

ICT Project Management

Disclaimer

This document is part of teaching materials for ICT PROJECT MANAGEMENT under the Pokhara University syllabus for Bachelor in Computer Engineering IV/I and Bachelor in Information Technology IV/I. This document does not cover all aspect of learning ICT PROJECT MANAGEMENT, nor are these be taken as primary source of information. As the core textbooks and reference books for learning the subject has already been specified and provided to the students, students are encouraged to learn from the original sources because this document cannot be used as a substitute for prescribed textbooks..

*Various text books as well as freely available material from internet were consulted for preparing this document. Contents in This document are **copyrighted** to the instructor and authors of original texts where applicable*

C@MUKUNDA PAUDEL 2022

Unit 2: Project Organization and Project Cycle

2.1. Organizational Structure

- ✓ Organizational structure refers to the way a company or organization is setup, how various task are divided, resources are deployed and how units/departments are coordinated in an organization.
- ✓ An organizational structure includes a set of formal tasks assigned to individual and departments, formal reporting relationship, and a design to ensure effective coordination of employees across departments/units with the help of authority, reliability, responsibility and accountability, which are fundamental to developing organizational structures and workflow based on their clear understanding by all employees.
- ✓ It is usually defined using a hierarchy chart that shows how groups or functions report within the organization.
- ✓ For Project Managers, a company's organizational structure type will affect how resources are allocated to the project and will be a factor in how much influence the Project Manager will have within the organization.
- ✓ In organizational structure, principle like Authority, Reliability, Responsibility, Accountability are most important.

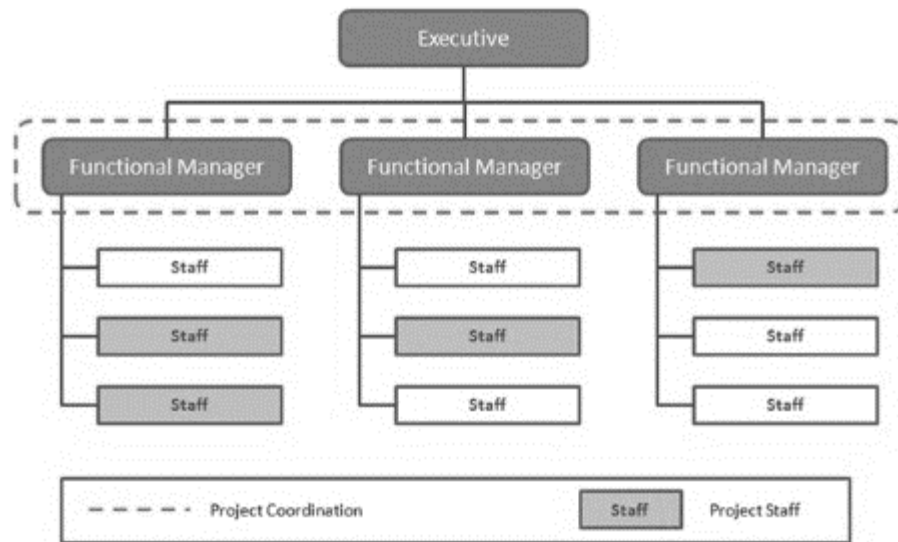
Types of Organizational Structures in Project Management:

Generally 3 types:

1. Functional Organizational Structure
2. Project-Based / Projectized / Centralized Organizational Structure
3. Matrix Organizational Structure

