

Project Management Technologies

Prepared by Dr. Majid Saad

Lecture 1



The background features a collage of vertical panels. The leftmost panel shows hands typing on a laptop. Subsequent panels contain white line-art icons on a dark background: a graduation cap, a play button, a target with an arrow, an open book, a magnifying glass, and a group of people. The rightmost panel is a solid light blue.

Project Management Technologies

Lecture 1

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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

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.

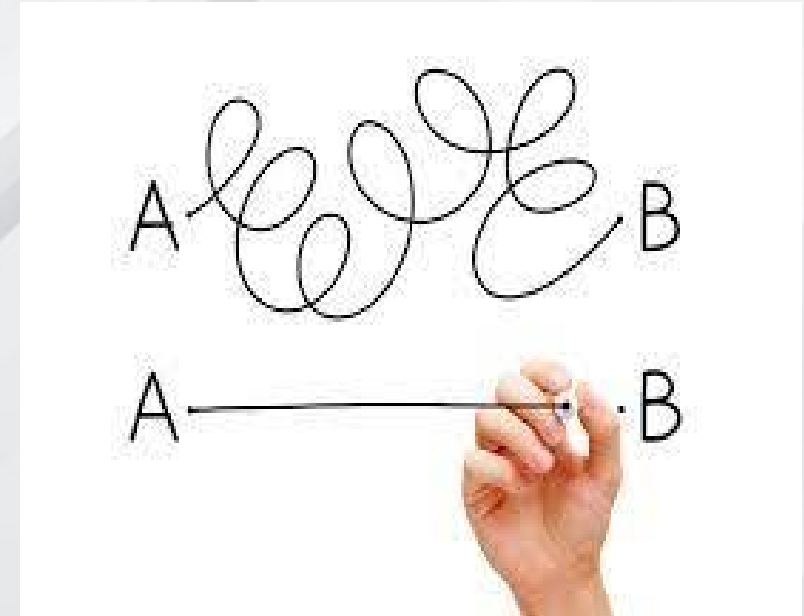
Introduction

- 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 o plications.



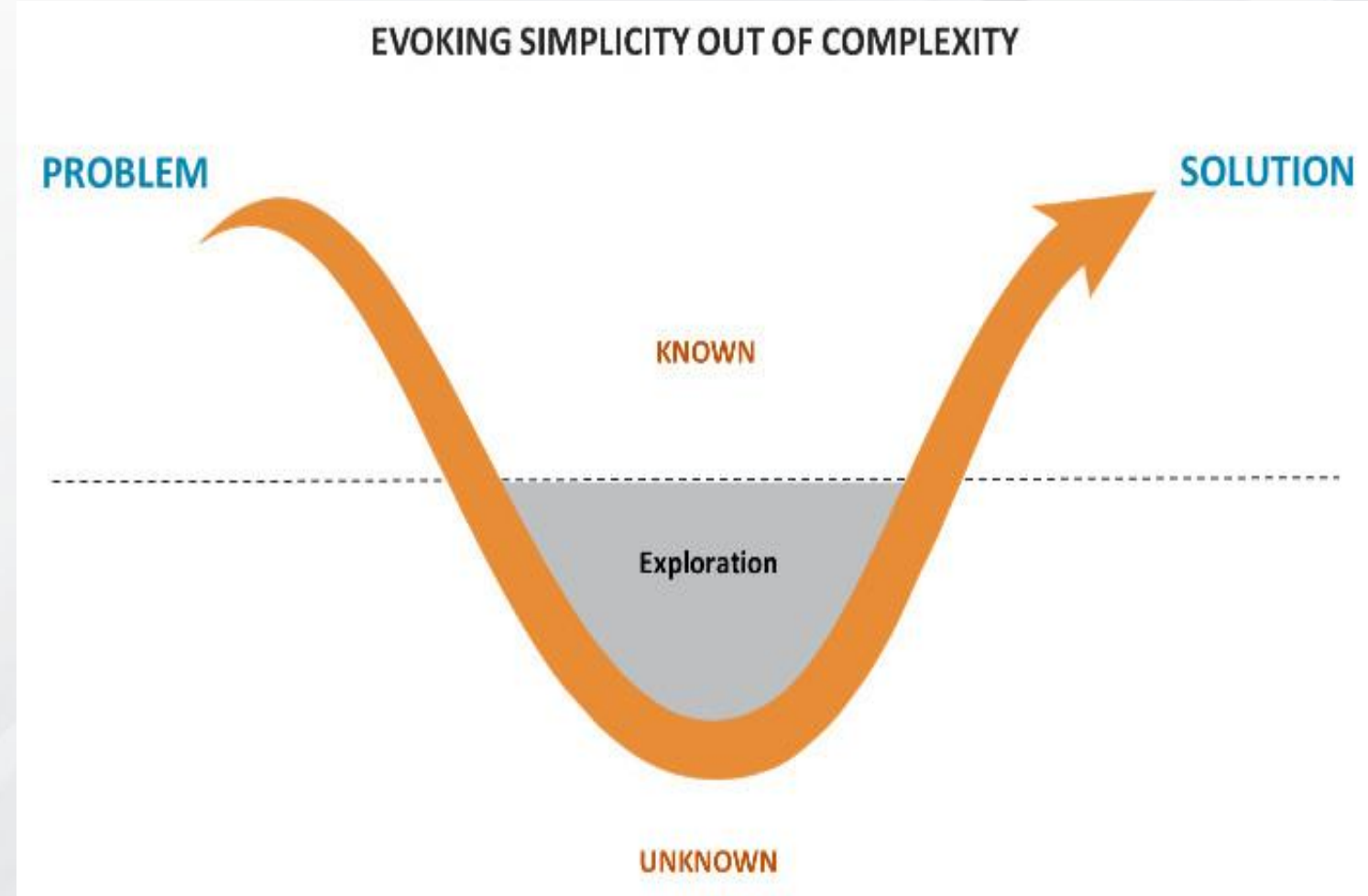
Introduction

- ❑ 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.

