EMpower

شركة الحلول الإداريـة المتقدمة المـحدودة

PMI® Authorized Certified Associate in Project Management (CAPM)® Exam Prep Course

Development Approach and Life Cycle Performance Domain

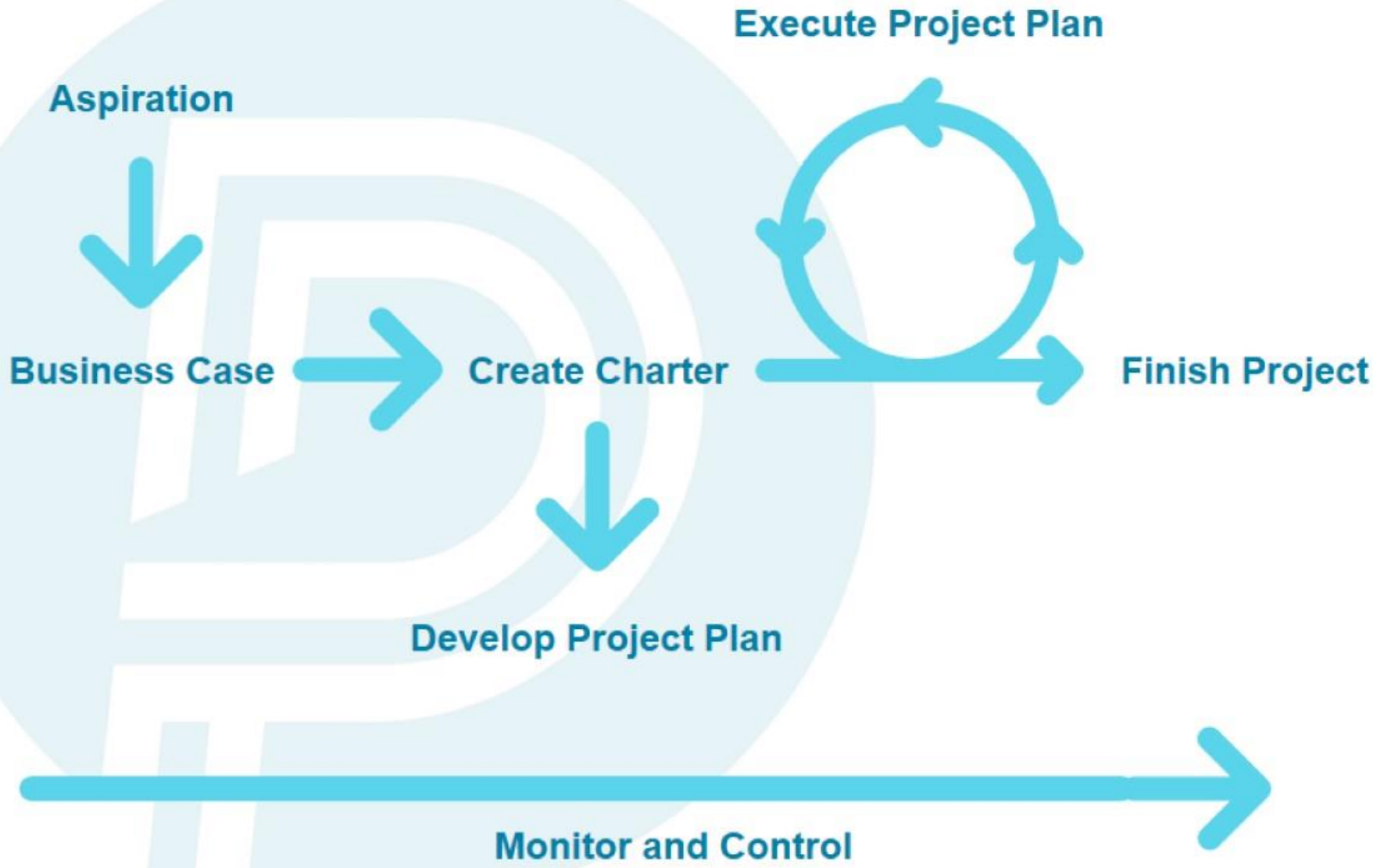
Figuring Out Your Team's Way of Working

In This Session

- Fundamentals of the project life cycle
- Development approach and the life cycle performance domain
- Monitoring and controlling project work
- Closing the project or phase
- Project activities, deliverables, and milestones

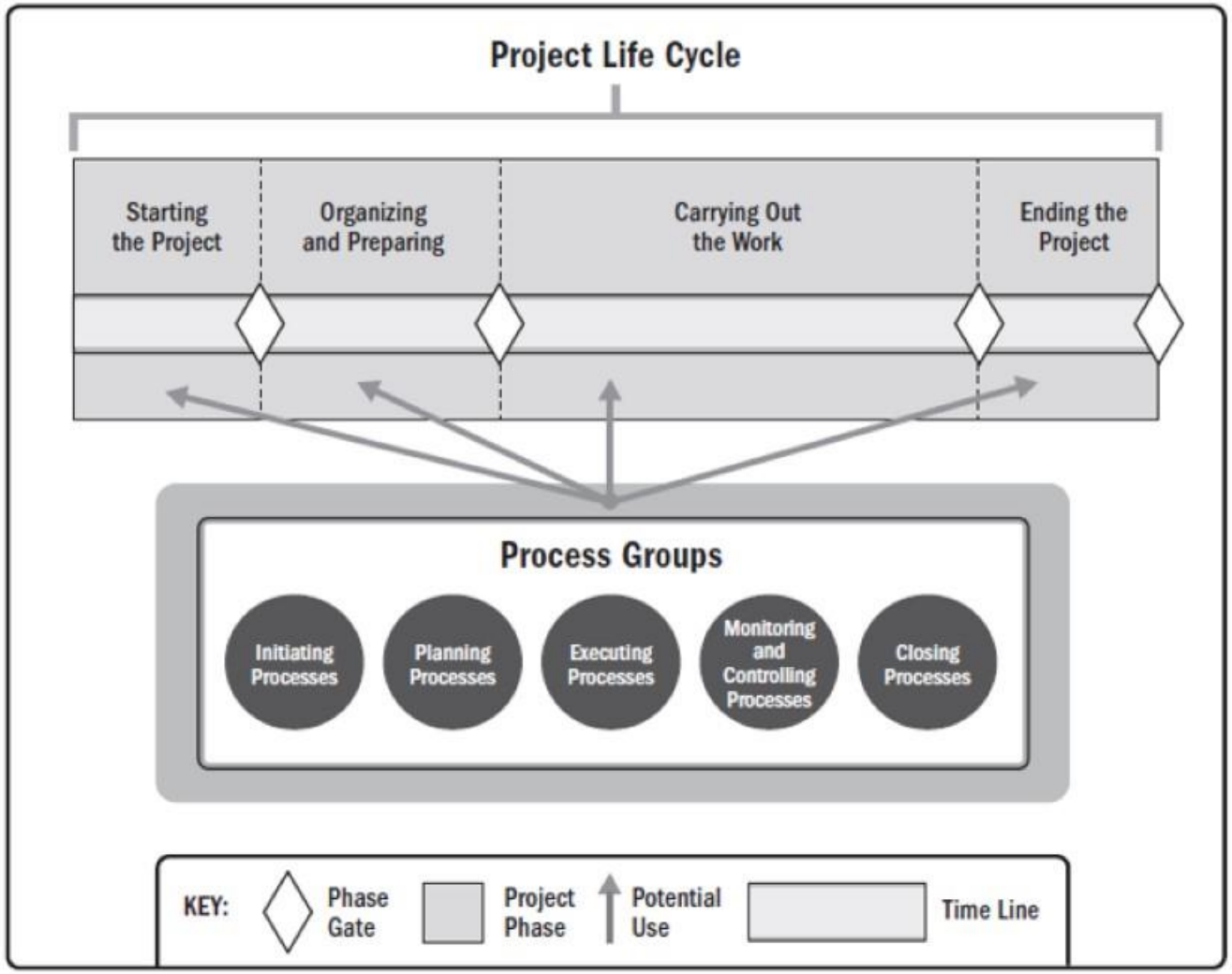
What Is a Life Cycle?

