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Achieved **20% productivity gains with GenAI-powered** code migration and modernization

Client **Background**

The client, an American medical equipment company, develops and maintains various mobile and web applications for its users. They had previously implemented Xamarin for their mobile app development, alongside Angular, NodeJS, .NET, and React for their web and backend systems. With changing technology landscapes and the impending deprecation of Xamarin, the client required a strategy to modernize and optimize their application infrastructure while ensuring minimal disruption to ongoing operations.

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Business **Challenges**

1   **Facing an imminent framework sunset –** The client's mobile apps were built on Xamarin, a framework nearing its end of life with Microsoft discontinuing support in 2024. To ensure their apps remained functional and supported, migrating to the new MAUI (Multi-platform App UI) framework was critical.

2   **A daunting manual migration –** The client initially attempted a manual migration, but the complex legacy codebase required extensive development effort and resources. This approach risked delays and disruptions to their existing systems.

3   **The need for automation –** Beyond mobile migration, the client aimed to automate code generation for Angular, NodeJS, .NET, React, and infrastructure as code (IaC) using Terraform. Writing unit tests in NUnit and JEST further strained their development bandwidth.

4   **Balancing speed and efficiency –** With limited resources and pressing deadlines, the client needed a faster, cost-effective solution to manage both the migration and ongoing development without compromising performance or stability.

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Value **Delivered**

CitiusTech, leveraging **GitHub Copilot**, provided a comprehensive solution to streamline the client's modernization and automation needs.

1 **Accelerated mobile app migration –** By leveraging GitHub Copilot, the client's migration from Xamarin to MAUI was automated, significantly reducing manual effort and ensuring the mobile app infrastructure remained future-proof.

2 **Streamlined code generation –** Automation of Angular, NodeJS, .NET, and React code generation simplified development workflows, reducing repetitive coding tasks and improving efficiency.

3 **Enhanced infrastructure management –** Terraform script generation was automated, enabling smoother infrastructure management and improved operational efficiency.

4 **Faster and reliable testing –** Automated unit test case generation using NUnit and JEST accelerated development cycles while ensuring robust testing standards.

5 **Scalable development processes –** By automating web and backend code generation, the client achieved a more scalable and streamlined development process.

6 **Boosted productivity by 20% –** GenAI capabilities reduced manual effort, enabling developers to focus on complex, value-driven tasks, resulting in a 20% increase in overall productivity.

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Thank You

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