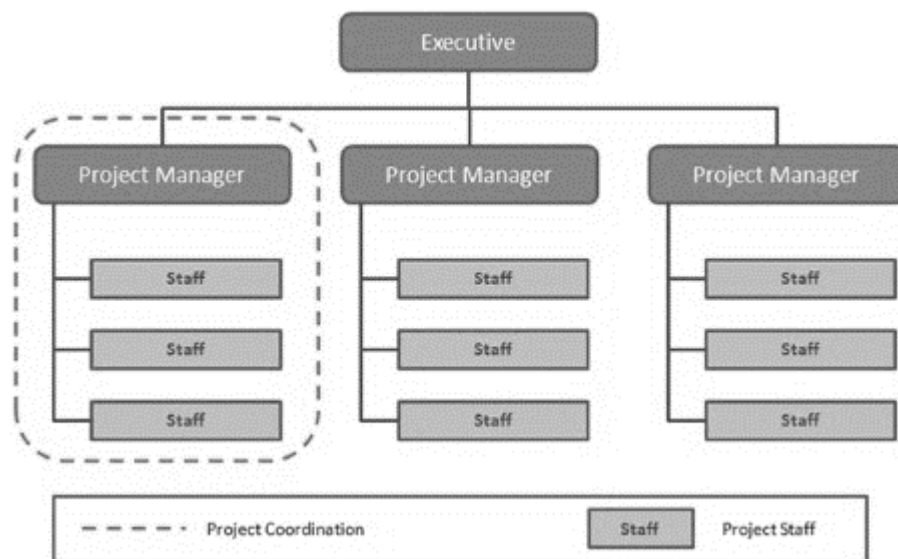
Functional Organizational Structure

- ✓ In the functional project organizational structure, the organization is divided into various specific departments; e.g. human resource, marketing, finance, operations, etc. Each department will have its own department head and he will be responsible for the performance of his section.
- ✓ This helps control the quality and uniformity of performance.



Project-Based Organizational Structure:

- ✓ Projectized organizations are nearly the opposite of functional organizations.
- ✓ The focus of this type of organization is the project itself.
- ✓ The idea behind a projectized organization is to develop loyalty to the project, not to a functional manager
- ✓ In projectized organization, the project manager has all the power and authority and everybody directly report to the project manager. Here, either no functional manager exists, or if he exists, he will have a very limited role.



Matrix Organizational Structure

- ✓ Matrix organizations came about to minimize the differences between, and take advantage of, the strengths and weaknesses of functional and projectized organizations.
- ✓ Matrix combines the best of both (functional and Project based) organizational structures into one.

- The project objectives are fulfilled and good project management techniques are utilized while still maintaining a hierarchical structure in the organization.
- ✓ In matrix structures, usually employees have two bosses to whom they may have to report. The authority of the functional manager flows vertically downwards and the authority of the project manager flows sideways.
- ✓ Since, the authorities flow downward and sideways, this structure is called the Matrix Organization Structure.
- ✓ Which Manager is more powerful depends upon the type of matrix structure

Matrix Organization has 3 types

1. Weak Matrix
2. Balanced Matrix
3. Strong Matrix

Weak Matrix:

- ✓ A *weak matrix organizational structure* maintains many of the features of the *functional organizational structure*.
- ✓ The role of the Project Manager is more that of a Project Coordinator.
- ✓ Their ability to make or enforce decisions is low and most of the authority remains with the Functional Manager.

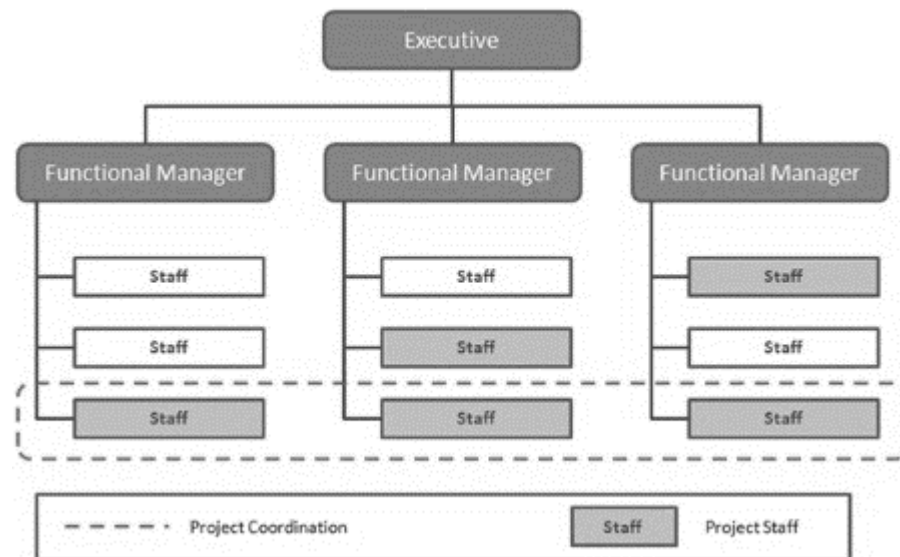


Figure: Weak Matrix Organizational Structure

Balanced Matrix:

- ✓ A *balanced matrix organizational structure* recognizes the need for a Project Manager.
- ✓ However, the Project Manager does not have full authority over the project, project staff or project budget.

