Welcome to Software Project Management

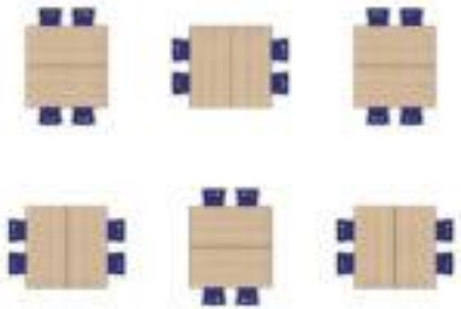
Table preparing challenging

There are 4 Groups required

1. Find 10 members for each group
2. Well prepare your member and site as group
    1. Nice table preparation
    2. Fastest
    3. Silence
    4. Put your group name
    5. Time: 5 min

Self Introduction

- Name?
- Position & Workplace?
- Academies Year



What you want from Session?

Group Individual discussion

List all your need from Software Project Management Subject

- Software Project Mgt
- Team mgt
- Communication and motivation
- Planning the project
- Task management and assign
- Handling budgeting
- QA
- Time management
- Design Plan
- System Architectures design

Ground Role

Microsoft Word
Document

Microsoft Excel
97-2003 Worksheet

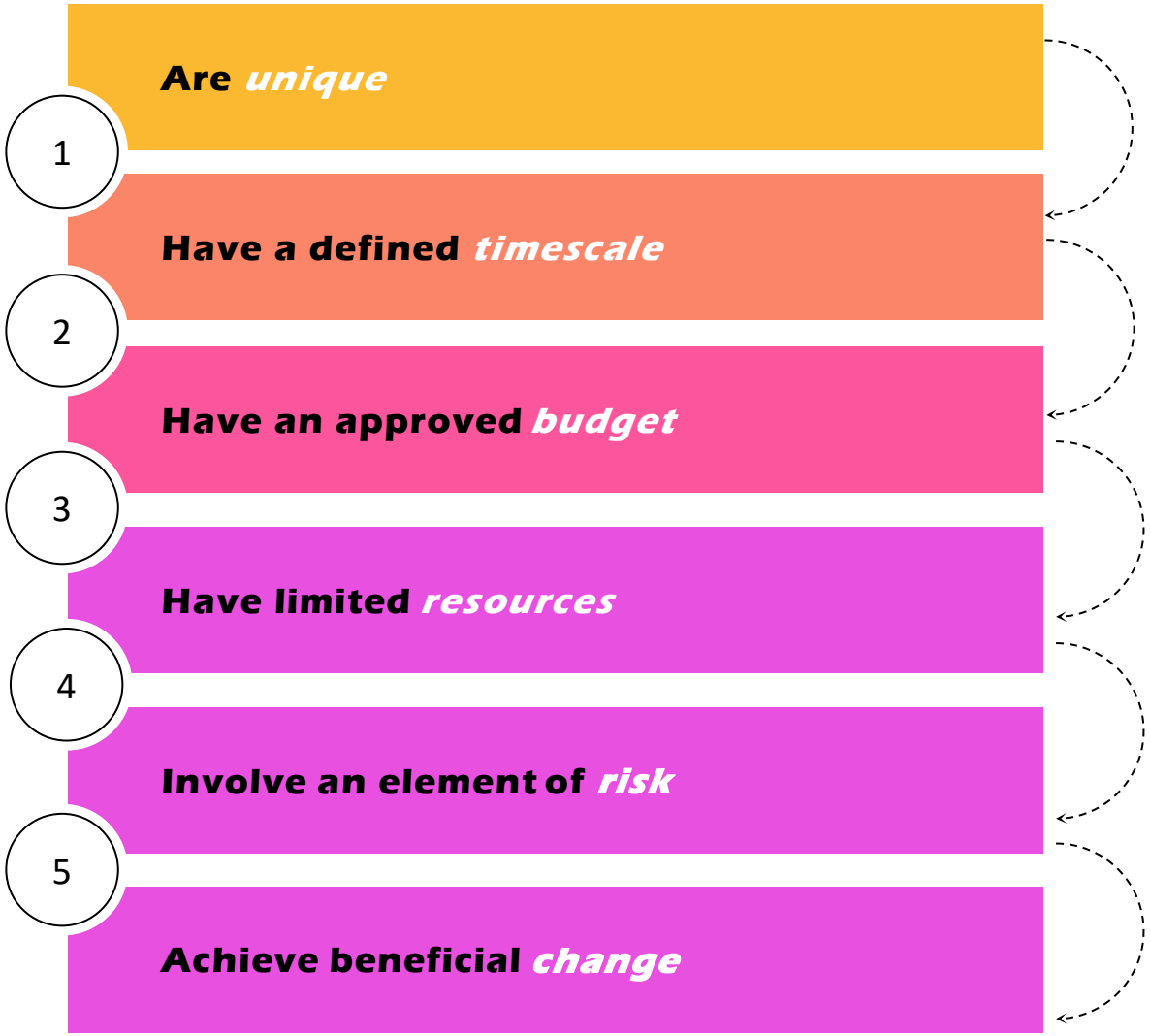
Agenda

1. WHAT IS A PROJECT?
2. Why Projects Fail
3. Why Projects Succeed!
4. Why Project Management?
5. Project Management: Official Definition
6. Project Management: Unofficial Definition
7. Laws of Project Management
8. Planning the Project
    a) Planning the Project: The Project Life Cycle
    b) Planning the Project: Organizing the Project Team
    c) Estimating Time Accurately
    d) Scheduling Simple Project
    e) Gantt Chart
    f) Critical Path Analysis and PERT Charts
    g) The Planning Cycle
9. Project Schedule Tools

Work as a group and find out with 5mins

What is Project?

WHAT IS A PROJECT?



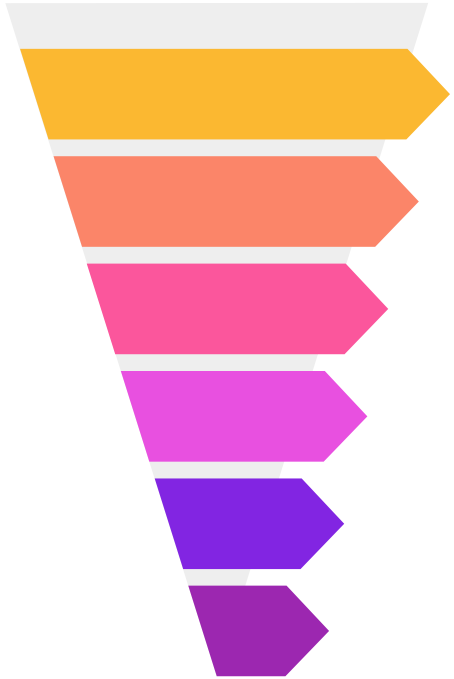
PROJECT

- A project is a **unique** endeavor to produce a set of deliverables within clearly **specified time**, **cost** and **quality** constraints.
- Projects are different from standard business operational activities as they:

Why Projects Fail

- Failure to align project with organizational objectives
- Poor scope
- Unrealistic expectations
- Lack of executive sponsorship
- Lack of project management
- Inability to move beyond individual and personality conflicts
- Politics

Why Projects Succeed!



