CONTEMPORARY PROJECT MANAGEMENT, 4E

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Chapter 1

Introduction to Project Management

The Element of Discipline

"A key to success in project management, as well as in mountain climbing, is to identify the pillars that will be practiced with discipline...I believe that project management is about applying common sense with uncommon discipline."

Michael O'Brochta, PMP

founder of Zozer Inc.

previously senior project manager at the Central Intelligence Agency

Chapter 1 Core Objectives

- Define a project and project management and tell why organizations would use them
- Describe major activities and deliverables, at each project life cycle stage
- List the 10 knowledge areas and 5 process groups of the Project Management Body of Knowledge (PMBOK)
- Describe project success and failure, as well as reasons both may occur
- Contrast predictive and adaptive project life cycles

Chapter 1 Behavioral Objectives:

- Identify project roles and key responsibilities for project team members
- Describe the importance of collaborative effort throughout a project

What is a project?

project – "a temporary endeavor undertaken to create a unique product, service, or result." **PMBOK® Guide**

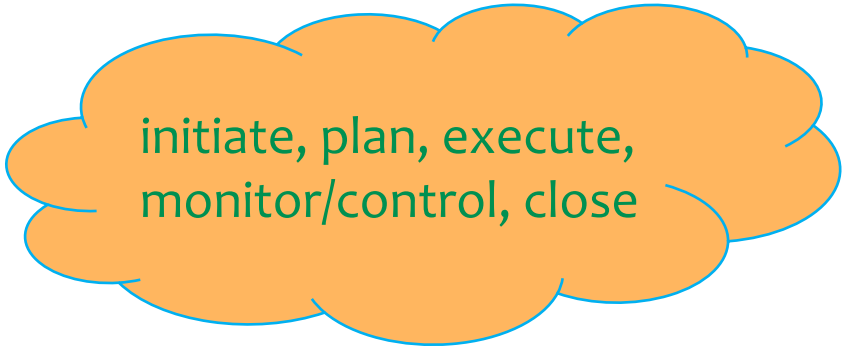
- Projects require:
  - an organized set of work efforts.
  - progressively elaborated detail.
  - a defined beginning and ending.
  - a unique combination of stakeholders.
- Projects are subject to time and resource limitations

stakeholders – "an individual, or organization who may affect, be affected by, or perceive itself to be affected by a decision, activity, or outcome of a project." **PMBOK® Guide**

Project Management (PM)

Project management – "the application of knowledge, skills, tools and techniques to project activities to meet project requirements." **PMBOK® Guide**

- Work processes



- Tradeoffs among

Project Management (PM)

- Administrative tasks

- Leadership tasks for work associates

- Knowledge, skills, and methods apply for most projects

History of PM

- Emerged as a formal discipline in the 1950s
- Developed for aerospace and construction
- Involved determining and controlling project schedules
- In 2001, Agile was created for adaptive project planning, originally for software projects
- In recent years, more focus has been given to the "soft skills" of communications, leadership, and teamwork

How Can Project Work Be Described?

- Projects versus operations
- Soft skills and hard skills
- Authority and responsibility
- Project Life Cycle
- Agile (adaptive) vs. Waterfall (predictive) approach

Projects Versus Operations

- Projects are temporary
- Projects have routine and unique characteristics
- Operations are ongoing work

Soft Skills and Hard Skills

- Soft skills activities
  - Communication
  - Leadership
  - Conflict resolution
- Hard skills activities
  - Risk analysis
  - Quality control
  - Scheduling work
  - Budgeting work

Authority and Responsibility

- One person being assigned accountability
- Project managers negotiate with functional managers
- Strong communication and leadership skills to persuade subordinates

Functional manager – "someone with management authority over an organizational unit.... the manager of any group that actually makes a product or performs a service." **PMBOK® Guide**

Project Life Cycle (PLC)

Project life cycle – "the series of phases that a project goes through from its initiation to its closure." **PMBOK® Guide**

- Project life cycles vary among different disciplines but generally are comprised of the same general stages

Project Life Cycle Stages

- Selecting and initiating
- Planning
- Executing (includes monitoring/controlling)
- Closing and realizing

