

ENGR3450 – Project Management



Week 1

Introduction

About Me - About The Course

What is Project? – Project Initiation



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YAŞAR ÜNİVERSİTESİ
Mühendislik Fakültesi

- Graduated from METU -1978
- MBA – Planning & Org. DEU -1995
- IT Manager Tarihbank -2000
- IT Coordinator – Smart Ticketing System 2000-2010
- Part time instructor in IUE 2003-2014
- IT Consultancy training – Meta-USA, Germany
- Solar system design training – SMA Germany 2010
- Part time instructor in YU 2017 - ?

Agenda today

- Aim of the Course
 - What is Project?
 - Why Projects – Ideal systems
 - Project Initiation Context
 - Importance of Project Management
 - Relationship of Projects, Program, Portfolio, and Operations Management
 - Project Life Cycle
 - Project Management Process
 - PM Process Groups
 - PM Knowledge areas
-
- Course resources – Load Software – Teams for Projects



Aim Of The Course

- Making you accustomed to PMI exams
- Teaching mathematical models-algorithms for PM
 - How to solve them too using
 - Formulas (spreadsheet)
 - Algorithms (Pert – CPM)
- Making you accustomed to PM-Software
 - MS-Project <https://products.office.com/en-us/project/project-and-portfolio-management-software>
 - Smartsheet <https://www.smartsheet.com/>
- Making you able to Interview with projectized organizations.
(Most locate in CA. – Usually innovative and result oriented – Gaining popularity over 70 countries including TURKEY)
(Without learning PMBOK® terminology it is impossible to interview)



What is Project



From new Bridge on Bosphorus
to your new kitchen

Design of a new design
of “hydrogen to electricity
power production unit”



From Uber competitor Europewide
to your company web site



From new production line
to your U shaped Lean workplace



What is Project

Historical perspective

Examples

- Pyramids of Giza,
- Olympic games,
- Great Wall of China,
- Taj Mahal,
- Publication of a children's book,
- Panama Canal,
- Development of commercial jet airplanes,
- Polio vaccine,
- Human beings landing on the moon,
- Commercial software applications,
- Portable devices to use the global positioning system (GPS), and Placement of the International Space Station into Earth's orbit.

What is Project

1. Creates a unique product, service or result.

- Developing a new pharmaceutical compound for market,
- Expanding a tour guide service,
- Merging two organizations,
- Improving a business process within an organization,
- Acquiring and installing a new computer hardware system for use in an organization,
- Exploring for oil in a region,
- Modifying a computer software program used in an organization,
- Conducting research to develop a new manufacturing process,
- Constructing a building.



What is Project

2. Temporary endeavor - Has a definite beginning or end.

End is reached when:

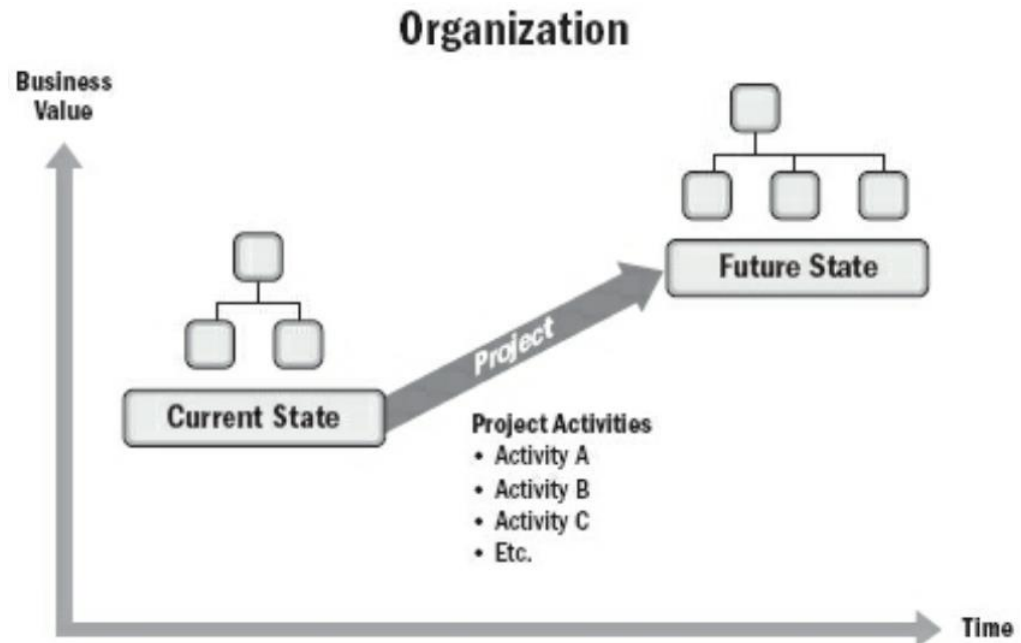
- The project's objectives have been achieved;
- The objectives will not or cannot be met;
- Funding is exhausted or no longer available for allocation to the project;
- The need for the project no longer exists (e.g., the customer no longer wants the project completed, a change in strategy or priority ends the project, the organizational management provides direction to end the project);
- The human or physical resources are no longer available;
- The project is terminated for legal cause or convenience.

