Coforge

WHITE PAPER

Legacy Application Modernization through Coforge CodeInsightAI and Pega Blueprint

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1. Executive Summary

AI Synergies – Legacy Code to modern applications

Legacy systems hold decades of business logic, often buried in monolithic code. These codes can be in languages like COBOL, TPF, RPG, PL1, Tandem COBOL, Eazytrieve, .NET, Unisys COBOL.

For rapid migration and modernization of legacy applications, it is imperative to analyze them to extract the business rules and technical specifications and utilize the outcome to generate a design blueprint for the following stages of development.

This paper highlights the combined power and process of Business Rules Extraction using Coforge's AI-infused tool CodeInsightAI and utilizing its output to create detailed designs using the Pega Blueprint. The integrated solution details out the Legacy Modernization design phase and how artificial intelligence is utilized to cut down on time, cost, and effort.

CodeInsightAI and Blueprints can combine synergies to automate and optimize the entire design phase for a Legacy Modernization project.

Overarching benefits include accelerated time to market, enhanced design and blueprint quality, optimized resource utilization, and reduced modernization costs.

2. Legacy Modernization – The Design Challenge, a Bottleneck to Rapid Application Development

2.1 Manual Era: Tedious and limited scalability

Early modernization efforts relied on developers and SMEs manually analysing legacy codes. While this approach used deep domain knowledge, it was time-consuming and dependent on tribal knowledge. These limitations naturally pointed to the need for scalable, automated solutions that could deliver greater accuracy and business context.

2.2 Automated Phase: Tool-Assisted Discovery

As Legacy modernization progressed, static code analysers and rule mining tools began to emerge. These technologies accelerated rule extraction and improved documentation quality. However, these documents were more technical, lacking domain knowledge, and still needed human interpretation. This paved the way for the next technological paradigm, artificial intelligence-driven analysis.

2.3 AI-Powered Revolution

AI-driven business rules extraction and documentation of Legacy Source codes and applications did not merely automate the retrieval of rules from legacy systems; it reimagined the entire process.

3. Coforge's CodeInsightAI

Coforge's CodeInsightAI leverages cutting-edge Generative AI (GenAI) technology to transform legacy code into an extensive knowledge hub through business requirements, technical specifications, and inventory documentation. It deconstructs the applications at the source code level and reconstructs at the business rule level. It generates the business requirements document for an application comprising all the underlying programs with the domain context. It supports multiple languages like IBM Cobol, TPF, PL1, ASM, Tandem Cobol, RPG, .Net, Java, with more programming languages and stored procedures support included.

CODEINSIGHTAI

4. Pega Blueprint

Pega GenAI Blueprint™ offers a transformative approach to modernizing legacy systems, eliminating technical debt, and redirecting budgets from maintenance to innovation. Pulling in existing application documentation (e.g., BRD from CodeInsightAI) leverages AI and industry best practices to streamline application requirements, data structures, and processes. It captures the process flows, personas, data objects, and case types that feed into the subsequent stages of application development.

