



Version 6.1 Updated for the 2021
Project Management Professional (PMP)[®] Exam



Crosswind Success Series: PMP[®] Exam Bootcamp Manual

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Version 6.1 aligned with the Project Management Institute, *A Guide to the Project Management Body of Knowledge, (PMBOK[®] Guide)* - Sixth Edition, Project Management Institute Inc., 2017

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13.8.16. Quality Responsibility

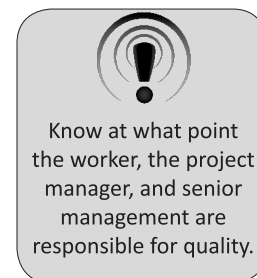
It is very important to know the level of responsibility for quality by role.

This knowledge:

- May be required to correctly answer some question on the exam
- May ensure that project quality will not slip as a result of a misunderstanding regarding which role is responsible for quality

The following table details three roles, their levels of responsibility, and an example.

Role	Level of Responsibility	Example
Team member or worker	Responsible for the quality of their own work	The electrician is accountable for doing satisfactory work on the job.
Project Manager	Responsible for the quality standards on the project	The project manager is responsible for the quality of the networking project.
Senior/Executive Management	Responsible for the quality standards at the organization	The CEO and senior management are responsible for quality at the organization.



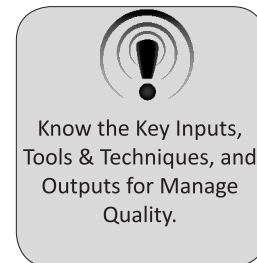
The source for the above text is the Project Management Institute, *A Guide to the Project Management Body of Knowledge, (PMBOK® Guide) – Sixth Edition*, Project Management Institute Inc., 2017, Pages 277-287

13.9. Manage Quality (Executing Process Group)

Manage Quality is the process of executing the project quality management plan and verifying/validating that the quality standards defined for the project will meet the desired standards. This process **validates the quality process, not the product**, by taking a random sampling of items created in order to verify a desired level of acceptability.

During Manage Quality, the quality management plan is executed.

For the situational questions on the exam, the Project Management Institute, Inc. assumes that the environment has a quality assurance initiative and a quality assurance/audit system in place.



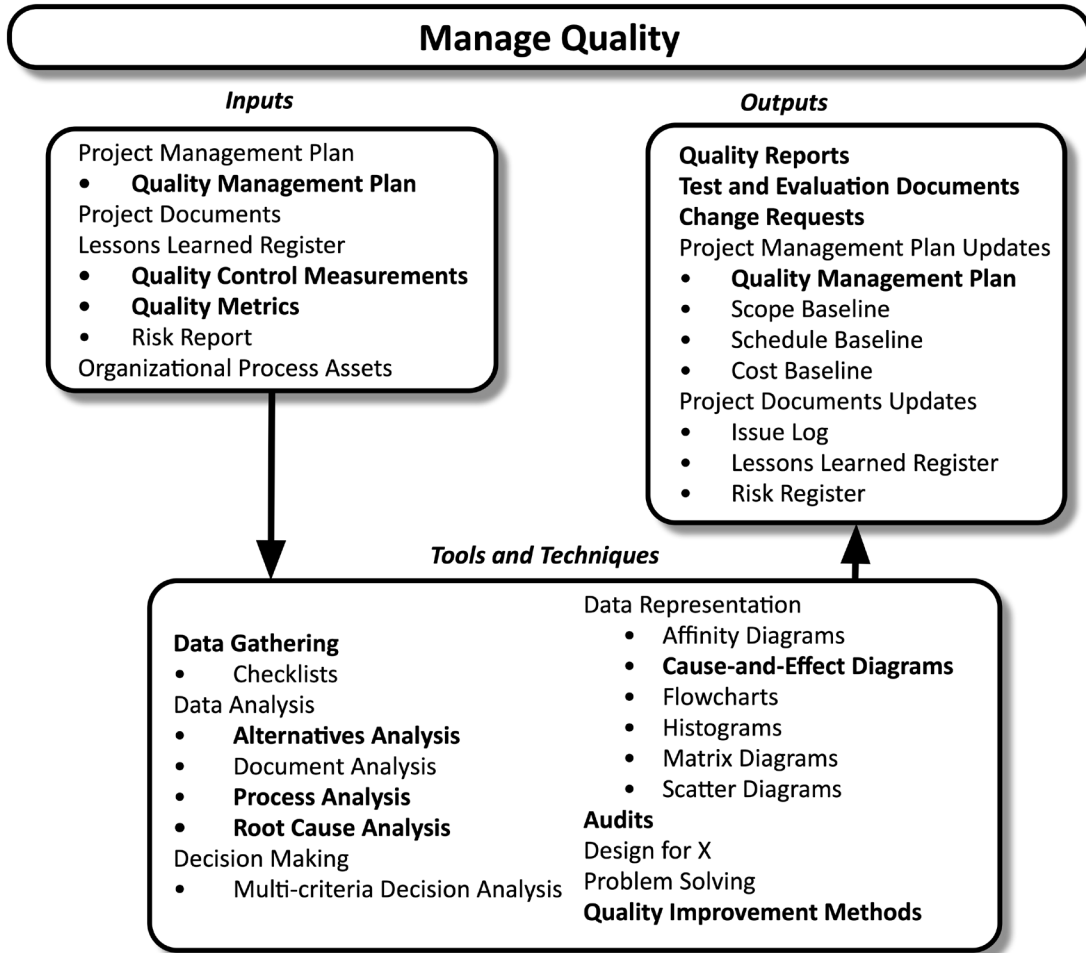


Figure 13-5: Manage Quality Data Flow Diagram

The source for the above figure is the Project Management Institute, *A Guide to the Project Management Body of Knowledge, (PMBOK® Guide)* – Sixth Edition, Project Management Institute Inc., 2017, Figure 8-7, Page 288

