

Getting Started with **Peer Reviews**



What is a Peer Review?

Peer reviews are a great way to improve quality and spread knowledge within the organization.

A Peer Review is a way to improve quality of work products through having individuals in the group review the product and provide feedback.

A Peer Review can be applied to requirements documents, software code, prototypes, wireframes, technical documents, or anything else for which quality is important.

The added benefit of a Peer Review is that it can help spread knowledge within your group. This is possible because the creator of the work product shares information with the review participants as part of the process. As a result, you share knowledge about upcoming product changes and may discover effective practices.

For requirements documents, Peer Reviews help to improve the quality of requirements and discover missing or incorrect requirements.

Quality requirements should be:

Correct: Accurately describe the desired functionality

Clear: Free from ambiguity

Consistent: Requirements do not conflict with one another

Feasible: Possible to implement

Testable: Measurable and can be tested (e.g., avoid "fast" or "easy")

Necessary: Provides value, within scope, and contributes to the goal

Prioritized: Include a relative priority to understand importance

Traceable: Can be traced to a higher level goal or requirement

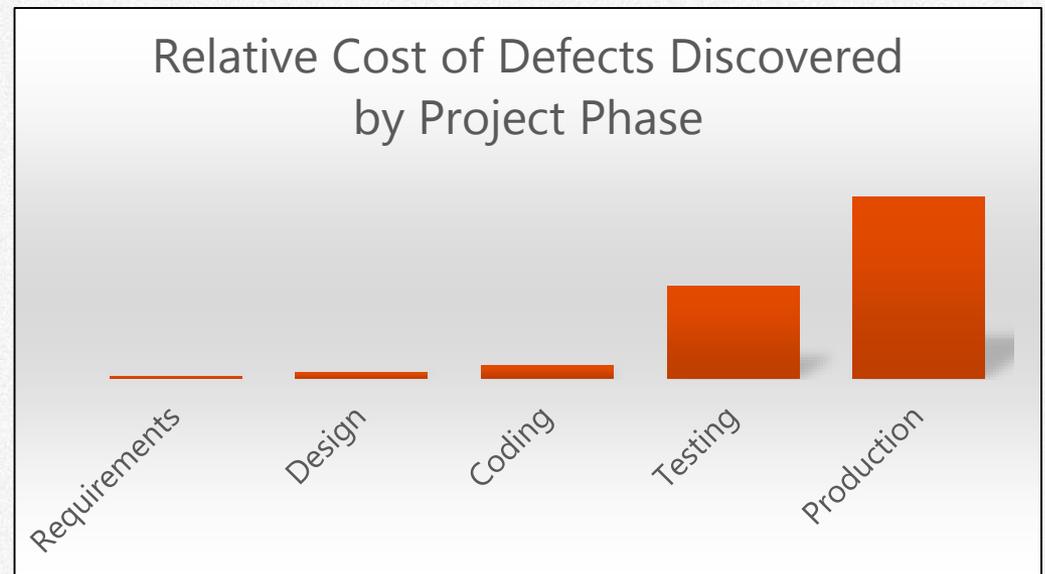
The Cost of Quality



Peer reviews help to identify and address defects early in the project lifecycle. It's fairly cheap to correct an error in the requirements phase. However, there's an exponential cost to correcting defects later in the lifecycle.

A defect found in coding or testing is much more expensive due to the rework effort needed. A defect discovered in production could require analysis work, solution design, coding, and testing before updating the system in production.

A missed or incorrect requirement can have significant impacts the longer it goes undiscovered.



Types of Peer Reviews

There's no one right way to perform a Peer Review. The type of Peer Review you use depends on your specific needs and the type of feedback that will help you improve the quality of your work product.

Types of Peer Reviews range from quick, ad hoc reviews to formal inspections. For requirements documents, I have found that an approach between formal inspections and walkthroughs provided the biggest benefit.

More Formal

Less Formal

Inspection

An inspection is a formal review process with defined roles and structure.

Results are often collected for better quality control.

Walkthrough

A walkthrough is a more formal review in which the author/creator goes through the work product in a meeting with peers or stakeholders to solicit feedback.

Ad Hoc Review

Informal reviews in this category include desk checks (asking one person to review your work and provide feedback) and pass arounds (sending your product to a group to solicit feedback without a meeting).

Ad Hoc (Informal) Reviews

Ad Hoc reviews are the most informal type of review. Among the ad hoc reviews are desk checks, in which you seek out another person to look at your work product and provide feedback.

Another ad hoc review is a pass-around. With this approach, you can send your work product to several people (via email or some other medium) to solicit feedback without face-to-face interaction.

Ad hoc reviews do not require meetings or any other special scheduling.

