Software Project Management

Introduction

PMI Standard & Guidelines

Recap

- **Key Characteristics** of Projects
  Non-routine, Specific deliverables / Outcome, Time restrictions, Many tasks, Coordinated

- Special **Factors** in Software Projects
  Invisibility, Complexity, Flexibility

- Key **Terms & Concepts**:

  - Outcome
    Focus on Benefit / Value
  - Product
    End Item, Component Item
  - Project
    Product, Service, Results
  - Program
    Related Projects + Sub Programs
  - Portfolio
    Projects+ Programs + Sub Portfolios + Operations

  - Project Management
    Application of knowledge, skills, tools, and techniques to meet project requirements
  - Project Manager
    Responsible
  - Project Team
    Individuals performing the work
  - System for Value Delivery
    A collection of strategic business activities aimed at building, sustaining, and/or advancing an organization.
  - Value
    Different stakeholders perceive value in different ways

Project Management

The application of **knowledge**, **skills**, **tools**,
and **techniques** to project activities
to meet project requirements.

REMEMBER:

A software project is not just concerned with
the actual writing of software.

Project Management

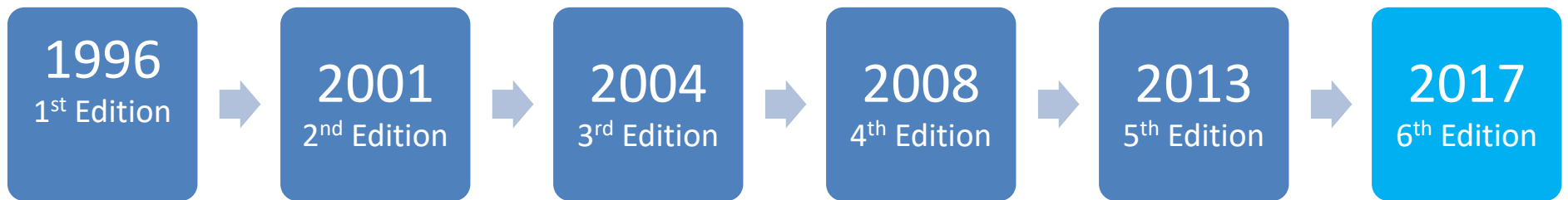## Which Knowledge, Skills, Tools, and Techniques

?

Project Management Institute (PMI)

- The **Project Management Institute (PMI)** is a US nonprofit professional organization for project management.

  - The PMI provides services including the development of standards, research, education, publication, networking-opportunities in local chapters, hosting conferences and training seminars, and providing accreditation in project management.

  - **PMBOK® Guide:** the Project Management Book of Knowledge from which PMI defines terms, standards, and good practices

- Learn More: http://www.pmi.org

PMBOK® Editions

Past Editions: Based on <u>process groups & knowledge areas</u> for the project manager