- Project Sponsorship at executive level
- Good project charter
- Strong project management
- The right mix of team players
- Good decision-making structure
- Good communication
- Team members are working toward common goals

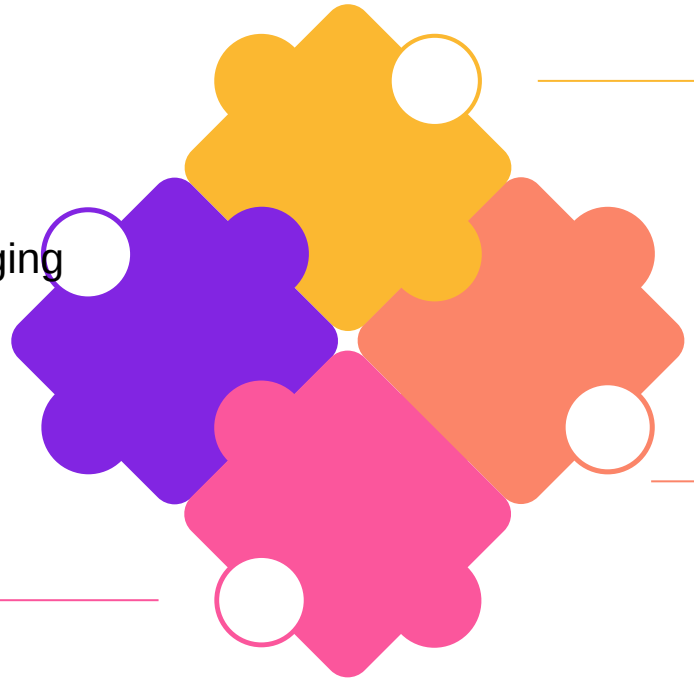
Why Project Management?

Manage

Project management is a method and mindset…a disciplined approach to managing chaos

Manage Change

framework for working amidst persistent change



Complex

Today's complex environments require ongoing implementations

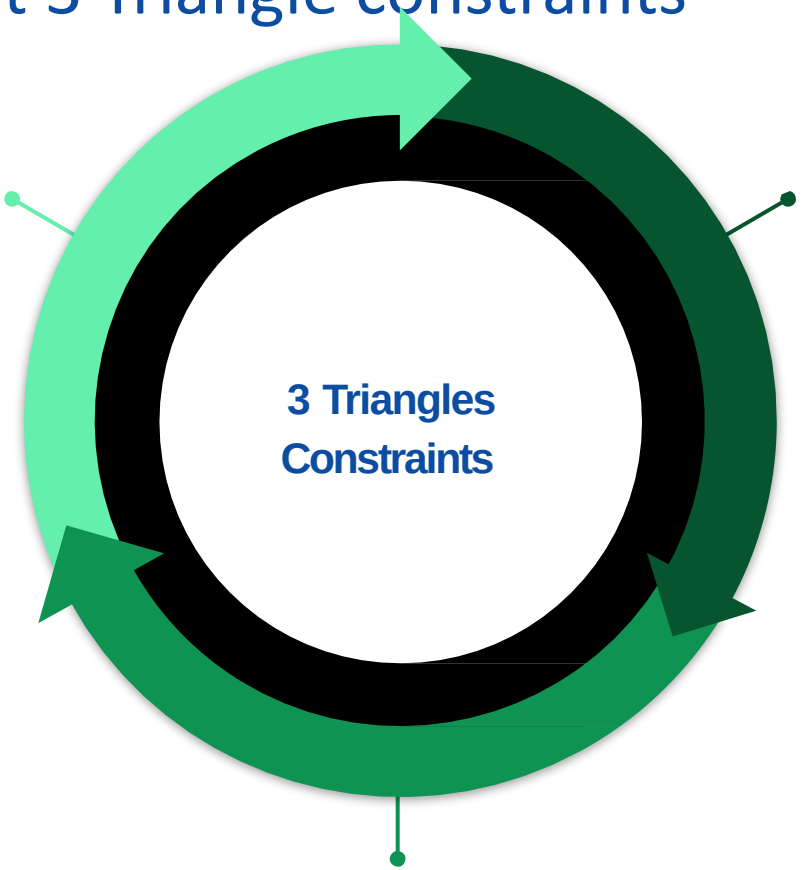
Delivery

ensures what is being delivered is right, and will deliver real value against the business opportunity

Project Management 3 Triangle constraints

Scope Constraint

- Understaffing
- Collect wrong requirement
- Uncertainty of technology



Budget Constraint

- Added additional requirement from Client
- Staffing & recruiting
- Changes to supplier pricing

Time Constraint

- Delays on resources
- Underestimating tasks duration
- Added additional requirement from Client

Working Group

Your Group Are the Software Project Management in IT Technology Solution.

Once client have sign contract to Build Mobile Application.

What is your role need to do as Software Project Manager?

Role of project manager

The main role of project manager is to deliver project successfully

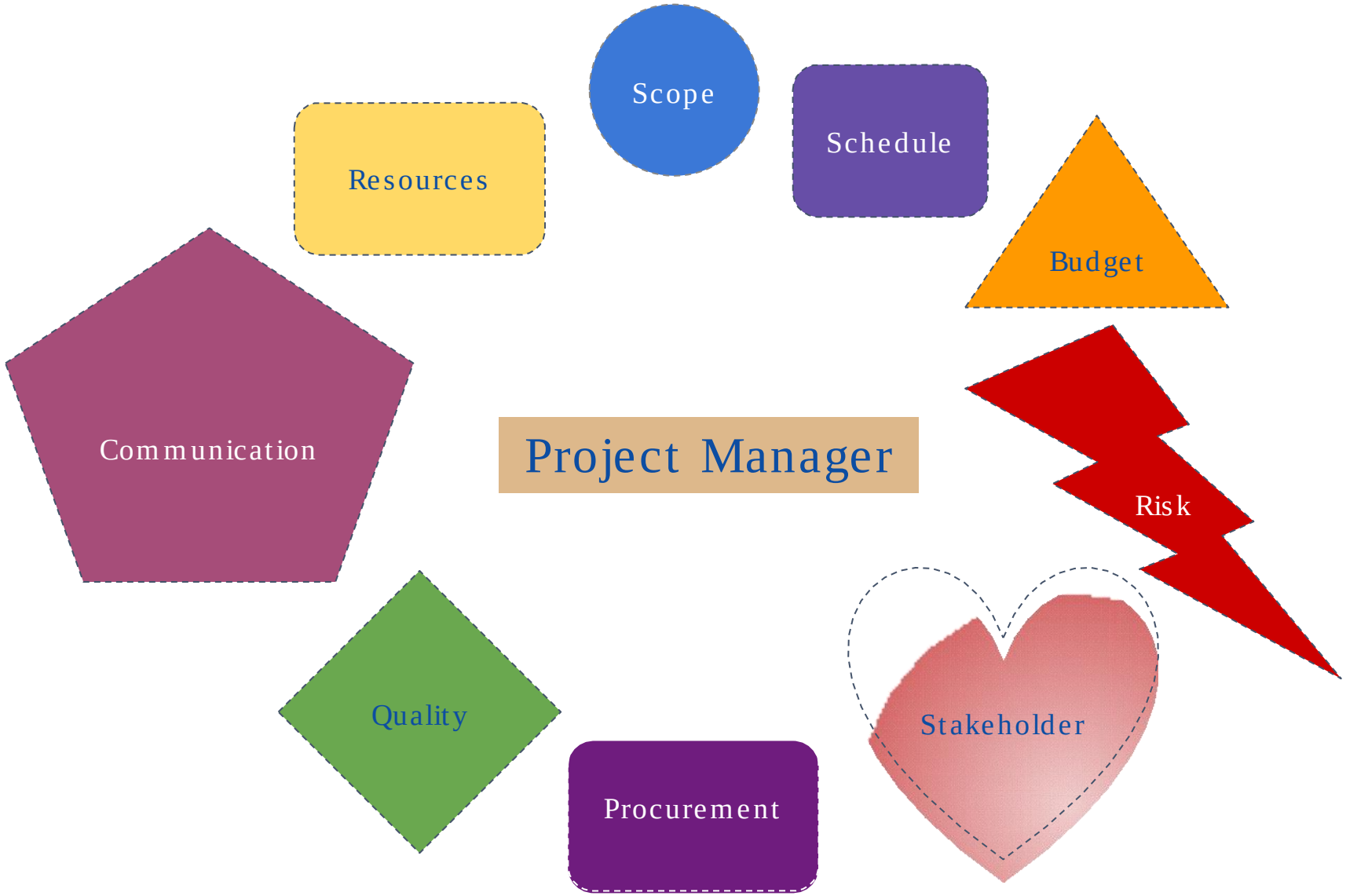
1. **Within a defined scope & quality**
2. **On schedule**
3. **Within budget** .

