CASESTUDY

Global Reinsurer Slashes Legacy Migration Effort by 90% with AI Refactoring

Year 2026

Scale at Speed™

Overview

A global reinsurance leader faced the critical challenge of migrating a shared Java library from end-of-life framework versions to modern technologies. The migration involved extensive code refactoring across a large legacy codebase with numerous dependencies, and a manual approach would have been time-consuming and risk-prone. Tech Mahindra leveraged AI-assisted refactoring and template-driven modernization techniques to accelerate delivery. The approach reduced migration effort from approximately 742 hours to 62 hours, improved development efficiency, and delivered a production-ready release within an accelerated timeframe.

Client Background and Challenges

This global reinsurance company is one of the world's leading providers of risk transfer and reinsurance solutions, operating across multiple continents and serving clients in more than 150 countries. With a history spanning over 150 years, the organization manages a vast and complex technology estate supporting sophisticated risk modeling, underwriting, and claims processing systems. As part of its ongoing technology modernization efforts, the company needed to migrate a critical shared Java library used across multiple applications. The library was built on outdated versions of Spring and Hibernate frameworks that had reached end of life, creating security and support risks.

End-of-Life Technology Stack
The organization relied on legacy versions of Spring and Hibernate frameworks that had reached end of life, necessitating migration to supported and modernized versions.

Complex Framework Migration
The modernization effort involved multiple technical transformations, including namespace conversions, persistence framework updates, and migration of legacy configuration and entity models.

Large Legacy Codebase
The project encompassed a sizeable codebase consisting of hundreds of classes and multiple downstream dependencies, increasing the complexity of the migration effort.

Risk of Manual Refactoring
A manual migration approach was expected to be time-consuming, resource-intensive, and susceptible to introducing behavioural or functional inconsistencies.

Our Approach and Solution

Tech Mahindra implemented an AI-assisted modernization framework to streamline the migration of legacy Java applications to newer technology versions. The solution leveraged GitHub Copilot to automate and accelerate the refactoring of legacy Spring and Hibernate components, enabling developers to work faster and with greater accuracy.

A template-driven migration methodology was developed using categorized component patterns to standardize code transformations and improve consistency across the application landscape. This approach minimized repetitive manual effort while ensuring adherence to modernization standards. Rather than having developers manually rewrite each class, the templates provided a consistent, repeatable approach to transformation.

Tech Mahindra also established standardized migration rules for persistence models, data access components, and framework-level updates. These predefined rules enabled the rapid conversion of legacy components into modern architectures while reducing risk and maintaining code quality. The rules covered everything from package naming conventions to persistence annotations.

By combining AI-driven code assistance with structured migration templates and standardized governance, the solution enabled efficient modernization of a large and complex application estate, reducing the time and effort required while maintaining quality and reliability.

The initiative successfully completed 371 migration items, including more than 350 classes, and delivered a production-ready release within three weeks, demonstrating the effectiveness of combining AI capabilities with structured modernization processes.

Key Results

- Reduced migration effort from approximately **742** hours to **62** hours
- Achieved approximately **680** hours of effort savings
- Reduced refactoring time from roughly **2 hours** per class to **10 minutes** per class
- Successfully migrated **371 items**, including **350+ classes**
- Delivered a production-ready release in just **3 weeks**

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