



Test, But Verify!

White Paper

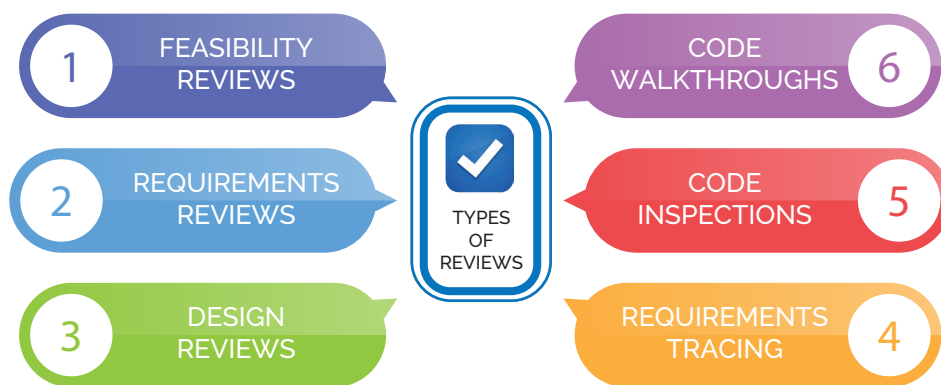
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This white paper is based on the Quality in a Quick video episode "The Value of Peer Reviews, Walkthroughs, and Inspections" which aired on YouTube on February 5th, 2018.

"Test, but verify". I would have sworn that's what I heard come from the television as I struggled to come up with a catchy title for this white paper based on one of our popular Quality in a Quick videos "The Value of Peer Reviews, Walkthroughs, and Inspections". Turning to look at the television I realized "Joe Anchorman" on the local news had started a commentary on President Ronald Regan's use of the phrase "Trust, but verify". President Regan had used the English translation of the Russian proverb "Doveriyai, no proveryai" quite often when discussing nuclear disarmament. Thank you Tampa Bay News Channel 9! Taking a bit of literary license, the perfect title for this white paper on the value of and techniques for implementing verification processes.

Peer reviews, a common verification tool, are my focus in this white paper. I'll be using the term "reviews" throughout for the sake of brevity. But there are many different types of reviews such as:



A review is a quality control technique that relies on an individual or group of individuals *other than the author or authors* of the deliverable or product to evaluate that deliverable or product. The purpose of the review is to find errors **before** the deliverable, for example a requirement document, is provided either to the customer or to the next step of the development cycle. A review process promotes the emphasis of quality throughout the SDLC (Software Development Life Cycle).

A primary goal and benefit of a review is to identify defects *within the stage or phase of the project where they originate* rather than in later test stages. This is referred to as **stage (or phase) containment**. Gartner has indicated and reported greater than 50% of all defects occur in the requirement stage! Peer reviews provide a better way, an earlier way, to detect defects sooner and make the correct adjustments or resolutions. And there are other benefits.

It also provides a *logical opportunity to involve the end-user*, customer, stakeholders, the developers, as well as all other groups such as quality assurance and testers in the *entire* development process. I was first introduced to peer review processes many years ago while a Product Development Lead and QA Engineer on an FBI project several years ago. They utilized a formal *peer* review process requiring preparation, adherence to protocol and procedure, and follow-up. It was exceptionally beneficial to be involved in peer reviews with the development

team, the customer, the architect, the IT operations team, etc. While the peer review was being conducted, as a QA Engineer, I could communicate "Hold up team! How are we going to test this? I have a concern." hlt was collaboration at its finest!

