

Project Quality Management

Prepared by Dr. Ehab Mahmoud



Project Quality Management

Lecture 6

PMG354
Project philosophy

Lecture
06

Objectives



At the end of this lecture, we expect to acquire fundamental knowledge about the projects starting by their definitions and ending to explanation of their inputs, outputs and tools.



Lecture
06

Contents

- Introduction
- What is a Project?
- Project Management
- Operations
- Operations Management
- Programs
- Program Management
- Portfolios
- Portfolio Management
- Portfolios, Programs, and Projects
- Project Management Office (PMO)
- Project Stakeholders
- The Project Manager
- The Project Management Life Cycle
- The Project Life Cycle
- Project Management Knowledge Areas
- The Project Management Processes
- Project Milestones
- Project Management Deliverables
- Project Timeline
- Project Resources
- Project Management Methodology
- Inputs, Tools and Techniques, and Outputs
- Project planning

Introduction

- A project is a series of activities and tasks with a specified objective, starting and ending dates and resources.
- Resources consumed by the project include time, money, people, and equipment.

Introduction (Cont.)

The Value of Project Management

- Allows for excellent organization and tracking
- Better control and use of resources
- Reduces complexity of inter-related tasks
- Allows measurement of outcome versus plans
- Early identification of problems and quick correction

Introduction (Cont.)

The Triple Constraint of Projects

- On Time, Budget, Quality = Required Scope

- Integration
- Trade – Off's



What is a Project?

- **A Project:** is a temporary integrative big task with a clearly defined beginning and end, resulting in a unique product or service using progressive elaboration.
- It is different from an organization's ongoing operations because a project ends when its objectives are achieved.

What is a Project?

Ongoing Work	Project Work
Repeating process	Temporary process
No clear beginning or ending	Clear beginning and ending
Same output each time	Output is created only once
Everyone in work group performs similar functions	Requires <u>multi-disciplined</u> team

Project Management

- **Project Management:** is the planning, organizing, scheduling, leading, communicating and controlling of work activities to achieve a **pre-defined** outcome of a project.
- Project Management: is defined as “The application of knowledge, skills, tools, and techniques to meet project requirements”.

Operations

- **Operations:** are the ongoing and repetitive tasks that produce the same outcome every time they are performed.
- The purpose of operations is to carry out day-to-day organizational functions, generate income to sustain the business, and increase the value of organizational assets; operational processes are aligned with the business requirements of the organization.

Operations Management

- **Operations Management:** is the management of resources and processes involved in producing and delivering products and services.

Programs

- **A Program:** is a group of related projects managed by a program manager and have a common objective; it offers great control over the organization projects and delivers benefits that the organization can use to meet its goals.
- Organization's projects always be a part of programs; projects that do not have a common objective, but still are managed in a group, are generally known as "multiple projects".

Program Management

Program Management: managing multiple projects and integrating them towards a common goal; it requires managers to manage the interdependencies between the projects by allocating resources, prioritizing efforts, and maintaining the projects' alignment with business objectives.

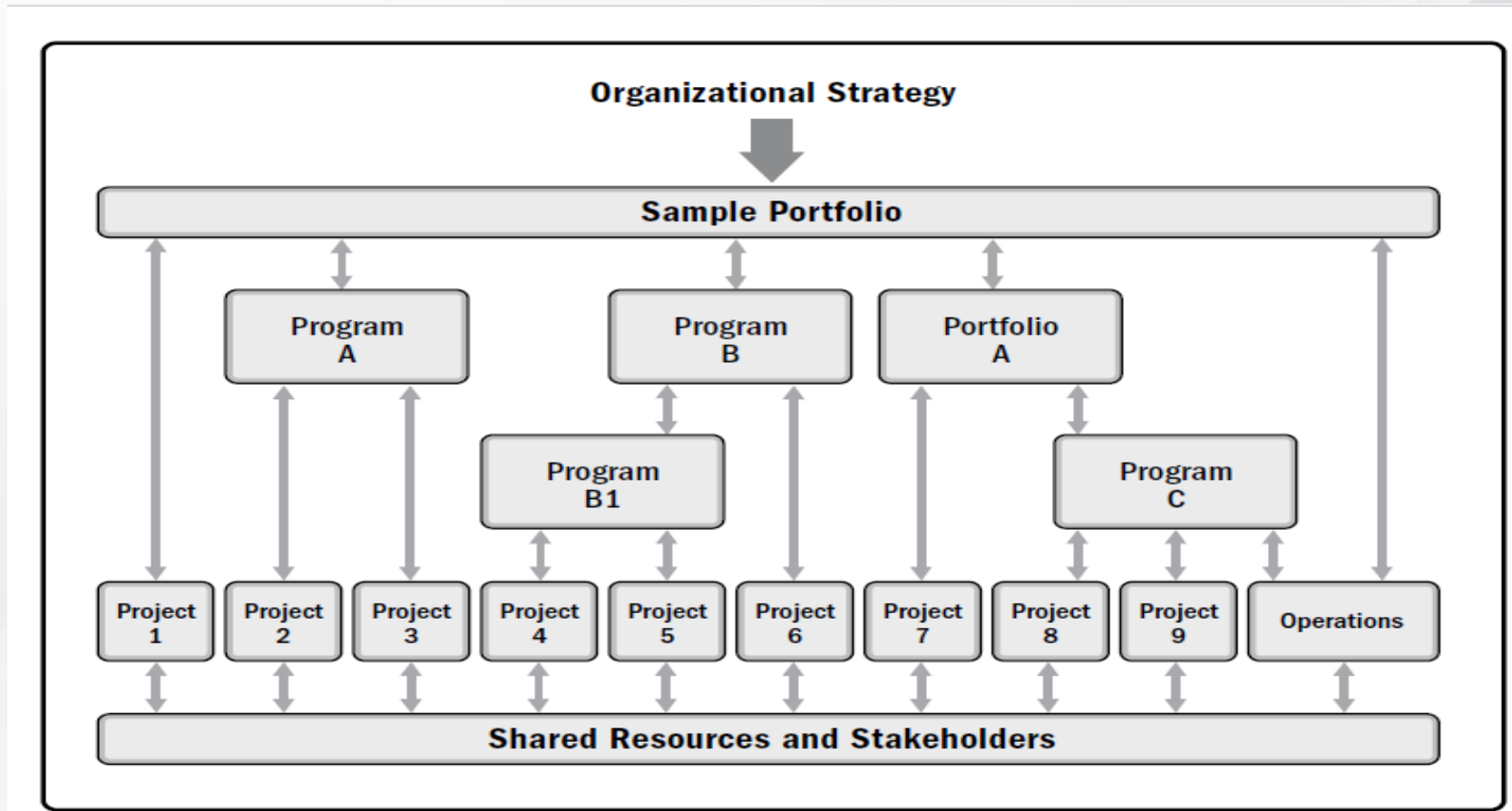
Portfolios

- **Portfolio:** is a collection of a group of projects in alignment with the strategic goals of the organization.
- The projects collected in a portfolio and managed together **may or may not be interdependent**, but they are grouped together to give management the long view of the organization's projects and their adherence to organizational objectives.

