# Inspections

Inspections are formal technical review used to find defects in project artifacts.

| | |
|---|---|
| **Main Benefits** | By detecting errors early in the development process, inspections help projects avoid costly, downstream rework. Inspection (and other forms of review) also provide a valuable forum for sharing technical knowledge among junior and senior technical-staff. |
| **Keys to Success** | Ensuring the artifacts are ready for review, focusing the meeting on the artifact not the author, focusing the meeting on defect detection, and training personnel. |
| **When to Use** | Inspections can be used on virtually any kind of project and on both new development and maintenance. They are most effective on upstream artifacts such as requirements, architecture, etc. |
| **Main Risks** | Inspections have no inherent risks. |

## Overview

Inspections are a kind of formal technical review in which participants in the review are assigned specific roles to play. Participants inspect review materials before the review meeting using checklists of common errors. The roles help focus participants defect detection in different areas and the review meeting stimulates discovery of additional errors.

During the inspection meeting the reviewers identify errors and a scribe records them. After the meeting, the moderator produces an inspection report that describes each defect and indicates what will be done about it. Throughout the inspection process data is gathered on defects, hours spent correcting defects, and hours spent on inspections so that the effectiveness of your software-development process can be analyzed and improved.

Inspections have been found to be much more effective at finding errors than execution testing—both in percentage of total defects found and in time spent per defect.

## CxOne Support

CxOne provide extensive support for implementing inspections through the *review* materials. *Quality planning* materials provide a mechanism for determining how inspections will be used on specific project.

## Interactions with other Best Practices

Inspections can be combined freely with other best practices.

## Further Reading

Gilb, Tom and Dorothy Graham. *Software Inspection*. Wokingham, England: Addison-Wesley, 1993.

Freedman, Daniel P. and Gerald M. Weinberg. *Handbook of Walkthroughs, Inspections and Technical Reviews, 3d Ed.* New York: Dorset House, 1990.

Fagan, Michael E. "Advances in Software Inspections," *IEEE Transactions on Software Engineering*, July 1986

Fagan, Michael E. "Design and Code Inspections to Reduce Errors in Program Development," *IBM Systems Journal*, vol. 15, no. 3, 1976

McConnell, Steve. *Rapid Development*. Redmond WA: Microsoft Press. 1996.

*CxStand_ReviewProcess*

*CxStand_Inspection*