PMP® V5 RDS

Introduction

V1.1

Class Logistics

- 12 lessons
- 2nd lesson includes the PMP exam application guidance
- 12th lesson is the monthly PMP Exam review

What is the PMP Exam like?

- PMP exam is not just a test of the information of the PMBOK® Guide
- You cannot only rely on real-world experience
- Training aligned with the PMBOK® Guide is required

PMP Certification Overview

- Exam
  - Close book exam
  - Only at HKEAA (San Po Kong) exam centre
  - 200 multiple-choice questions in 4 hours
  - 4 choices per question
  - 175 scored + 25 un-scored questions
  - Passing Mark: undisclosed
- More certification details is covered in 2nd and 12th lessons

About PMP RDS Syllabus

- Minor changes
- Why?
  - PMP certification is ISO 17024 certified, PMI needs to regular review PMP syllabus.
- Only eight new tasks are added.
- The exam on new syllabus is delivered on 2 November 2015.

PMP Domains

- Performance Domains
  - Project Initiating - 13%
  - Project Planning - 24%
  - Project Executing - 31%
  - Project Monitoring and Controlling - 25%
  - Project Closing - 7%
- Cross-cutting knowledge
  - General management skills across all domains, not separately tested

Introduction

- Project Management Institute (PMI®) was founded in 1969.
- “A Guide to the Project Management Body of Knowledge” (PMBOK® Guide) is released and updated around every 4 years, 1996, 2000, 2004, 2008, 2013.
- PMBOK is one of the two most popular project management frameworks.

PMBOK

- Recognition: Worldwide
- Popularity: North America, Canada, Asia
- Featuring: A best practice guidance that can be tailored and modified
- Architecture:
  - 5 process groups
  - 10 knowledge areas
  - 47 processes
  - Inputs / Tools and Techniques / Outputs for each processes
- Defined responsibility: mainly for project manager

PRINCE2

- Recognition: Worldwide
- Popularity: UK, Western Europe, Australia, UN
- Featuring: A methodology that defines step-by-step approach on managing projects
- Architecture:
  - 7 principles
  - 7 processes
  - 7 themes
  - Official templates, structured project management team
- Defined responsibility: for entire project management team

Which framework?

- Depends on
  - Your company and your customer's background
- A multinational corporate may use both PMP and PRINCE2
- PRINCE2 certification scheme:
  - Foundation
  - Practitioner

PMP Study Guidance

- Attend PMP lessons
- Study our notes (refer to PMBOK or Rita's book if necessary)
- Review and agree inputs, outputs, tools and techniques of different processes
- Do exercise!
- Important tips: take your exam within one month after you've completed PMP lessons

Important Notes

- PMP is the training of the PMI's perspective of project management
- PMI's view needs to be tailored when applying to the real life and in Hong Kong
- The framework is for helping instead of restricting
- Tips:
  - Study the PMI's view as doctrines for the exam
  - Justify and apply

PMI's View

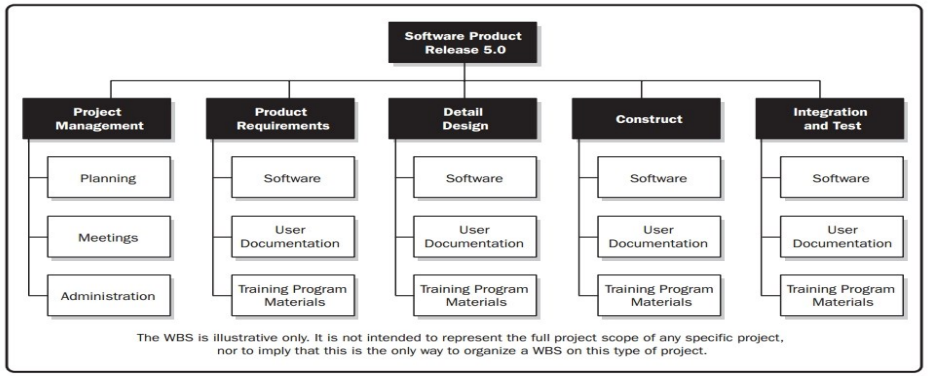
- PMI's view is the PMI's (ideal) practice that how projects should be managed.
- Why? PMI is a professional body which promotes the PM profession.
- PMI's view is originated from the PMI's Code of Ethics.
- Most important PMI's view:
  - The project manager has authority and power. He / she can say "No" and work to control the project for the benefit of the customer.
  - The project manager does not need to have technical knowledge.

PMI's View

- The project manager should try to achieve the project objectives if possible with (alternative analysis):
  - Shorter duration, less cost, better quality, and fewer resources
- PM puts the best interests of the project first
- The exam tests from the perspective of a large project (i.e. on all 47 processes).
- Project managers have all the power and perform all the activities as described in PMBOK®.
- The project manager is assigned during initiating.

PMI's View

- Organizations have historical information for all previous projects that include what the work packages were, how much each work package cost, and what risks were uncovered (part of organizational process assets, OPA).
- The project manager works within the existing systems and culture of a company (enterprise environmental factors, EEF).
- A work breakdown structure (WBS) is used in every projects.



PMI's View

- Stakeholders are involved throughout the project. Their needs are taken into account while planning.
- PMI does not approve of gold plating (adding extra functionality without customer's consent).
- Most projects are managed in a matrix environment.
- Organizations have a project management office (PMO) and project management policies.
- The project manager always knows why his project was selected by management (project objectives).

PMI's View

- Project managers plan the project with input from the team and stakeholders, not just on their own.
- Stakeholders are assigned risk identification and risk management duties.
- Project cost and schedule cannot be finalized without completing risk management planning.
- The project manager plans when and how to measure performance against the performance measurement baseline (PMB), as documented in the project management plan.

PMI's View

- Projects are re-estimated throughout the life of the project to make sure the end date or cost objectives will be met.
- Project delay is PM's responsibility. PM must be made up by adjusting future work, rather than asking for more time.
- The project manager lets others know they cannot get something for nothing (TRADE-OFF).

PMI's View

- A change in scope MUST be evaluated for its impacts to time, cost, quality, risk, and resources.
- Risks are a major topic at every team meeting.
- Team meetings do not focus on status (that can be collected by other means).
- The project manager should understand contract language.

Introduction to Project Management

What is a project?

- A project is a temporary endeavor undertaken to create a unique product, service, or result.
  - Project has a definite beginning and end.
  - The end is reached when the project's objectives have been achieved or
  - when the project is terminated because its objectives will not or cannot be met, or
  - when the need for the project no longer exists. A project may also be terminated if the client (customer, sponsor, or champion) wishes to terminate the project.

Related Concept

- Progressively elaborated: the characteristics of the product/service are determined incrementally and continually refined and worked out in detail as the project progresses
- Operational work
  - On-going and repetitive
  - Continuous without an end day
  - Often repeat the same processes and produce the same results

Why Projects?

- Solving existing problems
- Seizing new opportunities
- Fulfilling some requirements e.g. new regulations

What is Project Management?

- Project management is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements.
  - 47 project management processes
  - Five process groups
    - Initiating
    - Planning
    - Executing
    - Monitoring and Controlling
    - Closing

What is Project Management?

- Identifying requirements
- Addressing the various needs, concerns, and expectations of the stakeholders
- Setting up, maintaining, and carrying out communications
- Managing stakeholders towards meeting project requirements and creating project deliverables
- Balancing the competing project constraints, which include, but are not limited to
  - Scope, Quality, Schedule, Budget, Resources, and Risks.

Project, Program, Portfolio

- Project
  - Temporary endeavor to create a unique product/service/result
- Program
  - Groups of related projects managed using the same techniques in a coordinated fashion
  - Centrally managing and coordinating groups of related projects to meet the objectives of the program (benefits)

Project, Program, Portfolio

- Portfolio
  - Collections of programs and projects (may not be related) that meet a specific business goal or objective
  - Projects/programs in the portfolio meet the strategic objectives
  - Portfolio management encompasses managing the collections of programs and projects in the portfolio

For Reference Only

Certification Scheme

	PMI	AXELOS
Portfolio	PfMP, Portfolio Management Professional	MoP (Management of Portfolio)
Program	PgMP, Program Management Professional	MSP (Managing Successful Programmes)
Project	PMP, Project Management Professional	PRINCE2 (PRojects IN Controlled Environment)