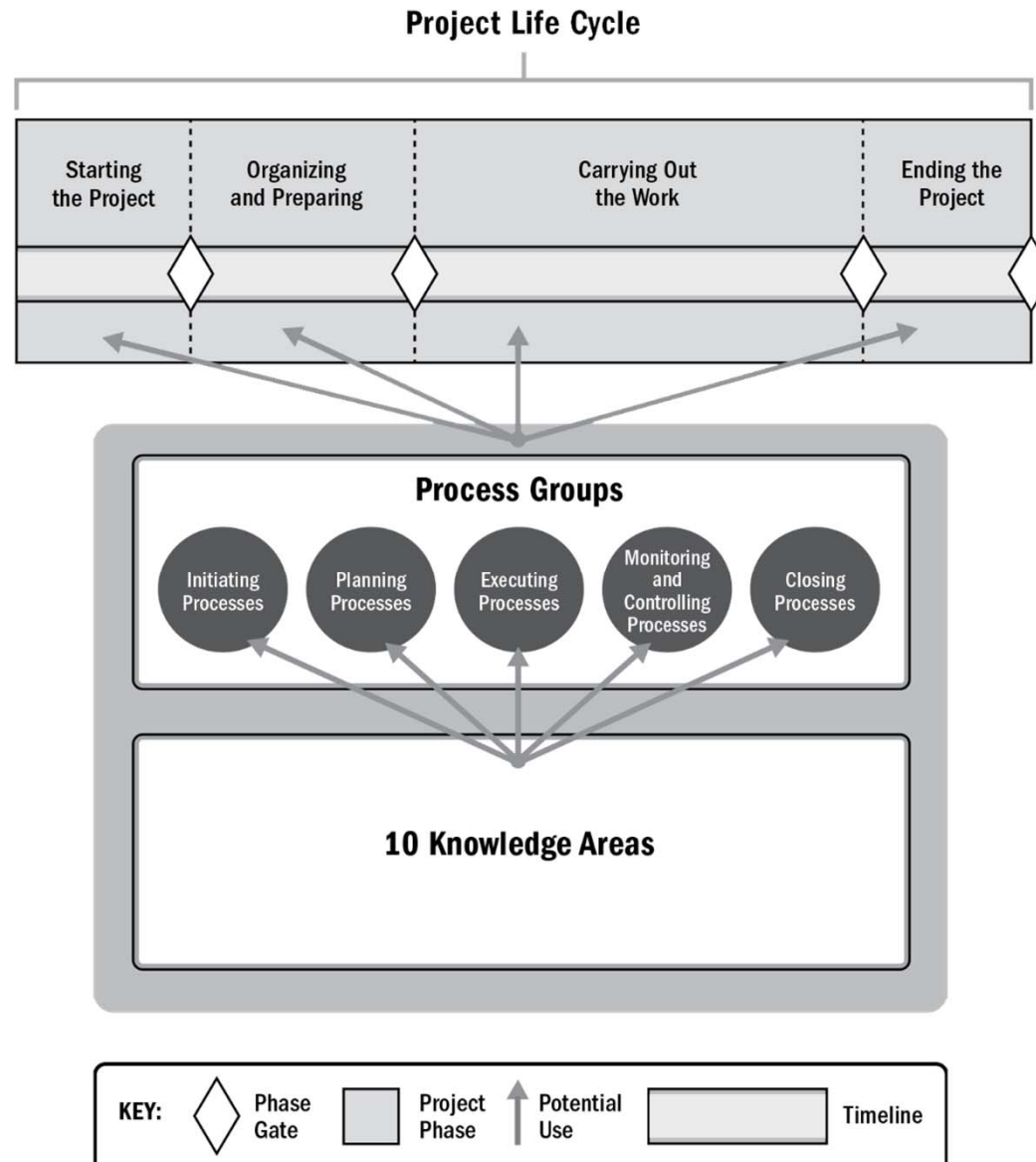| 1996 1st Edition | → | 2001 2nd Edition | → | 2004 3rd Edition | → | 2008 4th Edition | → | 2013 5th Edition | → | 2017 6th Edition |

2017 – 6th Edition:

- Like previous edition PMBOK® 6 includes a **Standard** & **Guide**

- It also included **Agile Practice Guide** that provides information on how to implement its approaches in agile environments
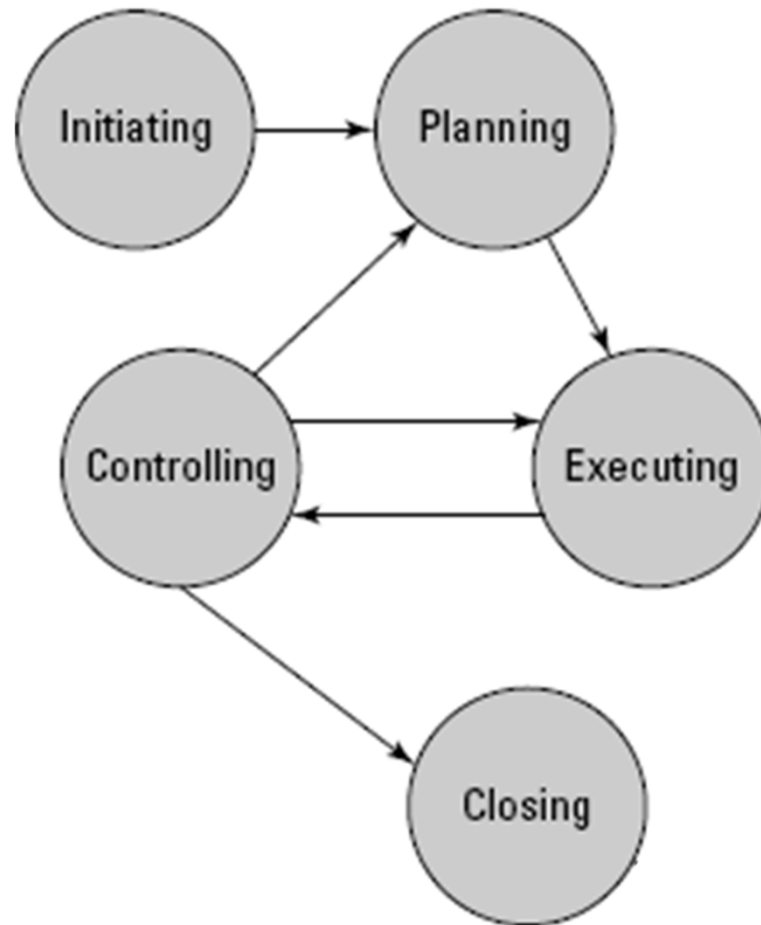
Software Project Management