Manage Quality (Executing)		
Key Inputs	Quality Management Plan	The quality management plan is a component of the project management plan that details the manner in which the policies, methods, and criteria of the organization are executed. It delineates the expected level of quality for the project and product, details the manner in which this level will be achieved, and provides instructions for the disposition of nonconforming products and related corrective action. It details the activities and resources necessary to accomplish quality goals. Typically it addresses quality criteria, roles and responsibilities, tools, objectives, control and quality management activities, and procedures (including those for continuous improvement).
	Quality Control Measurements	Quality control measurements are utilized to analyze and assess the quality of a process or deliverable against organizational standards or defined requirements. Quality control measurements can also be utilized to compare processes that create measurements and assess actual measurements to establish their level of conformance.
	Quality Metrics	Quality metrics delineate the manner in which the determination is made that a project or product conforms to its defined attributes. Quality metrics include cost performance, failure rate, defect frequency, maintainability, test coverage, and reliability among others.
Key Tools & Techniques	Data Gathering	Checklists are one of the data gathering tools that may be utilized. Using checklists ensures that appropriate procedures are followed. Checklists should integrate acceptance criteria from the scope baseline. Standardized checklists developed by the organization or the industry are often used.
	Alternatives Analysis	Alternatives analysis is a technique utilized to assess the most appropriate quality options or approaches.
	Process Analysis	Process analysis is used to determine process improvement opportunities by examining the issues, constraints, and non-value-added activities that occur during a process.
	Root Cause Analysis	Root cause analysis (RCA) is used to ascertain the underlying cause of a variance, defect, or risk. It is an analytical technique that may also be used to ascertain the root causes of an issue in order to resolve that issue.

Manage Quality (Continued)		
Key Tools & Techniques (Cont.)	Cause-and-effect Diagram	Cause-and-effect diagrams, also known as fishbone, Ishikawa, or why-why diagrams), are used to decompose the identified causes of a problem statement into separate branches in order to determine the root cause of a problem.
	Audits	A quality audit is a separate, configured technique that is performed randomly or in conformity with a set schedule. It is conducted to establish the compliance of project activities against organizational and project policies, processes, and procedures. A team external to the project or organization typically performs the quality audit in order to determine good and best practices; to determine any shortcomings or instances of non-conformity; to share good practices from similar projects; to propose positive help in the improvement of processes that will increase the team's effectiveness; and to emphasize audit contributions in the organizational lessons learned repository. Correction of discovered deficiencies typically decreases the overall cost of quality and increases customer product acceptance.
	Quality Improvement Methods	Quality improvement methods are quality improvement tools, such as plan-do-check-act and Six Sigma, utilized to assess improvement opportunities. Improvement opportunities can arise as a result of quality audits, quality control processes, or problem solving.
Key Outputs	Quality Reports	Quality reports, which can be presented in graphical, numeric, or qualitative form, can be used as the basis for the performance of corrective action(s) in order to meet project quality expectations. Information included in the reports can include any quality issues promoted by the team, corrective action recommendations, and improvements to a process, project, or product.
	Test and Evaluation Documents	Test and evaluation documents are used to assess the realization of quality goals. The documents can be generated based on industry needs and organizational templates. Dedicated checklists and a detailed requirements traceability matrix can be included in the documentation.
	Change Requests	Change requests are requests for modification that have not been formally approved through the change control process.

Manage Quality (Continued)

Key Outputs (Cont.)	Quality Management Plan	The quality management plan is a component of the project management plan that details the manner in which the policies, methods, and criteria of the organization are executed. It delineates the expected level of quality for the project and product, details the manner in which this level will be achieved, and provides instructions for the disposition of nonconforming products and related corrective action. It details the activities and resources necessary to accomplish quality goals and typically addresses quality criteria, roles and responsibilities, tools, objectives, control and quality management activities, and procedures (including those for continuous improvement).
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Situational Question and Real World Application

Failure to effectively perform the Manage Quality process could produce a project result that was not functional because the specifications were inaccurate.

13.9.1. Audits

Audits are structured, independent processes conducted to establish that project activities comply with organizational and project policies, processes, and procedures.

Quality audits are typically conducted by a team external to the project or organization in order to:

- Determine good and best practices
- Determine any shortcomings or instances of non-conformity
- Share good practices from similar projects
- Propose positive help in the improvement of processes in order to increase the team's effectiveness
- Emphasize audit contributions in the organizational lessons learned repository

Correction of discovered deficiencies typically decreases the cost of quality and increases customer product acceptance.

13.9.2. Design for X

Design for X (DfX) is a set of technical guidelines that may be used while designing a product in order to ensure the maximum functionality of the product. The X in DfX can be applied to specific aspects of product development such as reliability, cost, service, safety, and quality.

Applying DfX may result in:

- Cost reduction
- Superior performance
- Quality advances
- Customer satisfaction

13.9.3. Quality Reports

Quality reports, which are typically used to meet quality expectations for the project, can be qualitative, numerical, or graphic.

The information contained in the reports may include:

- Quality management issues escalated by the team
- Recommendations for corrective actions
- Recommendations for the improvement of processes, the product, and the project
- Summary of findings from the Control Quality process

13.9.4. Test and Evaluation Documents

Test and evaluation documents, typically based on organizational templates and industry needs, are used to assess if quality expectations are met.

Note that dedicated checklists and detailed requirements traceability matrices may be incorporated into test and evaluation documents.

The source for the above text is the Project Management Institute, *A Guide to the Project Management Body of Knowledge, (PMBOK® Guide)* – Sixth Edition, Project Management Institute Inc., 2017, Pages 288-297