

Project Management

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Course Agenda

- Module 1 : Overview
- Module 2 : Project Management Framework
- Module 3 : Project Management Process
- Module 4 : Project Integration Management
- Module 5 : Project Scope Management
- Module 6 : Project Time Management
- Module 7 : Project Cost Management

Agenda (Cont)

- Module 8 : Project Quality Management
- Module 9 : Project HR Management
- Module 10 : Project Communications Management
- Module 11 : Project Risk Management
- Module 12 : Project Procurement Management
- Module 13 : Project Stakeholders Management

Learning Outcomes

- Develop a Project Charter document for any project
- Develop Project Management Plan document
- Understand and practice the process of project management groups
- Acquire 10 knowledge area and its application in delivering a projects;
- Evaluate a project to develop the scope of work, provide accurate cost estimates and to plan the various activities;
- Understand and use risk management analysis techniques that identify the factors that put a project at risk and to quantify the likely effect of risk on project timescales;
- Prepare a project document that they have undertaken as a learning tool
- Qualify PMP certification offered by PMI

Module-1

Project Management Framework

Key Concepts

- What is a project ?
- What is project management ?
- The project manager
- Triple constraints
- The value of project management
- Projects and the business strategy
- Project Vs. Operations

What is a project ?

“ A temporary endeavor undertaken to create a unique product, service or result.

- Temporary

- Has a definite beginning and defined end.

- Doesn't mean short in duration.

- Temporary doesn't apply to the result of the project.

- Unique

- The result is different in some distinguishing way from all other existing products or services

- Presence of repetitive elements doesn't affect uniqueness.

- Progressive elaboration

- Developing in steps and continuing by increments.

Examples of Projects

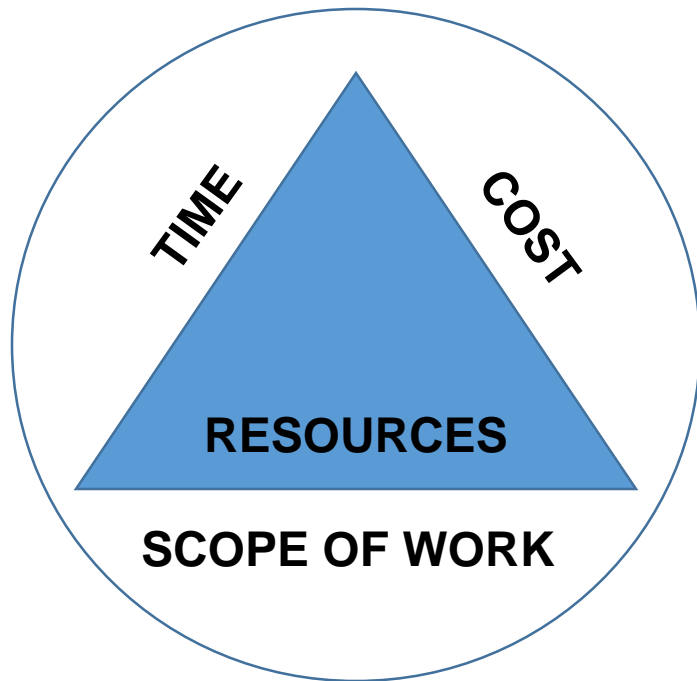
- Developing a new product (or Service)
- Constructing a building.
- Implementing a computer application
- Restructuring an organization
- Creating a marketing campaign.
- Building a highway/Railway project
- Organizing a cultural event
- Relocating a business.
- Making a Social campaign

What is Project Management ?

- “ The application of knowledge, skills, tools and techniques to project activities to meet project requirement”.

The Triple Constraint

WITHIN GOOD CUSTOMER RELATIONS !



- Every project is constrained in different ways by its:
 - **Scope** goals: What work will be done?
 - **Time** goals: How long should it take to complete?
 - **Cost** goals: What should it cost?
- It is the project manager's duty to balance these three often-competing goals.