Role of project manager

To delivery project successfully, project manager should possess the following attributes:

1. Initiator
2. Leader
3. Planner
4. Organizer
5. Communication
6. Negotiator
7. Problem solver
8. Decision maker

2 - Role of project manager



Project management office

PMO

1. Standardization and Governance
2. Project portfolio management
3. Resource management
4. Risk management
5. Reporting and communication
6. Quality assurance
7. Support training
8. Continuous improvement

Organization type

The Project Management Institute (PMI) defines four primary types of organizational structures in project management:

1. **Functional Organization** : In a functional organization, employees are grouped by specialized functions such as marketing, finance, or engineering. Project managers have limited authority and resources are controlled by functional managers. This structure is common in traditional hierarchical organizations

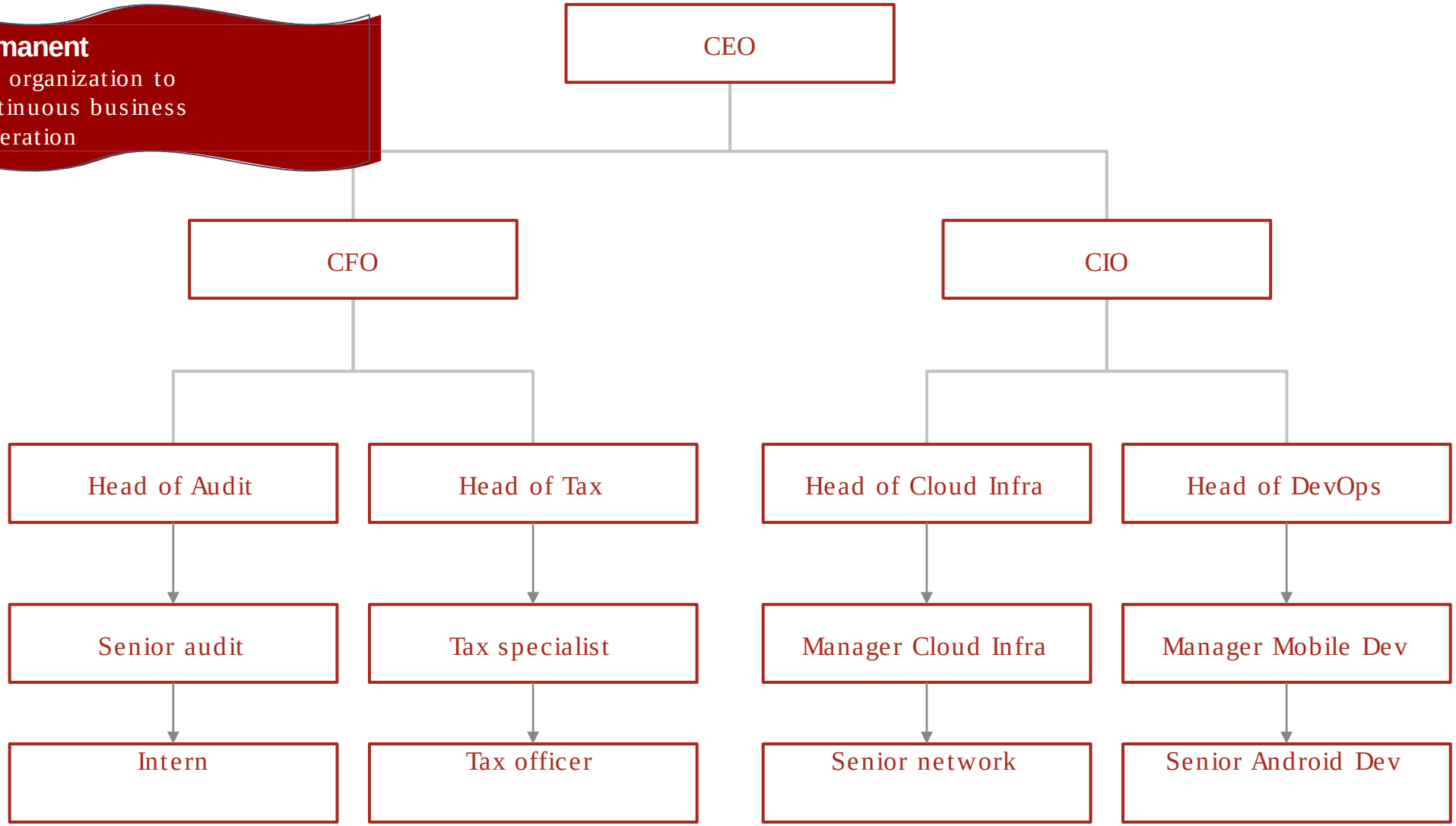
1. **Projectized Organization** : In a projectized organization, project managers have full authority over the project and dedicated project teams are formed for each project. Resources are assigned to projects on a full-time basis, and project managers have a high degree of autonomy. This structure is common in organizations where projects are the primary focus of operations, such as consulting firms or construction companies

1. **Matrix Organization** : A matrix organization combines elements of both functional and projectized structures. Employees report to both functional managers and project managers, creating a matrix-like structure. There are different types of matrix organizations, including weak, balanced, and strong matrices, depending on the balance of power between functional and project managers.