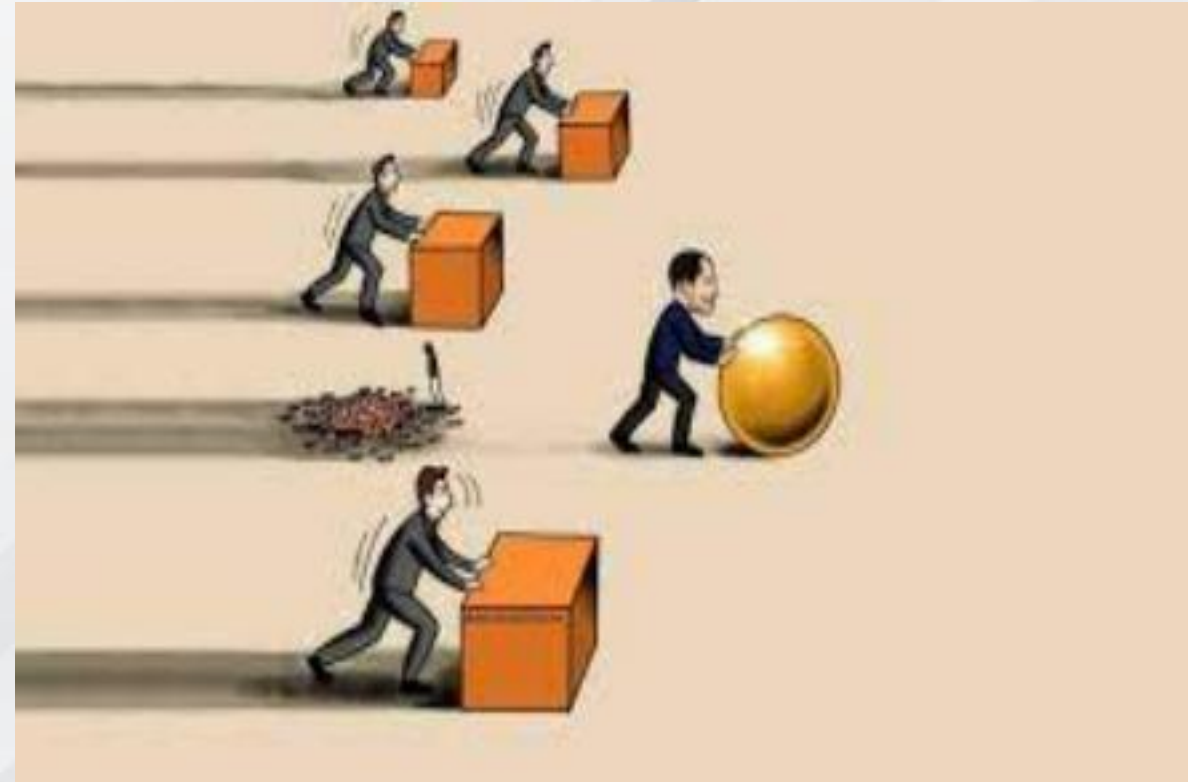


Introduction

- 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.*

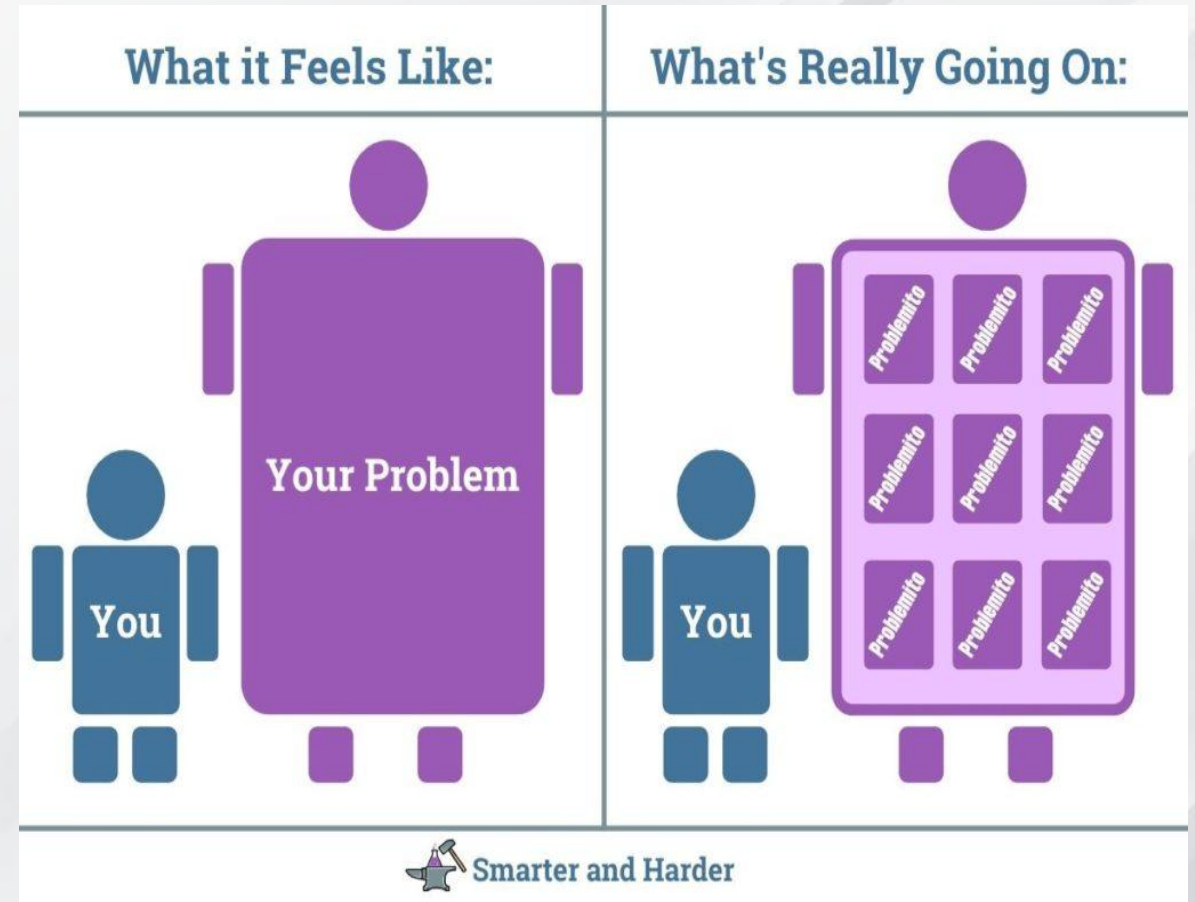
**Today's problems come
from yesterday's 'solutions'.**

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.



