

# Reimagining Legacy Modernization with **Generative AI and Pega**

Accelerating Digital Transformation with  
AI-led, Secure, and Scalable Modernization





# Why Modernization Can No Longer Be Delayed

Most legacy applications, built decades ago, suffer from undocumented code, knowledge loss, and security limitations. As digital-first expectations and cloud adoption accelerate, modernization is a strategic driver for innovation, efficiency, and long-term business resilience.

## Key Modernization Challenges:



### Loss of System Knowledge

Obsolete legacy applications built often lack documentation, resulting in diminishing access to SMEs who can decode the embedded logic.



### Security and Compliance Gaps

Older applications struggle to align with current data protection, cybersecurity, and regulatory standards.



### Outdated User Experience

Legacy interfaces do not support the intuitive, mobile-first experiences expected by today's users.



### Slow and Costly Enhancements

Manual development, testing, and integration make changes expensive, rigid, and time-consuming.



### High Dependency and Risk

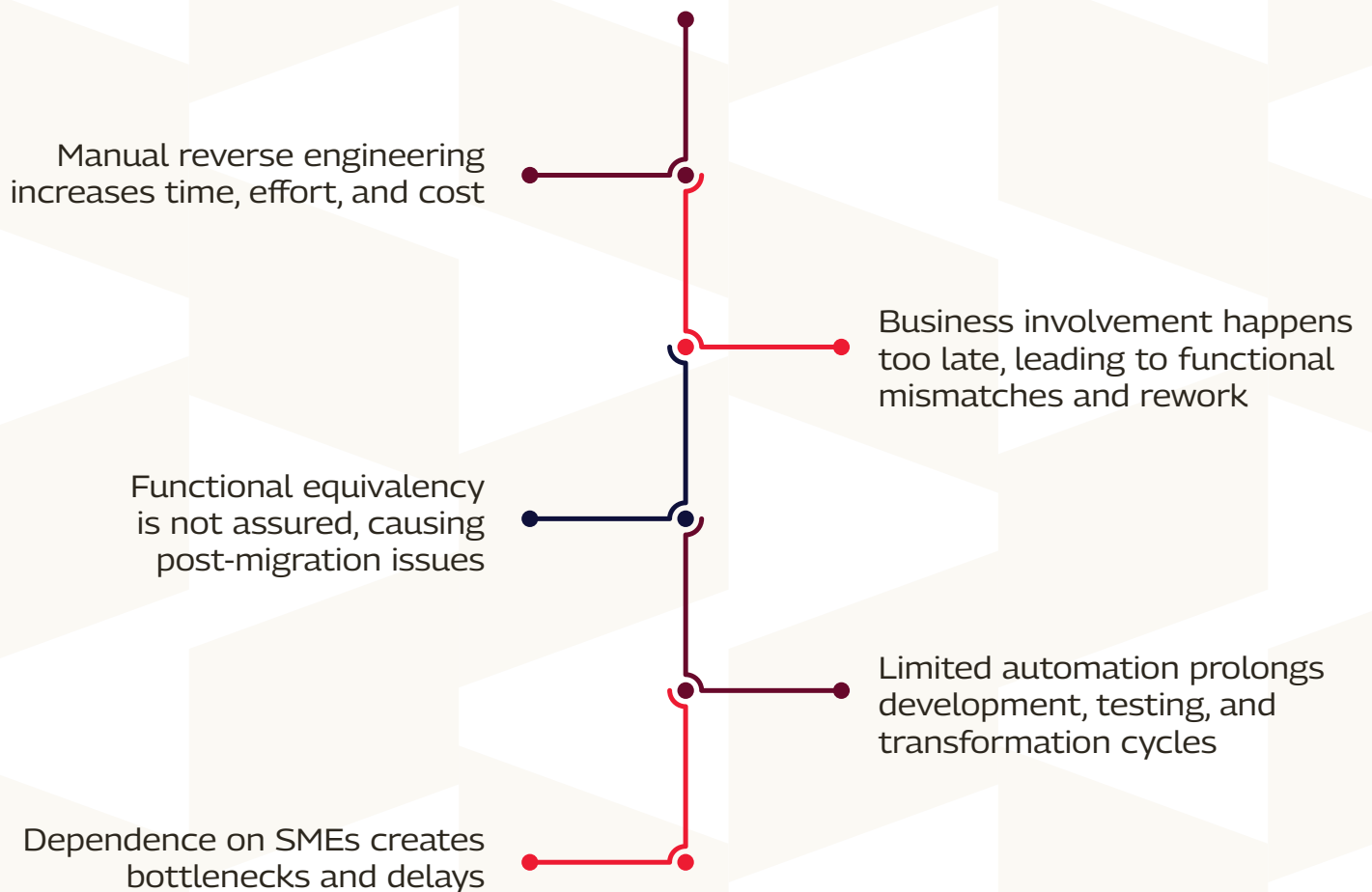
Unknown dependencies and poorly mapped workflows create functional blind spots, making modernization high-risk.



# Traditional methods: High Cost, High Risk, Limited Visibility

Systemic legacy modernization programs often fail because they rely heavily on manual reverse engineering, fragmented documentation, and late-stage business validation. As a result, organizations encounter extended timelines, escalating costs, rework, and unpredictable go-live risks.

## Limitations of Conventional Approaches:



A shift is required towards a modernization model that is automated, business-validated from the start, and powered by Generative AI.



