

Swiss Life

The Zwitserleven (Swiss Life) Test Center

Zwitserleven has more than one hundred years experience in the business of insuring pensions. They carefully manage this "insurance for the future" for hundreds of thousands of Dutch people. Next to that, Zwitserleven provides many financial services like mortgages, different insurances, saving plans and several state of the art stock constructions.

Zwitserleven is the successful Dutch part of the world wide operating Swiss Life company. Zwitserleven has 750 employees. The total company has around 12.000 employees. The total amount of money they manage adds up to 200 billion euro.

For a reliable financial service provider like Zwitserleven, reliability and accuracy of the IT-systems is crucial.

TACT: The Zwitserleven test center

The IT department for Technology & Implementation (T&I) is responsible for the execution of projects and the maintenance of Zwitserleven systems. This includes about 400 applications, a part of which is made by Zwitserleven, a part consists of standard packages and a part is made by third-parties. The systems run mainly on HP-Unix and Bull-mainframe platforms.

Within the T&I department the testing of critical systems (like policy administration, customer relation management and the financial system) is performed by a central test team: TACT (test advice and coordination team).

Tasks and responsibilities

TACT is responsible for coordination and execution of acceptance testing within projects, maintenance releases and bug-fixes on critical systems. Next to that it provides advice about the system tests and integration tests that are performed by system development. The test team consists of a permanent staff of 7 FTE. When necessary the team is expanded with external consultants.

The TACT team consists of 5 test coordinators and 2 testers. The test coordinators are responsible for writing test plans, coordination of test activities and support of the preparation and execution of tests. In agreement with the desire of the man-

agement to increase the involvement of users within the acceptance tests, for each project a test team is formed together with users. The preparation and execution of test cases is made the responsibility of the users.

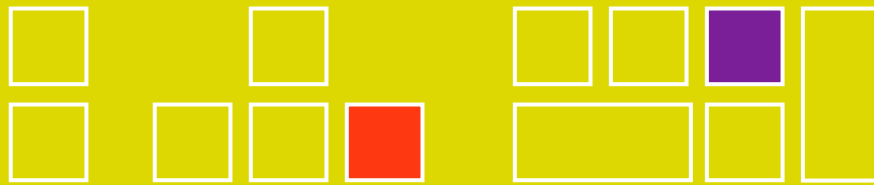
The staff of the TACT team is fairly stable. A career path has been introduced for testers and test coordinators. A junior, medium and senior function level has been defined for both roles. With each employee a personal career and development plan is made.

'With the test center we have created a reliable and repeatable test process.'

Approach

The test center has defined a standard test method (based upon TMap), contained within the standard test plan. For large and complex projects a master test plan is drawn up, containing a test strategy and coordination between test levels. For smaller (standard) projects a simplified method is followed. Several standard test techniques have been selected and the test center has created templates for these techniques to help the testers in using the techniques. Each test assignment is finished with writing a test report. This report summarizes the defects for the application that was tested and the progress of the test process. The test report contains advice about the quality of the application. Based upon this advice, the system owner or customer decides to implement the system. The use of the test center is secured within the development and maintenance process. Change management demands that a test report should be available for





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each critical system before it can go into production.

For test execution the test center has 3 test environments. The test center is entirely responsible for functional management of these environments. For almost 50% of the systems, a basic test set is available for regression testing.

Reason for a test center

Before the test center was implemented, each application had an application manager responsible for testing the system. Often, the application manager decided together with a senior user to implement the system in production. The management realized that this needed to change. They admitted that a standard approach would improve effectiveness. Furthermore, a shift was expected towards standard software. To preserve the proper quality of the systems, improving the test knowledge was essential. The Y2K problem and subsequent test that were needed provided Zwitserleven with the trigger to implement these ideas. In 1997 a feasibility study was performed, followed by actual implementation in 1998.

'The number and severity of defects found in production due to unstructured testing has been reduced with 50%.'