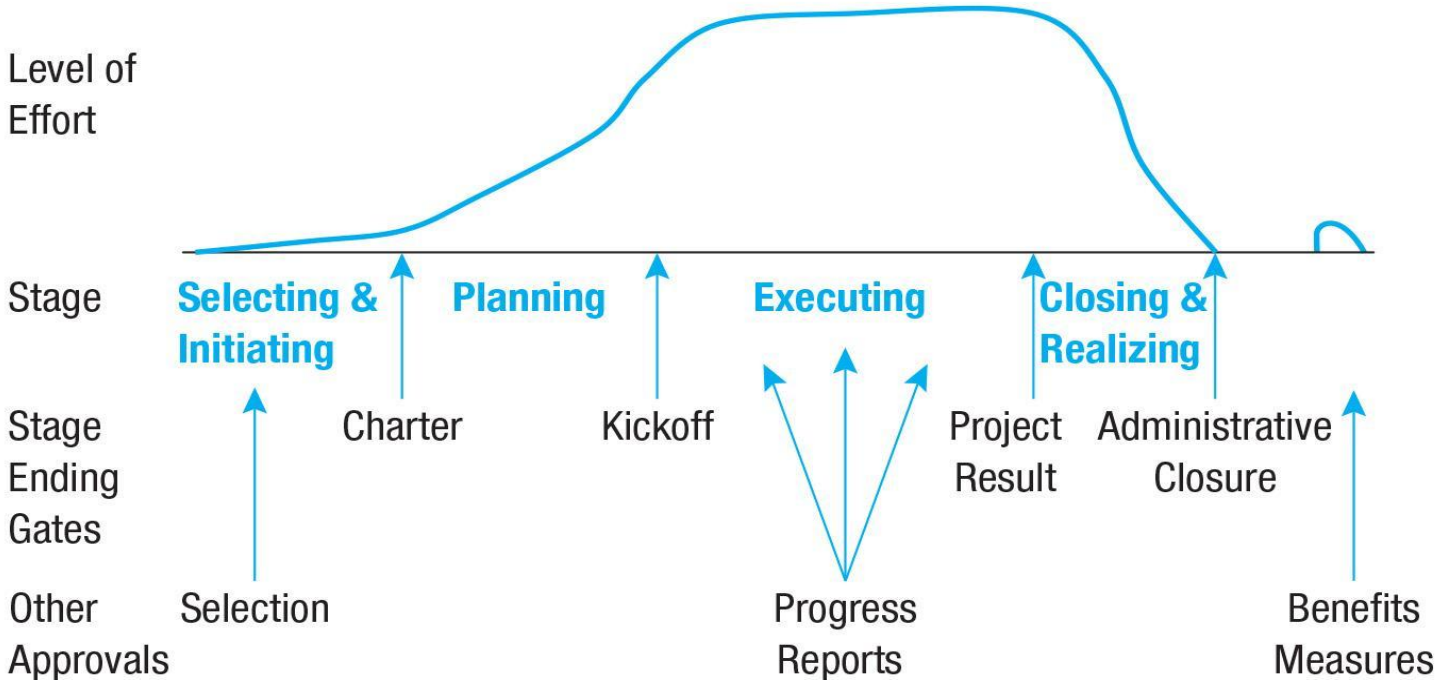
Project Life Cycle (PLC)

- A project must gain approval to move from one stage to the next
- Projects are measured at additional points
  - Selection
  - Progress reporting
  - Benefits realization