1. **Composite Organization** : This is a hybrid structure that combines elements of multiple organizational types to meet the specific needs of the organization. It may involve a combination of functional, projectized, or matrix structures, tailored to the organization's unique requirements and objectives.

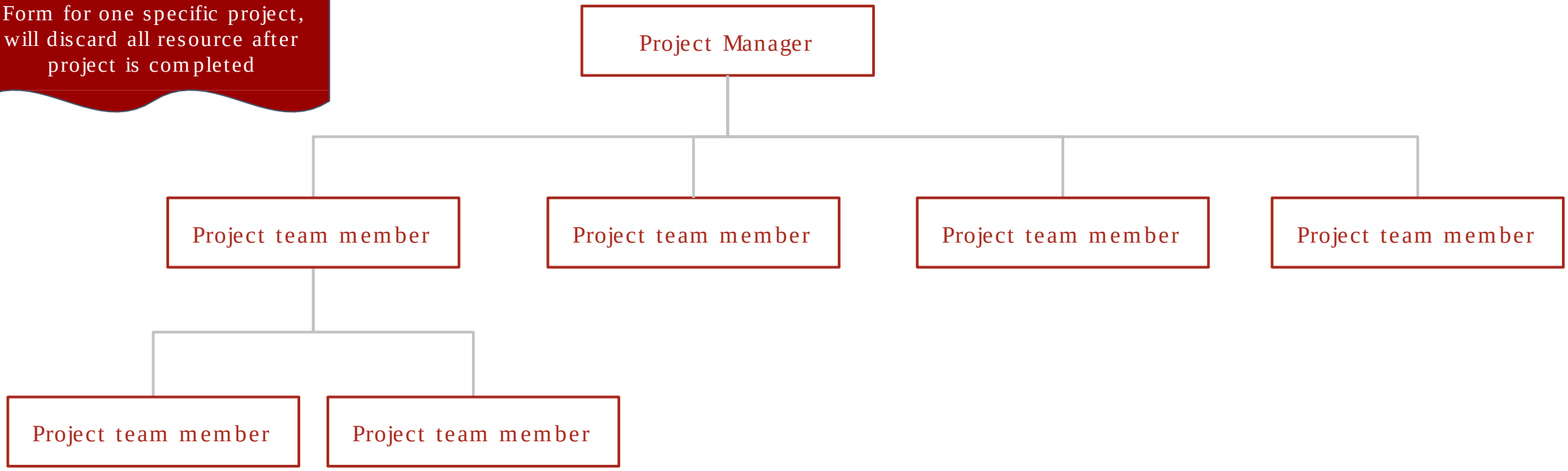
4 - Organization type - Functional

Permanent
Form as an organization to support continuous business operation



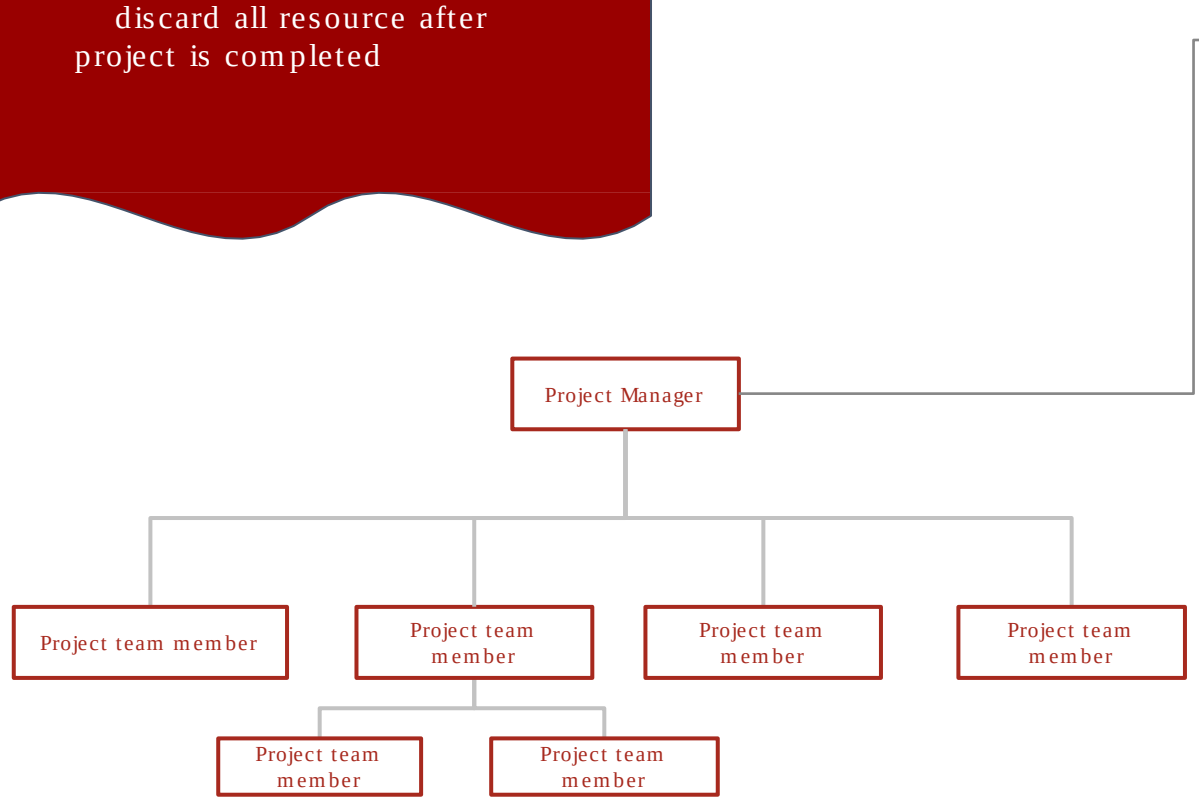
4 - Organization type - Projectized

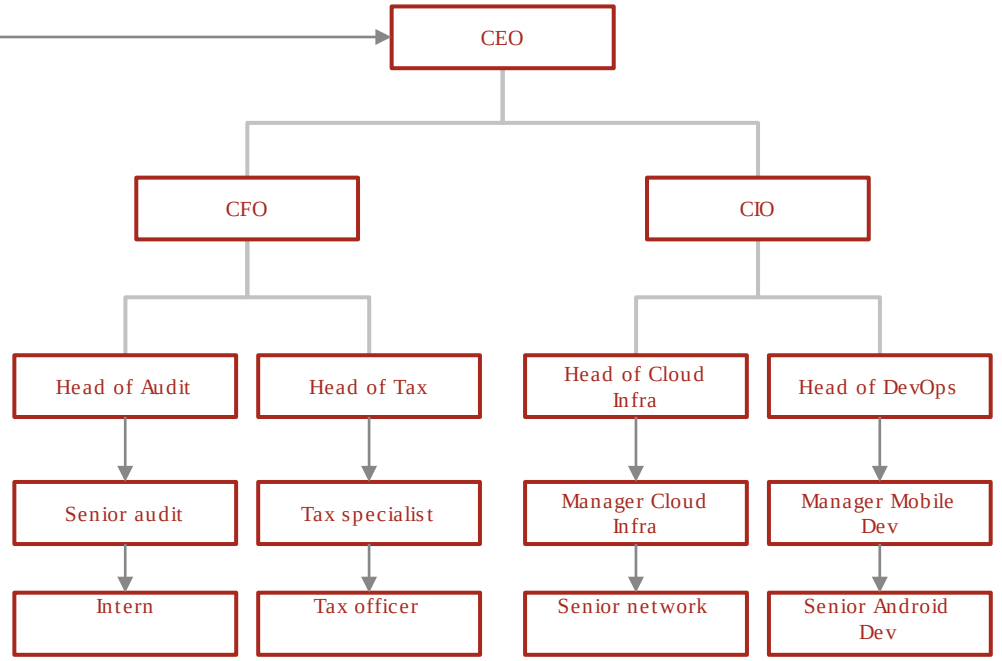
Temporarily
Form for one specific project, will discard all resource after project is completed



