Course: Software Project Management

Week 4: Project Initiation and Planning

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Contents

Learning Outcomes

After completing this lesson, you will be able to:

- Identify different sources of software projects
- Explain the key steps in initiating and planning a project
- Develop a project charter
- Conduct an effective project kickoff meeting
- Develop a software project management plan

Introduction

- **Projects do not begin randomly**
  - They are planned and always born from an initial concept that signals the need for change, improvement, or opportunity realization.
- **Therefore, every project begins with a concept**
  - an idea that addresses a problem, business need, or opportunity
- Understanding the sources and steps from idea to formal project initiation, planning and execution is crucial for successful project delivery.

Where do project ideas come from?

Sources of Projects

The idea can originate from several sources:

- **User Request / Business Need:**
  - When a client or user identifies a problem or a gap that requires a solution.
  - Sometimes this is formalized into a Request for Proposal (RFP).
- **Need Assessment:**
  - When internal teams or business partners proactively identify a requirement through analysis or research.

Sources of Projects

The idea can originate from several sources:

- **Market Opportunity:**
  - Recognition of new trends, emerging technologies, or competitive gaps suggest the need for a new product, service, or system.
- **Regulatory or Compliance Change:**
  - New laws or standards might force the organization to
    - start a new project.
  - New government or industry regulations
    - require new systems or updates.

Sources of Projects

The idea can originate from several sources:

- **Strategic Goals:**
  - Projects can be initiated to align with long-term business strategies or visions or digital transformation initiatives.
- **Operational Issues:**
  - Inefficiencies or recurring technical problems in existing systems can trigger new projects.

Sources of Projects

The idea can originate from several sources:

- **Innovation Initiatives:**
  - Research and development efforts lead to new product ideas or technology adoption.
- **Risk Response / Mitigation:**
  - Projects started to avoid, reduce, or respond to identified risks.

Sources of Projects

- **After the project idea is identified**, the next logical steps are:
  1. **Requirement gathering & analysis**
     - Understanding exactly what the project must achieve.
  2. **Feasibility study**
     - Checking if it's practical, doable, and worth pursuing.
     - Assess whether the project is technically, financially and operationally achievable.

Project Initiation

Initiating and Planning Software projects

Project Initiation

- **Initiation** is the first formal phase in project management where the idea is analyzed and approved, and the project is formally authorized.
- Sets the foundation and It’s where you decide:
  - What are we developing?
  - Why the project is needed?
  - Whether it’s feasible.
  - For whom and Who will be involved at a high level.

Project Initiation

- During initiation, for authorization of the idea or the project,
  - **Business case development** and **project charter** preparation is required in addition to the requirement gathering & analysis and feasibility study.
- **Business Case Development:**
  - A formal document is often prepared to justify the project
    - it includes benefits, costs, risks, and alignment with business goals.

Project Initiation

- **Project Charter Preparation: (PMI, 2013)**
  - Process of developing a formal approval document
  - **Inputs**
    - Statement of work, business case, agreements
  - **Tools and Techniques**
    - Expert judgement, facilitation techniques
  - **Outputs**
    - Project Charter

Project Initiation

- **Project Charter Preparation: (PMI, 2013)**
  - Project charter is the document issued by the project initiator or sponsor that formally
    - authorizes the existence of a project and
    - provides the project manager with the authority to apply organizational resources to project activities

Project Initiation

Contents of Project Charter

Project Title: Clearly state the project title.

→sponsor, project manager, date, version

➔Cover page

1. **Purpose**: Explain the purpose and justification for the project.
2. **Objectives**: List specific, measurable objectives ➔ SMART
3. **Deliverables**: List the key outputs or results
4. **Scope**: Define what is included and excluded

Project Initiation

Contents of Project Charter

5. High level Requirements: key features or system requirements.

6. Assumptions and Constraints:

- ✓Assumptions are Beliefs or conditions considered true without proof.
  - ➢ Example: “Lecturers will provide course materials in standard formats (MP4, PDF).“
- ✓ Constraints are fixed limitations that restrict the project
  - ➢ Example: "The platform must launch before the 1st academic semester in 2025/26