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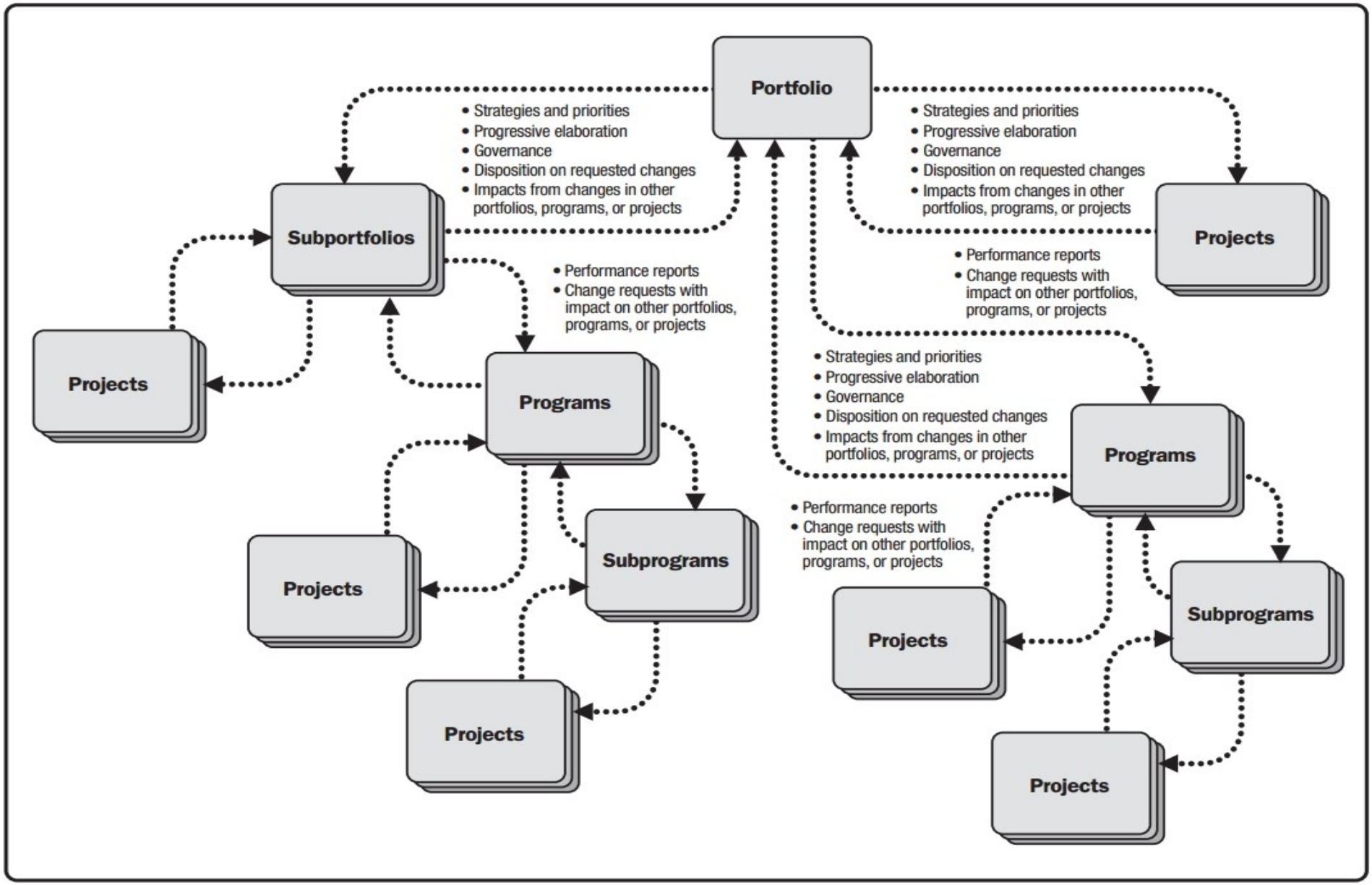

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Organizational Project Management			
	Projects	**Programs**	**Portfolios**
Scope	Projects have defined objectives. Scope is progressively elaborated throughout the project life cycle.	Programs have a larger scope and provide more significant benefits.	Portfolios have an organizational scope that changes with the strategic objectives of the organization.
Change	Project managers expect change and implement processes to keep change managed and controlled.	Program managers expect change from both inside and outside the program and are prepared to manage it.	Portfolio managers continuously monitor changes in the broader internal and external environment.
Planning	Project managers progressively elaborate high-level information into detailed plans throughout the project life cycle.	Program managers develop the overall program plan and create high-level plans to guide detailed planning at the component level.	Portfolio managers create and maintain necessary processes and communication relative to the aggregate portfolio.
Management	Project managers manage the project team to meet the project objectives.	Program managers manage the program staff and the project managers; they provide vision and overall leadership.	Portfolio managers may manage or coordinate portfolio management staff, or program and project staff that may have reporting responsibilities into the aggregate portfolio.
Success	Success is measured by product and project quality, timeliness, budget compliance, and degree of customer satisfaction.	Success is measured by the degree to which the program satisfies the needs and benefits for which it was undertaken.	Success is measured in terms of the aggregate investment performance and benefit realization of the portfolio.
Monitoring	Project managers monitor and control the work of producing the products, services, or results that the project was undertaken to produce.	Program managers monitor the progress of program components to ensure the overall goals, schedules, budget, and benefits of the program will be met.	Portfolio managers monitor strategic changes and aggregate resource allocation, performance results, and risk of the portfolio.

Project Management Office (PMO)

- A management structure that standardizes the project-related governance processes and facilitates the sharing of resources, methodologies, tools, and techniques.
  - **Supportive** PMOs provide a consultative role to projects by supplying templates, best practices, training, access to information and lessons learned from other projects. It is as a project repository. Low control
  - **Controlling** PMOs provide support and require compliance through various means. Compliance may involve adopting project management frameworks or methodologies, using specific templates, forms and tools, or conformance to governance. Moderate control
  - **Directive** PMOs take control of the projects by directly managing the projects. High control

Project Management Office (PMO)

- Managing shared resources across all projects
- Identifying and developing project management methodology, best practices, and standards
- Coaching, mentoring, training, and oversight
- Developing and managing project policies, procedures, templates, and other shared documentation(organizational process assets)
- Coordinating communication across projects

- For reference only: AXELOS framework, P3O® (Portfolio, Programme and Project Offices)

The Project Manager

- Manage Projects
- May not have the technical skills
- Generalists with many skills
- PM's competencies:
  - Knowledge: about project management
  - Performance: is able to do or accomplish while applying his or her PM knowledge
  - Personal:
    - Attitudes
    - Core personality characteristics
    - Leadership

The Project Manager

- Interpersonal Skills
  - Leadership
  - Team Building
  - Motivation
  - Communication
  - Influencing
  - Decision making
  - Political and cultural awareness
  - Negotiation
  - Trust building
  - Conflict management
  - Coaching

Organizational Influences and Project Life Cycle

Organizational Cultures & Styles

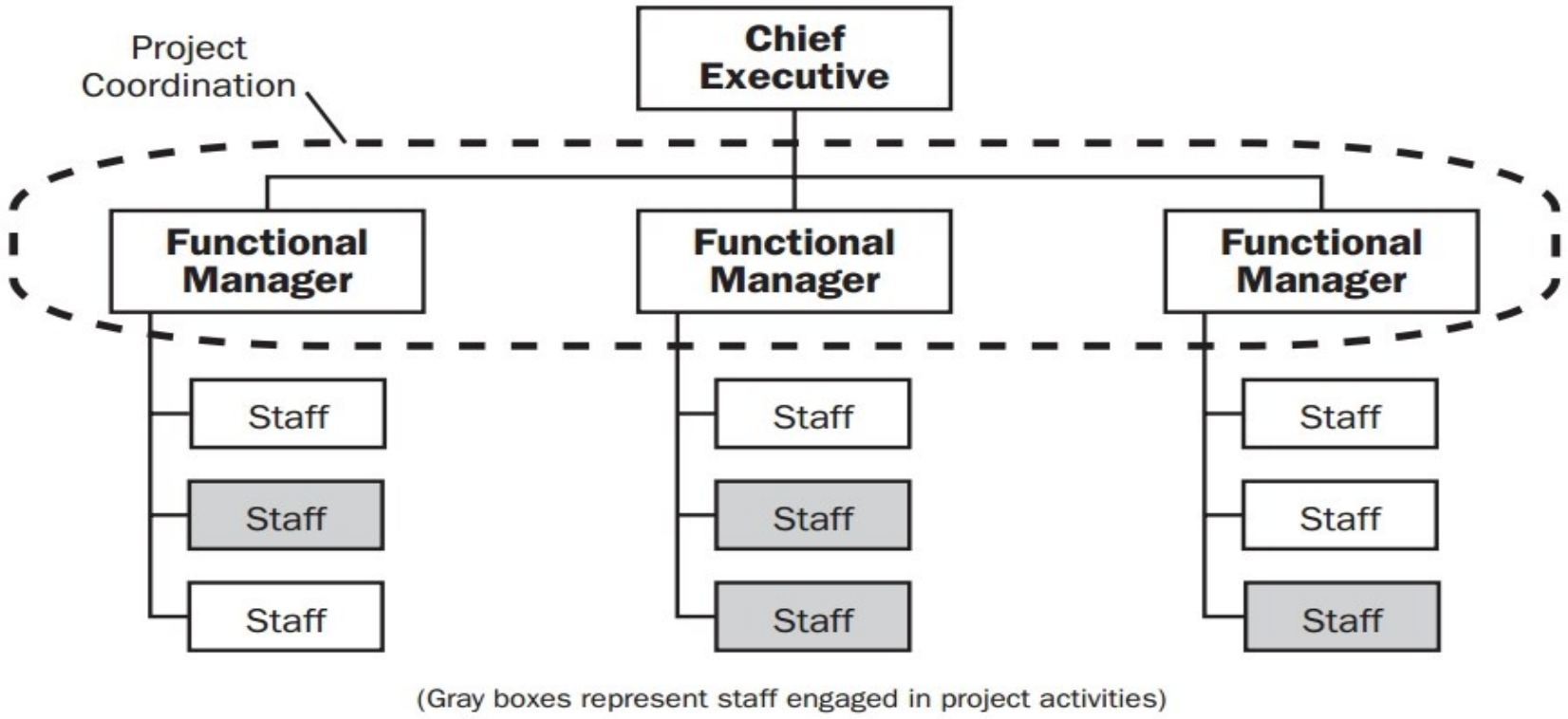
- These factors influence how a project is performed
  - Shared visions, mission, values, beliefs, and expectations
  - Regulations, policies, methods, and procedures
  - Motivation and reward systems
  - Risk tolerance
  - View of leadership, hierarchy, and authority relationships
  - Code of conduct, work ethic, and work hours
  - Operating environments

Organizational Structure

Organization Structure / Project Characteristics	Functional	Matrix			Projectized
		Weak Matrix	Balanced Matrix	Strong Matrix	
Project Manager's Authority	Little or None	Low	Low to Moderate	Moderate to High	High to Almost Total
Resource Availability	Little or None	Low	Low to Moderate	Moderate to High	High to Almost Total
Who manages 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

For each type of organization, Identify who has power - project manager or functional manager?

