

# Software project management

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# Introduction

- ✓ Theory: 45 sections
- ✓ Practice: 30 sections
- ✓ Requirements:
  - ❖ Attending class 80%
  - ❖ Do group exercise
  - ❖ Midterm test
  - ❖ Exam
  - ❖ Works on Ms Project

# References document

- ✓ Textbook: A Guide to the Project Management Body of Knowledge, 4rd edition
- ✓ References
  1. Bob Hughes, Mikecoterrell, “Software Project Management”, Third Edition, TataMcGraw Hill, 2004.
  2. Mulcahy, Rita. PMP Exam Prep (6th Edition), RMC Publishing, 2009

# Main contents

- ✓ Chapter 1: Overview of project management and organization
- ✓ Chapter 2: Project management process
- ✓ Chapter 3 : Project Integration
- ✓ Chapter 4 : Scope management
- ✓ Chapter 5 : Time management
- ✓ Chapter 6: Cost Management
- ✓ Chapter 7: Quality management
- ✓ Chapter 8: Human resource management
- ✓ Chapter 9: Communication management
- ✓ Chapter 10: Risk management
- ✓ Chapter 11: Procurement management

# Let's beginning

- Some concepts
  - What's a project ?
  - What's project management?
  - What's software project management?

# What's a project

- ✓ Project: a temporary endeavor(có chủ hướng) undertaken to create a unique product, service or result.
  - ✓ Project characteristics
  - ✓ Project vs. Operational work
  - ✓ Projects and Strategic(chiến lược) planning

# Project characteristics

- ✓ Temporary: has a definite beginning and definite end.
- ✓ Unique products, service or results
- ✓ Progressive Elaboration (cải tiến nhanh)

# Project vs. Operational work

- ✓ Performed by people
- ✓ Constrained by limited resources
- ✓ Planned, executed, and controlled.

Examples of projects include, but are not limited to:

- Developing a new product or service
- Effecting a change in structure, staffing, or style of an organization
- Designing a new transportation vehicle
- Developing or acquiring a new or modified information system
- Constructing a building or facility
- Responding to a contract solicitation.



# Projects and Strategic Planning

- ✓ A market demand
- ✓ An organizational need
- ✓ A customer request
- ✓ A technological advance
- ✓ A legal requirement

# What's project management?

... is the application of knowledge, skills, tools and techniques to project activities to meet project requirements.

- Processes:
  - ✓ initiating, planning, executing.
  - ✓ monitoring, controlling, and closing.
- Project manager: is the person responsible for accomplishing the project objectives

# What's project management? (con't)

Managing a project includes:

- ✓ identifying requirements
- ✓ Establishing clear and achievable objectives
- ✓ Balancing the competing demands for quality, scope, time and cost
- ✓ Adapting the specifications, plans, and approach to the different concerns and expectations of the various stakeholders.

What's software project management?  
Your opinions?

# Chapter 1

- ✓ Project life cycle
- ✓ Project stakeholders (bên liên quan)
- ✓ Project organization

# Project life cycle

Project life cycle: defines the phases that connect the beginning of a project to its end.

- ✓ Characteristics of the Project Life Cycle
- ✓ Characteristics of Project Phases
- ✓ Project Life Cycle and Product Life Cycle Relationships

# Characteristics of the Project Life Cycle

Defined on:

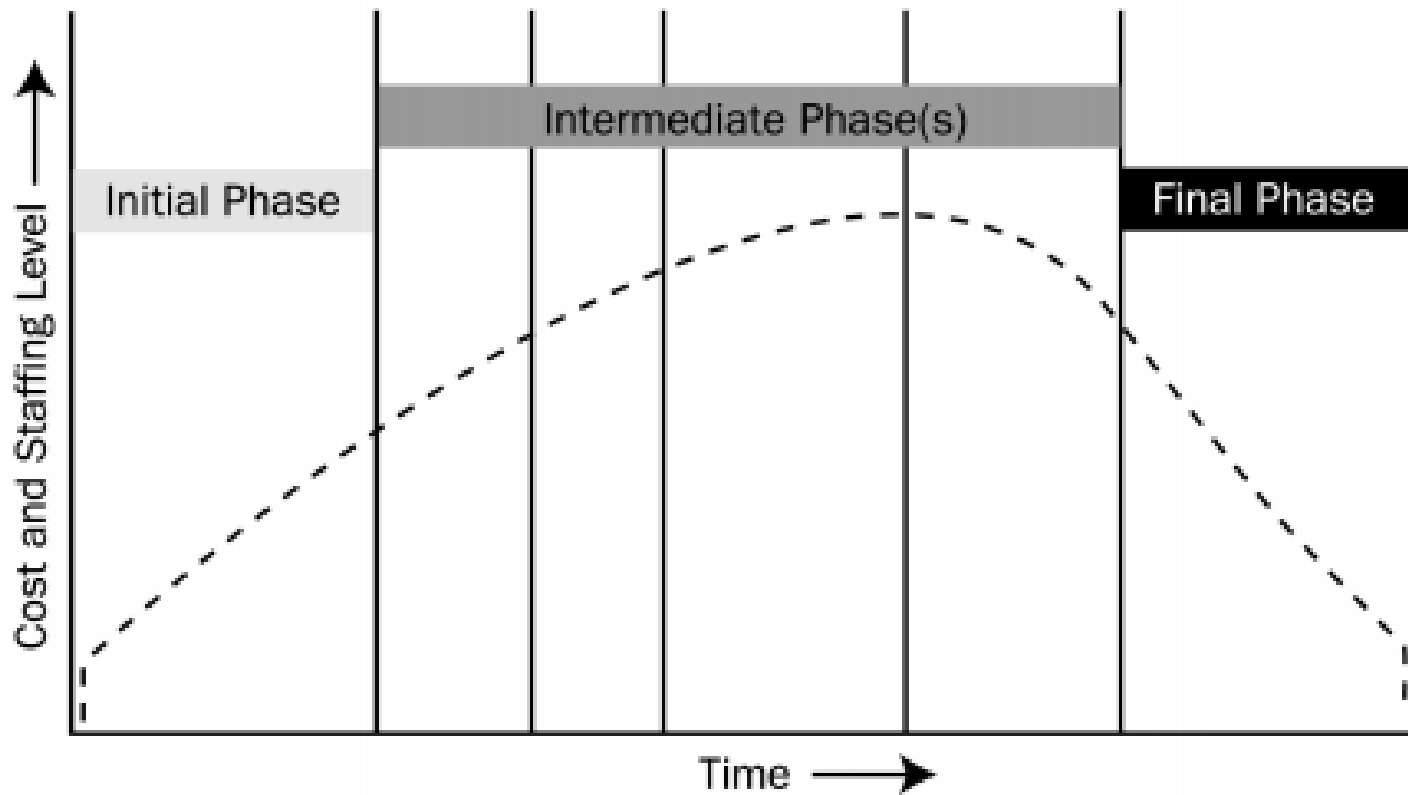
- ✓ What technical work to do in each phase (for example, in which phase should the architect's work be performed?)
- ✓ When the deliverables are to be generated in each phase and how each deliverable is reviewed, verified, and validated
- ✓ Who is involved in each phase (for example, concurrent engineering requires that the implementers be involved with requirements and design)
- ✓ How to control and approve each phase.

