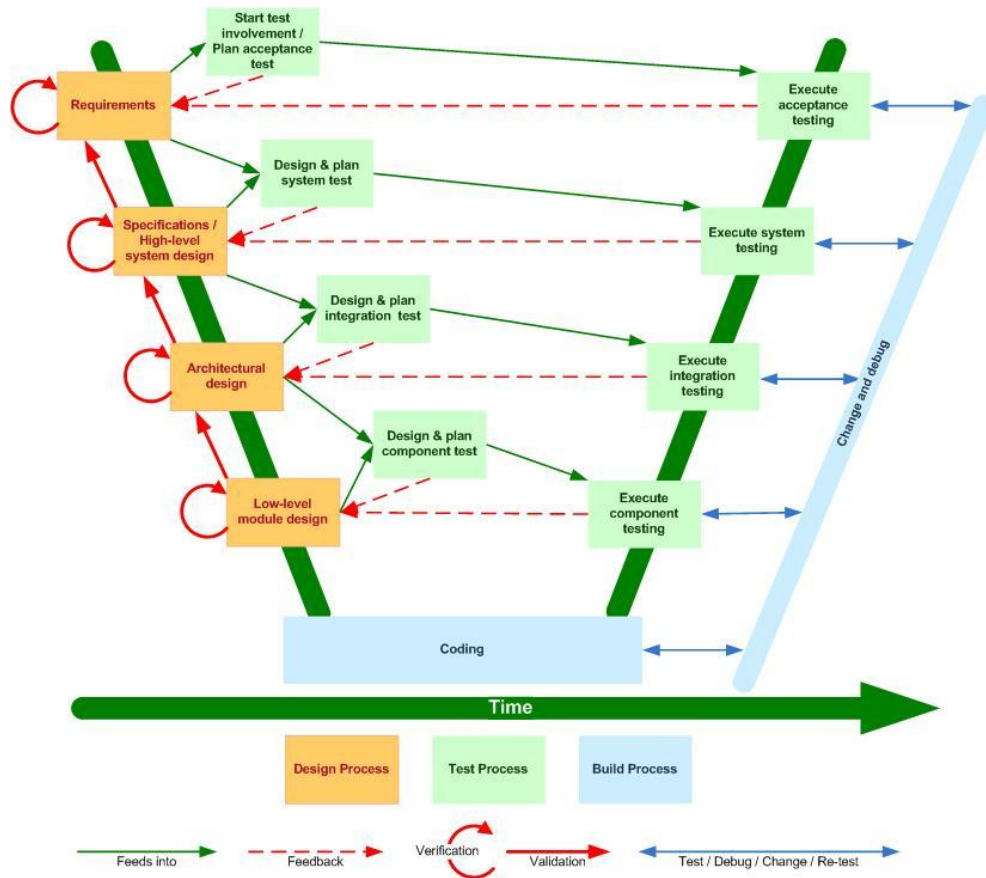


“Begin system test design during the system design stage”

By Adrian Howes, Experimentus Senior Consultant

Beginning the testing process early saves money, time and heartbreak over the lifetime of a project, no matter at what stage.

The model below, based on the *V-model* and *W-model*, demonstrates the relationships between system design, test design and test execution. Note that an additional benefit of designing and planning system tests at the system design stage becomes apparent from this model – that feedback from test design and planning is immediately available to the system design process. It matters not whether this feedback is positive or negative because it all helps to improve the quality of the product or the process (or both) going forward.



Software testers should get involved at the requirements stage of development because defects found here are about one hundred times cheaper to correct than the same defects found in production. Conducting early reviews aids in bringing anomalies to light and will ultimately save money by reducing the cost of putting them right.

Software testers should not be limited to testing software implementation but should also test software design. Defects will again be detected earlier in the development life cycle. Getting test execution prepared early is vital to completing a project in the shortest possible time because you can save time during test execution by having scenarios and scripts written before the code is delivered.

Metrics from previous in-house projects relating to how many defects have been found where in the development lifecycle, at what point they were introduced and when they were uncovered, demonstrate that system test design should begin during the system design stage. When I have carried out this type of analysis in the past it has been illuminating, not to say a little shocking, to discover just how many defects were introduced during the system design phase and not picked up until the system test execution phase. Having these sorts of metrics available at the outset will enable you eventually to make a comparison of the old and new processes and thereby demonstrate how effective the changes have been.

I strongly recommend at least one walkthrough of system designs to which the test lead and system testers are invited. I am constantly surprised by how many development organisations do not do this. It is a great way of finding many defects for a small investment of time.

A sensible plan would be to introduce changes on a small project. In this way, it will not be seen as a threat or a disruption. The benefits will become apparent very quickly and the change can be made permanent and more widespread as needed.



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Experimentus is an IT solutions and services company that specialises in software quality management. The range of solutions it provides helps organisations to reduce the risks associated with software development lifecycle and enables organisations to properly manage, control and measure existing IT applications*