Functional

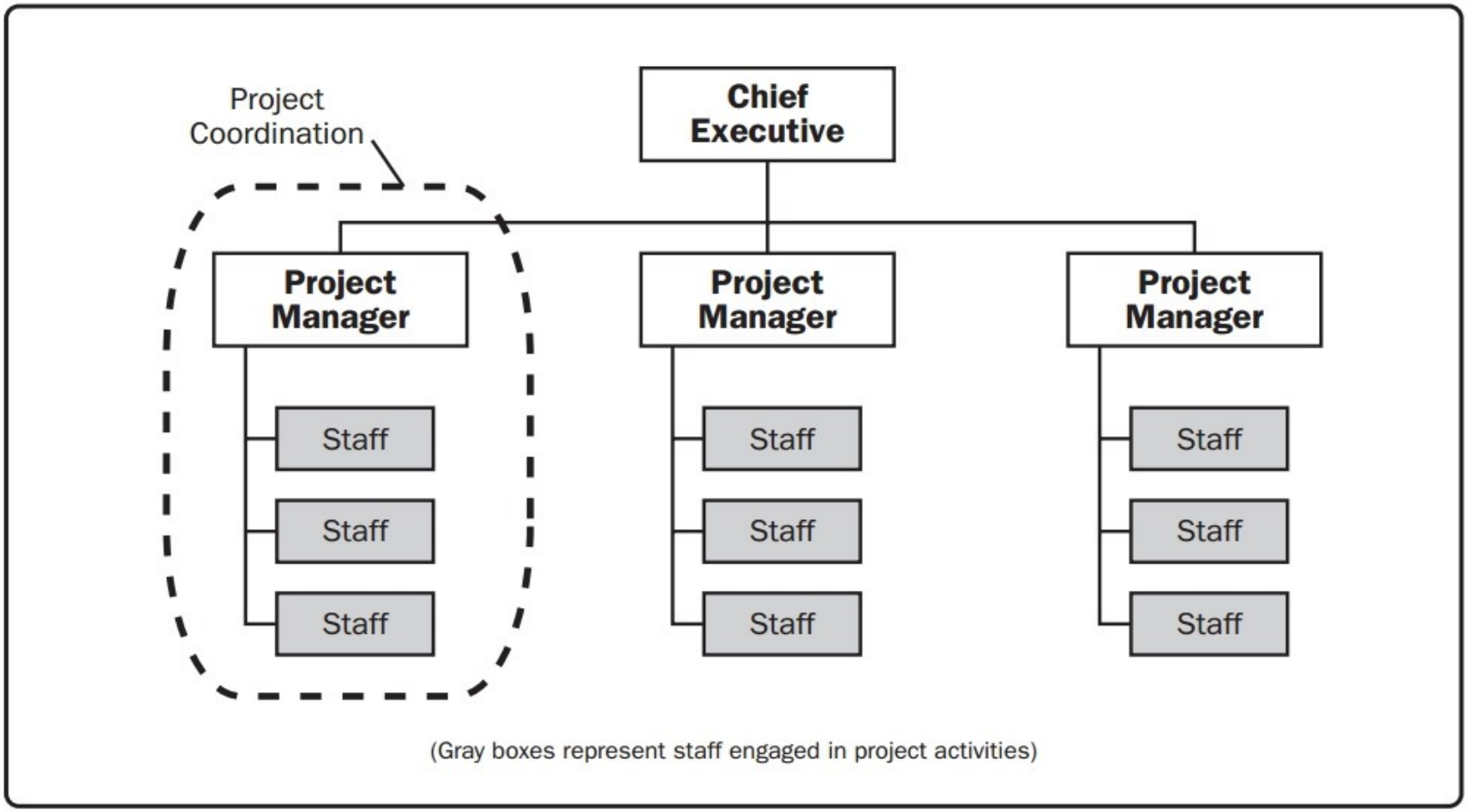


Hierarchical, each employee has a clear supervisor.
Staff grouped functionally.
PM has to gain formal approval from functional managers for resources.

Functional

- Advantages:
  - Easier management of specialists
  - Similar resources are centralized
  - Clear career paths in areas
- Disadvantages:
  - People are more emphasis on their functional specialty
  - The project manager has little or no authority

Projectized

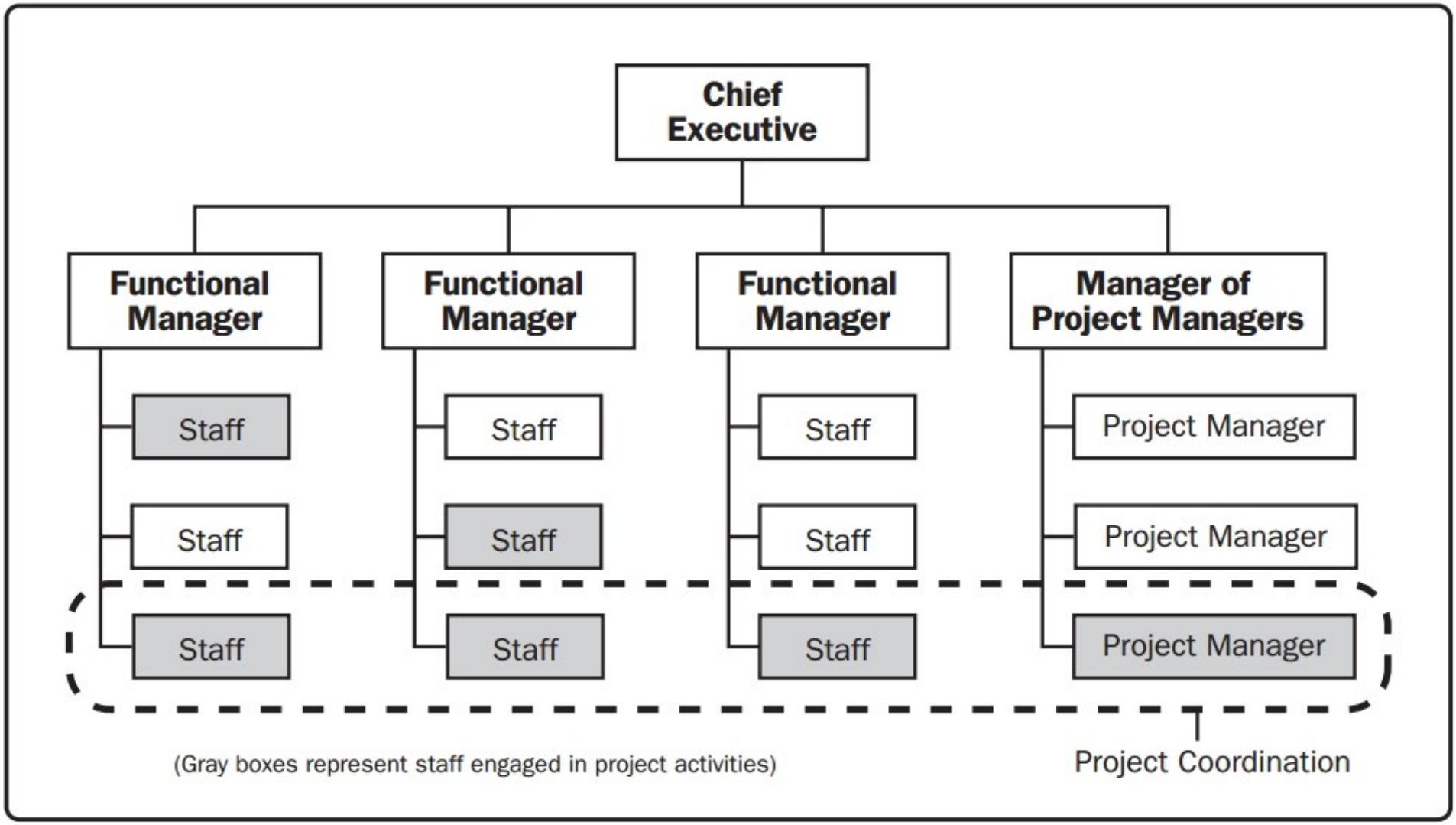


Organization is organized by projects.
Team members have no home.