Work products that may benefit from an ad hoc review include small products (documents, prototypes, etc.) in the early stages of development when only limited feedback is needed.

Benefits of ad hoc reviews

Ad hoc reviews do not require formal meetings and are usually of limited scope. As such, ad hoc reviews are generally faster than more formal reviews.

Drawbacks of ad hoc reviews

Ad hoc reviews are only appropriate if you need limited feedback. Because some of the feedback may be sent to you via email, the feedback may be misinterpreted or of limited benefit.

Ad hoc reviews are not appropriate if your work product requires rich feedback or if the product is of high risk or high impact.

Walkthroughs

Walkthroughs are often conducted with the project team and are designed to get feedback and ensure everyone understands the work product (e.g., business requirements document).

Walkthroughs can also be held with peers early in the development process before the document is ready for the project team to review it. Walkthroughs are held live with reviewers either in the same room or on a conference line and feedback is provided in real time.

The author of the work product provides context and walks the team through the work product to solicit feedback and make any needed changes.

Benefits of walkthroughs

Walkthroughs can provide real time feedback from a diverse audience. The feedback is often rich and because it's provided live, the author can discuss the feedback to get any needed clarifications.

Walkthroughs also help ensure a common understanding of the entire work product with attendees.

Drawbacks of walkthroughs

Because walkthroughs are live, they are often difficult to schedule. If you are reviewing a large work product such as a 100 page document, it can be difficult to keep all reviewers engaged.

Inspections

Inspections are the most formal type of review. They involve several different roles and often document the results of the review.

There are different types of inspections and they are conducted live and in person. There is usually a formal process for an inspection and the review process is often initiated by someone other than the creator of the work product.

Inspections often result in some type of documented results that are used by the organization for quality assurance and quality control.

Benefits of inspections

Inspections are extremely detailed and as such can be a good approach for critical work products such as medical devices or products that may result in large impacts if defective.

Drawbacks of inspections

Inspections often require training on the formal process and there may be a limited number of trained reviewers. As a result, inspections can be difficult to schedule. Additionally, because of the level of detail, an inspection may be a longer process than other types of reviews.

The documented output from an inspection may be used as part of performance management, resulting in fear and resistance from the author.

Peer Reviews for Requirements Documents

(One possible approach)

One Peer Review format that I have used in the past with a lot of success falls somewhere between a walkthrough and an inspection.

The problem with a typical inspection is that it often takes a lot of time and there is a fear that the output of the inspection will be used against the individual as part of performance management.

Walkthroughs often help improve quality, but it's difficult to get the proper level of engagement to get quality feedback.

A Role-Based Walkthrough is a review in which meeting attendees take on different roles such as tester, developer, sponsor, and various stakeholders. The author then walks through the document and attendees provide feedback based on their assumed role.

This type of walkthrough would be done before reviewing the document with the project team and can be done early in development before the document is complete. This allows the author to make changes early in the process to avoid rework and delays due to further analysis.

The benefit of attendees assuming roles of people who will consume the document or be impacted by the outcomes is that attendees need only focus on their small part of the bigger picture instead of the entire document. This leads to better engagement and richer feedback.

Adopted Roles for a Peer Review

Tip:

Rotate peer review team members and the roles they adopt to help people change perspectives and share knowledge.

Role: Sponsor

Focuses on correctness, necessity, and prioritization



Role: Stakeholder(s)

Focuses on requirements considerations for specific areas (Legal, Finance, etc.)



Role: BA/PM

Focuses on traceability and alignment to scope and goal



Role: Tester

Focuses on clarity, consistency, and testability



Role: Developer

Focuses on clarity of requirements and feasibility



Reasons Peer Reviews Fail



Peer reviews can fail for a variety of reasons, but the underlying root cause is fear. The person whose work product is being reviewed often fears judgment from their peers. They may also fear that the results of the peer review will be shared with their manager and be used against them for performance assessments.

To address this fear, provide training to the peer review team on the proper way to provide feedback. Any feedback should be about the work product and not the individual. Make it clear as to why peer reviews are important and the expected goal; knowledge sharing and improved quality.

Ideally, managers should not participate in peer review meetings and the output (other than whether or not a peer review took place) should not be shared with anyone except the author.

You may choose to ask for volunteers for the first few rounds of peer reviews and be sure to provide positive feedback in addition to constructive feedback.

Try Peer Reviews



Start by identifying a quality champion and a core team to begin peer reviews. Based on your environment, determine the format options for peer reviews.

Based on the peer review format, provide training to team members about what peer reviews are, the approach, and how to properly provide feedback. Managers will need to understand how to (or not to) use peer reviews.

Once you begin holding peer reviews, inspect the process and make any needed changes to improve quality.