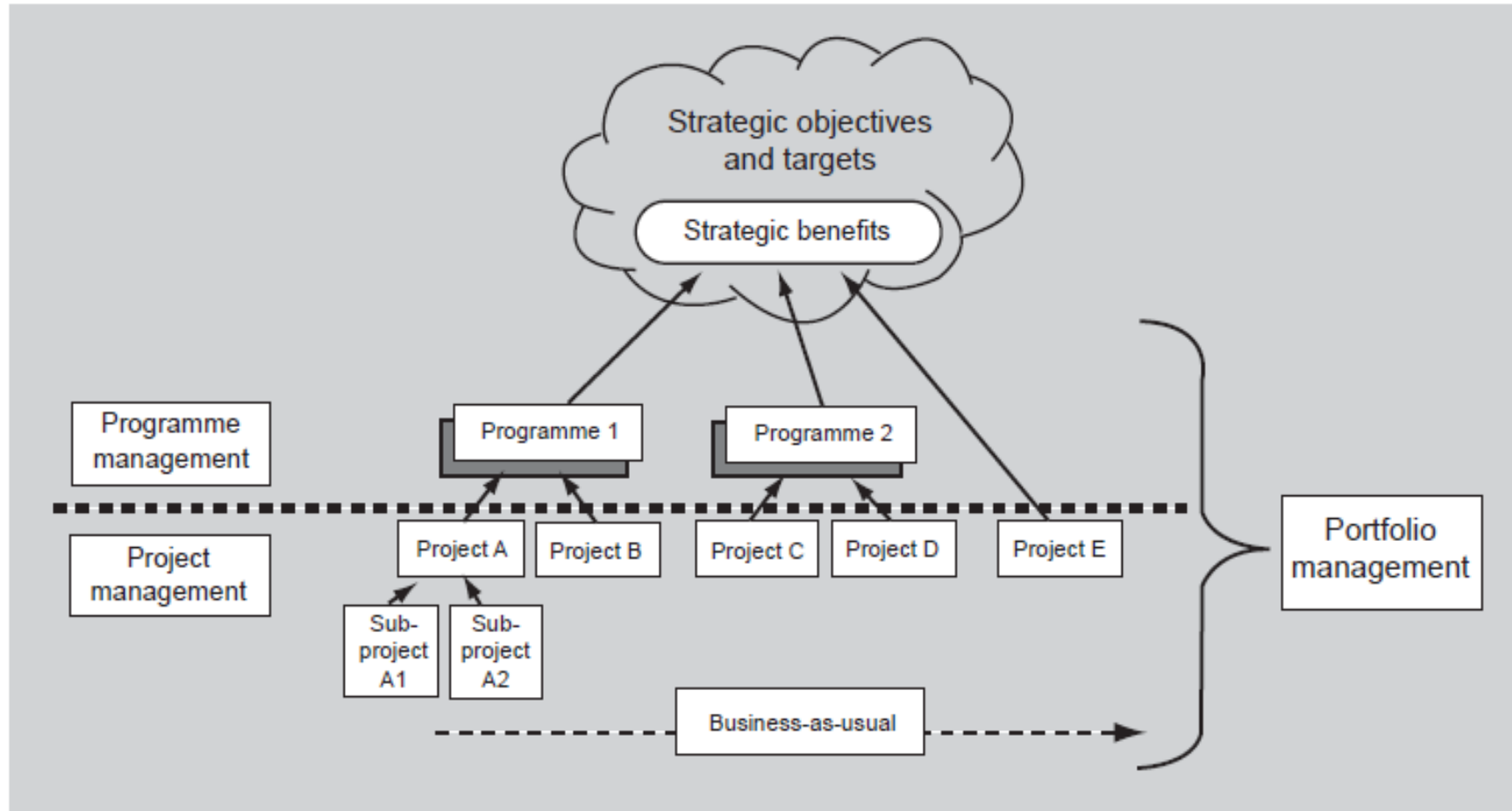
Portfolio Management

- Portfolio Management: a portfolio may collect several unrelated projects if they all support major goals or a significant product line and it resides at the top level of the organizational hierarchy.

Portfolios, Programs, and Projects



Portfolios, Programs, and Projects



Project Management Office (PMO)

- **A Project Management Office (PMO):** is a centralized, permanent, ongoing administrative unit or department that serves to improve project-management performance within an organization.
- The people in the PMO provide support, tools, training, and mentoring to project managers; they may or may not actually do hands-on project management themselves.

Project Management Office (PMO)

- The PMO try to maintain standards across projects and improve efficiency.
- The PMO may be referred to in some organizations as the “Project Office” or “Program Office” or “Program Management Office”.
- The head of the project management office can be considered as a manager of project managers.
- The project management office (PMO) will actually be responsible for direct management of large projects/programs.

PMO Functions

Maintaining
project historical
information.

Managing shared
resources across
projects managed
by the PMO.

Monitoring project
timelines, budget,
and quality at an
enterprise level.

Identifying and
implementing new
project
management
methodologies.

Creating effective
project policies
and templates.

Helping project
managers develop
cost estimates and
schedules.

Managing
communication
across projects.

Project Stakeholders

- **A Stakeholder:** is a person and/or organizations who has a business interest in the outcome of a project, or who is actively involved in a project (Sponsor, Customer, PM, Project team, PM team and any influencers).
- Stakeholders have different interests, needs, and priorities; they may have different opinions about what the project should be trying to accomplish, or what a successful outcome might be; therefore, it is important to identify all stakeholders as early as possible in the initiation.

