

Software Project Management

Suphitcha Chanrueang



Nakhon Pathom Rajabhat University



Chapter 2: Software Project Life Cycle

Suphitcha Chanrueang

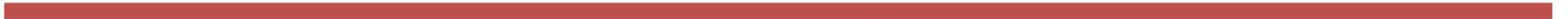


Nakhon Pathom Rajabhat University



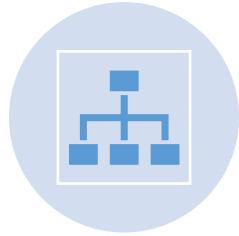
Learning Objectives

- Understand the concept of the software project life cycle
- Identify the five main phases and their importance
- Explain key activities in each phase
- Recognize documentation and deliverables across phases

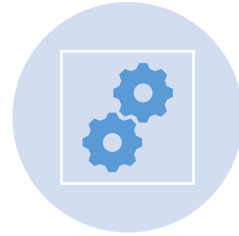




What is a Project Life Cycle?



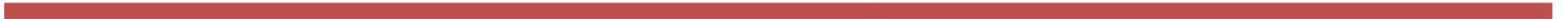
**A STRUCTURED
SEQUENCE OF
PHASES THAT A
PROJECT
FOLLOWS FROM
START TO FINISH**



**PROVIDES A
SYSTEMATIC
APPROACH TO
MANAGE
SOFTWARE
DEVELOPMENT**

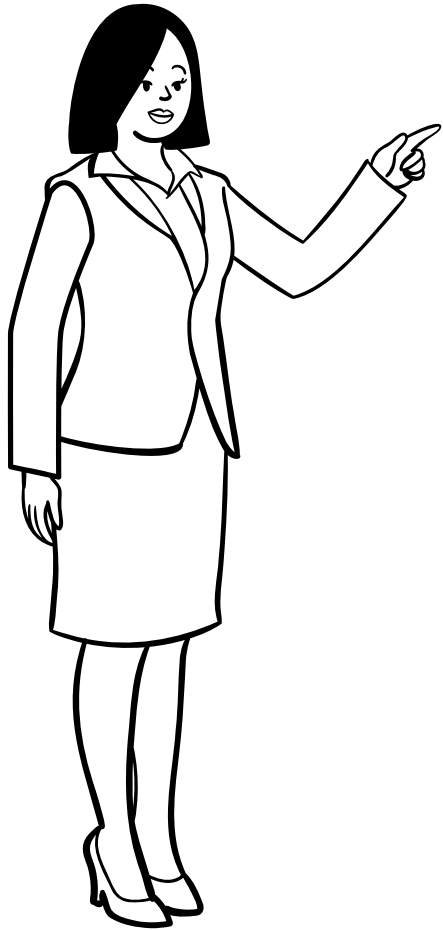


**HELPS ENSURE
QUALITY,
EFFICIENCY, AND
PROJECT
SUCCESS**

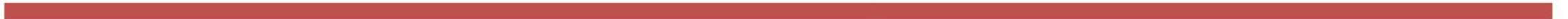




Characteristics of a Software Project



- Initiation – Define goals and scope
- Planning – Develop project plan and schedule
- Execution – Implement and build deliverables
- Monitoring & Controlling – Track progress and adjust plans
- Closure – Complete and evaluate the project





Phase 1: Initiation

- Establish project purpose and objectives
- Identify stakeholders and assign project manager
- Conduct feasibility study (technical, financial, operational)
- Create Project Charter





Key Activities in Initiation



Define project vision and deliverables



Analyze business needs and risks



Obtain management approval to proceed



Document goals and success criteria

Phase 2: Planning



1

Develop a
detailed project
plan

2

Define scope,
timeline,
budget, and
resources

3

Create Work
Breakdown
Structure
(WBS)

4

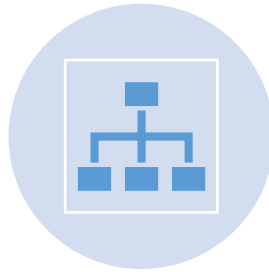
Plan for risk
management
and
communication