PMBOK®



What is Project

3. Projects drive change over time because of strategy change




PMBOK®



What is Project

4. Projects enable business value creation

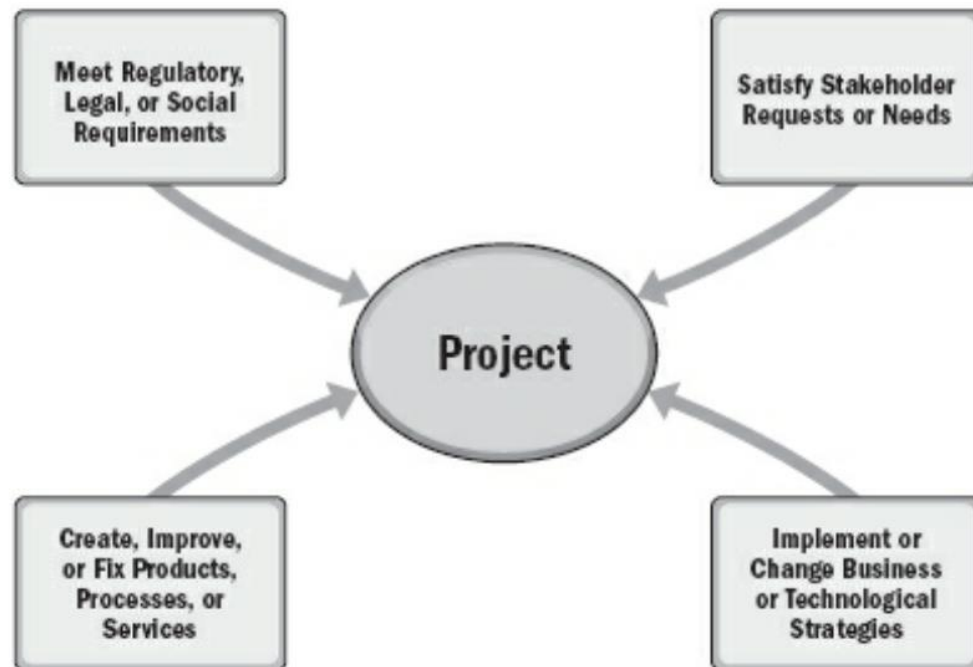
Business value in projects refers to the benefit that the results of a specific project provide to its stakeholders both tangible or intangible.

- 
- Monetary assets,
 - Stockholder equity,
 - Utility,
 - Fixtures,
 - Tools,
 - Market share.

- Goodwill,
- Brand recognition,
- Public benefit,
- Trademarks,
- Strategic alignment,
- Reputation.

Project Initiation Context

5. Project Initiation

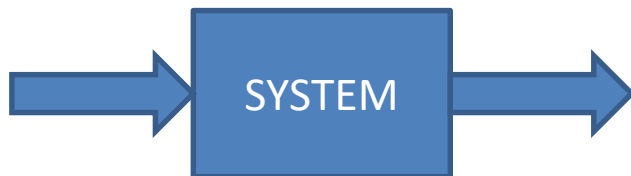


Why Projects

IDEAL System - Can It Be Real

AVAILABLE SYSTEM

- Some Cost
- Some Production
- Some Service



IDEAL SYSTEM

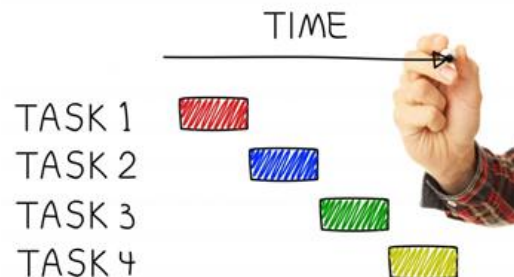
- Zero Cost
- Infinite Production
- Infinite Satisfaction

We need BRIGHT IDEAS

AND

MONEY to invest

Approach to Ideal By means of Projects



What is Project Management

The application of knowledge, skills, tools, and techniques to project activities to meet the project requirements. Project management is accomplished through the appropriate application and integration project management processes identified for the project. It enables organizations to execute projects effectively and efficiently.

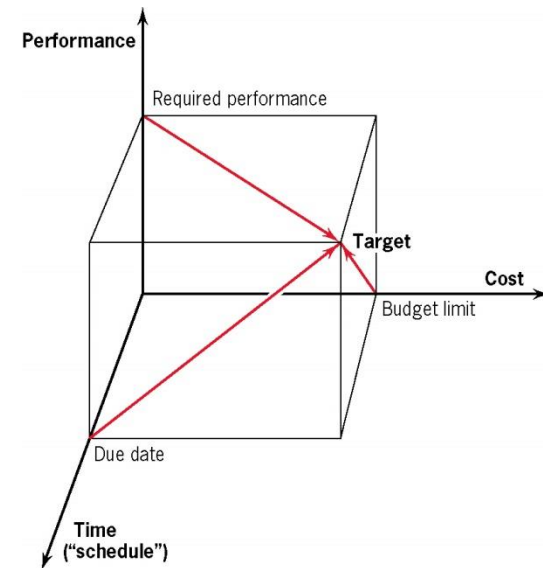
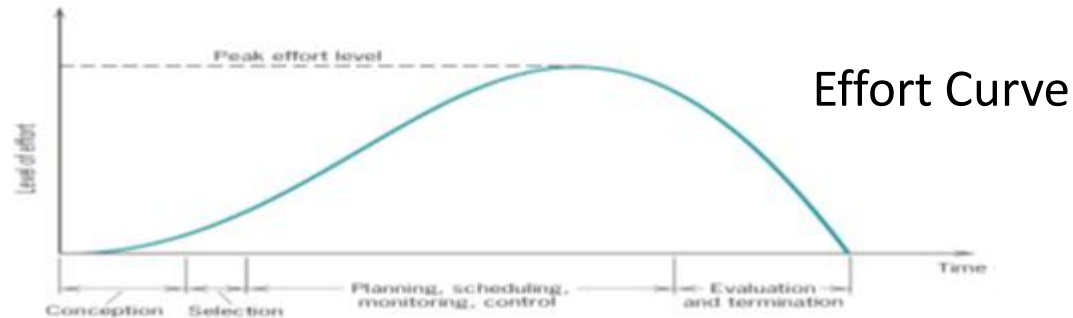
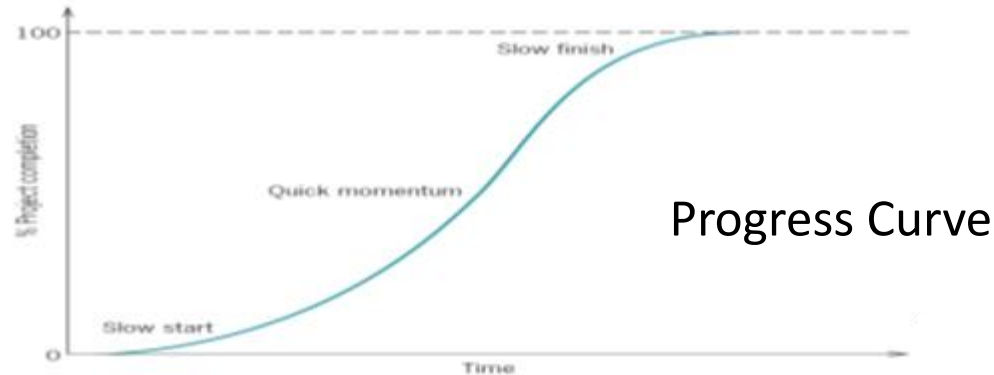


