

# Project Management Technologies PMG 312

Prepared by Dr. Majid Saad

## Lecture 1



The background features a series of vertical panels with rounded ends. The first panel shows hands typing on a laptop. The second panel has a graduation cap icon. The third panel has a play button icon. The fourth panel has a target icon. The fifth panel has an open book icon. The sixth panel has a magnifying glass icon. The seventh panel has a group of people icon. The eighth panel has a bar chart icon. The ninth panel has a line graph icon. The tenth panel has a pie chart icon. The eleventh panel has a scatter plot icon. The twelfth panel has a line graph icon. The thirteenth panel has a bar chart icon. The fourteenth panel has a line graph icon. The fifteenth panel has a bar chart icon. The sixteenth panel has a line graph icon. The seventeenth panel has a bar chart icon. The eighteenth panel has a line graph icon. The nineteenth panel has a bar chart icon. The twentieth panel has a line graph icon.

# Project Management Technologies PMG 312

## Lecture 1

Prepared by  
**Dr. Prepared by Dr. Majid Saad**

# AGENDA

- ❖ **Introduction**
- ❖ **What is the project?**
- ❖ **Methodology**

# Introduction

## Project management in a nutshell

### Methodology

Project life cycle

Project  
requirements  
definition

Understanding the  
project business  
case

Project  
ranking  
matrix

How to  
evaluate  
and  
prioritize IT  
project  
proposals

Quality  
management

Sponsor and  
supplier  
agreements

Microsoft  
Project 2010

Challenging

## Chapter objectives

- ❑ **Looks at the big picture of project management and how to get projects started by using a methodology.**
- A good starting point for having a methodology is to look at the PMBOK Guide (PMI 2008).
- Many organizations use this model methodology as a starting point and modify it to meet their unique needs.
- Included in the methodology is to define the project's requirements and evaluating its business case.
- Addresses useful brainstorming techniques such as brown papers (as-is and to-be model), process charting, decision logic table (DLT) (displays an entire situation visually), RACI (responsible–accountable–consult–inform) charting, and how to evaluate and prioritize projects.

# Introduction

- The book try to find realistic ways to eliminate the negative effects of developing systems using tools and techniques and to look at key ways that are needed to have successful projects that help improve organizations (Smith 1983).

# Introduction

- The writing style here uses mostly nontechnical language, which includes a heavy usage of graphics and tables for easy reading and as much as possible adheres to the “KISS” principle.



# Introduction

- The "keep it simple stupid" (KISS) principle is a design rule that states that systems perform best when they have simple designs rather than complex ones. KISS is not meant to imply stupidity.
- On the contrary, it is usually associated with intelligent systems that may be misconstrued as stupid because of their simplistic design.
- The KISS Principle hinders and/or prevents creeping featurism, system failover and other IT issues.

# Introduction

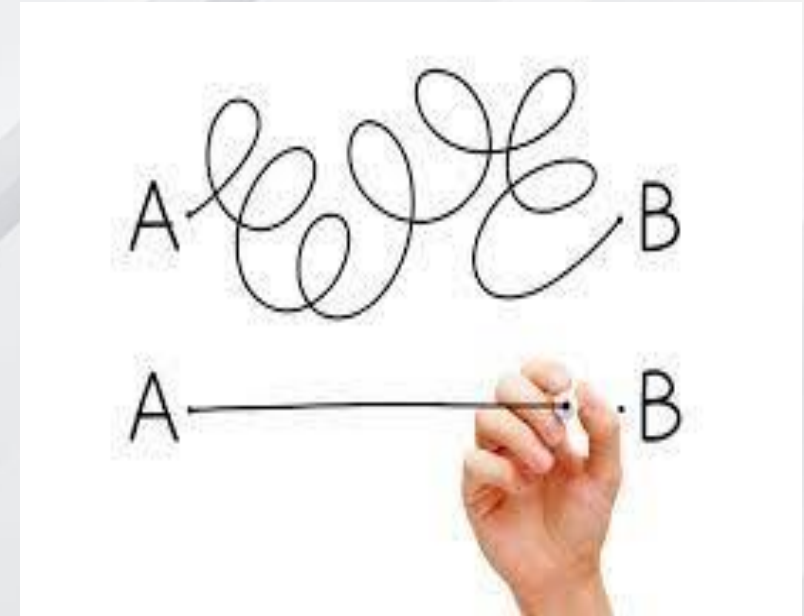
- KISS is an old information-processing acronym that stands for “keep it simple stupid” and more recently has been modified or updated to mean “keep it short and simple.” It is usually referred to the building of new software applications.



# Introduction

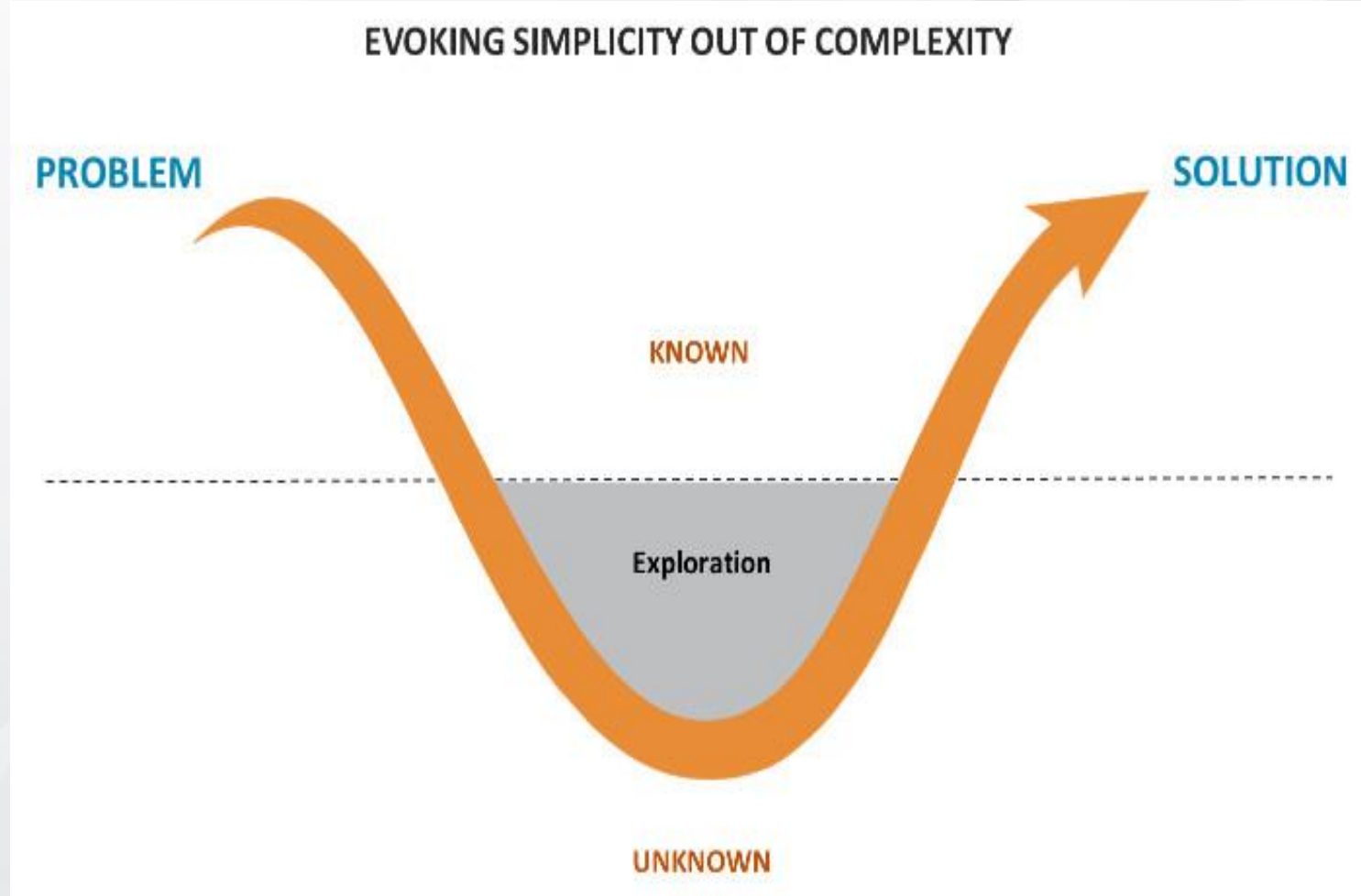
❑ The following is an expanded and updated definition of the elements that make up the KISS principle (Smith 1983):

- If you are fortunate to have a simple solution to a problem—keep it that way.