# Characteristics of the Project Life Cycle

- ✓ Phases are generally sequential and are usually defined by some form of technical information transfer or technical component handoff.
- ✓ Cost and staffing levels are low at the start, peak during the intermediate phases, and drop rapidly as the project draws to a conclusion.

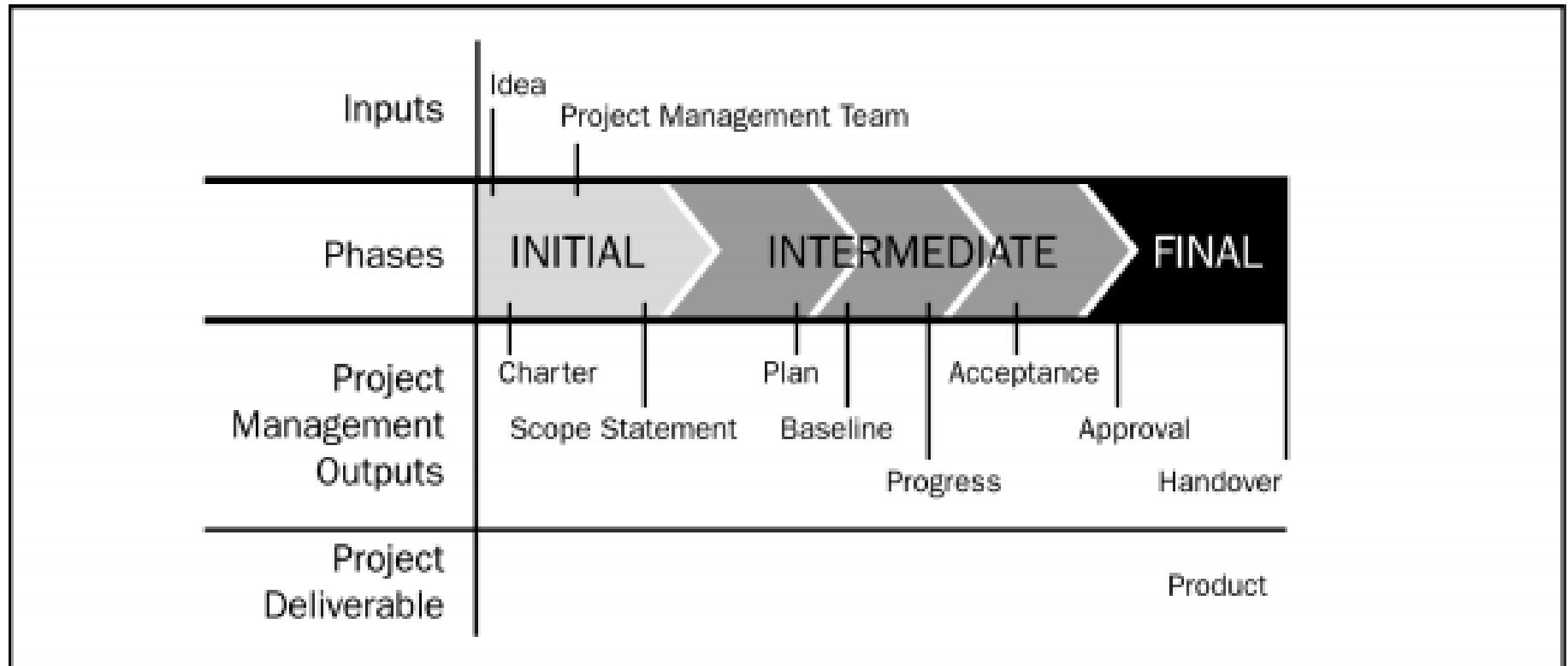


# Typical Project Cost and Staffing Level Across the Project Life Cycle



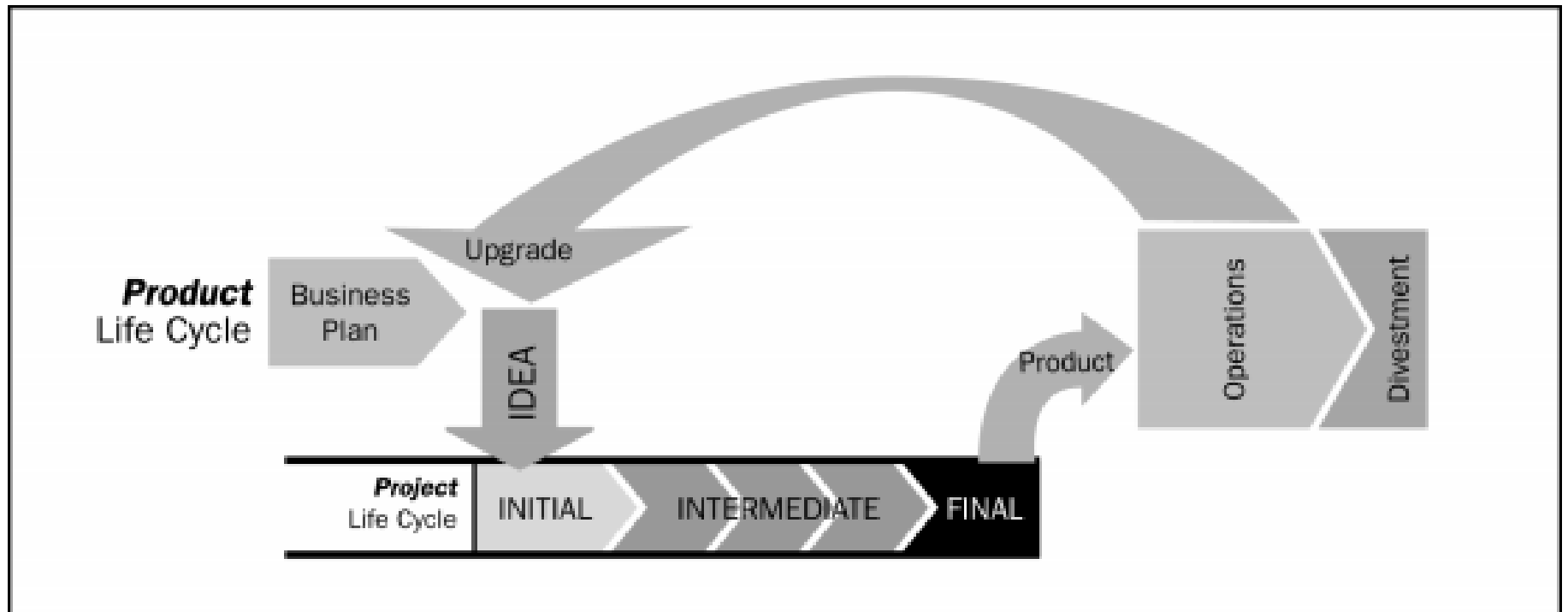
# Characteristics of Project Phases

What's project phase?



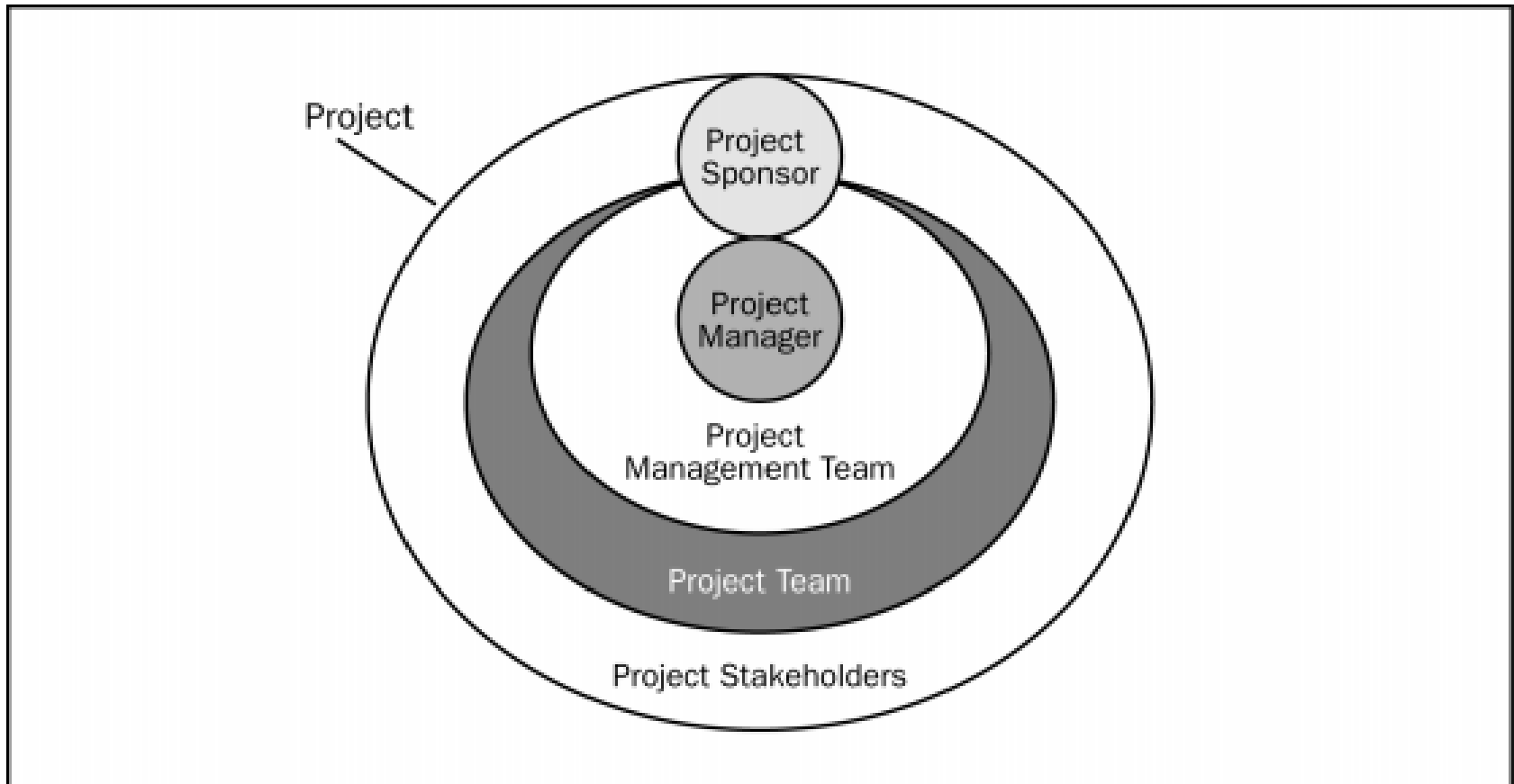
Typical sequence of phases in a project life cycle

# Project Life Cycle and Product Life Cycle Relationships



**Relationship Between the Product and the Project Life Cycles**

# Project Stakeholders



**The Relationship Between Stakeholders and the Project**

# Project Stakeholders

Key stakeholders on every project include:

- ✓ Project manager: The person responsible for managing the project.
- ✓ Customer/user: The person or organization that will use the project's product.
- ✓ Performing organization: The enterprise whose employees are most directly involved in doing the work of the project.
- ✓ Project team members: The group that is performing the work of the project.