Importance of Project Management

Effective PM

- Meet business objectives;
- Satisfy stakeholder expectations;
- Be more predictable;
- Increase chances of success;
- Deliver the right products at the right time;
- Resolve problems and issues;
- Respond to risks in a timely manner;
- Optimize the use of organizational resources;
- Identify, recover, or terminate failing projects;
- Manage constraints (e.g., scope, quality, schedule, costs, resources);
- Balance the influence of constraints on the project (e.g., increased scope may increase cost or schedule);
- Manage change in a better manner.

Effective Project Management



Importance of Project Management

Effective PM – Strategic Competency

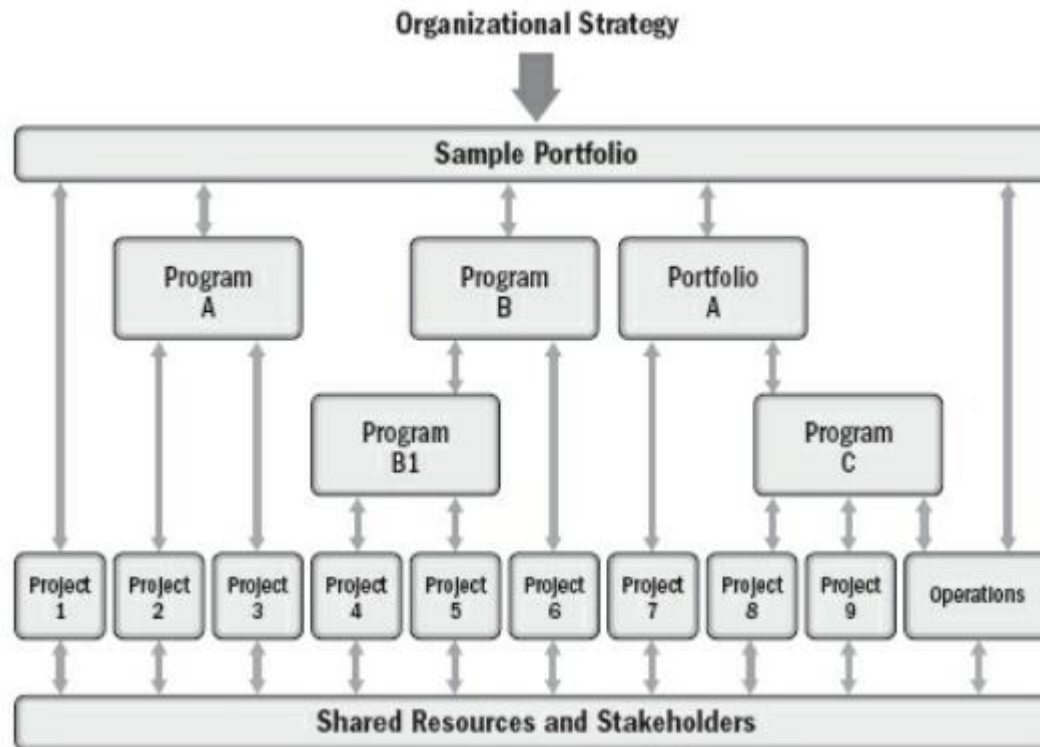
- Tie project results to business goals,
- Compete more effectively in their markets,
- Sustain the organization,
- Respond to the impact of business environment changes on projects by appropriately adjusting project management plans