Structure of the test center

The test center started on a small scale. At the start, the scope was restricted to the functional acceptance test of one important application. In this pilot phase the approach and templates were defined and put to practice. Only after the successful completion of this project, the test center started to become involved in projects related to other systems and the execution of other test levels (i.e. the User and Production Acceptance tests). As expected, projects and project leaders looked upon the test center with reservation. They were seen as an additional burden and consequently they were expected to increase the time needed for the projects. Furthermore nobody was

convinced they actually could realize their promises: a thorough and efficient acceptance test.

Results

The test center is now an integral part of the system development process. Testing is a standard part in the project management approach and the test team is a structural part of system development. The test team is involved early in projects during the analysis phase. Based upon the integral (yearly) project calendar the planning and estimation of the test team is made.

The test center contributed to Zwitserleven by:

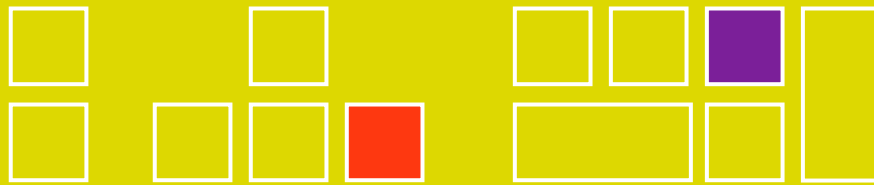
- Efficiency improvement: the testware has become more re-usable using a standard test method. A regression test set is available for 50% of the systems. The test preparation time for these systems has been reduced with 60%. The stabilized test environment has reduced the creation of a test environment from 1 week to 1 day.
- Quality improvement: the number and severity of the defects found in production, due to unstructured testing, has been reduced with 50%.
- Process control: planning and estimating of test activities is transparent for all parties: system development, technical application management and the users. Based upon the (yearly) project calendar, each party reserves a number of resources for test activities. This reduces the number of unplanned claims upon resources.

Success factors and lessons learned

According to Zwitserleven, the most important factors for success and the most important lessons learned are:

- Start on a small scale with a small number of systems and pilot projects. Increase the scope once you have sufficiently demonstrated the approach and organization.
- Make sure the test center becomes an integral part of the project approach once the pilot projects have been completed successfully. Be proactive towards project leaders with respect to forming a standard project approach. Demonstrate how the test process is improved.
- Pay a lot of attention to test reports because they provide the information proving the added value of the test center.





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- Make sure the test center is balanced. Next to the methodology, attention has to be paid to test infrastructure and test organization.
- Keep asking for proper quality of the test basis. Although the test basis will never become 100% perfect, early in a project the clearness and testability should be checked. Thereafter, improvements on the documentation should be checked. The test center of Zwitterleven demands that some form of test basis should be minimally available.

Conclusion and follow-up

Zwitterleven is satisfied with the results achieved by the test center: "With the test center we have created a reliable and repeatable test process. By combining test knowledge and standardization, objective improvements have been made with respect to efficiency and reliability of the test process. The test center has become a clear and structural part of the development process. "

During the next period, the test center will focus on:

- Test automation. Mainly in the area of automated regression testing. Zwitterleven deliberately waited with this until the test process was understood and regression test sets were available.
- Metrics to enhance tracking the efficiency and quality of the test center.

The test center could further improve efficiency. 60 to 80 percent of all test activities is of technical nature and can be performed by a professional test team without input of the users. The users could then concentrate on the testing of usability aspects only. Although this would reduce the initial learning period, the participation and thus the awareness of the business regarding IT development is found to be more important at this moment.

Project facts

Company: Zwitterleven (Swiss Life)
Topic: Test center
Goal: More efficient testing
Period: 1998 - present
Size: 7 FTE (permanent staff)
Result: Efficiency improvement: over 50% reduction of preparation time for release testing.
Quality improvement: up to 60% less defects in production after implementation of releases.
Process control: clear planning and estimating of test activities.

