

CASE STUDY

Telecom Giant Slashes Development Time by 83% with AI-Powered SDLC



Overview

A leading global telecommunications provider with an extensive portfolio of digital services faced mounting pressure to accelerate software delivery while maintaining quality across thousands of applications. Manual development processes, inconsistent knowledge reuse, and variable team practices were slowing progress and limiting innovation. Tech Mahindra partnered with the company to implement an end-to-end AI-enabled SDLC transformation. By combining generative AI, agentic development tools, and enterprise integrations, the solution reduced application development timelines from approximately one quarter to just two weeks, an 83% improvement, while enhancing consistency and quality across engineering teams.

83% Faster Development

Reduced application development timelines from approximately one quarter to two weeks.*





Client Background and Challenges

This major telecommunications provider is one of the world's leading communications services companies, operating across the UK and internationally. Serving millions of residential and business customers, the organization offers a comprehensive range of services including broadband, mobile, TV, and enterprise solutions. Behind this vast service portfolio lies a massive IT organization with thousands of developers supporting hundreds of applications across network management, customer experience, and business operations. As the company pursued ambitious digital transformation goals, its engineering teams struggled to keep pace with the growing demand for new features and services.



Manual and Time-Intensive SDLC Processes

Traditional development processes spanning requirements gathering, design, coding, and testing required extensive manual effort, creating bottlenecks that slowed delivery and limited the organization's ability to respond quickly to market demands.



Developer Productivity Constraints

Engineering teams spent a significant portion of their time on repetitive tasks—writing boilerplate code, creating unit tests, and reviewing large codebases—which limited their capacity for more complex, value-added work and extended delivery timelines.



Inconsistent Knowledge Reuse

Project teams across the organization struggled to share and reuse knowledge effectively, leading to duplicated effort, reinvention of solutions, and inconsistent outputs across development initiatives.



Variable Development Outcomes

Differences in team practices, documentation quality, and technical approaches resulted in inconsistent software delivery quality and efficiency, making it difficult to scale best practices across the organization.

Agentic Development Framework

Enabled specification-driven workflows for more consistent software delivery.



Our Approach and Solution

Tech Mahindra worked closely with the telecommunications provider to design and implement a comprehensive AI-powered SDLC transformation framework—one that would seamlessly integrate with their existing development environment while fundamentally changing how software was built.

The solution combined advanced AI-assisted development tools with deep enterprise integrations to automate and enhance multiple phases of the software lifecycle. Generative AI capabilities were applied across coding, code reviews, and testing activities, giving developers intelligent assistance at every step. This meant less time spent on repetitive tasks and more focus on solving complex problems.

To enable better knowledge utilization, we integrated the AI tools with the client's existing enterprise collaboration and knowledge management platforms. This ensured that developers could access and reuse relevant organizational knowledge throughout the delivery process, reducing duplication and improving consistency.

A key innovation was the introduction of agentic development capabilities, which enabled a more structured, specification-driven approach to software creation. Rather than relying solely on conversational prompts, teams worked through AI-guided workflows that enhanced consistency and quality. Custom integration services ensured seamless connectivity between AI tools and enterprise systems, creating a unified development environment that teams could adopt with minimal disruption.

Business and Community Impact

The AI-enabled SDLC transformation delivered dramatic improvements in software delivery speed and engineering productivity, fundamentally changing how the telecommunications provider's development teams operated.

For projects of comparable scope, application development timelines were reduced from approximately one quarter to about two weeks: an 83% reduction. This acceleration meant that business initiatives could move from concept to deployment in a fraction of the previous time, enabling faster response to market opportunities and customer needs.

Developer efficiency improved across multiple SDLC phases as repetitive tasks were automated and structured AI assistance was introduced. Teams adopted a specification-driven development model that enhanced consistency and reduced variability in outputs, making code more maintainable and predictable.

Additionally, governed AI-assisted workflows contributed to higher-quality deliverables and improved overall software engineering effectiveness, creating a sustainable model for continued improvement.

Enterprise Knowledge Integration

Connected AI tools with enterprise knowledge platforms to improve reuse and consistency.





Key Results

- Reduced application development timelines by approximately 83%
- Accelerated delivery from approximately one quarter to two weeks for comparable project scope
- Improved developer productivity across the SDLC
- Enabled specification-driven development workflows
- Reduced dependence on manual development activities
- Improved consistency and quality of software outputs
- Increased reuse of organizational knowledge and best practices
- Enhanced overall software engineering efficiency



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