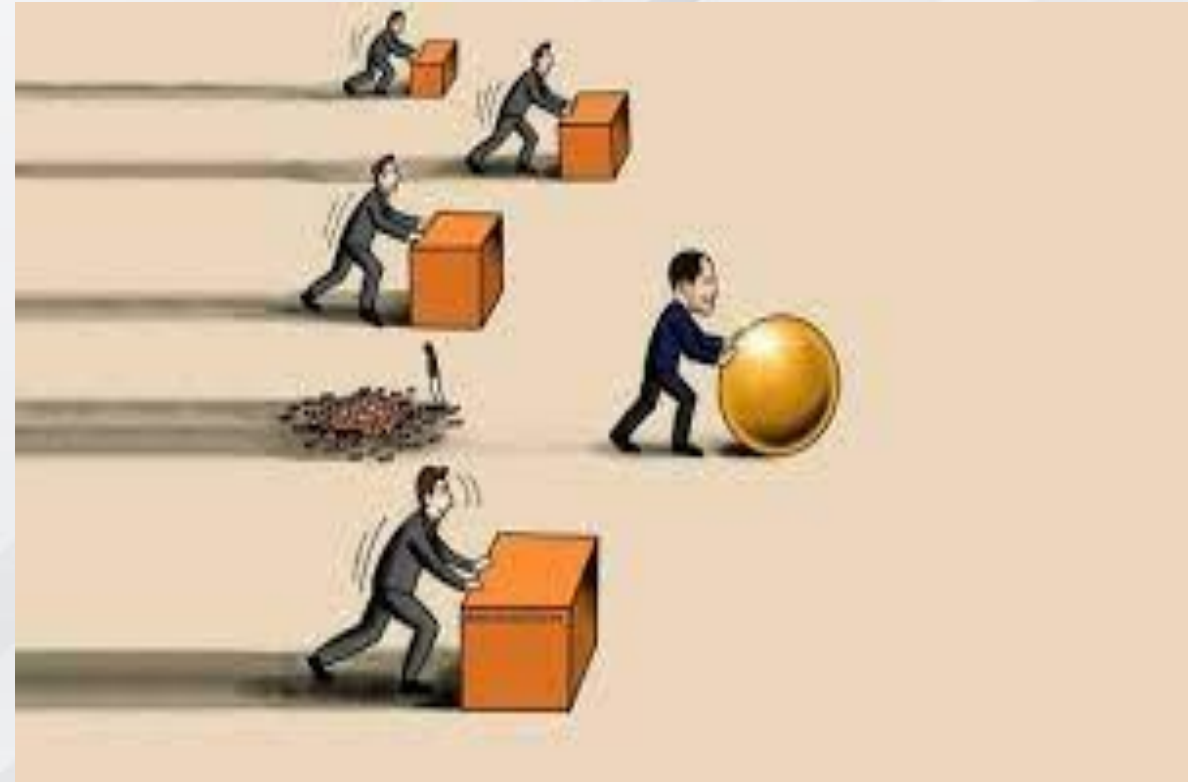


# Introduction

- Sometimes, it is human nature to take a simple solution to a problem and complicate it.



# Introduction



# Introduction

- Quite often, today's complicated solutions create tomorrow's problems.

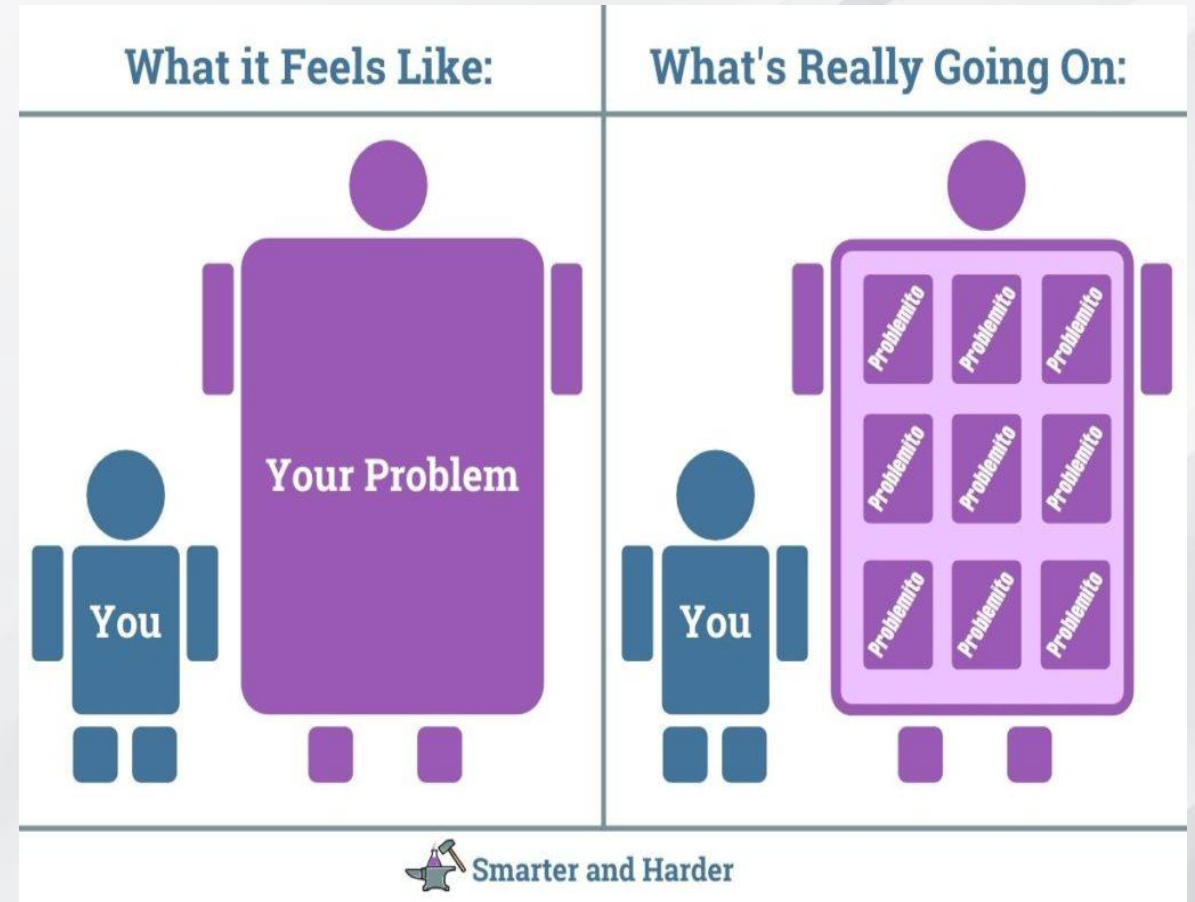
**Today's problems come  
from yesterday's 'solutions'.**

Peter M. Senge

quote fancy

# Introduction

- If the only solution to a problem is a complicated one, then the solution should be divided into simple and workable parts that interface with each other.



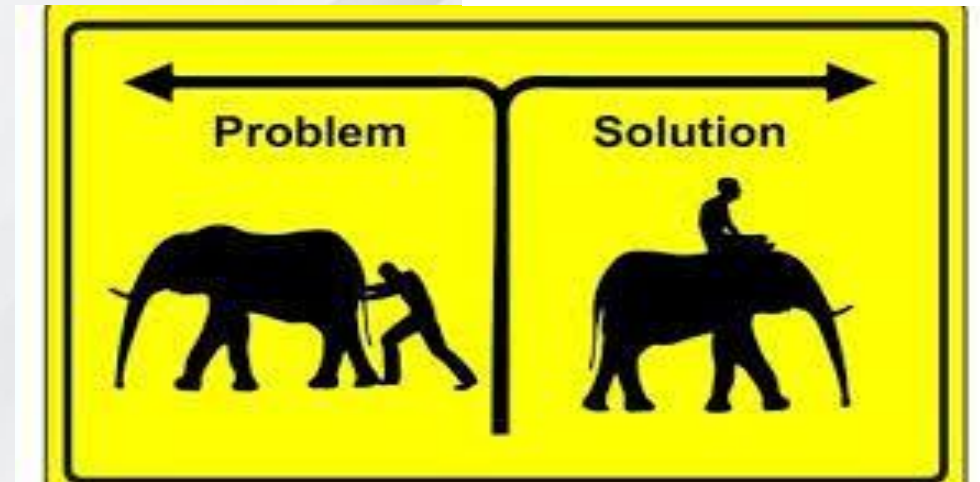
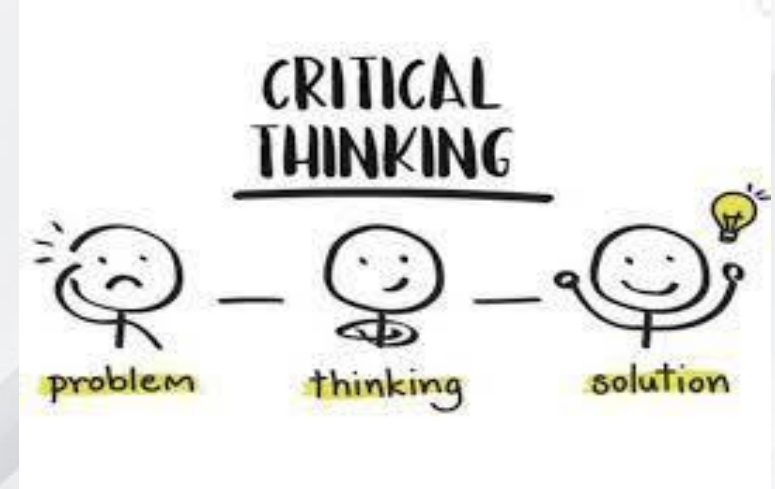
# Introduction

- The complicated solution should be like putting the pieces of a puzzle together.



