Project Management
Organizational Influences and Project Life Cycle

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Organizational Influences on Project Management

- An organization's culture, style, and structure influence how its projects are performed.
- The organization's level of project management maturity and its project management systems can also influence the project. When a project involves external entities such as those that are part of a joint venture or partnering agreement, the project will be influenced by more than one organization. The following sections describe organizational characteristics, factors, and assets within an enterprise that are likely to influence the project.

Organizational Cultures and Styles

- Organizations are systematic arrangements of entities (persons and/or departments) aimed at accomplishing a purpose, which may involve undertaking projects.
- An organization's culture and style affect how it conducts projects.
- Organizational culture is shaped by the common experiences of members of the organization and most organizations have developed unique cultures over time by practice and common usage.
- In light of globalization, understanding the impact of cultural influences is critical in projects involving diverse organizations and locations around the world. Culture becomes a critical factor in defining project success, and multicultural competence becomes critical for the project manager.

Organizational Communications

- Project management success in an organization is highly dependent on an effective organizational communication style, especially in the face of globalization of the project management profession.
- Organizational communications capabilities have great influence on how projects are conducted. As a consequence, project managers in distant locations are able to more effectively communicate with all relevant stakeholders within the organizational structure to facilitate decision making.
- Stakeholders and project team members can also use electronic communications (including e-mail, texting, instant messaging, social media, video and web conferencing, and other forms of electronic media) to communicate with the project manager formally or informally.

Organizational Structures

- Organizational structure is an enterprise environmental factor, which can affect the availability of resources and influence how projects are conducted.

- Organizational structures range from functional to projectized, with a variety of matrix structures in between. Table 2-1 shows key project-related characteristics of the major types of organizational structures.

Table 2-1. Influence of Organizational Structures on Projects

| 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
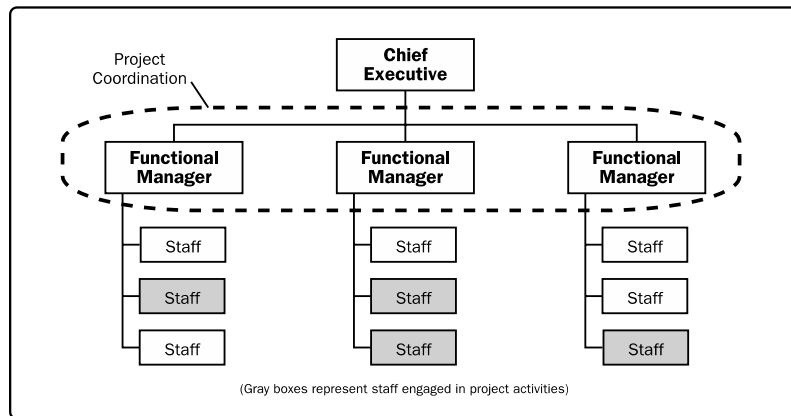
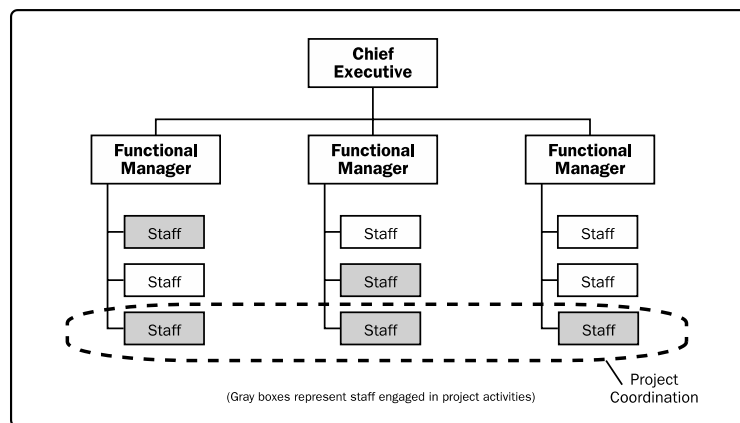**Figure 2-1. Functional Organization**
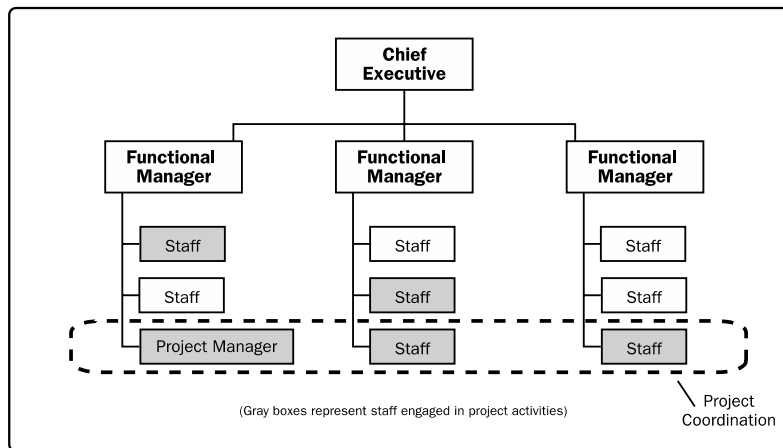

