



Quality Management

January 2010

Contact Name: Cheryl Archer
Contact E-mail: cheryl.archer@tybrin.com
Contact Phone Number: 850-337-2653

Quality Management

1. Terminology
2. Quality Management
3. Quality Planning
4. Quality Assurance
5. Quality Control
6. Quality Improvement
7. Summary
8. Discussion



Quality

- The totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs.

Quality Policy

- The over all intentions and direction of an organization with regard to quality, as formally expressed by the top management

Quality Management

- Approach to planning and implementing quality control and quality assurance for a project.
- This includes all the activities of the overall management function that determine the quality policy, objectives, and responsibilities and implement them within the quality team.
- Should address both the management of the project and the product of the project.
- Quality Improvement – Quality Management should focus not only on the quality of a product but the means to achieve it.

- QUALITY PLANNING
- QUALITY ASSURANCE
- QUALITY CONTROL



These processes interact with each other as well as with the processes of other knowledge areas

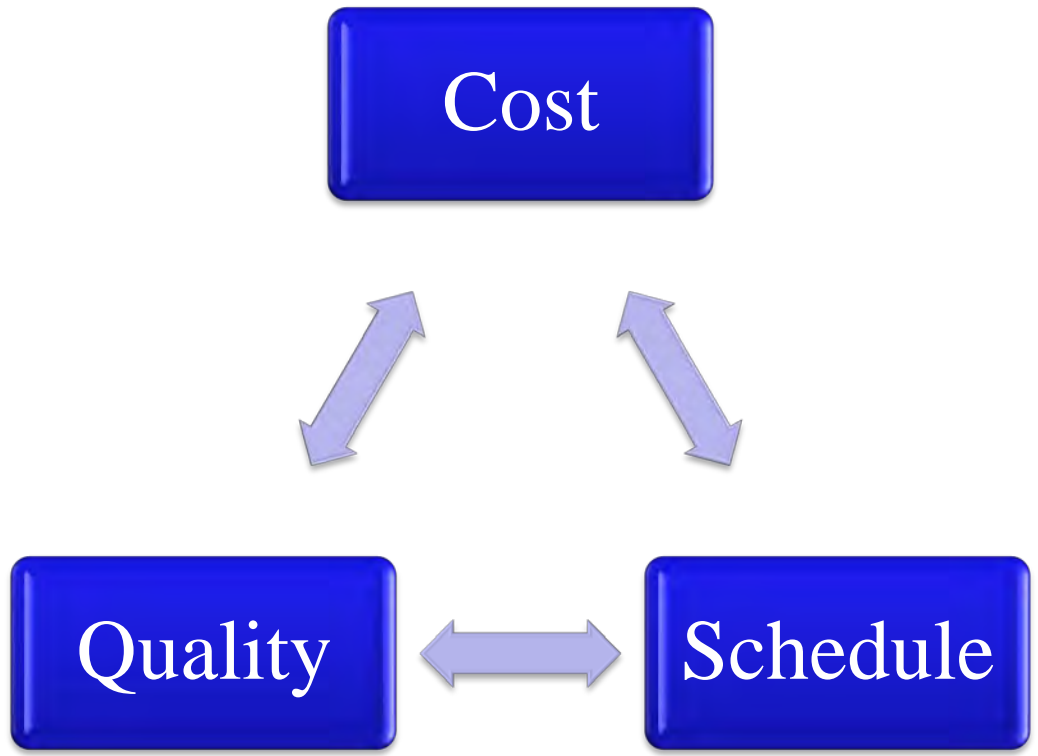
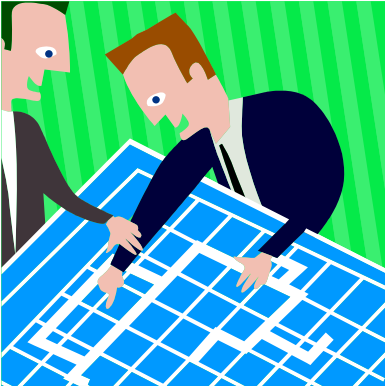
Each process involves an effort of one or more individual or group of individuals based on the need of the project.

Each process occurs at least once in every project phase during the project life cycle.



Where does Quality and Quality Management fit in?

Management fit in?



Where does Quality and Quality Management fit in?

Who is responsible?



Knowledge Areas	Project Management Process Groups				
	Initiating Process Group	Planning Process Group	Executing Process Group	Monitoring & Controlling Process Group	Closing Process Group
4. Project Integration Management	4.1 Develop Project Charter	4.2 Develop Project Management Plan	4.3 Direct and Manage Project Execution	4.4 Monitor and Control Project Work 4.5 Perform Integrated Change Control	4.6 Close Project or Phase
5. Project Scope Management		5.1 Collect Requirements 5.2 Define Scope 5.3 Create WBS		5.4 Verify Scope 5.5 Control Scope	
6. Project Time Management		6.1 Define Activities 6.2 Sequence Activities 6.3 Estimate Activity Resources 6.4 Estimate Activity Durations 6.5 Develop Schedule		6.6 Control Schedule	
7. Project Cost Management		7.1 Estimate Costs 7.2 Determine Budget		7.3 Control Costs	
8. Project Quality Management		8.1 Plan Quality	8.2 Perform Quality Assurance	8.3 Perform Quality Control	
9. Project Human Resource Management		9.1 Develop Human Resource Plan	9.2 Acquire Project Team 9.3 Develop Project Team 9.4 Manage Project Team		
10. Project Communications Management	10.1 Identify Stakeholders	10.2 Plan Communications	10.3 Distribute Information 10.4 Manage Stakeholder Expectations	10.5 Report Performance	
11. Project Risk Management		11.1 Plan Risk Management 11.2 Identify Risks 11.3 Perform Qualitative Risk Analysis 11.4 Perform Quantitative Risk Analysis 11.5 Plan Risk Responses		11.6 Monitor and Control Risks	
12. Project Procurement Management		12.1 Plan Procurements	12.2 Conduct Procurements	12.3 Administer Procurements	12.4 Close Procurements

