8 Project quality mgmt

Input

- Stakeholder register
- Baselines
  - Scope baseline
    - Project Scope Statement
    - WBS
    - WBS Dictionary
  - Schedule baseline
  - Cost baseline
- Risk register
- EEF
- OPA
- PP
- Quality Metrics
- Work Performance Information
- Quality Ctrl. Measures
- ~~Unterzweig~~
- PP
- Quality Metrics
- Quality Checklist
- Work Performance Measurement
- Approved Change Requests
- Deliverables
- OPA

Output

- Quality mgmt. plan
- Quality metrics
- Quality Checklist
- Process Improvement Plan
- Updt. P doc's
- Change requests
- Updt. OPA
- Updt. PP / P doc's
- Validated changes
- Validated deliverables
- Updt. OPA
  - Lessons learned
- Change requests (incl...)
- Updt. PP / P doc's

Processes

8.1 Plan quality

Identify all relevant practises, standards & requirements for Q
P must comply with any required EEF & OPA

Plan the P so it meets customers quality standards
Q mgmt. should be performed regularly and in parallel with other planning processes throughout the project.

Determine how you will do planning - part of all mgmt. plans

Determine Quality Standards & metrics

Create Process Improvement Plan

Determine all roles & responsibilities

Go back - iterations

Finalize the "how to execute & ctrl." parts of all mgmt. plans

Develop realistic and final PP & performance measurement baseline

~~Tools/Techniques~~

- Cost benefit analysis
- Cost of Quality (COQ)
  - Cost of conformance and non-conformance on the P
  - Cost of conformance MUST be lower
- Ctrl Charts
  - Upper & lower ctrl limits
    - Points within the range are in ctrl
  - Mean
  - Specification limits
  - Out of Ctrl
    - Point outside upper / lower ctrl limit
    - Rule of 7
      - A group or series of 7 on one side of the mean
  - Assignable cause / Special cause variation
- Benchmarking
- Design of Experiments (DOE)
  - experimentation to determine what variables will improve Q
- Statistical sampling
  - If 100% takes too long
  - If 100% costs too much
  - If 100% is too destructive
- Flowcharting

Input

- Project performance baselines
  - Scope
    - Project scope statement
    - WBS
    - WBS Dictionary
  - Cost
  - Schedule
- Stakeholder register
- Risk register
- EEF
- OPA

Output

- Quality mgmt. plan
- Quality metrics
- Quality Checklist
- Process Improvement Plan
- Updt. P doc's

8.2 Perform quality assurance

Usually handled by an external dept.
Answers: Are procedures being followed
Can we improve the way we do work

Request Changes

Continuously improve

Follow processes

Perform Quality Assurance

Perform Quality Audits

~~Tools/Techniques~~

- Quality Audits
  - If not by Orga than by PM
- Process analysis
  - Part of continuous improvement
- Tools/Techniques from 8.1 & 8.3

Input

- PP
- Quality Metrics
- Work Performance Information
- Quality Ctrl. Measures

Output

- Change requests
- Updt. OPA
- Updt. PP / P doc's

8.3 Perform quality control

Ensures a certain level of quality in a deliverable
Ctrl. means measure

Take action to ctrl. the Project

Measure performance against other metrics determined by PM

Determine variances & if they warrant corrective action or change requests

Influence the factors that cause change

Request Changes

Perform Quality Ctrl.

~~Tools/Techniques~~

- Cause & effect diagram / Fishbone / Ishikawa
- Ctrl chart
- Flowchart
- Histogram
- Pareto chart
  - Focus attention on most critical issues
  - Prioritises potential causes
  - Separates the critical few
- Run chart
- Scatter diagram
  - Tracks 2 variables
- Statistical sampling
- Inspection

Terms

- Mutual exclusivity
  - 2 events can't occur in a single trial
- Probability
  - Likelihood something will occur
- Normal distribution
  - Bell shaped curve
- Statistical independence
  - 1 event occurring does not affect another event occurring
- Std. deviation (sigma)
- 3 / 6 sigma
  - 1 sigma = 68.26%
  - 2 sigma = 95.46%
  - 3 sigma = 99.78%
  - 6 sigma = 99.98%

Input

- PP
- Quality Metrics
- Quality Checklist
- Work Performance Measurement
- Approved Change Requests
- Deliverables
- OPA

Output

- Quality Ctrl. Measurements
- Validated changes
- Validated deliverables
- Updt. OPA
  - Lessons learned
- Change requests (incl...)
- Updt. PP / P doc's