Importance of Project Management

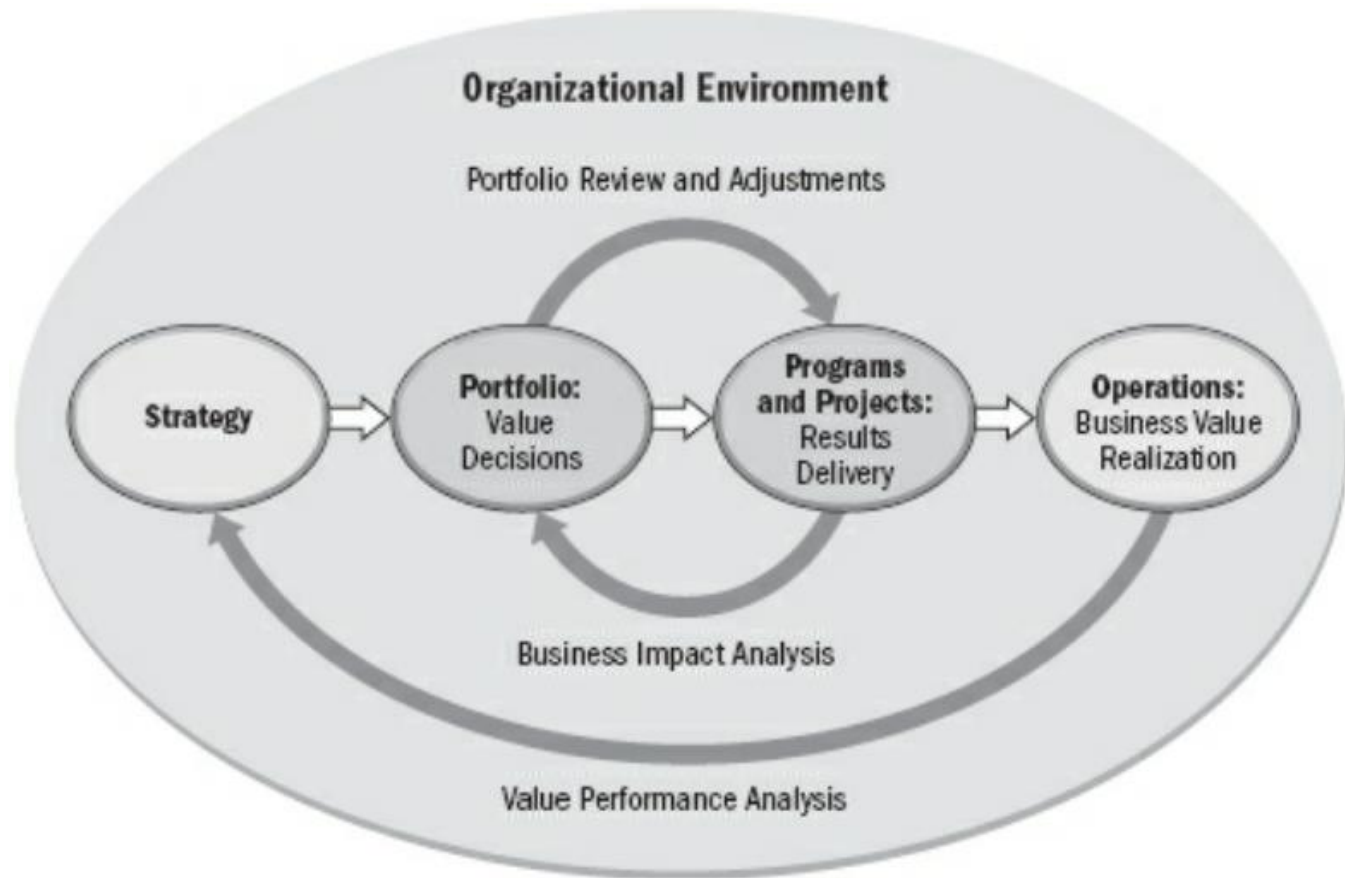
Poor PM

- Missed deadlines,
- Cost overruns,
- Poor quality,
- Rework,
- Uncontrolled expansion of the project,
- Loss of reputation for the organization,
- Unsatisfied stakeholders,
- Failure in achieving the objectives for which the project was undertaken.

Portfolio – Programs – Projects - Operations



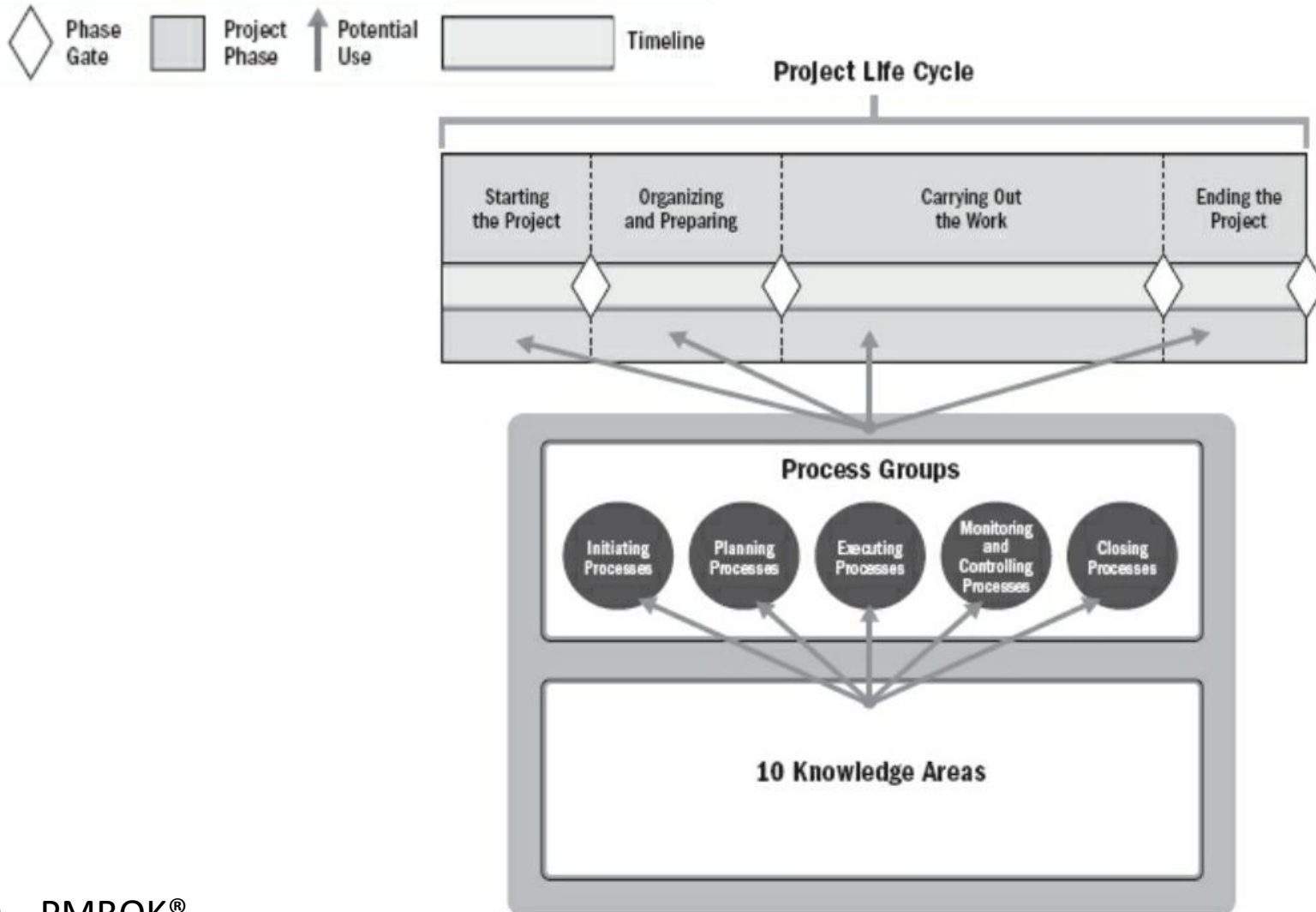
Portfolio – Programs – Projects - Operations



