

# PROJECT REVIEW TECHNIQUES

Review techniques, Inspection techniques, Desckcheck techniques, Walkthroughs, Pair work techniques,

Real cases of projects of Information technology and software quality engineering

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# PROJECT REVIEW

**Project Review is a process of examining and auditing planned tasks, activities, procedures, events and other work components of a project to identify whether the project's requirements can be fully addressed by the planned amount of work and to determine what additional resources are necessary to match the work with the requirements. It is an attempt to align current working environment with the requirements prior to the project implementation process gets started.**

**The purpose of the project review process is to provide a team with a clear and unambiguous understanding of the steps required to complete the project as per requirements.**

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# PROJECT REVIEW

A review is an activity in which a project tasks are distributed to reviewers who examine it and give feedback.

Reviews are useful not only for finding and eliminating defects, but also for gaining consensus among the project team, securing approval from stakeholders, and aiding in professional development for team members.

Review can help to have

Suitability of methods

Significance of outcomes

Conformance to regulatory expectations

Analysis of project risks

Likely conditions of approval



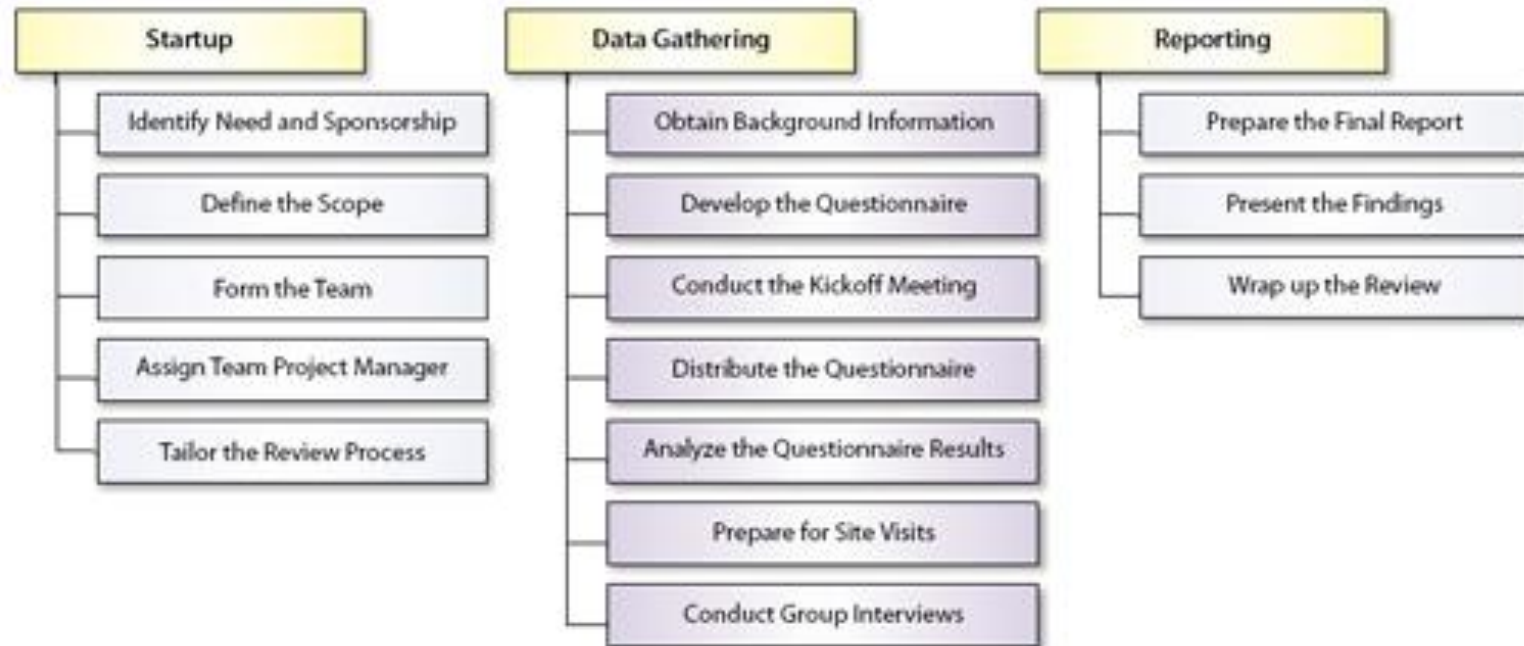
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<https://katestone.global/peer-review-a-second-opinion-can-save-your-project/>

“Applied Software Project Management”, Andrew Stellman published by OReily, 2010

# PROJECT REVIEW

Three phases and 15 steps make up most kinds of reviews, audits, and appraisals.