Project Management Framework

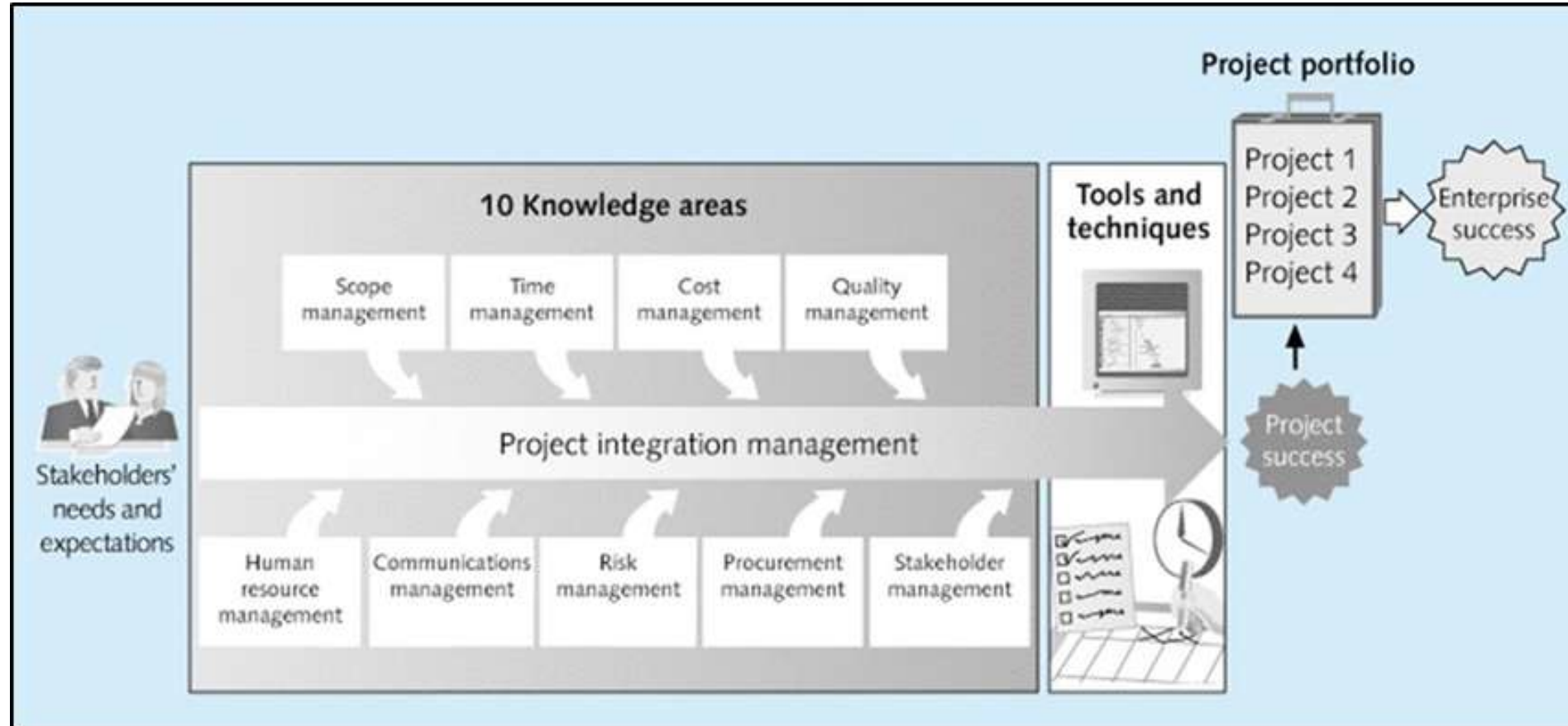


Table 1-3. Fifteen Project Management Job Functions

- Define scope of project.
- Identify stakeholders, decision-makers, and escalation procedures.
- Develop detailed task list (work breakdown structures).
- Estimate time requirements.
- Develop initial project management flow chart.
- Identify required resources and budget.
- Evaluate project requirements.
- Identify and evaluate risks.
- Prepare contingency plan.
- Identify interdependencies.
- Identify and track critical milestones.
- Participate in project phase review.
- Secure needed resources.
- Manage the change control process.
- Report project status.

Project Manager

Characteristics;

- **Knowledge;** What the Project Manager knows about project management
- **Performance:** What project Manager is able to do or accomplish while applying the knowledge
- **Personal:** How project manager behaves viz; personal effectiveness, attitude, leadership etc.

Other “Project Managers”

- **Project Coordinator**
 - Weaker than a Project Manager
 - Assigns work but not responsible for schedule or budget.
- **Project expediter**
 - Weakest role
 - Updates schedule and makes sure things are done on time
 - Tracks down status report.

Required Areas of Expertise

- Project Management Body of Knowledge
 - Project Life cycle definition
 - Five process groups
 - Nine knowledge Areas
- Application area knowledge, standards, regulations
- Understanding the project environment
- General management knowledge and skills
- Interpersonal skills.

Application Area Knowledge

- Functional department and supporting disciplines
 - i.e. Legal, production, marketing, logistics etc.
- Technical elements
 - i.e. Software development, engineering, technical disciplines etc.
- Various Management specialization
 - i.e. Government contracting, public administration, educational management etc.
- Industry groups
 - Automotive, chemical, financial services, IT, etc.

Standards and Regulations

- Standards
 - Established by Consensus
 - Confirmed by a governing body
- Regulations
 - Government imposed requirement

Suggested Skills for Project Managers

- Project managers need both “hard” and “soft” skills.
 - **Hard skills** include product knowledge and knowing how to use various project management tools and techniques.
 - **Soft skills** include being able to work with various types of people.

Hard Skills

- Financial and Accounting
- Purchasing and Procurement
- Sales and Marketing
- Contracts and commercial law
- Manufacturing and distribution
- Logistics and Supply chain
- Strategic, tactical and operational planning
- Health and Safety practices
- Information technology

Soft Skills

- **Communication skills:** Listens, persuades.
- **Organizational skills:** Plans, sets goals, analyzes.
- **Team-building skills:** Shows empathy, motivates, promotes esprit de corps.
- **Leadership skills:** Sets examples, provides vision (big picture), delegates, positive, energetic.
- **Coping skills:** Flexible, creative, patient, persistent.
- **Technology skills:** Experience, project knowledge.

Media Snapshot – Good Project Management Skills from *The Apprentice*

- Leadership and professionalism are crucial.
- Know what your sponsor expects from the project, and learn from your mistakes.
- Trust your team and delegate decisions.
- Know the business.
- Stand up for yourself.
- Be a team player.
- Stay organized and don't be overly emotional.
- Work on projects and for people you believe in.
- Think outside the box.
- There is some luck involved in project management, and you should always aim high.

Project Management Context

- **Project:** A project is simply a set of activities that occur according to a schedule, and that produce some kind of output. Some projects stand alone, with no relationship to other work going on in an organization. On the other hand, some projects are part of larger efforts, like phases, processes, programs, and portfolios.

Project Management Context

- **Phases:** Projects can be scheduled in **phases**, so that several projects relating to the same goal can be managed together. For example, a charitable organization has a fundraiser every year.
- To manage all of the projects associated with the function, they group the projects into three phases: Planning, Event Day, and Follow-Up. Each phase contains multiple projects.

Project Management Context

- **Program:** A **program** is a group of projects that are managed together, to make the most of their interrelated status.
- For example, a construction company that is working on a new subdivision manages each house in the subdivision as a separate project. By grouping the projects into a program for the entire subdivision, the company can easily see the progress of the subdivision as a whole, and plan for bringing in third-party resources, such as concrete trucks or landscapers.

● Portfolios

- A collection of projects and programs and other work that are initiated to meet strategic objectives.
- Some project managers may use **portfolios** to pair projects and programs with their corresponding strategic business objectives.
- For example, a software development company has identified three strategic business objectives: "Innovate in the industry," "Develop secure software," and "Provide top-notch customer support." The organization sets up portfolios for each of these objectives (Innovation, Security, and Support), and aligns the current projects and programs within these portfolios.

	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 a business scope that changes with the strategic goals of the organization.
Change	Project managers expect change and implement processes to keep change managed and controlled.	The program manager must expect change from both inside and outside the program and be prepared to manage it.	Portfolio managers continually monitor changes in the broad 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.
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 aggregate performance of portfolio components.
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 aggregate performance and value indicators.

