



**SQS PractiQ®**  
Early Error Detection by Test Case Specification

## Detect errors early on, reduce costs and increase quality

The search for errors can never begin soon enough, since incomplete or incorrect specifications of requirements and inadequate tests are among the biggest cost drivers in IT projects. With the aid of early identification and correction of these errors, you can reduce costs by up to 90 per cent.

SQS has almost 30 years of project experience, and from this it clearly emerges that around 70 per cent of all errors arise in the first two project phases, analysis and design. Other investigations, such as ones carried out by HP or the Quality Assurance Institute, arrive at similar results. However, only about five per cent of defects in each case are also discovered during the analysis and design phases. The longer it takes to correct them, though, the more costly the effect of the errors becomes and the worse the impact on quality.

This is because systems are becoming ever more complex and their interdependencies ever closer. Networking and integration, including internet or Web 2.0 applications, have now become standard. The process of tracing errors can then become accordingly prolonged and expensive if the errors are not noticed until the systems are implemented or up and running.

### Active early detection

In Early Error Detection by Test Case Specification, SQS provides you with a solution package that bundles the expertise and methodology of the specialists in test management and quality assurance in a single proposition. The solution is aimed at companies in all branches of industry and of all sizes, and is not dependent on the software and infrastructure already in place.

It means that even in the analysis and design phases of a project you can check whether codes, documents, (technical) specifications and requirements are complete and consistent. At the same time, the results can be used to derive initial test cases that serve to test the running software later on. Error detection and test preparation come together with Early Error Detection by Test Case Specification.

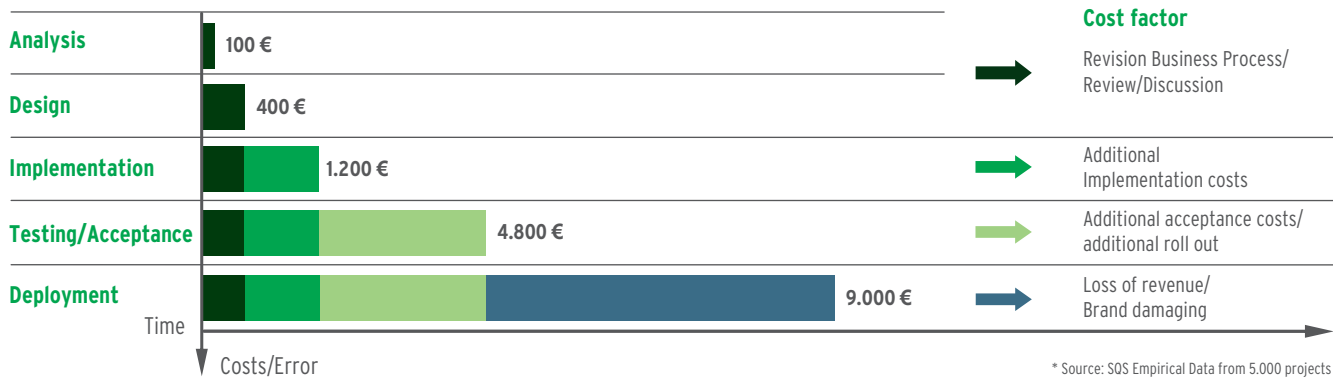
### Achieve considerable cost advantages

If we take a requirements specification of 1,700 pages and about 50 lines per page as the basis, for example, the number of errors in this total of 85,000 lines ranges between 1,275 and 2,125. This calculation is based on the empirical finding that on average 1.5 to 2.5 errors are hidden in every 100 lines of specifications. All of these bugs can be identified and eliminated at an early stage. Depending on the level of cost estimated for debugging at your company and which project phase you correct the errors in, the cost advantage can amount to as much as 90 per cent.

**About SQS:** The SQS Group is the world's leading specialist in software quality. Founded in Cologne, Germany, in 1982, SQS has more than 2,100 employees in 15 countries worldwide and achieved revenues of € 189.1 million in 2011. With more than 7,000 completed projects under its belt, SQS has a strong customer base, including half of the DAX 30 companies.

**SQS PractiQ® solutions – best practices, services and tools as a package:** Software quality management and quality assurance often need to be faster and less expensive in many companies. SQS has all-in solutions at the ready to handle challenges that companies frequently face and thus enables its clients to lower IT costs and raise the quality of systems.

## Defect correction cost factors\*



The earlier an error is detected, the lower the costs of its corrections

## Continuously improve quality

Early Error Detection helps you to obtain individual, company-specific empirical values against which you can benchmark all subsequent software projects in your company. In addition, with Early Error Detection by Test Case Specification you generate formalised, repeated and – as far as possible – automated test cases which make a considerable contribution to continuous improvement of the cost situation and software quality.

In Early Error Detection by Test Case Specification, SQS has assembled about half a dozen services encompassing a comprehensive set of measures:

- Test management in conjunction with project and quality management
- Coaching
- Test and business analysis
- Specification of tests and the derivation of test cases with tool support
- Systematic training that gives your employees practice in producing test cases

If these measures are applied, the number of test cases can be reduced to the necessary minimum, thereby saving costs. Finally, SQS produces a return-on-investment calculation for you to illustrate the long-term and lasting cost advantages of Early Error Detection.

## Contact

Do you have any other questions, or do you need more information?  
We look forward to hearing from you, by phone or e-mail:  
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## Your advantages at a glance

- Dovetailing of project management and quality management
- Systematic testing of documents and specifications
- Early identification of errors, ambiguities, contradictions and gaps
- Documentation of defects and their solutions
- Systematic specification of test cases (SQS Test Case Specification)
- Tool support and integration of Test Case Specification (TCS) into the existing tool landscape
- Compilation of test cases and reduction to the necessary minimum
- ROI calculation with the aid of benchmarks

SQS has its own tools at its disposal, such as SQS-TEST®/Professional TCS with stored methods, which allow formalised analysis with meaningful, correlatable results.

With Early Error Detection, you achieve several objectives for your company simultaneously:

- High potential savings
- Fast time to market
- Successful IT projects
- Higher software quality