Visualizing the Project Life Cycle



Interrelationship of Key Components in Projects

A project life cycle is the series of phases that a project passes through from its start to its completion. It provides the basic framework for managing the project.



01

Aspiration and Ideation Phase

In this pre-project phase, the business has the idea, and you need to ensure that any proposed project idea is aligned with the organization's mission.

02

Business Case

The project Manager needs to assess the project benefit and the value it brings to stakeholders.

03

Developing the Project Charter

The project charter is an official document that identifies the project manager and grants authority to apply organizational resources to project activities.

04

Develop the Project Plan

This phase looks at the activities that need to be completed to deliver the project successfully. It considers both project- and product-related activities.

05

Execute the Project Plan

The project team must be motivated and led successfully to produce the project deliverables.

06

Monitor the project Work

There is also a monitoring and controlling aspect to the execution phase; milestones must be attained within the targeted project schedule, cost, and quality constraints.

07

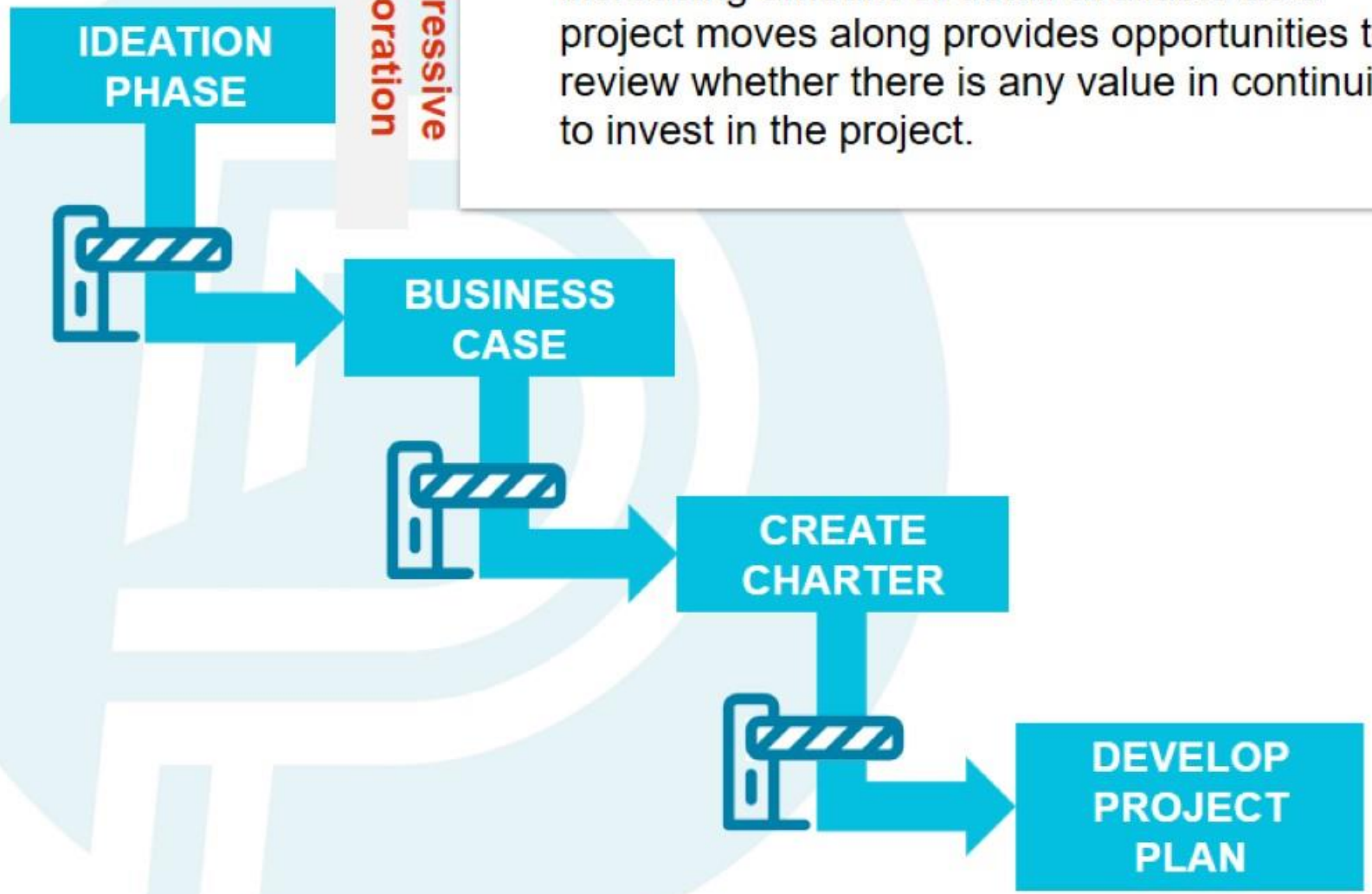
Finish Project/ Closing

As project manager, you will handle administrative closure, document lessons learned, and communicate project results.

Phase Gates

A **phase gate** is a point for **deciding** whether a project should be continued or terminated.

Progressive elaboration takes place as a project progresses from one phase to another. The increasing amount of detail available as a project moves along provides opportunities to review whether there is any value in continuing to invest in the project.



What's the Difference Between a Project Phase and a Project Life Cycle?

PROJECT PHASE

A project phase is a collection of logically related project activities that culminate in the completion of one or more deliverables.