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Corbin, D., Cox, R., Hamerly, R., & Knight, K. (2001). Project management of project reviews. *PM Network*, 15(3), 59-62.

“Applied Software Project Management”, Andrew Stellman published by OReily, 2010

# ON THE RESULT OF IT PROJECT REVIEW

Reviews help teams find defects soon after they are injected making them cost less to fix than they would cost if they were found in test.

All work products in a software project should be either reviewed or tested.

Software requirements specifications, schedules, design documents, code, test plans, test cases, and defect reports should all be reviewed.

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“Applied Software Project Management”, Andrew Stellman published by OReily, 2010

# Types of reviews

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- ◆ Inspections
- ◆ Deskchecks
- ◆ Walkthroughs
- ◆ Code reviews
- ◆ Peer Programming

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<https://slidetodoc.com/pert-and-reviews-sg-chapter-5-540-f/>

“Applied Software Project Management”, Andrew Stellman published by OReily, 2010

# TYPES OF PROJECT REVIEW

## The Technical Oversight and Architecture Review

focuses the architecture of the system such as the languages, tools, and technologies being included in the design and also on the ability of the system to scale up and serve a larger portion of the enterprise.

## A Production/Operational Readiness Review

focuses on development and testing, the schedule including user/support documentation and training materials, integration testing, stress testing, installation, and logistics preparation.

## A Project Management Review

concerns with schedule variances, budget variances, satisfaction of the requirements, and accomplishment of the statement of work.

## The Product Provider Review

is used to check sourcing, selection of a product or provider.

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# TYPES OF PROJECT REVIEW

## Typical review components

Example: Project Review Showing Deadlines Cost Requirements Overall Status

Project Name/No.			
Date	01.01.2018	Author	<Name>
Time/Deadlines	Cost/Budget	Requirements	Overall Status
			

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# PROJECT REVIEW REPORT OUTLINE

The final report outline helps to clarify the purpose of the review and displays what the final deliverable will look like.

After the review is defined and the kickoff meeting is held, the detailed review work begins.

The review work includes a questionnaire, designed to help the reviewer keep focused on the areas of investigation, is a very effective technique to use during this phase. The questions should map directly to the original review charter.



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# TYPES OF REVIEW: INSPECTIONS

## Inspections

These are moderated meetings in which reviewers list all issues and defects they have found in the document and log them so that they can be addressed by the author.

The goal of the inspection is to repair all of the defects so that everyone on the inspection team can approve the work product.

Commonly inspected work products include It project specially software requirements specifications and test plans.

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# TYPES OF REVIEW: INSPECTIONS

## Change management with inspections

The loss of upper management program leaders, inadequate communication and training to prepare personnel for the change, and policy and procedural uncertainties in integrating the change with other systems and operations were found to be factors that may have influenced the outcome of the program.

Implementation efforts must also be planned and managed, just as any other engineering project, including setting objectives, identifying milestones, measuring effectiveness of the effort, and revising the plan as needed.

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Julian Yamaura, Stephen T. Muench, Kim Willough, "Factors Influencing Adoption of Information Technologies for Public Transportation Project Inspection: A WSDOT Case Study", Transportation Research Record, vol. 2673, 2: pp. 1-12. , First Published January 19, 2019.

Sanders Steve, R., Frank, E. W. Managing Implementation of Change. Journal of Management in Engineering, Vol. 9, No. 4, 1993, pp. 363-381.

# RUNNING AN INSPECTION, CASE STUDY IN IT PROJECT

## Running an inspection meeting:

The primary barriers are top and middle management. Top management often backs the implementation effort in words, but not in actions.

A **work product** is selected for review and a team is gathered for an inspection meeting to review the work product.

A **moderator** is chosen to moderate the meeting.

Each inspector prepares for the meeting by reading the work product and noting each defect.

In an inspection, a defect is any part of the work product that will keep an inspector from approving it.

**Discussion** is focused on each defect, and coming up with a specific resolution. The moderator compiles all of the defect resolutions into an inspection **log**.

