

## Jumpstart QA – Setting Up a Mature QA Practice



A start-up company developing an ERP product for SMEs partners STAG to leverage its expertise in setting up a well-defined QA practice to ensure quality is injected over the PDLC and go-to-market with high confidence product release.



Domain/Category -  
ERP – Pharmaceutical, Chemical  
and Food Processing



Technology - Microsoft technologies

### CUSTOMER AND PRODUCT BACKGROUND

The customer is an IT start-up subsidiary of a well-known Indian pharmaceutical company focusing on developing an ERP solution for SMEs in the verticals of pharmaceutical, chemical, and food processing.

The product in question is an ERP software developed using Microsoft technologies and is compliant with good manufacturing practices (CGMP) and requirements of international regulatory bodies such as USFDA, EDQM, TGA, MHRA, and MCC.

### PROBLEM STATEMENT

The customer's product development team was led by strong ERP domain experts, with a team of young new recruits backing them up as software developers. The customer planned for an early beta release of the software to capitalize on the market opportunity. Being a start-up company, they faced challenges in balancing cost, quality, and go-to-market on-time. Therefore, they preferred to partner with a software testing expert to jumpstart the QA activity so they could concentrate on product development.

## SOLUTION

The STAG team first reviewed the current development process and noted numerous gaps, including sparse product documentation, lack of requirement traceability, lack of unit testing practice, and missing build release notes.

The STAG team then initiated an effective knowledge transfer mechanism with the customer's functional experts to gain clarity on the functionalities of the product, and also independently explored the various modules that were ready.

The team reviewed the requirements from a testability perspective and prepared a feature list as well as test scenarios.

The team spent substantial time in educating the customer team on requirement collection, project management, configuration management, use case methods, feature-driven development, and developer testing and also in guiding them on adopting a suitable development model.

The STAG team highlighted the importance of a disciplined approach to testing by differentiating the test levels and test types. It also introduced the practice of multi-level testing – unit, integration, system, and end-user perspective.

The team designed test cases by applying the Behavioral Stimuli (BeST) technique. It enhanced the depth of testing by applying techniques like Boundary Value analysis, equivalence class, and domain specific special value, while the breadth of testing was increased by adding scenarios for different test types based on the requirements. It also designed end-to-end test scenarios based on identified module-to-module link interfaces.

Finally, the team established an efficient bug-tracking mechanism to maintain consistency in defect arrival and defect closure, thereby ensuring product development was on course and in line with the schedule.

## OUTCOME AND VALUE ADDITIONS

The robust automation architecture developed by the STAG team ensured a well-defined and disciplined test process, thereby reducing the testing cycle effort from 50 hours to just 12 hours, a 70% reduction. Selecting TestComplete as the tool for automation ensured a 60% cost saving, owing to its significantly low per seat license cost. The goal-oriented automation strategy largely contributed to effective product release as per the scheduled time frame. The workaround solution was effective and its performance was closer to expectations.

Further, the STAG team also trained the in-house QA team on the usage of the tool, which was a saving compared to the tool vendor training cost.

### CUSTOMER SPEAK

“...By leveraging STAG's expertise we had a jumpstart to the QA process. This enabled us to quickly adopt the best-of-the-breed development processes resulting in faster development cycles. Our PDLC has reached a level of maturity and we can now make accurate delivery commitments to our customers ”

- Director & CEO



# Test cases created: 2000



# Defects logged: 1200



# Test cycles: 20