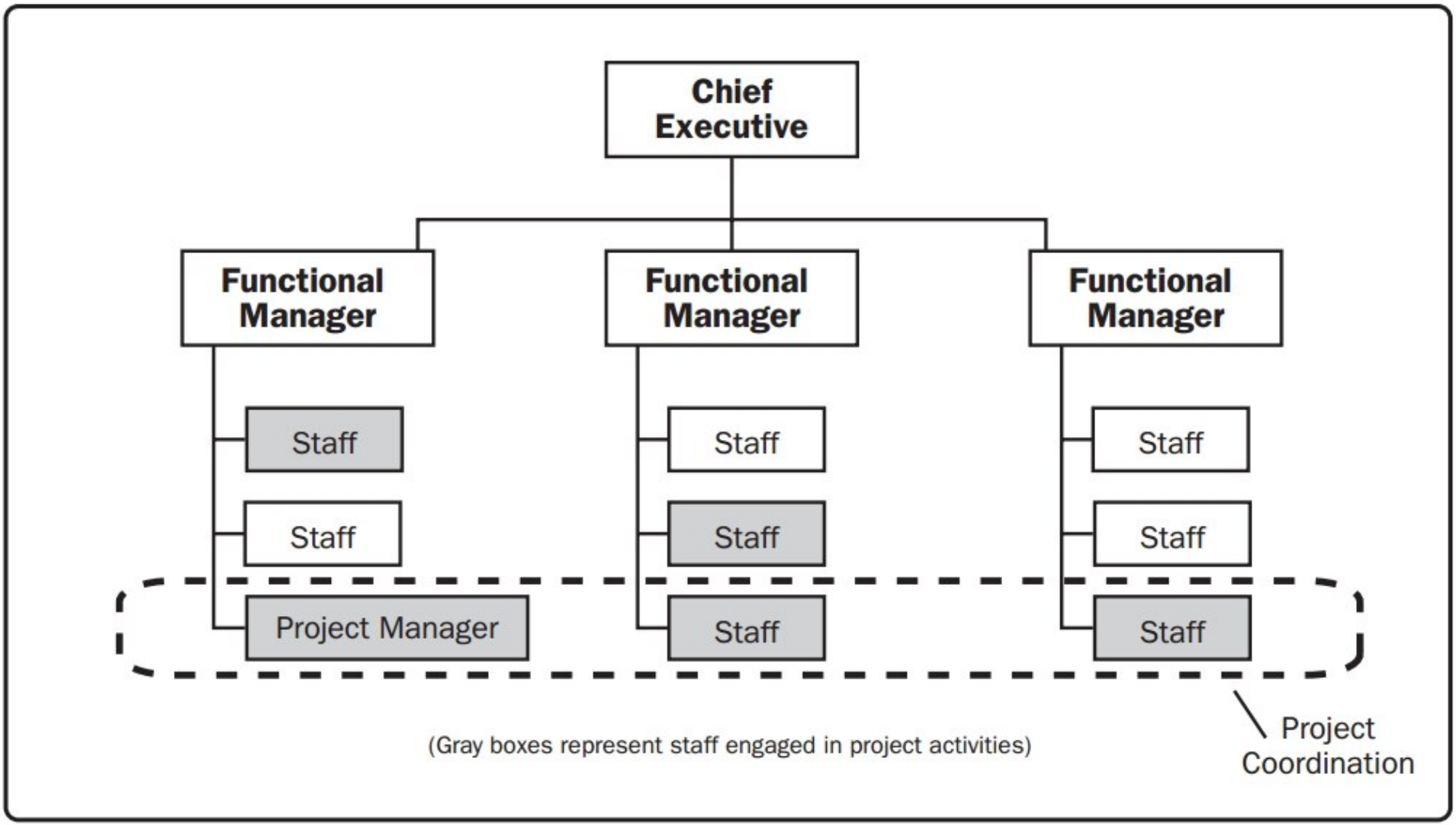
Projectized

- Advantages:
  - Efficient project organization
  - Loyalty to the project
  - More effective communications than functional
- Disadvantages:
  - No “home” when project is completed
  - Duplication of facilities and job functions
  - Less efficient use of resources

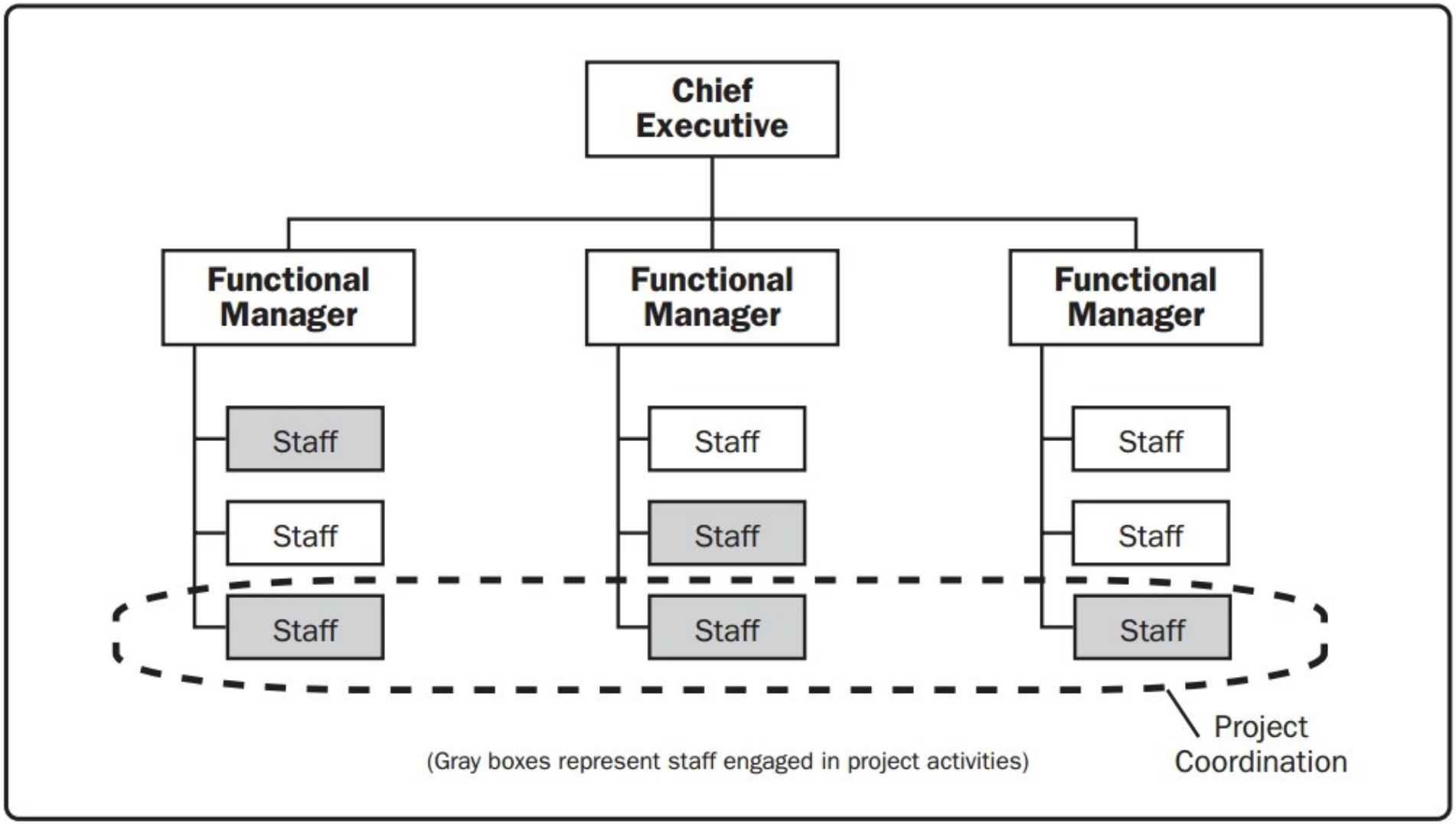
Strong Matrix Organization



Balanced Matrix Organization



Weak Matrix Organization



Matrix

- Employees have two bosses - the project manager and the functional manager
- Strong matrix: power rests with project manager
- Balanced Matrix: recognizes the need for a project manager, it does not provide the project manager with the full authority over the project and project funding.
  - Full time PM under functional manager

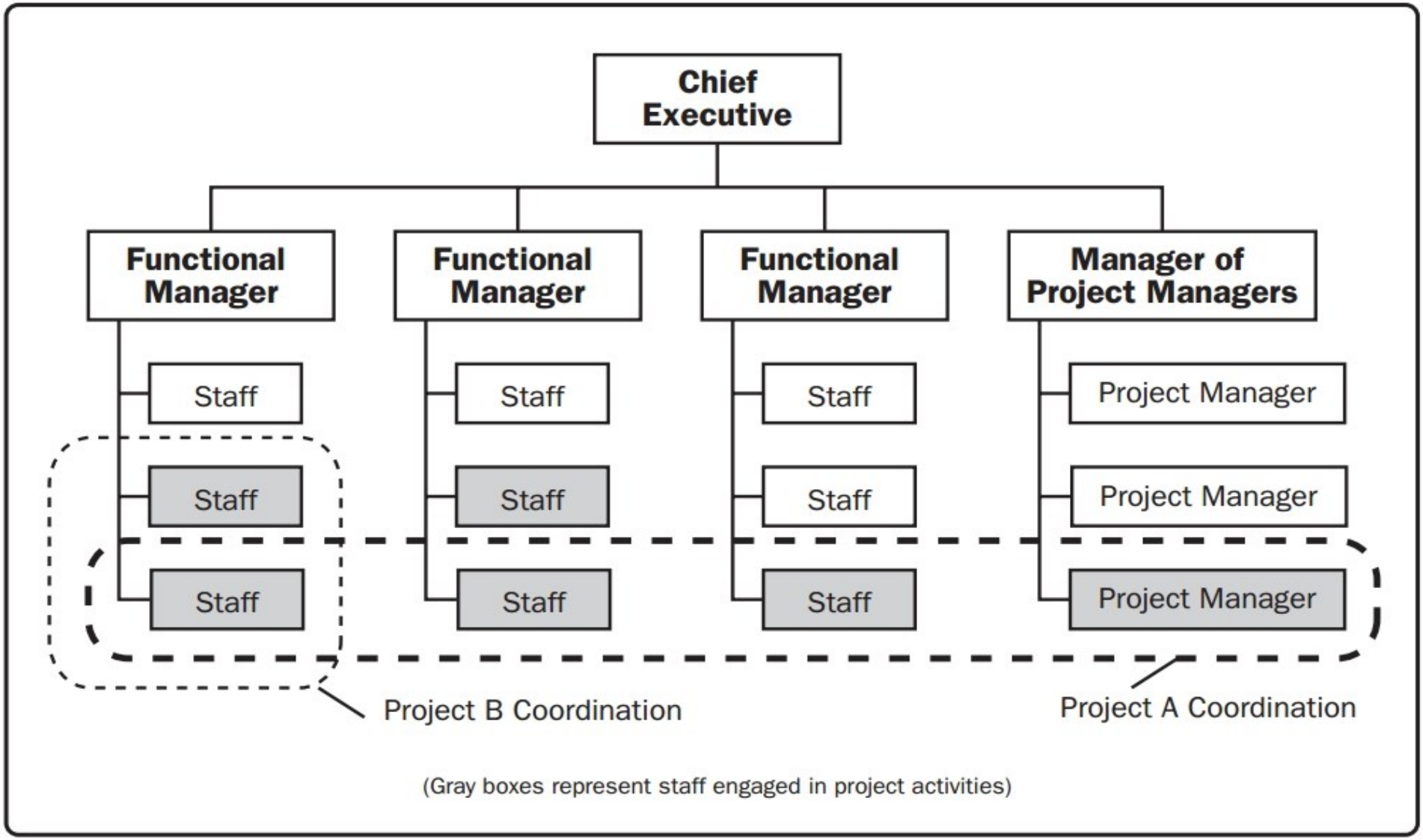
Matrix

- Weak matrix: power rests with functional manager
  - In this environment, the Project Manager is like
    - Project Expediter: PM acts as a staff assistant and communications coordinator. PM cannot make or enforce decisions
    - Project Coordinator: Can make some decisions, some authority, and reports to a higher-level manager