Projects and Strategic Planning

- Projects can be initiated as a result
 - Market demand
 - Strategic opportunity/business need
 - Organizational need
 - Customer request
 - Technological Advance
 - Legal requirement

Project Management Office (PMO)

- Organizational unit assigned various responsibilities related to the centralized and coordinated management of those projects under its domain.
- Key features may include
 - Responsible for the project management methodology, best practices, standards etc
 - Mentoring for project managers
 - Central Coordination of communication management across all projects.
 - Report to management on overall status of projects.

Project Manager Roles and Interactions



Project Mgmt Vs. Operations Mgmt

- Common Characteristics

- Constrained by Limited resources
- Planned, Executed and Controlled

- Differences

- Operations are ongoing and repetitive, while projects are temporary and unique.
- A project concludes when its specific objective have been attained, while operations adopt a new set of objectives and the work continues.

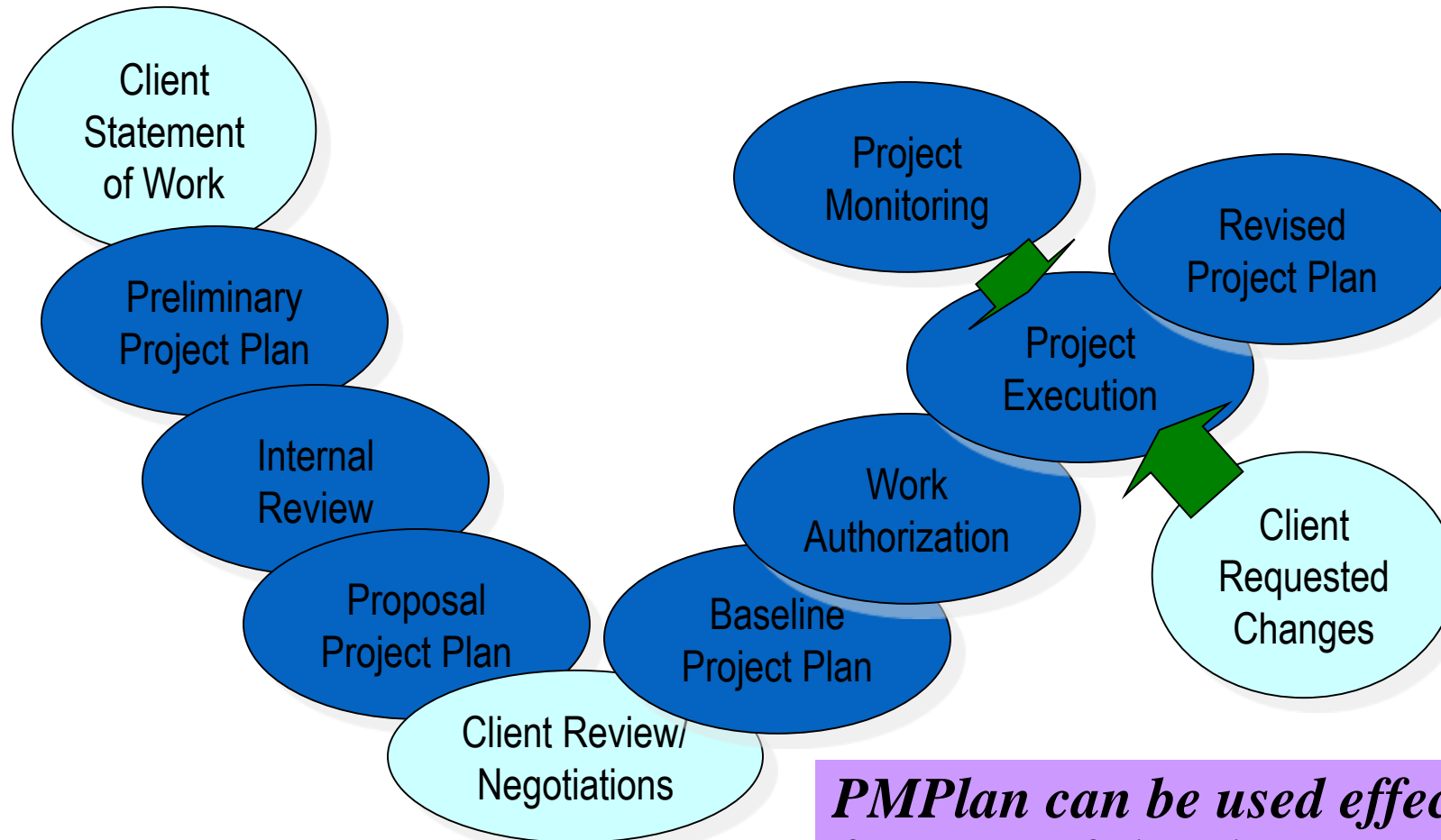
Enterprise Environmental Factors

It refers to both internal and external environmental factors that influence a project's success.

- Organisation culture, structure and processes
- Government or Industry standards
- Infrastructure
- Existing Human Resource
- Personal Administration
- Company work authorisation systems
- Marketplace conditions
- Stakeholder risk tolerances
- Commercial database
- Project Management Information systems