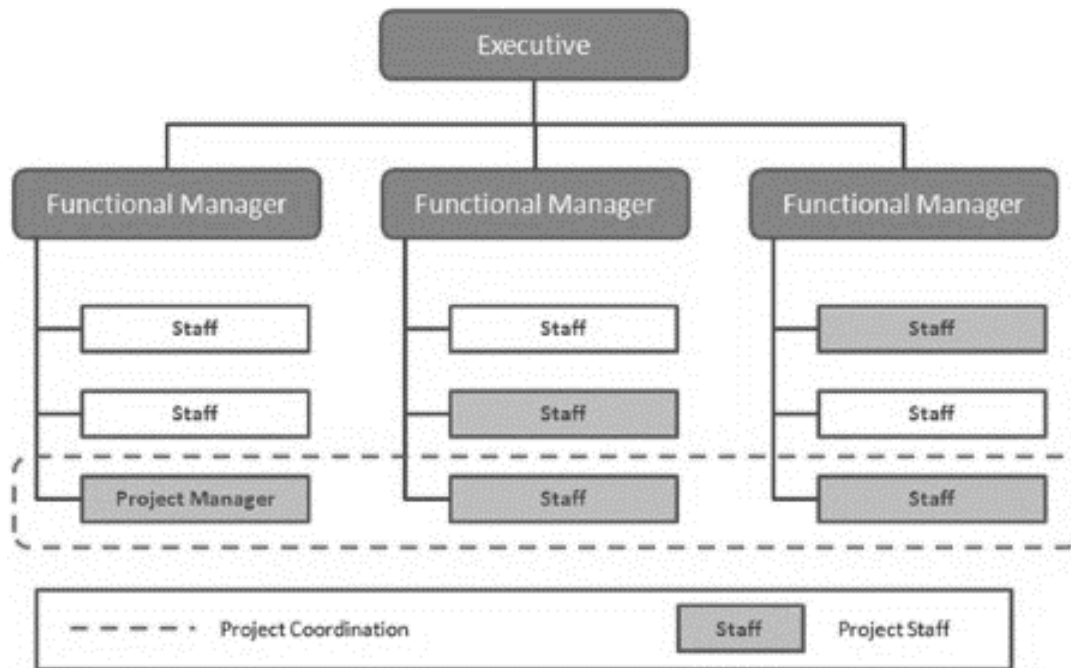


Figure: Balanced Matrix Organizational Structure

Strong Matrix:

- ✓ A strong matrix organizational structure *has many of the features of the projectized organizational structure.*
- ✓ They have full-time Project Managers and project administrative staff.
- ✓ Project Managers have considerable authority over the project in this organizational structure.

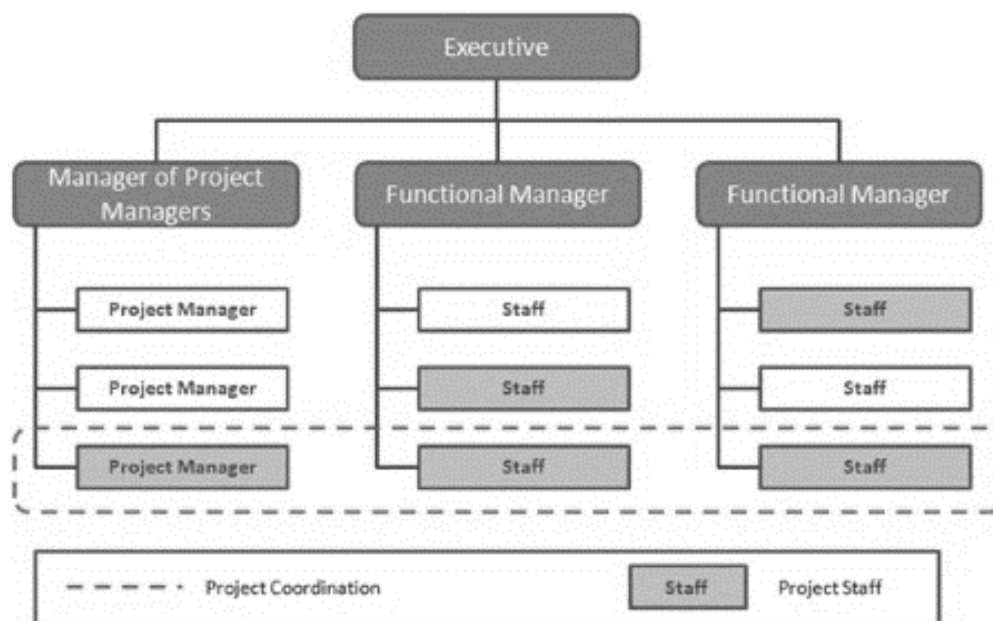


Figure: Strong Matrix Organizational Structure

Summary and Influences on project:

		Organization Structures				
		Functional	Matrix			Projectize
			Weak	Balanced	Strong	
Project Characteristics	Project Manager's Authority	Little or None	Limited Authority	Reasonable Authority	Reasonable to High Level	Highest Authority
	Who Manages the Project Budget	Functional Manager	Functional Manager	Functional & Project Manager	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

2.3. Organizational Structures influences on project

- ✓ Two of the key project aspects affected by organizational structure types are **Project Manager Authority** and **Resource Availability**.