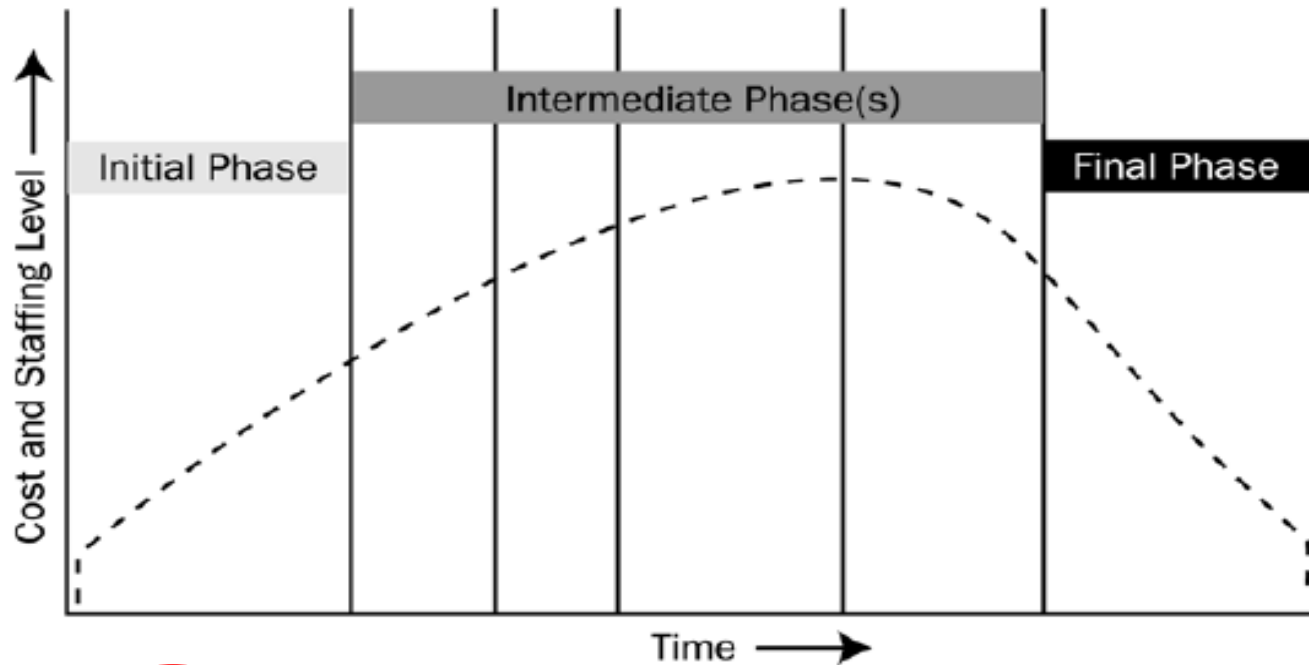
Key Components of a Project

- Project Life Cycle
- Project Phase
- Phase Gate
- Project Management Processes
- Project Management Process Groups
- Project Management Knowledge Areas

Project Life Cycle



Project Life Cycle



1. Project Initiation, Selection and Definition

2. Project Planning, Modeling and Scheduling

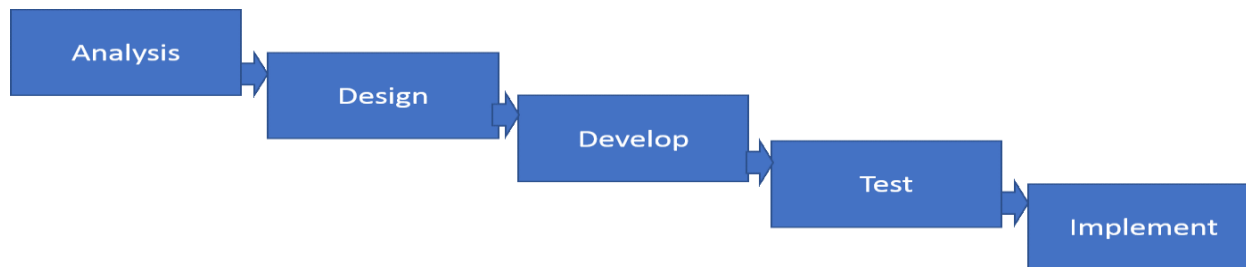
3. Project Implementation and Control

4. Project Evaluation and Termination

Project and Development Life Cycles

Predictive Life Cycle

- In a predictive life cycle, the project scope, time, and cost are determined in the early phases of the life cycle.
- Any changes to the scope are carefully managed.
- Predictive life cycles may also be referred to as waterfall life cycles.



