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Software Quality Workshop

Towards high quality project results
and improvement of customer satisfaction

As software plays an increasingly important role in many manufactured products, the need to ensure software quality has never been greater. Lacking software product quality is in many cases responsible for a considerable increase in the total cost of software-intensive systems. Latent defects and difficulty in maintaining or extending complex code can have a dramatic impact on business competitiveness.

How to get a grip on the vital business-related software quality attributes that need to be guaranteed in your development process? The 'Software Quality Workshop' will show you the way.

Software product quality is an often underexposed vehicle for the alignment of the software development process with the business goals. Apart from the critical relationship between process quality and product quality, the traditional focus during software development is on functionality, only too often at the cost of quality.

Afterwards verification of software quality has a limited value. Quality is not an "add-on": it requires attention right from the start of the development activities. Only when quality criteria are part of the overall design and implementation process, it is possible to guarantee the project result.

The 'Software Quality Workshop' is targeted to prevent or solve many common problems in software development projects, such as late delivery, increasing problem reports, legacy issues, instability caused by software faults, persistent and expensive problems with performance or connectivity, etc.

Why is software quality important?

Experience shows that at least 70% of the total cost of software development is spent on quality-related issues, such as quality control and maintenance. However, quality is rarely regarded as the most important driver for a software project. To reduce these costs, it is essential to compose a concise quality profile at the start of development activities, based on the requirements and expectations of all stakeholders of the system to be build.

But also (existing) projects involved in modification, migration or renovation will take advantage of the mapping of such a software product quality profile.



How can we quantify software quality?

The basis for the measurement of software quality is the ISO/IEC 9126 quality standard. This model comprises a collection of quality attributes, metrics and examples of measurement protocols.

An important aspect of the model is the distinction between the perspective of the developer and that of the stakeholder. The internal and external quality is described according to six 'basic' quality features, namely *functionality, reliability, usability, efficiency, maintainability* and *portability*. Furthermore, the perspective of the end user is addressed with quality features such as *effectiveness, productivity, safety* and *satisfaction*.

What is the purpose of the workshop?

The goal of the software quality workshop is to reach agreement between stakeholders about their views, expectations and demands regarding the quality of their software product. The deliverable of the workshop is a shortlist with the five most significant product quality features, including domain-specific definitions and indicators. The agreed-upon quality attributes are the main drivers for the software architecture or the migration path.

How is the workshop organized?

Point of departure is the active participation of 10 to 15 employees of your company. The workshop takes about 8 hours in total, and is subdivided in two sessions.

It is a custom-made workshop targeted at the improvement of the quality of *your* software product. Therefore the participation of a wide-ranging committee of stakeholders is essential – not only software engineers and project leaders, but also workers from other relevant departments, such as research, (after-)sales, product development, service, marketing, quality assurance, etc. Especially the consumer and end users of the software product (or the system equipped with this software) should be represented.

What is the surplus value?

The Software Quality Workshop will bring you the following benefits:

- Participants are familiar with the concept of software product quality and the ISO 9126 quality model;
- All stakeholder utilize a consistent terminology with respect to product quality;
- Growing consensus and agreement between disciplines with regard to the most important quality requirements;
- A clear understanding of the specific issues related to software quality in your project;
- A pragmatic fundament to introduce (or to intensify) the quality program in your project;
- An instrument at your disposal for monitoring a re-engineering project;
- The foundation to include quality requirements as decisive factor in your project;

Especially in a multi-disciplined environment, the workshop usually yields a valuable spin-off: colleagues from different disciplines will discover that well-defined quality attributes are part of a common language to confer on their collective products. Quality appears to be a vehicle for alignment between co-workers.



What is the investment?

The Software Quality Workshop comprises two daily periods which (preferably) are organised in-house. Based on a maximum number of 15 participants, the total cost of the workshop amounts to € 2750,- excluding VAT, including intake, preparation, analysis, presentation of results, a clear report, and a sound advice for follow-up activities.

Every participant will receive a portfolio with hand-outs and worksheets, a practical guidebook with all ISO 9126 definitions, indicators and measurement protocols, a reader with useful information about software product quality, and an annotated report with the results of the workshop.

ImprovementT offers the *Software Quality Audit* as a consecutive service, aiming at the actual measurement of selected quality attributes of your software product. The combination of workshop and audit is offered for the reduced price of € 3750,- excl. VAT.

Are you interested?

Please contact **ImprovementT** for more information, or make an appointment for an introductory and exploratory conversation.

At your service,
Erik Philippus

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Agile Architecting