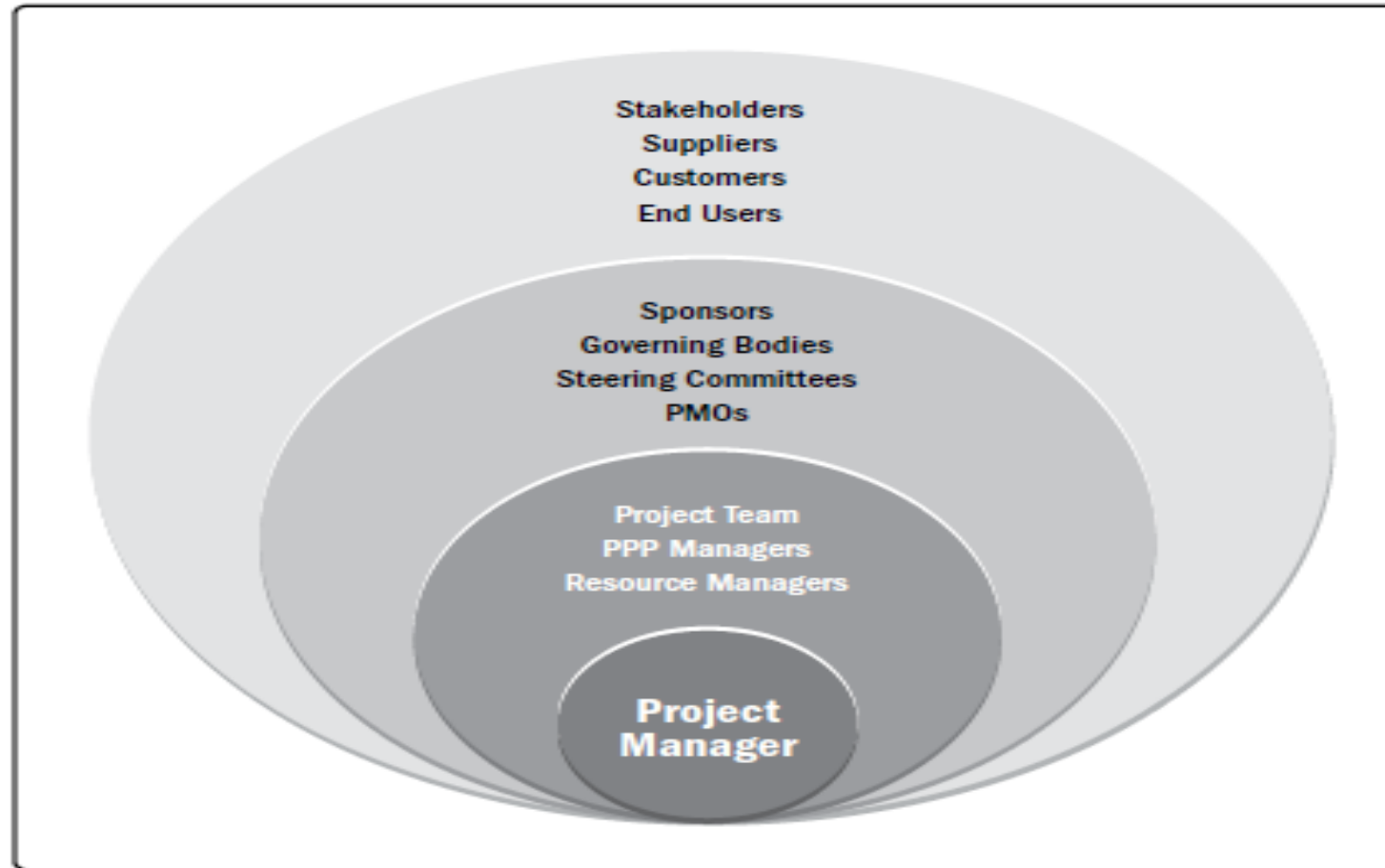
Project Stakeholders

- Often have conflicting expectations and objectives
- In general, differences should be resolved in favor of the customer – individual(s) or organization(s) that will use the outcome of the project
- Stakeholder management is a proactive task
 - Project Managers must determine all stakeholders and incorporate their needs into the project

Types of Project Stakeholders

Internal stakeholders	External stakeholders
Sponsor,	Customers,
Resource manager,	End users,
Project management office (PMO),	Suppliers,
Portfolio steering committee,	Shareholders
Program manager,	Regulatory bodies
Project managers of other projects,	Competitors
Team members.	

Types of Project Stakeholders



The Project Manager

- The Project Manager is the individual responsible for managing all aspects of the project.
- The project manager:
 - Works with stakeholders to define the project.
 - Plans, schedules, and budgets project activities.
 - Monitors performance and takes corrective actions.
 - Keeps the sponsor and the stakeholders informed.
 - Requests and documents scope changes.
 - Acts as a liaison between the project team and other stakeholders.

The Project Manager

- If the sponsor is outside of the company (external customer); the project manager also:
 - Has the financial resources for the project.
 - Signs and publishes the project charter.
 - Signs off on all planning documents and change requests.
 - Authorizes team to use resources.
 - Reviews progress and quality.

The Project Manager

- The Successful Project Manager: A balance of soft and technical Skills.

A Successful Project Manager “Soft skills”



A Successful Project Manager “Technical skills”

- **Project Management Knowledge:**
 - Knowledge of project management tools and techniques.
 - Ability to apply the project management knowledge to ongoing projects.
- **Knowledge of the Application Area:**
 - Knowledge of the industry, functional departments, and technical elements.
 - Familiarity with accepted standards and regulations.

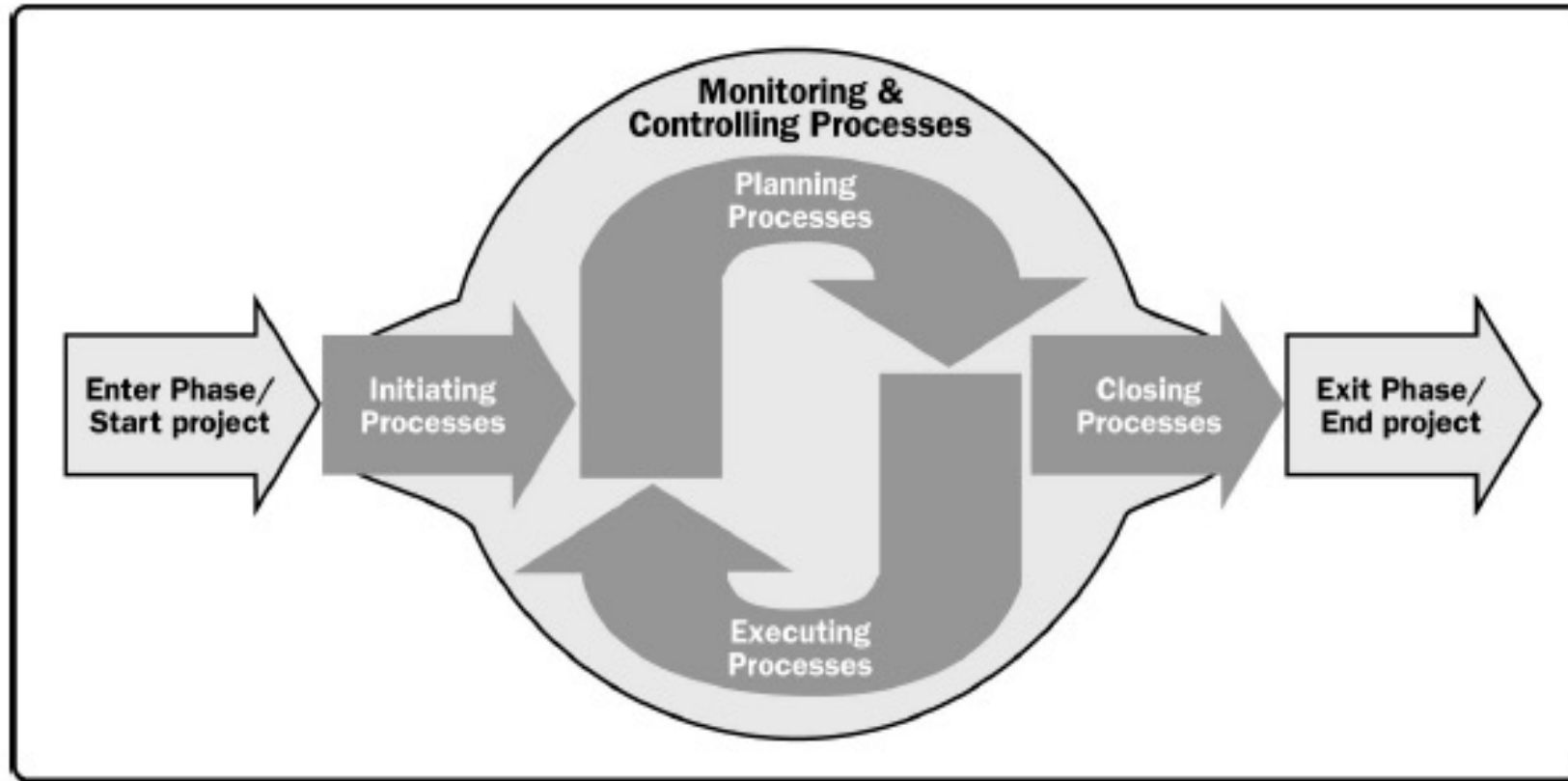
The Project Management Life Cycle

- Once a project is initiated, you move into the planning processes where you develop a project management plan.
- From there, you start executing the plan, control and monitor work results in the executing phase.

The Project Management Life Cycle

- The work results your team generates may indicate a need for modifications to the project schedule, budget, or scope statement, which requires more planning.
- The loop continues between planning, executing, and controlling and monitoring until the project's objectives are completely and satisfactorily met; then, you move into the closing phase.