# Introduction

- Once you have defined your solution, there will be many levels of approaches in planning, designing, and implementing that alternative.



# Introduction

- The difficult part is to choose the overall approach.
- In today's highly sophisticated industrial environment, it is often best to partner with other organizations that can perform special segment better than doing it all in-house.



# Introduction

- The term for this strategy is “outsourcing” and it is increasingly employed in projects

Key Strategies for  
Successful Project  
Delivery When  
Outsourcing



## Introduction

- ❑ What are the odds of having a successful product that is delivered within the budget and schedule? ما هي احتمالات الحصول على منتج ناجح يتم تسليمه ضمن الميزانية والجدول الزمني؟

# Introduction

❑ Various surveys indicate that:



✓ 25% of all projects are completed on time



✓ 50% have late completion dates and/or go over budget

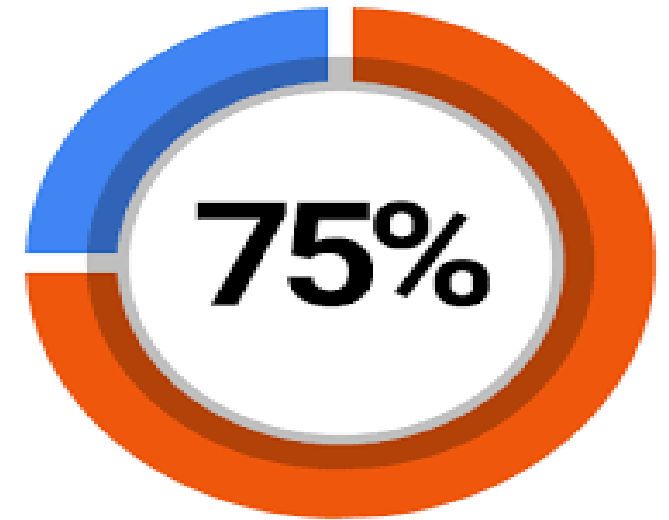


✓ 25% are canceled.



# Introduction

- ✓ This means that approximately 75% of all projects undertaken will probably come in late or be canceled!

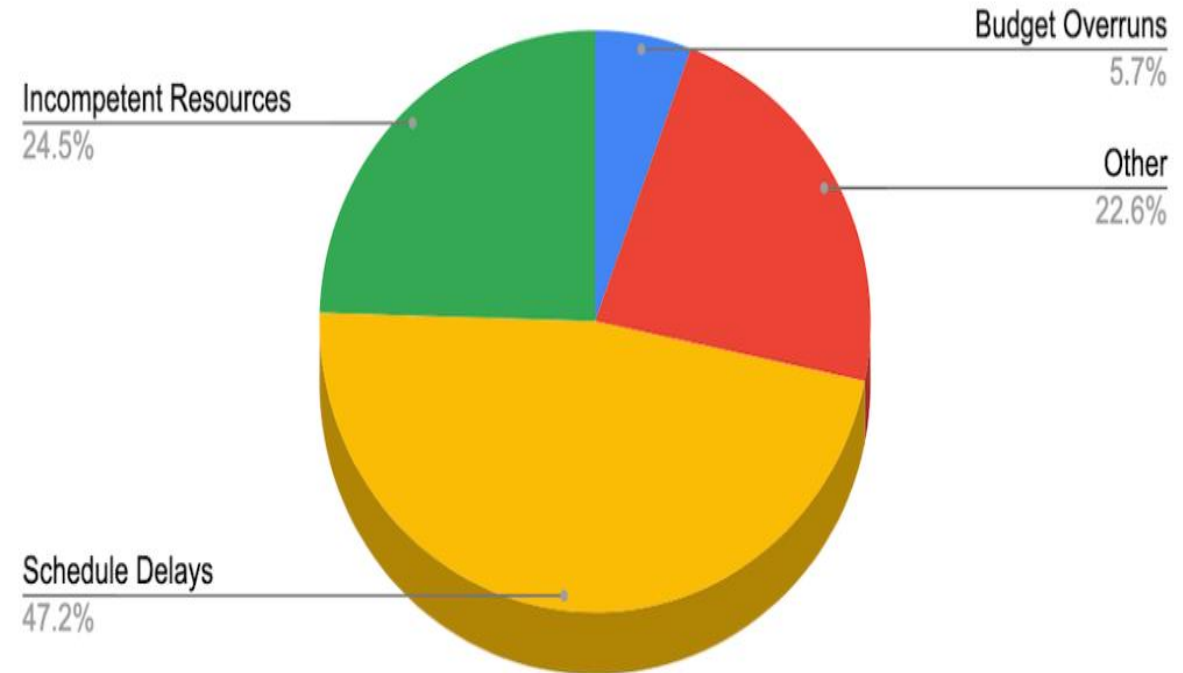


# Introduction

- ❑ Also, the projects that are completed (on time or late) usually end up having fewer features and functions than originally specified to save development time and/or costs.



What were the biggest issues in terms of project management in your organization before the training?



# Introduction

The top 10 reasons why projects are successful and the first five make up 72% of the total.

*Table 2.1 Summary of Factor Rankings for Successful Projects*

| Rank | Factor                         | %   |
|------|--------------------------------|-----|
| 1    | User involvement               | 17  |
| 2    | Executive management support   | 15  |
| 3    | Experienced project management | 14  |
| 4    | Clean business objectives      | 14  |
| 5    | Minimized scope                | 12  |
| 6    | Agile requirement process      | 7   |
| 7    | Standard infrastructure        | 6   |
| 8    | Formal methodology             | 5   |
| 9    | Reliable estimates             | 5   |
| 10   | Skilled staff                  | 5   |
|      | Total                          | 100 |

*Source:* Adapted from Standish Group from *InformationWeek Magazine*, December 15, 2003.

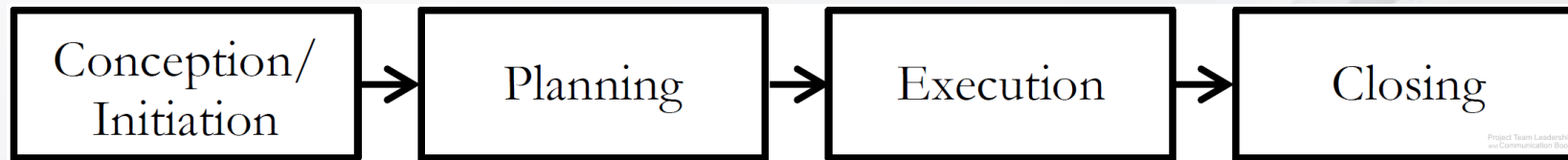
# What is Project Management?

- ❑ Project Management is the process of defining, Planning ,organizing, leading and controlling the development of an Information System Project.
- ❑ The goal of Project Management is to deliver an Information System that is acceptable to Users and is developed on time and within budget

## What is Project Management?

- Based on a business need or opportunity
- Often explored and initiated by the *Project Sponsor(s)*, who writes or approves the *Project Charter*
- Has the following features:
  - A defined beginning and end
  - Unique goals and outcomes
  - Typically requires team members with varied skills
- Contrasts with *Operational Work*, which is repetitive ‘business as usual’