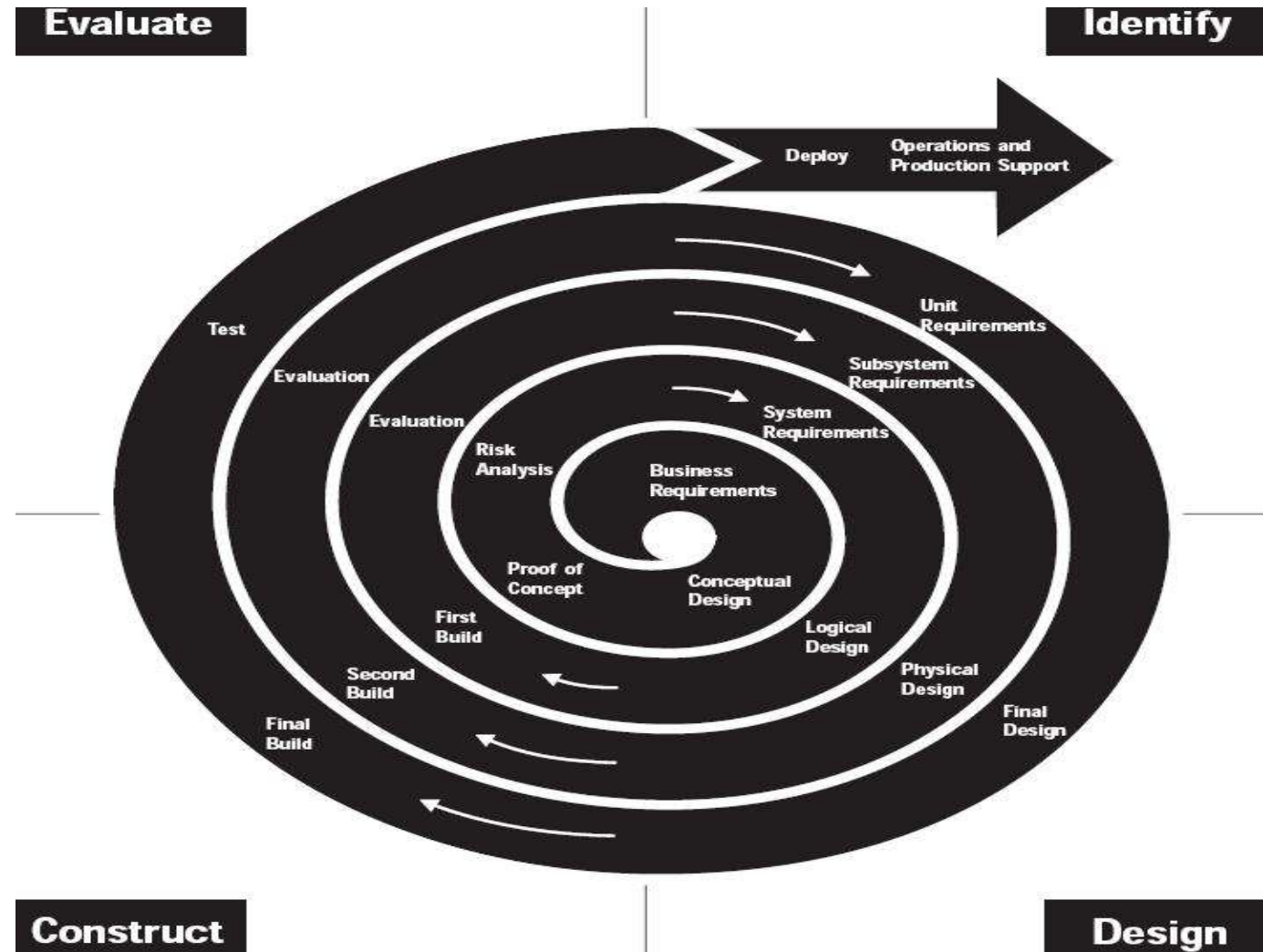
Project Life Cycle and organisation

Elements of a Project's Life Cycle



PMPlan can be used effectively for most of the elements of a project's life cycle.