-- PMI® Lexicon of Project Management Terms

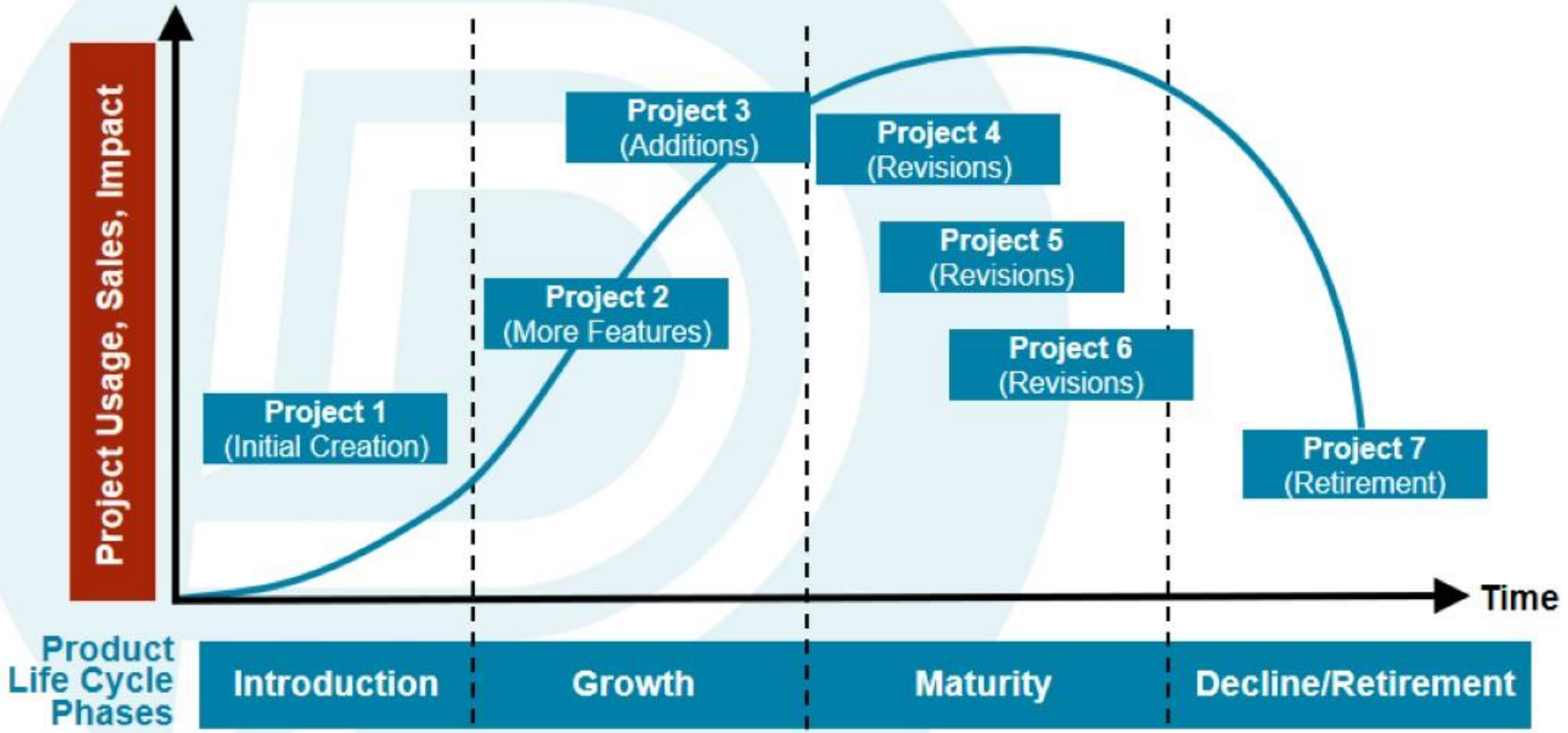
PROJECT LIFE CYCLE

A project life cycle is the series of phases that a project passes through, from its start to its completion.

-- PMI® Lexicon of Project Management Terms

©2024 Project Management Institute, Inc. All rights reserved.
This material is being provided as part of a PMI® Workshop.

What's the Difference Between a Project Life Cycle and a Product Life Cycle?



PRODUCT

PRODUCT LIFE CYCLE

What's the Difference Between a Project Life Cycle and a Product Life Cycle?

01

Product

A product is an artifact that is produced and is quantifiable; either an end item or a component item.

02

Project Lice Cycle

The series of phases that represent the evolution of a product, from concept through delivery, growth, maturity, and to retirement.

03

The relationship between product life cycle and project life cycle

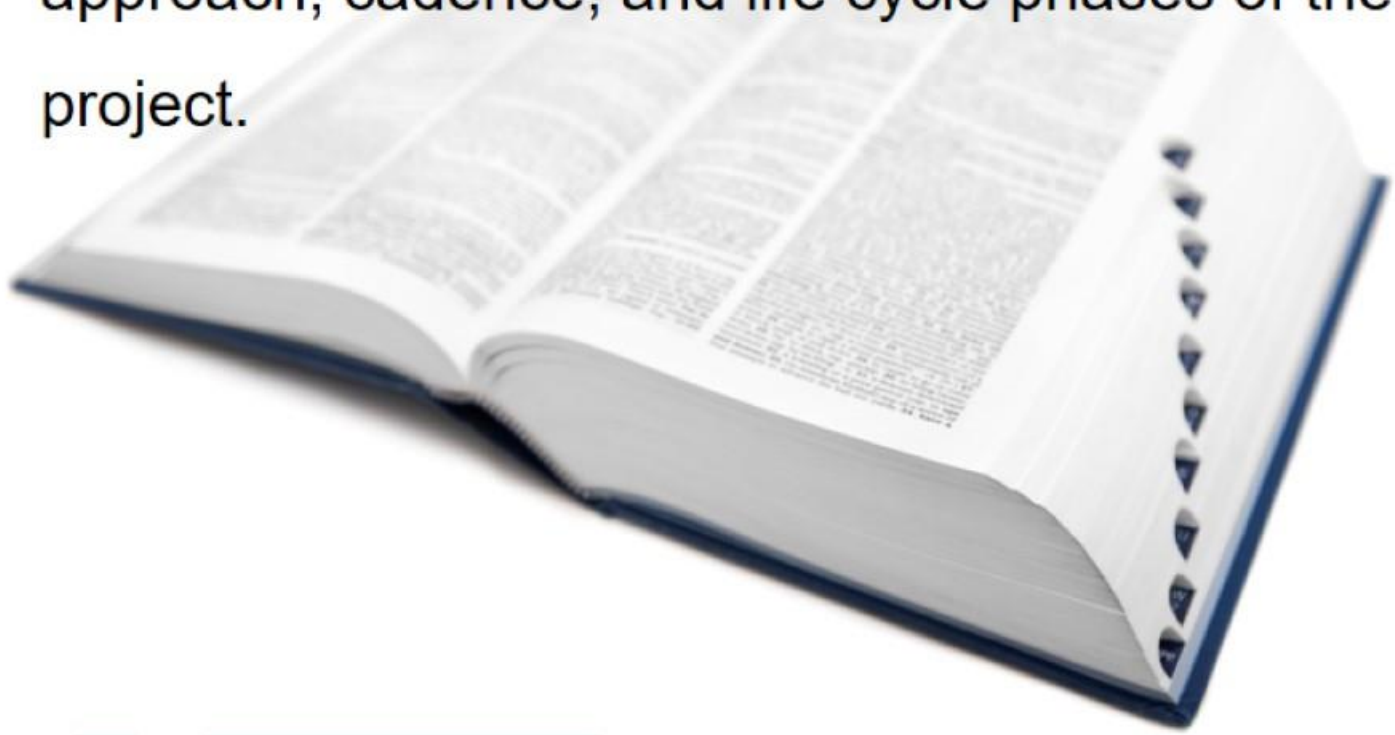
- There can be a number of projects at different points in the product's life cycle.
- The project life cycle occurs throughout the life cycle of a product.
- The initial creation of the product could be a project.
- Adding features to the product could be another project.
- Revisions could be a project. And so on.