Figure 2-2. Weak Matrix Organization

Figure 2-3. Balanced Matrix Organization
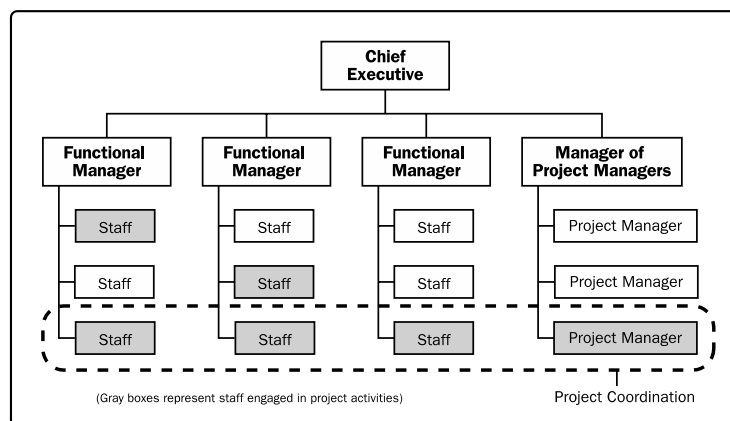
Figure 2-4. Strong Matrix Organization

(Gray boxes represent staff engaged in project activities)

Figure 2-5. Projectized Organization

(Gray boxes represent staff engaged in project activities)
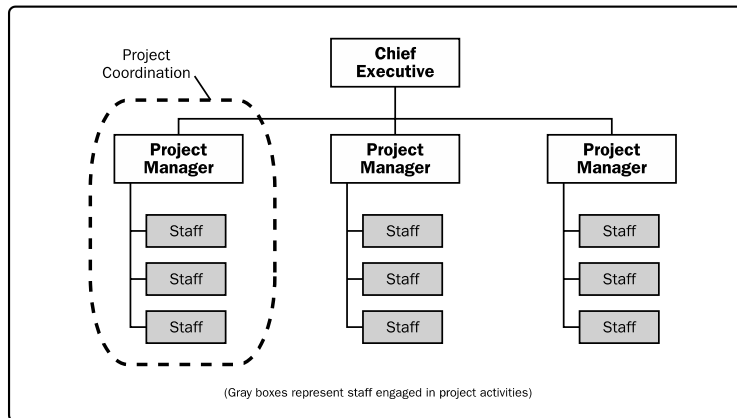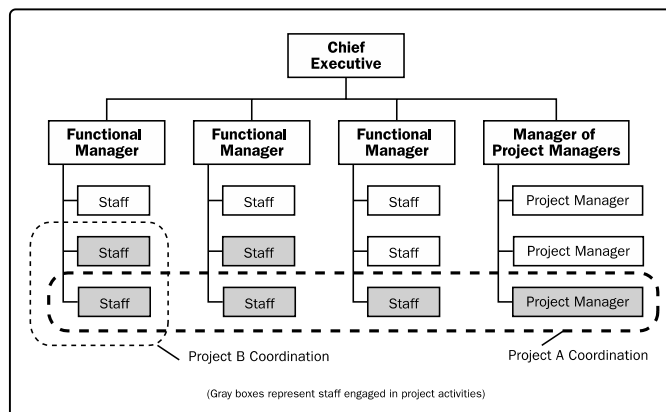
Figure 2-6. Composite Organization