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“Applied Software Project Management”, Andrew Stellman published by OReily, 2010

# INSPECTION LOG EXAMPLE

<b>Document:</b>	Contract Royalty Subsystem, vision and scope doc.
<b>Version::</b>	1.3
<b># of Issues:</b>	16
<b>Review Date:</b>	March 16, 2003

<b>Attendees</b>	<b>Read Document</b>	<b>Time Spent Preparing</b>
Mike (project manager)	Y	Author
Barbara (VP)	Y	1.0 hours
Quentin (requirements analyst)	Y	2.0 hours
Sophie (senior QA engineer)	Y	3.0 hours
Jill (senior programmer)	Y	0.5 hours

<b>Issue No.</b>	<b>Section / Page</b>	<b>Identified By</b>	<b>Issue</b>
1	Global	Quentin	The term "standard contract" should be replaced with "pro-forma contract"
2	Section 3.1.1 Line 165	Sophie	The contents of the cells in the table are out of order. It looks like some cells were moved down.
3	Section 3.1.2 Line 190	Jill	Specify the look up is by contract number and artist name.
4	Section 3.3b Line 623	Sophie	Title of the section needs to be changed to "Deletion File (Maintenance). To be consistent with section 3.2.1 #1

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# INSPECTION EXAMPLE

## Example

This is a project management timeline parameter analysis and site inspection ppt PowerPoint presentation professional designs. This is a six stage process. The stages in this process are 6 month project timeline, roadmap, timeline. Justify being loyal with our Project Management Timeline Parameter Analysis And Site Inspection Ppt PowerPoint Presentation Professional Designs. Convey your desire to be devoted.



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<https://www.slidegeeks.com/timelines/product/project-management-timeline-parameter-analysis-and-site-inspection-ppt-powerpoint-presentation-professional-designs>

“Applied Software Project Management”, Andrew Stellman published by OReily, 2010

# TYPES OF REVIEW:DESKCHECKS

A *deskcheck* is a simple review in which the author of a work product distributes it to one or more reviewers.

The author sends a copy of the work product to selected project team members. The team members read it, and then write up defects and comments to send back to the author.

<b>Reviewer's name:</b>	Sophie (senior QA engineer)
<b>Author's name:</b>	Dean (junior QA engineer)
<b>Title:</b>	Contract certification-automated test script #TP-491-A
<b>Review date:</b>	8/12/03
<b>No. of review hours:</b>	2
<b>Location</b>	
<b>Comments</b>	
Global	Script does not adequately copy databases in when the data changes.
Case 14	The test plan logs in as "Administrator," this script logs in as "Admin."
Case 52, 53	What exactly is printed? It's not clear, you should be looking for specific data.
Case 61	The test plan tests all of the preferences, but the script only tests the first five.

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# TYPES OF REVIEW:DESKCHECKS

Unlike an inspection, a deskcheck does not produce written logs which can be archived with the document for later reference.

Deskchecks can be used as predecessors to inspections. In many cases, having an author of a work product pass his work to a peer for an informal review will significantly reduce the amount of effort involved in the inspection.

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# TYPES OF REVIEW: WALKTHROUGHS

A **walkthrough** is an informal way of presenting a technical document in a meeting.

Unlike other kinds of reviews, the author runs the walkthrough: calling the meeting, inviting the reviewers, soliciting comments and ensuring that everyone present understands the work product.

**Walkthroughs** are used when the author of a work product needs to take into account the perspective of someone who does not have the technical expertise to review the document.

After the meeting, the author should follow up with individual attendees who may have had additional information or insights. The document should then be corrected to reflect any issues that were raised.

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# TYPES OF REVIEW: WALKTHROUGHS

1. Plan for a Design Walkthrough
2. Get the Right Participants
3. Understand Key Roles and Responsibilities
4. Prepare for a Design Walkthrough
5. Use a Well-Structured Process
6. Review and Critique the Product, Not the Designer
7. Review, Do Not Solve Problems



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[https://www.youtube.com/watch?v=4bun6\\_Pk3OU](https://www.youtube.com/watch?v=4bun6_Pk3OU)

“Applied Software Project Management”, Andrew Stellman published by OReily, 2010

<https://www.projectsmart.co.uk/it-project-management/an-effective-design-walkthrough-a-step-towards-delivering-the-best-design.php>

# TYPES OF REVIEW: CODE REVIEW IN SOFTWARE PROJECT

A **code review** is a special kind of inspection in which the team examines a sample of code and fixes any defects in it.

In a code review, a defect is a block of code which does not properly implement its requirements, which does not function as the programmer intended, or which is not incorrect but could be improved

For example, it could be made more readable or its performance could be improved.

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# TYPES OF REVIEW: CODE REVIEW IN SOFTWARE PROJECT

It's important to review the code which is most likely to have defects. This will generally be the most complex, tricky or involved code.