Development Approach and Life Cycle Performance Domain

What Is The Development Approach and Life Cycle Performance Domain?

Project Management Institute. (2022). A Guide to the Project Management Body of Knowledge (PMBOK® Guide)– Seventh Edition.

The **Development Approach** and Life Cycle performance domain addresses **activities and functions** associated with the development approach, cadence, and life cycle phases of the project.



Some More Critical Definitions

DEVELOPMENT APPROACH

A method used to create and evolve a product, service, or result during the project life cycle, such as a predictive, adaptive, or hybrid method. The development approach can demonstrate specific characteristics, such as being iterative or incremental.

— PMBOK® Guide — Seventh Edition

Initiating

Planning

Executing

Monitoring and Controlling

Closing

Development Approach and Life Cycle Performance Domain

Predictive Vs Agile (Iterative + Incremental)

SIMPLE PROJECT

YOUR PROJECT IS
FIXING THE POTHOLE

Waterfall

Iterative

Incremental

Agile

Predictive = Waterfall = Traditional

1 Predictive Approach

YOU KNOW the dimensions of the pothole
i.e You know the requirements of your project

Waterfall- Sequential Relationship

Goals

1 **Requirements**
starts with the dimensions or requirements.

Start

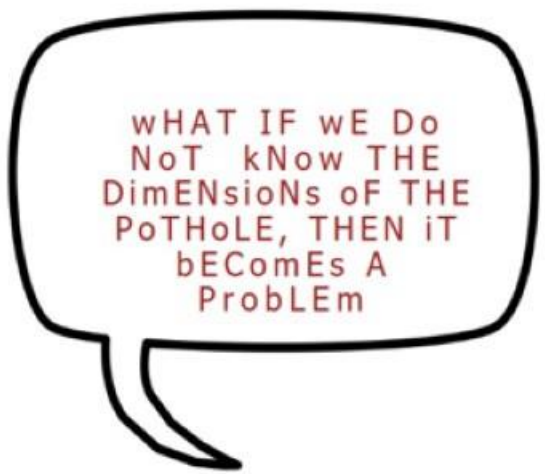
2 **Design**
Prepare shape for the concrete material

3 **Implementation**
Deploying the concrete in the pothole

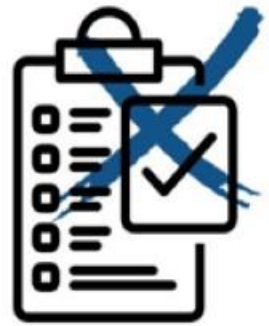
4 **Verification**
you make sure if the concrete fits the pothole

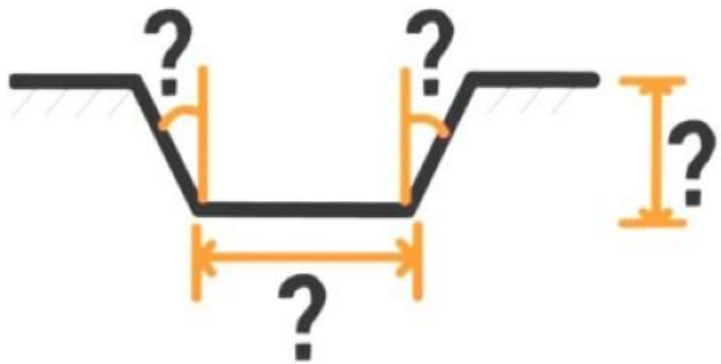
5 **Deliver**
You have reached your goal and deliver the product to customer

