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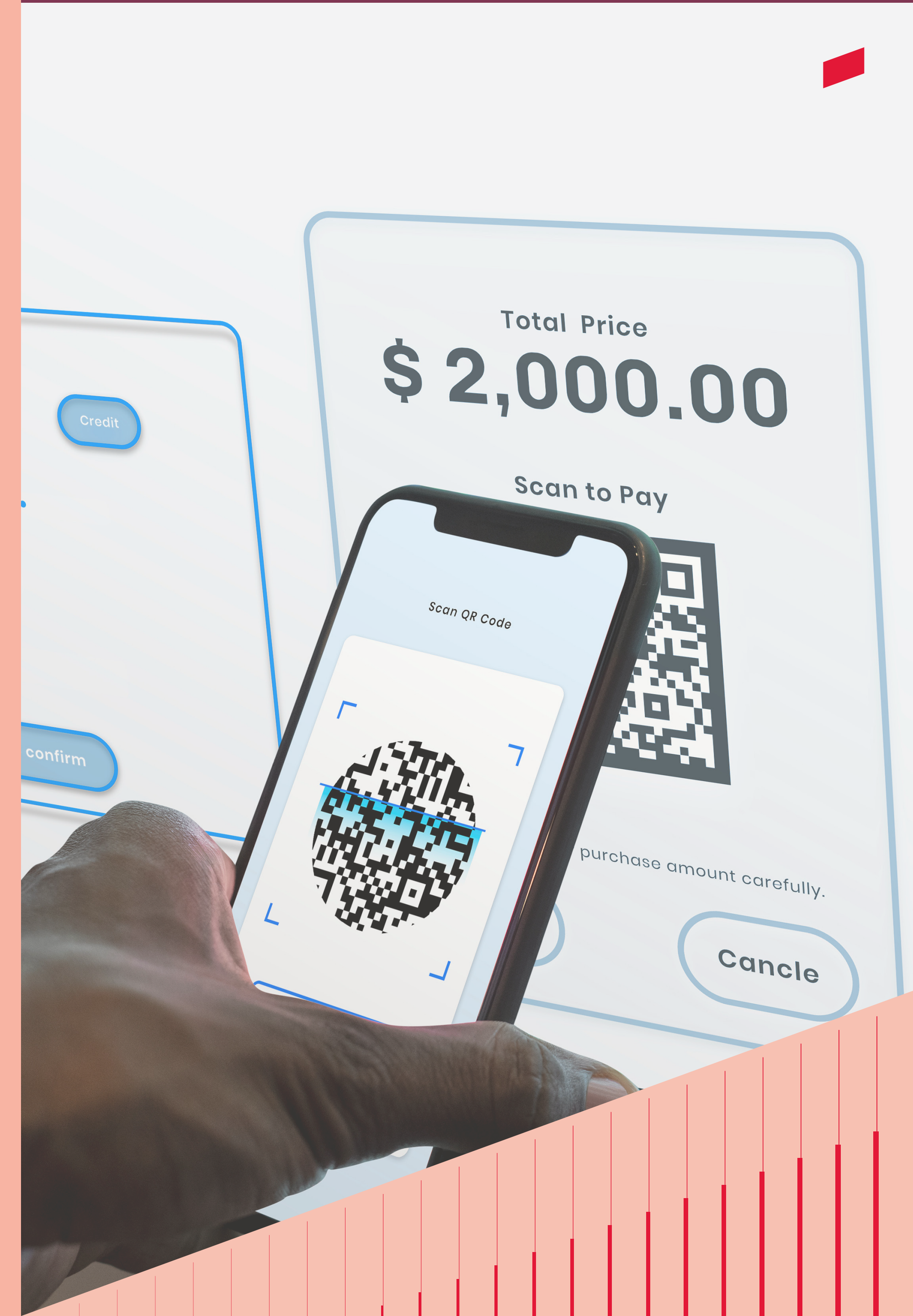
Case Study

European Telecom Provider Modernizes Payment Management from Mainframe to AWS

Overview

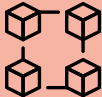
A leading European telecommunications provider relied on a mainframe-based payment management platform that was costly to maintain, difficult to scale, and dependent on scarce specialist skills. After a previous replacement attempt failed, the provider needed a lower-risk path to modernization that could preserve proven business logic and deliver results.