# Project Management Phases

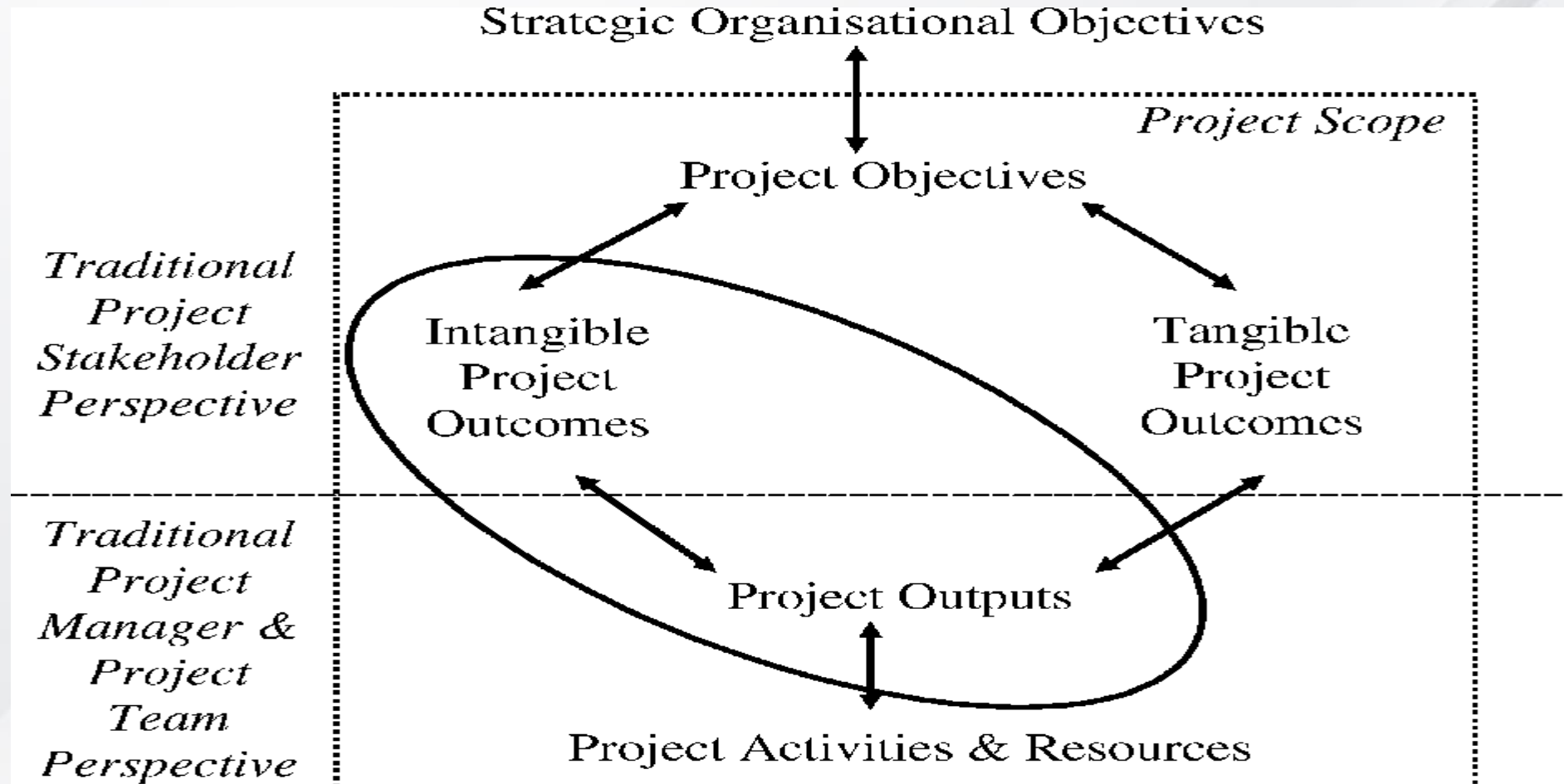


- INITIATING/Defined THE PROJECT
- PLANNING THE PROJECT
- EXECUTING THE PROJECT
- CLOSING DOWN THE PROJECT

## 1. PROJECT INITIATION/ Defined

- The first phase of Project Management
- Process in which activities are performed to assess the Size, Scope, and Complexity of the Project and to establish procedures to support later Project activities.

# 1. PROJECT INITIATION/ Defined



## 2. PROJECT PLANNING

- The Project Planning provides an overall framework for managing Project Costs and schedules.
- Project Planning takes place at the beginning and at the end of each Project Phase.
- Project Planning **involves** defining clear, discrete “Activities” or “Tasks” and the work needed to complete each Activity.

**IF YOU FAIL TO PLAN, YOU PLAN TO FAIL!**

### 3. EXECUTING THE PROJECT

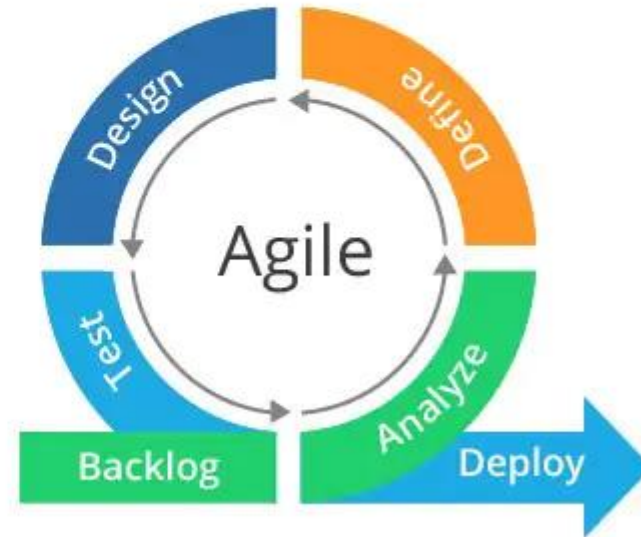
- The third Phase in Project Management Process in which the Plans created in the prior Project Phases are put to action.
- If you develop a high-quality Project Plan, it is much more likely that the Project will be successfully executed

## 4. CLOSING DOWN THE PROJECT

- The final Phase of Project Management process which focuses on bringing a Project to an end.
- Closedown is a very important activity since a Project is not complete until it is closed and it is at closedown that projects are deemed a success or failure.

# Methodology

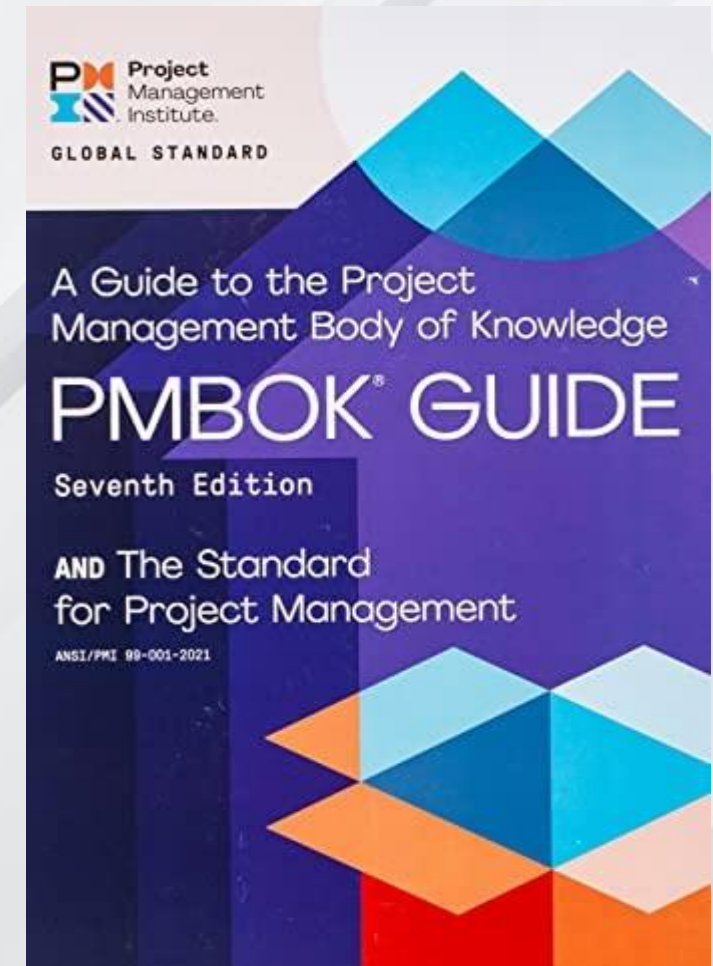
## Waterfall vs. Agile



## Methodology

- There are many options to look at for guidance in this.

Some notable examples of project management definition are found in the Project Management Body of Knowledge (PMBOK) from the PMI, PRINCE2 (UK), or the more contemporary

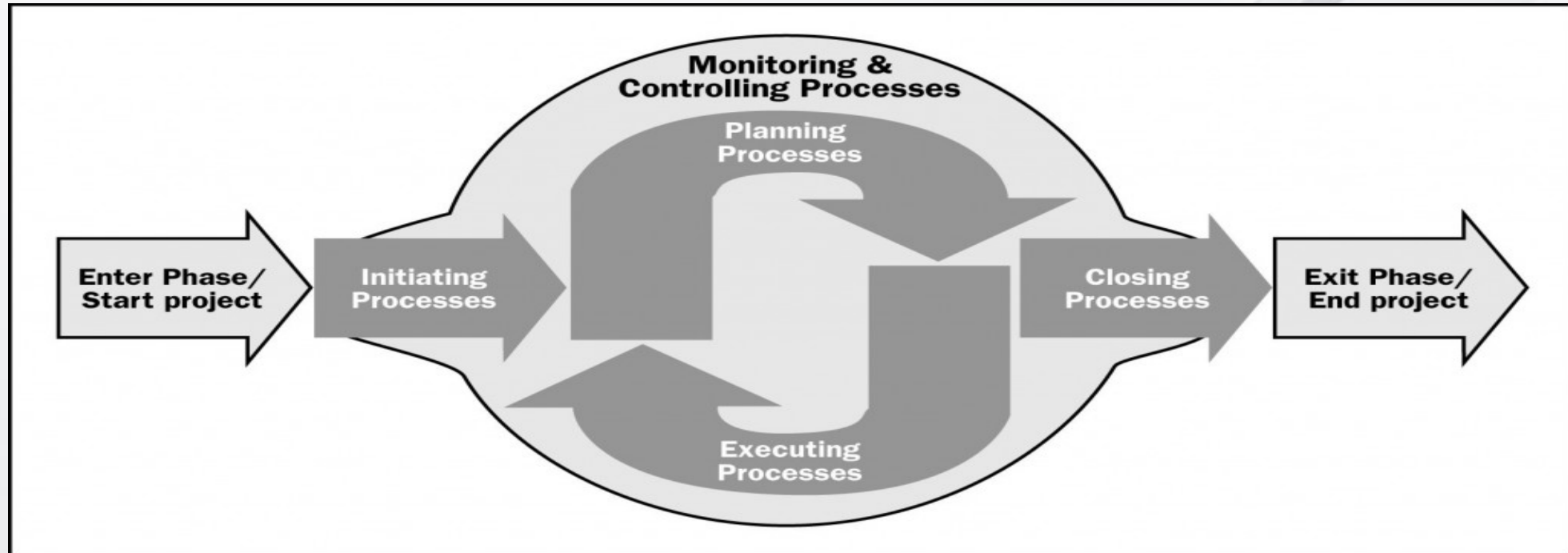


## Methodology

- ❑ Agile methodology (prototyping or taking development shortcuts to release more quickly).
- ❑ Each of these approaches attempts to model a project life cycle and through this guidance helps produce a more successful outcome.

