

PECB

When Recognition Matters



ISO/IEC 25000 – SOFTWARE
QUALITY REQUIREMENTS
AND EVALUATION - SQuaRE



Introduction

Rapid ICT evolution causes an emergence of many new concepts of application systems and software products.

The enormous progress and evolution have enabled new applications, for example; video movie, Internet shopping and cloud computing. In order to develop such new application systems and software products, new systems and software technologies are required.

In general, new application systems need larger, more complex and higher quality software. Almost every software product, such as MS-Word, Google, Adobe Acrobat, have become larger and larger as the product versions up. Every application system and software product needs different quality property based on its purpose and context of use.

It is very important for an organization to select and practice an appropriate project delivery methodology. Many aspects should be considered during the software implementation and evaluation. Important aspects are those related to safety, economy, security, environment, and to the marketing of the product when appropriate.

Research

Despite the industry you belong, you should be prepared to avoid any risk level of any aspects. Statistics say that 68% of IT projects fail in different levels of implementation due to various reasons.

- Due to the way they approach business analysis, companies are more likely to have a marginal project or outright failure than a success
- The budget consumption for IT software development, staff and external professional services will be wasted by poor requirements
- Poor requirement definitions of the project will surely lead companies to spend much more time and budget
- Bad planning will lead companies to fail in delivering products on time and within the budget

Conclusion

So, how can you measure something that you did not define or how can you evaluate something that you cannot measure. After you decide which methodology you will use for software engineering in your organization, you will need to define Quality Requirements, set the Measurement Elements and prepare the Evaluation strategy in order to assure that the final product meets stakeholder's requirements. Using ISO/IEC 25000 SQuaRE (Software Quality Requirement and Evaluation) standard while developing a software product will reduce the potential risk in many aspects. Also, you can make a more informed decision about the risk, what iteration should be prioritized and define the cost value of your software product.

Benefits of using SQuaRE

Setting up and defining Quality Requirements

Software quality is the capability of the software product to satisfy stated and implied needs when used under specified conditions. Stakeholders are sometimes not aware of all their needs. In many situations stakeholders needs only become evident when the software product and related business processes or tasks can be tried out. With SQuaRE quality model, you will be able to define the Internal and External quality of your software as well as the quality in use. By defining Software quality requirements, you will increase the chances of success for your project.

Quality Measure and Quality Measure Elements

Software Quality Measure should specify the Quality in use Requirements, External Quality Requirements and Internal Quality Requirements based on product requirements and specifications. Quality attributes are measured by applying a measurement method which can satisfy the needs of developers, acquirers, managers and other stakeholders. Quality measure will help you identify and evaluate quality software requirements and assures that those requirements are fulfilled.

Evaluation of your software product

Developers, acquirers and independent evaluators perform different activities during the system product quality evaluation according to each specific role and the category of the evaluation target entity. The product quality evaluation process of each role is the same, but the target entity of evaluation is different according to the purposes of the evaluation, depending on the requester's needs.

ISO/IEC 25000 SQuaRE describes the activities and tasks providing their inputs, outcomes and complementary information that can be used to guide a software product quality evaluation.