(PMBOK® 6)

Software Project Management

(PMBOK® 6 – Process Groups)

Software Project Management

(PMBOK® 6)

Process Groups

1. Initiating
2. Planning
3. Executing
4. Controlling
5. Closing

Knowledge Areas

1. Integration Management
2. Scope Management
3. Schedule Management
4. Cost Management
5. Quality Management
6. Resources Management
7. Communications Management
8. Risk Management
9. Procurement Management
10. Stakeholder Management

PMBOK® 7

7th Edition: Based on <u>principles & performance domains</u> for the project team

1996	2001	2004	2008	2013	2017	2021
1st Edition	2nd Edition	3rd Edition	4th Edition	5th Edition	6th Edition	7th Edition

Major Revision

- The degree of change with the PMBOK® Guide – Seventh edition is more significant than what we have seen in the past.

Software Project Management

(PMBOK® 7)

Principles of Project Management

Be a diligent, respectful, and caring steward	Create a collaborative team environment	Effectively engage with stakeholders	Focus on value
Recognize, evaluate, and respond to system interactions	Demonstrate leadership behaviors	Tailor based on context	Build quality into processes and deliverables
Navigate complexity	Optimize risk responses	Embrace adaptability and resiliency	Enable change to achieve the envisioned future state

Guide Behavior

Stakeholders

Uncertainty

Team

Measurement

Project Performance Domains

Development Approach and Life Cycle

Delivery

Planning

Project Work

Software Project Management

(PMBOK® 7)

Principles

1. Be a Diligent, Respectful, and Caring **Steward**
2. Create a Collaborative Project **Team** Environment
3. Effectively Engage with **Stakeholders**
4. Focus on **Value**
5. Recognize, Evaluate, and Respond to **System** Interactions
6. Demonstrate **Leadership** Behaviors
7. **Tailor** Based on Context
8. Build **Quality** into Processes and Deliverables
9. Navigate **Complexity**
10. Optimize **Risk** Responses
11. Embrace **Adaptability and Resiliency**
12. Enable **Change** to Achieve the Envisioned Future State

Performance Domains

1. **Stakeholders**
2. **Team**
3. **Development Approach and Life Cycle**
4. **Planning**
5. **Project Work**
6. **Delivery**
7. **Measurement**
8. **Uncertainty**

PMBOK® 6 –vs– PMBOK® 7

- PMBOK 6th Edition was supposed to be **project manager-centric**, the new PMBOK 7th edition is **project team-centric**.

- The standard moves from **processes** to twelve **principles**.

- The guide moves from **Knowledge Areas** to eight **Project Performance Domains** defined as groups of related activities that are critical for the effective delivery of project outcomes.

- **Can we still use Process Groups and Knowledge Areas?**

    – Yes. In fact, the Process Groups is one of the models in the Models, Methods, and Artifacts section of the guide.

Summary

- Project Management Institute (**PMI**)

- **PMBOK**® Guide

- **PMBOK**® 6
    - PMI **Process Groups**
    - PMI **Knowledge Areas**

- **PMBOK**® 7
    - **Principles** of Project Management
    - Project **Performance Domains**

- PMBOK® 6 -vs- PMBOK® 7

Q & A