Matrix

- Advantages:
  - More support from functional areas
  - Better coordination
- Disadvantages:
  - Extra administration is required
  - More complex to monitor and control
  - Need extensive policies and procedures

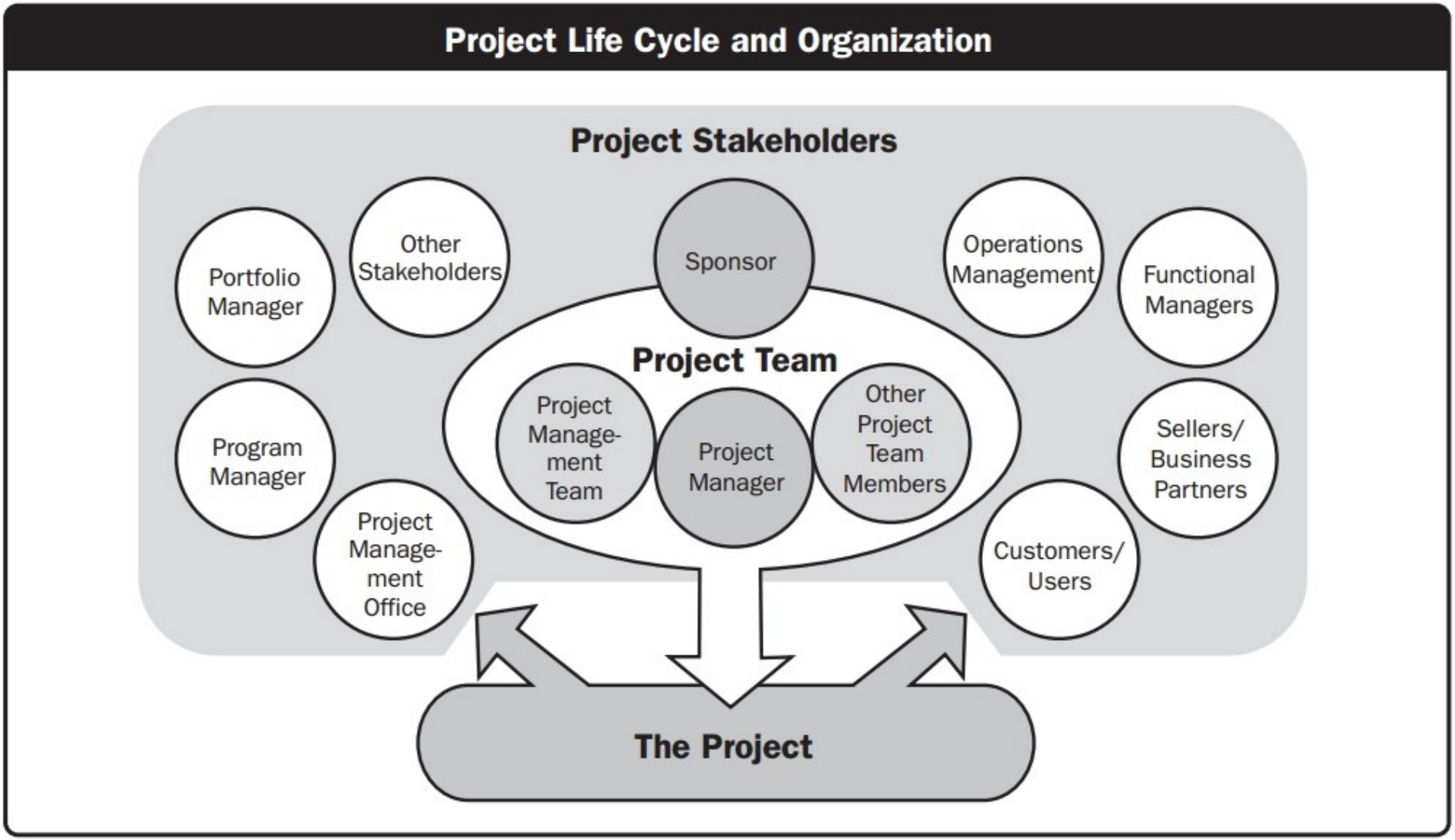
Composite Organization



Composite

- When an organization involve all these structures at various levels
  - E.g. a functional organization creates a special project team for a critical project
  - May have full time staff from different departments, develop its own set of procedures, and may operate outside of the reporting structure
  - Full time PM under Project Manager team

Stakeholders



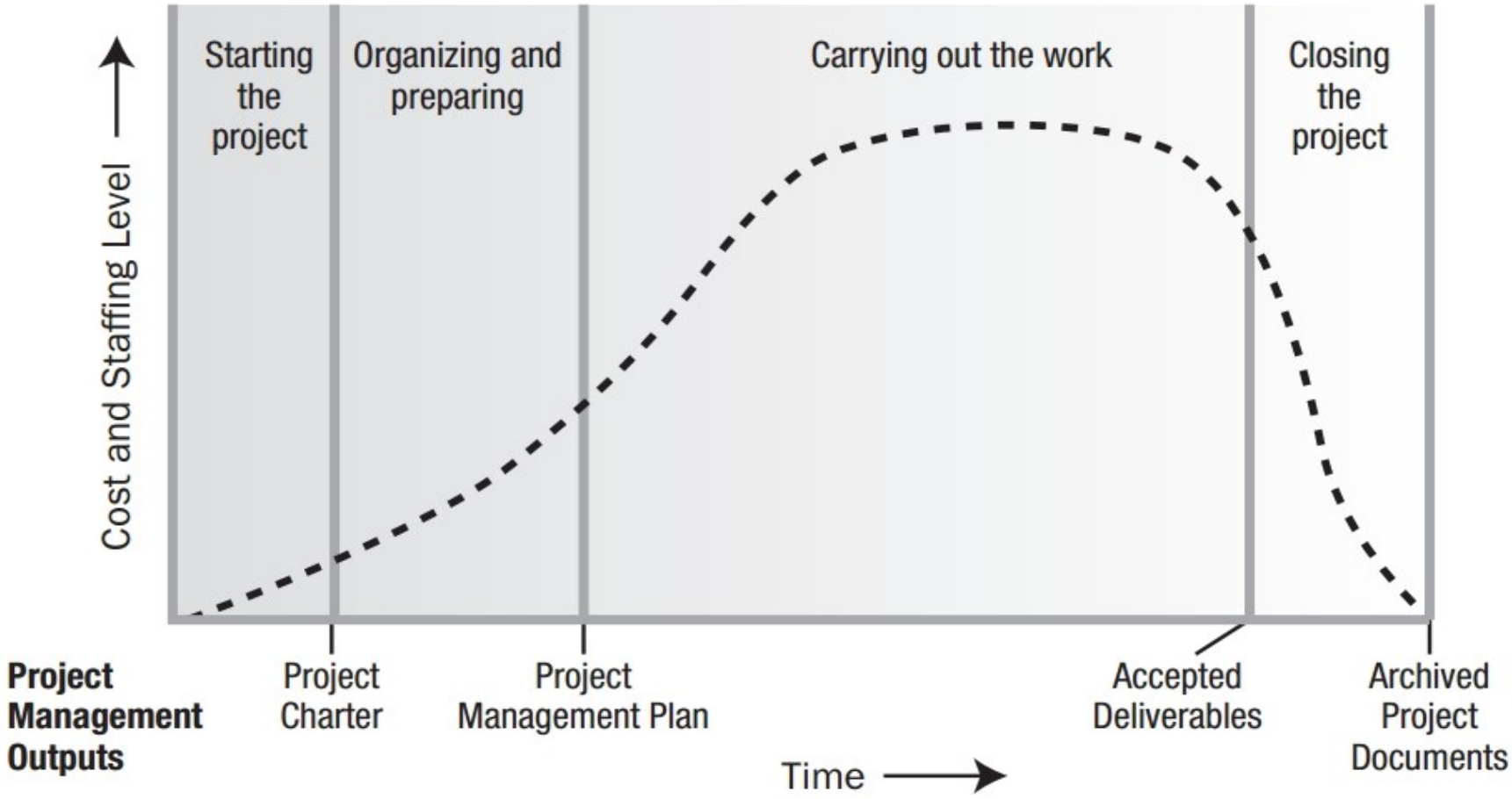
Stakeholders

- Anyone involved, or whose interests are affected (positively or negatively) by the project
- Able to influence the project, deliverables, team members
- Can be internal or external
- The PM must identify them to determine project requirements and expectations, and manage their influences to ensure a successful project