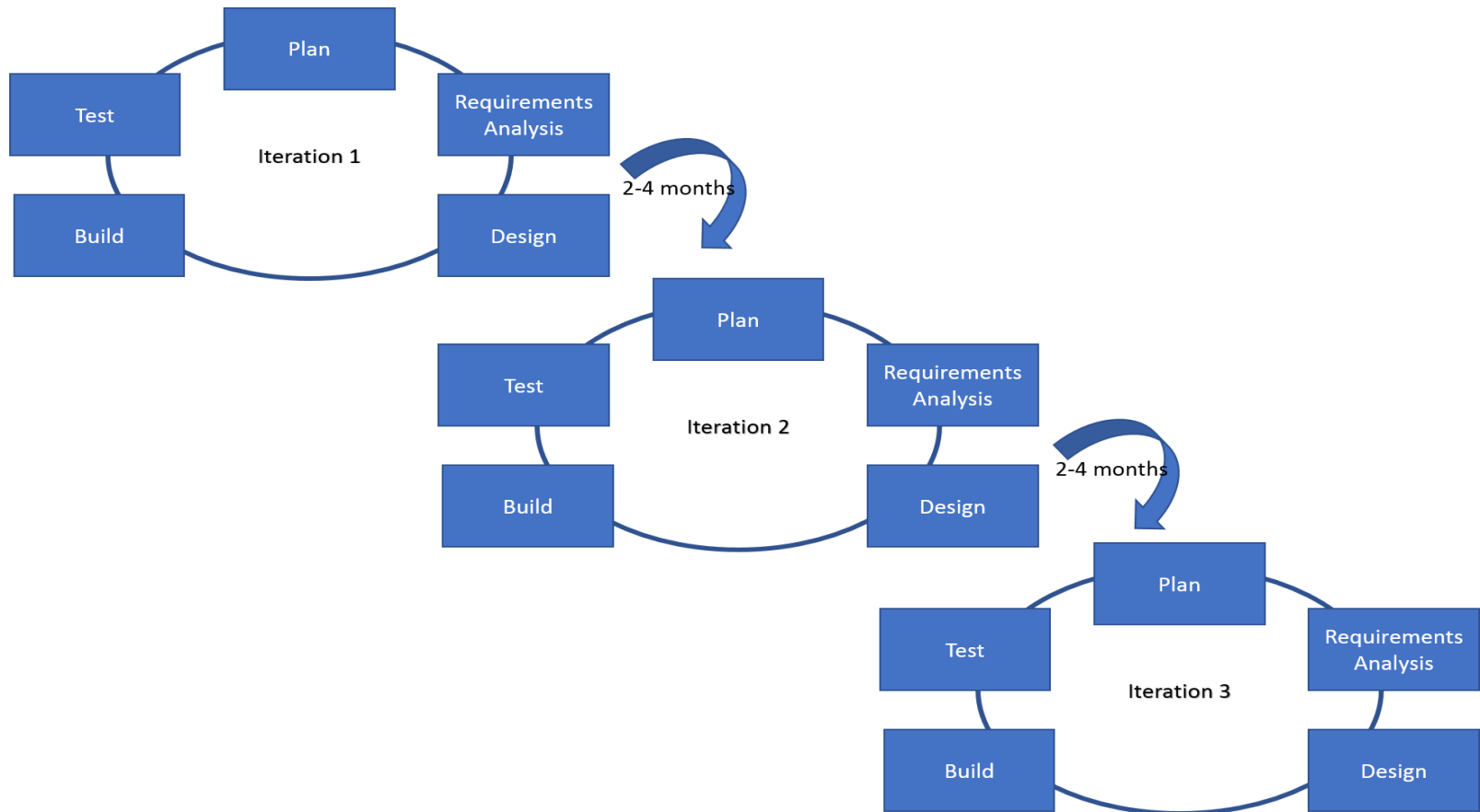
Project and Development Life Cycles

Iterative Life Cycle

- The project scope is generally determined early in the project life cycle,
- Time and cost estimates are routinely modified as the project team's understanding of the product increases.
- Iterations develop the product through a series of repeated cycles, while increments successively add to the functionality of the product.

