A holistic approach to the quality process

Alfa Laval is a global organisation which uses a support system with numerous data-driven systems requiring continuous development and support. With System Verification as a partner, Alfa Laval has created a structured quality process where testing has been integrated with development. This has resulted in improved cost effectiveness, reduced lead times and increased quality in every delivery.

Increased quality in the One4AL order system

Alfa Laval first contacted System Verification when they needed help in testing the One4AL order system. On several occasions, Alfa Laval had attempted to offshore its testing, but had not obtained the expected results. Offshoring is always associated with significant challenges, because regional systems are often difficult for outsiders to understand. The total cost of offshoring can easily exceed the benefits, as increased management and control are often required. As a result, Alfa Laval chose to bring home its testing function to Lund, Sweden. The internal IT department took on the responsibility for testing, but felt it also needed additional resources. In 2009 System Verification became a partner with Alfa Laval, and the journey began towards a structured way of working to reduce costs and increase quality. Today, testing activities are on a controlled level, which has enabled offshoring of certain types of testing to System Verification’s office in Sarajevo.
Fourfold development of new functionality

The One4AL system contains a large number of applications, which undergo continuous development. The first step for System Verification was to create a clear scope for each release and establish routines for follow-up. A structured system for reporting bugs was also introduced. Another step was to organise test cases in a common platform. Many of the existing test cases were unnecessarily technical, and it was difficult to compare test runs. System Verification worked closely together with the IT department to collect data, create new test cases and build a common structure, including documentation templates. In parallel with these efforts, requirements specification was improved - a decisive step needed to ensure fulfilment of established goals. Today, Alfa Laval is enjoying the fruits of this labour. The company now develops four times as much new functionality than before, and the quality of each release has increased. It became clear that structured testing provides more benefits than just reducing the number of bugs. Testing is quite simply essential if an IT project is to succeed.

"Now, the teams working with development deliveries can focus more on new functionality than on fixing bugs. Price performance has increased.”

CAROL ROGERS, MANAGER COMPETENCE CENTER TEST, ALFA LAVAL

Analysis revealed need for test strategies

System Verification then received a request from Alfa Laval’s Test & Training competence centre to conduct an extensive analysis based on the Test Process Improvement (TPI)® model, for a number of other IT projects. Alfa Laval wanted to ensure that these projects maintained the same quality as One4AL. One aspect identified in the analysis was the need for test strategies, and Alfa Laval asked System Verification to create a portfolio of templates. At the same time, Alfa Laval decided that from then on, every IT project must have a test strategy. Alfa Laval’s confidence in System Verification continued to grow, thanks to the value created by complementing the customer’s own organisation with System Verification’s cutting-edge competence. Alfa Laval decided to give System Verification a strategic and advisory role in Test & Training.

Common frameworks cut costs

In addition to test strategies, System Verification also developed a common framework for test automation. Previously, each IT project had its own licences, tools and equipment, which created unnecessary costs. Today, these activities are coordinated by the Test & Training competence centre. One advantage is that the frameworks can be re-used, which in turn creates opportunities to reduce costs. In addition, projects can begin test automation more quickly.

E-commerce platform: fast start-up with ready-to-use templates

In 2011 the eBusiness project was started to create an e-commerce platform for the more than one million products Alfa Laval offers its customers. The goal was to ensure that a significant portion of all transactions in the Equipment Division could take place online. System Verification was responsible for quality assurance of the system prior to its rollout in various countries. Thanks to the creation of ready-to-use templates, testing work could start quickly: integration testing, system testing and acceptance testing, and performance and security testing. Still, many challenges remained. One of these was the complexity. This system integrates with more than 30 other systems in order to fetch necessary information, such as product details, prices and lead times. System Verification’s knowledge of these systems was a prerequisite in order to troubleshoot problems and ensure quality in all processes. Another challenge was the configurator, which is a major part of the solution. This function is undergoing constant growth as more products and models are continuously added.

New software tools mean even more efficiency

In 2012 Alfa Laval had developed its testing to the point where specific software tools were needed in order to ensure continued gains in efficiency. In consultation with System Verification, Alfa Laval decided to implement Microsoft® Visual Studio® Team Foundation Server (TFS) for test management and defect management. This led in turn to a review of the entire development process. Previously, there were two distinct processes - one for test and one for development. These were combined into a single, standardised process guided by agile working methods. The result was increased awareness about the importance of testing from the beginning.

Increased efficiency in all IT projects

Alfa Laval has noted significantly improved efficiency in all its IT projects. The organisation moved from working in silos, where each project had its own processes and tools, to shared processes. No one reinvents the wheel - acquired knowledge can be re-used. Use of effective tools has reduced the time required for administration. System Verification is responsible for test strategies, and coordinates projects through provision of testing resources with the right skills and knowledge.

"It’s always a pleasure to work with System Verification. Today, they function as a natural part of our organisation.”

MORTEN TRUelsen, MANAGER COMPETENCE CENTER CORPORATE IT, ALFA LAVAL