**Good candidates for code review include:**

A portion of the software that only one person has the expertise to maintain

Code that implements a highly abstract or tricky algorithm

An object, library or API that is particularly difficult to work with

Code written by someone who is inexperienced or has not written that kind of code before, or written in an unfamiliar language

Code which employs a new programming technique

An area of the code that will be especially catastrophic if there are defects

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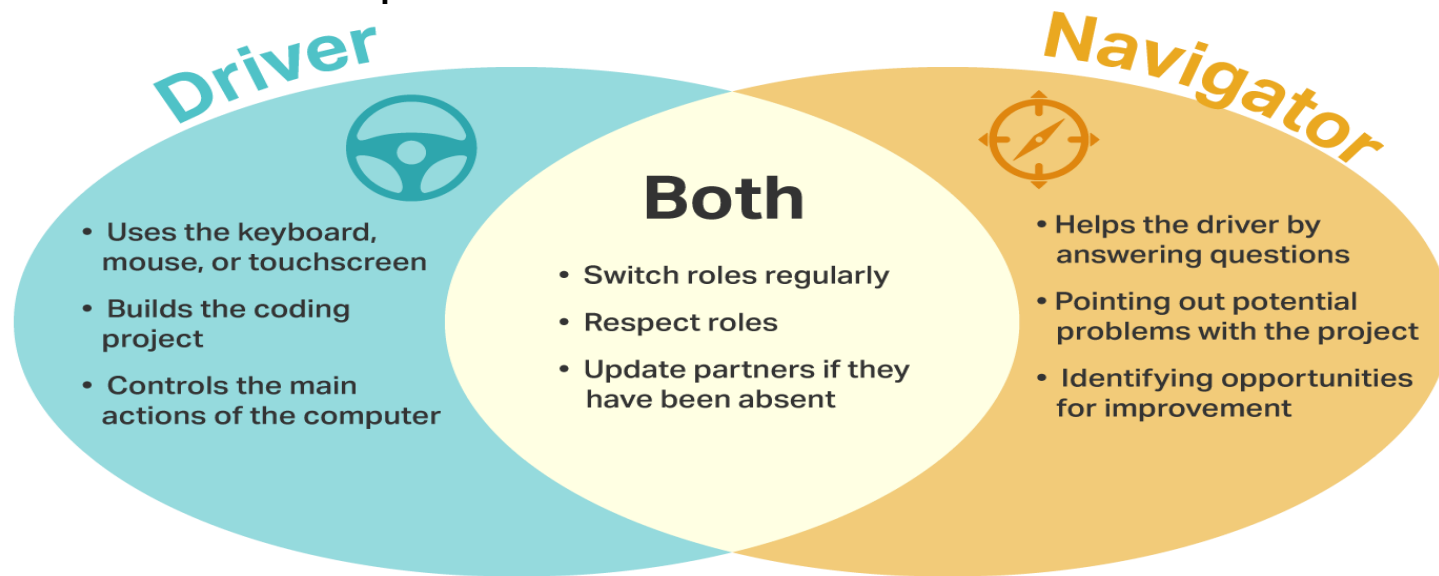
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# TYPES OF REVIEW: PAIR PROGRAMMING

**Pair programming** is a technique in which project team members work together or work simultaneously at a resource or continuously review each others' work. It allows students to work together on coding projects, side-by-side, on the same computer or tablet. The idea is that two heads are better than one, and have increased enjoyment of coding, and have more positive views of their individual performance.



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# TYPES OF REVIEW: PAIR PROGRAMMING IN SOFTWARE PROJECT

**Pair programming** is a technique in which two programmers work simultaneously at a single computer and continuously review each others' work.

Although many programmers were introduced to pair programming as a part of **Extreme Programming**, it is a practice that can be valuable in any development environment.

Pair programming improves the organization by ensuring that at least two programmers are able to maintain any piece of the software.

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# TYPES OF REVIEW: PAIR PROGRAMMING IN SOFTWARE PROJECT

Some teams have found that pair programming works best for them if the pairs are constantly rotated; this helps diffuse the shared knowledge throughout the organization. Others prefer to pair a more junior person with a more senior for knowledge sharing.

The project manager should not try to force pair programming on the team; it helps to introduce the change slowly, and where it will meet the least resistance.

It is difficult to implement pair programming in an organization where the programmers do not share the same nine-to-five (or ten-to-six) work schedule.

Some people do not work well in pairs, and some pairs do not work well together.

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# PERFORMANCE REVIEW: RESPONDING TO FAILURE

When you start a project you want it to succeed. But, projects fail.

Some of the most successful people have said the following about failure  
“There are no secrets to success. It is the result of preparation, hard work, and learning from failure.” Colin Powell

“Anyone who has never made a mistake has never tried anything new.”  
“Failure is success in progress” Albert Einstein

“I have not failed. I’ve just found 10,000 ways that won’t work.” Thomas A. Edison

The common theme is the recognition that highly intelligent and successful people accept failure and do not let it get them down. They learn from failure.

