Project Management Supplemental Deck #11

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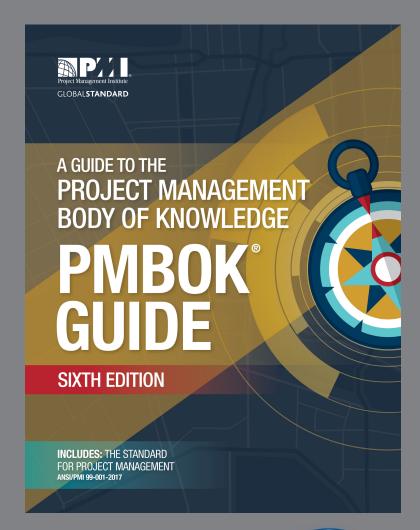
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Project Management

This is accepted in the Project Management Field as the main guide which is used to training and certify Project management Professionals

All Supplemental Slide decks will be relating to this and the information from them will be included on any possible tests/assignments etc...

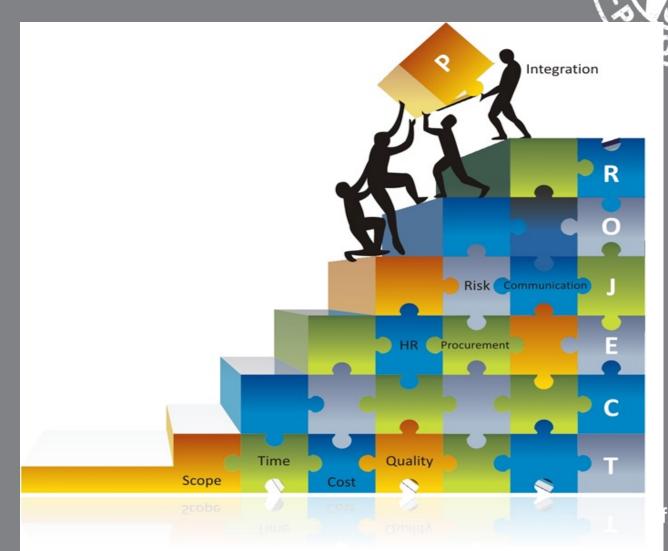






Chapter 8

Project Quality Management



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Project Quality Management

Project Quality Management is the 5th knowledge area within the Project Management Body of Knowledge (PMBOK). It contains the knowledge and processes required to ensure the highest quality products and deliverables are produced by the project. Although the highest quality should always be a goal, the highest grade is not necessarily so.

- Quality: The degree to which a set of inherent characteristics fulfill requirements.
- *Grade:* The performance specification to which a product is produced. For example, a particular child's toy might be high grade (many features, etc.), but if the parts break easily the quality could be unacceptable.

There are three processes within this knowledge area:

- 1. <u>Plan Quality Management.</u> The selection of the quality standards and production of the Quality Management Plan.
- 2. <u>Manage Quality</u> Auditing the processes being used to achieve the quality standards.
- **3.** Control Quality. Measuring the quality of the deliverables.



Project Quality Management

Project Quality Management Overview

8.1 Plan Quality Management

- .1 Inputs
 - .1 Project charter
 - .2 Project management plan
 - 3 Project documents
 - .4 Enterprise environmental factors
 - .5 Organizational process assets
- .2 Tools & Techniques
 - .1 Expert judgement
 - .2 Data gathering
 - .3 Data analysis
 - .4 Decision making
 - .5 Data representation
 - .6 Test and inspection planning
 - .7 Meetings
- .3 Outputs
 - .1 Quality management plan
 - .2 Quality metrics
 - .3 Project management plan updates
 - .4 Project documents updates

8.2 Manage Quality

- .1 Inputs
 - .1 Project management plan
 - 2 Project documents
 - .3 Organizational process assets
- .2 Tools & Techniques
 - .1 Data gathering
 - .2 Data analysis
 - .3 Decision making
 - .4 Data representation
 - .5 Audits
 - .6 Design for X
 - .7 Problem solving
 - .8 Quality improvement methods
- .3 Outputs
 - .1 Quality reports
 - .2 Test and evaluation documents
 - .3 Change requests
 - 4 Project management plan updates
 - .5 Project documents updates

8.3 Control Quality

- .1 Inputs
 - .1 Project management plan
 - .2 Project documents
 - .3 Approved change requests
 - .4 Deliverables
 - .5 Work performance data
 - 6 Enterprise environmental factors
 - .7 Organizational process assets
- .2 Tools & Techniques
 - .1 Data gathering
 - .2 Data analysis
 - .3 Inspection
 - .4 Testing/product evaluations
 - .5 Data representation
 - .6 Meetings
- .3 Outputs
 - .1 Quality control measurements
 - .2 Verified deliverables
 - .3 Work performance information

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- .4 Change requests
- .5 Project management plan updates
- .6 Project documents updates





Plan Quality Management

- The quality management plan is a component of the project management plan that describes how the applicable policies, procedures, and guidelines will be implemented to achieve the quality objectives. It describes the activities and resources necessary for the project management team to achieve the quality objectives set for the project.
- The quality management plan may be formal or informal, detailed, or broadly framed. The style and detail of the quality management plan are determined by the requirements of the project.