# Methodology

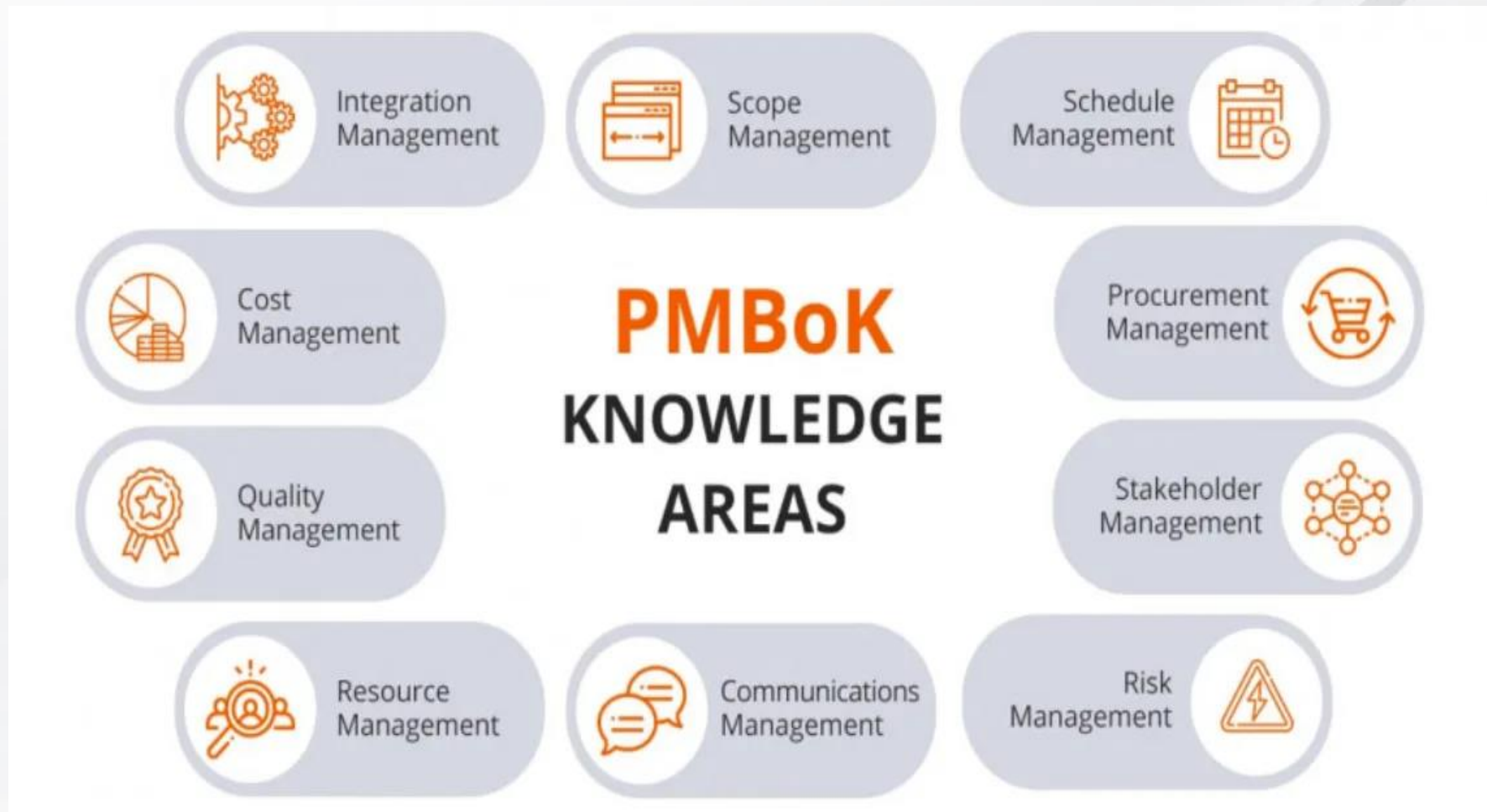
□ These groups are briefly defined as follows:



**Figure 3-1.** Project Management Process Groups

*A Guide to the Project Management Body of Knowledge (PMBOK® Guide) – Fourth Edition. ©2008 Project Management Institute, Inc. All Rights Reserved.*

## The nine organizational knowledge management areas covered in PMBOK



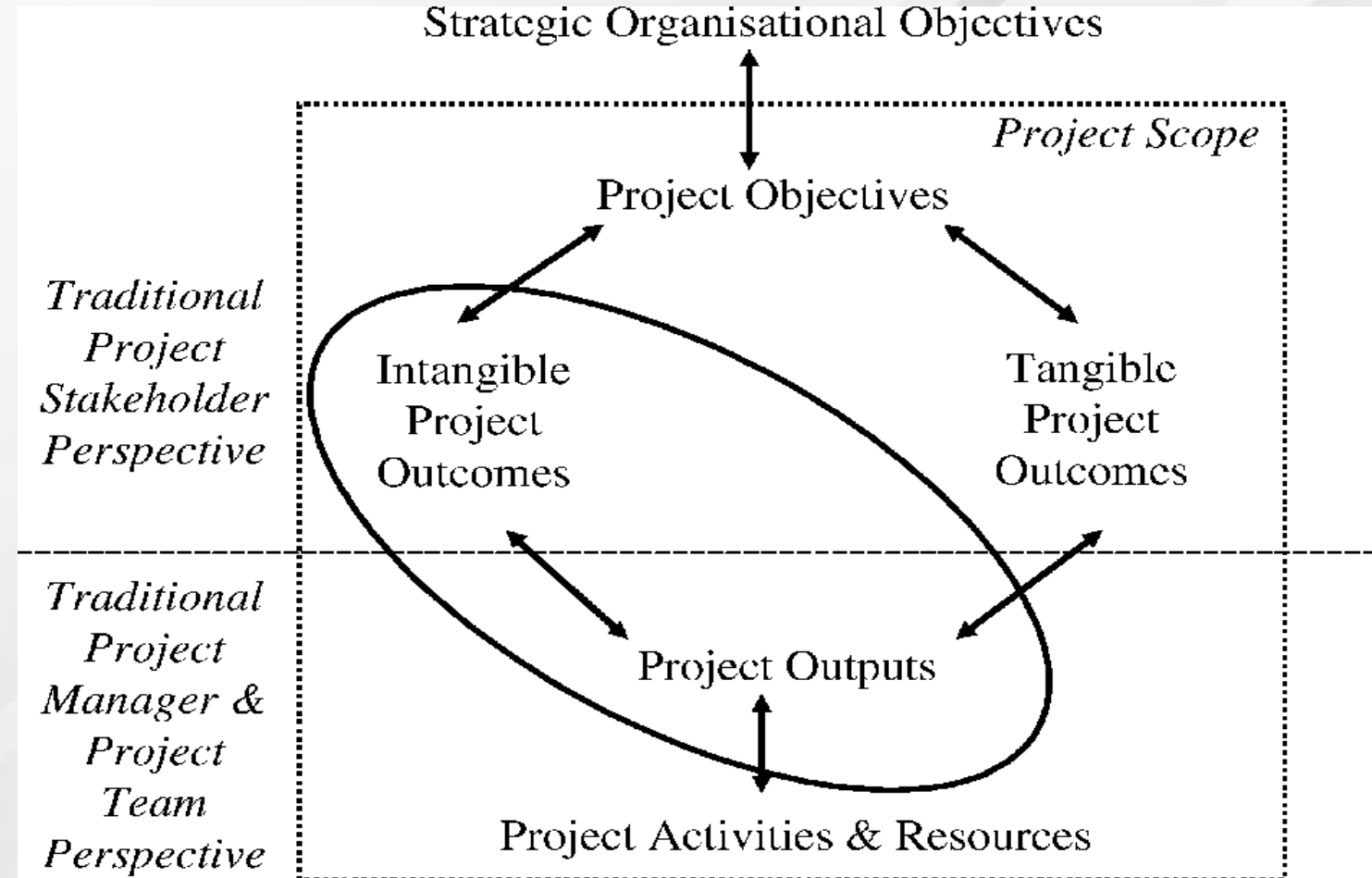
## The organizational knowledge management areas covered in PMBOK