4 - Organization type - Matrix

Temporarily
Form for one specific project, will discard all resource after project is completed





Permanent
Form as an organization to support continuous business operation

Class Activities

Select one Project

Prepare your Team member

Design Team Structures by follow the Organization type

Computer Management

Motor Shop Management

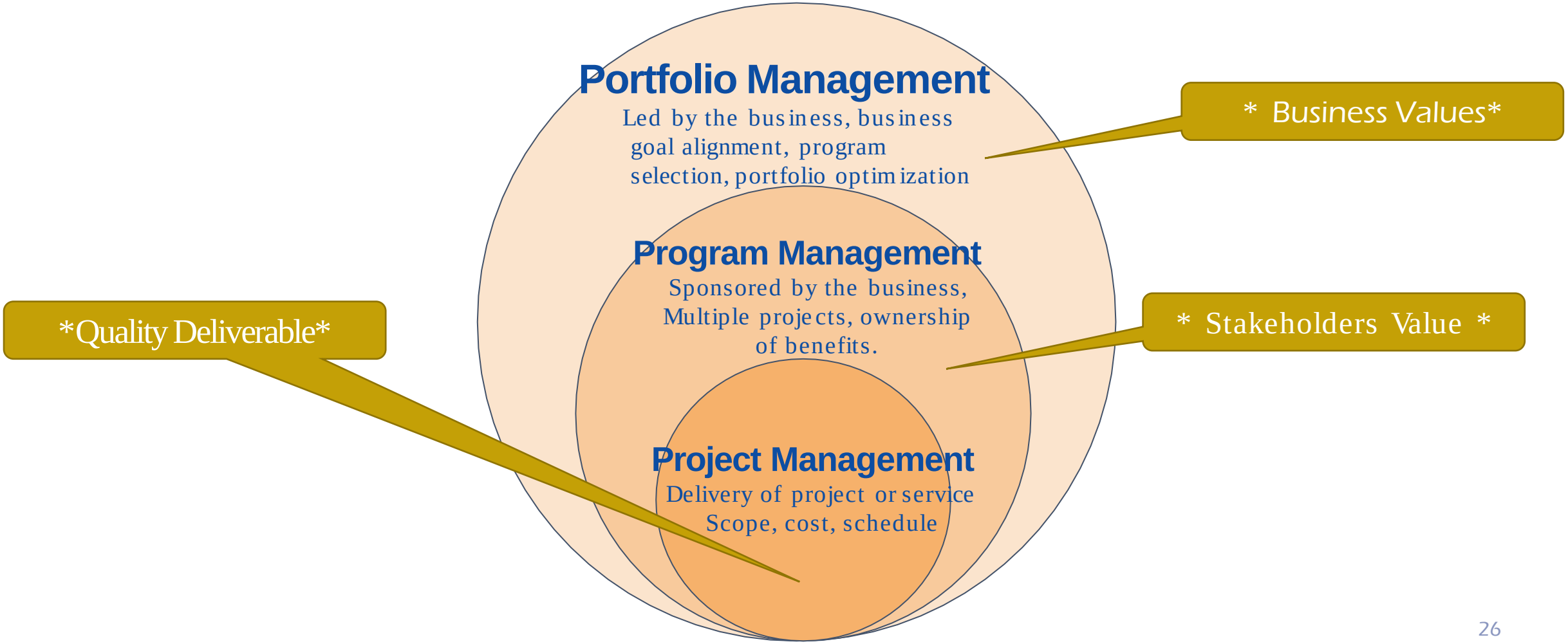
Student Management

Library Management

Phone Management

Portfolio, program, project

The terms portfolio, program, project are commonly used in project management and organizational management. Here's a brief overview of the differences between them:



Portfolio, program, project

1. **Portfolio** :
   - A portfolio is a collection of projects, programs, and other work that are grouped together to achieve strategic objectives.
   - It represents the entire suite of initiatives undertaken by an organization, typically aligned with its mission, vision, and goals.
   - Portfolios are managed at a high level and focus on optimizing resource allocation, balancing risk, and maximizing return on investment across multiple projects and programs.
2. **Program** :
   - A program is a collection of related projects and activities that are managed together to achieve strategic objectives that may not be attainable by managing them individually.
   - Programs often involve interdependencies between projects and share common resources, stakeholders, and goals.
   - Program management involves coordinating and aligning the efforts of multiple project teams to ensure that the overall program objectives are met.
3. **Project** :
   - A project is a temporary endeavor undertaken to create a unique product, service, or result.
   - Projects have defined objectives, scope, timelines, and resources, and they are executed within constraints such as budget, schedule, and quality.
   - Project management involves planning, executing, and controlling the project activities to deliver the desired outcomes on time and within budget.

Operation

- **Operation** :
  - Operations refer to the ongoing, day-to-day activities of an organization that are required to sustain its business and deliver products or services to customers.
  - Unlike projects, operations are repetitive and continuous in nature, with the goal of maintaining business-as-usual functions.
  - Examples of operations include manufacturing processes, customer service operations, IT support services, and administrative functions.

Project vs Operation

In summary, portfolios encompass multiple programs, projects, and operations that collectively contribute to organizational objectives. Programs consist of related projects managed together to achieve strategic goals. Projects are temporary endeavors aimed at delivering specific outcomes within defined constraints. Operations represent the ongoing activities that sustain the organization's business functions.

Project management methodology

A project management methodology is a set of principles, practices, processes, techniques, and tools used to plan, execute, monitor, and control projects. It provides a structured approach for managing projects from initiation to completion, helping project managers and teams effectively deliver project objectives within scope, time, and budget constraints

Project management methodology

There are two methodology in project management:

- **Waterfall** : A linear, sequential approach where each phase of the project is completed before moving to the next phase.
- **Agile**: Iterative and incremental approach focused on flexibility, collaboration, and delivering value to customers through frequent iterations.

