



Helping a global leader in construction and mining equipment, engines, turbines, and locomotives minimise bug leaks and optimise their testing process

Operate | Testing Managed Services

The challenge

Our client, a leading construction and mining equipment manufacturer of engines, turbines, and diesel-electric locomotives, sought support for testing activities. Their cloud-based application utilised automated work quantification through detailed reports, effectively eliminating the need for manual record-keeping.

The client was experiencing high bug leakage in subsequent environments due to issues with other vendors, inadequate testing processes, poor coordination, and a backlog of unresolved bugs. Additionally, the automation pipeline had a low pass percentage. Deloitte's team was engaged to address these challenges.

Our solution

Improving QA effectiveness:

- To improve QA effectiveness, we conducted a gap analysis.
- We provided a detailed report with recommendations for each identified gap.
- We scheduled calls with the release component teams, the client UI lead, and the development team to understand project changes and align efforts.
- We identified improvement opportunities in QA processes, frameworks, governance, planning, requirement management, and the structure of the testing team.

Bug reduction strategy:

- We developed a bug reduction strategy focused on impact analysis to identify affected modules and functionalities.
- We ensured proper knowledge transition and handover from the product owner and conducted brainstorming and scenario mapping sessions.

- We reviewed scenarios with the scrum master (business analyst) and shared them with the development team to uncover additional impacted areas during development.
- The strategy included:
 - Cascading information to the test team
 - Increasing test coverage
 - Maintaining sanity accuracy when handing features to the end-to-end team
 - Proper documentation through screenshots
 - Ensuring thorough unit testing for code changes affecting other modules

The outcomes

This structured approach significantly enhanced QA effectiveness, reduced bug leakage, and improved test efficiency.

Reduced bug leakage from the lower environment to minimal

- We significantly reduced bug leakage from 34 to 1 in this release with the help of our bug reduction strategy.
- We reduced gaps in unit testing by using reviewed test scenario documents, which helped the development team identify additional impacted areas during development.

Increase in pass percentage of the automation pipeline for modules owned by Deloitte

- We have increased the pass rates to over 90 percent and 70 percent for the modules managed by our team, up from the initial rates of 30 percent and 22 percent, respectively and continue to work towards further improvement.

Delivery of bug-free features to end-to-end team.

- We are focused on delivering features without bug leakage to the end-to-end team.



Delivering exemplary work through optimised testing and a bug reduction strategy aligned with the client's business processes.