1. **Project integration**—These are processes (i.e., coordination of procedures and phases) in place to develop, manage, and monitor your project, which includes change control.

| Process                             | Project Phase          | Key Deliverables               |
|-------------------------------------|------------------------|--------------------------------|
| Develop Project Charter             | Initiating             | Project Charter                |
| Develop Preliminary Scope Statement | Planning               | Scope Statement                |
| Develop Project Management Plan     | Planning               | Project Management Plan        |
| Direct and Manage Project           | Execution              | Deliverables                   |
| Monitor and Control Project Work    | Monitoring and Control | Change Requests                |
| Perform Integrated Change Control   | Monitoring and Control | Change Requests Status Updates |
| Close Project or Phase              | Closure                | Final Product                  |

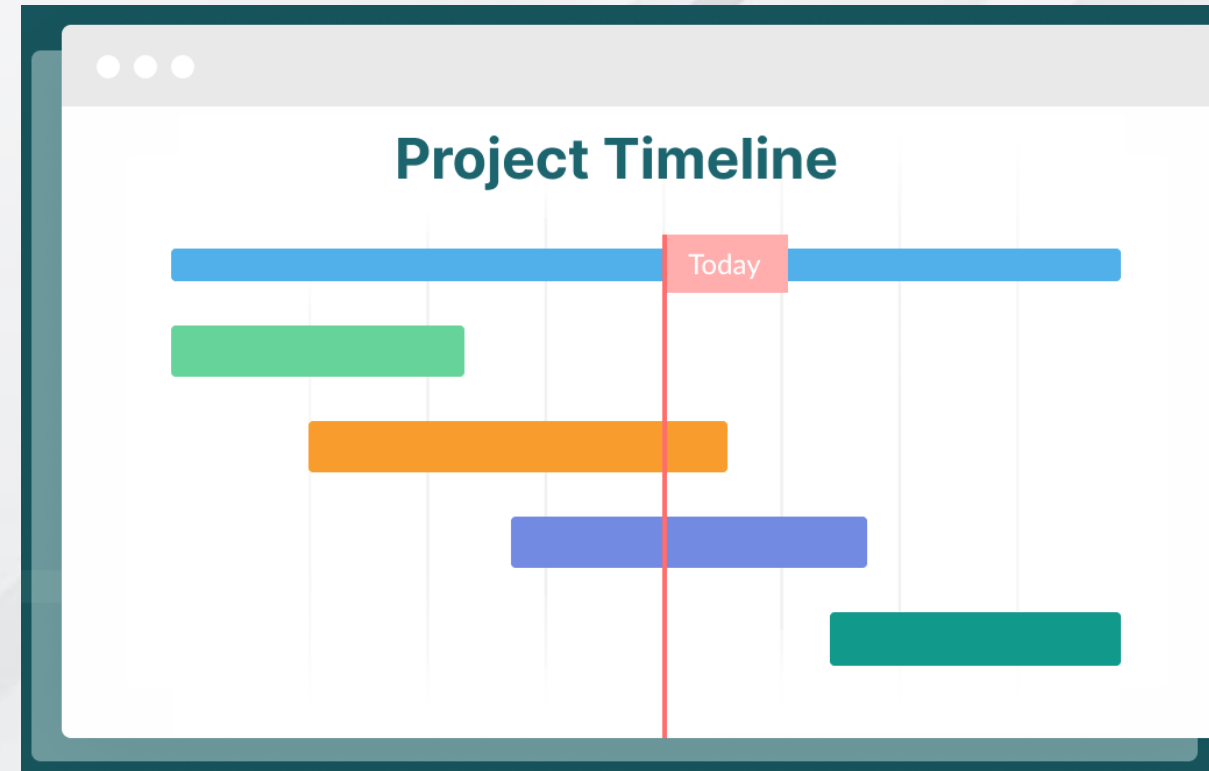
## The nine organizational knowledge management areas covered in PMBOK

2. **Scope**—These are processes (work included and excluded) in place to define the project work.



## The organizational knowledge management areas covered in PMBOK

3. **Time** :These are processes (i.e., estimating and scheduling) in place to make to support schedule development and status tracking.



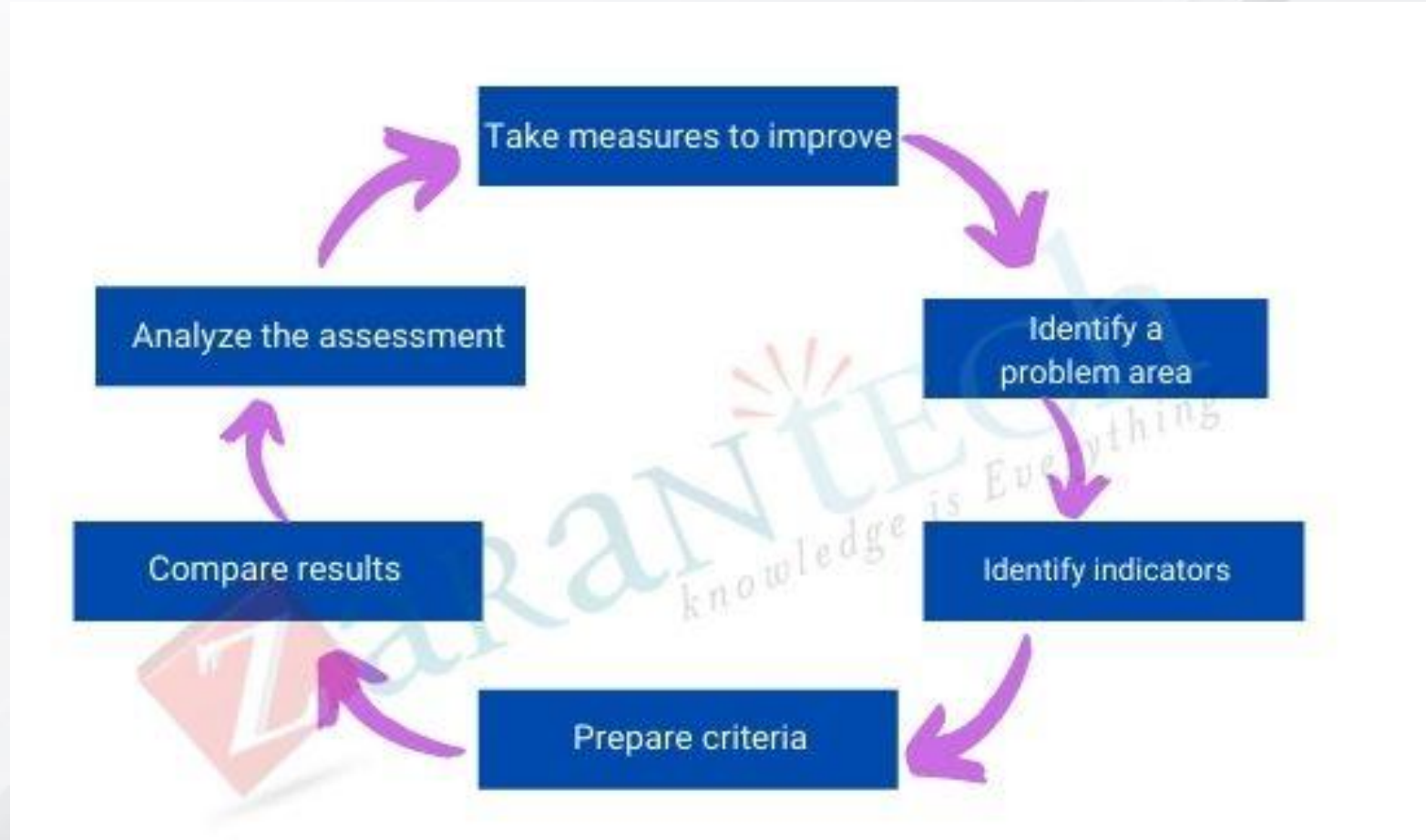
## The nine organizational knowledge management areas covered in PMBOK

4. **Cost:** These are processes (i.e., costing and cost control) in place to support budget planning and status tracking.