# Introducing **SAILONOMOUS**: Tech Mahindra's AI-Driven Modernization Framework

Tech Mahindra's **SAILONOMOUS** framework combines Generative AI, AWS services, and Pega Blueprint™ to reverse-engineer legacy applications, extract business logic, generate functional documentation, and accelerate modernization. This approach ensures functional equivalency, business engagement from Day Zero, and a seamless transition to a secure, modern Pega-based digital application.

## The AI-Led Modernization Stages:

### AI-Driven Discovery and Code Analysis

Automated reverse engineering to extract business rules, process flows, and system logic.

### Blueprint Creation and Prototyping

AWS-assisted prompt engineering and Pega Blueprint™ produce a working application blueprint for early business validation.

### Business-First Validation

Interactive prototypes enable business users to validate functionality and workflows early, ensuring alignment before development begins.

### Accelerated Build and Deployment

Guardrail-aligned components, delivery utilities, and automated testing enable faster development and secure deployment.

## Value Delivered:

- Early validation ensures functional continuity and smoother adoption
- Significant reduction in reverse engineering and documentation effort
- Modern architecture improves mobility, usability, security, and scalability

# What Makes Tech Mahindra's Modernization Approach Distinct

Our modernization model minimizes risk, maximizes automation, and ensures business alignment throughout the lifecycle. With SAILONOMOUS at the core, enterprises benefit from a structured, intelligence-led modernization program designed to deliver measurable outcomes.

## Solution Highlights:

### Automated Legacy Code Analysis



AI-driven extraction of business rules and logic to reduce dependency on SMEs.

### Generative AI-Enabled Prototyping



Blueprint-based application previews allow for early and accurate business validation.

### Functional Equivalency Assurance



Embedded testing frameworks ensure legacy functionality is preserved in the modernized system.

### Modern User Experience and Mobility



Intuitive, cloud-ready interfaces aligned to modern usability and accessibility standards.

### Security and Compliance Alignment



Updated architecture adheres to current security, data privacy, and regulatory guidelines.

### Accelerators and Tooling Ecosystem



Tech M Tools, ex. LCaaS and App Geniez, improve productivity across discovery, design, build, and deployment stages.

## Proven Impact

# 15%

Productivity improvements across modernization programs

# 20%

Quality enhancements in delivery outcomes

# Modernization in Action

## Case Study 1 Large-Scale Legacy Mainframe Modernization



### Challenge

A major global fortune enterprise relied on a three-decade-old mainframe application to support high-volume transactions, with limited documentation, growing operational risks, and high maintenance costs.



### Approach:

Tech Mahindra's digital transformation program migrated 50,000+ mainframe business rules and modernized workflows into a Pega-based digital application. We have rolled out a global application for 26,000+ users while still localizing for regions and brands.

### Outcome:

- Reduced the total cost of ownership for a **\$60 MN** annual ROI savings with a single integrated and scalable system.
- An increase of **\$5 bn** in annual transaction volume globally due to minimum legacy dependency, improved system reliability, and maintainability.

## Case Study 2 Accelerated Legacy Application Modernization via Rapid Blueprinting



### Challenge

A leading Canadian organization depended on an aging desktop and a SharePoint forms-based application that constrained scalability for customer onboarding and delayed onboarding, impacting customer experience.



### Approach:

Tech Mahindra conducted a rapid proof of concept using Pega Blueprint™ to visually prototype the modernized application and validate functionality with business stakeholders.

### Outcome:

- Faster decision-making through early validation, a clear modernization roadmap, and reduced risk before full-scale transformation.

## Case Study 3

### Wrap & Renew for Order Orchestration Transformation



#### Challenge

A leading global conglomerate used over 40+ disparate systems across ERP technology platforms to process orders. The absence of a centralized orchestration system led to multiple manual interventions, missing revenue recognition, and delayed or incomplete shipments across the supply chain.



#### Approach

- ▀ Tech Mahindra modernized the entire order lifecycle with Pega.
- ▀ Integrated 10+ applications and retained the ERP / Oracle systems with Pega.

#### Outcome:

- ▀ Improved time to order and sales from 3 weeks to less than a week
- ▀ **12%** reduction in operational costs

## Modernize with Confidence

Tech Mahindra's AI-led modernization framework, combined with proven Pega delivery expertise and strong hyperscaler partnerships, provides a secure, accelerated pathway to modernize legacy systems without business disruption. Our modernization specialists can help you assess your landscape and define a transformation roadmap tailored to your specific business needs.

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## About Tech Mahindra

Tech Mahindra (NSE: TECHM) offers technology consulting and digital solutions to global enterprises across industries, enabling transformative scale at unparalleled speed. With 149,000+ professionals across 90+ countries helping 1100+ clients, Tech Mahindra provides a full spectrum of services including consulting, information technology, enterprise applications, business process services, engineering services, network services, customer experience & design, AI & analytics, and cloud & infrastructure services. It is the first Indian company in the world to have been awarded the Sustainable Markets Initiative's Terra Carta Seal, which recognizes global companies that are actively leading the charge to create a climate and nature-positive future. Tech Mahindra is part of the Mahindra Group, founded in 1945, one of the largest and most admired multinational federation of companies. For more information on how TechM can partner with you to meet your Scale at Speed™ imperatives, please visit <https://www.techmahindra.com/>.



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