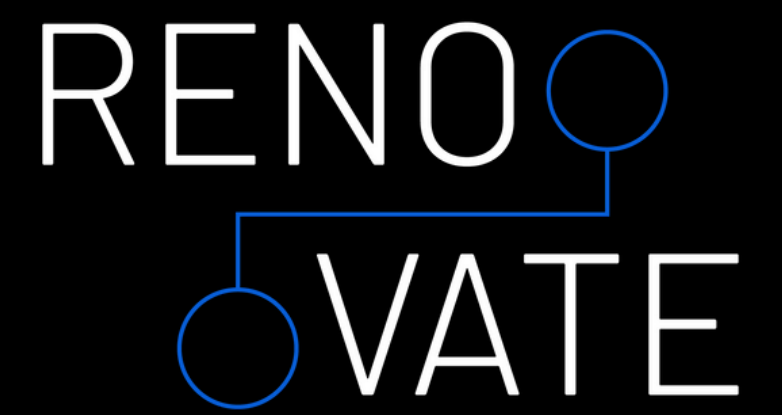


Financial Services Firm Accelerates Application Modernization By Automating JUnit Test Case Generation

**Automated JUnit Test Case Generation
Case Study**



Financial Services Firm Accelerates Application Modernization By Automating JUnit Test Case Generation

Customer

The client is a leading international financial services organization with a strong focus on providing protection and wealth management solutions. Operating in various markets worldwide, offering a wide range of insurance, retirement, and investment products and services, the company is committed to helping clients achieve lifetime financial security and live healthier lives. This powerhouse organization combines financial strength, innovation, and a customer-centric approach to empower individuals and businesses in their pursuit of financial well-being.

Challenges Faced

In navigating the complexities of legacy COBOL applications, our client confronted challenges that impeded adaptability, scalability, and operational efficiency. The reliance on legacy systems not only hindered growth but also contributed to high operational costs.

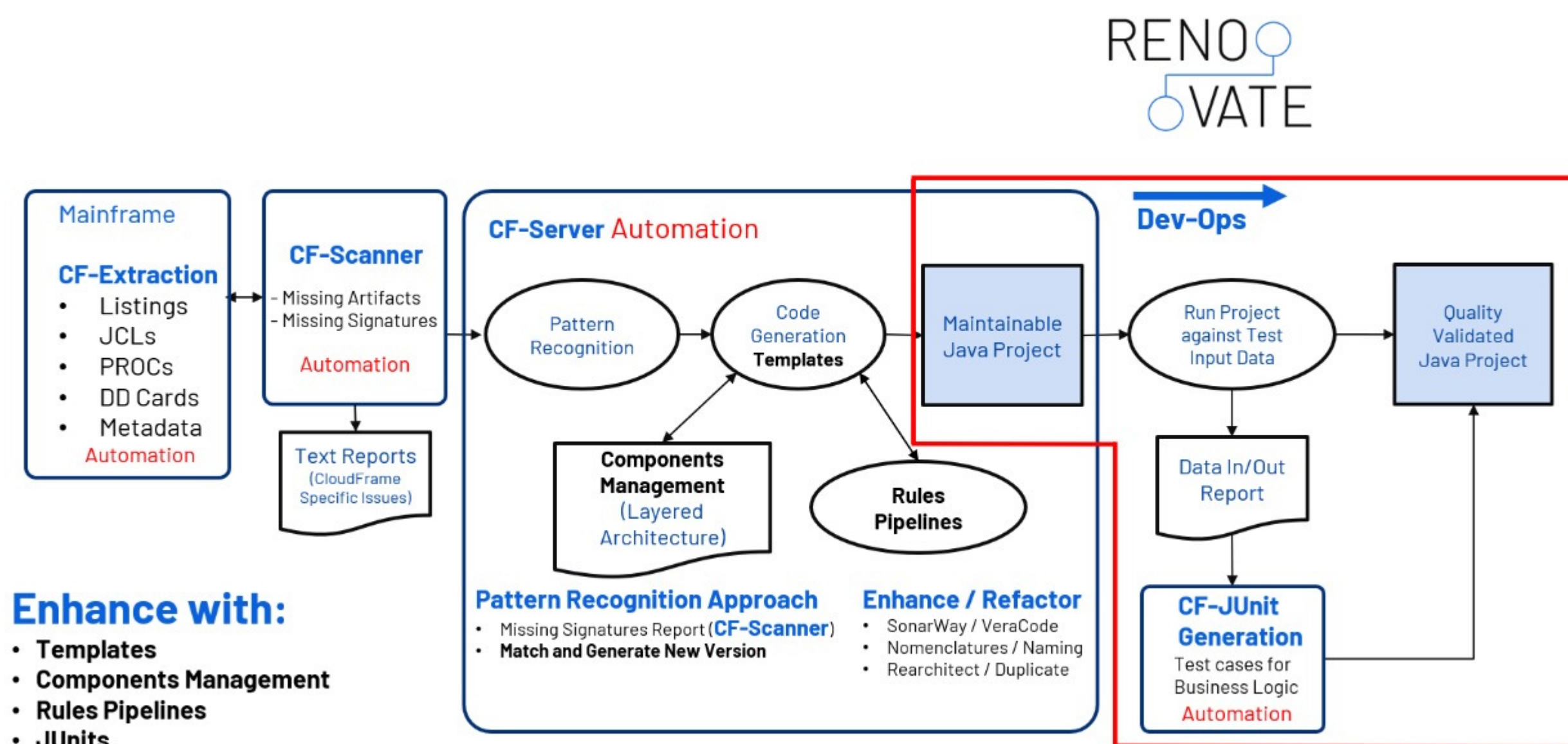
Previous obstacles faced by the client included:

- Code Confidence and Decision Delays: Confidence in auto-generated code was low, delaying critical decision-making processes.
- Testing Bottlenecks: Manual testing after automated code conversion hindered reliable testing and compliance with DevOps standards.

