronous Natural Language Processing (NLP) engine capable of processing collection calls in five languages. The engine automatically extracts and tags variables like payment intent, disputes, and explicit promises to pay, instantly structuring qualitative audio into actionable CRM data and eliminating substantial daily manual logging.
- **Algorithmic Reconciliation Engine:** To replace brittle, spreadsheet-based workflows, we developed a high-throughput Python-based rule engine. The engine programmatically ingests, normalizes, and matches complex, multi-source payment data against open invoices, establishing an audit-ready, single source of financial truth.
- **No-Code AI Cash Forecasting:** Zemoso transformed the client's predictive analytics layer into a dynamic, No-Code AI forecasting platform spanning over 100 configured screens. This architecture allows finance leaders to instantly run real-time, "what-if" cash flow scenarios to evaluate macroeconomic shifts and liquidity risk variables.
- **Sub-Second Financial Analytics Architecture:** We overhauled the platform's data presentation layer by integrating Apache Superset and SQLFrames. By optimizing query execution paths and refining the underlying data virtualization models, we eliminated heavy frontend rendering delays to deliver instant financial insights.



How did Zemoso deliver excellence

By combining AI-driven automation, sentiment analysis, and high-performance analytics, Zemoso helped the client to create a system where the transaction journey becomes shorter, faster, and smarter.

In doing so, finance teams are no longer constrained by operational friction. Instead, they are empowered to function as strategic partners driving growth, liquidity, and financial resilience.