Project management methodology

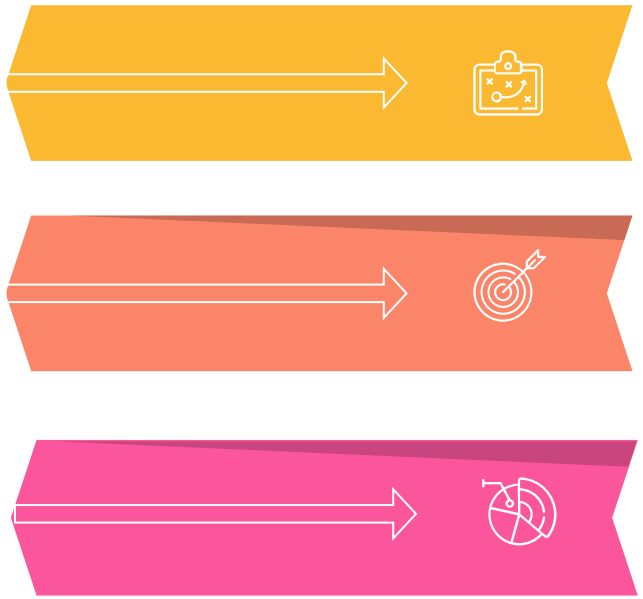
Organizations may adopt one or a combination of these methodologies based on their project requirements, organizational culture, and industry norms. The choice of methodology influences how projects are planned, executed, and controlled, ultimately impacting project success.

Tailoring process

Tailoring in project management refers to the process of adapting and customizing project management methodologies, processes, and practices to suit the specific needs and characteristics of a project. It involves selecting and applying the most appropriate project management approach based on factors such as project size, complexity, risk, and organizational culture. Tailoring allowsproject managers to optimize project management practices to achieve the best outcomes for their projects.

Project Management: Official Definition

Project Management is the skills, tools and management processes required to undertake a project successfully. It incorporates:

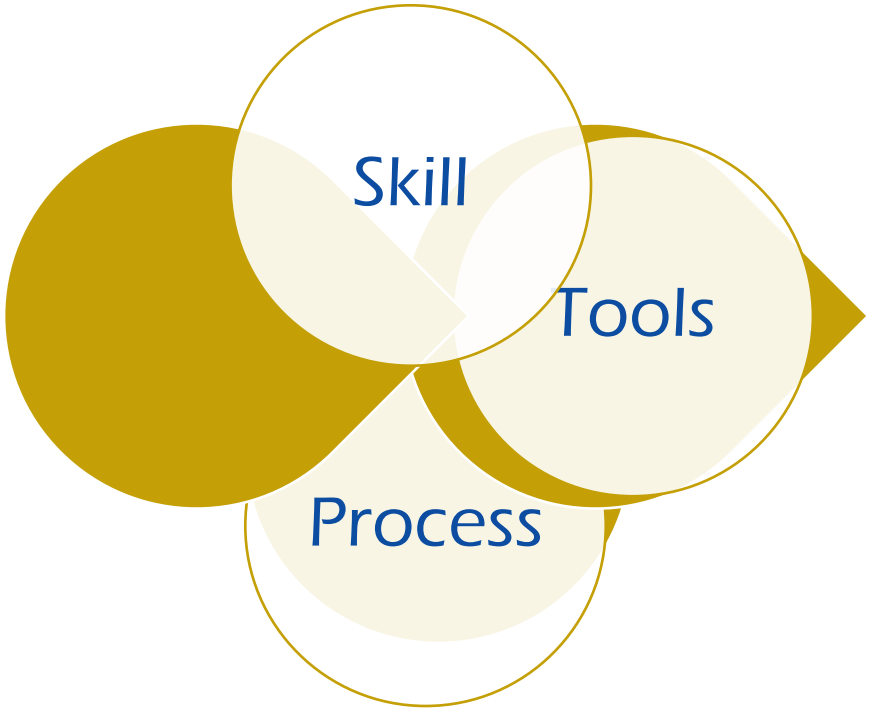


A set of *skills*

A suite of *tools*

A series of *processes*

Project management components



Project Management: Unofficial Definition

Laws of Project Management

- No major project is ever installed on time, within budget, or with the same staff that started it. Yours will not be the first.
- Projects progress quickly until become 90% complete, then they remain at 90% complete forever.
- When things are going well, something will go wrong.
- When things just cannot get any worse, they will.

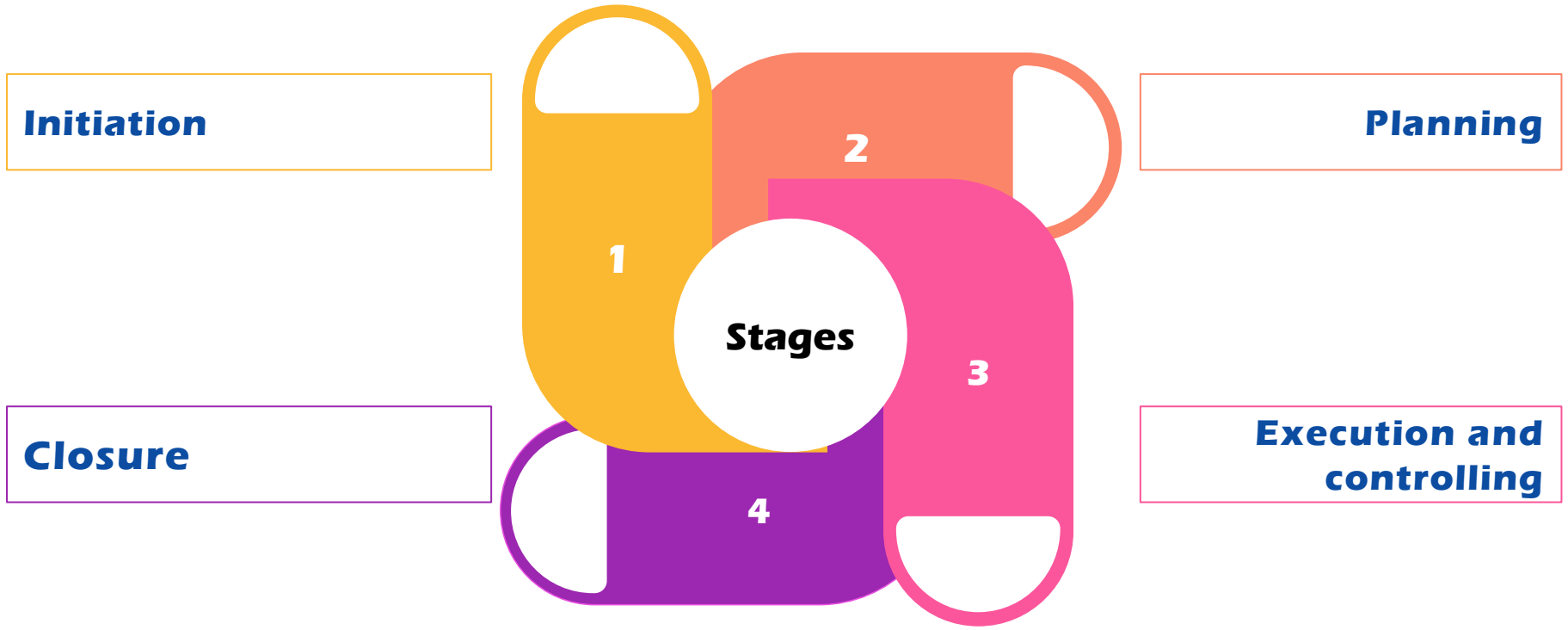
Project Planning and Implementation. by Abraham Shtub, Jonathan F. Bard, and Shlomo Globerson Copyright © 1994