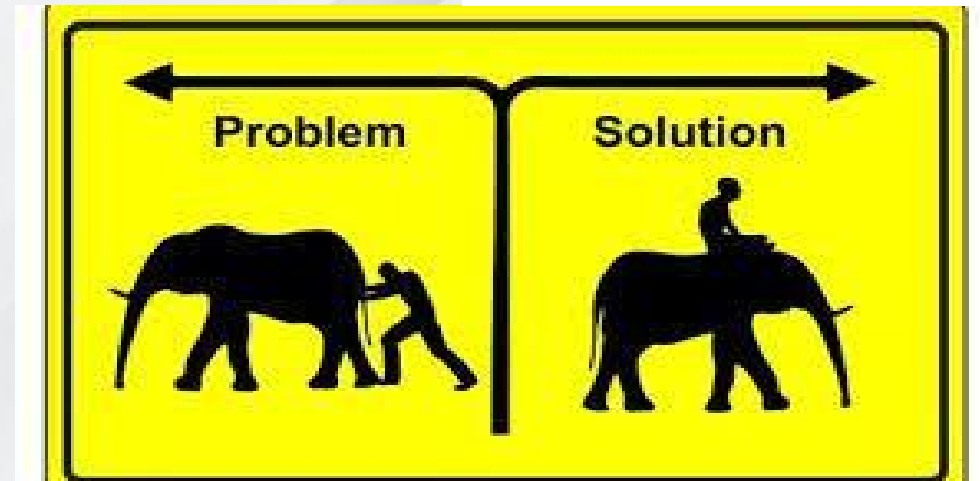
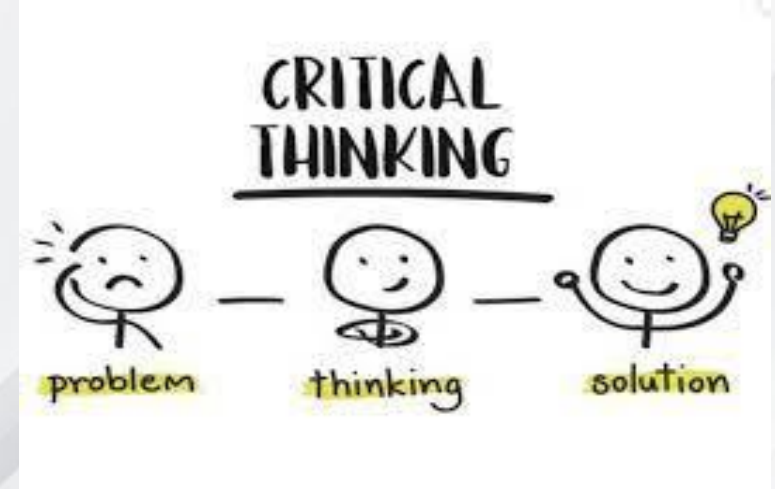
Introduction

- 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!

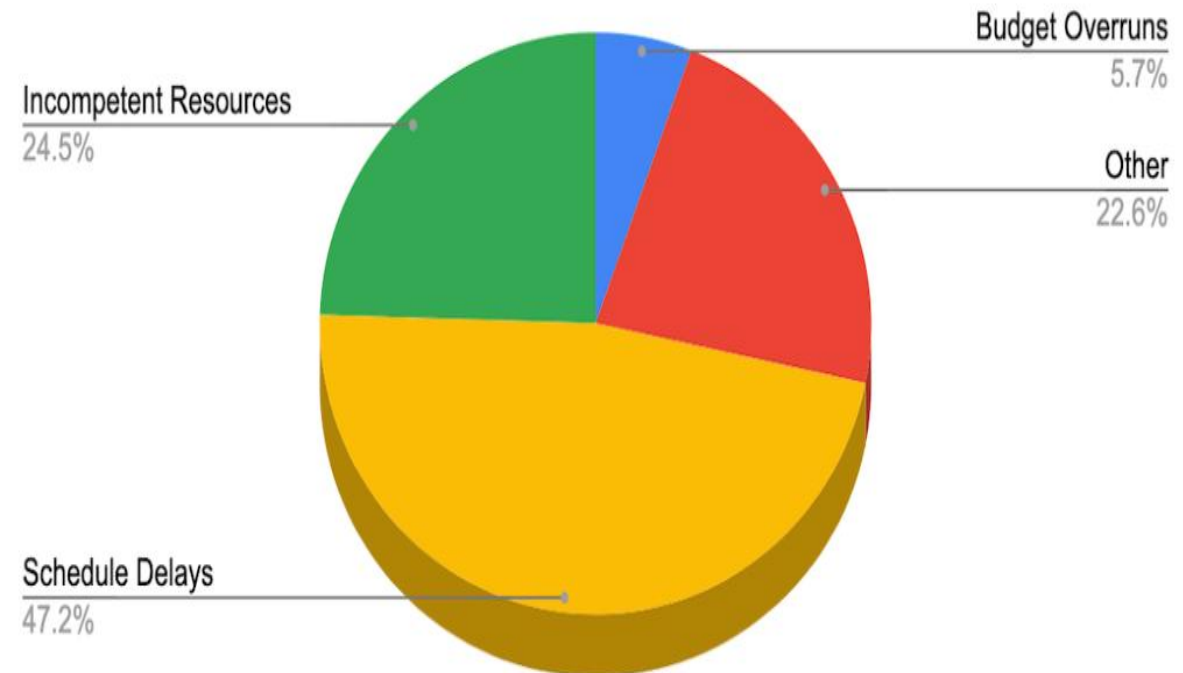


Introduction

- ❑ 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.

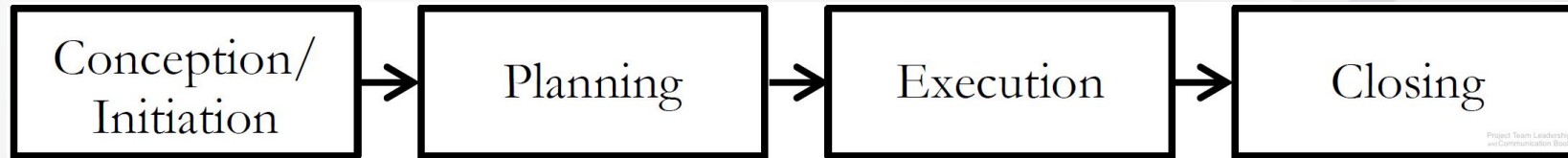
What is Project Management?

