

PMP

Project Management Professional

EARN A SEAT AT THE BOARDROOM TABLE



Ch I: What is a Project?

Objectives

- Describe the difference between projects and operations
- Denote some of the skills that every good project manager should possess
- Differentiate the different organizational structures and the project manager's authority in each
- Name the five project management process groups

Is it a Project?

Project

Projects are:

- Unique (it doesn't already exist)
- Temporary with a defined start and end date
- Completed when goals are reached or project is no longer viable
- Successful if stakeholder expectations are met or exceeded

Progressive elaboration: describing and refining the characteristics and features of a project as it progresses

Operations

Operations are:

- Continuous
- Repetitive

It's good practice to include operational staff in a project to get some buy-in and acceptance of the project deliverables

Stakeholders

Stakeholders are individuals with vested interest in a project

Project sponsors are usually management level individuals with the authority to appropriate resources for the project, and they act as tie-breakers in the decision process

Project management

Project management is applying tools, techniques, skills, and knowledge to project activities to bring about successful results and meet the project requirements

The process groups interact with a Plan-Do-Check-Act concept. The following process groups embody this concept: Planning (Plan), Execution (Do), Monitoring and Control (Check and Act)

Ch II: Creating the Project Charter

Objectives

- Name the nine project management Knowledge Areas
- Distinguish between the seven needs or demands that bring about project creation
- Define decision models
- Describe and calculate payback period
- Denote the decision criteria for NPV and IRR
- Denote the Develop Project Charter inputs
- Describe the importance of the project charter
- Understand the Identify Stakeholders process

The 9 Knowledge Areas

Knowledge Areas bring together common processes, and process groups bring together sequential processes.

The PMP Knowledge Areas are:

- Project integration management
- Project scope management
- Project time management
- Project cost management
- Project quality management
- Project HR management
- Project communications management
- Project risk management
- Project procurement management

Project integration management

Process Name	Project Management Process Group
Develop project charter	Initiating
Develop project management plan	Planning
Direct and manage project execution	Execution
Monitor and control project work	Monitoring and controlling
Perform integrated change control	Monitoring and controlling
Close project or phase	Closing

This Knowledge Area focuses on coordinating all aspects of the project plan and is highly interactive

There are two tools for assisting in project integration:

- Earned value management (EVM)
- Project management software

Project scope management

Process Name	Project Management Process Group
Collect requirements	Planning
Define scope	Planning
Create WBS	Planning
Verify scope	Monitoring and controlling
Control scope	Monitoring and controlling

This Knowledge Area focuses on defining all the work of the project needed to successfully produce the project goals. The processes are highly interactive

Product scope covers how well the product's characteristics meet its requirements; Project scope involves how well the work of the project meets the project management plan

Project time management

Process Name	Project Management Process Group
Define activities	Planning
Sequence activities	Planning
Estimate activity resources	Planning
Estimate activity durations	Planning
Develop schedule	Planning
Control schedule	Monitoring and controlling

This Knowledge Area focuses on completing the project in a timely manner

Project cost management

Process Name	Project Management Process Group
Estimate costs	Planning
Determine budget	Planning
Control costs	Monitoring and controlling

This Knowledge Area focuses on the costs of resources

Two techniques are used to decide among alternatives and improve the project process:

- Lifecycle costing: considers group of costs collectively (acquisition, operation, disposal...) to compare alternatives
- Value engineering: optimizes project performance and costs

- Making use of previous similar projects' schedule networks as a guide

Outputs

- **Project schedule network diagrams**
 - In producing schedule network diagrams, new activities may come to light, and some may be grouped into summary-level activities (also known as **hammocks**)
- **Project document updates**

PROCESS: Estimating Activity Resources

Determines the type of resources needed (human and material) and in what quantities for each schedule activity in a work package

Inputs

- **Activity list**
- **Activity attributes**
- **Resource calendars**
 - Describe time frames and quantities in which resources are available
 - These are outputs of the Acquire Project Team and Conduct Procurement processes (which are part of the Executing process group), but they are initially assembled in this process and further refined as more information is available
- **Enterprise environmental factors**
- **Organizational process assets**

Tools and Techniques

- **Expert judgment**
- **Alternatives analysis**
 - Analyze various methods that may be used to accomplish the activities assigned to resources (i.e. number of workers and skill levels, make or buy decisions, ...)
- **Published estimating data**
 - Use historical production rates and industry estimation data to determine resource requirements
- **Bottom-up estimating**
 - Estimate resources for low-level activities and roll them up to the work package level. The more detailed the activity, the more accurate the estimate, but costs of this technique also increase
- **Project management software**
 - Software that helps organize, plan, estimate, and document resource needs and availability