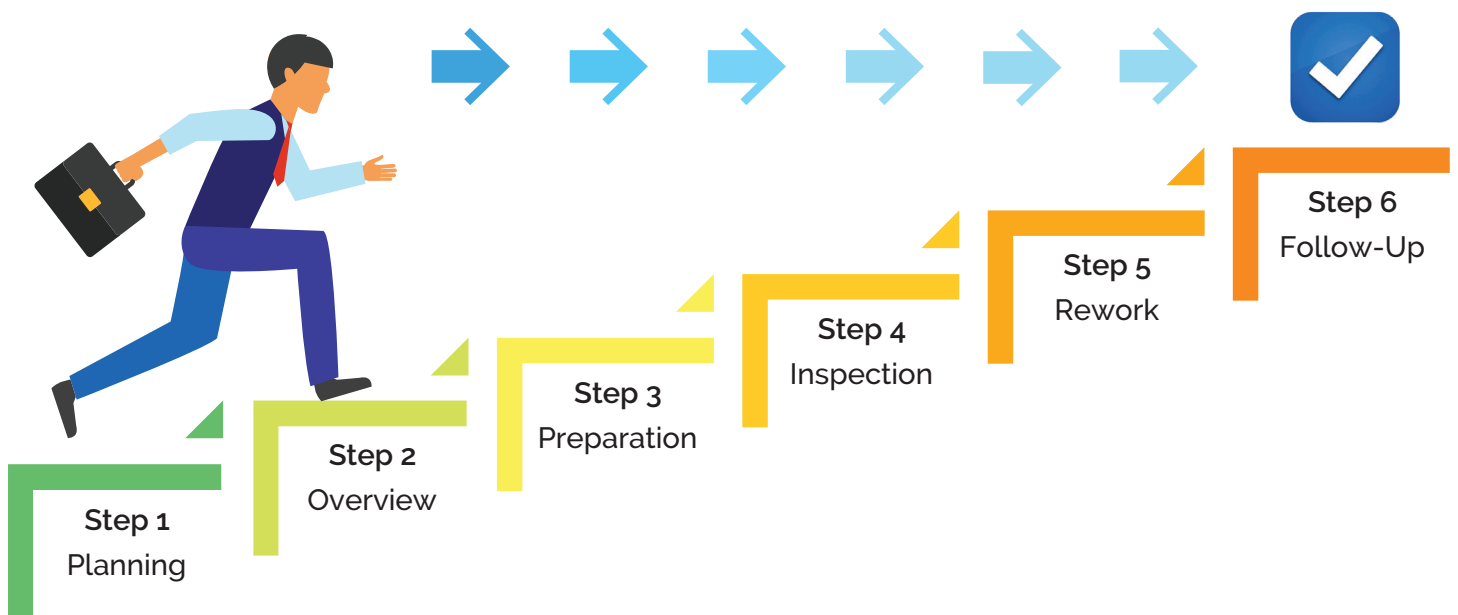
Mid-course corrections are easier and less expensive than waiting until you are closer to or at the deployment stage. And especially more than if you have already deployed into PROD. Think of the risks and costs...direct and indirect...avoided by exposure to your IT customers! And with customer involvement in mid-course corrections the customer can provide input via the review process.

To lay the foundation for a formal review process you must first establish prerequisites (i.e., the rules to enter into the review process). Establishing prerequisites to a review process requires you to analyze and understand your organization's SDLC and culture. Common products and entrenched policies and procedures are necessary. Without these, reviews are not practical. Once defined and communicated, the prerequisites must be enforced. Additionally, the review process must:

- Receive management support allowing a commitment of time and resources
- Have staff support. The team members must be on board
- Be well-defined and communicated with confirmation it's understood. Comprehensive training must be provided covering the review process in detail.
- Be installed throughout the entire organization or, at the very least, the project

The focus of a verification process is to evaluate the correctness of a single product such as a database, a program module, or a requirement document. The evaluation is based on whether or not the product satisfies its specifications or entrance criteria into the next phase. (Don't let the term "phase" force you into thinking only about Waterfall. Agile has phases too!)