- ❑ 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

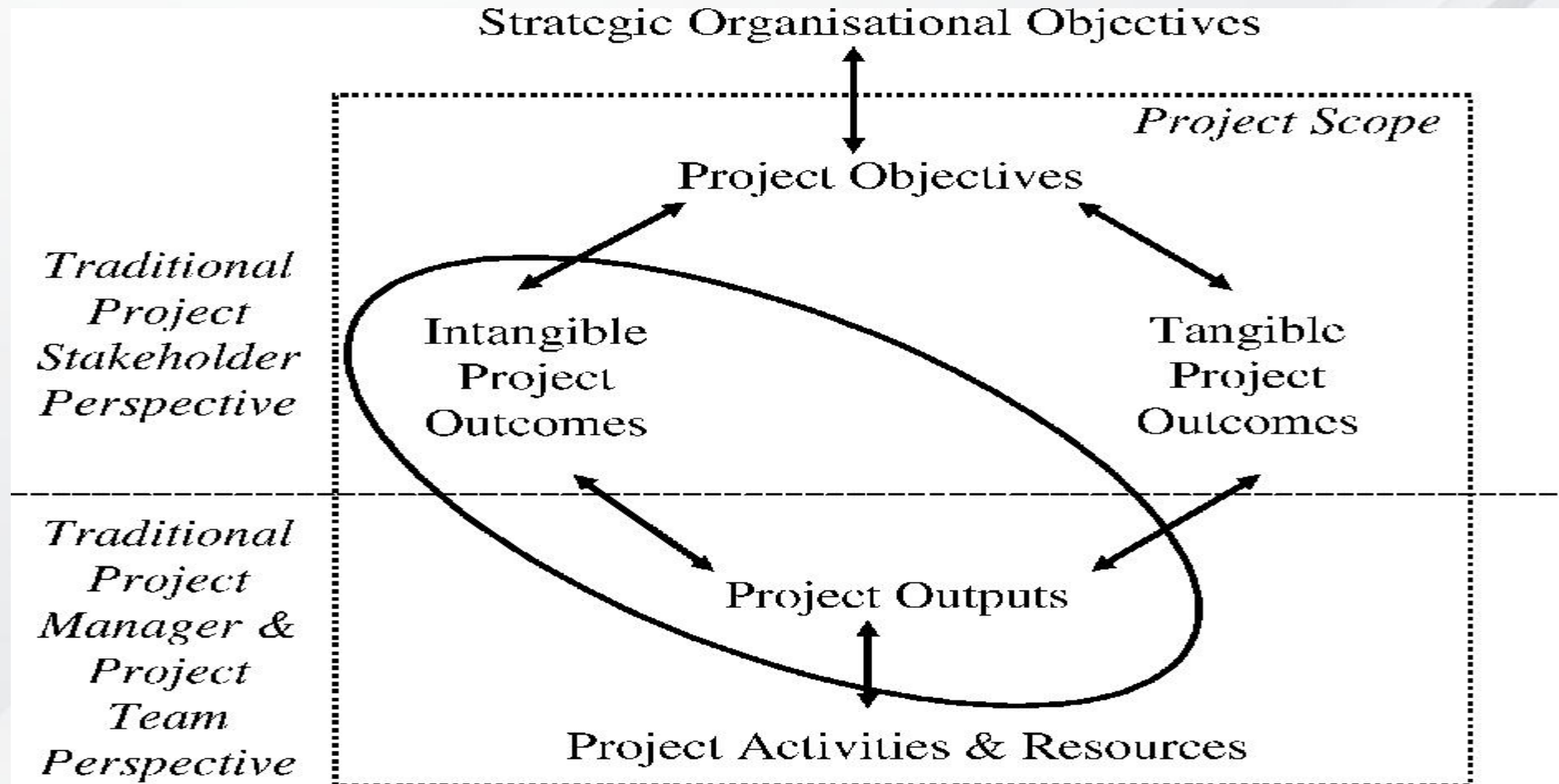


- INITIATING/Defined THE PROJECT
- PLANNING THE PROJECT
- EXECUTING THE PROJECT
- CLOSING DOWN THE PROJECT

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

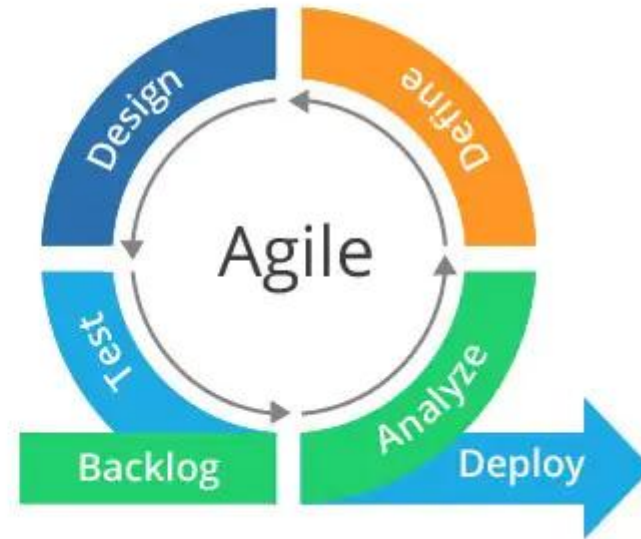
- The third Phase in Project Management Process in which the Plans created in the prior Project Phases are put to action.
- If you develop a high-quality Project Plan, it is much more likely that the Project will be successfully executed

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.

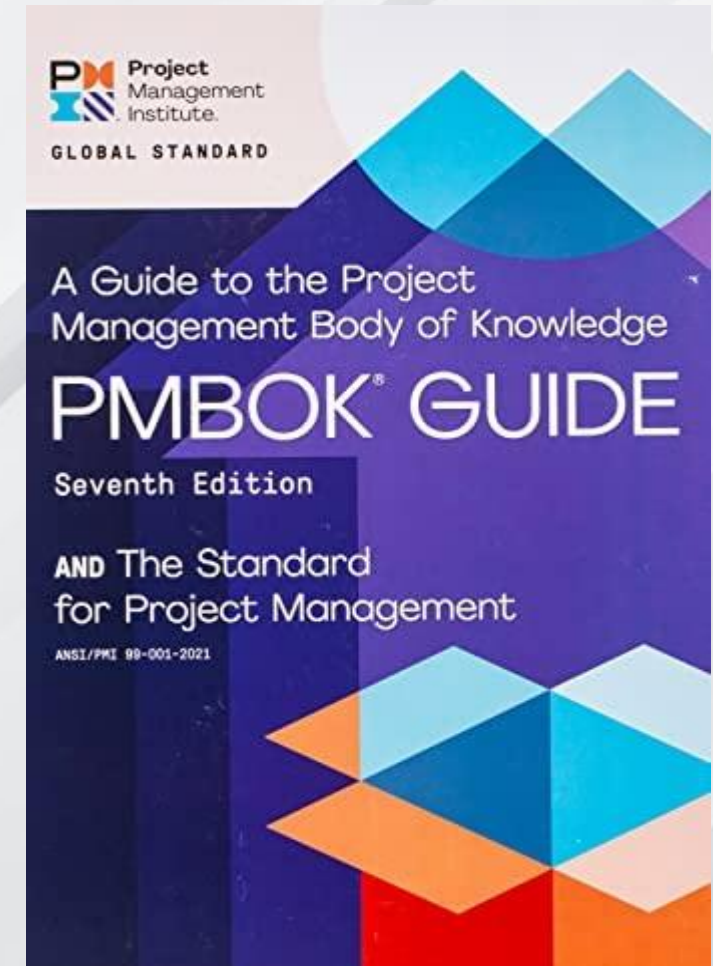
Methodology

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:

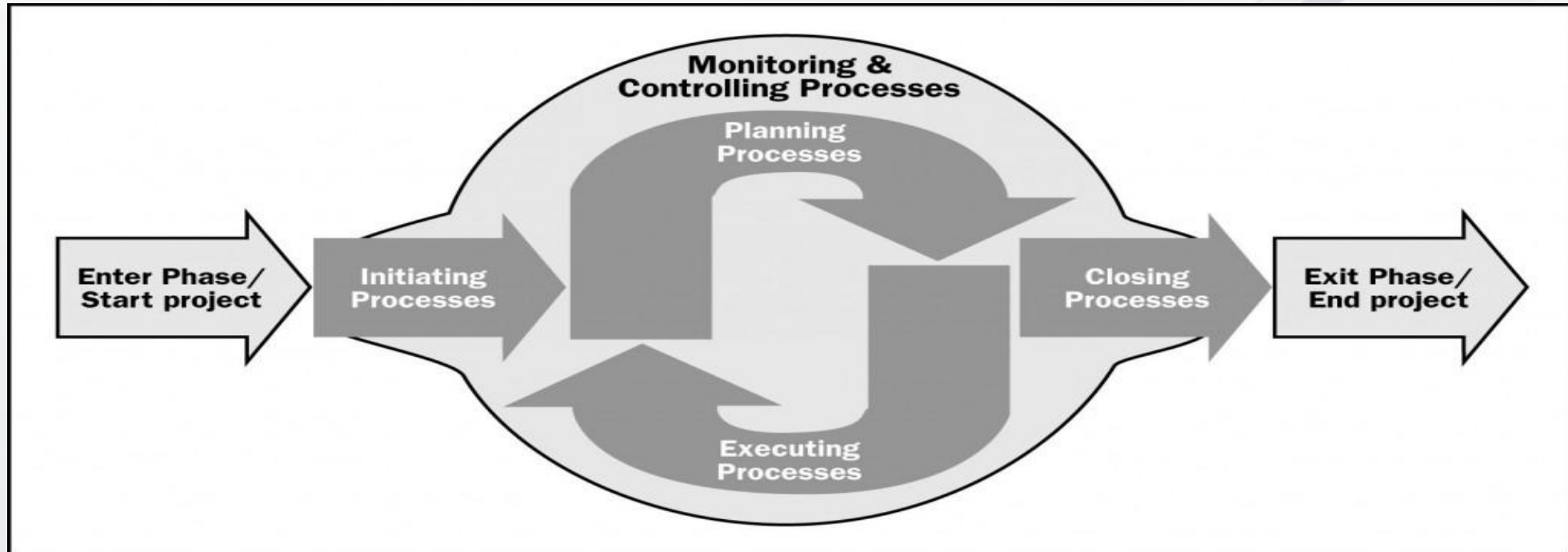
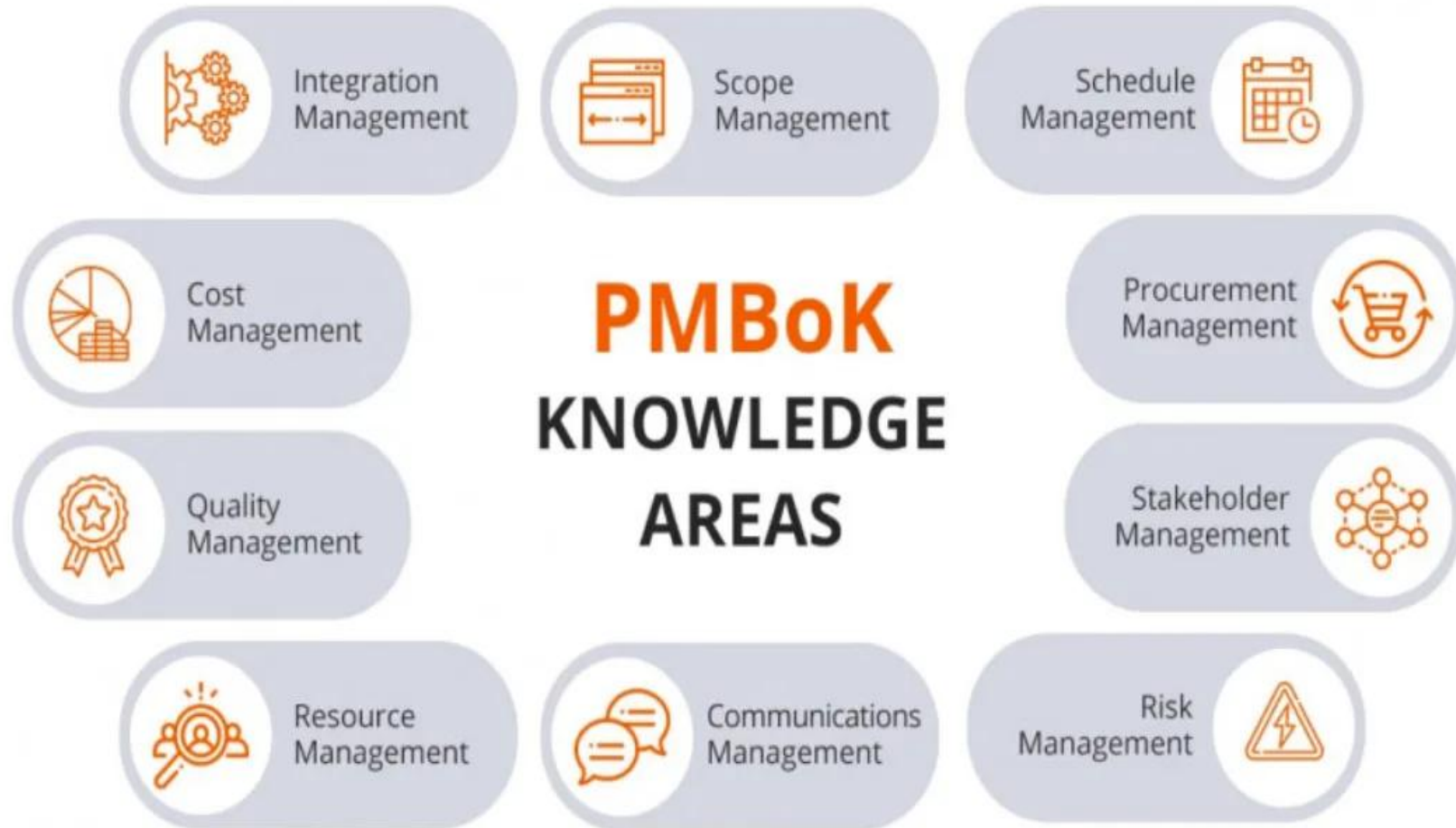