# Project Stakeholders

- ✓ Project management team: The members of the project team who are directly involved in project management activities.
- ✓ Sponsor: The person or group that provides the financial resources, in cash or in kind, for the project.
- ✓ Influencers: People or groups that are not directly related to the acquisition or use of the project's product
- ✓ PMO: can be a stakeholder

# Project organization

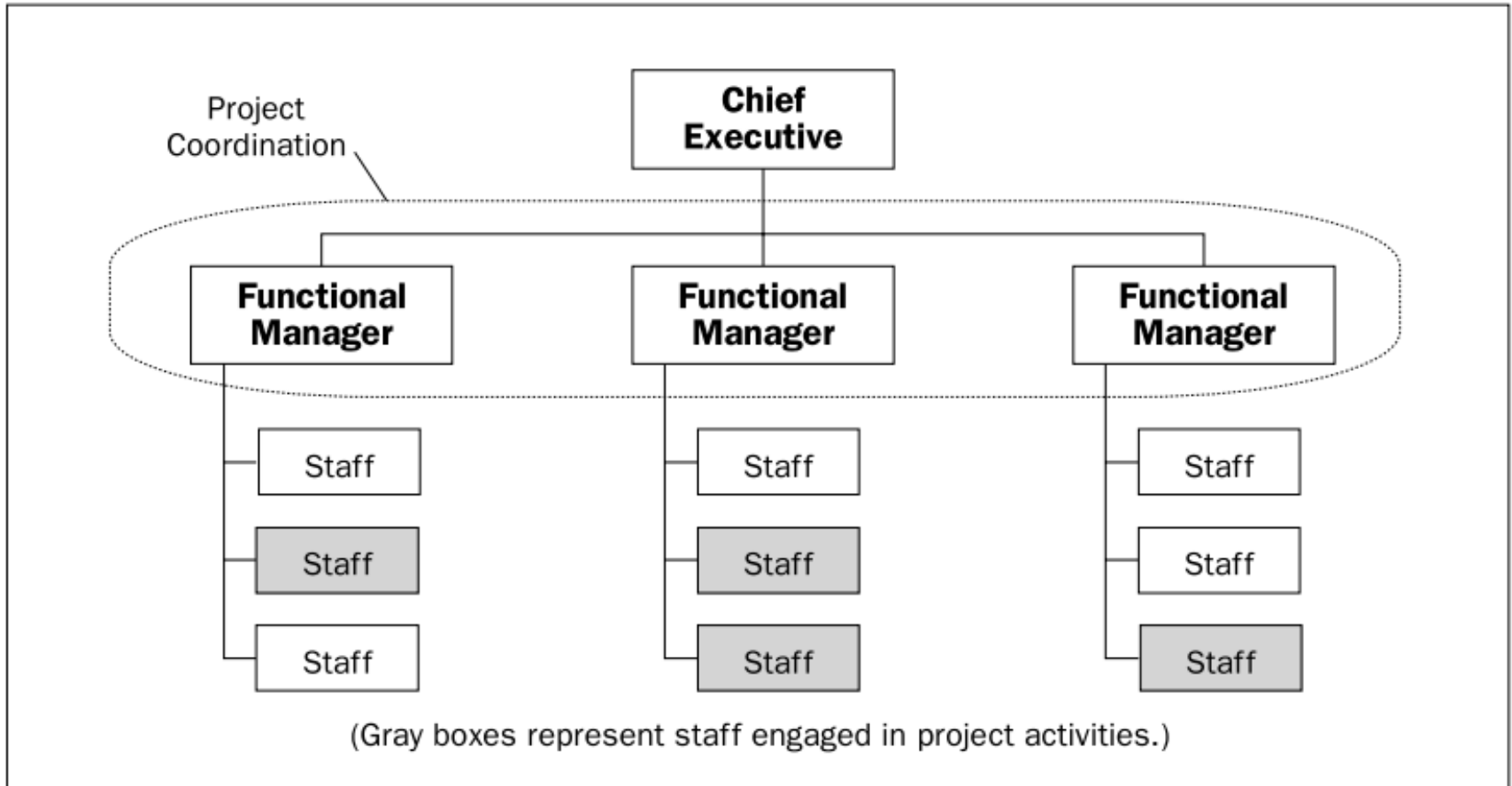
- Organizational Systems
- Organizational Cultures and Styles
- Organizational Structure

# Organizational influences on Project

<b>Organization Structure</b> <b>Project Characteristics</b>	<i>Functional</i>	<i>Matrix</i>			<i>Projectized</i>
		<b>Weak Matrix</b>	<b>Balanced Matrix</b>	<b>Strong Matrix</b>	
Project Manager's Authority	Little or None	Limited	Low to Moderate	Moderate to High	High to Almost Total
Resource Availability	Little or None	Limited	Low to Moderate	Moderate to High	High to Almost Total
Who controls the project budget	Functional Manager	Functional Manager	Mixed	Project Manager	Project Manager
Project Manager's Role	Part-time	Part-time	Full-time	Full-time	Full-time
Project Management Administrative Staff	Part-time	Part-time	Part-time	Full-time	Full-time