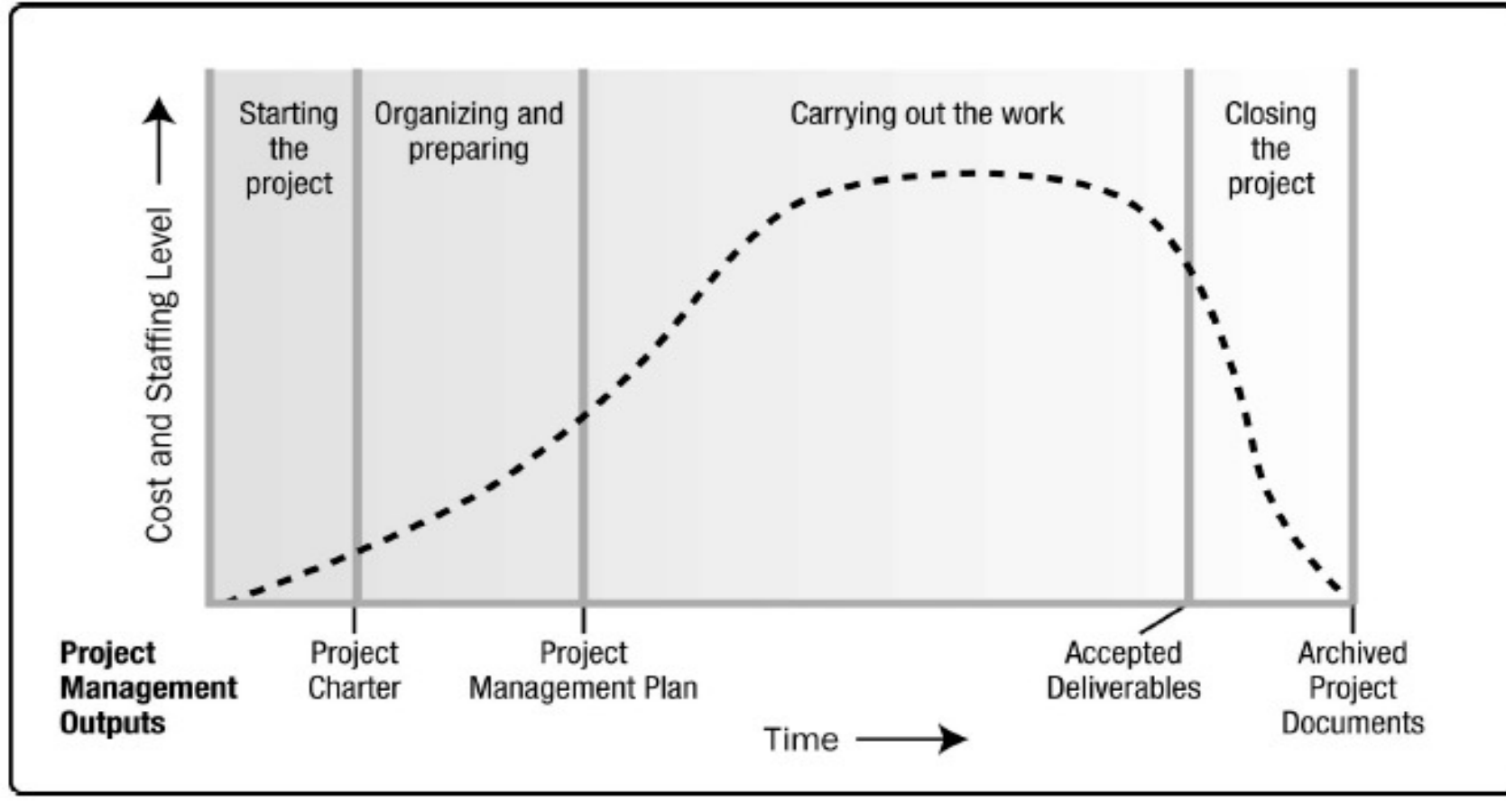
The Project Management Life Cycle



The Project Life Cycle

- Project life cycle: is the series of phases that a project passes through from its start to its completion.
- projects vary in size and the amount of complexity they contain, a typical project can be mapped to the following project life cycle structure:-
 - ☐ Starting the project,
 - ☐ Organizing and preparing,
 - ☐ Carrying out the work, and
 - ☐ Closing the project.

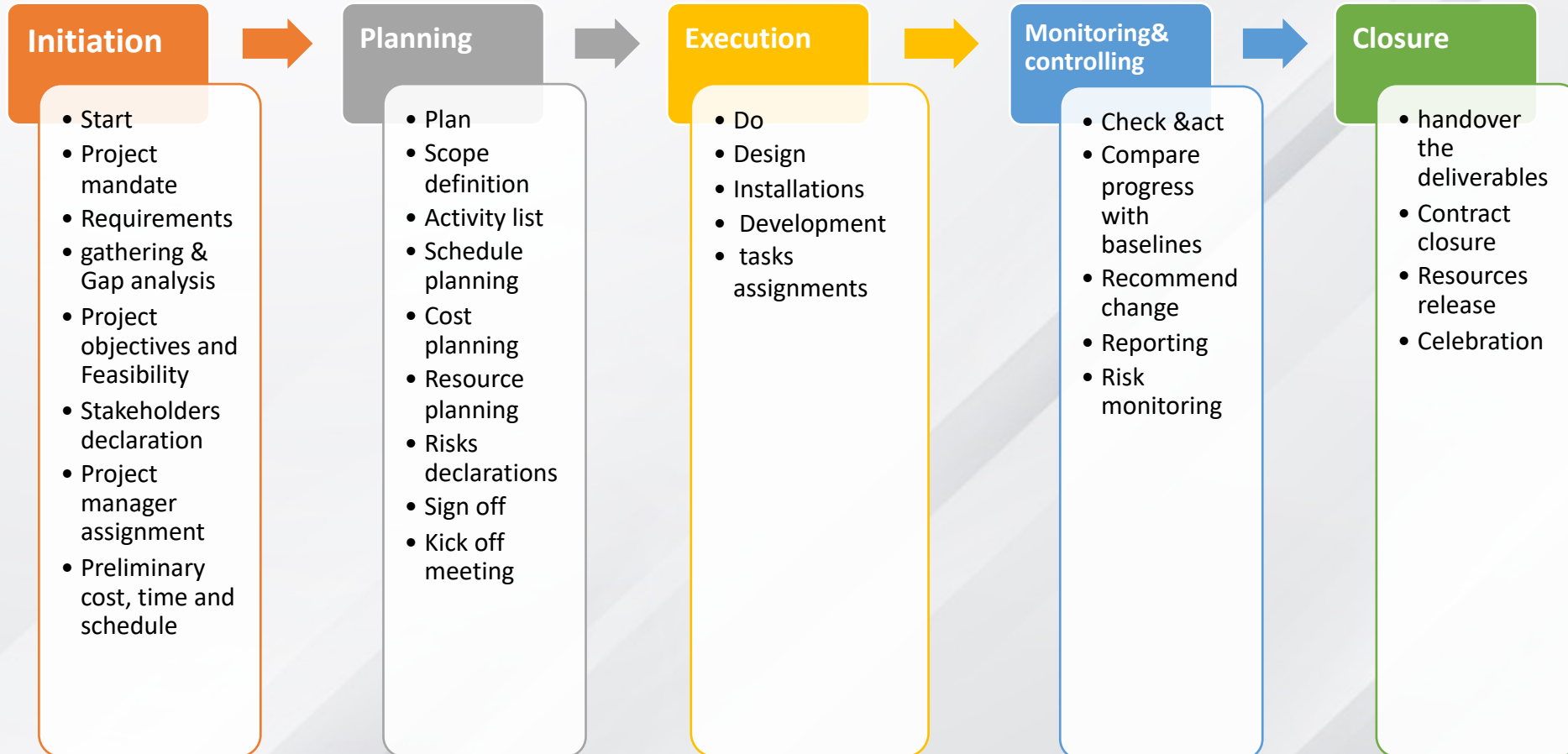
The Project Life Cycle



The Project Life Cycle

- In order to improve management control, projects are typically broken down into manageable, sequential phases of work activities named: Project Life Cycle (in general: 5 phases).
 - Initiating Phase
 - Planning Phase
 - Executing Phase
 - Monitoring and controlling
 - Closing Phase

Project life cycle



Project Management Knowledge Areas

- The Project Management Knowledge Areas are fields or areas of specialization that are commonly employed when managing projects.
- A Knowledge Area is a set of processes associated with a particular topic in project management.
- These 10 Knowledge Areas are used on most projects most of the time.
- The needs of a specific project may require additional Knowledge Areas

Project Management Knowledge Areas

No.	Knowledge Area	Definition
1	Project Integration Management	includes the processes and activities to identify, define, combine, unify, and coordinate the various processes and project management activities within the Project Management Process Groups.
2	Project Scope Management	includes the processes required to ensure that the project includes all the work required, and only the work required, to complete the project successfully
3	Project Schedule Management	includes the processes required to manage the timely completion of the project.