- Many organizational structures include strategic, middle management, and operational levels. The project manager may interact with all three levels depending on factors such as:
  - Strategic importance of the project,
  - Capacity of stakeholders to exert influence on the project,
  - Degree of project management maturity,
  - Project management systems, and
  - Organizational communications.

- This interaction determines project characteristics such as:
  - Project manager's level of authority,
  - Resource availability and management,
  - Entity controlling the project budget,
  - Project manager's role, and
  - Project team composition.

Organizational Process Assets

- Organizational process assets are the plans, processes, policies, procedures, and knowledge bases specific to and used by the performing organization.
- They include any artifact, practice, or knowledge from any or all of the organizations involved in the project that can be used to perform or govern the project.
- These process assets include formal and informal plans, processes, policies, procedures, and knowledge bases, specific to and used by the performing organization.
- The process assets also include the organization's knowledge bases such as lessons learned and historical information.
- *Organizational process assets are inputs to most planning processes.*

Processes and Procedures

- The organization's processes and procedures for conducting project work include, but are not limited to:
  - Initiating and Planning:
    - Guidelines;
    - Specific organizational standards; and
    - Templates.
  - Executing, Monitoring and Controlling:
    - Change control procedures;
    - Financial controls procedures;
    - Issue and defect management procedures;
  - Closing:
    - Project closure guidelines or requirements

Corporate Knowledge Base

- The organizational knowledge base for storing and retrieving information includes, but is not limited to:
  - Configuration management knowledge bases containing the versions and baselines of all performing organization standards, policies, procedures, and any project documents;
  - Financial databases;
  - Historical information and lessons learned knowledge bases;
  - Issue and defect management databases containing issue and defect status, control information, issue and defect resolution, and action item results;
  - Process measurement databases; and
  - Project files from previous projects.

Enterprise Environmental Factors

- Enterprise environmental factors refer to conditions, not under the control of the project team, that influence, constrain, or direct the project.
- Enterprise environmental factors are considered inputs to most planning processes, may enhance or constrain project management options, and may have a positive or negative influence on the outcome.

- Enterprise environmental factors vary widely in type or nature. Enterprise environmental factors include, but are not limited to:
  - Organizational culture, structure, and governance;
  - Geographic distribution of facilities and resources;
  - Government or industry standards;
  - Infrastructure;
  - Existing human resources;
  - Personnel administration;
  - Company work authorization systems;
  - Marketplace conditions;
  - Stakeholder risk tolerances;
  - Political climate;
  - Organization's established communications channels;
  - Commercial databases; and
  - Project management information system.

Project Stakeholders and Governance

- A stakeholder is an individual, group, or organization who may affect, be affected by, or perceive itself to be affected by a decision, activity, or outcome of a project.
- Different stakeholders may have competing expectations that might create conflicts within the project. Stakeholders may also exert influence over the project, its deliverables, and the project team in order to achieve a set of outcomes that satisfy strategic business objectives or other needs.
- Project governance—the alignment of the project with stakeholders' needs or objectives—is critical to the successful management of stakeholder engagement and the achievement of organizational objectives. Project governance enables organizations to consistently manage projects and maximize the value of project outcomes and align the projects with business strategy.
- It provides a framework in which the project manager and sponsors can make decisions that satisfy both stakeholder needs and expectations and organizational strategic objectives or address circumstances where these may not be in alignment.
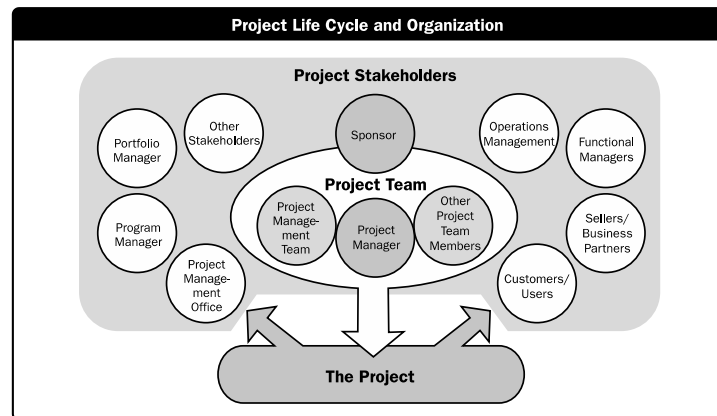
Project Stakeholders

