

Global Pharmaceutical Firm Reduces Application Defects and Costs by 50% by Outsourcing Testing to Keane

Keane Reduces Defects Through Risk-Based Testing, Enabling Client to Streamline Drug Development

Abstract

Using a combination of onsite and offshore resources, Keane increased the productivity of a global pharmaceutical firm's testing function by 70% and reduced overall application defects by 50%, while reducing implementation and support costs by 50%. For the first time, the client has defined and documented testing processes that provide the visibility, scalability, and repeatability for long-term benefit. As a result of partnering with Keane, the client has streamlined its drug development process by successfully launching a state-of-the-art Web portal that provides a collaborative workplace for 12,000 scientists and employees located around the world.

Client

One of the world's largest pharmaceutical and consumer product firms, with research and development (R&D) facilities located across the globe, engaged Keane to improve the testing

"The cost to correct errors post-release is up to 30 times higher than those corrected early."

2002 Department of Commerce study

"If there are no formal testing practices in place, there is a substantial potential for releasing defects that can expose a company to rework, poor customer satisfaction, and possible legal action."

"Quality Assurance Versus Quality Control," Forrester Research, Inc., December 2004

processes for one of its top R&D IT initiatives—a new internal Web portal that provides a collaborative workplace for 12,000 scientists and employees.

Challenges

With thousands of scientists spread across global R&D facilities—partly a result of M&A activity—much of the client's business-critical data was siloed and inaccessible. To facilitate the work of its R&D teams, streamline the drug discovery process, and increase collaboration, this large pharmaceutical company developed a research Web portal that would provide universal access to its masses of compound and biotechnology data.

However, with the first release of the portal, the client discovered significant defects were hindering user acceptance and the work of developers. The client had not integrated testing into the development lifecycle. Rather, the in-house testing team had performed manual, ad-hoc testing, which meant that testing was time-consuming and test scripts could not be reused or verified. Without a risk-based approach that prioritized application functions and caught defects prior to production, the return on investment for the application was threatened.

Solution

Although the client had not outsourced testing in the past, it engaged Keane to perform functional testing of the Web portal during a three-month pilot program. Keane's project manager, test leads, and members of Keane's dedicated test team worked onsite with the client's business analysts and developers to lay

Passing the Test: Results That Add Up

- 50% reduction in application defects
- \$4 million cost savings in 5 months (approximately)
- 70% boost in testing efficiency
- 50% savings in testing costs
- 0% defect seepage

the groundwork for the risk-based testing program that prioritized application functions for testing and that integrated Keane's lifecycle management approach into existing development cycles. Keane's approach prevents defects from occurring by testing from the outset of software development through the project lifecycle. Keane's project manager and test leads remained at the client site for the duration of the project, while much of the testing was moved offshore to Keane's Hyderabad, India, testing facility. Specifically, Keane:

- Integrated Keane's testing process into existing development lifecycles
- Assessed the application's functionality and supporting set of business requirements
- Created an overall test strategy and selected and implemented best-of-breed testing tools
- Documented cost-effective, risk-based test plans
- Developed and executed reusable test scripts and reported results

Keane used Mercury's TestDirector to create and store test cases and QuickTest Pro to automate test scripts. The Mercury tools enabled transparency into project activities for greater accountability—

Client Story: Global Pharmaceutical Firm

both for Keane's project manager who monitored the India team's progress "down to the second" and for the client's management team, developers, and quality assurance group who tracked Keane's progress around several metrics, such as testing productivity, test coverage, defect injection, seepage, rework, and fault resolution rate.

Results

Keane's dedicated testing team reduced critical defects to less than 5%—saving the client an estimated \$4 million in lost man-hours over five months. Keane increased testing efficiency by 70%, completely eliminated defect seepage, and lowered testing costs by 50%.

For the first time, the client had documented testing processes that verified critical requirements prior to code releases. Moreover, Keane's agility with Mercury's suite of testing tools enabled accurate, automated, and repeatable testing and provided the client with visibility into testing practices and results. Using Keane's global delivery model, the client increased productivity by leveraging time zone differences that enabled the test team to report defects early. In addition, Keane's offshore resources lowered testing costs and provided the client with the flexibility to ramp up and pare down testing resources as needed.

In only six weeks, this team of testers was able to begin writing test cases—a milestone that the client estimated would take an outside firm six months to achieve. Extremely satisfied with Keane's results, the client extended Keane's engagement to cover subsequent releases of the research portal, and broadened it to include load testing.

Keane is a global services firm that specializes in enabling transformation of its clients' business and IT functions.