Project Management Knowledge Areas

No.	Knowledge Area	Definition
4	Project Cost Management	includes the processes involved in planning, estimating, budgeting, financing, funding, managing, and controlling costs so the project can be completed within the approved budget.
5	Project Quality Management	includes the processes for incorporating the organization's quality policy regarding planning, managing, and controlling project and product quality requirements, in order to meet stakeholders' expectations.
6	Project Resource Management	includes the processes to identify, acquire, and manage the resources needed for the successful completion of the project

Project Management Knowledge Areas

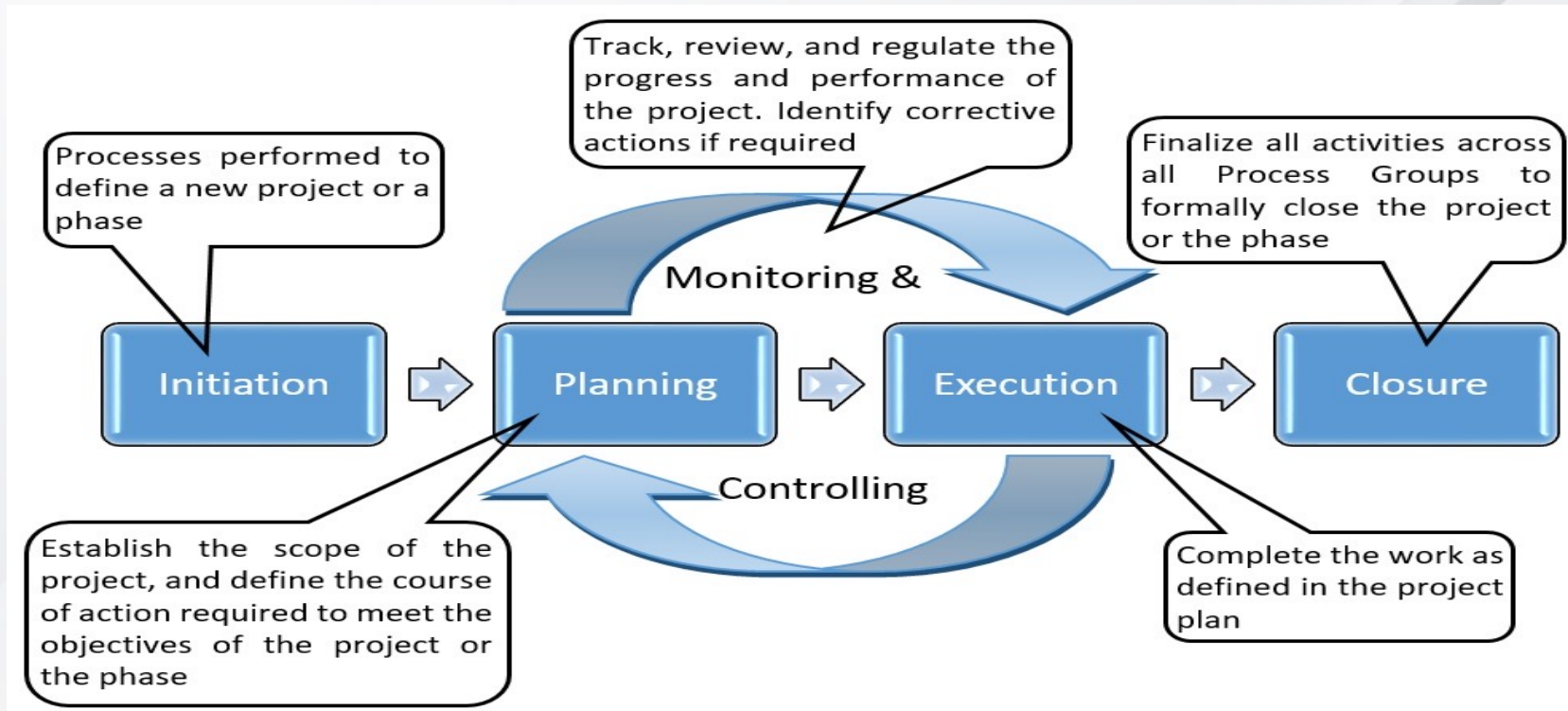
No.	Knowledge Area	Definition
7	Project Communications Management	includes the processes required to ensure timely and appropriate planning, collection, creation, distribution, storage, retrieval, management, control, monitoring, and ultimate disposition of project information.
8	Project Risk Management	includes the processes of conducting risk management planning, identification, analysis, response planning, response implementation, and monitoring risk on a project.
9	Project Procurement Management	includes the processes necessary to purchase or acquire products, services, or results needed from outside the project team.

Project Management Knowledge Areas

No.	Knowledge Area	Definition
10	Project Stakeholder Management	includes the processes required to identify the people, groups, or organizations that could impact or be impacted by the project, to analyze stakeholder expectations and their impact on the project, and to develop appropriate management strategies for effectively engaging stakeholders in project decisions and execution.

The Project Management Processes

- **Process Groups:**



Project Milestones

- **Project Milestone:** the end of each phase is often referred to as a Project Milestone.
- In some organizations, these are referred to as Project Gates.
- The project milestone is the time for the stakeholders in a project to evaluate the project's progress, suggest changes, and decide whether to continue or discontinue working on the project.

Project Management Deliverables

- Deliverable is an output from a project management activity/phase.
- In each phase, you create project management deliverables as an output of project management activities.
- Deliverables from each phase are used to manage the next phases of the project

Project Timeline

- The time line is the most visible yardstick for measurement of project performance.
- both early and late projects have the opportunity for poor quality.
- it is the easiest resource to measure and the hardest to replace