Dimensions NOT KNOWN = Problem



Requirements are not Known





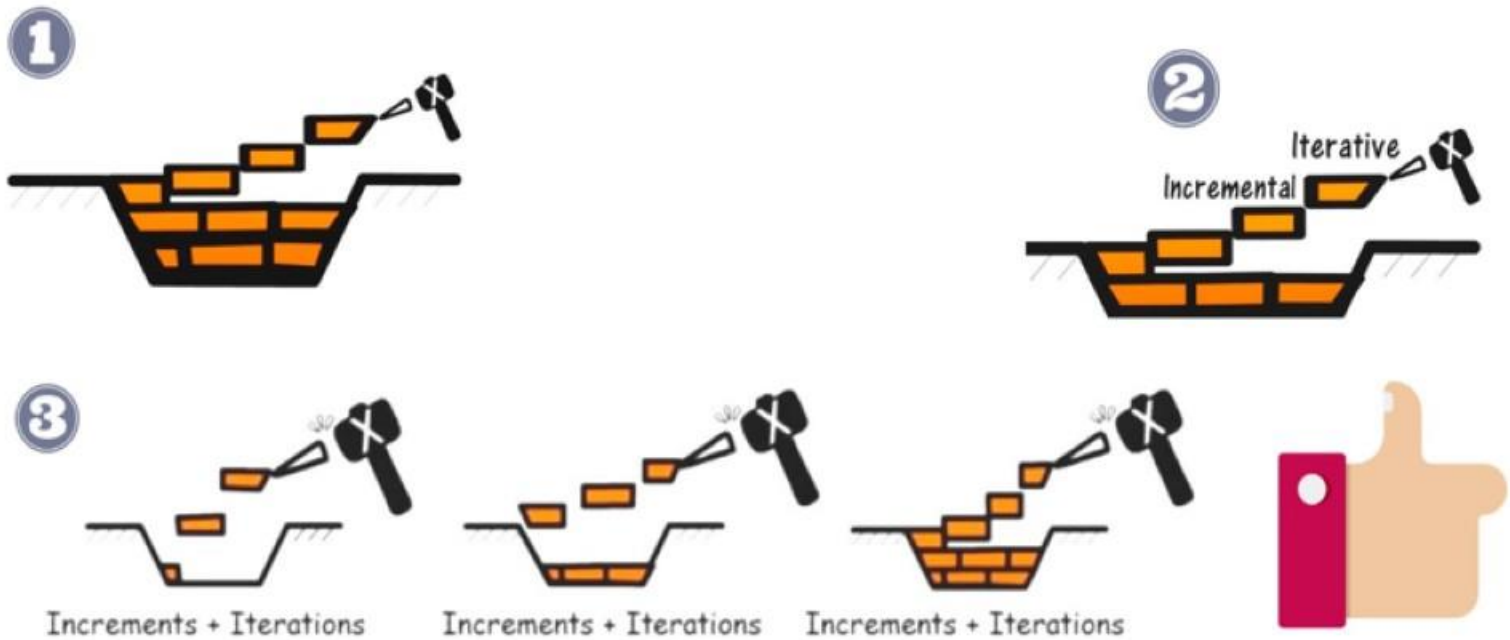
2 Iterative Approach

REFINEMENT

3 Incremental Approach

Increment # 1 Increment # 2 & 3 Increment # 4

4 Agile Approach ITERATIVE + INCREMENTAL

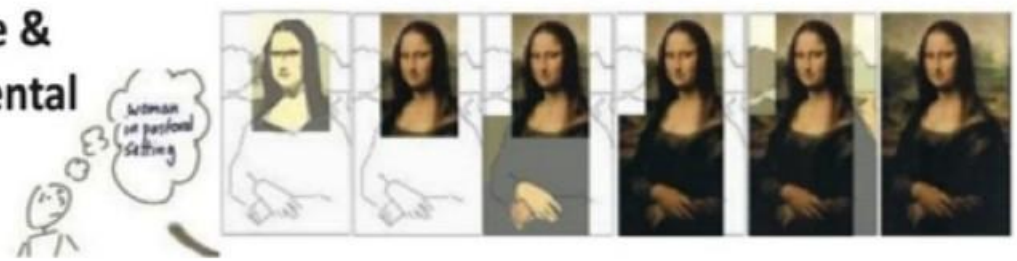


Iterative, incremental, and Agile

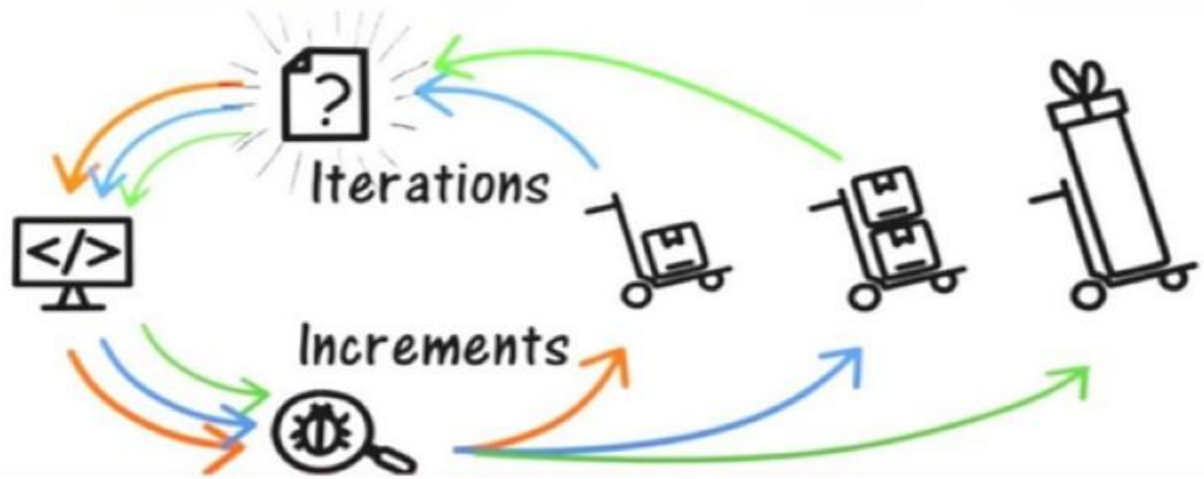
Iterative

Incremental

Iterative & Incremental



Agile Lifecycle



Requirements are Not known

Refine Concepts overtime, Start with what you know, refine products as you go

Incremental + Iterative

Islam Tanas PMP, RMP, ACP, PBA, ACAC, ITIL, MCSE, MBA, MSc, PhD

Development Approach Extremes

- Development approaches can be broadly seen as two extremes in terms of goals and implementation.
- Either can be appropriate in the right circumstances—and on the right project.

PREDICTIVE LIFE CYCLES.

These are traditional, step-by-step processes. They also go by names like waterfall, linear, structured, plan-based, or stable.

HYBRID

These use elements of both predictive and adaptive development life cycles.

ADAPTIVE Life Cycle

These are iterative—that is, they cycle through iterations that repeat. They also go by names like agile, iterative, incremental, spiral, extreme, and evolutionary.

Recommendations for Choosing a Predictive Development Approach

Characteristics

Follow a generally **sequential structure** from start to finish

Well-planned-out **steps**

Delivers an output at the end of the project, not incrementally throughout

Best Used When

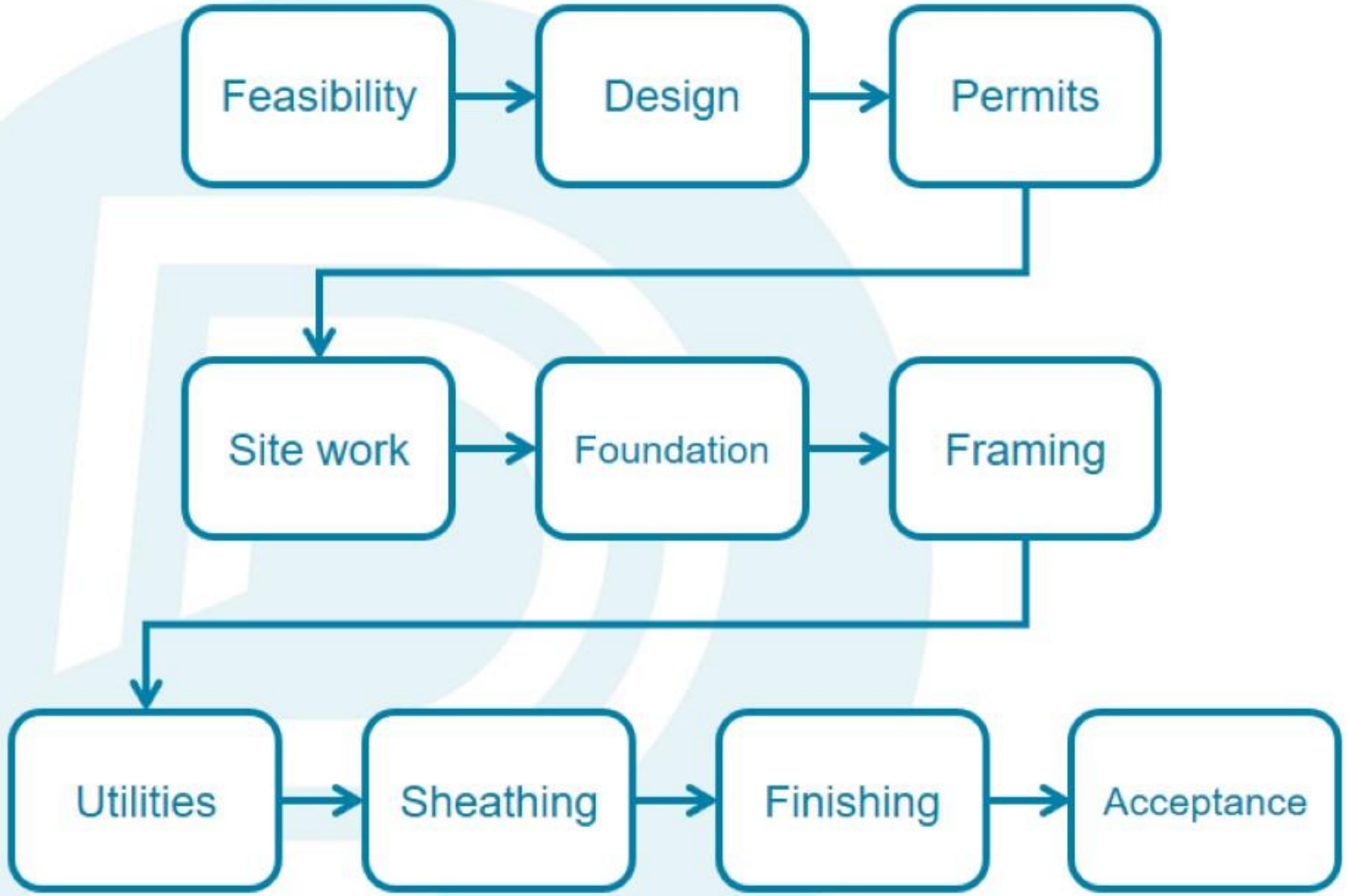
Templates from previous, similar projects are available

