

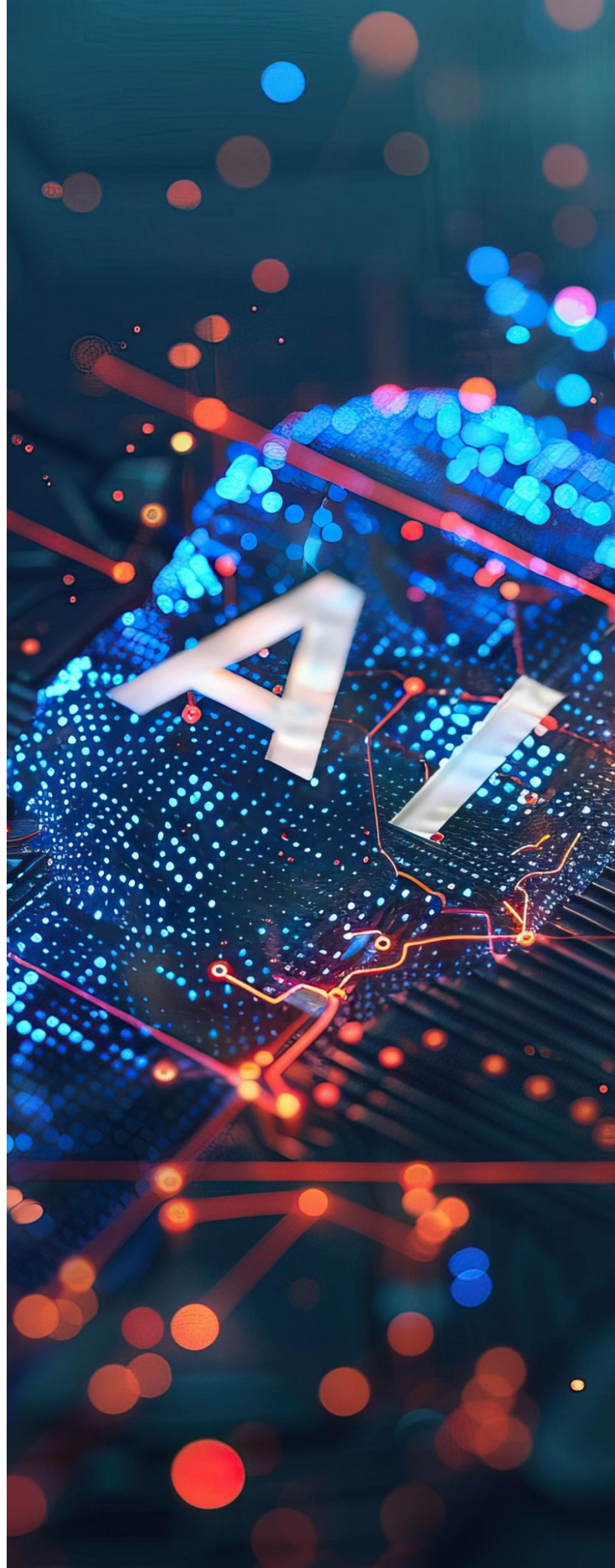


# Gen AI Implementations for a Major US Telecom Services Provider



## Overview

This case study highlights the significant impact of AI-powered solutions implemented by a telecom services provider. By leveraging the GenAI Troubleshooting Platform and the Intelligent Test Framework, the client experienced remarkable enhancements in operational efficiency, customer satisfaction, and software quality. The GenAI Troubleshooting Platform revolutionized issue resolution processes, while the Intelligent Test Framework reduced manual dependencies and accelerated time-to-market for software releases. These innovations not only streamlined IT operations but also positioned the client as a leader in adopting AI-driven advancements, paving the way for scalable, intelligent operations.