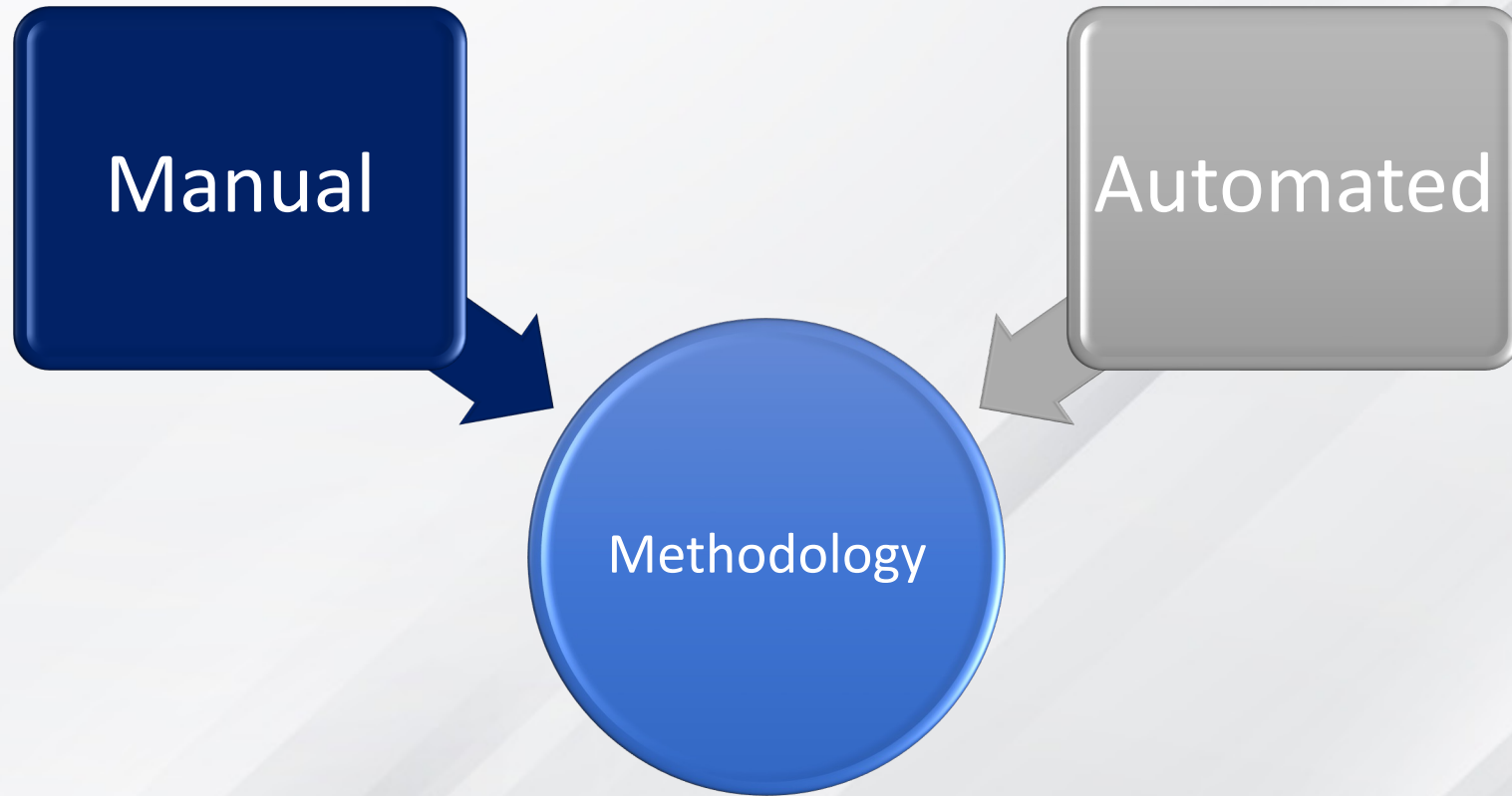
Project Resources

- Each project activity is broken into smaller tasks, the resources are assigned to complete those tasks.
- Resource conflicts are resolved according to the circumstances in which they occur.

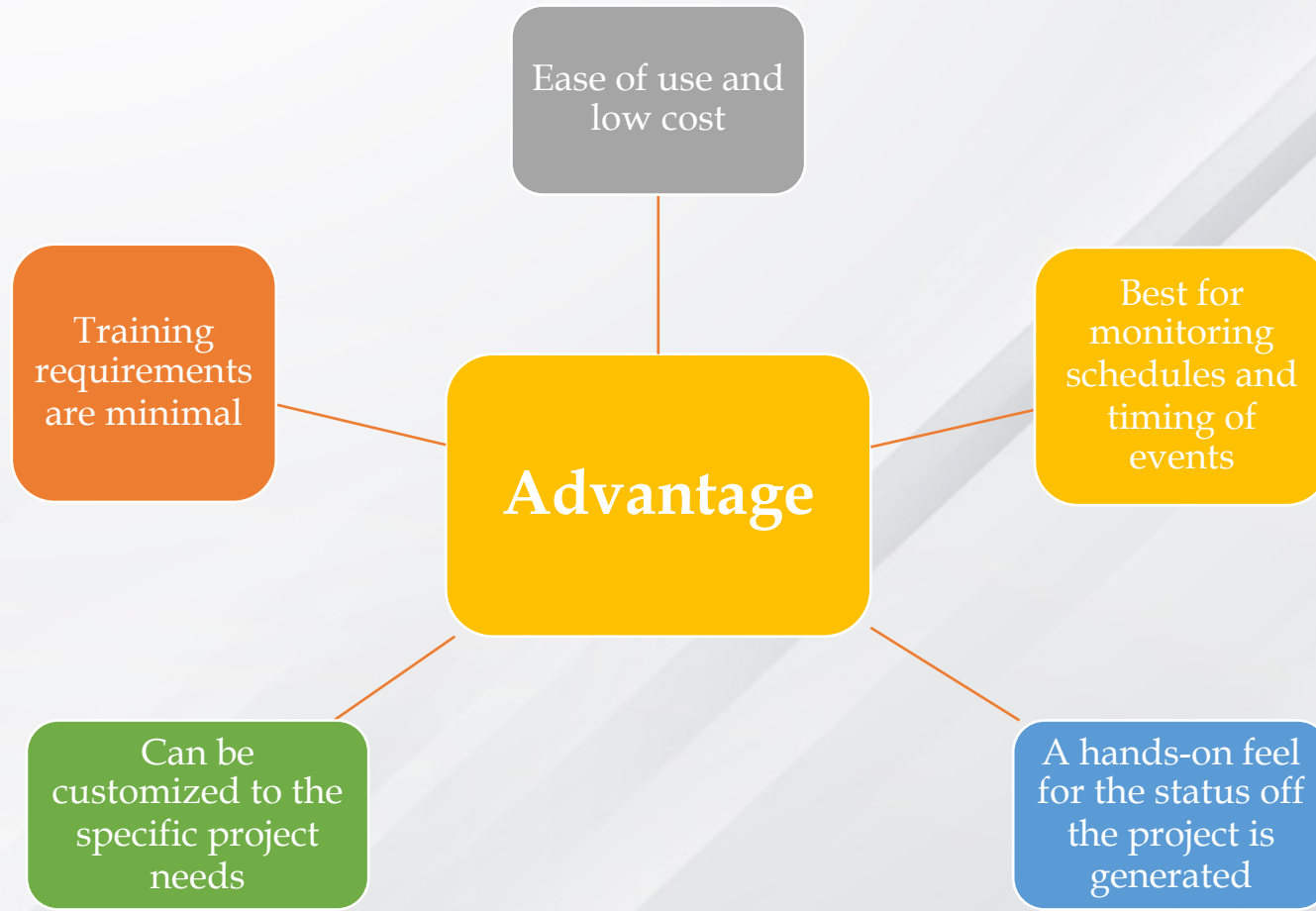
Project Resources (cont.)