Planning can be done reliably **up-front**

There are **well-defined** and **stable** scope, schedule, cost, and resource needs

Predictive Life Cycle Example: Construction Project

Predictive life cycles are associated with clear phases; the project manager and team elicit requirements early and execute work and monitor performance through fulfilment



Framing can't happen, for example, until the foundation is complete. The foundation can't happen until the site work is complete. And so on.

Recommendations for Choosing the Adaptive Development Approach

Characteristics

Uses an **iterative approach** that repeats project phases

Project moves to the next phase after **customer feedback**

Best Used When

Requirements are **not well known** up front

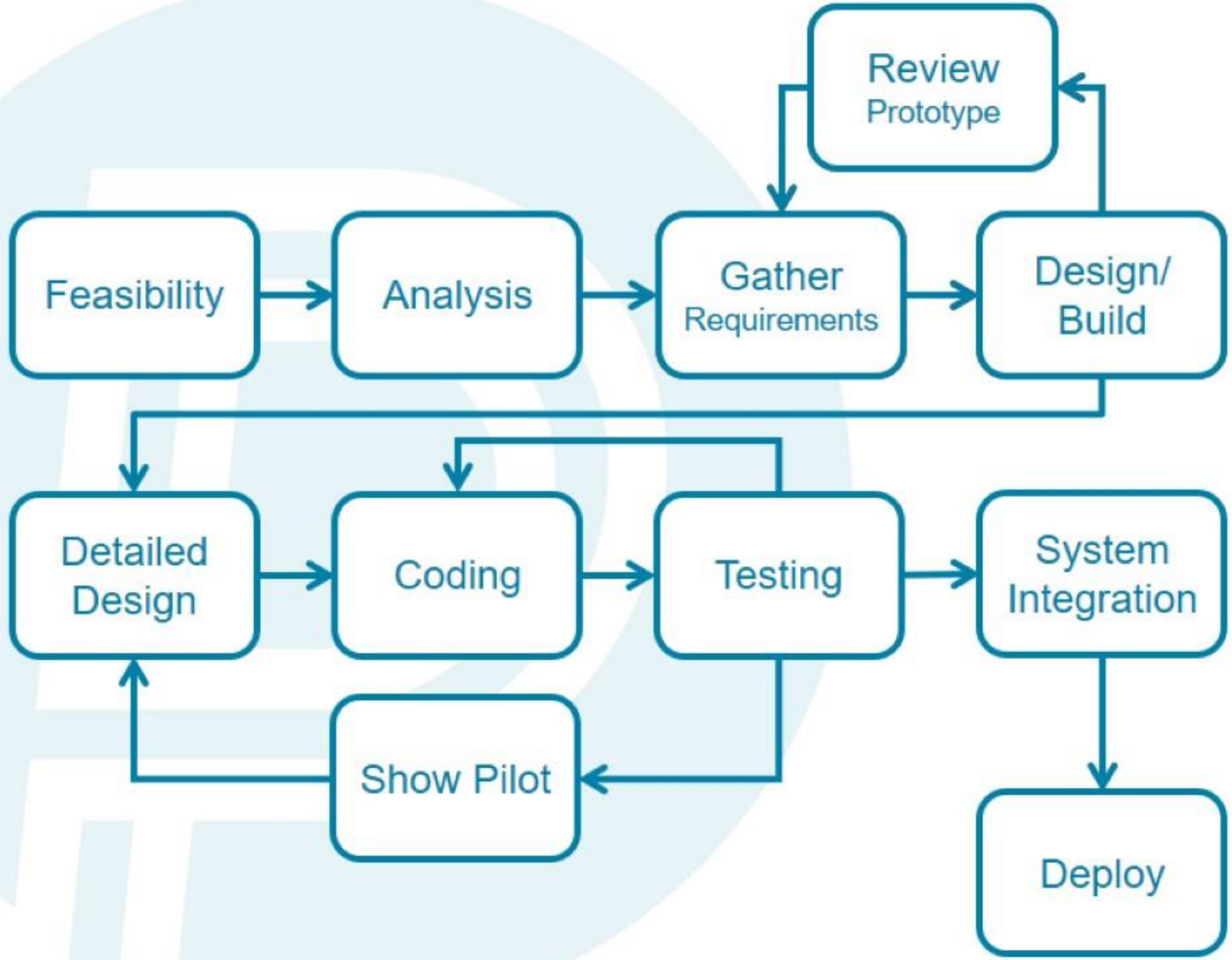
Requirements are known to be **changing**

Opportunity to receive **frequent user feedback**

Flexibility to change, refine, and even replace requirements

Adaptive Life Cycle Example:

Software Development



Hybrid Development Approaches

Characteristics

Elements of **both** predictive and adaptive approaches

Best Used When

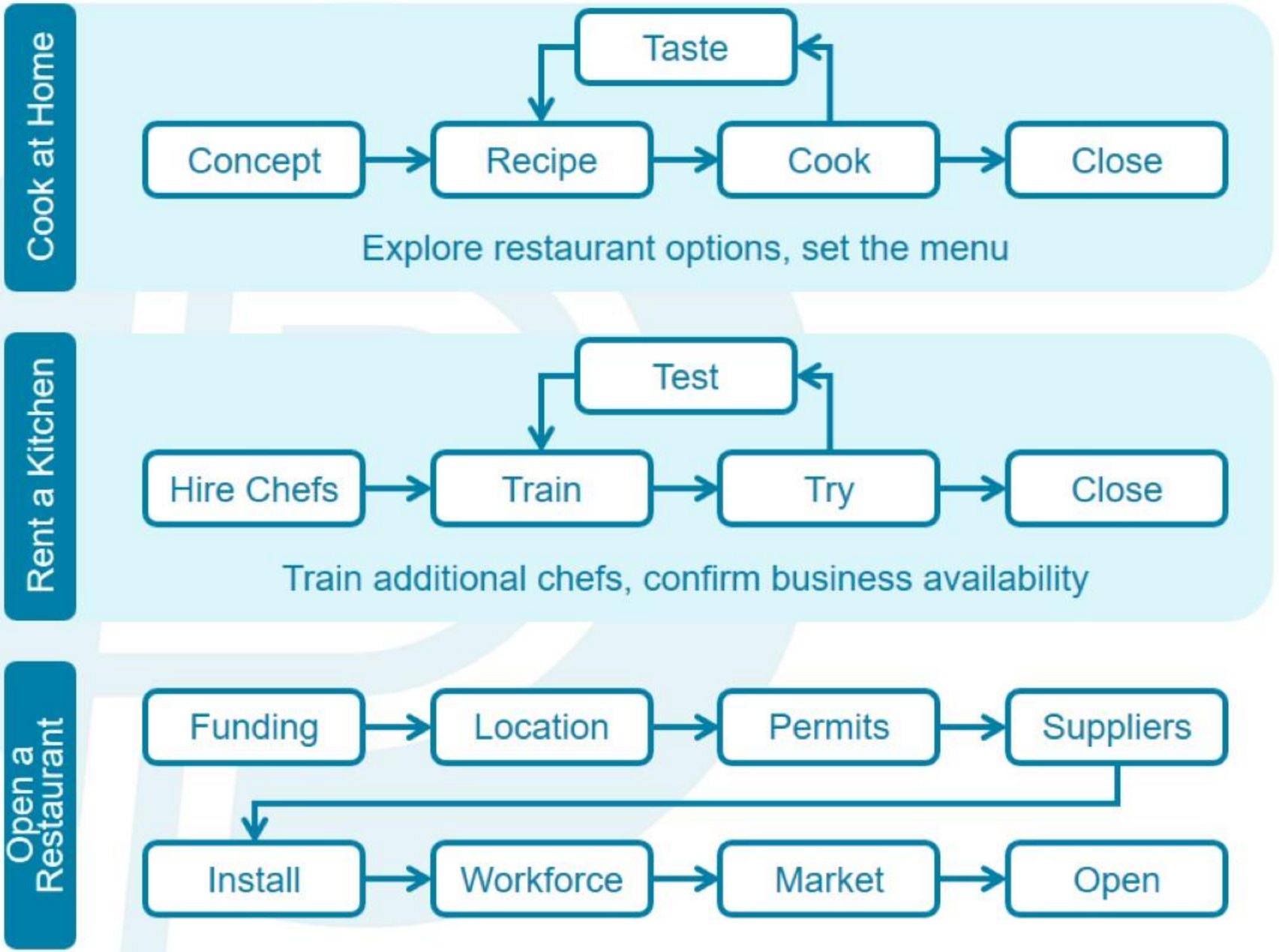
High need for up-front research

Requirements indicate that deliverable must be implemented in a predictable way

Project attributes suit elements of both predictive and adaptive approaches

Hybrid Life Cycle Example:

Opening a Small Restaurant



Process Groups

Processes Can Be Grouped

Initiating

Planning

Executing

Monitoring and Controlling

Closing

Notes on Processes

- Groups of processes are **not project phases**.
- Process groups can interact with each stage of a project life cycle.
- The **outputs** of one process group generally become the **inputs** for another process group.
- The process groups can be used as a **template** to manage all kinds of projects across industry domains.
- The process groups can be used to **tailor** your own project management life cycle.

Monitoring and Controlling Project Work

Measurement Performance Domains

Monitoring and Controlling Project Work

Process Group	Performance Domain	Processes
Monitoring and controlling	Measurement	Monitor and Control Project Work Control Costs Control Schedule Monitor Risks Validate Scope Control Scope Perform Integral Change Control Monitor Stakeholder Engagement

This section addresses the monitoring and controlling aspects of project management. These aspects include management of project scope changes, cost, schedule, risks, and issues—all of which can affect a project's work status and progress toward goals.

Managing Issues

An **issue** is a current condition or situation that may have an impact on the project objectives.

Whenever an issue is raised, it should be addressed **as soon as possible** to avoid complications later.

The issue needs to be **recorded**, **assigned**, and **researched**, and a **resolution** needs to be **proposed**.

Issue Tracking Log

Issue No	Raised by	Date Opened	Description	Impact	Resolution	Assigned to	Date Closed

Some project managers might choose to log and track a specific issue in a risk register and manage it as a risk or an uncertainty.

Change Requests

Get a decision on the proposed change

Formally **log** and **document** the change

Evaluate the change and **document** its impact

Clarify the **need** for the change.

If the change is approved, **create a new baseline** and update all project documentation

Communicate to the team and impacted stakeholders

Monitoring and Controlling Project Cost and Schedule

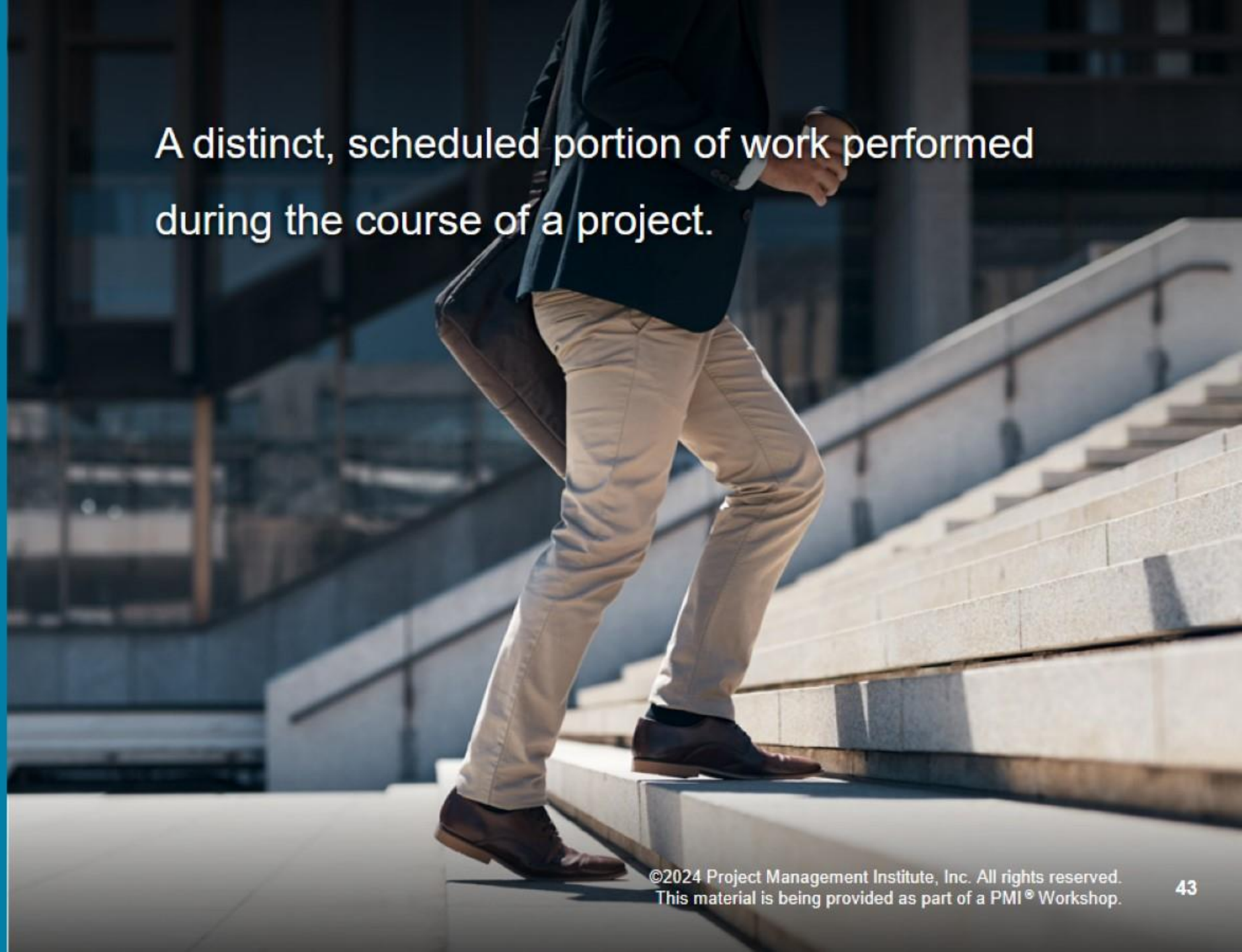
Closing the Project or Phase

Closing the Project or Phase

Process Group	Performance Domain	Processes
Closing	Delivery	Close Project or Phase

Project Activities, Deliverables, and Milestones

What Is an Activity?