Project and Development Life Cycles

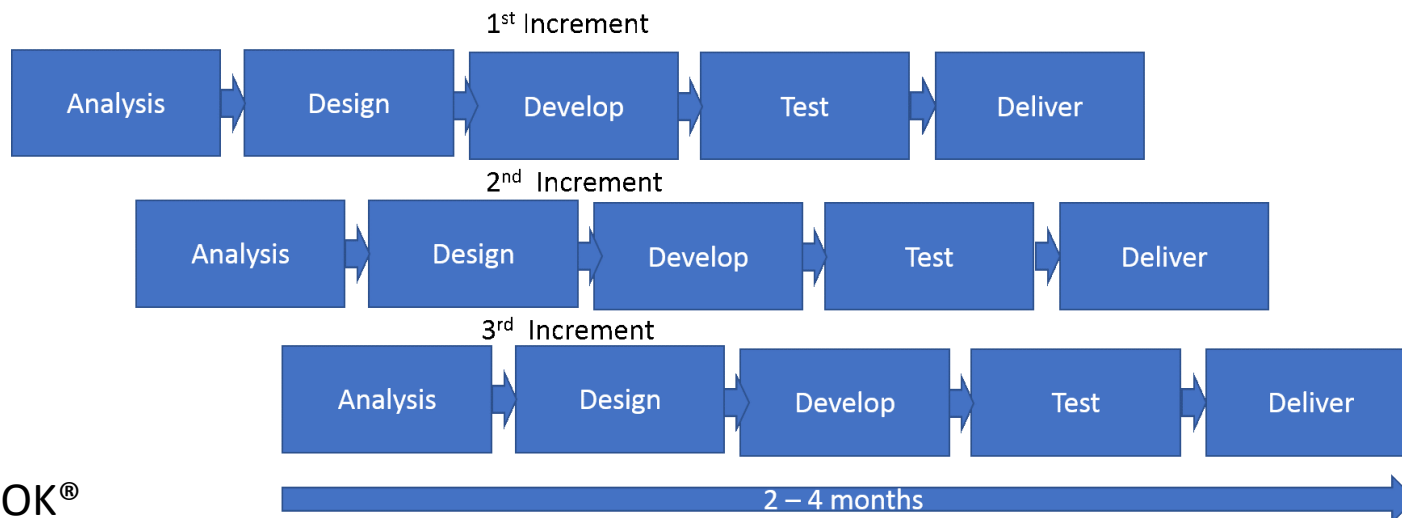
Iterative Life Cycle



Project and Development Life Cycles

Incremental Life Cycle

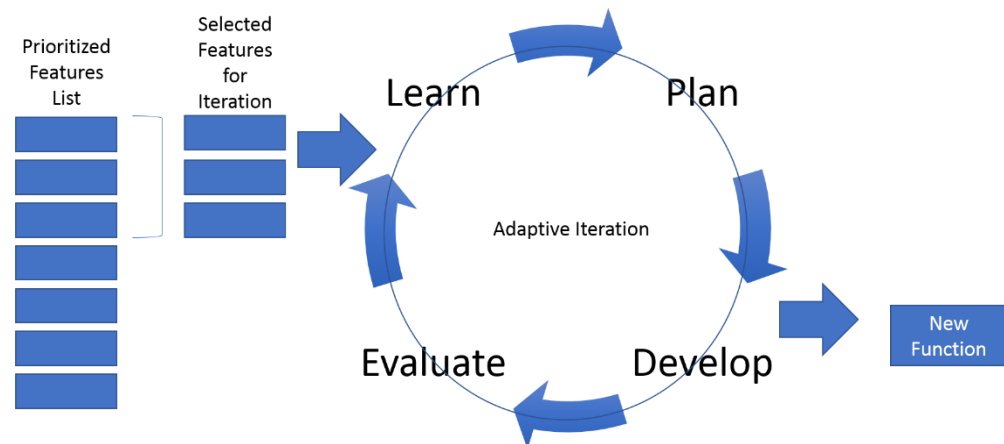
- The deliverable is produced through a series of iterations that successively add functionality within a predetermined time frame.
- The deliverable contains the necessary and sufficient capability to be considered complete only after the final iteration.



Project and Development Life Cycles

Adaptive Life Cycle

- Adaptive life cycles are agile, iterative, or incremental.
- The detailed scope is defined and approved before the start of an iteration.
- Adaptive life cycles are also referred to as agile or change-driven life cycles.



Project and Development Life Cycles

Hybrid Life Cycle

- A hybrid life cycle is a combination of a predictive and an adaptive life cycle.
- Those elements of the project that are well known or have fixed requirements follow a predictive development life cycle, and those elements that are still evolving follow an adaptive development life cycle.

Project Phase



- A project phase is a collection of logically related project activities that culminates in the completion of one or more deliverables.
- The phases in a life cycle can be described by a variety of attributes.
- Attributes may be measurable and unique to a specific phase. Attributes may include but are not limited to:

Phase Attributes



- Name (e.g., Phase A, Phase B, Phase 1, Phase 2, proposal phase),
- Number (e.g., three phases in the project, five phases in the project),
- Duration (e.g., 1 week, 1 month, 1 quarter),
- Resource requirements (e.g., people, buildings, equipment),
- Entrance criteria for a project to move into that phase (e.g., specified approvals documented, specified documents completed),
- Exit criteria for a project to complete a phase (e.g., documented approvals, completed documents, completed deliverables).

Project Phases and Establish Bases

- Concept development,
- Feasibility study,
- Customer requirements,
- Solution development,
- Design,
- Prototype,
- Build,
- Test,
- Transition,
- Commissioning,
- Milestone review,
- Lessons learned.

Management needs;

Nature of the project;

Unique characteristics of the organization, industry, or technology;

Project elements including, but not limited to, technology, engineering, business, process, or legal;

Decision points (e.g., funding, project go/no-go, and milestone review).



Phase Gate

A phase gate, is held at the end of a phase. The project's performance and progress are compared to project and business documents including but not limited to:

- Project business case
- Project charter
- Project management plan
- Benefits management plan

A decision (e.g., go/no-go decision) is made as a result of this comparison to:

- Continue to the next phase,
- Continue to the next phase with modification,
- End the project,
- Remain in the phase,
- Repeat the phase or elements of it.

Project Management Process



PM Process Groups

- Initiating Process Group.
- Planning Process Group.
- Executing Process Group.
- Monitoring and Controlling Process Group.
- Closing Process Group.