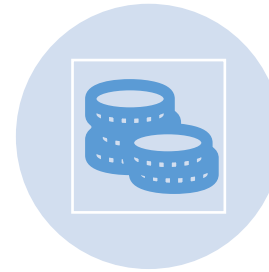
Tools for Project Planning



GANTT CHART –
VISUALIZE
PROJECT
SCHEDULE



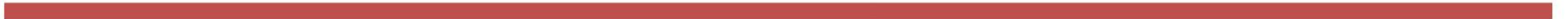
WBS – ORGANIZE
TASKS AND
SUBTASKS



BUDGET SHEET –
ESTIMATE COSTS
AND RESOURCES



RISK REGISTER –
LIST POTENTIAL
RISKS AND
MITIGATION
PLANS



Phase 3: Execution

Team begins
to develop and
implement
project
deliverables

Assign tasks
and manage
workloads

Conduct team
meetings to
coordinate
progress

Ensure work
aligns with the
project plan
and scope





Roles in Execution Phase

1

Project Manager:
Oversees
progress and
resolves issues

2

Developers: Build
software features

3

Testers: Verify
functionality and
fix bugs

4

Designers: Create
user interfaces

5

Clients: Provide
feedback and
approvals



Phase 4: Monitoring & Controlling



**MEASURE PROJECT
PERFORMANCE VS.
PLAN**



**IDENTIFY
DEVIATIONS IN TIME,
COST, OR QUALITY**



**MANAGE CHANGE
REQUESTS AND RISKS**



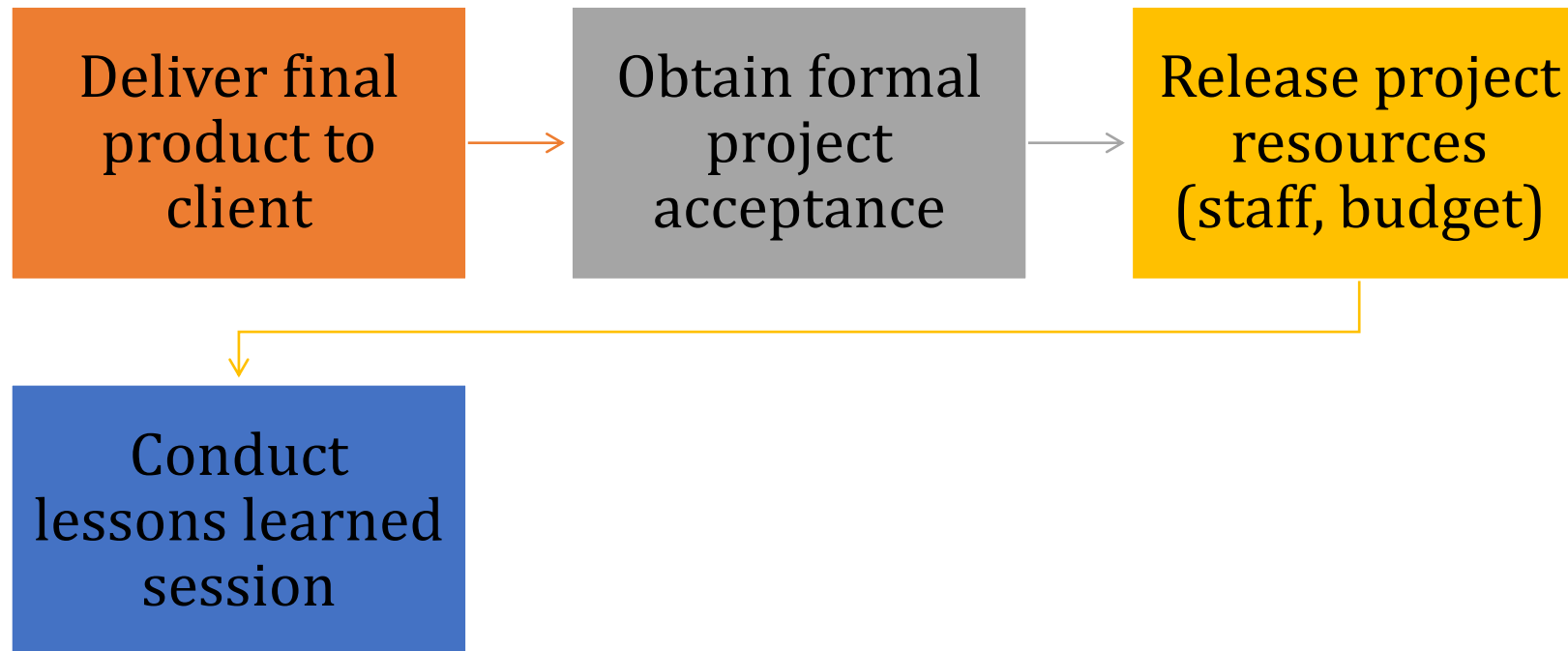
**USE PERFORMANCE
METRICS TO ENSURE
PROJECT ALIGNMENT**



Common Monitoring Metrics

- Schedule Variance (SV) – Is the project on time?
- Cost Variance (CV) – Are we within budget?
- Defect Rate – How many issues have been reported?
- Customer Satisfaction – Quality of deliverables

Phase 5: Closure



Closure Deliverables



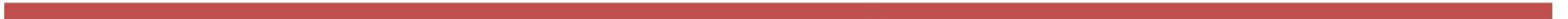
Project Closure Report –
summarize performance
and outcomes



Lessons Learned