Figure 2-7. The Relationship Between Stakeholders and the Project

- The following are some examples of project stakeholders:
  - **Sponsor.** A sponsor is the person or group who provides resources and support for the project and is accountable for enabling success.
  - **Customers and users.** Customers are the persons or organizations who will approve and manage the project's product, service, or result. Users are the persons or organizations who will use the project's product, service, or result.
  - **Sellers**. Sellers, also called vendors, suppliers, or contractors, are external companies that enter into a contractual agreement to provide components or services necessary for the project.
  - **Business partners**. Business partners are external organizations that have a special relationship with the enterprise, sometimes attained through a certification process.
  - **organizational groups**. Organizational groups are internal stakeholders who are affected by the activities of the project team.
  - **other stakeholders**. Additional stakeholders, such as procurement entities, financial institutions, government regulators, subject matter experts, consultants, and others, may have a financial interest in the project, contribute inputs to the project, or have an interest in the outcome of the project.
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Project Governance

- Project governance is an oversight function that is aligned with the organization's governance model and that encompasses the project life cycle.

- Project governance framework provides the project manager and team with structure, processes, decision-making models and tools for managing the project, while supporting and controlling the project for successful delivery.

- Project governance is a critical element of any project, especially on complex and risky projects.

- It provides a comprehensive, consistent method of controlling the project and ensuring its success by defining and documenting and communicating reliable, repeatable project practices.

Project Success

- Since projects are temporary in nature, the success of the project should be measured in terms of completing the project within the constraints of scope, time, cost, quality, resources, and risk as approved between the project managers and senior management.

- To ensure realization of benefits for the undertaken project, a test period (such as soft launch in services) can be part of the total project time before handing it over to the permanent operations.

- Project success should be referred to the last baselines approved by the authorized stakeholders.

- The project manager is responsible and accountable for setting realistic and achievable boundaries for the project and to accomplish the project within the approved baselines.

Project team

- The project team includes the project manager and the group of individuals who act together in performing the work of the project to achieve its objectives.
- The project team includes the project manager, project management staff, and other team members who carry out the work but who are not necessarily involved with management of the project.
- This team is comprised of individuals from different groups with specific subject matter knowledge or with a specific skill set to carry out the work of the project.
- The structure and characteristics of a project team can vary widely, but one constant is the project manager's role as the leader of the team, regardless of what authority the project manager may have over its members.

- Project teams include roles such as:
  - **Project management staff**. The members of the team who perform project management activities such as scheduling, budgeting, reporting and control, communications, risk management and administrative support.
  - **Project staff**. The members of the team who carry out the work of creating the project deliverables.
  - **Supporting experts**. Supporting experts perform activities required to develop or execute the project management plan. These can include such roles as contracting, financial management, logistics, legal, safety, engineering, test, or quality control.
  - **user or customer representatives**. Members of the organization who will accept the deliverables or products of the project may be assigned to act as representatives or liaisons to ensure proper coordination, advise on requirements, or validate the acceptability of the project's results.
  - **Sellers**. Sellers, also called vendors, suppliers, or contractors, are external companies that enter into a contractual agreement to provide components or services necessary for the project.
  - **Business partner members**. Members of business partners' organizations may be assigned as members of the project team to ensure proper coordination.
  - **Business partners**. Business partners are also external companies, but they have a special relationship with the enterprise, sometimes attained through a certification process. Business partners provide specialized expertise or fill a specified role such as installation, customization, training, or support.