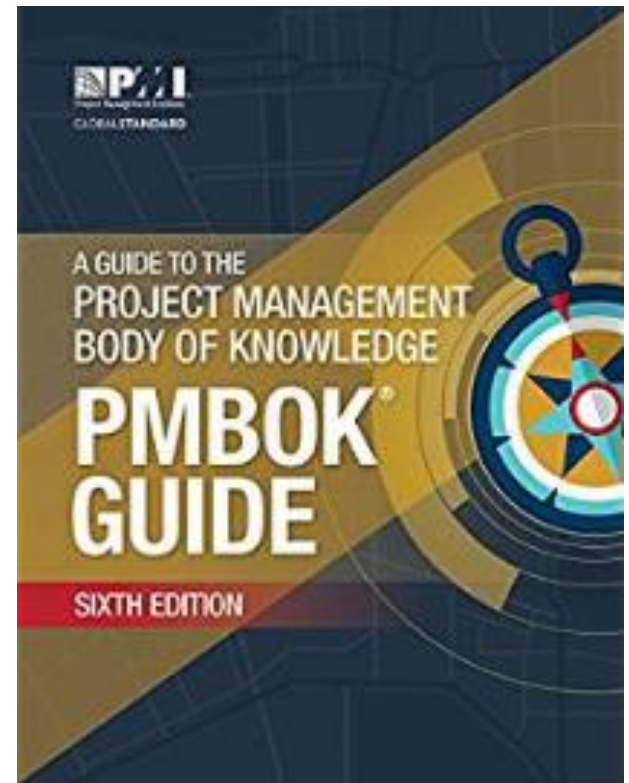
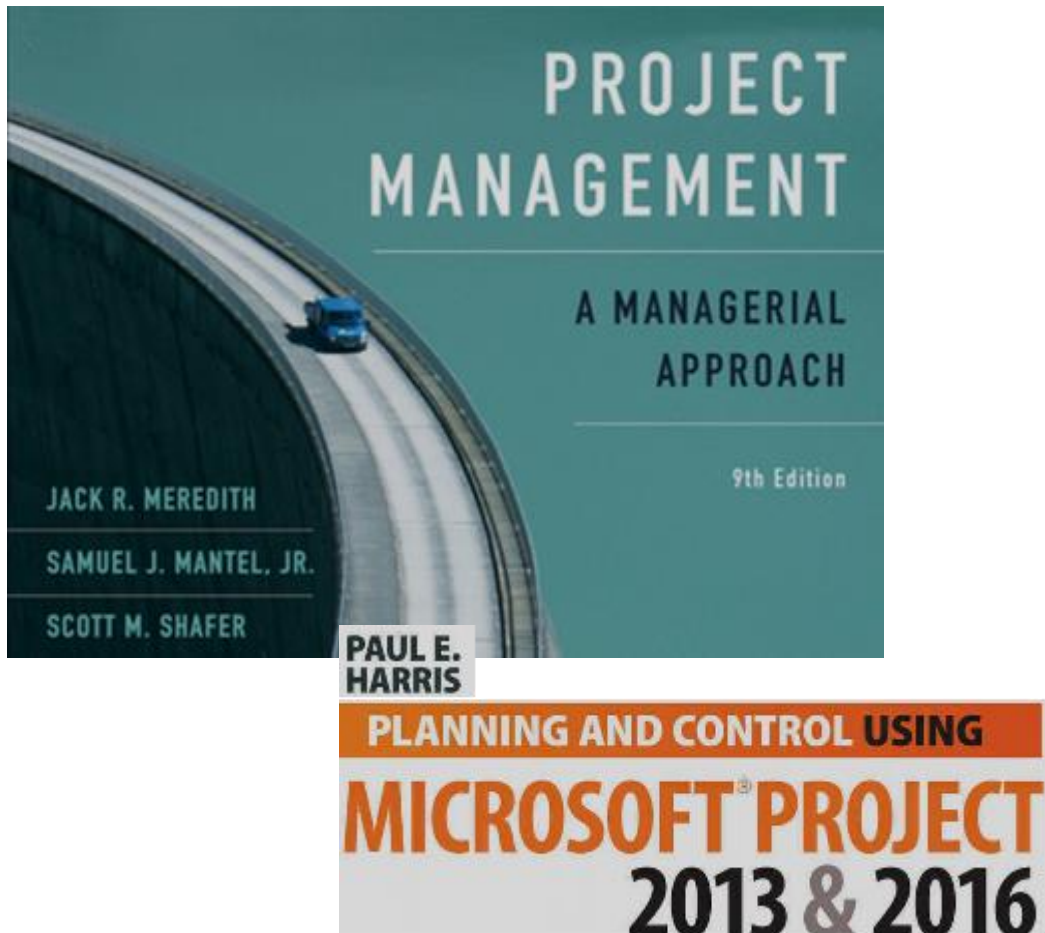


PM Knowledge Areas

- Project Integration Management.
- Project Scope Management.
- Project Schedule Management.
- Project Cost Management.
- Project Quality Management.
- Project Resource Management.
- Project Communications Management.
- Project Risk Management.
- Project Procurement Management.
- Project Stakeholder Management.



Course resources

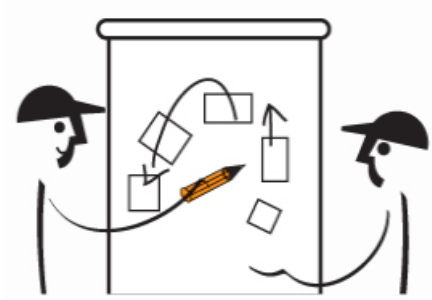


Teams for your projects

Teams preferably can be the same of your project course

- Teams of 3 to 5
 - 3 or 5 is better
 - (you will have free software for each computer)
- Team should be of the same section.
- But from Different Departments



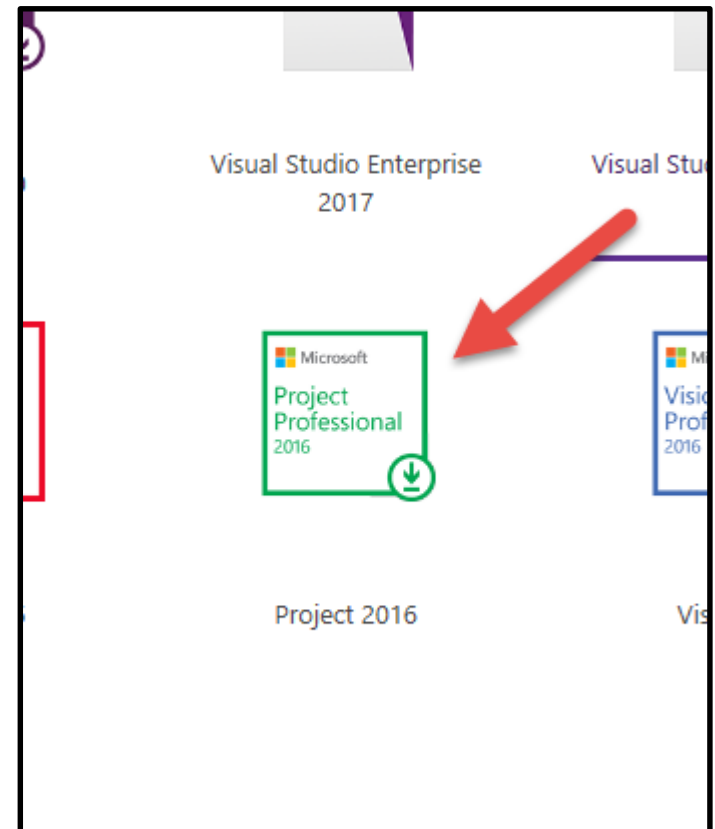


Workshop & Assignment

Load MS Project

<https://e5.onthehub.com/WebStore/ProductsByMajorVersionList.aspx?ws=44b496ae-799b-e011-969d-0030487d8897&vsro=8>

- Go to the address at top
- Select the software
- Select English version
- Add to basket
- Login by your e-mail of @yasar.edu and load.
- If you cannot, connect to Admin C H ??.





Questions

hp@quiztechnology.com

NEXT WEEK: Project Environment
Project Selection Models
Exam problems - solutions
Workshop & quiz