Outputs

- **Activity resource requirements**

Ch IX: Conducting Procurements and Sharing Information

Objectives

- Describe the purpose of the Conduct Procurements process
- Name the tools and techniques of the Conduct Procurements process
- Name the contracting lifecycle stages
- Describe the purpose of the Perform Quality Assurance process
- Differentiate between senders and receivers of information
- Describe the purpose of the Manage Stakeholder Expectations process

PROCESS: Conduct Procurements

Concerned with obtaining responses to bids and proposals from potential vendors, selecting a vendor, and awarding the contract. This process is only used when obtaining goods and services from outside the organization

Inputs

- **Project management plan: procurement management plan**
- **Source selection criteria**
- **Qualified seller list: list of current or pre-approved prospective sellers**
- **Seller proposals**
- **Project documents**
- **Make-or-buy decisions**
- **Teaming agreements**
- **Organizational process assets**

Tools and Techniques

- **Bidder conferences**
 - Allow prospective vendors to meet with buyers and clarify the terms of the project and RFP prior to their response proposals
 - Also known as vendor conferences, prebid conferences, and contractor conferences
- **Proposal evaluation techniques**
 - For simple procurements, a price comparison or evaluation against the SOW may be enough
 - For complex procurements, the following techniques can be applied:
 - Source selection criteria to rate and score proposals, including weighting selection criteria, screening proposals, and rating vendors
 - Request samples for evaluation
 - Request financial records to assess vendors' long-term viability
- **Independent estimates**
 - Known as **should cost estimates**, help provide an internal perspective of the range of the costs to expect from potential vendors

- **Expert judgment**
 - Helps refine independent estimates
- **Advertisement**
 - Make potential vendors aware of the availability of the RFP
- **Internet search**
 - Find vendors, research their past performance, and compare prices
- **Procurement negotiations**
 - Negotiate to come to an agreement on the terms of contracts
 - Beware of “fait accompli” or done deal situations in which one party doesn’t want to negotiate a given issue by arguing that it can’t be changed

Outputs

- **Selected sellers:**
 - Should include a negotiated draft contract, and may require senior management signatures on complex, high-risk, or high-dollar contracts
- **Procurement contract award**
 - Should clearly address elements of the SOW, time period, pricing and payment plan, acceptance criteria, warranty, dispute resolution procedures, etc.
 - Note the following stages of a contract’s lifecycle:
 - **Requirement:** establish project needs with a SOW and a work breakdown structure (WBS)
 - **Requisition:** refine and confirm project objectives
 - **Solicitation:** vendors are asked to compete for the contract with their responses to the RFP
 - **Award:** vendors are selected and allotted the contract
- **Resource calendars**
- **Change requests**
- **Project management plan updates**
- **Project document updates**

PROCESS: Perform Quality Assurance

Ensures that the project requirements are achieved and performed effectively and efficiently. Continuous process improvement can be performed through this process, and an organization’s internal quality assurance department can be leveraged

Inputs

- **Project management plan**
- **Quality metrics**
- **Work performance information**
- **Quality control measurements**

Tools and Techniques

- **Plan Quality and Perform Quality Control tools and techniques** (refer to these processes)
- **Quality audits**
 - Employ trained auditors or third-party reviewers to identify inefficient activities or processes used on the project
 - Perform audits on a schedule or at random
 - Benefits include:
 - Ensure fit for use of project output
 - Adherence to laws and standards
 - Proper recommendation and implementation of necessary corrective action
 - Adherence to the quality plan
 - Confirmation of the implementation of approved change requests, corrective actions, preventative actions, and defect repairs
 - Identified gaps in the process
- **Process analysis**
 - Examine:
 - Problems encountered during the project
 - Constraints experienced while undertaking the project
 - Ineffective and inefficient processes
 - Focus on identifying the root cause of the problems, so that they may be remedied effectively

Outputs

- **Organizational process assets updates**
- **Change requests** (should be acted upon immediately to prevent future quality issues)
- **Project management plan updates**
- **Project document updates**

PROCESS: Distribute Information

Provides information to stakeholders in a timely manner. Describes how information reports and meetings are structured, and who receives/attends them. It puts into action the communications management plan that was defined during the Plan Communications process

Inputs

- **Project management plan**
- **Performance reports**
- **Organization process assets**

Tools and Techniques

- **Communication methods:** meetings, emails, conference calls, videoconferences, etc.