

AI-Assisted modernization – IFRS17

Technology and actuarial modernization PoC for a leading peruvian insurance company.

A leading Peruvian insurance company modernized its IFRS17 actuarial platform through an AI-assisted proof of concept, reducing the migration time for critical services from an estimated 6 weeks to just 80 effective hours.

Industry: **Insurance**

*Image for illustrative purposes only

Summary

The insurer's actuarial platform ran on an outdated technology stack (.NET Core 2.1 and React 16, both out of support), with a rigid N-tier architecture that made it difficult to comply with IFRS17 and incorporate new regulatory requirements.

Novacomp designed an AI-assisted modernization PoC that migrated 10 critical actuarial services with an average 92% reduction in execution time versus the initial estimate, validating a path toward .NET 10.

Key challenges

- **Unsupported technology stack:** backend on .NET Core 2.1 and frontend on React 16, both discontinued.
- Rigid N-tier architecture, with high coupling and poor alignment with IFRS17.
- Manual processes in actuarial calculations and sensitivity validations.
- **Limited traceability and observability:** no structured logging or technical auditing.
- **Misalignment with the corporate ecosystem:** low interoperability with modern standards.

Approach

Novacomp defined a structured, AI-assisted modernization methodology, combining expert architectural judgment with intelligent automation to accelerate the analysis, design, and migration of the insurer's actuarial services:

- Configuring and training an AI model tailored to the client's specific context and needs.
- Progressive, AI-assisted migration of services from .NET Core 2.1 to .NET 6, validating the evolution path to .NET 10.
- Reducing analysis and design time through intelligent automation, improving technical quality.
- Standardizing development practices and laying the groundwork to scale a modernization capability organization-wide, with governance and technical oversight.

Migration time dropped from an initial estimate of **~6 weeks (480 hours)** to **~3 actual weeks (235 hours)**, reaching an optimized migration time of just **~80 hours**.

Results

- Migration of 10 critical actuarial services with an average time deviation of -92%, an acceleration factor of 9.8x, and a +250% improvement over the original estimate.
- Code coverage above 80%, with identification and visibility of technical debt.
- Implementation of design patterns (e.g., Adapter) to decouple components and enable changes without disrupting operations.
- Transition from synchronous to asynchronous processes, with concurrent job execution and multi-provider asynchronous logging.
- Reduced Azure KeyVault migration time from 4-5 days to 4-6 hours, with automatic rotation and auditing enabled.

Technologies used

.NET 6 (path to .NET 10)

React

Azure KeyVault

Generative AI (GenAI)

IFRS17



Conclusion

The AI-assisted modernization PoC enabled the client not only to update its technology platform and advance its IFRS17 compliance, but also to establish a sustainable organizational capability to accelerate future modernization initiatives, with greater quality, security, traceability, and regulatory control.