Predictive (Plan-Driven) PLC

EXHIBIT 1.1

PREDICTIVE OR PLAN-DRIVEN PROJECT LIFE CYCLE WITH MEASUREMENT POINTS

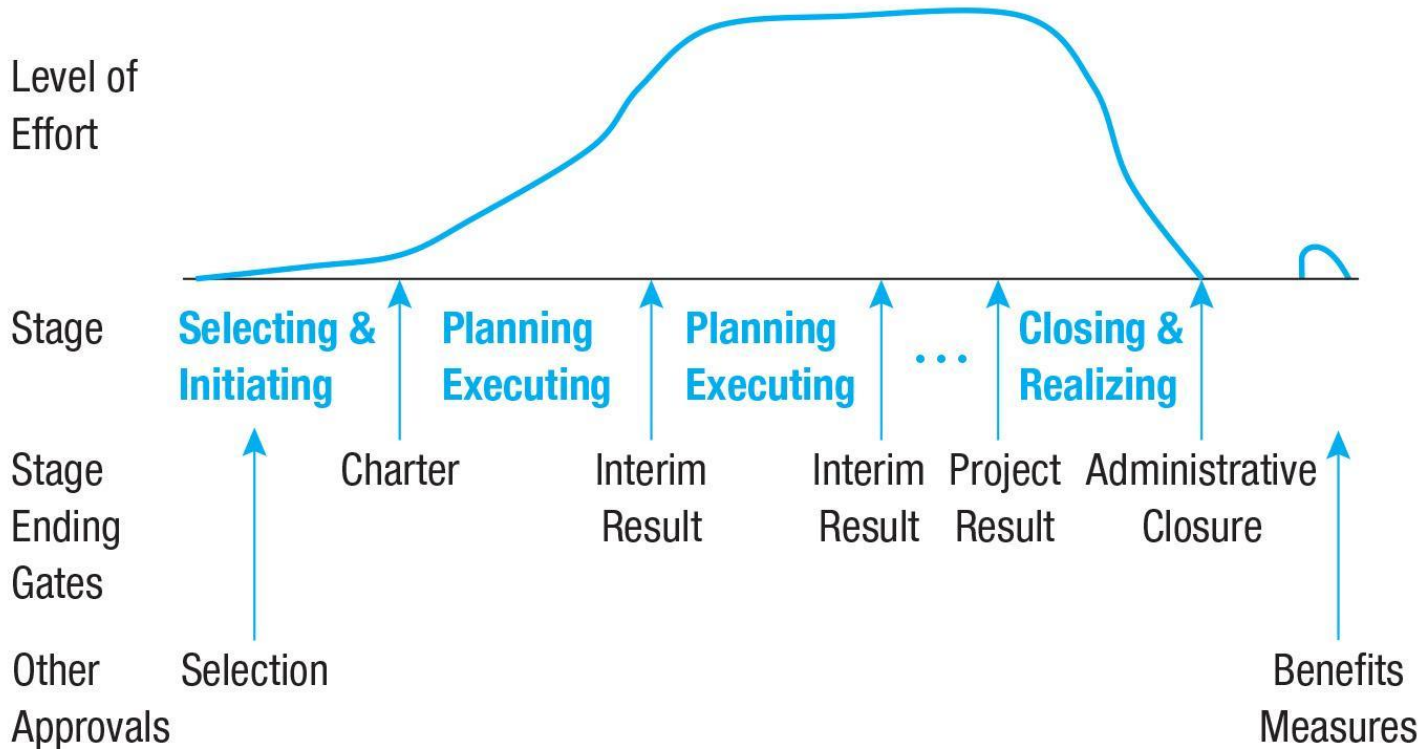


Predictive extreme □ □ □ □ □ □ □ waterfall

Adaptive (Change-Driven) PLC

EXHIBIT 1.2

ADAPTIVE OR CHANGE–DRIVEN PROJECT LIFE CYCLE WITH MEASUREMENT POINTS



Adaptive extreme □ □ □ □ □ □ □ *agile*

Midland Insurance PLC for Quality Improvement Projects

EXHIBIT 1.3

MIDLAND INSURANCE COMPANY PROJECT LIFE CYCLE FOR QUALITY IMPROVEMENT PROJECTS

Source: Martin J. Novakov, American Modern Insurance Group.

Understanding Projects

- Project Management Institute (PMI)
- Project Management Body of Knowledge (PMBOK)
- PMI Talent Triangle
- Selecting and Prioritizing Projects

Understanding Projects

- Project Goals and Constraints
- Defining Project Success and Failure
- Using MS Project
- Types of Projects
- Scalability of Project Tools

The Project Management Institute (PMI)

- The largest professional organization
- Produces *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)*
- Talent Triangle—Technical PM, Leadership, & Strategic and Business Management

The Project Management Institute (PMI)

- Project Management Professional (PMP®) certification
- Certified Associate in Project Management (CAPM) certification

Project Management Body of Knowledge (PMBOK®)

- Project Life Cycle
- 5 process groups
- 10 knowledge areas

Project management process group – "a logical grouping of the project management inputs, tools and techniques, and outputs." PMBOK® Guide

PMBOK® Process Groups

Initiating— "define a project or a new phase by obtaining authorization"

Planning— "establish the project scope, refine objectives and define actions to attain objectives"

Executing— "complete the work defined to satisfy project specifications"

Monitoring and controlling— "track, review, and regulate progress and performance, identify changes required, and initiate changes"

Closing— "finalize all activities to formally close project of phase"

