

THE ROAD TO HEIGHTENED QUALITY AT SPEED WITH CAPGEMINI



Embedded Quality Engineering in Capgemini's ADMnext delivers a program of sustained, predictable quality for a global leader in automobile manufacturing

A European multinational vehicle manufacturer was looking for improvement in its ability to identify defect leakages, the duration and effectiveness of test cycles, and a reduction in the cost of quality overall. The company was also looking for solutions for challenges such as low-test automation, delays in releases, and poor application performance. So, the company decided to find a partner that could help improve application quality, resilience, scalability, and security while driving improved operational efficiency and drastically lowering application support efforts.

Introducing embedded Quality Engineering within Capgemini's ADMnext

The company chose Capgemini to address these challenges through its Quality Engineering capabilities, a core part of the ADMnext solution. In deploying this solution, the team helped the company excel at the fundamentals with a Test Process Improvement® (TPI) Assessment & Plan transformation program. Following this, the testing team drew up a full implementation plan for the development of proof of concepts across six lines of business, along with key levers that included quality KPIs, baselining with industry benchmarks, product risk assessments, and a testing service catalog.

Overview

Client: A global leader in automotive manufacturing

Region: France

Industry: Automotive/Manufacturing

Client Challenge: The company was experiencing production quality issues in the form of defect leakages, long and ineffective test cycles, and higher overall production costs

Solution: The Capgemini team helped deliver sustained, predictable quality with a host of proof of concepts and assets, AI-based quality engineering, zero-touch testing, and ADM testing services

Benefits:

- 75% reduction in defect leakages
- 25% shorter test cycle times
- 15% cost reduction
- 65% improved quality
- 38% increased automation
- 80% heightened test effectiveness

The company and Capgemini then applied lightweight processes and a foundation for automation across these business lines. This began with integration testing for the first three lines of business and expanded to the remaining with qualification testing, regression testing, and a structured test strategy at a controlled pace. Next, the project team is implementing the SmartQA platform along with Cognitive QA and Artificial Data Amplifier (ADA) solution.

As a whole, embedded Quality Engineering capabilities within Capgemini's ADMnext solution, such as product risk assessments, to manage risk levels, test case priorities, and risk definitions. The project team added a number of techno-functional testers that were cross trained in automation, increasing the testing team's size by 30%. The team also defined tool feasibility methods, along with a test approach and framework with over twelve proof of concepts for automation and performance testing. Additionally, the partners focused on building environment-agnostic scripts to extend benefits across all levels of testing. The Company and Capgemini are working closely to explore new ways of improving quality through proof of concepts and assets, including pilots for AI-based quality engineering, zero-touch testing, and ADM testing services.

Overall, the end results of an integrated ADM and Quality Engineering approach include:

- 75% cut in defect leakages where most critical defects were identified in the integration phase
- 80% heightened test effectiveness through a testing strategy focused on regression, test data preparation, performance testing, and reviews with BA for business-centric testing
- 38% increase in automation across all six programs and testing stages
- 25% shorter test cycle times through increased test automation and reusability within programs and across different stages of testing (integration testing, qualification testing, and UAT)
- 15% cost reduction through catalog-based services, an increase in the number of techno-functional testers, standardization, and quality KPIs that were baselined and monitored
- 65% improvement in quality through higher test penetration across all programs for integration and UAT testing with automation and performance.

The future roadmap with Capgemini

The manufacturer is looking to expand on the benefits that the Capgemini team has already delivered during this strong partnership. This is being worked on further with a four-step plan geared towards inclusive QA and will be built with AI and continuous testing solutions, increased test automation, and a performance test lab leveraged across all programs. This will also increase business alignment with shift-left testing through a smart QA-AI test platform for end-to-end testing assets and enablers.

Additionally, the company and Capgemini are looking to focus more on continuous testing by empowering ongoing business releases through Shiftright and TestOps with performance engineering solutions and progressive automation and digital labor bots. Finally, the company and Capgemini plan to build towards more inclusive quality with zero-touch testing and zero technical debt through a strategic single storefront for test toolkits and plug-and-play solutions.

About Capgemini

Capgemini is a global leader in partnering with companies to transform and manage their business by harnessing the power of technology. The Group is guided everyday by its purpose of unleashing human energy through technology for an inclusive and sustainable future. It is a responsible and diverse organization of 270,000 team members in nearly 50 countries. With its strong 50 year heritage and deep industry expertise, Capgemini is trusted by its clients to address the entire breadth of their business needs, from strategy and design to operations, fuelled by the fast evolving and innovative world of cloud, data, AI, connectivity, software, digital engineering and platforms. The Group reported in 2020 global revenues of €16 billion.

Get the Future You Want

www.capgemini.com