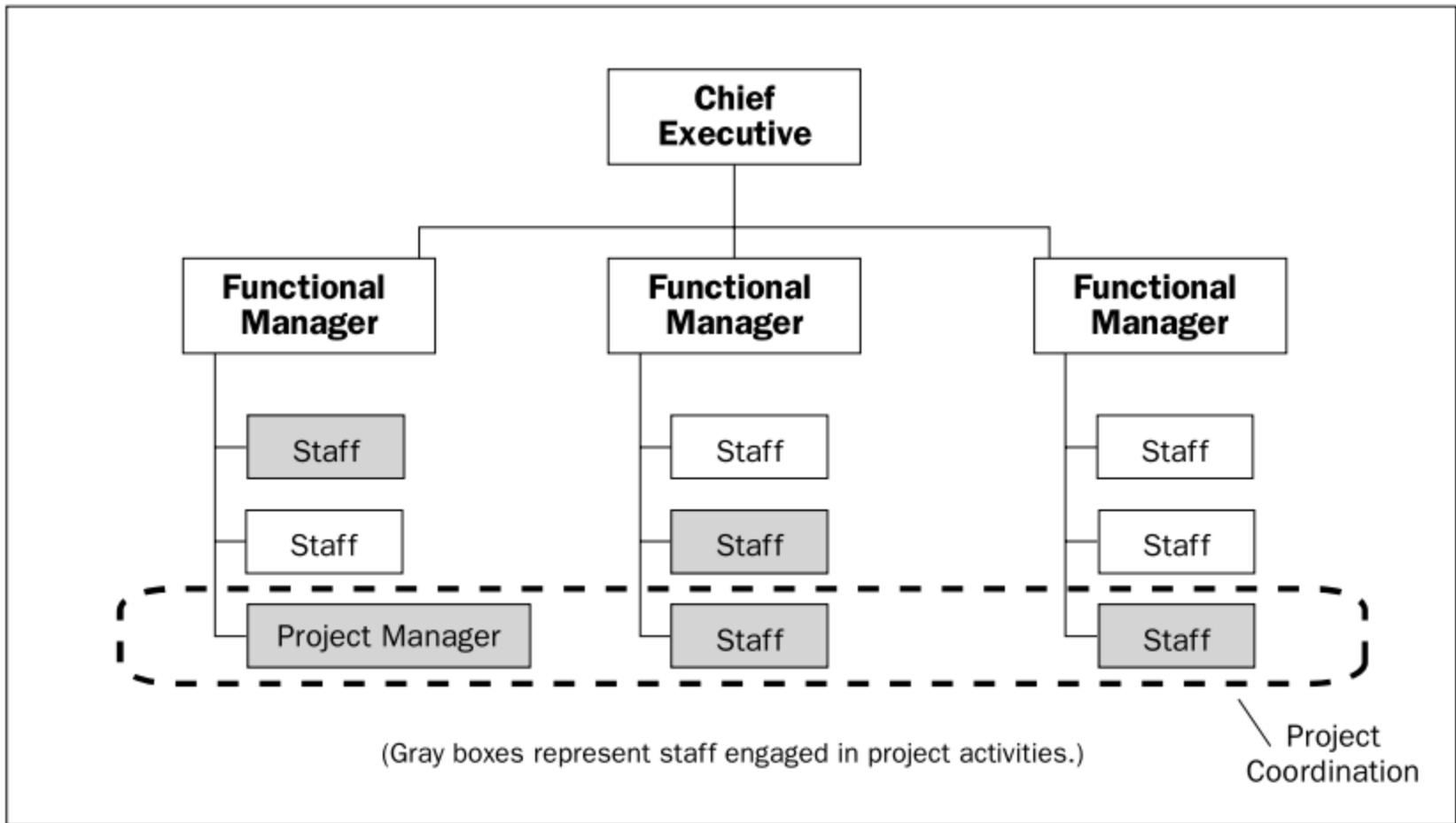


# Functional Organization



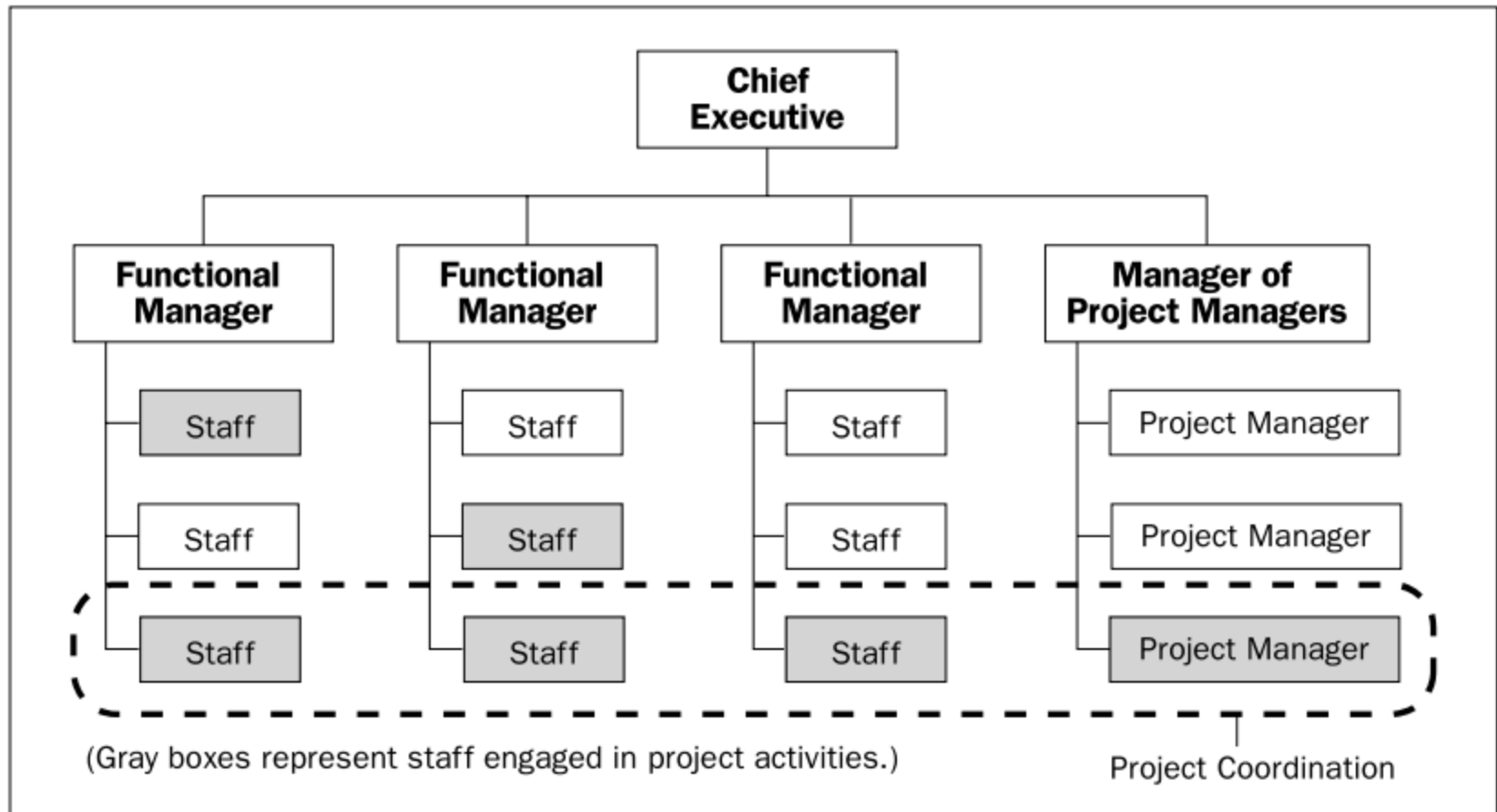
**Functional Organization**

# Balanced Matrix Organization

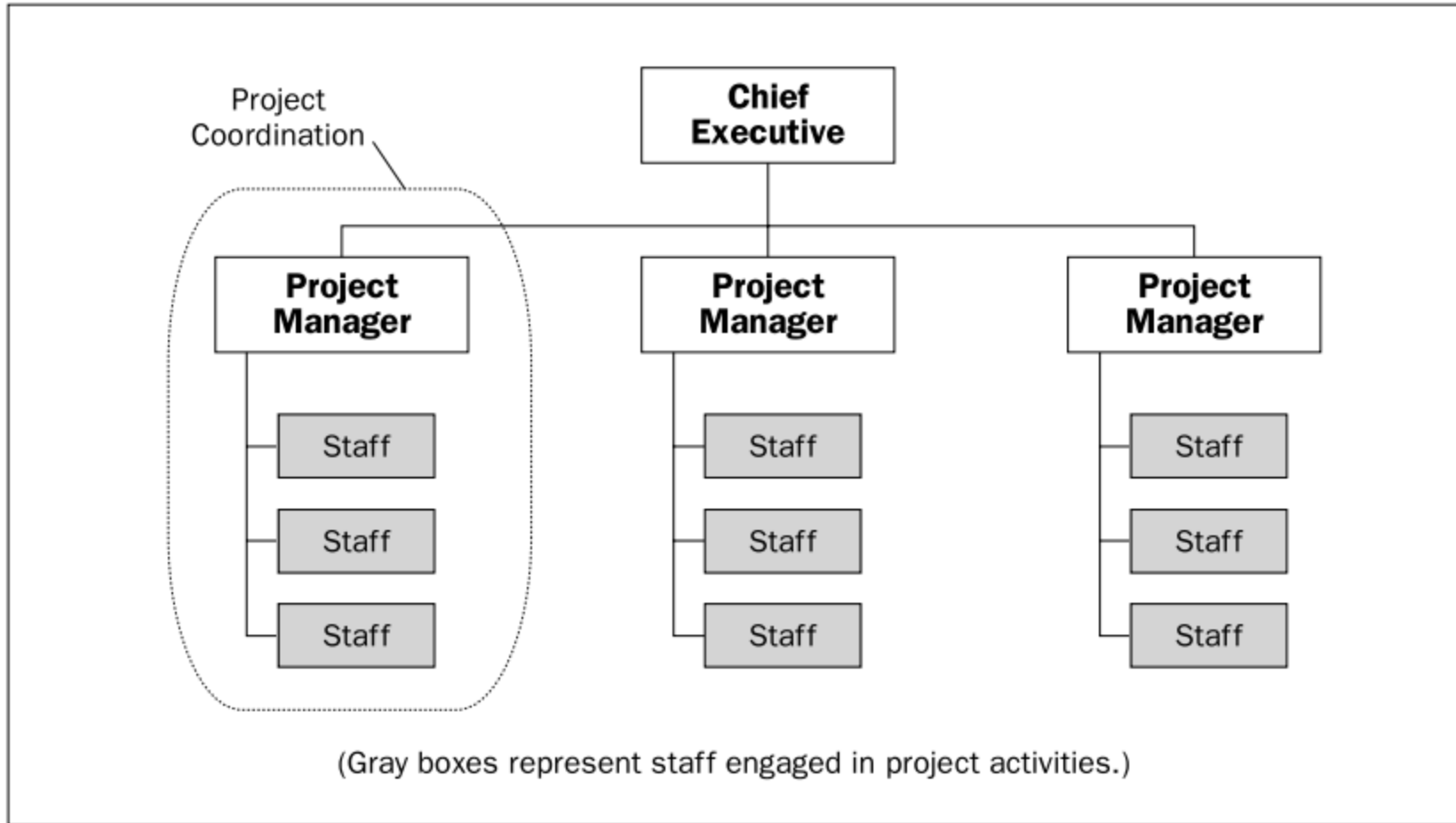


