



IT Project Management

Lecture 2-5 – Quality

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Quality



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1. Quality Objectives
2. Procedure
3. Summary

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Introduction

- Based on the objectives, a project delivers something at the end of the project execution.
- During the project life cycle, deliveries are made. All deliveries should follow
 - requirements
 - quality standards
- That's why all deliveries should be validated and verified before delivered to the client
- A quality management function should be established from the beginning of a project
 - Quality management (QM)
 - Synonym: Project assurance, Quality assurance

Quality

- The originally semantic meaning of quality is: absolute characteristic of an entity (Latin, qualis = “what kind of a”).
- **Quality** (*in the sense of quality management*): result of a comparison between quality requirements and the true nature of an entity related to a specific grade.
- Quality: Fit for its purpose?
 - Quality is how good something is – depending on expectations
 - Different people – different expectations – different definition of quality

Quality

- Quality management (QM) ensures that the deliverables meet the objectives of the project.
- Essential tasks are:
 - Checking and ensuring that a project fulfills the requirements, for example specifications
 - Using of defined methods as well as examining and ensuring standards in the project
 - Testing of work results

Quality

- The PMBOK lists three processes concerning project quality management [PMI17]:
 - Quality planning
 - Quality assurance
 - Quality control

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Proceeding

How can quality be achieved and ensured?

- Definition of the role of quality management
 - The quality manager role is defined based on quality requirements and adequate quality processes
- Development of a learning organization
 - Continuous improvement
A learning organization has the aim of constantly improving and thereby achieving a higher quality
 - Building quality into a product
 - Lessons learned workshops

Proceeding

- Management of process problems locally (Genba* principle), where the problem occurs
 - Problem analysis
 - Development of a proposal/solution
 - Implementation of developed proposal/solution
- Consolidation with project partners/suppliers
- Reviews
especially in phase transitions
- Use of checklists
especially during milestone approval

*Called Gemba principle as well

Proceeding

- Processes used in managing a project should always perform. A method to continuously improve processes is PDCA (Deming Cycle) [Dcm82]
 - PLAN
Definition how a process should work or be updated
 - DO
Execute the planned process or process changes.
If possible, collect data for the following steps.
 - CHECK
How is the process / updated process working?
Evaluate and compare actual results to planned results.
 - ACT
Take action based on what has been learned

Proceeding

- Quality guideline (Synonym: project quality plan (PQP) or quality handbook)
 - Content
 - Entry and exit criteria for project phases
 - ❖ Measurement criteria for milestones.
 - Project glossary
 - Uniform formats
 - should balance between cost and benefit

Proceeding

- Considering company-specific conventions and regulations
 - Industry standards (ISO 9000ff) [ISO20]
 - Company specific guidelines and regulations
- Audits
 - Analysis and reviewing of the project and the progress of the project
- Coaching
- Qualification
 - project manager training and organizational training

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Summary



- Quality management is an important part of project management to ensure quality achievements of deliveries to the client
- Continuous improvement as basis for a learning organization
- Reviews and checklists are effective to improve quality
- PDCA (Deming Cycle) is a method to continuously improve processes