Tech Mahindra validated an AI-led approach to modernize the platform using Java 21, PostgreSQL, and AWS. The approach reduced modernization timeline from approximately 24 months to seven months, cut mainframe infrastructure costs by up to 50%, and establish a scalable platform for future digital services on AWS.



Client Background and Challenges

The client is a leading European telecommunications provider managing critical payment and collections operations. Their payment management platform relied on legacy mainframe technology, limiting scalability and increasing maintenance costs, despite its mature, business-critical functionality. **Their underlying architecture presented several constraints:**

	High mainframe infrastructure and maintenance costs		Slow development and release cycles
	Limited scalability and flexibility		Dependence on scarce mainframe and CA Gen expertise
	Complex and aging technology stack		Limited integration with modern cloud services and engineering practices
	Security vulnerabilities associated with legacy components		

The client needed a hybrid strategy to retain the proven reliability of their legacy platform and introduce the speed, automation, and flexibility of modern cloud engineering.

A proof of concept validated the technical feasibility of the proposed modernization approach and its suitability for scaled delivery. It also identified where expert engineering oversight would remain essential. These findings helped shape a pragmatic model that combines AI-assisted modernization with engineering review and validation.

Our Approach and Solution

By partnering with Tech Mahindra, the client successfully adopted a phased modernization approach that aligns with established business rules and progressively transforms the technology foundation. Our team created a Java baseline from the existing mainframe and used AI to accelerate code modernization, testing, documentation, and quality assurance.

Baseline Business-Logic Extraction

The team identified key mainframe processes, including JCL jobs and CA Gen components, and converted selected code into Java 1.8 for version control and progressive modernization.

AI-Driven Java Upcycling

Amazon Q Developer supported the move from Java 1.8 to Java 21 by identifying deprecated syntax and libraries, recommending replacements, refactoring patterns, debugging, validating, and generating test data. Claude Opus supported complex code retrofitting and optimization.

Cloud-Native Integration

The modernized application was integrated with AWS services including Amazon S3, PostgreSQL, HikariCP, AWS EventBridge, GitHub, GitHub Actions, CloudFormation, and Flyway. Digital Engine components were reused for API connectivity where appropriate.

AI-infused Quality Engineering

GitHub Copilot supported test-scenario generation, validation scripts, automation components, edge-case prediction, test-data preparation, root-cause analysis, and documentation. A continuous shadow-run approach was planned to compare modernized application behavior with the existing system before final transition.



Business and Community Impact

The migration successfully delivered clear, measurable improvements in delivery speed, infrastructure costs, security, scalability, and engineering productivity.



Faster Time to Value

The AI-led approach targets reducing the modernization timeline from approximately 24 months to seven months, accelerating value realization compared with a conventional rewrite.



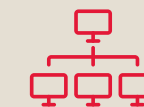
Lower Infrastructure Costs

Moving workloads away from the mainframe save infrastructure costs of up to 50%.



Improved Security

Migration to supported technologies and cloud-native services expected to reduce exposure to legacy vulnerabilities and strengthen the platform's security posture.



Simplified Technology Landscape

The new architecture is expected to reduce reliance on CA Gen and specialist mainframe tooling while establishing Java 21, PostgreSQL, AWS, and GitHub as the core engineering ecosystem.



Greater Scalability

The cloud-native environment is designed to scale more easily and support future integration, automation, and service development.



Stronger Engineering Productivity

Automated builds, deployments, testing, and documentation enable faster feedback and reduce manual effort, while AI-infused tools also help engineers modernize and validate complex legacy code.

About Tech Mahindra

Tech Mahindra (NSE: TECHM, BSE: 532755) offers technology consulting and digital solutions to global enterprises across industries, enabling transformative scale at unparalleled speed. With 146,000+ professionals across 90 countries, 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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