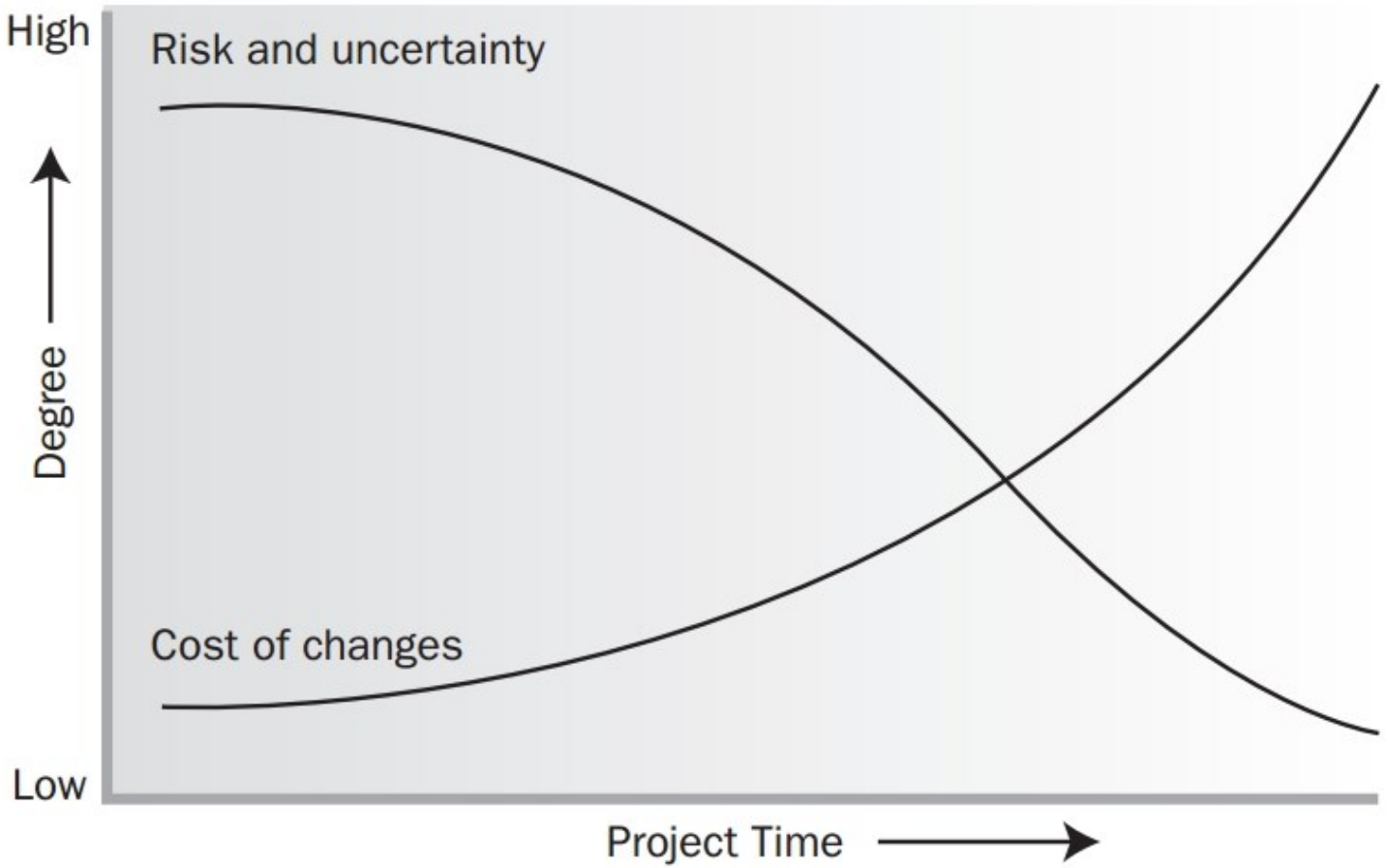
Project Lifecycle

- Sequential and sometimes overlapping project phases
- Basic framework for managing the project
- A high level framework for comparing different projects

Cost and Staffing Levels across Project Lifecycle



Impact of Variable

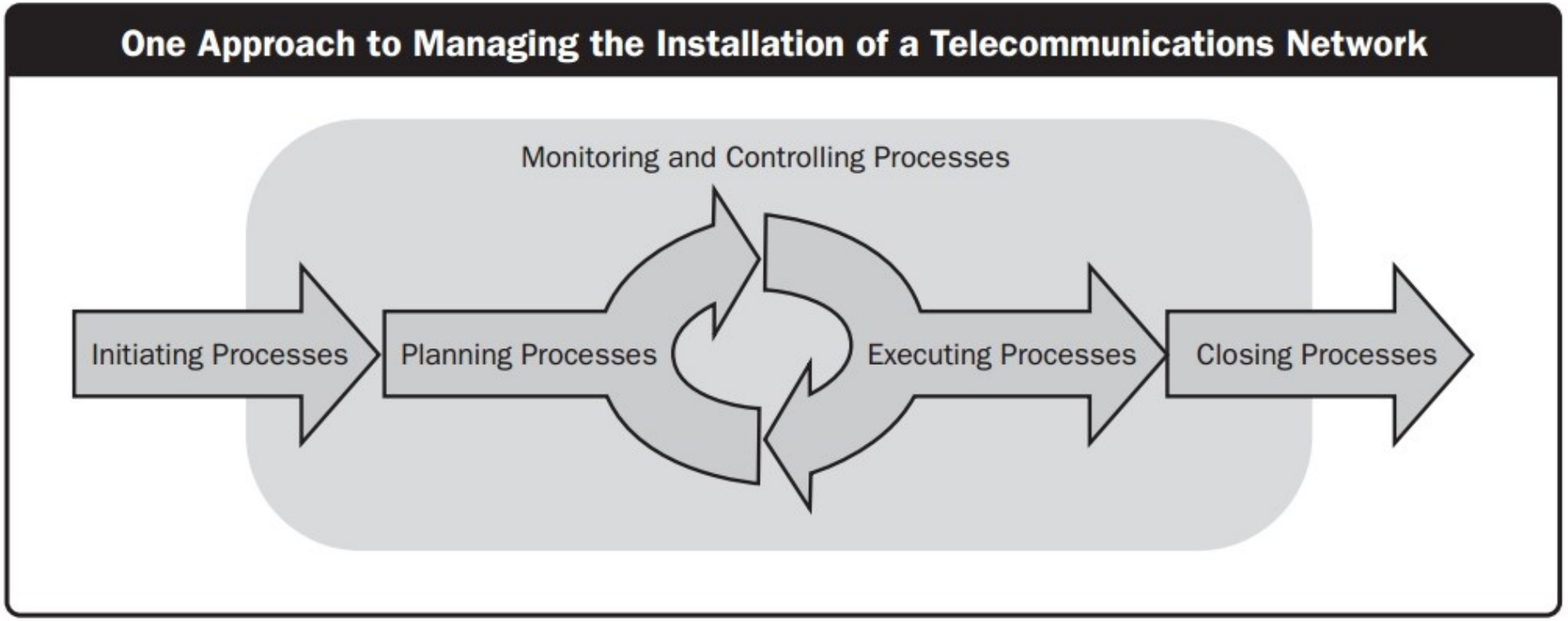


Project Phase

- A project consists of Phases:
  - Sequential; different phases for different industries
- Each phase have clear objectives and/or milestones. Stakeholder sign off is required at the end of a phase.
- Each phase can be a subproject, within which all project management processes, i.e. all process groups, may occur.

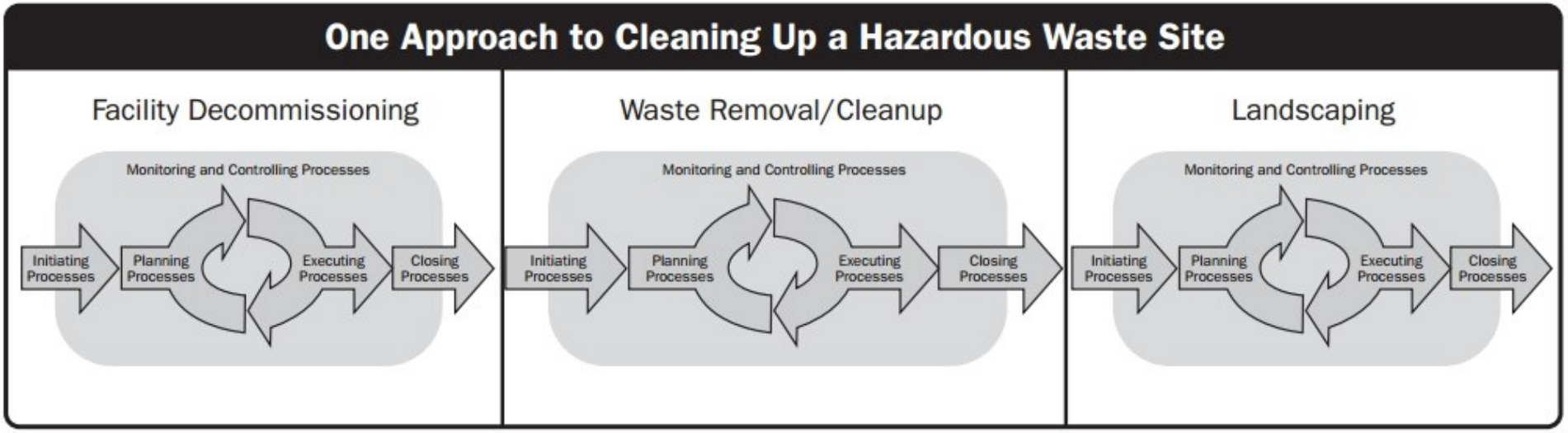
Project Phase

- A project phase is a collection of logically related project activities that culminates in the completion of one or more deliverables.
- Single-Phase project