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# Peer Review Methods

## Methods

## Typical Goals

## Typical Attributes

### Desk Check

- Minimal overhead
- Quick turnaround

- Little/no preparation
- Informal process
- No measurement
- No Meetings
- Done by the author

### Walkthrough

- Minimal overhead
- Developer training
- Quick turnaround

- Little/no preparation
- Informal process
- Meetings
- No measurement
- Led by the author

### SW Inspection

- Detect and report all defects efficiently and effectively.
- Usage of deliverable

- Formal process
- Known Coverage Rate
- Moderator
- Checklists
- Customer Reviewers
- Measurement

# PERFORMANCE REVIEW: WHAT, WHY, HOW AND WHO

## Types of reviews



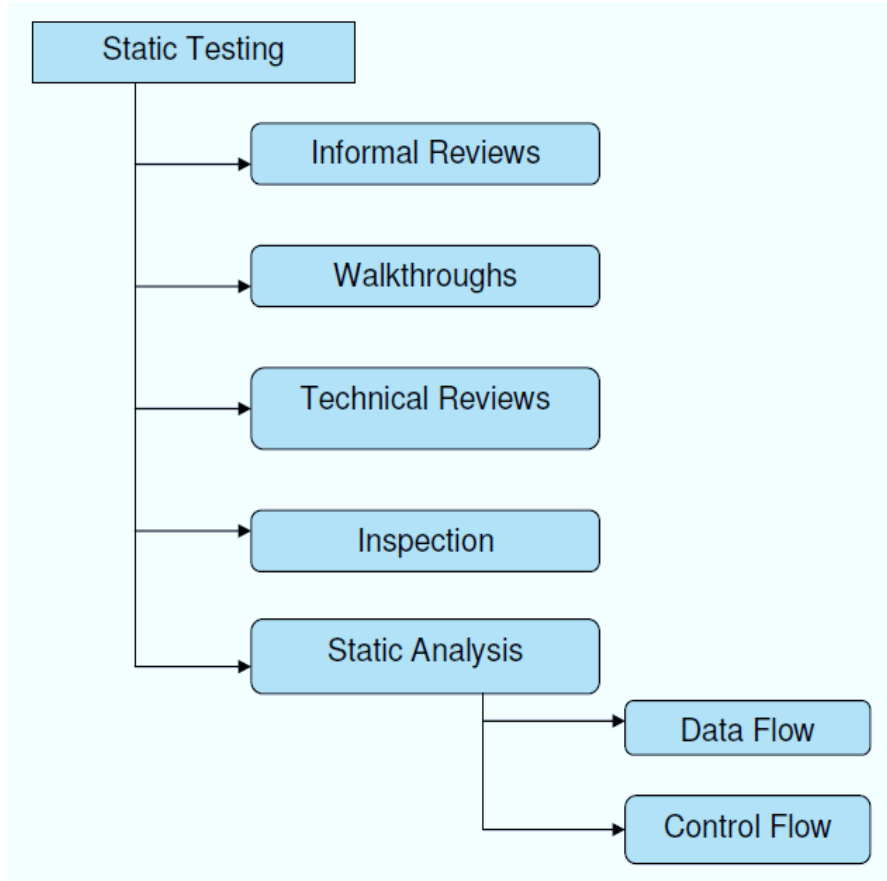
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# IT PROJECT CASE: WHAT IS STATIC TESTING?

**Static Testing** is a software testing technique which is used to check defects in software application without executing the code.

**Static testing** is done to avoid errors at an early stage of development as it is easier to identify the errors and solve the errors.

It also helps finding errors that may not be found by **Dynamic Testing**.



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# WHY REVIEWS ARE NOT HELD

**Fear of confronting failure and its causes** – failure is viewed as something to be denied and hidden, then reviews will be avoided.

**Blaming** – If the culture relies on blame and punishment to motivate behavior there will be resistance and defensiveness.

**Negative experience** – past reviews have been worthless.

**Lack of skilled facilitators** – skilled facilitators are needed to make reviews effective by addressing the tendency of project managers and performers to be action oriented rather than introspective and reflective.

**No time** – Stakeholders are off onto the next project or back to their operational activities and the review is not prioritized as a valuable activity and therefore, not scheduled.

**Lack of a documented project management process** – the absence of guidelines and templates makes for unnecessary effort

Not valuing quality assurance and continuous improvement

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