Software Development Life Cycle



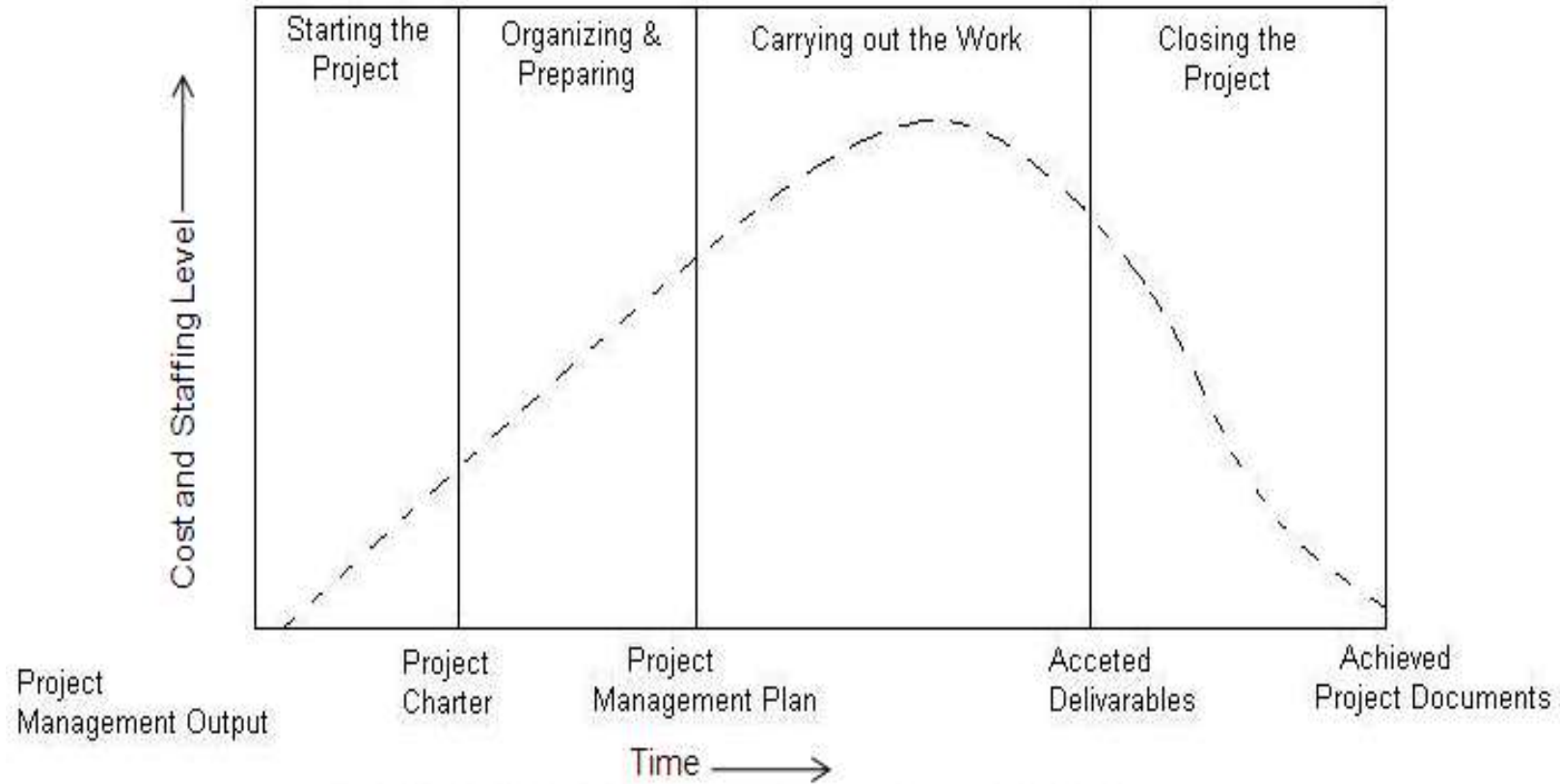
Project Phases

- Projects are divided into smaller, more manageable components.
- Usually, deliverables of a phase (output) are used as inputs to the next phase.
- Each project phase completion is marked by one or more deliverables and their review.
 - Deliverables- a tangible, verifiable work product

Project Life cycle

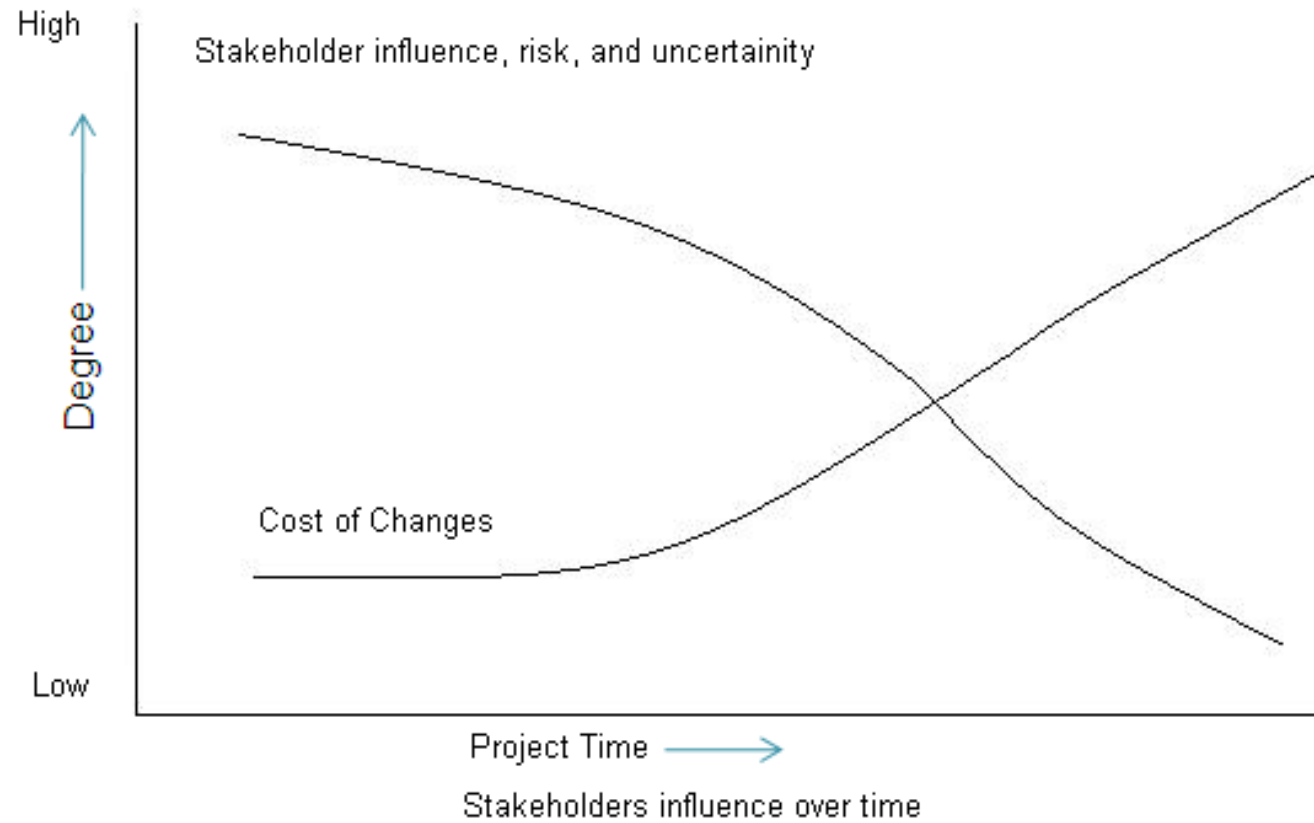
- The sum of all project phases and their sequence.
- Project life cycle defines
 - The technical work to be done
 - The sequence
 - The technical competencies needed.
- Project lifecycle is application area specific
 - E.g. Software Development Lifecycle
 - E.g. Construction
 - Feasibility, Planning, design, build, turnover, startup