Figure 3-1. Project Management Process Groups

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



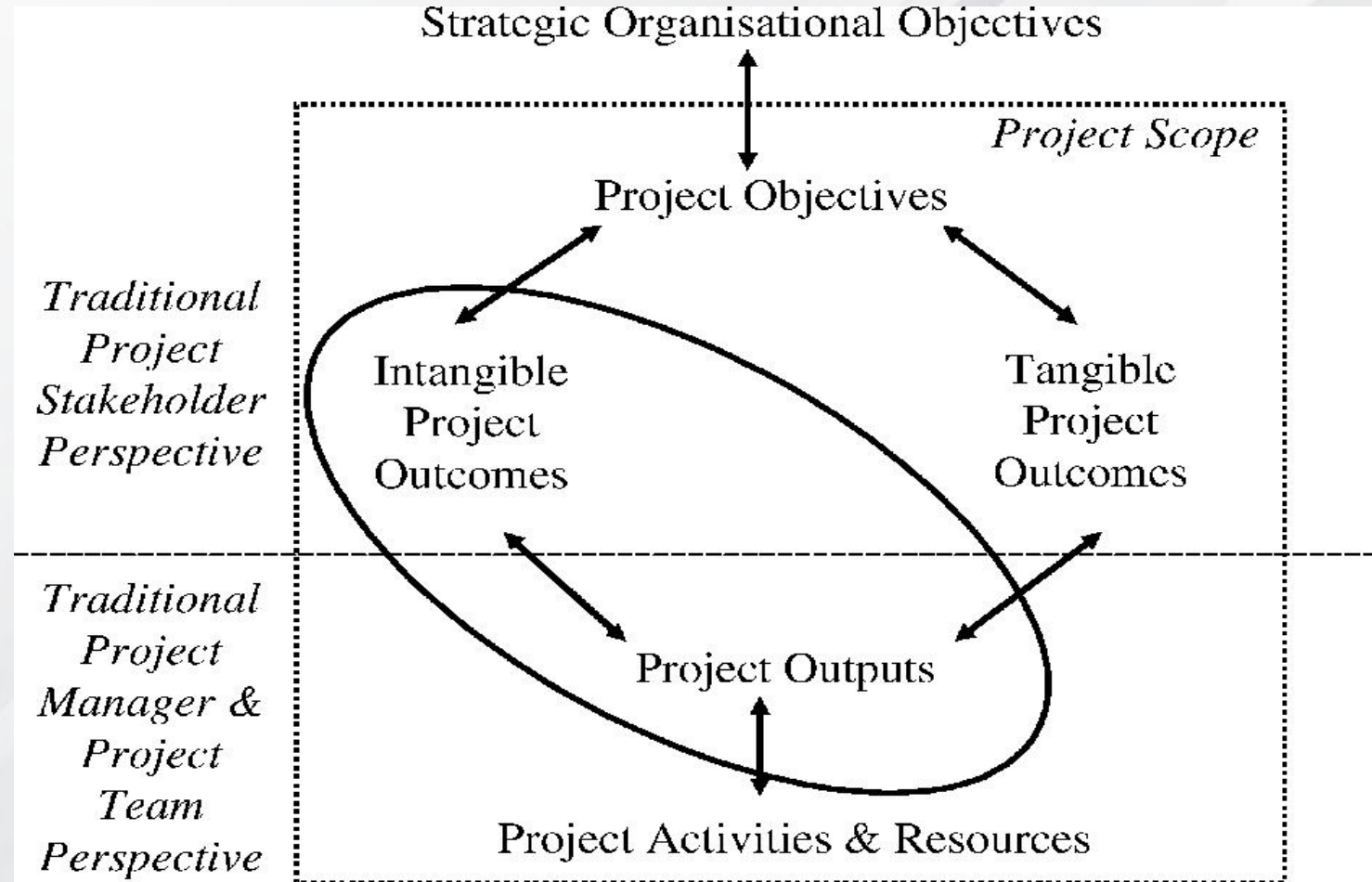
The organizational knowledge management areas covered in PMBOK

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

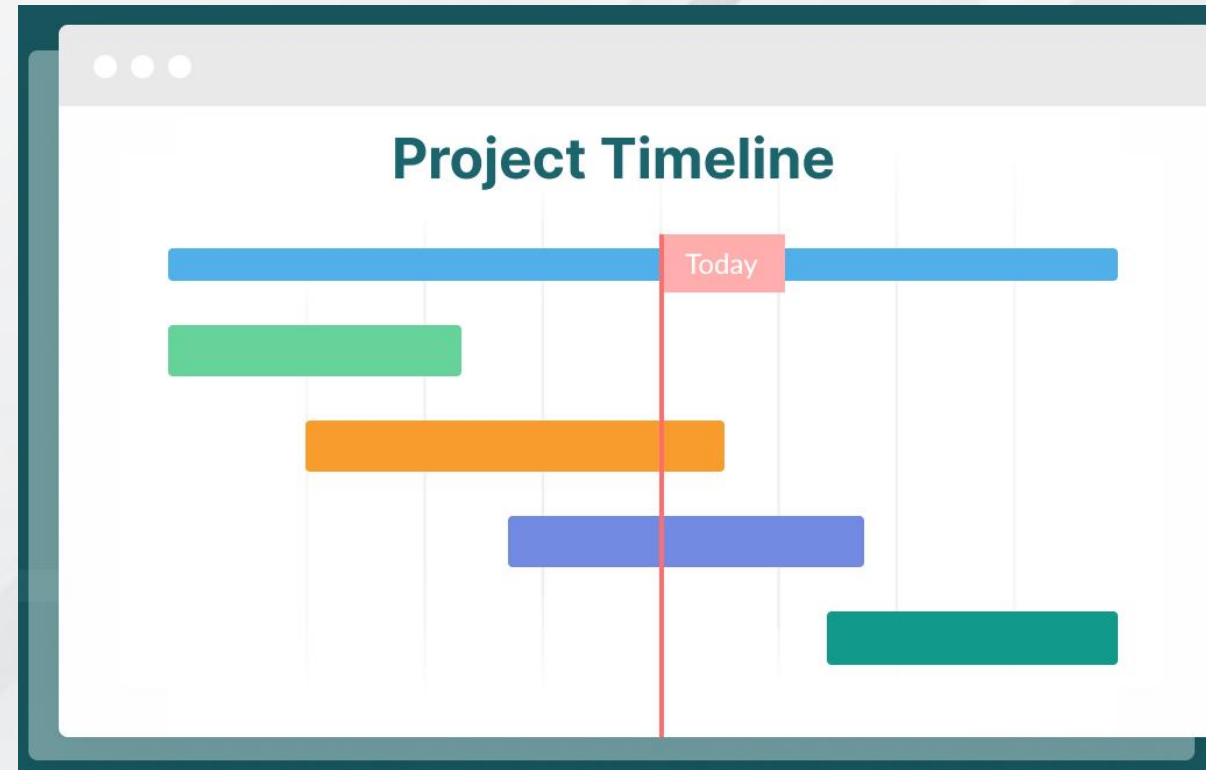
The nine organizational knowledge management areas covered in PMBOK

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.



