

Quality Assurance & Control—Activity Definition**Purpose:**

The objective of this activity is to ensure that the project team meets the project requirements and that all requisite quality criteria are met.

Participants:

Project Manager, Project team

Inputs:

Quality Strategy[1], Work Breakdown Structure[1], Project Schedule[1], Test Plan[1], Test Cases[1], Project Approach[2], Guidelines established in the Project Approach[2], Integrated Project Plan[3], Organizational guidelines and standards

Process:

1. This process comprises project reviews, product reviews, code reviews, testing, and any other process that the Project Manager might think necessary.
2. All these activities need to be scheduled in the project plan by the Project Manager.
3. The Project Manager may modify the processes used to develop the product in order to achieve the appropriate product quality.
4. It is the Project Manager's responsibility to ensure that all scheduled reviews are conducted.
5. The product must meet performance levels set by the customer and the project team. The product should also comply with applicable standards.
6. Defects should be identified and categorized. Root causes should be analyzed.
7. The Project Manager needs to ensure that the testing team is provided with detailed test cases and a test plan. The reviewers need to be provided with the Project Overview Statement and the guidelines.

Outputs:

Review reports, Bug reports

Quality Assurance & Control—Guidelines

1. One of the purposes of quality management is to find errors and defects as early in the project as possible. The Cost of Quality includes the costs incurred to ensure quality in the product and process. This comprises external failure costs, internal failure costs, inspection costs, and prevention costs. The cost of quality may be high but it will always offset the cost spent on rework and correction if the quality assurance and control processes weren't being implemented. This is because typically, the cost to eliminate a failure in the testing phase is five times greater than it is at the development or manufacturing phase. Effective quality management decreases production costs because the sooner an error is found and corrected, the less costly it will be.
2. Evaluate the Quality Plan on a monthly basis or at the completion of major milestones. The review should focus on whether the Quality Plan is still adequate to ensure that the project deliverables are completed within the quality expectations of the customer.
3. Document the metrics. Examples of metrics could include customer satisfaction, amount of rework, errors found during testing, etc. At the end of your project, provide feedback to the organization on the results of your quality process and report the final metrics captured.
4. Analyze the metrics to determine how your project work processes can be improved. e.g. in a training program, if the amount of rework after content is integrated into the training program is high, you might decide to introduce a review after the content is developed. This might reduce the rework.
5. When quality problems are found, implement a process to determine the cause and to make improvements in the process. Implement the improvements that were identified.
6. Testing is the last Quality control activity to ensure that the product meets the customer's needs.
7. You can track rework to determine how much of your project time is spent working on the same problems twice.
8. Ideally, the persons conducting the reviews and the acceptance testing should not be part of the project team.