## The organizational knowledge management areas covered in PMBOK

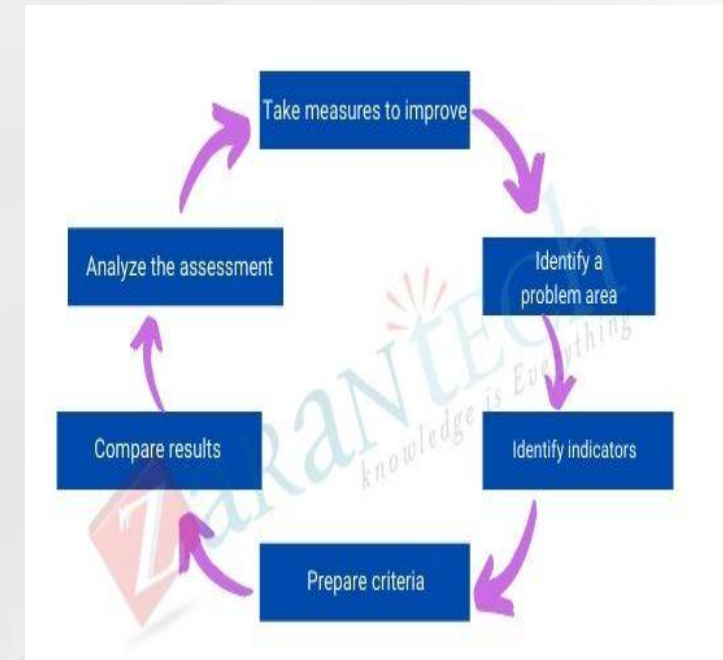
### 5. Quality:



## The organizational knowledge management areas covered in PMBOK

5. **Quality:** These are processes in place to support meeting quality goals.

- There are **three types of quality assurance (QA)** project reviews: **deliverable, compliance, and health.**



## The organizational knowledge management areas covered in PMBOK

➤ There are **three types of quality assurance (QA)** project

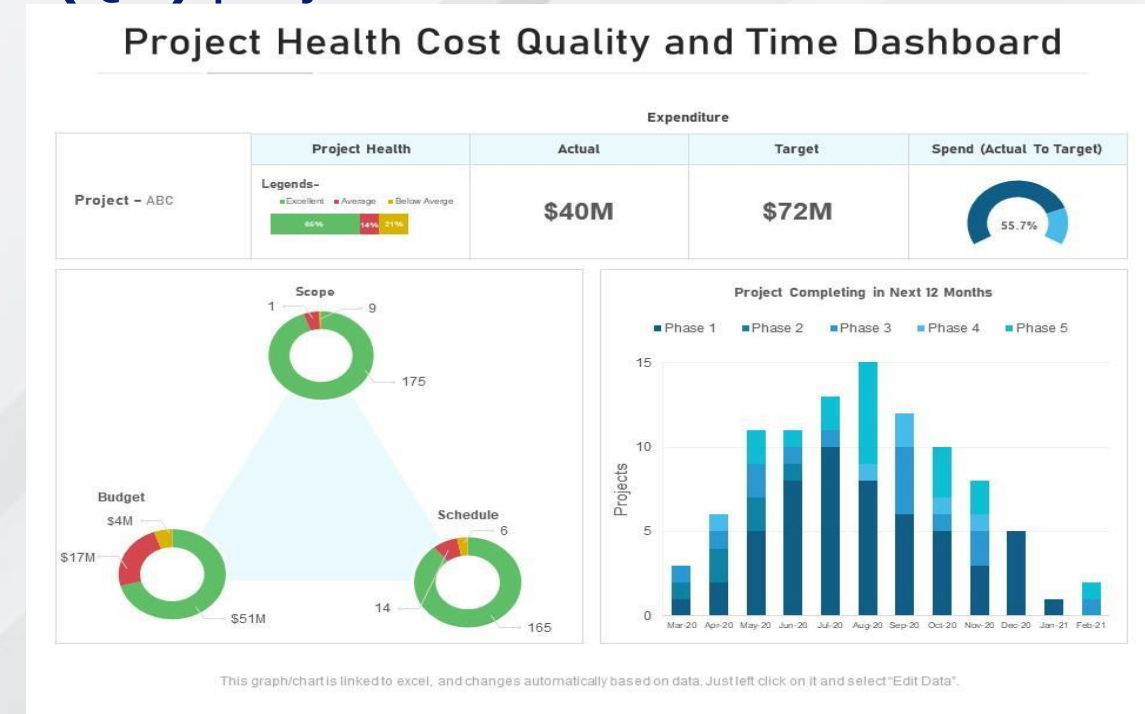
❖ **Deliverable** is any tangible outcome or item produced to complete a project; this can range from a client's approval of a project plan to completion sign-off.



# The organizational knowledge management areas covered in PMBOK

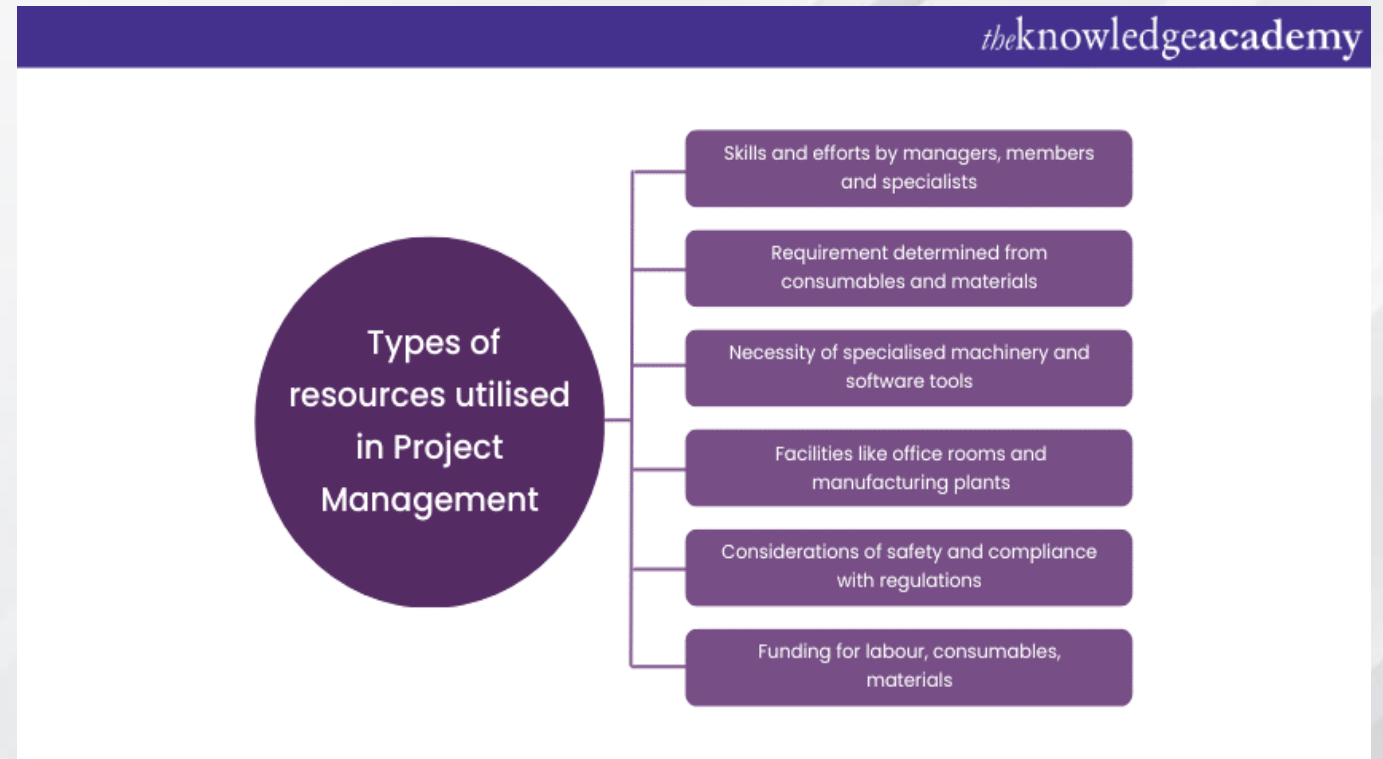
➤ There are **three types of quality assurance (QA) project**

- **Compliance :**
- **Health** tells how well a project is doing; if it has run off the rails, the team can use the review to decide which actions to take to get the project back on track.



# The organizational knowledge management areas covered in PMBOK

**6. Resources** Resource management is the process of estimating what resources will be needed to complete a project, acquiring them, making a schedule for their allocation and monitoring their utilization during the execution of a project, program or portfolio of projects.