- Resource leveling is used
- Resource leveling advantages are:
 - Decrease costs through an more efficient use of resources
 - Reduces unnecessary overtime and off shift premiums
 - simplifies logistics, of resource availability

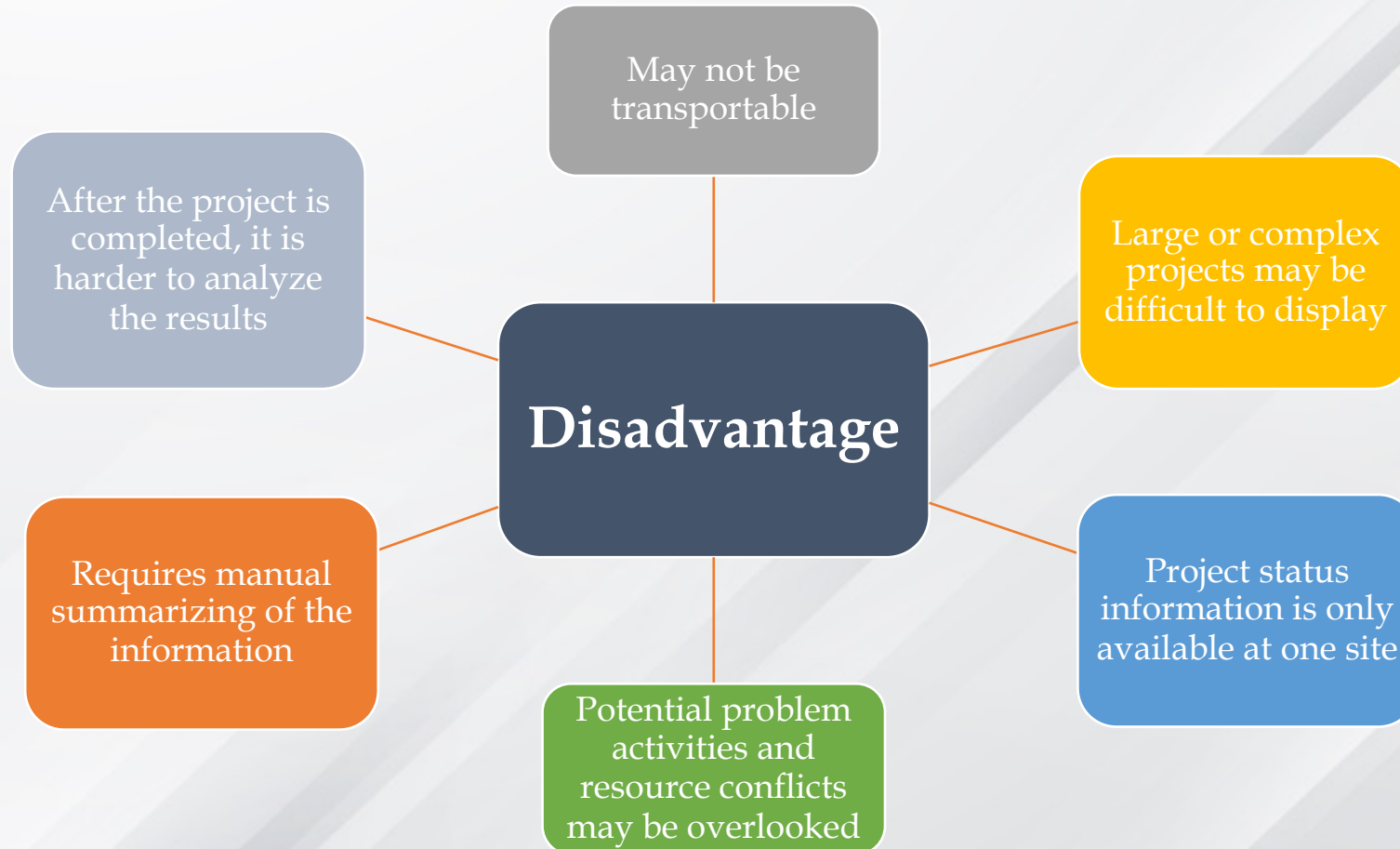
Project Management Methodology



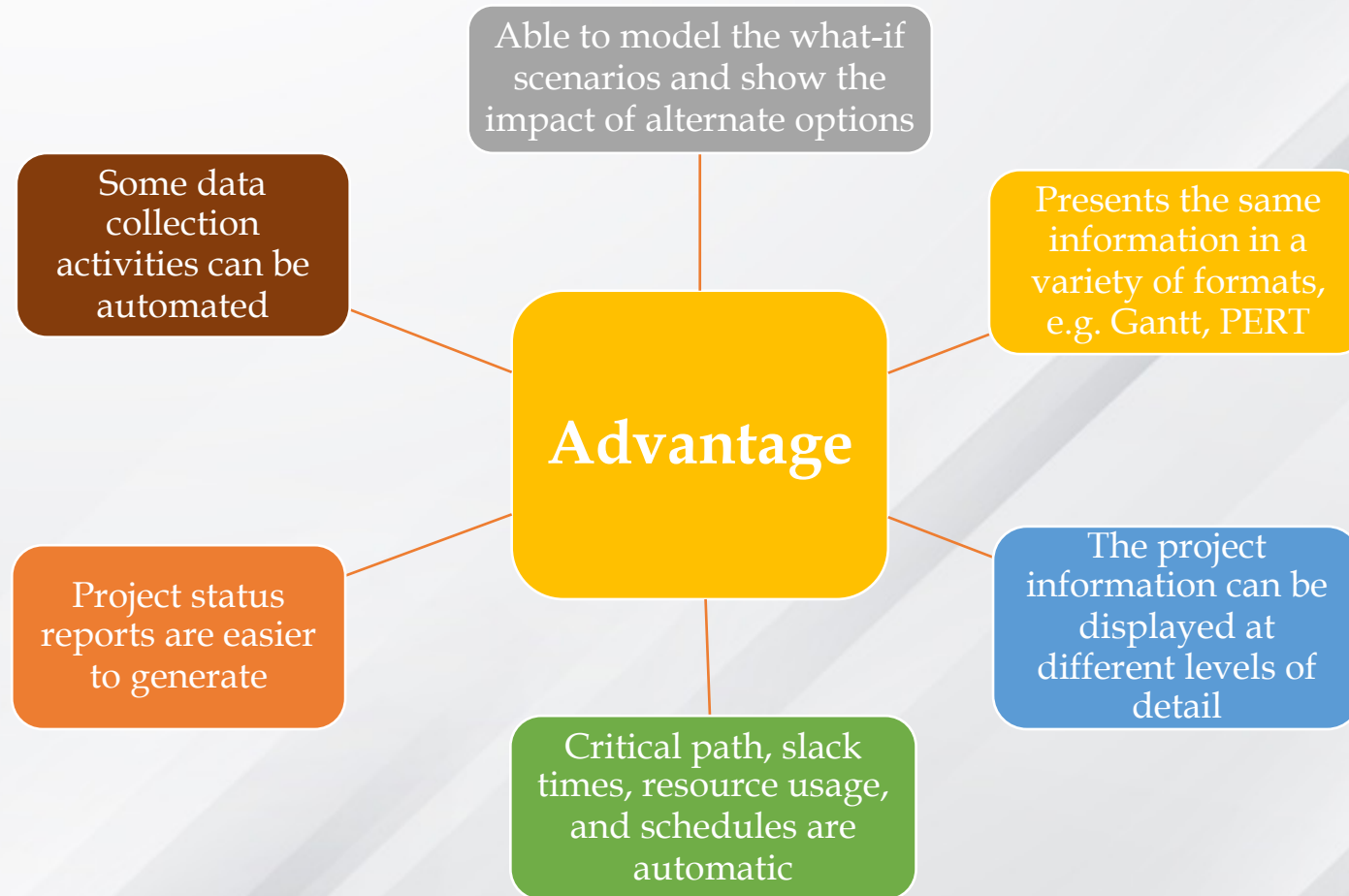
Manual Method