**Balanced Matrix Organization**

# Strong matrix Organization

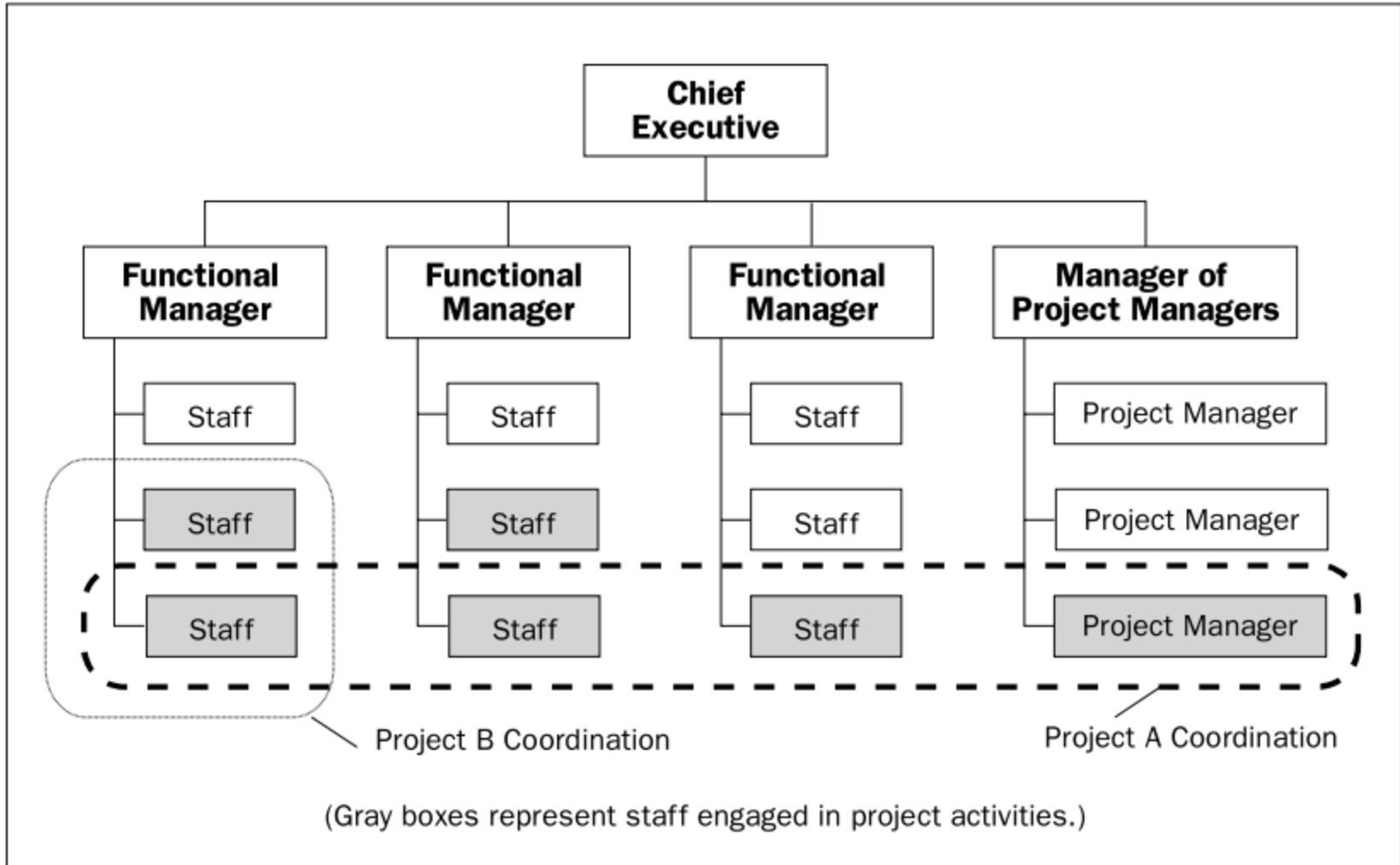


# Projectized Organization



**Projectized Organization**