Project Initiation

Contents of Project Charter

7. **High level Risks**: Identify potential risks and mitigation strategies.
8. **Milestone Schedule**: Provide a high-level timeline with milestones.
9. **Budget Summary**: Provide an estimated total project cost
10. **Stakeholders**: Identify key stakeholders and their roles.
11. **Approval**: Include a section for signature

Project Initiation

Contents of Project Charter:

Stakeholders Identification and Analysis

- Internal and external
- User, implementer, influencer, sustainer
- RACI matrix
  - Who is responsible?
  - Who is accountable?
  - Who is consulted?
  - Who is informed?

Project Initiation

Project Charter: ➔ Online Learning System

Project Charter

Project Title:	Online Learning Management System
Project Sponsor:	AASTU (Mr. Xyz)
Project Manager:	Mr. Yimer A.
Date of Authorization:	April 14, 2025
Version:	1.0

Project Initiation

Kickoff Meeting

- The first official meeting between the project team and stakeholders after a project has been **formally approved → Charter**
- It marks the transition from "concept and approval" into "action and planning.“
- Some big organizations split the kickoff into two:
  - **Internal Kickoff** (project team only).
  - **External Kickoff** (with clients or partners).

Project Initiation

Kickoff Meeting

- **Purpose:** ➔ **to prevent future misunderstandings**
  - Introduce the project to everyone involved.
  - Align the team around the project scope, objectives, and expectations.
  - Clarify roles and responsibilities.
  - Discuss initial timeline, milestones, and risks.
  - Set the tone for team collaboration and communication.
- **Who?** **Sponsor, PM, Team member, key stakeholder, vendor / consultant**

Project Initiation

Kickoff Meeting: Why is it Important for Software Projects?

- Software projects often involve cross-functional teams:
  - Developers
  - testers
  - UI/UX designers
  - Clients, DevOps

Each group might have its own assumptions about **Scope, Expectation, Communications, Priorities**

- A kickoff meeting makes sure that
  - ***everyone starts from the same page.***

Project Initiation

Kickoff Meeting:

- **Key Agenda Items**
  - Introduction ➔Project background & Business need
  - Project scope overview
  - Objective and Success Criteria
  - Stakeholder roles and responsibilities
  - Timeline and key milestones
  - Communication plans

Planning Software Projects

Project Planning

Basic Concepts:

- **Method:** Steps to perform a type of activity.
- **Plan:** Converting a method to a real activity
  - Start and end dates
  - Who will carry it out
  - What tools and materials will be used
- **Methodology:**
  - Sequenced group of methods or techniques

Project Planning

- Planning is answering questions (Heagney, 2012)
  - who, what, why, when, how much, how long

Project Planning

- Project planning is a process of defining
  - the scope, objectives, goals, timelines and course of action required to attain project goals.
- Project planning
  - Helps avoid scope creep and identifies risks early
  - Improves time and resource management.
  - Clarifies roles and responsibilities.
  - Helps track progress against the plan.

Project Planning

- Software Project Planning
  - The process of defining the scope, objectives, activities, resources, schedule, risks, and budget for a software development project.
  - Involves defining the **what**, **how**, **who**, **when**, and **how much** of a software project
    - before development begins.

Project Planning

Project Management Plan (PMP) (PMI, 2013) (Wiley, 2010)

- A comprehensive document that defines how the project is executed, monitored & controlled, and closed.
- It defines how the project is supposed to be executed and what it is going to produce.
- The PMP should contain definitive project information
  - Charter, organizations, process
  - Work breakdown, schedule, budget, etc.

Project Planning

Project Management Plan (PMP) (PMI, 2013) (Wiley, 2010)

- Developing PMP is the **process** of defining, preparing, and coordinating all subsidiary plans and integrating them into a comprehensive PMP, align with **program management plan**
- The benefit of the process is
  - A central document that defines the basis of all project work.
- It is developed through a series of integrated processes extending through project closure.