Plan Quality Management

- This process involves the determination of the quality standards that govern the project <u>deliverables</u> and/or product and how the project will achieve compliance to those standards. Many projects have standards that are given to them directly, such as design standards for buildings. However, many other standards often exist which are not explicitly stated but expected to be complied with. The project manager could purchase the applicable standards from organizations such as <u>ASTM</u>, <u>IEEE</u>, or <u>ANSI</u> to ensure a complete set.
- The main output of this process is a <u>quality management</u> <u>plan</u> which dictates the quality standards and outlines how those standards will be met as well as the quality assurance and quality control activities.

Plan Quality Management



Plan Quality Management

Inputs

- .1 Project charter
- .2 Project management plan
 - Requirements management plan
 - · Risk management plan
 - Stakeholder engagement plan
 - Scope baseline
- .3 Project documents
 - · Assumption log
 - Requirements documentation
 - Requirements traceability matrix
 - · Risk register
 - Stakeholder register
- .4 Enterprise environmental factors
- .5 Organizational process assets

Tools & Techniques

- .1 Expert judgment
- .2 Data gathering
 - Benchmarking
 - Brainstorming
 - Interviews
- .3 Data analysis
 - Cost-benefit analysis
- Cost of quality
- .4 Decision making
- Multicriteria decision analysis
- .5 Data representation
- Flowcharts
- Logical data model
- Matrix diagrams
- Mind mapping
- .6 Test and inspection planning
- .7 Meetings

Outputs

- .1 Quality management plan
- .2 Quality metrics
- .3 Project management plan updates
 - · Risk management plan
 - · Scope baseline
- .4 Project documents updates
- · Lessons learned register
- Requirements traceability matrix
- Risk register
- Stakeholder register





Manage Quality



• Manage Quality is the <u>process</u> of auditing the quality requirements and the results from quality control measurements to ensure that appropriate quality standards and operational definitions are used. The quality audits test and/or confirm that the system is functioning correctly. Quality assurance should always be based on a foundation of continuous improvement.



Manage Quality

Manage Quality

Inputs

- .1 Project management plan
 - · Quality management plan
- .2 Project documents
 - · Lessons learned register
- Quality control measurements
- · Quality metrics
- · Risk report
- .3 Organizational process assets

Tools & Techniques

- .1 Data gathering
- Checklists
- .2 Data analysis
 - · Alternatives analysis
 - · Document analysis
 - Process analysis
 - · Root cause analysis
- .3 Decision making
- Multicriteria decision analysis
- .4 Data representation
- · Affinity diagrams
- · Cause-and-effect diagrams
- Flowcharts
- · Histograms
- · Matrix diagrams
- Scatter diagrams
- .5 Audits
- .6 Design for X
- .7 Problem solving
- .8 Quality improvement methods

Outputs

- .1 Quality reports
- .2 Test and evaluation documents
- .3 Change requests
- .4 Project management plan updates
 - · Quality management plan
 - · Scope baseline
 - · Schedule baseline
 - · Cost baseline
- .5 Project documents updates
 - Issue log
 - · Lessons learned register
 - Risk register



Figure 8-7. Manage Quality: Inputs, Tools & Techniques, and Outputs



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Control Quality

• Quality Control is the <u>process</u> of monitoring and recording results of executing the quality activities to assess performance and recommend necessary changes. In short, it is the measurement of defects.



Control Quality

Inputs

- .1 Project management plan
 - Quality management plan
- .2 Project documents
- · Lessons learned register
- Quality metrics
- Test and evaluation documents
- .3 Approved change requests
- .4 Deliverables
- .5 Work performance data
- .6 Enterprise environmental factors
- .7 Organizational process assets

Tools & Techniques

- .1 Data gathering
 Checklists
 - Check sheets
 - Check sneets
 - Statistical sampling
 - · Questionnaires and surveys
- .2 Data analysis
 - · Performance reviews
 - · Root cause analysis
- .3 Inspection
- .4 Testing/product evaluations
- .5 Data representation
 - · Cause-and-effect diagrams
 - · Control charts
 - Histogram
 - Scatter diagrams
- .6 Meetings

Outputs

- .1 Quality control measurements
- .2 Verified deliverables
- .3 Work performance information
- .4 Change requests
- .5 Project management plan updates
 - Quality management plan
- .6 Project documents updates
 - Issue log
 - Lessons learned register
 - · Risk register
 - Test and evaluation documents