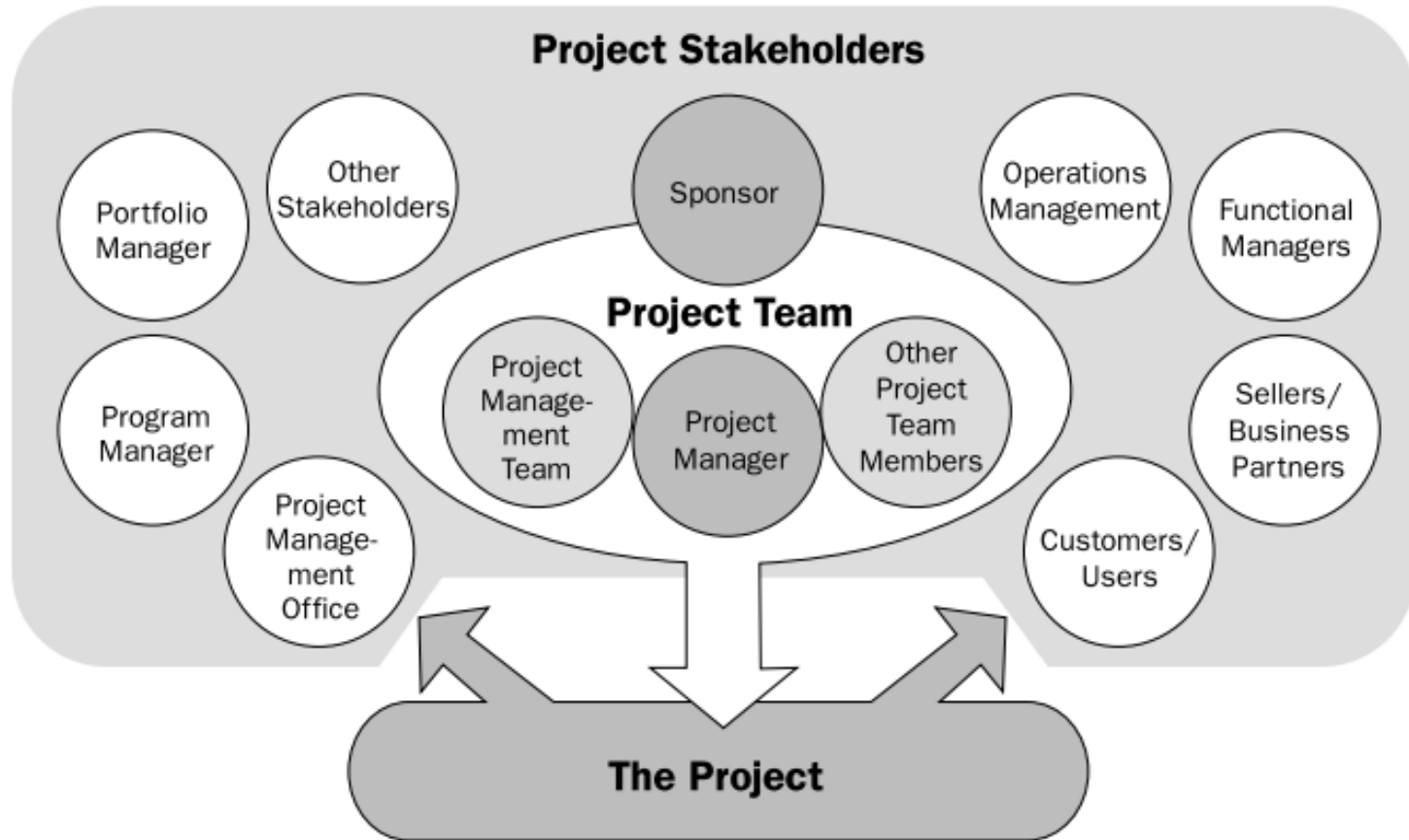
# Composite Organization



**Composite Organization**

# Relationships between Stakeholders and the Project

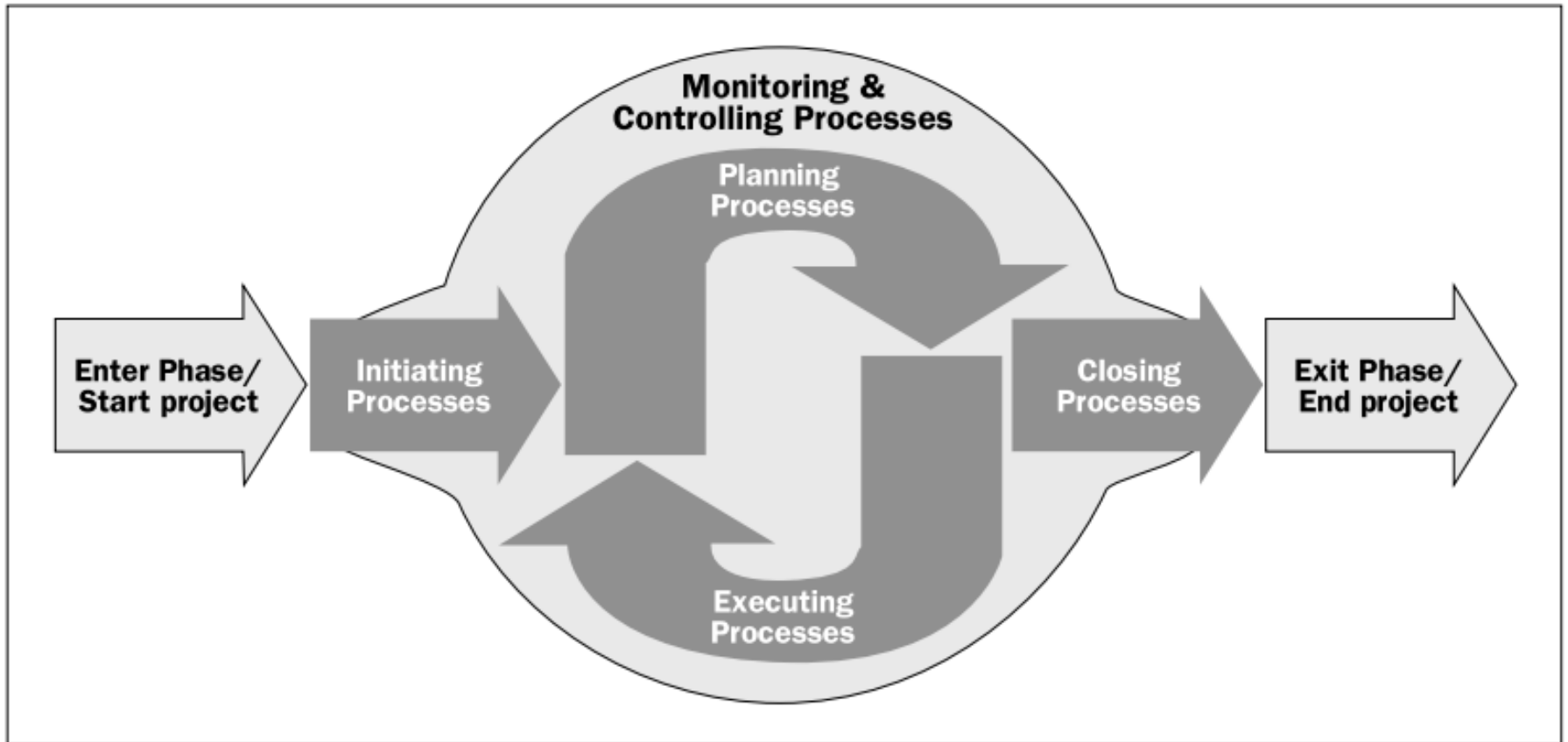
## Project Life Cycle and Organization



# Project management process

- ✓ Initiating
- ✓ Planning
- ✓ Executing
- ✓ Monitoring & Controlling
- ✓ Closing

# Initiating



**Project Management Process Groups**