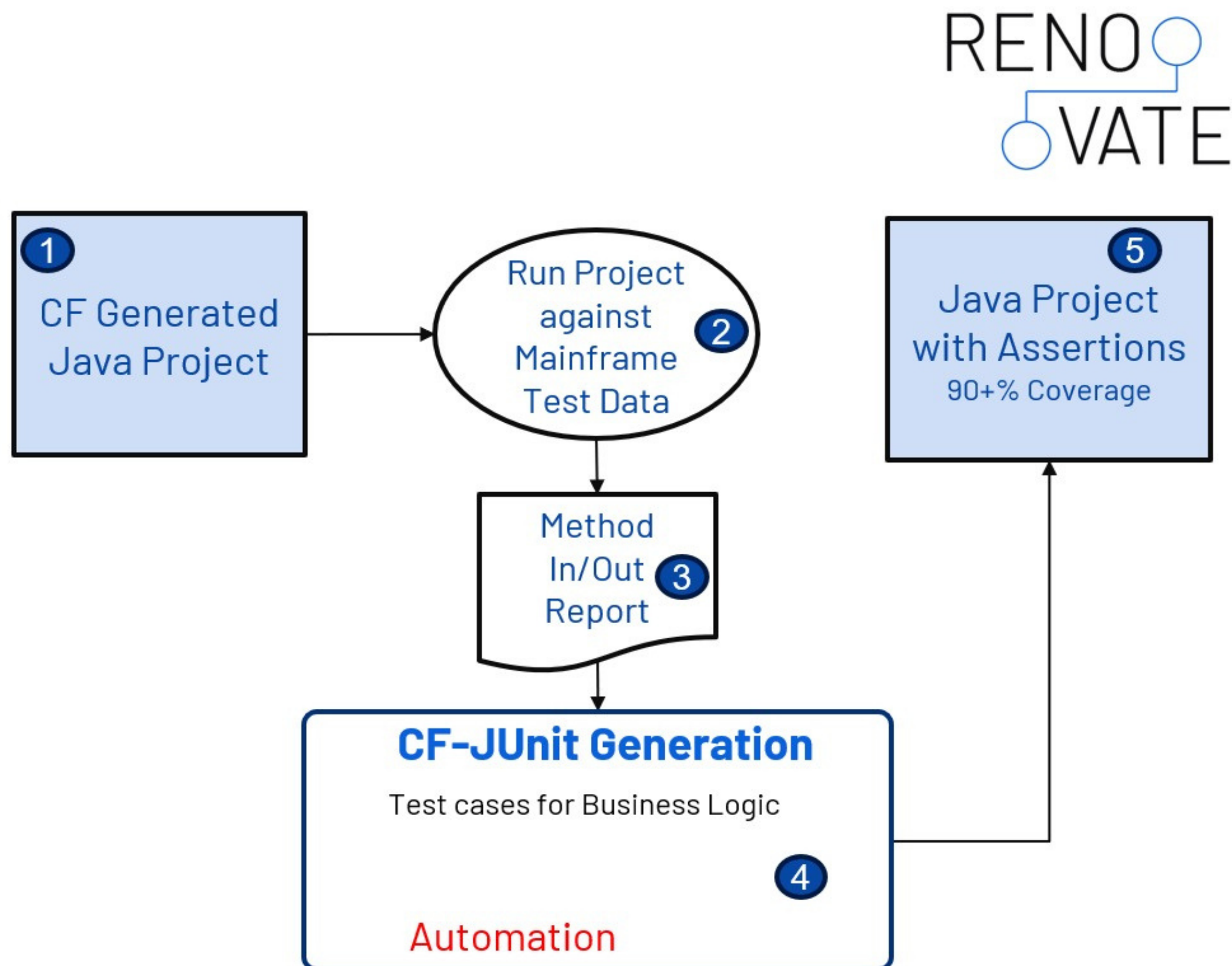
The Solution:

To address these challenges, CloudFrame introduced a transformative initiative to automatically refactor the applications by converting them to Cloud-native Java. The process also involved automating and streamlining testing procedures, ensuring strict compliance with regulatory requirements.

A successful pilot with CloudFrame's Renovate demonstrated 100% automated code conversion, which led the client to the next phase: Integrating AI-powered JUnit generation into the workflow to establish functional equivalence.



Renovate's Migration Suite, Rule Engine and AI-enabled technology was successfully used in the automation of generated JUnit test cases.



Results:

CloudFrame executed a clean transition, converting legacy COBOL applications to Java seamlessly. A key feature was the automated generation of JUnit test cases that aligned perfectly with internal compliance thresholds.

Key Objectives Achieved:

- Enhanced Efficiency: The solution drastically reduced timelines and costs, achieving over 90% code coverage on business logic without manual intervention.
- Cost and Time Savings: Code coverage showcased substantial improvements, reducing testing and implementation costs by over 50%.
- CloudFrame's automated JUnit test generation offers significant time savings, potentially reducing a year of manual work for a 10-person team to just a few hours, contingent on existing Mainframe test case quality.

The project not only met its objectives within the stipulated time and budget but also set a benchmark for future application modernizations. With all testing requirements successfully addressed, the organization now possessed a reliable model for handling similar transformations with efficiency and precision.