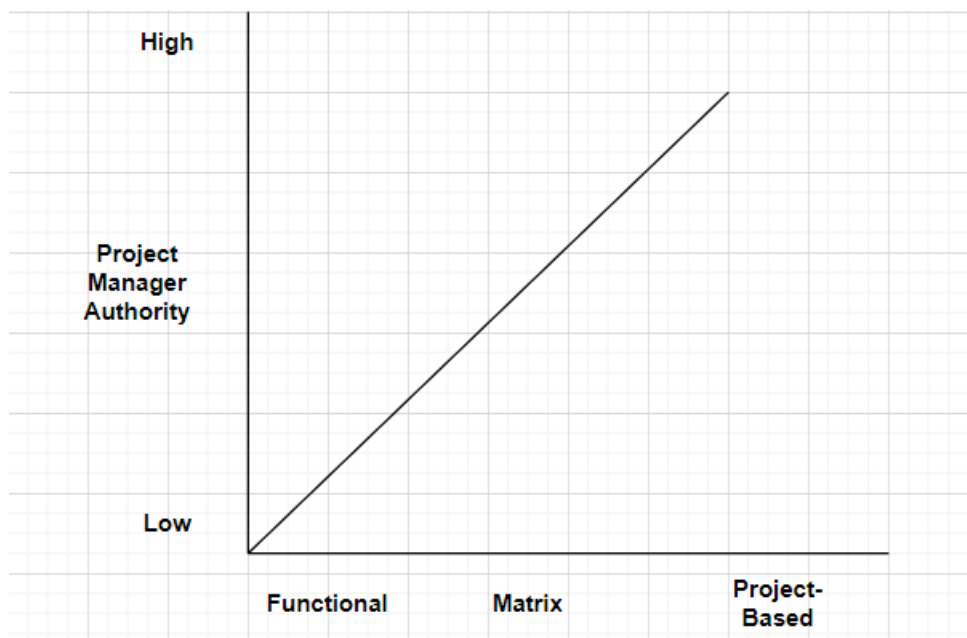


Figure: Organizational Structure Spectrum Project Manager Authority perspective

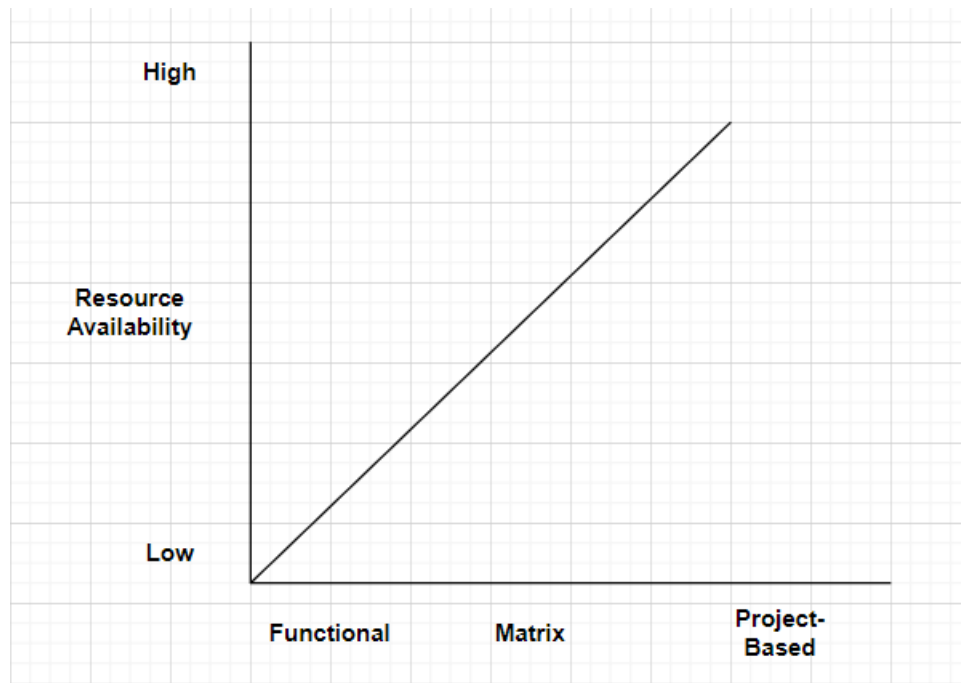


Figure: Organizational Structure Spectrum Resource availability perspective

- ✓ As you move across the spectrum from Functional to Matrix to Project-Based organizational structure types, the organization will move from favoring ongoing operations to favoring projects.
- ✓ On the left side of the spectrum are Functional Organizational Structures.
- ✓ As a Project Manager, you will have limited *positional authority* in these type of organizations.
- ✓ You will need to rely on *expert authority* and *referent authority* to get project tasks completed.
- ✓ Because of this, you will need to develop your influencing and negotiating skills if you want to be successful.
- ✓ From a Resource Availability perspective, you will be dependent on the Functional Managers in your organization to provide you with resources.
- ✓ In these cases, the project resources will report indirectly to you.
- ✓ On the right side of the spectrum are Project-Based Organizations.
- ✓ As a Project Manager, you will have more *positional authority* the further right your project sits on the spectrum.
- ✓ This doesn't mean you can just command others, but you will have more formal authority for getting project tasks completed.
- ✓ From a Resource Availability perspective, you will also have greater control over your project resources since they will be more likely to directly report to you and not to a functional manager.

Understanding *what type of organizational structure* is used by your company will help you determine how you should manage your project.

2.4 Project Team

- ✓ The project team is the group of people responsible for executing the tasks and producing deliverables outlined in the project plan and schedule, as directed by the project manager, at whatever level of effort or participation defined for them.
- ✓ Project team members may or may not be involved during the entire life cycle of the project and may or may not be full time to the project.
- ✓ Project teams are comprised of many different roles such as project manager, subject matter experts, business analysts, and other stakeholders.

Project Team Includes and their duties:

1. Project Manager

- ✓ developing the project's plan
- ✓ recruiting the project's team members
- ✓ managing the project's deliverables
- ✓ managing and leading the project's team
- ✓ determining the project's methodology
- ✓ establishing the project's schedule