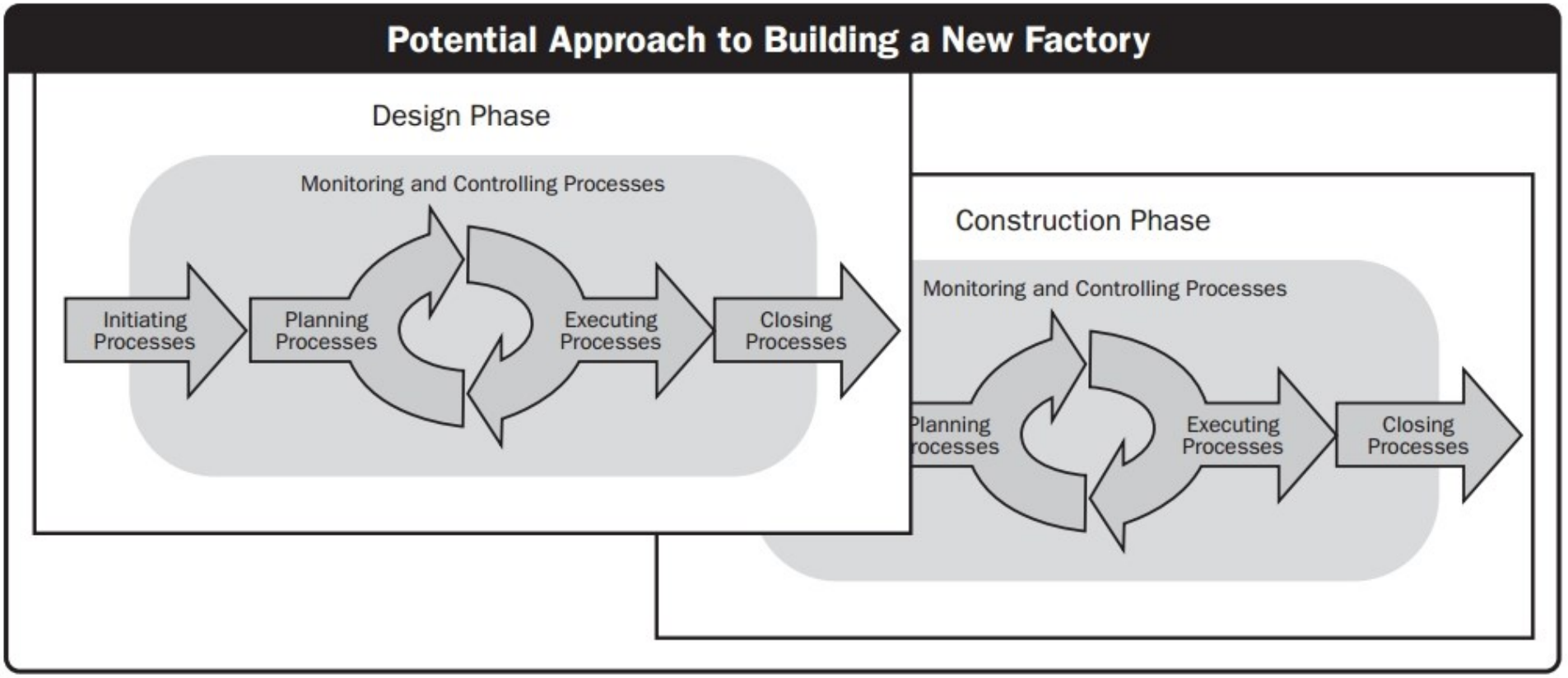
Phase-to-Phase Relationship

- Sequential



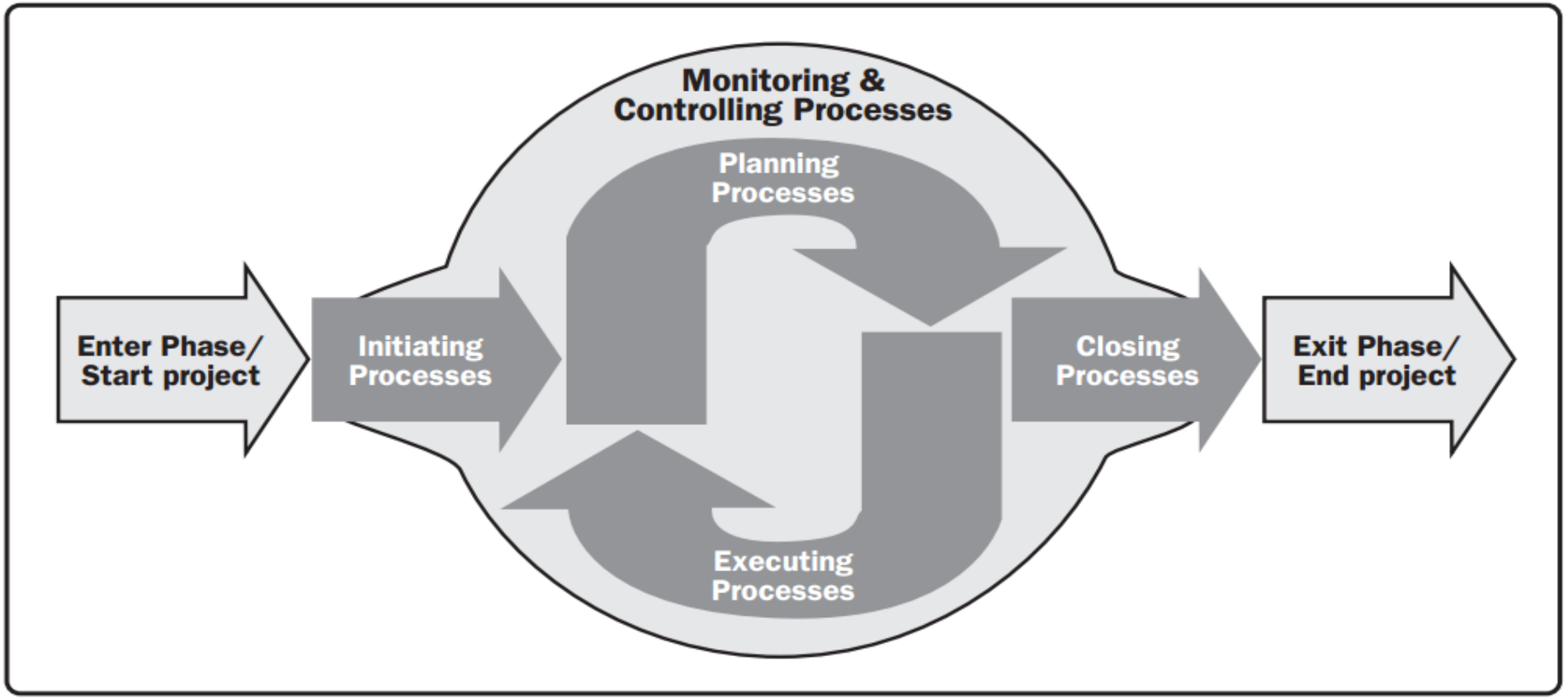
Phase-to-Phase Relationship

- Overlapping



Process Groups

- Not sequential
- Same for all (PMBOK) projects



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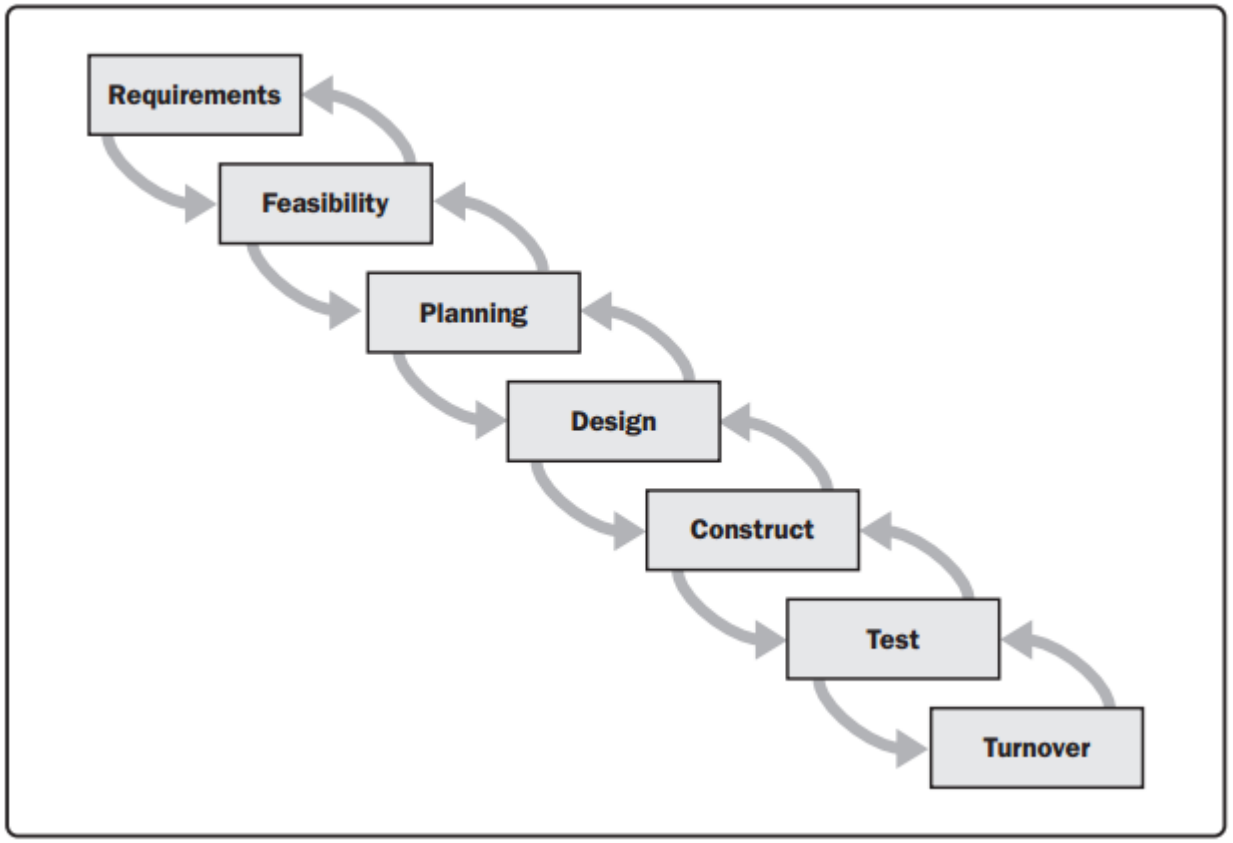
Predictive Life Cycles

- Also known as **fully plan-driven** are ones in which the project scope, and the time and cost required to deliver that scope, are determined as early in the project life cycle as practically possible



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Iterative & Incremental Lifecycles

- Also called iterations; intentionally repeat one or more project activities as the project team's understanding of the product increases
- Iterations develop the product through a series of repeated cycles, while increments successively add to the functionality of the product

For Reference Only

Adaptive Lifecycles

- Also known as change-driven or agile methods
- Intended to respond to high levels of change and ongoing stakeholder involvement
- Also iterative and incremental, but iterations are very rapid (max. 4 weeks) and are fixed in time and cost
- Popular frameworks and certifications
  - DSDM, Scrum
  - APMG AgilePM® (DSDM), PMI-ACP, Scrum Master

Remarks: OGCIO has done a feasibility study on Agile and DSDM is recommended.