Quality Planning

- Describes approach to implementation of quality policy. Identifying which quality standards are relevant to the project and determining how to satisfy them.
- Part of the project planning process and must be performed concurrently with other planning processes to balance with cost and time factors. Contributory part of the overall project plan
- Outlines how quality control and quality assurance will be performed within the project.
- Identifies who is responsible for quality functions within the project team including addressing any quality issues that may arise.
- ❑ In modern quality management quality is planned in and not inspected in
- ❑ Prior to the development of ISO 9000 series, quality planning concepts were widely discussed as part of quality assurance.

- Part of implementing the Quality Management Plan
- Quality assurance is evaluating the overall project performance on a regular basis to provide a confidence that the project will satisfy the relevant quality standards.
- Quality assurance encompasses all the planned and systematic activity implemented in a quality system to provide confidence that the project will satisfy the relevant quality standards.
- Reviewing results of quality control measurements which are records of quality control testing and measurement in a format of comparison or analysis.
- Quality assurance is provided by a Quality Assurance dept.
- Quality assurance can be INTERNAL (from the project management team to the performing organization)
- Quality assurance can be EXTERNAL (provided to the customer and other parties actively involved in the work of the project)

- Quality Control is the monitoring of specific project results to determine if they comply with the relevant quality standards and identifying ways to eliminate causes of unsatisfactory performance.
- Quality control involves monitoring specific project results to determine if they comply with relevant standards and identifying ways to eliminate causes of unsatisfactory results.
- Project results mentioned include both **PRODUCT** results such as deliverables and **MANAGEMENT** results such as cost and schedule performance
- Quality control is often performed by a quality control department
- The project management team should have a working knowledge of statistical quality control especially sampling and probability to help evaluate and control outputs.

- Quality improvement includes taking action to increase the effectiveness and efficiency of the project to be provide added benefits to the stakeholders of that project .
- Process Adjustments, which involves immediate corrective or preventive action as a result of quality control measurements. In many cases the implementation of quality improvements will require preparation of change requests or taking corrective actions and will be handled according to procedure for overall change control
- ❑ Quality Improvement can be distinguished from Quality Control in that Quality Improvement is the purposeful change of a process to improve the reliability of achieving an outcome.

QUALITY PLANNING

1- INPUTS

- Quality policy
- Scope statement
- Product description
- Standards and regulations
- Other process outputs

2- TOOLS AND TECH.

- benefit/ cost analysis
- Benchmarking
- Flowcharting
- Design of experiments

3- OUTPUTS

- Quality management plan
- Operational definitions
- checklists
- Inputs to other processes

QUALITY ASSURANCE

1- INPUTS

- Quality management plan
- result of quality control measurements
- Operational definitions

2- TOOLS AND TECH.

- Quality planning tools and techniques
- Quality audits

3- OUTPUTS

- Quality improvement

QUALITY CONTROL

1- INPUTS

- work results
- quality management plan
- Operational definitions
- checklists

2- TOOLS AND TECH.

- inspection
- Control charts
- Pareto diagrams
- Statistical sampling
- flowcharting
- Trend analysis

3- OUTPUTS

- Quality improvement
- Acceptance decisions
- rework
- Completed checklist
- Process adjustment

Quality Management involves integration of the concepts of Project management with the processes of quality management at the project scale and throughout its different phases.

It is essential that the project management team be aware of the concepts of quality management to be able to make use of the described processes and implement them to achieve the required end product

Discussion



- 1) Measured quality of a product is :
 - A. Always constant
 - B. Continually decreasing
 - C. Subject to a certain amount of variation**
 - D. Continually increasing

- 2) The primary components of the quality management function are :
 - A. quality planning
 - B. quality control and assurance
 - C. quantitative measurement
 - D. a and b**

- 3) Setting the number of defects before a product is rejected, is a direct responsibility of :
- A. a functional worker
 - B. the project manager
 - C. management**
 - D. the accounting department
- 4) On a project the project manager should strive for a "Quality Level" that :
- A. is the highest level possible
 - B. is as close to the project objectives as possible**
 - C. represents the least cost to the project.
 - D. Exceeds the specified requirements of the project.

5) Quality control in the final analysis is :

- A. using the technical procedures of monitoring project results to decide if the outputs meet the requirements**
- B. a production system
- C. an inspection system
- D. fitness for purpose

6) Which of the following is more critical on a project:

- A. Managing Costs
- B. Managing Schedule
- C. Managing Quality
- D. They are all equally important |**