Lexicon of Terms | Project Management Institute. (n.d.). Retrieved from https://www.pmi.org/pmbok-guide-standards/lexicon

What Is a Deliverable?

- Any unique and verifiable product, result, or capability to perform a service that is produced to complete a process, phase, or project.

- Deliverables can be tangible or intangible.
- If it helps, just imagine handing off something to the project sponsor or stakeholders at the conclusion of an activity.

Lexicon of Terms | Project Management Institute. (n.d.). Retrieved from https://www.pmi.org/pmbok-guide-standards/lexicon

Measuring Deliverables

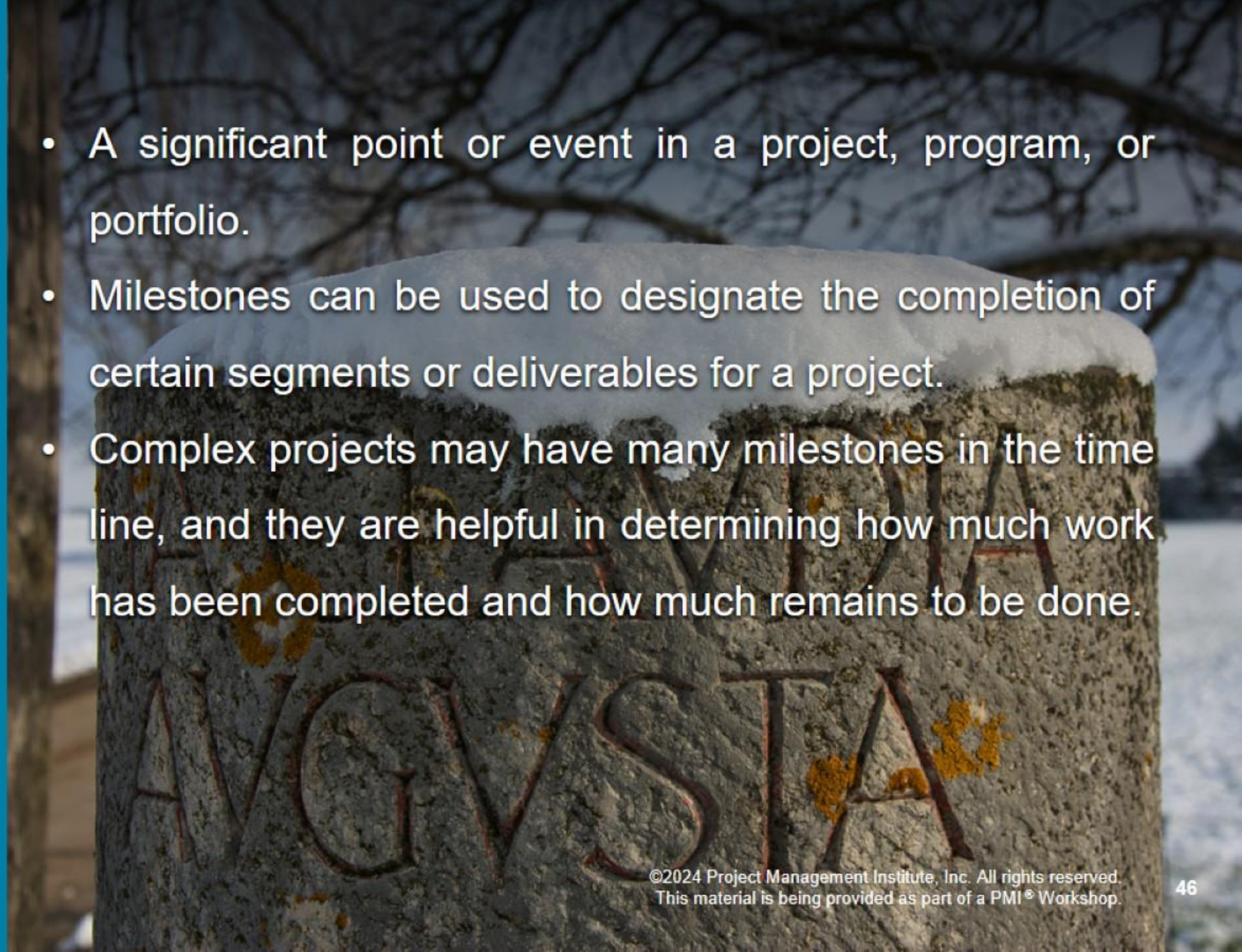
When deliverables are proposed, the project manager must consider how they are to be **assessed** and **measured**.

When a deliverable is defined and assigned to a given resource, these measures can communicate what **level of effort** is expected.

This also enables you to reasonably measure **progress** against **expectations**.

What Is a Milestone?

- A significant point or event in a project, program, or portfolio.
- Milestones can be used to designate the completion of certain segments or deliverables for a project.
- Complex projects may have many milestones in the time line, and they are helpful in determining how much work has been completed and how much remains to be done.



Lexicon of Terms | Project Management Institute. (n.d.). Retrieved from https://www.pmi.org/pmbok-guide-standards/lexicon

Working with Milestones

A milestone has **no duration or resources** assigned;

it is simply a **marker** for reference.

At the point of project planning and estimating, a **target date**

should be assigned to each milestone.

Do I Already Know That?

Question 1

The scope, schedule, cost, resource needs, and risks of a small construction project can be well defined in the early phases of the project, and they are relatively stable. Which approach should you take?

1. Predictive

2. Product

3. Adaptive

4. Hybrid

Question 2

Executives of a widget company have decided that it's time to phase out Widget 452 and bring Widget 673 into production and sales. These factors would lead you to believe that the executives are discussing a(n) _____?

1. Phase

2. Product life cycle

3. Activity

4. Project life cycle

Question 3

Although a(n) _____ is scheduled in a project plan, it has no estimated duration and is used to provide information about progress through the major segments.

1. Milestone

2. Deliverable

3. Phase

4. Activity

How Did You Do?

Wrapping Up

Summary

- Fundamentals of the project life cycle
- Development approach and the life cycle performance domain
- Monitoring and controlling project work
- Closing the project or phase
- Project activities, deliverables, and milestones

Up Next:
Predictive Methodologies