Project Planning

Project Management Plan (PMP) (PMI, 2013) (Wiley, 2010)

- **Inputs**
  - Project charter, Outputs from other processes
- **Tools & Techniques**
  - Expert Judgement, Facilitation techniques
- **Outputs**
  - Project Management Plan

Project Planning

Content or Structure of PMP (PMI, 2013) (Wiley, 2010)

- The project management plan's content varies depending upon the application area and complexity of the project.
- However, most project management plans have common elements.
  - Introduction or overview of the project
  - A description of how the project is organized
  - The management and technical processes used on the project, and sections describing
    - the work to be performed, the schedule & the budget

Project Planning

Software Project Management Plan (SPMP) (PMI, 2013) (Wiley, 2010)

- A specialized version of a PMP **tailored** specifically for **software development projects**.
- It provides a detailed **roadmap** for **managing** the development, deployment, and maintenance of software systems
- Focuses on **software lifecycle** from requirement gathering to deployment.
  - outlines how a specific software development project will be planned, executed, and controlled.

Project Planning

Content or Structure of SPMP (PMI, 2013) (Wiley, 2010) (IEEE, 1998)

Software Project Management Plan

Front Matter
1. Introduction
2. Project Organization
3. Managerial Process
4. Technical Process
5. Work Elements, Schedule, Budget
Optional Inclusions

It follows **IEEE** Standard **1058** and includes technical, managerial, and quality assurance aspects.

Project Planning

Content or Structure of SPMP

Front Matter

- ✓ Title Page
- ✓ Change history
- ✓ Tables of contents
- ✓ List of figures
- ✓ List of tables

1. Overview
    - 1.1 Project summary
        - 1.1.1 Purpose, scope, and objectives
        - 1.1.2 Assumptions and constraints
        - 1.1.3 Project deliverables
        - 1.1.4 Schedule and budget summary
    - 1.2 Evolution of the plan
2. References
3. Definitions
4. Project organization
    - 4.1 External interfaces
    - 4.2 Internal structure
    - 4.3 Roles and responsibilities

Project Planning

Content or Structure of SPMP

5. Managerial process plans
    - 5.1 Start-up plan
        - 5.1.1 Estimation plan
        - 5.1.2 Staffing plan
        - 5.1.3 Resource acquisition plan
        - 5.1.4 Project staff training plan
    - 5.2 Work plan
        - 5.2.1 Work activities
        - 5.2.2 Schedule allocation
        - 5.2.3 Resource allocation
        - 5.2.4 Budget allocation
    - 5.3 Control plan
        - 5.3.1 Requirements control plan
        - 5.3.2 Schedule control plan
        - 5.3.3 Budget control plan
        - 5.3.4 Quality control plan
        - 5.3.5 Reporting plan
        - 5.3.6 Metrics collection plan
    - 5.4 Risk management plan
    - 5.5 Closeout plan

Project Planning

Content or Structure of SPMP

6. Technical process plans
    - 6.1 Process model
    - 6.2 Methods, tools, and techniques
    - 6.3 Infrastructure plan
    - 6.4 Product acceptance plan

7. Supporting process plans
    - 7.1 Configuration management plan
    - 7.2 Verification and validation plan
    - 7.3 Documentation plan
    - 7.4 Quality assurance plan
    - 7.5 Reviews and audits
    - 7.6 Problem resolution plan
    - 7.7 Subcontractor management plan
    - 7.8 Process improvement plan

Project Initiation & Planning

Activity

- Which part of initiation and planning do you think is most challenging in real software projects?
  - Defining a **clear and realistic project scope ➔ Scope Creep**
  - Creating a **practical and achievable plan**
    - estimating **time, cost, and resources** accurately when the software is still just an idea on paper.

Summary

- Project identification phase is where ideas and opportunities are documented and screened. Then the initiation and planning
- Initiation and planning matters in software development projects
  - Ensures clarity of goals, scope, and deliverables
  - Reduces risks of failure (budget overruns, missed deadlines, poor quality)
  - Helps in resource allocation and team coordination

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