Composition of Project Teams

- The composition of project teams varies based on factors such as organizational culture, scope, and location.
- The relationship between the project manager and the team varies depending on the authority of the project manager. In some cases, a project manager may be the team's line manager, with full authority over its members. In other cases, a project manager may have little or no direct organizational authority over the team members and may have been brought in to lead the project on a part-time basis or under contract.
- The following are examples of basic project team compositions:
  - **dedicated**. In a dedicated team, all or a majority of the project team members are assigned to work full-time on the project. The project team may be co-located or virtual and usually reports directly to the project manager. This is the simplest structure for a project manager, as the lines of authority are clear and team members can focus on the project's objectives.
  - **Part-time**. Some projects are established as temporary additional work, with the project manager and team members working on the project while remaining in their existing organizations and continuing to carry out their normal functions. The functional managers maintain control over the team members and the resources allocated to the project, and the project manager is likely to continue performing other management duties. Part-time team members may also be assigned to more than one project at a time.

Project Life Cycle

- A project life cycle is the series of phases that a project passes through from its initiation to its closure.
- The phases are generally sequential, and their names and numbers are determined by the management and control needs of the organization or organizations involved in the project, the nature of the project itself, and its area of application.
- The phases can be broken down by functional or partial objectives, intermediate results or deliverables, specific milestones within the overall scope of work, or financial availability.
- Phases are generally time bounded, with a start and ending or control point.
- While every project has a definite start and a definite end, the specific deliverables and activities that take place in between will vary widely with the project.
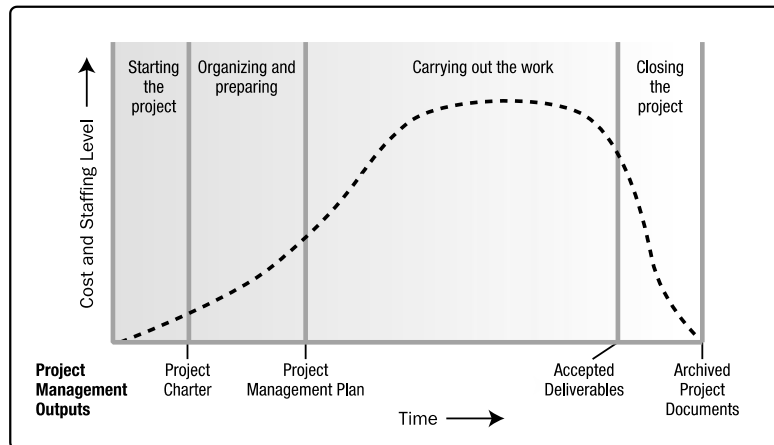
Characteristics of the Project Life Cycle

Figure 2-8. Typical Cost and Staffing Levels Across a Generic Project Life Cycle Structure

- The generic life cycle structure generally displays the following characteristics:
  - Cost and staffing levels are low at the start, peak as the work is carried out, and drop rapidly as the project draws to a close. Figure 2-8 illustrates this typical pattern.
  - The typical cost and staffing curve above may not apply to all projects. A project may require significant expenditures to secure needed resources early in its life cycle, for instance, or be fully staffed from a point very early in its life cycle.
  - Risk and uncertainty (as illustrated in Figure 2-9) are greatest at the start of the project. These factors decrease over the life of the project as decisions are reached and as deliverables are accepted.
  - The ability to influence the final characteristics of the project's product, without significantly impacting cost, is highest at the start of the project and decreases as the project progresses towards completion. Figure 2-9 illustrates the idea that the cost of making changes and correcting errors typically increases substantially as the project approaches completion.
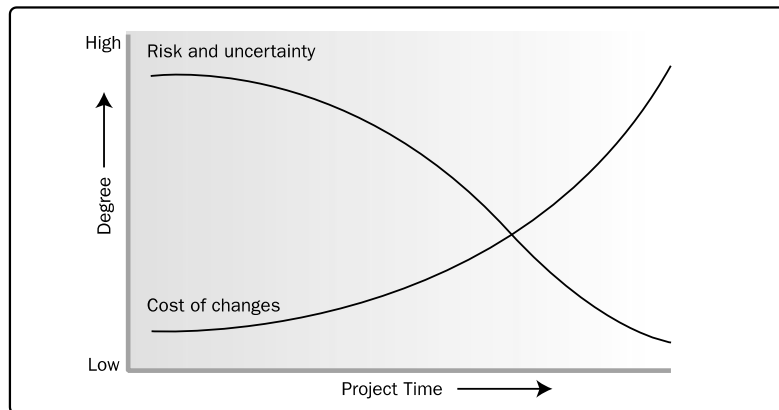
Figure 2-9. Impact of Variable Based on Project Time