Characteristics Of Project Lifecycle

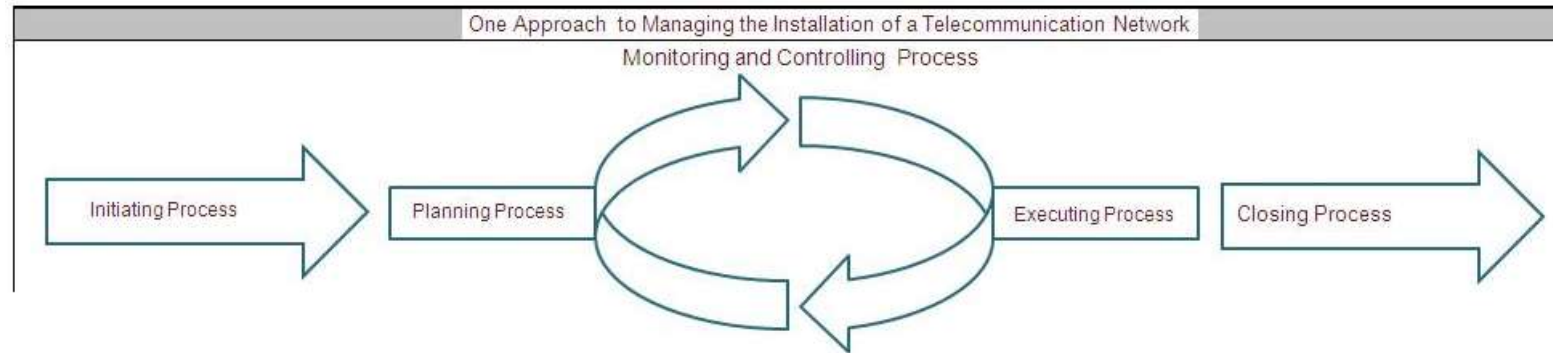


Typical Project Cost and Staffing Level across the project lifecycle

Characteristics Of Project Lifecycle

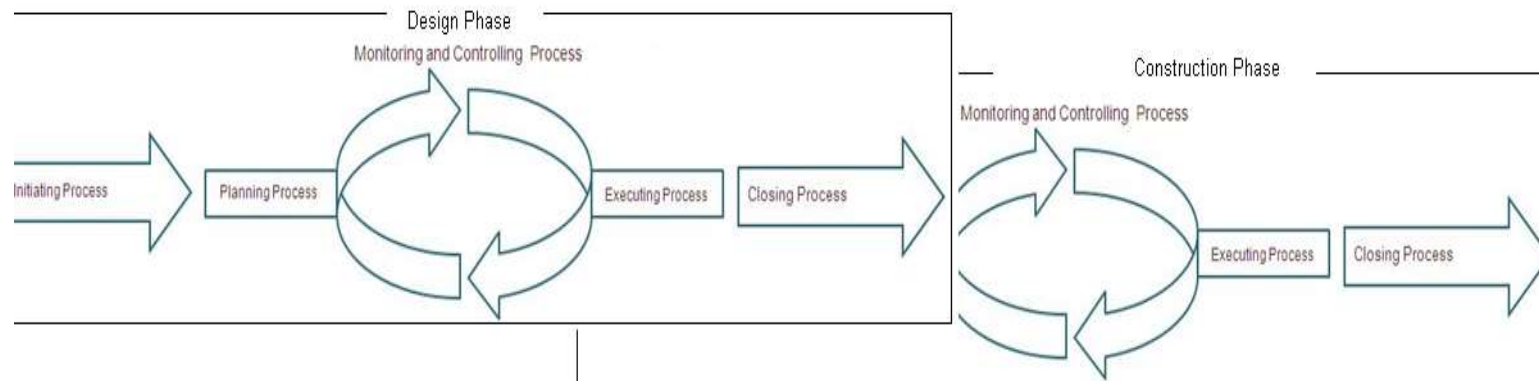


Impact of Variable based on project time



Example of Single Phase Project

Potential Approach to Building a New Factory



Example of Project with Overlapping Phase

Product Vs. Project Life Cycle

- Product Life Cycle : generally sequential, non overlapping product phases (eg, manufacturing)
- Last product life cycle phase is usually the products retirement.
- Project life cycle is contained within more or more product life cycles.
- Multiple separate projects could be related to a product development (eg, a new car)

Project Stakeholders

- Individuals and Organizations
 - Interested in the projects
 - May be affected by the project execution
 - May exert influence on project (positive & negative)
- Project Management team must
 - Identify stake holders
 - Determine their requirements and expectations
 - Assess their knowledge and skills
 - Manage their expectation and their influences
 - Conflicting expectations should be resolved in favor of customer.

Key Stakeholders

Customer / User	Person or Organization that will use the result of the project. Customer and users may be different entities.
Sponsor	The person or group that provides financial resources for the project
Portfolio Managers/Portfolio Review board	Responsible for governing the project within the portfolio. Review the projects return on investment, value, alignment, etc.
Program Managers	Responsible for managing related projects in coordinated manner to obtain benefits. Provide guidance and support to the project managers within their program
Project Management Office	PMO can be a stakeholder if it has direct or indirect responsibility for the outcome of the project.

Key Stakeholders

Project Manager	The person responsible for managing the project.
Project Team	Individuals from different groups with specific subject matter knowledge or skill who carry out the work of the project.
Functional Managers	May provide the subject matter expertise to the project
Operation Management	Involved in the handoff of the project deliverables to ongoing operations.
Sellers/ Business Partners	Have a contractual arrangement to provide a service related to the project.