PMBOK®'s 10 Knowledge Areas

Integration management - "processes and activities to identify, define, combine, unify, and coordinate the various processes and project management activities"

Scope management - "processes to ensure that the project includes all the work required, and only the work required, to complete the project successfully"

Schedule management - "processes to manage timely completion of the project"

PMBOK® Knowledge Areas

Cost management – "processes involved in planning, estimating, budgeting, financing, funding, managing, and controlling costs so that the project can be completed within the approved budget"

Quality management - "processes and activities of the performing organization that determine quality policies, objectives, and responsibilities so that the project will satisfy the needs for which it was undertaken"

Resource management - "processes that organize, manage, and lead the project team"

PMBOK® Knowledge Areas

Communications management - "processes to ensure timely and appropriate planning, collection, creation, distribution, storage, retrieval, management, control, monitoring, and ultimate disposition of project information"

Risk management - "processes of conducting risk management planning, identification, analysis, response planning, and control… to increase the likelihood and impact of positive events and decrease the likelihood and impact of negative events in the project"

PMBOK® Knowledge Areas

Procurement management - "processes to purchase or acquire products, services, or results from outside the project team"

Stakeholder management - "processes to identify the people, groups, or organizations, that could impact or be impacted by the project, analyze their expectations and impact, and develop strategies for engaging them and managing conflicting interests"

Selecting and Prioritizing Projects

- Identify potential projects
- All parts of the organization are involved
- Determine which projects align best with organizational goals
- Organizational priorities:
  - Understood
  - Communicated
  - Accepted

Selecting and Prioritizing Projects

What value does each potential project bring to the organization?

Are the demands of performing each project understood?

?

Are the resources needed to perform the project available?

Which projects will best help the organization achieve its goals?

Is there enthusiastic support both from the external customers and from one or more internal champions?

Project Goals and Constraints

- Projects are undertaken to accomplish specific goals
- Scope and quality are performance goals

Scope – "the sum of the products, services, and results to be provided as a project." **PMBOK® Guide**

- Subject to constraints of time and cost

Quality – "the degree to which a set of inherent characteristics fulfills requirements." **PMBOK® Guide**

Project Goals and Constraints

- Obstacles or challenges may limit ability to perform
- Opportunities may allow projects to exceed original expectations.
- Project Managers (PMs) decide which goals and constraints take precedence
- Additional constraints
  - Amount of resources available
  - Decision maker's risk tolerance

Project Customer Tradeoff Matrix

EXHIBIT 1.4

PROJECT CUSTOMER TRADEOFF MATRIX

	ENHANCE	MEET	SACRIFICE
Cost			Pay up to $5,000 extra if it saves 10 days
Schedule	Save up to 10 days		
Quality		Must meet	
Scope		Must meet	

Source: Adapted from Timothy J. Kloppenborg and Joseph A. Petrick, *Managing Project Qualify* (Vienna, VA: Management Concepts, 2002): 46.

Break-out Session!

- How do YOU define project success and failure?
- What are some common reasons for project success or failure?

Project Success and Failure

- Deliverables include all agreed-upon features
- Outputs please customers
- Customers use the outputs effectively
- Completed on schedule and on budget

Project Success and Failure

- Completed without heroics
- Learn new and/or refine skills
- Organizational learning
- Reap business-level benefits

Project Success

EXHIBIT 1.5

PROJECT SUCCESS

- **Meeting Agreements**
  —Cost, schedule, and specifications met
- **Customer's Success**
  —Needs met, deliverables used, customer satisfied
- **Performing Organization's Success**
  —Market share, new products, new technology
- **Project Team's Success**
  —Loyalty, development, satisfaction

Source: Adapted from Timothy J. Kloppenborg, Debbie Tesch, and Ravi Chinta, "21st Century Project Success Measures: Evolution, Interpretation, and Direction," *Proceedings, PMI Research and Education Conference 2012* (Limerick, Ireland, July 2012).