- ✓ assigning tasks to the team members

2. Project Team Member

- ✓ contribute to project objectives
- ✓ complete deliverables
- ✓ provide expertise
- ✓ work with stakeholders to establish and meet the organization's requirements

3. Project Sponsors

- ✓ make key project decisions
- ✓ approve project budget
- ✓ ensure resources are available
- ✓ communicate the project's goals to the organization

4. Executive Sponsors

- ✓ approve project scope changes
- ✓ provide additional funds for changes
- ✓ approve project deliverables

5. Business Analyst

- ✓ assist with defining the project
- ✓ gather the organization's units or user requirements
- ✓ document the organization and technical requirements
- ✓ verify project deliverables meet all requirements
- ✓ test solutions to validate the project's objectives

Advantages of Project Team

1. **Relationships:** Individuals on the project team interact to create services or products

2. **Creativity:** Multiple individuals can brainstorm ideas and discover new, creative, and innovative solutions to any complex issues
3. **Redundancy:** When working as a team, individuals understand everyone's roles and responsibilities. If a team member is away or cannot finish their task, PM can assign their task to another member.

2.5 Project Life Cycle and Phases

- ✓ The project management life cycle describes high-level processes for delivering a successful project.
- ✓ The project management life cycle is usually broken down into four phases:
- ✓ **Generally 4 Phases** (initiation, planning, execution, and closure), some methodologies also includes a **fifth phase- 'Controlling and monitoring'** but this phase is covered under the execution and closure phase.

1. Project Initiation Phase

- ✓ Undertaking a feasibility study
- ✓ Identifying scope
- ✓ Identifying deliverables
- ✓ Identifying project stakeholders
- ✓ Developing a business case
- ✓ Developing a statement of work

2. Project Planning Phase

- ✓ Creating a project plan (time Scheduling)
- ✓ Creating workflow diagrams
- ✓ Estimating budget Gathering resources
- ✓ Anticipating risks
- ✓ Holding a project kickoff meeting:

3. Project Execution Phase

- ✓ Creating tasks and organizing workflows
- ✓ Briefing team members on tasks
- ✓ Communicating with team members, clients, and upper management
- ✓ Monitoring quality of work
- ✓ Managing budget

4. Project Closure Phase

- ✓ Analyzing project performance
- ✓ Analyzing team performance
- ✓ Documenting project closure
- ✓ Conducting post-implementation reviews
- ✓ Accounting for used and unused budget

****End of Unit 2****