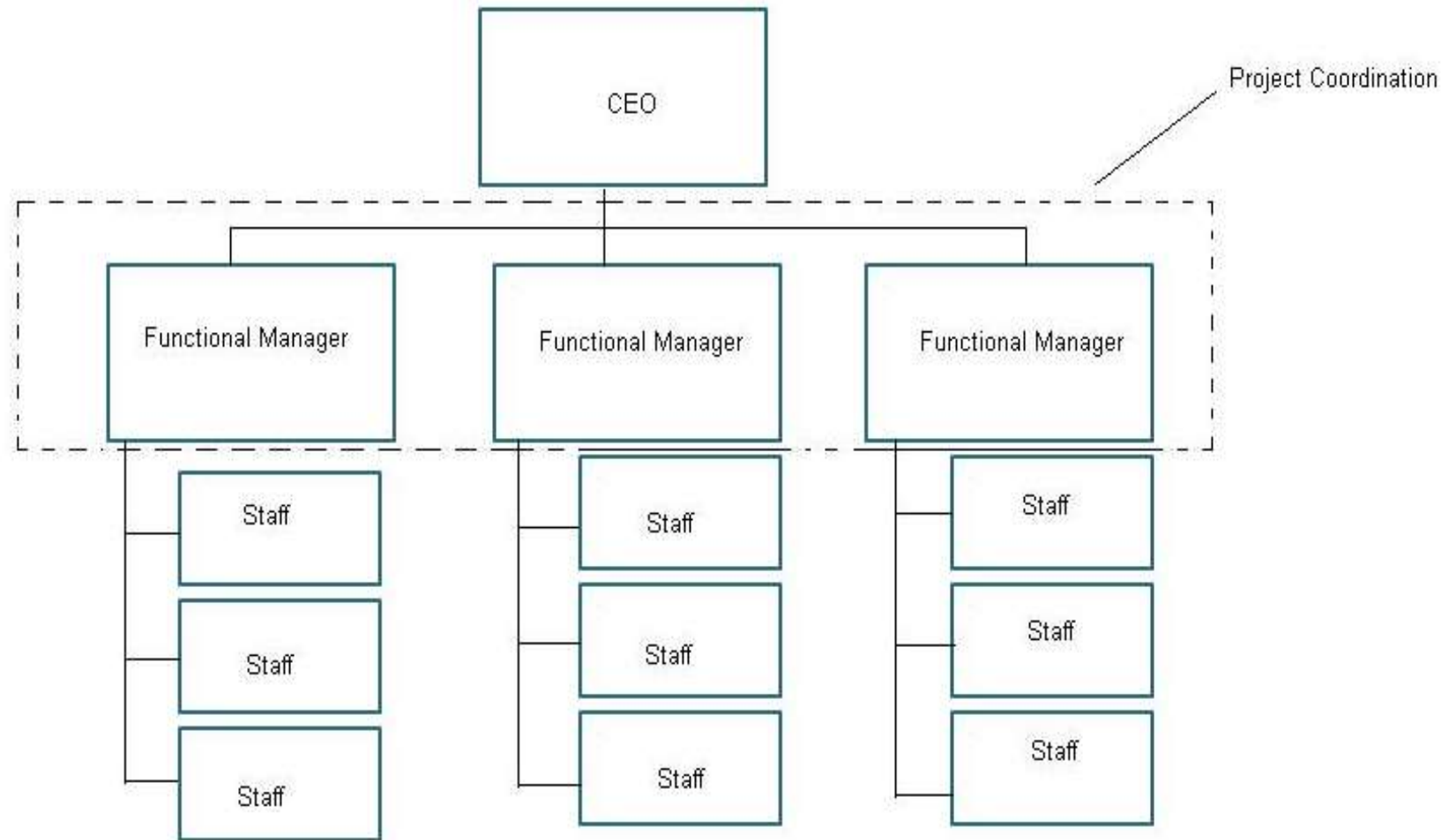
Cultures and Styles

- Organizational Culture is reflected in many aspects
 - Shared values, norms, beliefs, expectation
 - Policies, rules and procedures.
 - The perception of the authority relationships
 - Ethics
 - Working Schedule
 - Dressing Style
- Organizational Culture can impact the project
 - Attitude on risk
 - Management style

Organizational Structures

- Functional
- Matrix
 - Weak Matrix
 - Balance Matrix
 - Strong Matrix
- Projectized

Functional Organization



Green boxes : Staff involved in Project Work

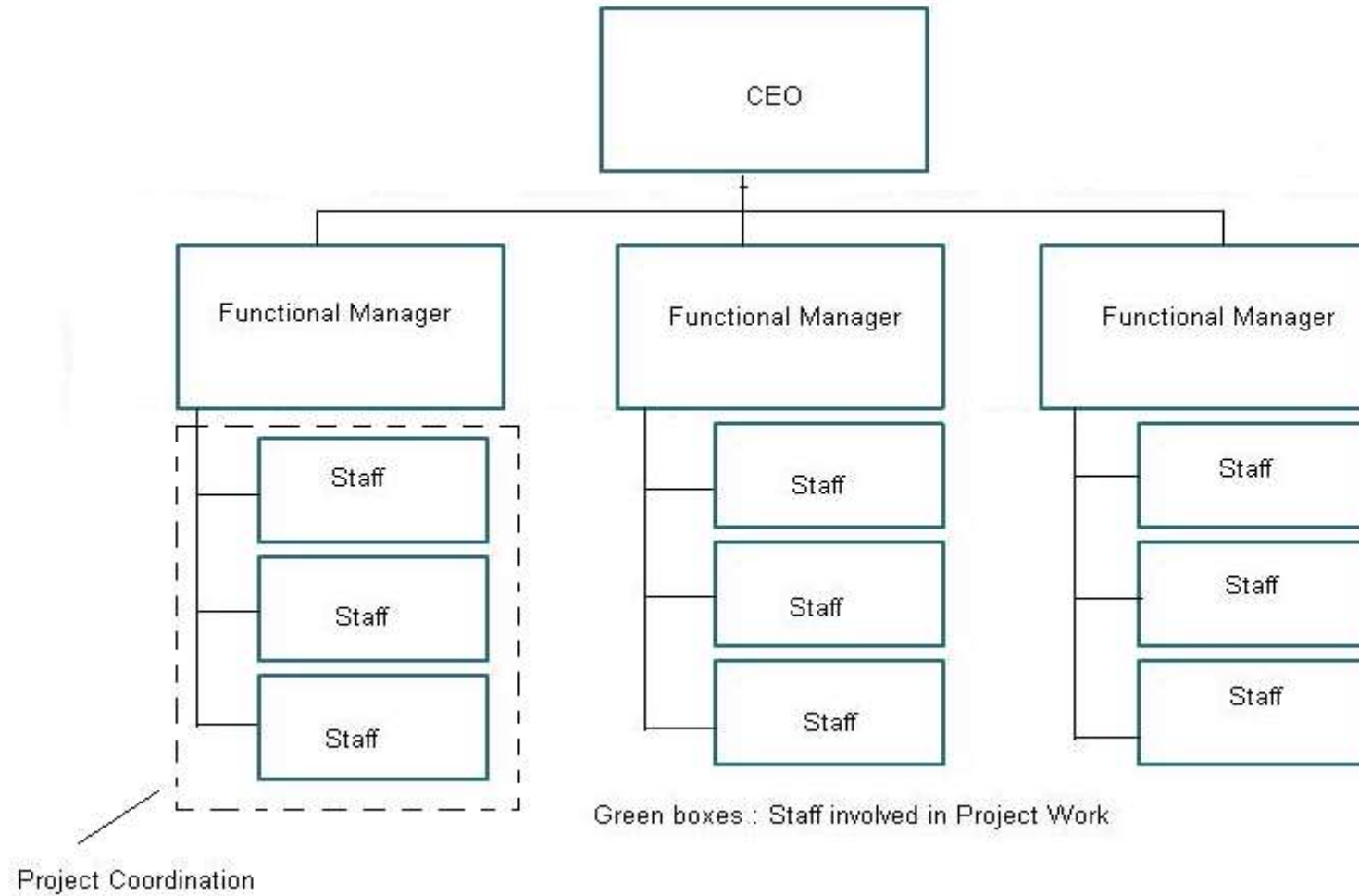
Functional Organization

- Hierarchical
- Grouped by area of specialization
- Staff members report to a clear superior
- Project scope is usually limited to the department's boundaries
- Project manager has title authority
- The most common form of the organization.