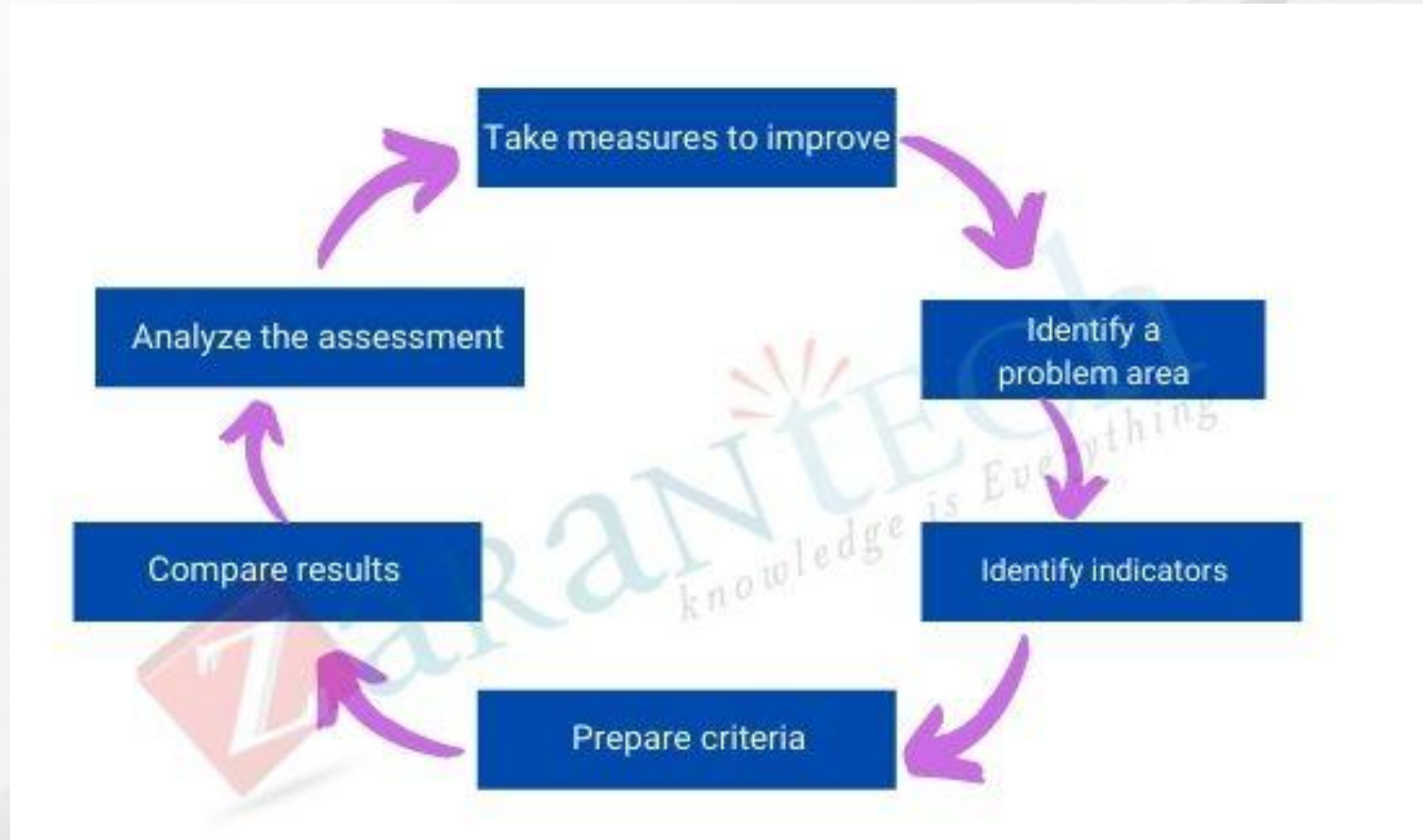
The nine organizational knowledge management areas covered in PMBOK

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

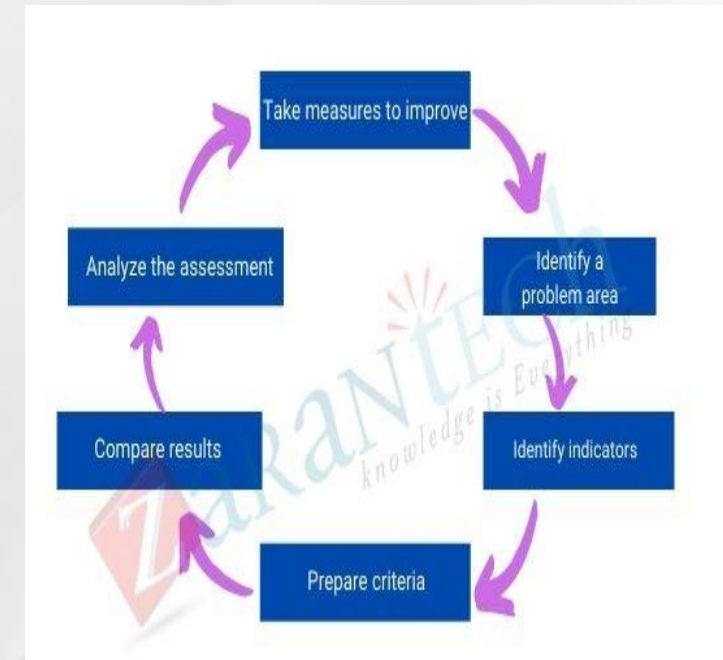
5. Quality:



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

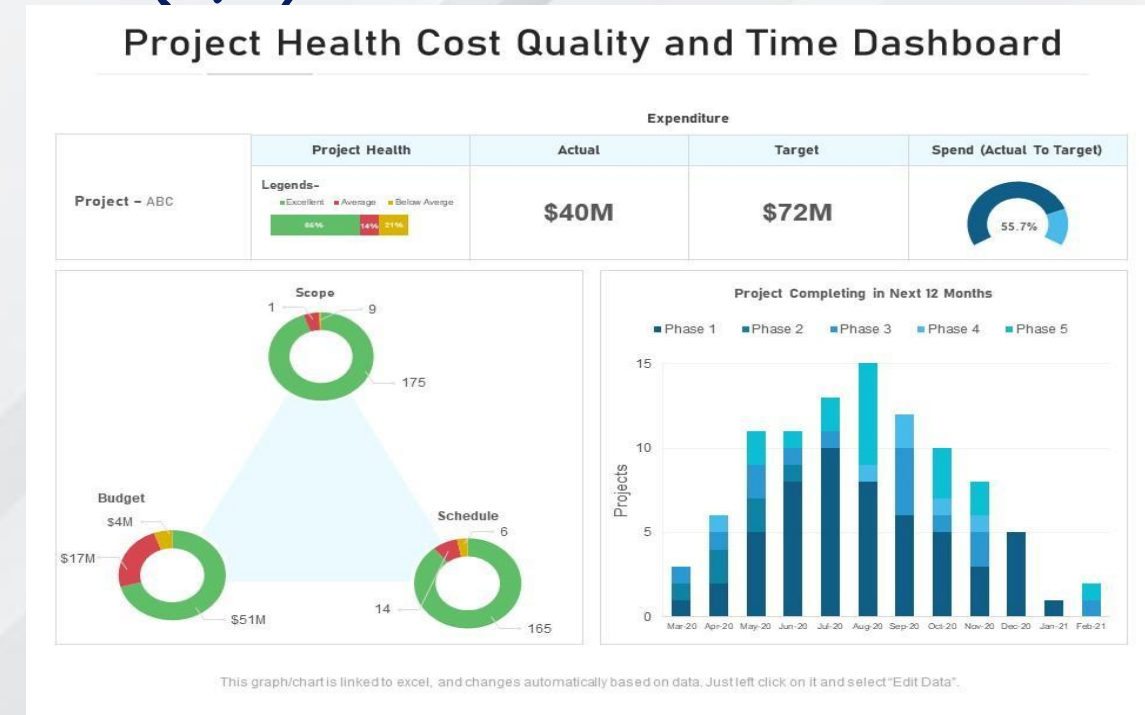
❖ **Deliverable** is any tangible outcome or item produced to complete a project; this can range from a client's approval of a project plan to completion sign-off.



The organizational knowledge management areas covered in PMBOK

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

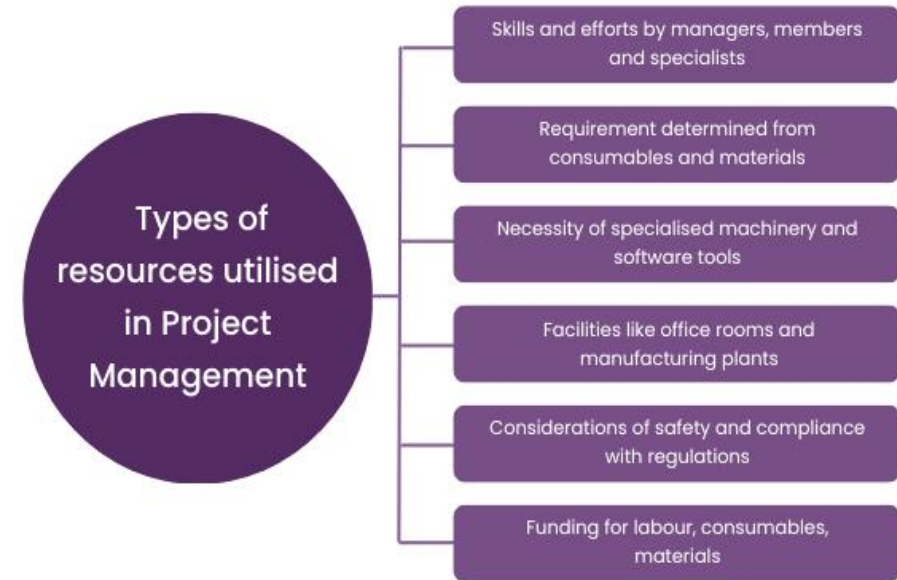
- **Compliance :**
- **Health** tells how well a project is doing; if it has run off the rails, the team can use the review to decide which actions to take to get the



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.

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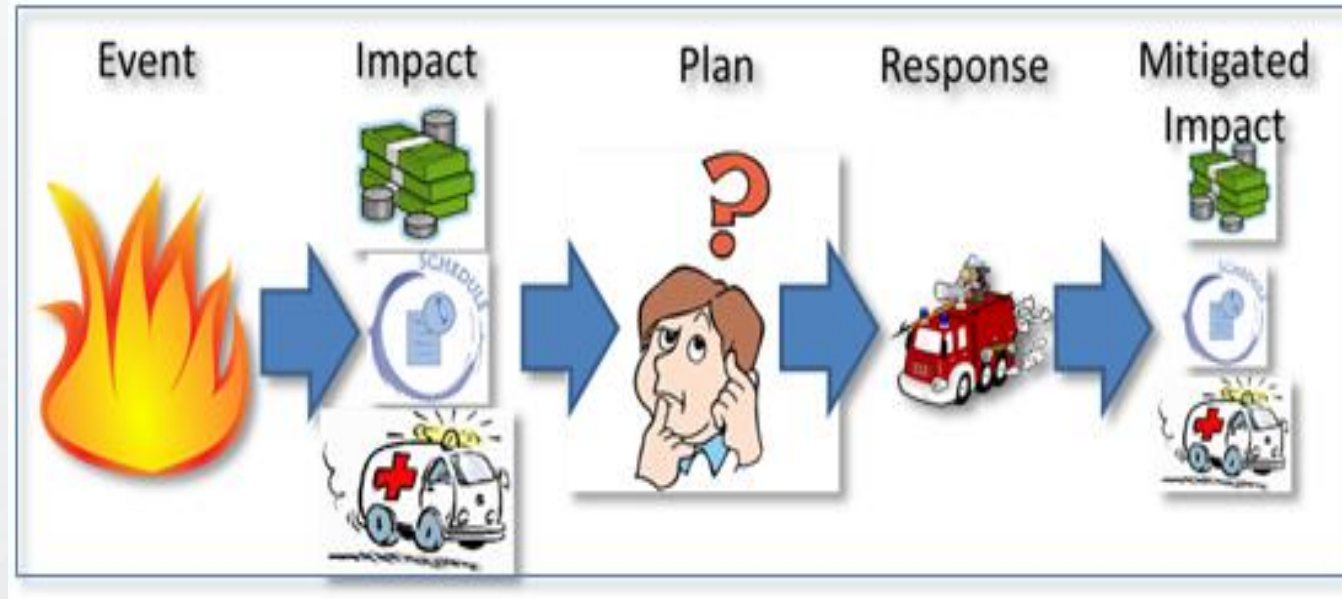
The organizational knowledge management areas covered in PMBOK

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

The organizational knowledge management areas covered in PMBOK

Planning processes: where do we stand?



The organizational knowledge management areas covered in PMBOK

Integration	• Coordinate activities across all project management areas and process groups
Scope	• Ensure the project work includes all elements required to complete the work
Schedule	• Ensure the project work is completed in a timely way
Cost	• Plan, estimate, manage and control project finances
Quality	• Ensure the project delivers a quality output that is fit for purpose
Resource	• Secure, manage and monitor use of resources throughout the project
Communications	• Ensure communications on the project are planned and carried out appropriately
Risk	• Identify, assess and manage risk
Procurement	• Carry out purchasing and contracting as required
Stakeholder	• Identify and engage stakeholders throughout the project

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