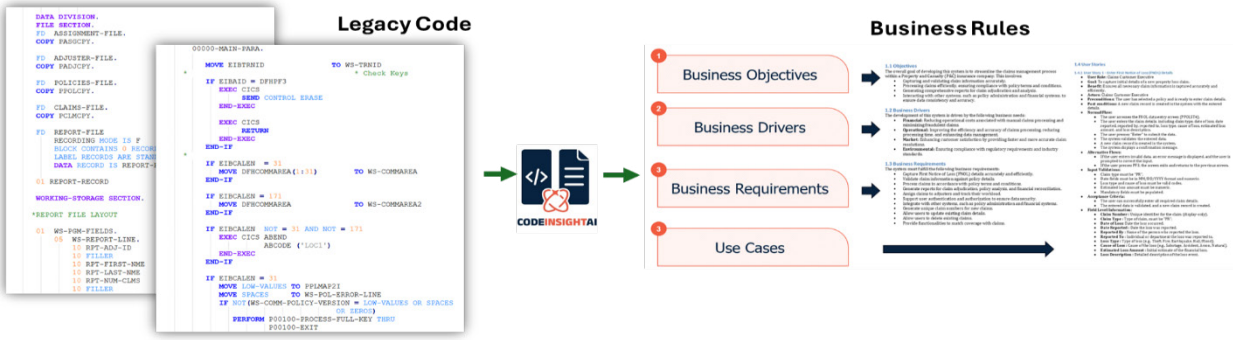
5. The Joint Offering

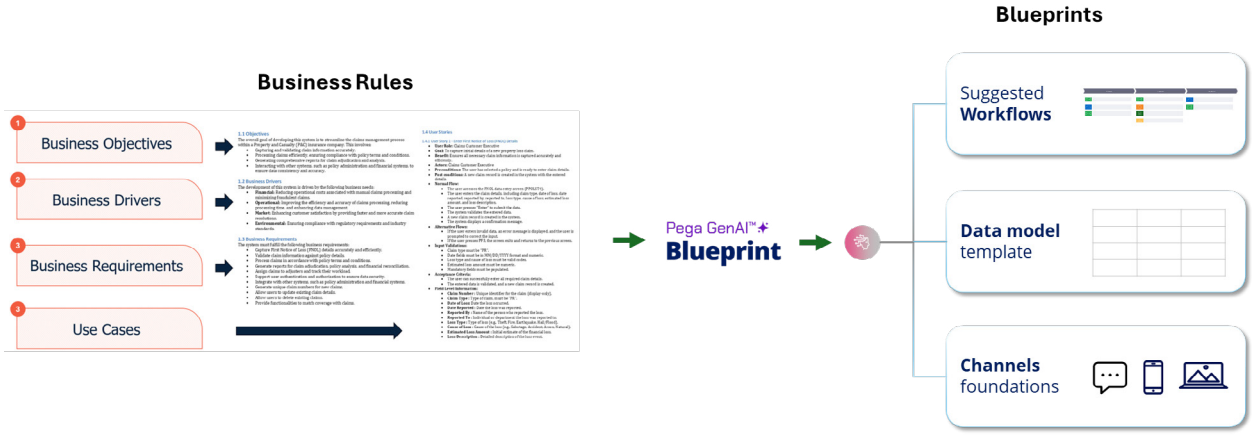
Coforge CodeInsightAI and Pega BluePrint collaborated to understand legacy applications and modernization better. In this approach, CodeInsightAI generates business requirement documents. (BRD) from legacy application code at scale, with accuracy and speed. BRD comprises rules in user stories, actors (personas), pre- and post-conditions, business rules, test conditions, and domain entities. Pega Blueprint then ingests BRD and captures the process flows, personas, data objects, and case types in a collaborative, no-code environment.

Aman Gupta, SVP, Modernization, Coforge states: "Coforge's deep modernization and industry expertise, amplified by its GenAI-led reverse engineering platform CodeInsightAI and Pega Blueprint, redefines enterprise transformation. This powerful combination accelerates legacy system analysis and generates intelligent, future-proof process designs. Our partnership with Pega empowers clients to rapidly build and deploy AI-driven solutions, reducing technical debt and significantly enhancing operational agility for true business impact."

The diagrams below depict how both the tools combine synergies to generate outcomes.

Legacy Code is used by CodeInsightAI to generate Business rules





Business rules are used by Blueprint to generate design outcomes

Matt Healy, Sr Director, Pega, says – "Together, Coforge and Pega are redefining enterprise modernization and paving the way for businesses to harness AI at scale. By infusing Coforge's decades of modernization expertise directly into Pega Blueprint, enterprises gain a fully AI-led approach to legacy transformation. This enables them to understand their legacy estate quickly, reimagine end-to-end customer journeys, and deploy new AI-powered solutions on the cloud faster than ever before."

5.1 Business Impact and Return on Investment

The integrated solution uses innovative Generative AI (GenAI) technology to extract deeply hidden and complex business rules from Legacy source codes and convert them to detailed designs for rapid application development on modern platforms.

Faster Time to Market

Leveraging AI to break the monolith and spaghetti legacy code into business documents and then using those to create domain-driven designs drastically reduces the overall application transformation time by up to **45%**

Improved Quality Designs and Blueprints

AI-led design generation creates consistent, tailored, and contextualized designs. Design time can be reduced by up to **50%**

Optimization of Resources

Developers and architects can focus on target state development, enhancement, and optimization. Reworks are reduced by up to **35%**

Reduced Cost

The solution reduces manual effort and jump-starts modernization projects, resulting in an overall cost reduction of at least **30%**

About the Author

Piyush Dwivedi is an Enterprise Architect at Coforge, specializing in Legacy Modernization. He is recognized for his expertise in strategy, architecture, and implementation, particularly in Mainframe Modernization, and he designs scalable, outcome-driven solutions. As a seasoned architect, Piyush brings global, cross-industry experience in solutions for assessments, re-architecting, and re-engineering legacy systems. He is passionate about innovation and blends hands-on expertise with a forward-looking mindset to help organizations drive meaningful transformation.

About Coforge

Coforge is a global digital services and solutions provider, that leverages emerging technologies and deep domain expertise to deliver real-world business impact for its clients. A focus on select industries, a deep domain understanding of the underlying processes of those industries and partnerships with leading technology platforms, enables Coforge to be a trusted partner of its clients in their transformation initiatives. Coforge leads with its Product Engineering approach and leverages AI, Cloud, Data, Integration and Automation technologies to transform businesses into intelligent, high growth enterprises. Coforge has 30 global delivery centers and is present in 23 countries.

Learn more: www.coforge.com

For more information, contact information@coforge.com

About Pega

Pega (Pegasystems Inc.) is a leading software company focused on enterprise AI decisioning and workflow automation. Their low-code Pega Platform empowers organizations to build and deploy custom applications, automate complex business processes, and optimize customer engagement. Pega helps businesses achieve digital transformation by streamlining operations and delivering exceptional customer experiences. A notable offering, Pega GenAI Blueprint, leverages generative AI to rapidly design application workflows from natural language descriptions, accelerating modernization and fostering collaboration.

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