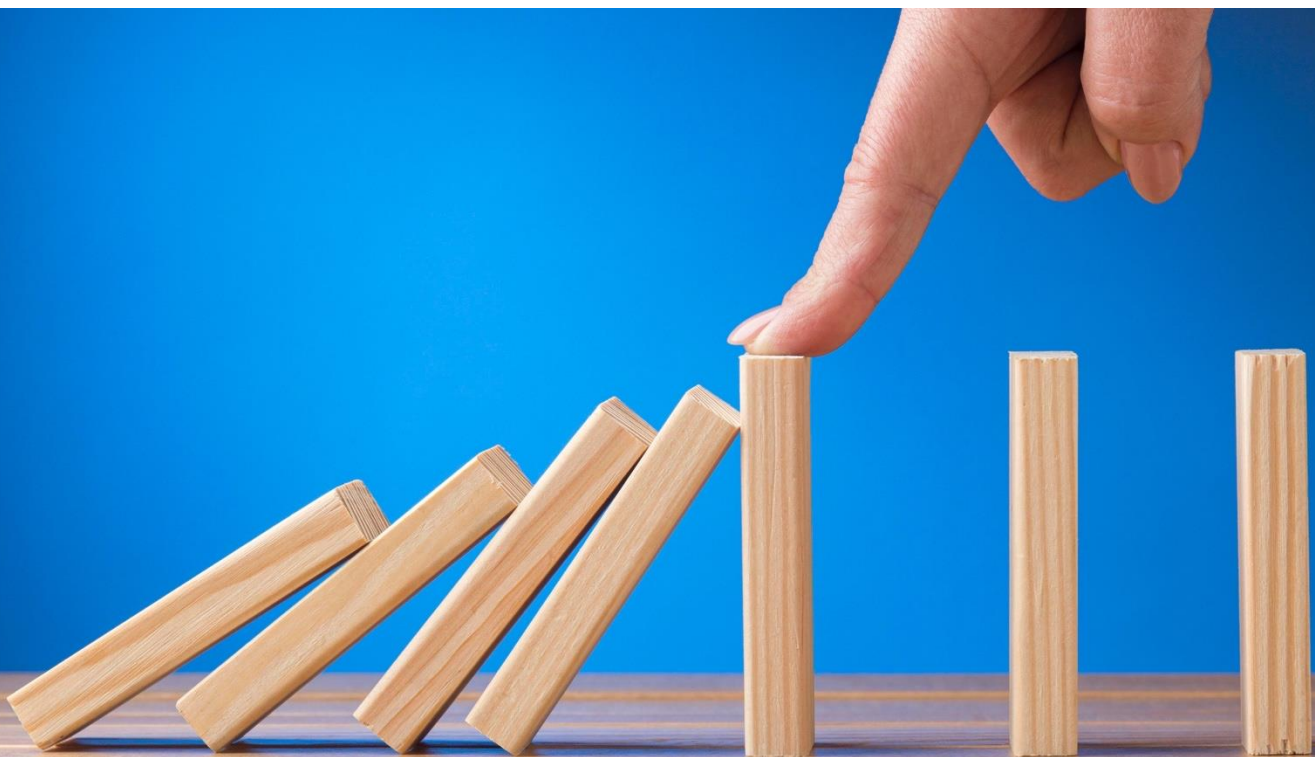
## Problems

- **Delayed Issue Resolution:** Customer Care Agents faced an average turnaround time of 5 to 6 days to resolve order fallouts in a newly launched product, impacting customer satisfaction and operational efficiency.
- **Misaligned Issue Escalations:** Frequent errors in routing tickets to the appropriate L3 teams resulted in unnecessary delays and resource inefficiencies.
- **Time-Consuming Test Case Creation:** Developers and testers struggled with manual generation and management of test data, often requiring a deep understanding of intricate systems.
- **Scalability Issues:** Manual testing approaches lacked scalability, slowing down development cycles and making regression testing inefficient.
- **Code Complexity:** Difficulties in analyzing and writing comprehensive test scenarios due to code complexity and lack of domain-specific insights.



## Proposed Solutions

- **Smart Issue Resolution:** Leveraging Generative AI to analyze historical data and provide guided steps for issue resolution in real time.
- **Data-Driven Learning Model:** Trained on 10+ years of error fallout data, enabling pattern recognition, root-cause analysis, and intelligent suggestions for issue remediation.
- **Dynamic Decision Support System:** AI algorithms equipped the platform to continuously learn from recurring issues and refine resolution pathways, ensuring adaptability to evolving system updates.
- **Automated Test Case Creation:** The platform leveraged Generative AI to scan source code, extract functional requirements, and generate unit test cases and functional test cases automatically.
- **Continuous Integration and Delivery (CI/CD) Enablement:** Incorporated automation pipelines to execute test cases with every software update, ensuring seamless regression testing and faster releases.
- **Domain-Driven Approach:** Enabled automatic categorization of test cases into subdomains and domains, simplifying test management and improving traceability.
- **Centralized Repository Integration:** Supported integration with repositories such as Tricentis qTest and Jira Xray, providing a unified view for managing end-to-end test scenarios.





## Key Benefits

- **Accelerated Test Creation:** Eliminated manual efforts in generating test cases, saving significant time and effort.
- **Improved Test Coverage:** Generated comprehensive test scenarios covering multiple layers of functionality, reducing defect leakage.
- **Domain-Centric Organization:** Categorized test cases into logical domains, enabling focused testing and easier maintenance.
- **Democratized Testing Framework:** Made testing more accessible and scalable by integrating with multiple repositories and tools, fostering collaboration across teams.
- **Faster Time-to-Market:** Enabled quicker releases through automated validation processes, improving agility in software development lifecycles.
- **Accelerated Resolution Time:** Reduced turnaround time for issue resolution by 60%, enabling faster service delivery.
- **Optimized Ticket Handling:** Minimized ticket escalations to L3 teams by 30%, reducing workload and dependency on senior-level engineers.
- **Enhanced Routing Accuracy:** Improved the precision of ticket assignments to the right L3 teams by 30%, leading to faster problem identification and resolution.
- **Customer Satisfaction:** Elevated customer experience with faster, first-contact resolutions, driving loyalty and retention.





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