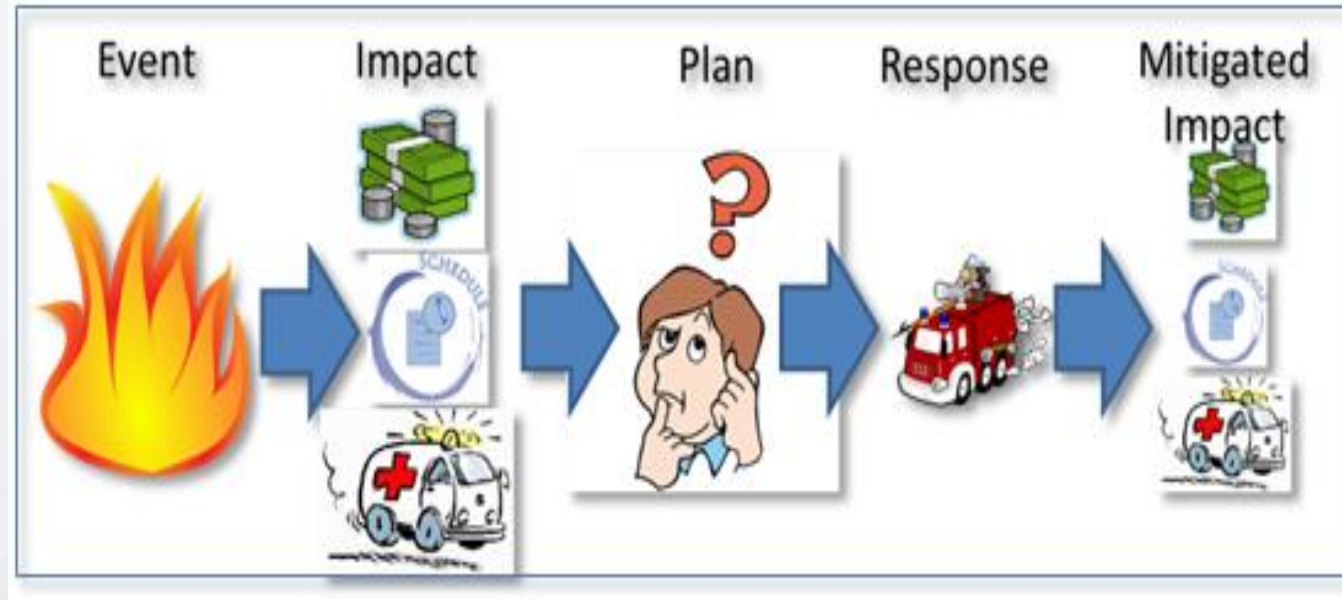
## The organizational knowledge management areas covered in PMBOK

7. **Communication**—These are processes (i.e., planning and managing team, user expectations, and performance) in place to support meeting your information needs.



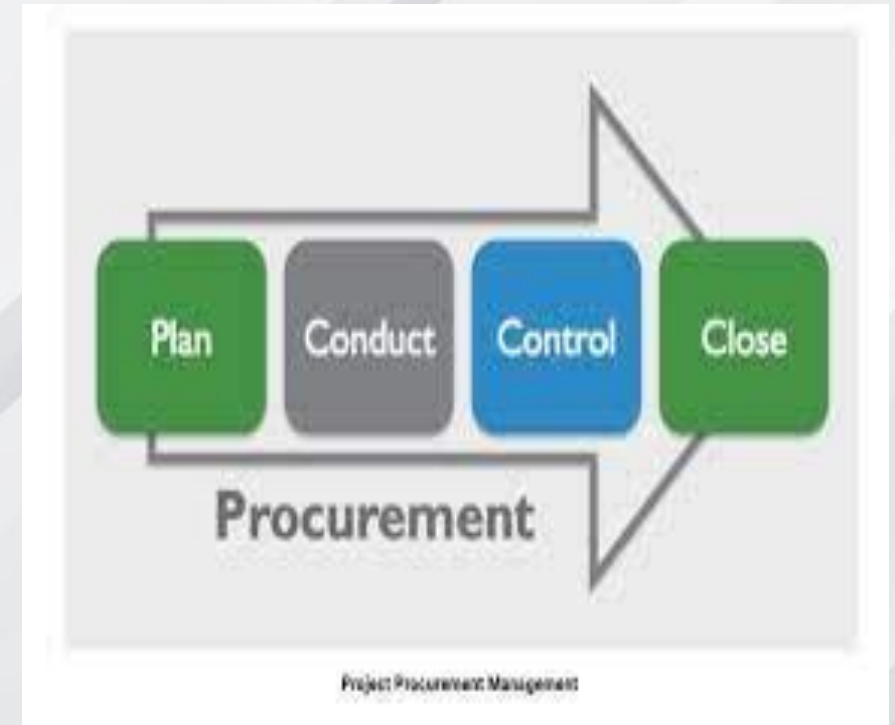
## The organizational knowledge management areas covered in PMBOK

**8. Risk:** These are processes in place (i.e., identifying, performing qualitative analysis, and planning responses) to support preventing a potential event or future situation that may adversely affect the project.



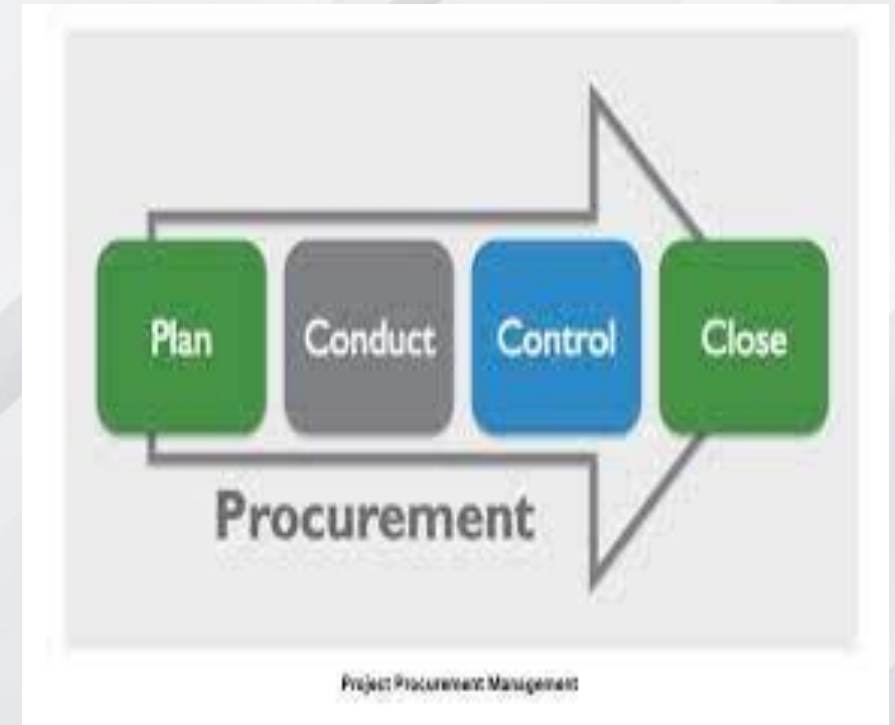
## The organizational knowledge management areas covered in PMBOK

**9. Procurement:** These are processes (i.e., planning the solicitation and obtaining) in place to support the procuring of goods and services, which includes good contract management.



## The organizational knowledge management areas covered in PMBOK

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## The organizational knowledge management areas covered in PMBOK

**10. Stakeholder management** is defined as the process by which you organize, monitor, and improve your relationships with your stakeholders. Usually this involves identifying stakeholders, analyzing their needs and expectations, and then planning and implementing various tasks to engage with them

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graph TD; A[Scope defined & requirements collected] --> B[Plan risk management, identify & analyze risks]; B --> C[Plan quality]; C --> D[Plan communications]; E[Plan procurements] --> F[Budget determined]; G[Develop human resource plan] --> F; F --> H[Costs estimated]; I[WBS created] --> J[Tasks defined]; J --> K[Tasks sequenced]; K --> L[Task resources estimated]; L --> M[Task durations estimated]; M --> N[Schedule developed]; H --> N; O[Costs estimated] --> P[Schedule developed];
```

## The organizational knowledge management areas covered in PMBOK

|                |                                                                                                                                  |
|----------------|----------------------------------------------------------------------------------------------------------------------------------|
| Integration    | <ul style="list-style-type: none"><li>• Coordinate activities across all project management areas and process groups</li></ul>   |
| Scope          | <ul style="list-style-type: none"><li>• Ensure the project work includes all elements required to complete the work</li></ul>    |
| Schedule       | <ul style="list-style-type: none"><li>• Ensure the project work is completed in a timely way</li></ul>                           |
| Cost           | <ul style="list-style-type: none"><li>• Plan, estimate, manage and control project finances</li></ul>                            |
| Quality        | <ul style="list-style-type: none"><li>• Ensure the project delivers a quality output that is fit for purpose</li></ul>           |
| Resource       | <ul style="list-style-type: none"><li>• Secure, manage and monitor use of resources throughout the project</li></ul>             |
| Communications | <ul style="list-style-type: none"><li>• Ensure communications on the project are planned and carried out appropriately</li></ul> |
| Risk           | <ul style="list-style-type: none"><li>• Identify, assess and manage risk</li></ul>                                               |
| Procurement    | <ul style="list-style-type: none"><li>• Carry out purchasing and contracting as required</li></ul>                               |
| Stakeholder    | <ul style="list-style-type: none"><li>• Identify and engage stakeholders throughout the project</li></ul>                        |

## Conclusion

- ❑ A good methodology encompasses standard policies, processes, and procedures that incorporate a suite of tools and techniques to help guide the process through its life cycle in an efficient, consistent, and repeatable manner.
- ❑ Even though a methodology is described as a standard approach, it should be viewed as a living organism that constantly needs to be reviewed and updated for improvements based on experience.



Thank You