Laws of Project Management

- When things appear to be going better, you have overlooked something.
- No system is ever completely debugged. Attempts to debug a system inevitably introduce new bugs that are even harder to find.
- A carelessly planned project will take three times longer to complete than expected
- A carefully planned project will take only twice as long.
- Project teams detest progress reporting because it vividly manifests their lack of

Planning the Project

Planning the Project: The Project Life Cycle



Planning the Project: The Project Life Cycle

1
Initiation

- Develop a Business Case
- Establish the Term of Reference
- Setup Project Office
- Undertake a Feasibility Study
- Appoint a Project Team
- Perform Phase Review

Planning the Project: The Project Life Cycle

2
Planning

- Create a Project Plan
- Create a Resource Plan
- Create a Financial Plan
- Create Quality Plan
- Create a Risk Plan
- Create an Acceptance Plan
- Create a Communication Plan
- Create a Procurement Plan
- Contract the Suppliers
- Perform Phase Review

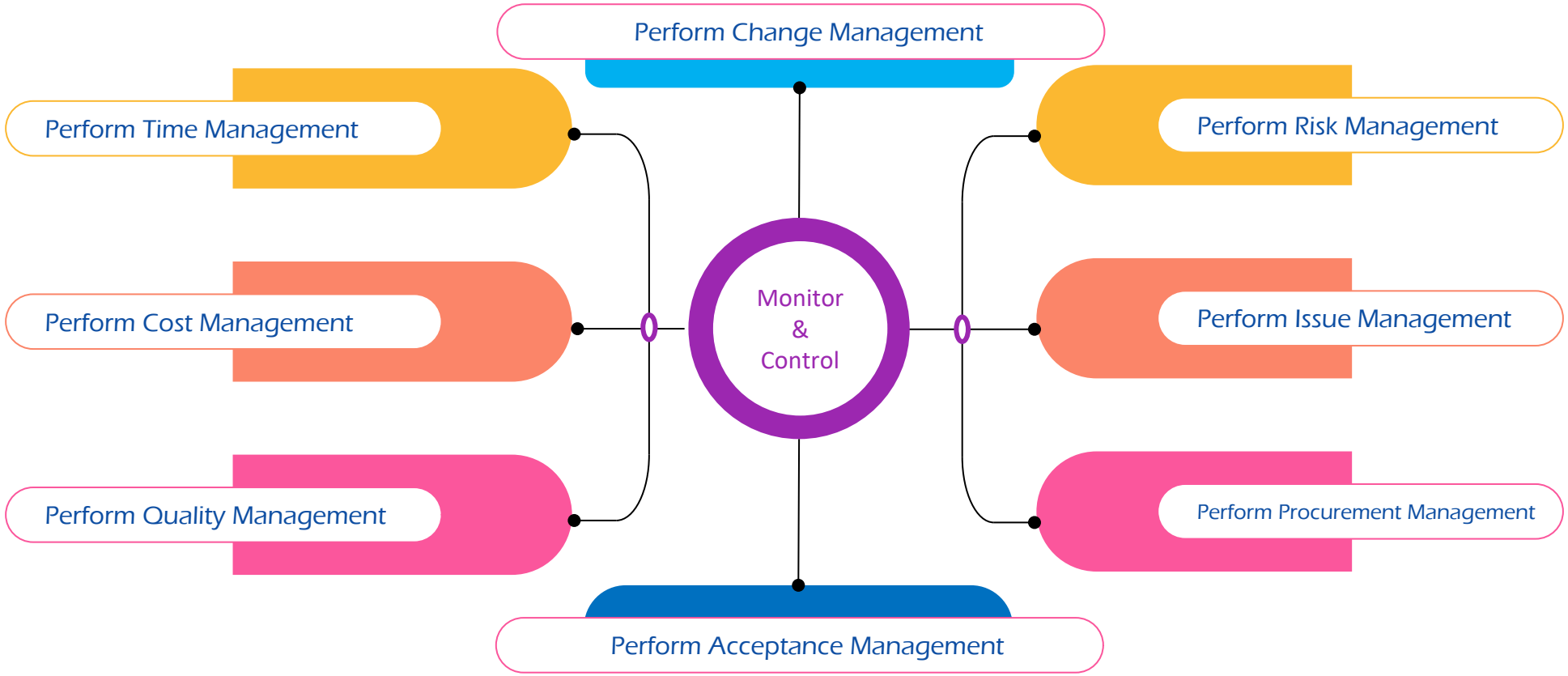
Planning the Project: The Project Life Cycle

3. Execution and Controlling

- Build Deliverables

➔ Perform Phase Review

➔ Perform Communications Management



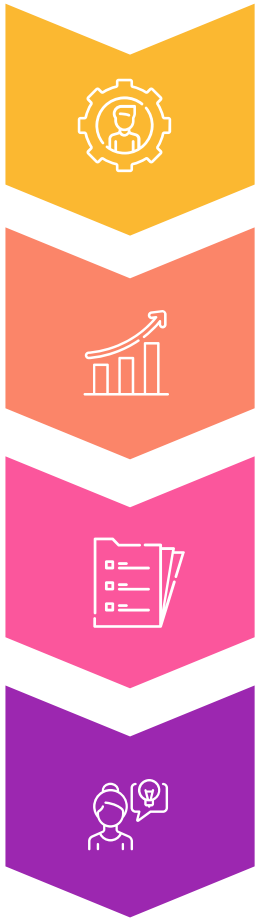
Planning the Project: The Project Life Cycle

4 Closure

Perform Project Closure

Review Project Completion

Planning the Project: Organizing the Project Team



Project Leader

The Team

Work Methods and Procedures

Work Plan

Planning the Project: Project Plans

Project Plans Componence

1) Estimating Time Accurately
2) Scheduling Simple Projects
3) Gantt Charts – Scheduling Projects with Dependent Stages
4) Critical Path Analysis and PERT – Scheduling Complex Projects
5) The Planning Cycle – A Planning Process for Middle- Sized Projects
6) Planning Large Projects and Programs

Planning the Project: Project Plans

1 Estimating Time Accurately

- Time estimates drive the setting of deadlines for delivery of projects, and hence people's assessments of your reliability.
- They often determine the pricing of contracts and hence their profitability.