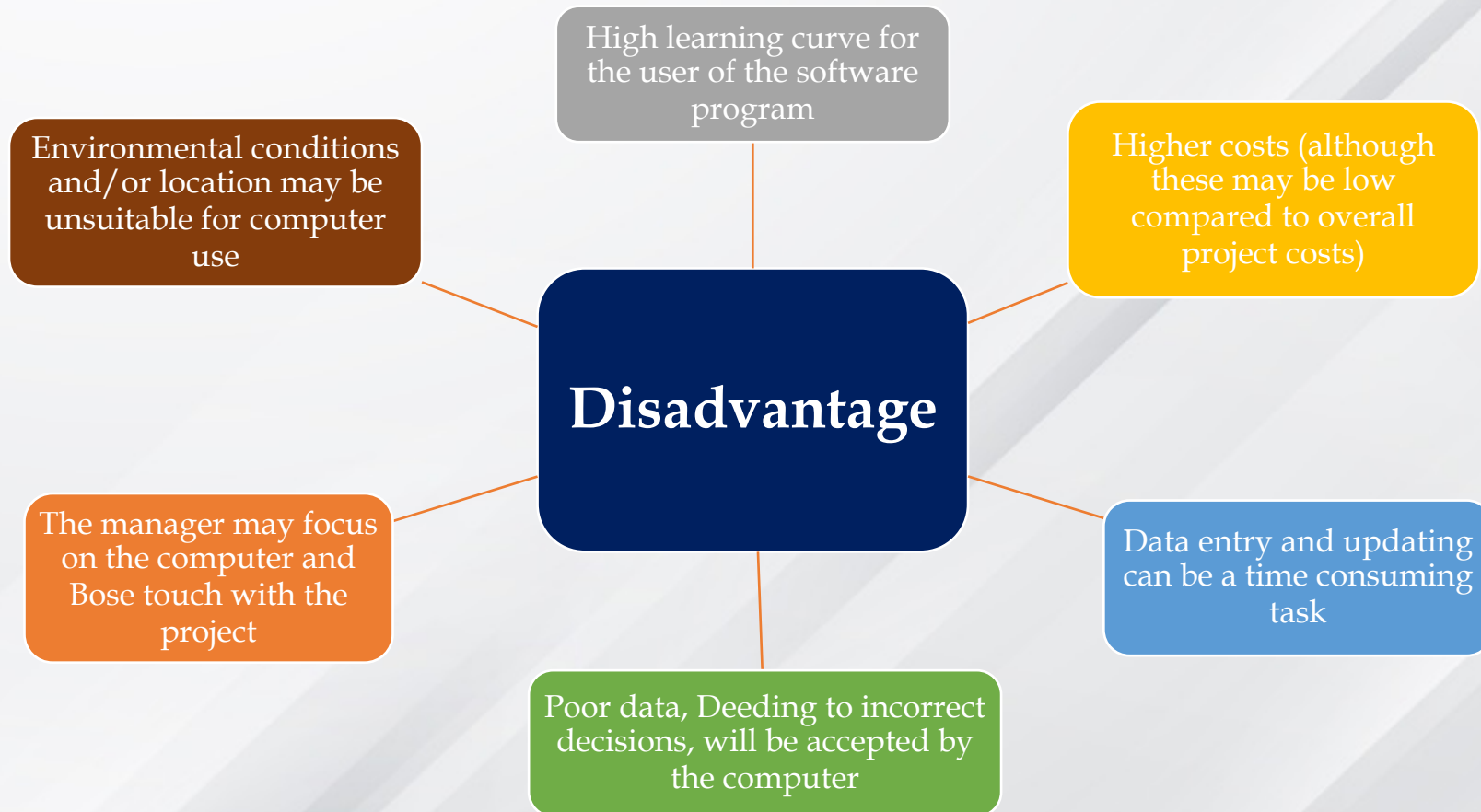
Manual Method



Automated Method



Automated Method

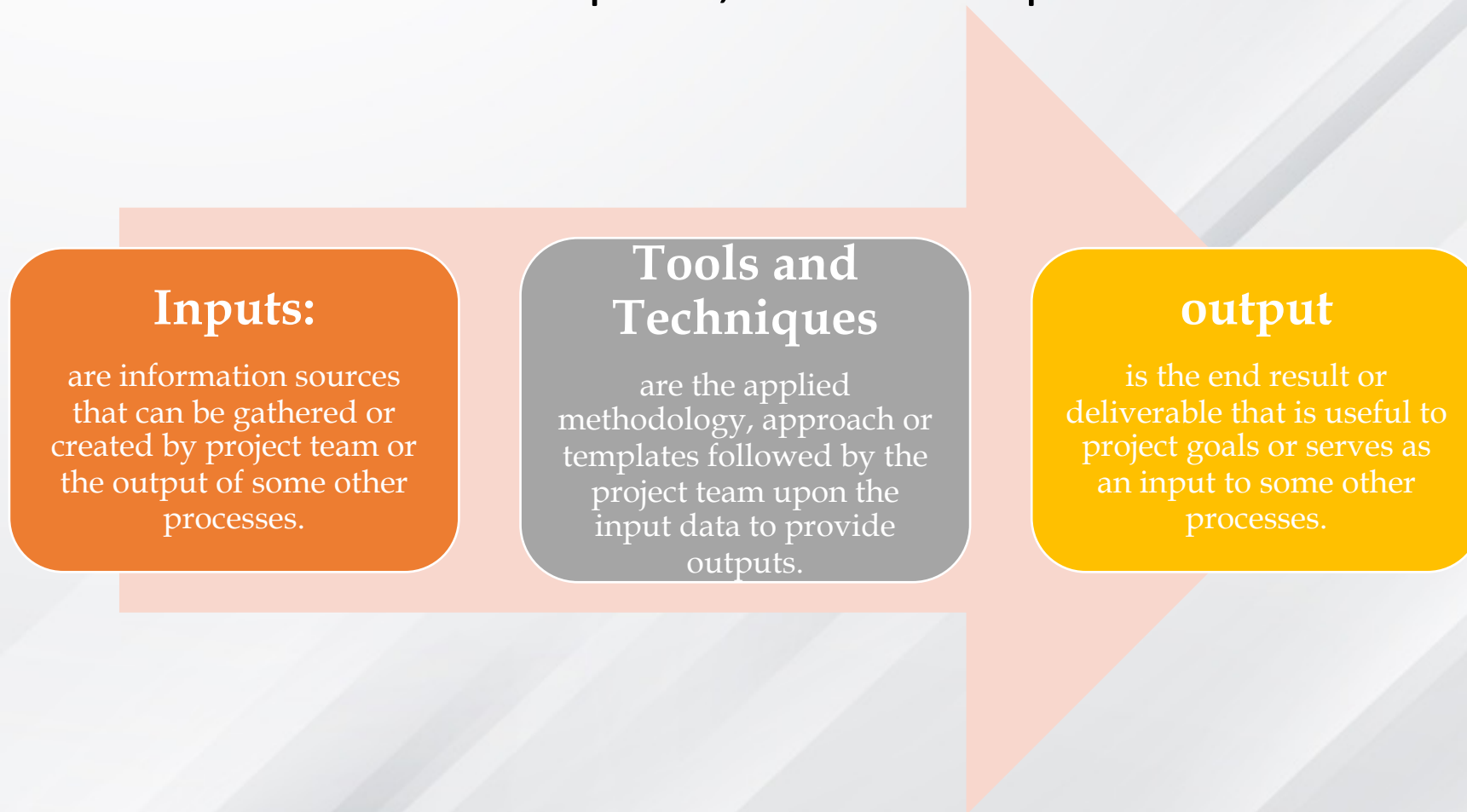


Inputs, Tools and Techniques, and Outputs

- Project management processes are implemented(Executed) through using inputs, tools and techniques, and outputs.



Inputs, Tools and Techniques, and Outputs





Thank You