

Software Testing Services

Case Study

Domain: Analytical Instrumentation

Type: Testing

“Software for interfacing instrumentation used in Label-free Cell based technology for Drug Discovery”

B.A.T. to provide Testing services for the Analytical instrument software throughout the Product Development Life Cycle

An ongoing support to a leading global manufacturer and supplier from North America; B.A.T. shared its testing expertise for the software that plays a key role in the drug discovery/development process.

Challenge

- Proper understanding and study of the new process adapted by the client for the entire product development life cycle (PDLC).
- To capture the knowledge of ongoing testing processes and practices.
- The client was keen on optimizing cost, so to allocate competent professionals for this crucial assignment as resource count was low.

Solution

- B.A.T. developed the **onsite-offshore model** comprising competent resources and deploying skills combining domain and software expertise.
- B.A.T. provided an exclusive setup for the testing exactly matching the client's working environment involving instruments, software, expertise and processes.

Assessing The Solution:

The client is a leading global manufacturer and supplier of analytical instrumentation from North America, who manufactures LC/ MS, ICP-MS, MALDI TOF Products and MALDI TOF/ TOF products along with the software. The client contributes to the healthcare and well being of people and uses advanced technologies which play a key role in the drug discovery/ development for the pharmaceutical and biotechnology markets.

B.A.T. assiduously assessed the testing requirements of the client and recommended a solution of onsite-offshore model for the extensive support in an ongoing software development project for the product.

The customer being a leading global name, B.A.T. had to ensure that robustness and quality of the development adhering their existing stringent standards.

Expertise Shared:

With an extensive experience of many projects in the past with this client, B.A.T. had already proven its testing capabilities. The initial assessment of the project requirements yielded a need for a resource matrix. Moreover the resources have to be well-versed in software test strategies, methods and plans. After proper allocation of the resources our “Testing Team” carried out successfully both on-site and offshore activities under on-site-offshore model. Our team’s periodic visits at the client’s location were planned to take care activities associated with the verification and validation testing of the product. As the client concentrated on cost optimization, this solution was not only cost effective and but also provided first-rate testing team to the client. The successful completion of the project entrenched the extreme confidence and trust in B.A.T. The client also recognized the proficiency and familiarization of B.A.T. with this new product and its functionality. Hence, offered us to become a partner to handle the testing requirements throughout the life of the product.

Delivering The Solution:

Client approached B.A.T. for assistance. Our team assessed the exact requirement of the client and decided to build an “**On-site-Offshore Model**” for the successful project management. This helped B.A.T. to provide extensive testing services to the client in an ongoing software development for the product.

The advanced parameters and requirement specification were predetermined by the client. B.A.T. provided an ideal setup to carry out various testing practices. The in-house availability of Instrumentation room, Testing and Analytical Labs with Software design labs helped us to provide finest solution to the Client ‘Under One Roof’.

B.A.T. is equipped with Multidisciplinary skills; the experts from different streams required for the project were involved to carry out various necessary Testing practices. We worked closely with the client for perfect and timely delivery. The team included qualified Domain experts from the field of Biology, Biochemistry and Molecular Biology together with software testers.

Correct understanding of the application, the core software and end-user perspective is extremely critical to provide appropriate solutions, consequently B.A.T. handled this entire process very smoothly and professionally which was well appreciated by the client.



Some of the testing methodologies that were adopted by the B.A.T. include:

Product Testing: To test whether the product is performing as per the requirements and expectations.

Verification: The process to determine whether or not the product at a given phase of the software development cycle meets the implementation steps and can be traced to the incoming objectives established during the previous phase. The techniques for the verification are testing, inspection and reviewing

Validation: This involved testing and comparing test results to the expected results in actual condition of use, which occurred at the end of the development process.

Automated Testing: This involved writing story tests for automatic checking of functionality. (A normal user workflow for that particular functionality is generally the story test).

Regression Testing: This is the most intricate testing procedure. The procedure involved, once a change has been made to fix problems with the software, it should be tested again to ensure that no new bugs have been accidentally introduced while fixing old bugs.

Sanity Testing: A subset of regression testing. At the basic level, used to verify incase the specifications are met.

Manual Testing and UI Testing: A series of tests that involve lot of user interactions (many mouse clicks), hence cannot be totally automated. This also included the UI specification verification at times.

Benefits:

The superior program management, and proven processes and methodologies provided following advantages to the client and B.A.T.:

- Perfect and successful delivery adhering the client's budget plan and aggressive schedules without any compromise over testing resources.
- Availability of the Beta testing resource throughout the PDLC helped client to perform, effective and in-time testing activities without any additional overheads.
- On-time successful completion of the entire software development cycle including testing phase.
- B.A.T. proved its immense capability and understanding to successfully handle a completely new area of product and technology. Thus gaining the ability of advancing to new areas of responsibility.
- B.A.T. reveres this opportunity of being a part of this crucial knowledge based software project which can be beneficial for the both client and B.A.T. in the future.