Document – identify
improvements for future
projects



Client Sign-off Form –
official acceptance of the
product





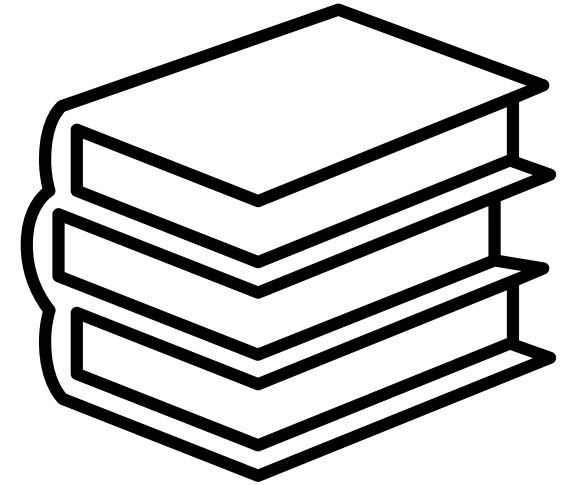
Documentation Across Phases

Phase	Main Documents
Initiation	Project Charter
Planning	Project Plan, WBS, Risk Plan
Execution	Progress Reports
Monitoring	Performance Reports, Change Logs
Closure	Closure Report, Lessons Learned



Challenges in Managing the Life Cycle

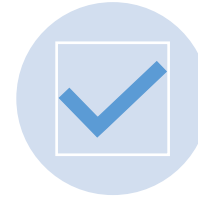
- Changing requirements during development
- Poor communication among team members
- Insufficient planning or unclear goals
- Limited resources or unrealistic timelines



Best Practices for Effective Life Cycle Management



Define objectives clearly from the start



Review progress regularly



Communicate openly with all stakeholders



Encourage collaboration and adaptability



Document every phase consistently





Summary

- The Software Project Life Cycle ensures structured project execution
- It includes 5 stages: Initiation, Planning, Execution, Monitoring, Closure
- Each stage contributes to project success
- Proper management balances time, cost, scope, and quality





Review Exercise

1. What are the five phases of the software project life cycle?
 2. What is the main purpose of the Initiation phase?
 3. Name two tools used in the Planning phase.
 4. Why is Monitoring and Controlling important?
 5. What should be included in a Project Closure Report?
-