



## Cost-saving Software Quality Assurance more than software testing

The earlier comprehensive Software Quality Assurance (SQA) processes are applied in the Software Development Life Cycle, the more project costs are reduced and the less chance there is of a high defect count, business process misalignment and lost productivity wiping out a good portion of whatever business benefits the project should and could have delivered.

That's according to Steve Lauter, head of New Business Development for The IQ Business Group's Software and Technology Business Unit, who says available statistics from highly regarded international market analysts support his view that properly applied SQA can result in exponentially reduced project costs.

"There's no need for corporates to just accept the cliché that software development projects run over-budget and over-time. And there's certainly no need to make provision for the rectification of shoddy development work in the project timeline. Software engineering organisations that have a mature SQA policy in place are less likely to deliver sub-standard custom software solutions than those that don't," he says.

Lauter emphasises that the term "Software Quality Assurance" is not limited to software testing activities. Rather, he says, SQA is the set of processes that enables the definition, management and measurement of software engineering activities.

SQA encompasses processes that make an organisation compliant with best practices and frameworks such as CMMi and ISO. These processes include but are not limited to formal Requirements Engineering, Software Configuration Management, Planning and Reviews - each one a separate, defined methodology in itself, but collectively encompassed under the term SQA.

"It's this practice of good process governance in a software engineering environment that is responsible for assuring that the activities included in the Project Management methodology, the Software Development Life Cycle (SDLC) methodology, and the correct validation and verification activities are applied," he explains.

"However, because so many people mistakenly view SQA as the 'testing' component of the SDLC, it's usually slotted in as an activity on its own at the end of the SDLC. Certainly, testing is a key part of SQA but it is actually part of the complete SDLC, along with a host of other qualitative activities that are required to ensure success.

"SQA provides the mechanism for managing and measuring the test planning, execution, and management activities in the context of and in alignment with the SDLC from end to end," he adds.

According to Lauter, the SQA processes and activities that need to be followed to ensure quality deliverables are pretty standard across the planet, though they might be known by different names. However, they have been proven time and time again to be necessary for success in software engineering.

SQA is so important, he says, that it needs to be defined and managed as a separate process.

“It has to start at project initiation and must live through the entire lifecycle of a software development project, from planning, past implementation and through to maintenance.

“Unfortunately, too few organisations recognise the importance of SQA. Qualitative activities that should start early in the project are ignored until the final testing activities at the project’s end. By this time, it could be too late to prevent the delivery of a sub-standard custom software solution that ends up costing both the development organisation and the customer fortunes in defect rectification, scope-to-business-process re-alignment, and lost productivity,” Lauter concludes.

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