1			**Bakong Visa Store Value**	**102 days**	**7/10/23**	**11/29/23**		**70%**
2	✓		Project Kick Off	1 day	7/10/23	7/10/23	BU,NBC,VISA/CYBS	100%
3	✓		Requirement Collection	31 days	7/11/23	8/22/23	2 Hang Youlay, Houng Borey	100%
4	✓		Analyst BRD	19 days	8/23/23	9/18/23	3 Hang Youlay, Houng Borey	100%
5	✓		Analyst Cybersource Specification	3 days	9/19/23	9/21/23	4 Hang Youlay, Houng Borey	100%
6	✓		Analyst Program specification need to use	1 day	9/22/23	9/22/23	5 Houng Borey, Hang Youlay	100%
7			**API Development and system intergration**	**4 days**	**9/22/23**	**9/28/23**	**6**	**100%**

Planning the Project: Project Plans

1 Estimating Time Accurately

- Other high urgency tasks to be carried out which will have priority over this one
- Accidents and emergencies Internal meeting
- Holidays and sickness in essential staff
- Contact with other customers, perhaps to arrange the next job Breakdowns in equipment
- Missed deliveries by suppliers Interruptions
- Quality control rejections

Planning the Project: Project Plans

2 Scheduling Simple Project

Examples might be coordinating delivery of resources for a workshop session, implementing a small marketing plan, or delivering a simple software enhancement.

Planning the Project: Project Plans

2 Scheduling Simple Project (Cont.)

Sequential and Parallel Activities

- An essential concept behind project planning and Critical Path Analysis is that some activities are dependent on other activities being completed first.
- These dependent activities need to be completed in a sequence, with each stage being more-or-less completed before the next activity can begin. We can call dependent activities 'sequential' or 'linear'.
- Other activities are not dependent on completion of any other tasks. These may be done at any time before or after a particular stage is reached. These are nondependent or 'parallel' tasks.

Planning the Project: Project Plans

3 Gantt Chart

Gantt Charts are useful tools for analyzing and planning complex projects. They:

- Help you to plan out the tasks that need to be completed
- Give you a basis for scheduling when these tasks will be carried out
- Allow you to plan the allocation of resources needed to complete the project, and
- Help you to work out the critical path for a project where you must complete it by a particular date.

Planning the Project: Project Plans

3 Gantt Chart (Cont.)

To draw up a Gantt diagram, follow these steps:

1. List all activities in the plan
2. Head up graph paper with the days or weeks through to task completion
3. Plot the tasks onto the graph paper
4. Schedule Activities
5. Presenting the Analysis

Planning the Project: Project Plans

3 Gantt Chart (Cont.)

1. List all activities in the plan

- For each task, show the earliest start date, estimated length of time it will take, and whether it is parallel or sequential. If tasks are sequential, show which stages they depend on.

	Task Mode	Task Name	Duration	Start	Finish	Predece	Resource Names	% Work Complete
1		**Bakong Visa Store Value**	**102 days**	**7/10/23**	**11/29/23**			**70%**
2	✓	Project Kick Off	1 day	7/10/23	7/10/23		BU,NBC,VISA/CYBS	100%
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4	✓	Analyst BRD	19 days	8/23/23	9/18/23	3	Hang Youlay, Houng Borey	100%
5	✓	Analyst Cybersource Specification	3 days	9/19/23	9/21/23	4	Hang Youlay, Houng Borey	100%
6	✓	Analyst Program specification need to use	1 day	9/22/23	9/22/23	5	Houng Borey, Hang Youlay	100%
7		**API Development and system intergration**	**4 days**	**9/22/23**	**9/28/23**	**6**		**100%**
8	✓	Environment Setup	1 day	9/25/23	9/25/23	6	Houng Borey,Infra-Network	100%
9	✓	Developvelop Get Instrument Identifier	1 day	9/26/23	9/26/23	8	Houng Borey	100%
10	✓	Development Payer Authentication	1 day	9/26/23	9/26/23	8	Houng Borey	100%
11	✓	Develop Payer Authentication Enrollment	2 days	9/26/23	9/27/23	8	Houng Borey	100%
12	✓	Develop Payer Authentication Enrollment with payment token	1 day	9/26/23	9/26/23	8	Houng Borey	100%

Class Activities

1. List all activities in the plan to do in excel of your Project Group
2. Othering Priority Task

Planning the Project: Project Plans

3 Gantt Chart (Cont.)

2. Head up graph paper with the days or weeks through to task completion

3. Plot the tasks onto the graph paper

- Plot each task on the graph paper, showing it starting on the earliest possible date. Draw it as a bar, with the length of the bar being the length of the task.

Task Mode	Task Name	Duration	Start	Finish	Predece
	Bakong Visa Store Value	**102 days**	**7/10/23**	**11/29/23**	
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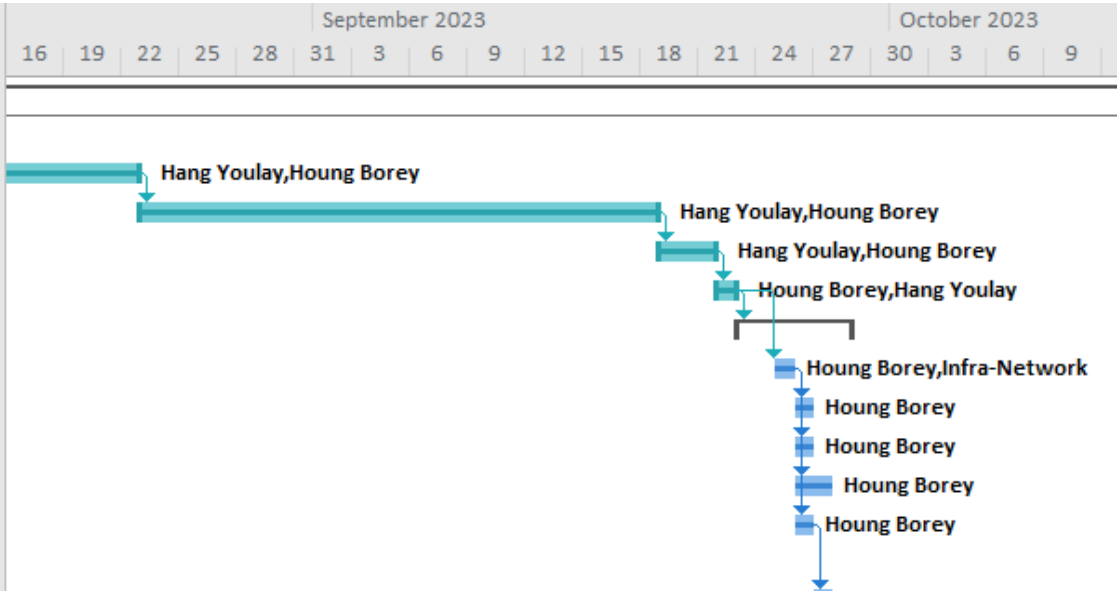
✓	Environment Setup	1 day	9/25/23	9/25/23	6
✓	Developvelop Get Instrument Identifier	1 day	9/26/23	9/26/23	8
✓	Development Payer Authentication	1 day	9/26/23	9/26/23	8
✓	Develop Payer Authentication Enrollment	2 days	9/26/23	9/27/23	8
✓	Develop Payer Authentication Enrollment with payment token	1 day	9/26/23	9/26/23	8



Planning the Project: Project Plans

Gantt Chart