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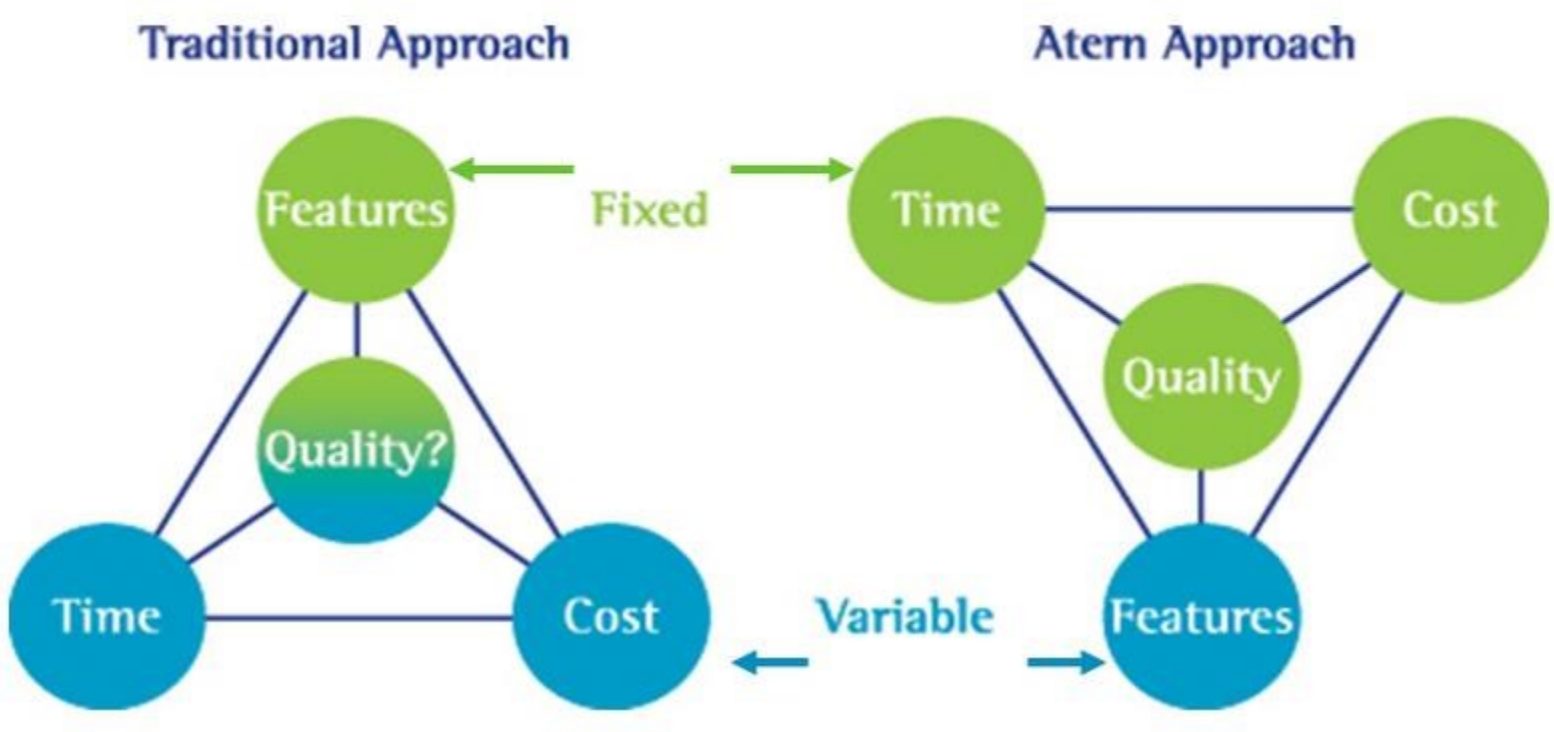
Traditional vs Agile Approach

Project Constraints – What is important?



Project Constraints

- Time, cost, risk, scope, quality, resource, other factors that limit project options, e.g. client satisfaction.
  - The concept of “trade-off”
- Priority of constraints are set by management.

Lessons Learned

- Causes of issues the project has faced, and the reasons behind these, includes
  - Technical aspects of the project
  - Project management techniques
  - Management skills of the project manager
- Can be created any time during the project, shared with the rest of the organization immediately, and finalized during project close
- Added to company database as input to other projects for continuous improvement

Exercise

- A project may end for which of the following reasons EXCEPT:
  A. It is determined that the objectives cannot be met.
  B. The project objectives have been met.
  C. The need for the project no longer exists.
  D. The project manager has left the company.

Answer: D

- A frequent complaint about matrix organizations is that communications are:

A. Hard to automate.
B. Closed and inaccurate.
C. Complex.
D. Misleading.

Answer: C

- A difference between the requirements is BEST resolved in favor of the:

A. Sponsor.
B. Project manager’s boss.
C. Stakeholder.
D. Customer.

Answer: D

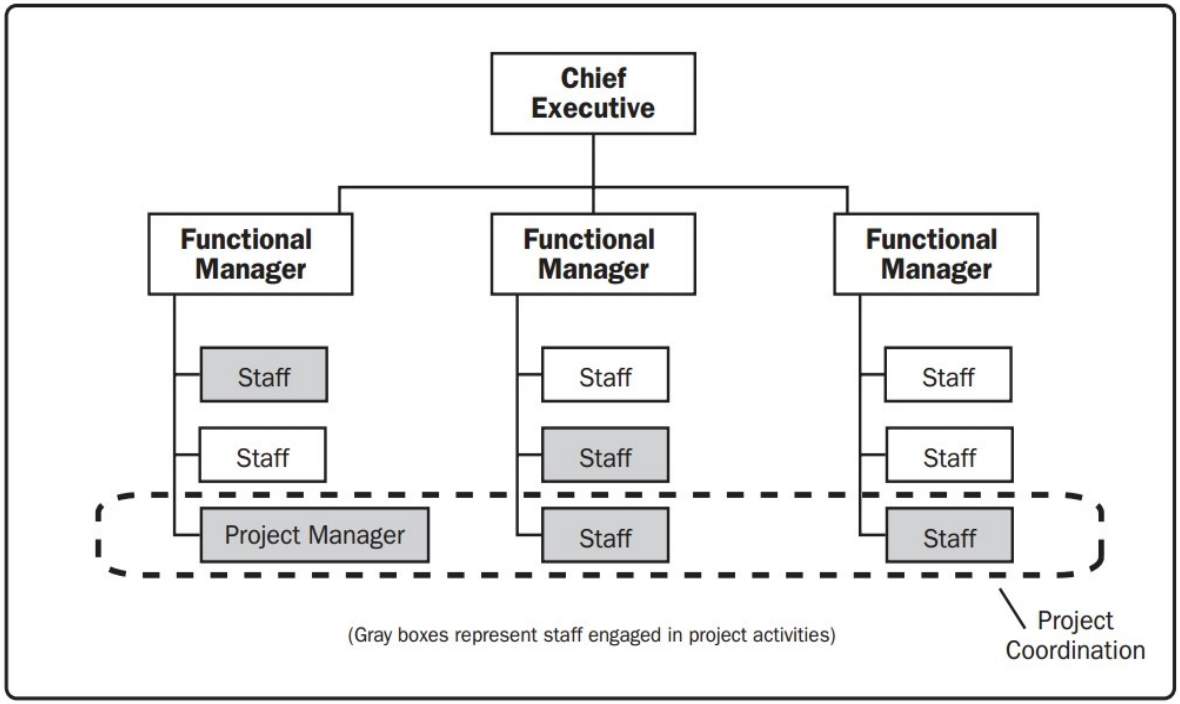
- An advisor to a new project manager tells the project manager to create lessons learned at the end of a project. What does a lessons learned include?

A. Variances and their causes
B. Reports from the customer
C. Reports from management
D. All the plans used in the project

Answer: A

- What is this organisation structure?
  - A. Functional
  - B. Strong matrix
  - C. Weak matrix
  - D. Balanced matrix

Answer: D



- A new project manager is having difficulty creating a WBS with the team. To alleviate this situation, the project manager should ask for help from:

A. The sponsor.
B. Other project managers.
C. The project management office.
D. The team.

Answer: C

- Which of the following BEST describes the role of the project management office (PMO)?

A. They supply project managers for projects.
B. They are part of the change control board.
C. They provide the project management procedures.
D. Their role can vary from an advisory capacity to full authority over projects.

Answer: D

- To obtain support for the project throughout the performing organization, it's BEST if the project manager:

A. Ensures there is a communications management plan.
B. Correlates the need for the project to the organization's strategic plan.
C. Connects the project to the personal objectives of the sponsor.
D. Ensures that the management plan includes the management of team members.

Answer: B

- The project life cycle differs from the process group in that the project life cycle:
  A. Does not incorporate a methodology.
  B. Is different for each industry.
  C. Can spawn many projects.
  D. Describes project management activities.

  Answer: B

- The ongoing definition of a project as more information becomes available to the team is called:

A. Scope validation.
B. Strategic planning.
C. Progressive elaboration.
D. Quantitative elaboration.

Answer: C

- In a projectized organization, the project team:
  A. Reports to many bosses.
  B. Has no loyalty to the project.
  C. Reports to the functional manager.
  D. Will not always have a “home”.

Answer: D

- Which of the following describes stakeholders?

A. People who may have a positive or negative influence on project
B. End users
C. Sponsor and the team
D. The public

Answer: A

- What is a program?
  A. An initiative set up by management
  B. A means to gain benefits and control of related projects
  C. A group of unrelated projects managed in a coordinated way
  D. A government regulation

  Answer: B

- A market demand, a business need, and legal requirements are examples of:
  A. Reasons to hire a project manager.
  B. Reasons projects are initiated.
  C. Reasons people or businesses become stakeholders.
  D. Reasons to sponsor a project.

Answer: B

- The skills required for effective project management include knowledge of standards and regulations, understanding the project environment, and:

A. Application area knowledge.
B. Engineering knowledge.
C. Software knowledge.
D. Financial knowledge.

Answer: A

- Which type of organization is BEST for managing complex projects involving cross-disciplinary efforts?
  A. Projectized
  B. Functional
  C. Line
  D. Matrix

  Answer: D

The End