Project Phases

- A project may be divided into any number of phases.
- A project phase is a collection of logically related project activities that culminates in the completion of one or more deliverables.
- The phase structure allows the project to be segmented into logical subsets for ease of management, planning, and control.
- The number of phases, the need for phases, and the degree of control applied depend on the size, complexity, and potential impact of the project.
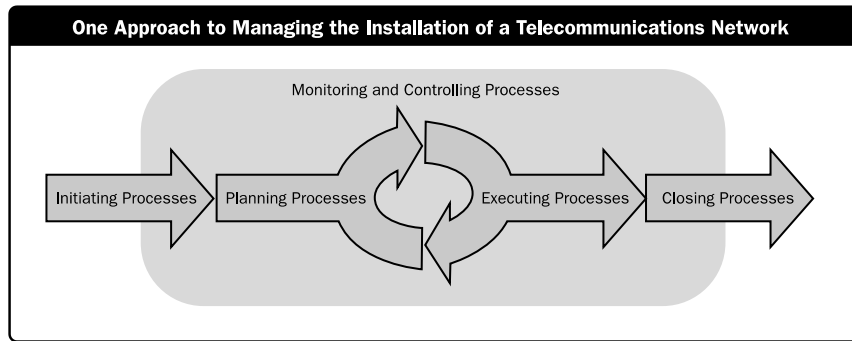
Figure 2-10. Example of a Single-Phase Project

Phase-to-Phase relationships

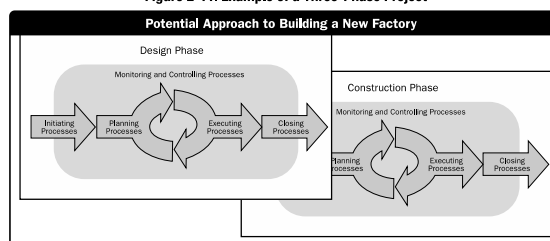

Figure 2-11. Example of a Three-Phase Project

Figure 2-12. Example of a Project with Overlapping Phases
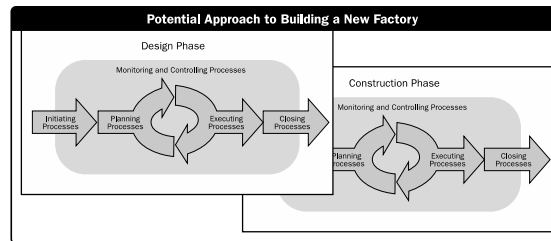
Predictive Life cycles

Figure 2-12. Example of a Project with Overlapping Phases

Iterative and Incremental Life cycles

- Iterative and incremental life cycles are ones in which project phases (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.

- These life cycles develop the product both iteratively and incrementally.

Adaptive Life cycles

- Adaptive life cycles (also known as change-driven or agile methods) are intended to respond to high levels of change and ongoing stakeholder involvement.

- Adaptive methods are also iterative and incremental, but differ in that iterations are very rapid (usually with a duration of 2 to 4 weeks) and are fixed in time and cost.

- Adaptive projects generally perform several processes in each iteration, although early iterations may concentrate more on planning activities.