

# Project Management

Suphitcha Chanrueang



Nakhon Pathom Rajabhat University

# Chapter 9: Project Quality Management

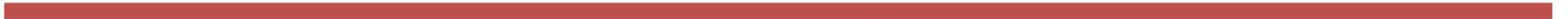
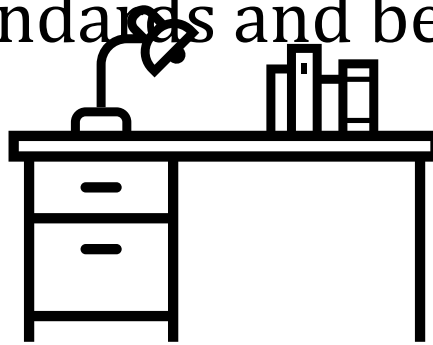
Suphitcha Chanrueang





# Learning Objectives

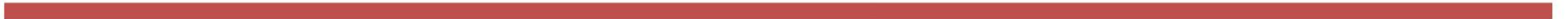
- Understand the concept of project quality management
- Identify key quality management processes
- Learn quality planning, assurance, and control
- Explain the importance of quality in software projects
- Recognize quality standards and best practices





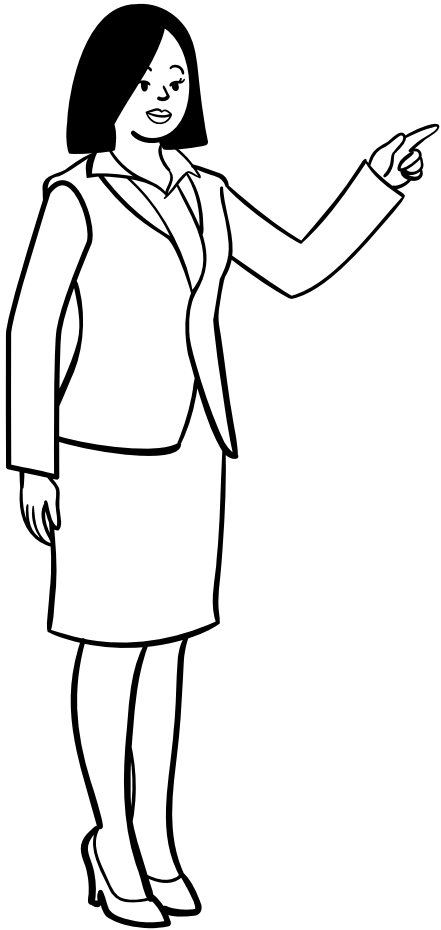
# Introduction to Project Quality Management

- Ensures project meets requirements and expectations
- Focuses on preventing defects rather than fixing later
- Emphasizes building quality into processes
- Applies throughout project life cycle





# What is Quality?



- Degree to which product meets requirements
- Fitness for intended use
- In software:
  - Functionality
  - Reliability
  - Usability
  - Performance
  - Security



# Importance of Quality Management

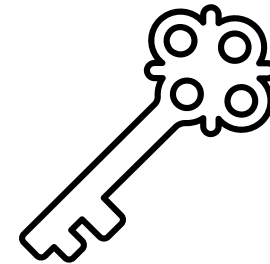
- Improves customer satisfaction
- Reduces defects and rework
- Saves time and cost
- Enhances organization reputation
- Increases chance of project success.





# Quality Management Processes

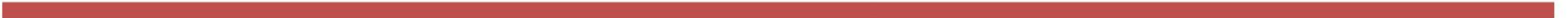
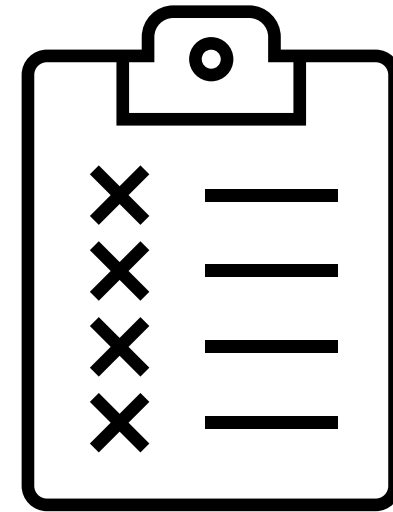
- Quality Planning
- Quality Assurance
- Quality Control
- Continuous Improvement





# Quality Planning

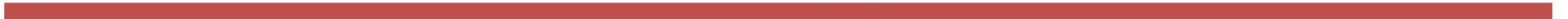
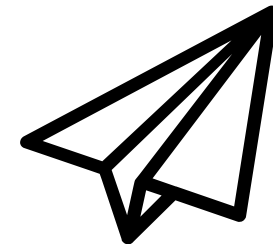
- Identify quality standards
- Define quality objectives
- Select metrics and measurements
- Plan quality activities





# Quality Standards in Software Projects

- ISO/IEC standards (e.g., ISO 25010)
- Organizational policies
- Industry best practices
- Customer and regulatory requirements





# Quality Assurance (QA)

- Focuses on processes
- Prevents defects
- Ensures correct procedures are followed
- Process-oriented





# Quality Assurance Activities

- Process audits
- Training and guidelines
- Compliance checks
- Process improvement initiatives





# Quality Assurance Activities

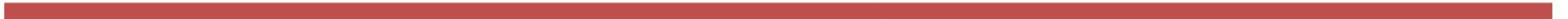
- Testing
- Code review
- Inspections
- Walkthroughs
- Checklists





# Quality Control (QC)

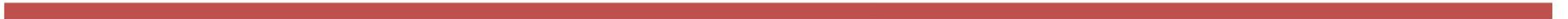
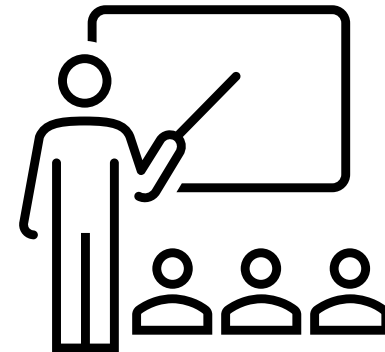
- Focuses on product and deliverables
- Monitors specific project results
- Verifies outputs against quality standards
- Identifies defects and errors early
- Ensures deliverables meet requirements





# Quality Control Techniques

- Software Testing
- Code Review
- Inspections
- Walkthroughs
- Checklists
- Automated Testing Tools





# Software Testing and Quality

- Verifies software meets requirements
- Detects defects early
- Improves reliability and usability
- Supports user acceptance
- Reduces risk before deployment





# Cost of Quality

- Prevention Costs
- Appraisal Costs
- Internal Failure Costs
- External Failure Costs
- Investing in prevention reduces total cost





# Continuous Improvement

- Focuses on ongoing improvement
- Uses lessons learned
- Improves processes and practices
- Encourages innovation
- Supports long-term quality





# Common Quality Issues

- Unclear or changing requirements
- Insufficient testing
- Poor documentation
- Lack of standards
- Weak communication





# Managing Quality Problems

- Identify root causes
- Implement corrective actions
- Prevent recurrence
- Monitor results
- Document lessons learned





# Summary

- Ensures acceptable deliverables
- Focuses on prevention and control
- Uses planning, assurance, and control
- Improves project success





# Review Exercise

1. What is project quality management?
  2. Why is quality important in software projects?
  3. What is the difference between QA and QC?
  4. Name two quality control techniques.
  5. What is cost of quality?
-