Why Projects Fail

- Insufficient resources and/or time
- Unclear expectations
- Changes in the scope not understood or agreed upon
- Stakeholders disagree on expectations
- Inadequate project planning

Types of Projects

- Classifying by industry
- Classifying by size
- Classifying by understanding of project scope
- Classifying by application

PMI Communities of Practice

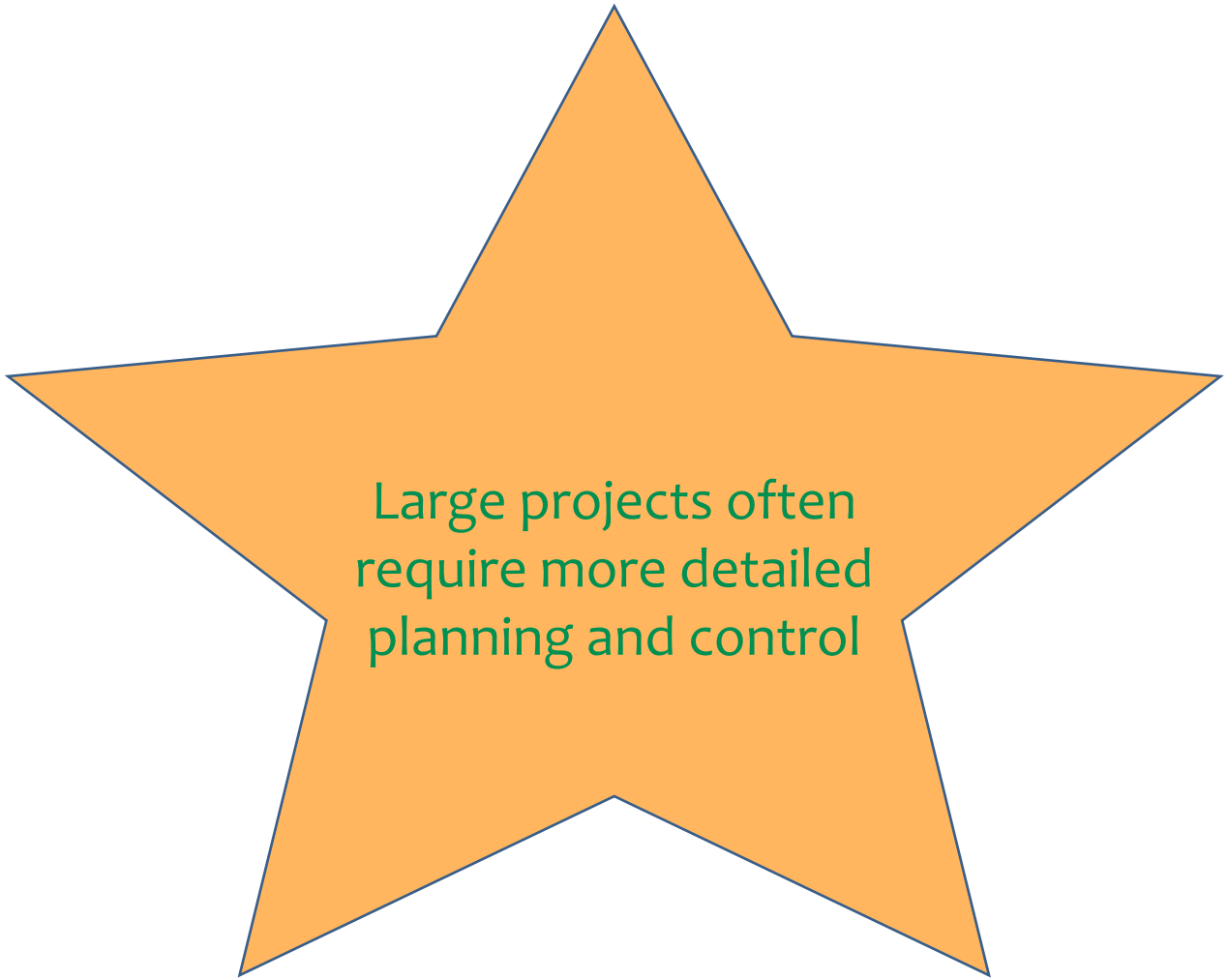
Projects in different industries often have unique requirements

