

Nexus Achieves Automation Excellence with Eggplant

Company Profile

NEXUS / E&L GmbH is the market-leading provider of medical document management and medical device connectivity systems in Germany. It is perhaps best known for its Clinic WinData (CWD) software, and its solutions are used by more than 500 clinics and hospitals across the country.

The company was founded in 1990 and is based in Nürnberg, Bavaria, Germany.

Test Automation to Enhance Testing Capabilities and Improve User Experience

For NEXUS / E&L, robust testing regimes are essential. Their customers need to have complete confidence that its software conforms to all statutory and safety requirements and is fully functioning and bug-free – one bug could literally be a matter of life or death.

In NEXUS / E&L's manual testing environment, achieving the level of testing accuracy needed to deliver this confidence was delaying releases, which was in turn delaying product development.

The Quality Assurance team at NEXUS / E&L knew that test automation would give them the testing efficiency they needed.

With test automation in place, NEXUS / E&L would be able to devote manual testing resources to testing for critical bugs, with regression testing being handled by automation.

Eggplant is the Preferred Choice

After researching the market and trialing several solutions, the QA team saw that Eggplant was the test automation platform they needed.

The team liked Eggplant's graphical user interface (GUI), which allowed them to test both the user interface (UI) and the user experience (UX) without the complexity of needing to integrate it with their systems architecture.

To ensure NEXUS / E&L could harness all the benefits of Eggplant, Bennett Nana Botchway was tasked with the rollout.

Bennett was initially unfamiliar with Eggplant, but found it easy to pick up thanks to the wealth of documentation on Keysight Eggplant's website. Crucial too was the intuitive nature of Eggplant's SenseTalk language. Bennett says: "Because Eggplant's programming language is English-like, it was very simple to grasp every concept."

He adds: "The first test case I worked on was successful, and I still use it to this day."

A Tool That Transforms Testing Efficiency and Testing Accuracy

Bennett's first test case has now joined over 22 others involving around 200 scripts. NEXUS / E&L development teams work in three-week sprints, and Bennett deploys the necessary tests within each sprint, depending on whether the sprint is designed to bug fix or change functionality. By the end of each sprint, Bennett can be sure that the new version meets the standards required under medical device and safety regulations.

Bennett highlights three features of Eggplant that he particularly values.

The first is SenseTalk. He says: "The QA team at NEXUS / E&L have a variety of programming backgrounds. Because Eggplant's language is so intuitive, everyone can understand and use it to achieve their testing goal, no matter which language they code in, or even if they don't have a programming background at all."

The second is its AI capabilities. "With AI-generated test cases we can conduct so much more exploratory testing to identify bugs or potential bugs. We can then fix the bugs before we release, so we enhance overall quality and improve the user experience."

The third is the optical character recognition (OCR) functionality. "To meet medical device standards, we need to check version numbers, which change from release to release. The OCR functionality means we don't need to hard code these version numbers each time. We can ask it to identify the version number on the page and log it as a variable. It can then validate the variable against the other numbers in the database and pass or fail it. It's just awesome."

Overall, Eggplant is more than delivering on expectations.

Using Eggplant, Bennett has automated 20% of regression testing in Clinic WinData (CWD), NEXUS / E&L's biggest software product, and its subsidiary applications. In the Quality Control team, 65% of regression testing is automated. Bennett reports too that bug detection has proved reliably consistent.

Overall, where 20 test cases would have taken three days to run using manual testing, with Eggplant, the same number of tests takes just one day. It has freed up the QA team to conduct more manual testing to drive further improvements to the user experience.

Harnessing More of the Power of Test Automation

Bennett has big plans for the future of Eggplant within NEXUS / E&L as the company continues its test automation journey.

Full integration with NEXUS / E&L's Azure DevOps environment is planned. Once this is complete, the plan is to optimize the DevOps process by rolling out the Eggplant DAI runner, the command-line tool that will allow the team to run Eggplant DAI tests remotely through the DAI API.

Bennett concludes: "Test automation is the future for every software development company."

"Testing our software involves checking the user interface and the databases. Eggplant gives us the ability to fully automate each step of the way, giving us the confidence we need to certify a version for release."

Bennett Nana Botchway, Quality Assurance Analyst, NEXUS / E&L