Functional Organization Analysis

Advantages	Disadvantages
Technical Management is easier.	No authority for project manager
Clear career path in areas of specialization	No career path in project management
Team members report to only one boss	People are focused on their functional specialization, instead on their projects.

Projectized Organization



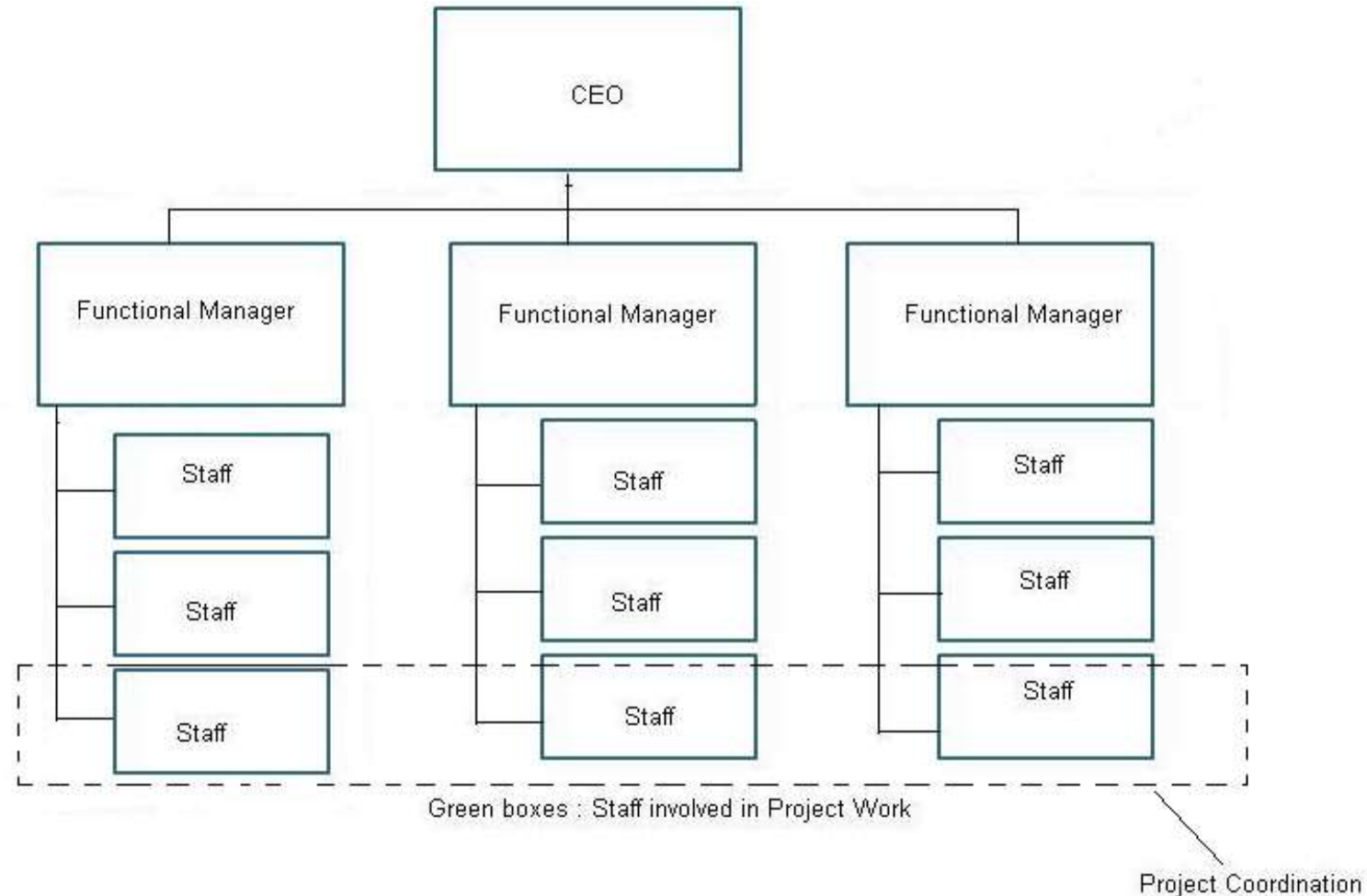
Projectized Organization

- All work is organized by projects.
- Project Manager has total control over the projects.
- Personnel report only to project manager.

Projectized Organization Analysis

Advantages	Disadvantages
Efficient Project Organization	Team is disbanded when project ends
Better alignment of people interest with their project objective.	Less efficient usage of resources
Communication is more effective than in functional structures	Duplication of job functions

Matrix Organization



Matrix Organization

- Balance between functional and projectized
- Three types
 - Weak-Functional manager has more power than project manager
 - Balanced-functional manager and project manager share authority
 - Strong-power rests with project manager.
- Staff members report to two bosses-project manager and functional manager

Matrix Organization Analysis

Advantages	Disadvantages
Better visibility of project objectives	People reports two managers
Better project management control of resources	More complex to control
Team members are not disbanded when project ends	Resources allocation problems
Maximum utilization of resources	Potential conflicts between project managers and functional managers.

Projects

- Causes of poor performance of Engineering/Management students and possible remedial measures
- Organise a training programme for street vendors for keeping books of accounts and investment plans
- Developing strategy and creating awareness to save energy and water
- Developing communication strategy for eradication of soft drugs, alcohol and ghutka in the campus
- Organising as social campaign/activity in the campus
- Developing a strategy for community development and involvement in the neighborhood of University
- Organising an event (Retail Bazaar, techno-B-fest etc.) in the campus