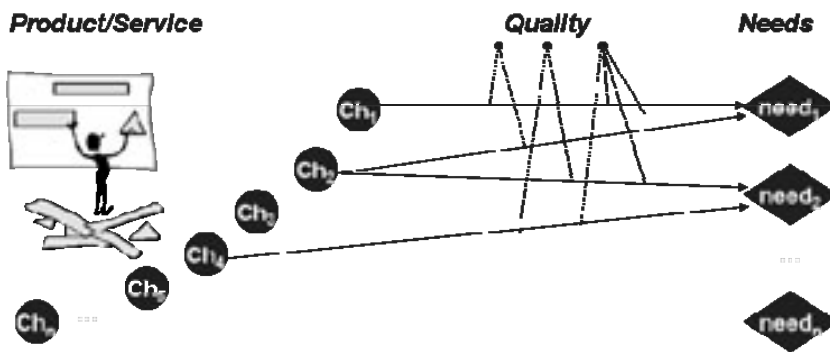


360° Quality: Functional quality is not enough

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Most surveys about the success rate of IT-Projects demonstrate very dramatically that there is still missing a silver-bullet for doing large IT-Projects in time, in cost and in quality. Neither new techniques and tools nor new processes are increasing the success-rate. Instead of improving single steps within the Application Lifecycle it should be tried to change the general view on an IT-project. The idea is to have a very holistic view on project success, like already established in the context of quality management since many years. Understanding quality as “the characteristics of a product or service that bear on its ability to satisfy stated or implied needs” quality in general can be modelled like in the following Figure.



Corresponding to this model an IT-project depends on the following two factors:
a) Holistic and systematic consideration of all needs and products/services as well as b)
continuous transparency about the degree to which characteristics fulfil the needs.

Holistic View

Looking at the reasons for failed IT-projects one interesting fact is that needs/requirements can not be reduced to functional requirements in today's projects. If such a mono-dimensional view on quality is used there exist many high project risks. Typical quality aspects relevant for today's IT-Projects are:

- Maintainability: Most activities around an IT-System are understanding, analysing,

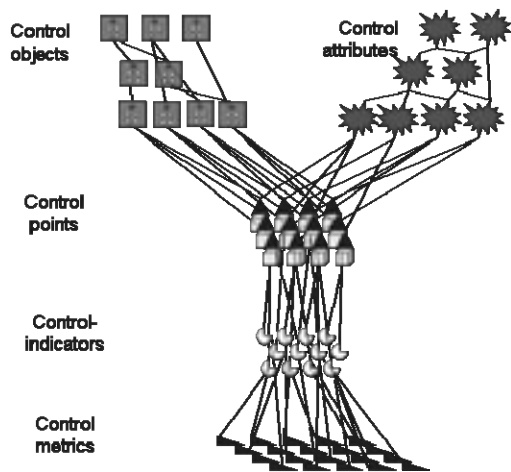
modifying and extending it. To enable these activities it is very important that the system has a corresponding high internal quality. Typical aspects there are to follow programming style-guides, application of well established design patterns as well as the reuse of experienced frameworks with an extensible architecture.

- License Compliance: To reuse existing source-code-snippets, libraries and frameworks is state-of-the-art for today's software development. Unfortunately there exist many licensing aspects that have to be considered when doing so. Ignoring this aspect can immediately stop every project. This is particular relevant when reusing components under the Gnu General Public License (GPL).

Another type of holistic view has to consider, that software can not be reduced to the delivered executable. The overall success of a project also depends on the Quality of the documentation (technical, domain-specific, operational, etc.), the traceability of the requirements, test-infrastructure etc.

Transparency

To have a continuous transparency about the degree to what the holistic requirements are fulfilled it is helpful to see an IT-Project as a typical engineering discipline: The most important characteristics of doing so is to have a systematic approach, to work in a very disciplined way and to concentrate on measurable check points. All of them are fulfilled by the so called Y-Model (see Figure), handling with control objects and control attributes to have a holistic view on the project. Control indicators based on control metrics ensures a high potential for automation and makes sure that the generated view is objective and repeatable.



Software Quality Systems AG

The SQS AG is the world-market-leader in the area of quality management and testing. SQS has about 1.500 employees and about 150 Mio. revenues and knows about all relevant control-points and how to check them continuously as early as possible. For real projects SQS hosts an experienced set of Best-Practices to make IT-Projects successful.

Frank Simon is the head of the SQS-Research & Innovation Group that has the task to maintain and update the set of experienced Best-Practices as well as to work on new services like model-based testing or architecture-verification.