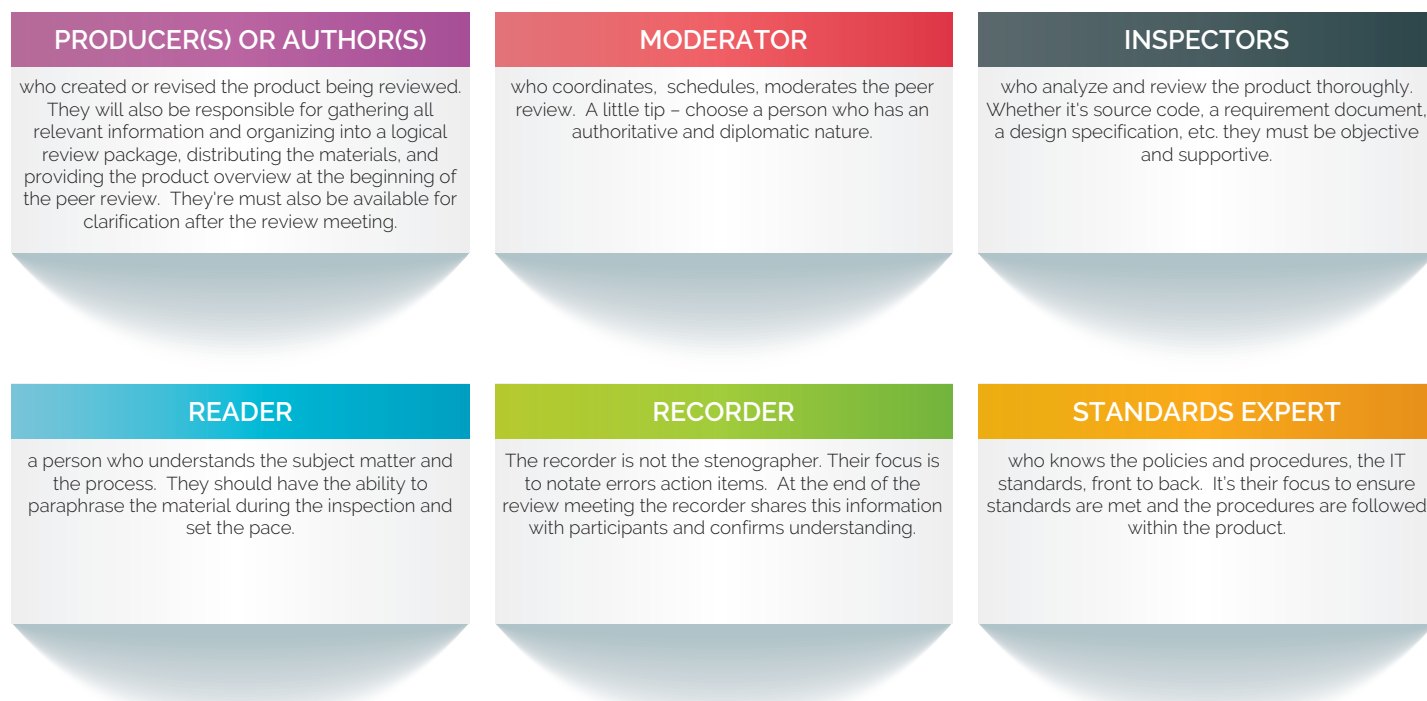
The workflow steps of a peer review are:



Leadership overseeing the FBI project I referenced previously was so adamant about preparation that if any peer review participant was not prepared, if they had not read the materials provided in advance, the peer review leader would say, "Time out!", stop the review and reschedule it for a later date. It was magnificent! It showed leadership's commitment to the peer review process.

During the planning phase be certain to identify the individuals who will have specific, defined roles during the review process. Be strategic and select those individuals based on their expertise, experience, AND personality.

Key roles include:



As you're choosing the team and assigning roles consider the unique personality of team members. This will assist in minimizing the emotion and conflict which inevitably occurs. It's seldom you'll have none.

If you have any feedback, questions, thoughts you'd like to share, or any topics you'd like to see in future white papers, blogs or "Quality in a Quick" videos please email me at bcrews@checkpointtech.com. I'm Bob Crews, President and Co-Founder of Checkpoint Technologies.

Thank you! Be sure to make it a great day!

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