EXHIBIT 1.6

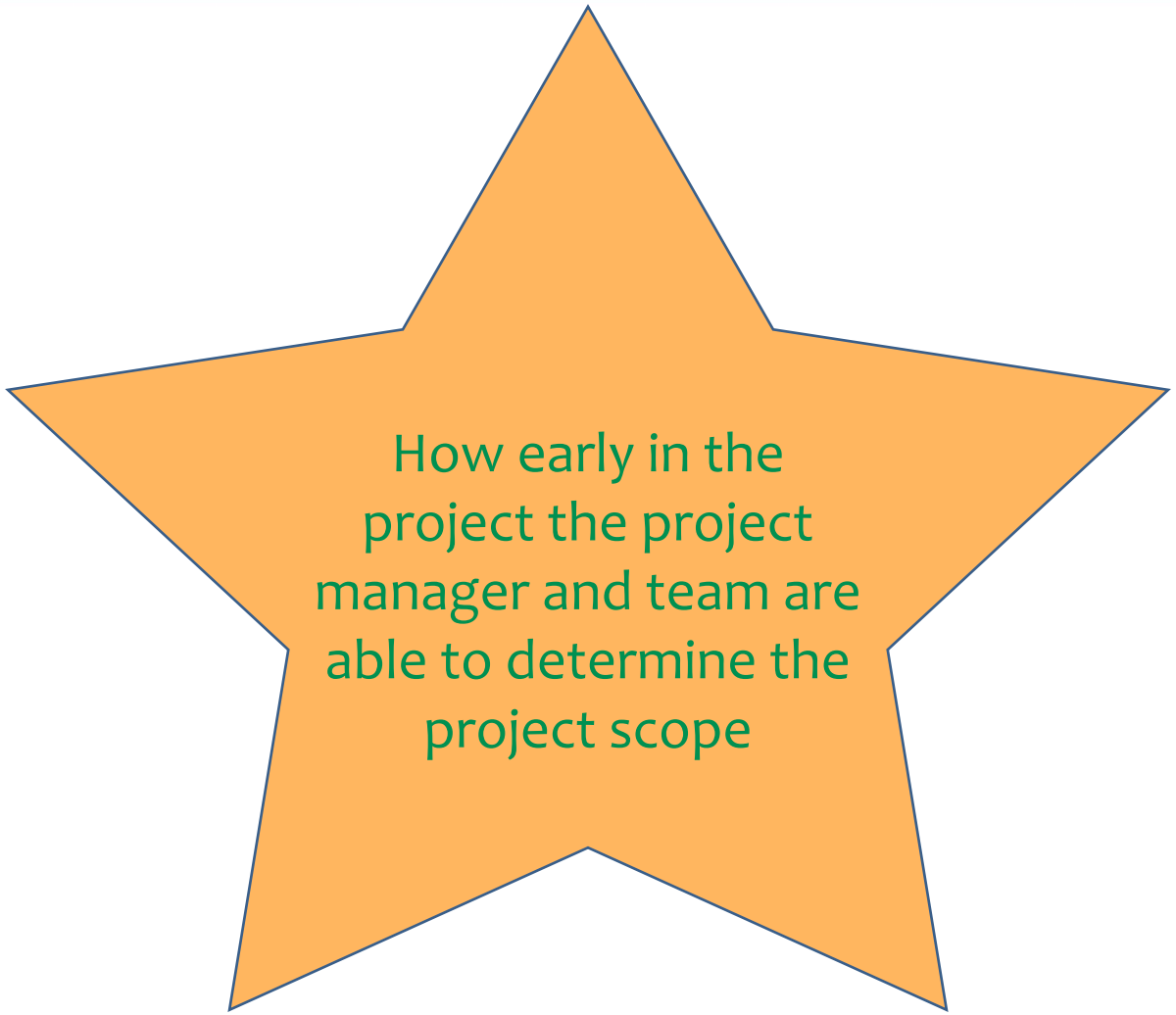
PMI COMMUNITIES OF PRACTICE		
Aerospace and Defense	Global Diversity	New Practitioners
Agile	Global Sustainability	Organizational Project Management
Automation Systems	Government	Pharmaceutical
Change Management	Healthcare	Program Management Office
China Project Management	Human Resource Project Management	Project Management Quality
Construction Industry	Information Systems	Project Risk Management
Consulting	Innovation and New Product Development	Requirements Management
Earned Value Management	International Development	Retail
eBusiness	IT and Telecom	Scheduling
Energy, Oil, Gas and Petrochemical	Leadership in Project Management	Service and Outsourcing
Entertainment	Learning, Education, and Development	Transportation
Ethics in Project Management	Legal Project Management	Troubled Projects
Financial Services Industry	Marketing and Sales	Utility Industry

Source: http://www.pmi.org/Get-Involved/Communities-of-Practice.aspx, accessed March 1, 2013.

Classifying by Size

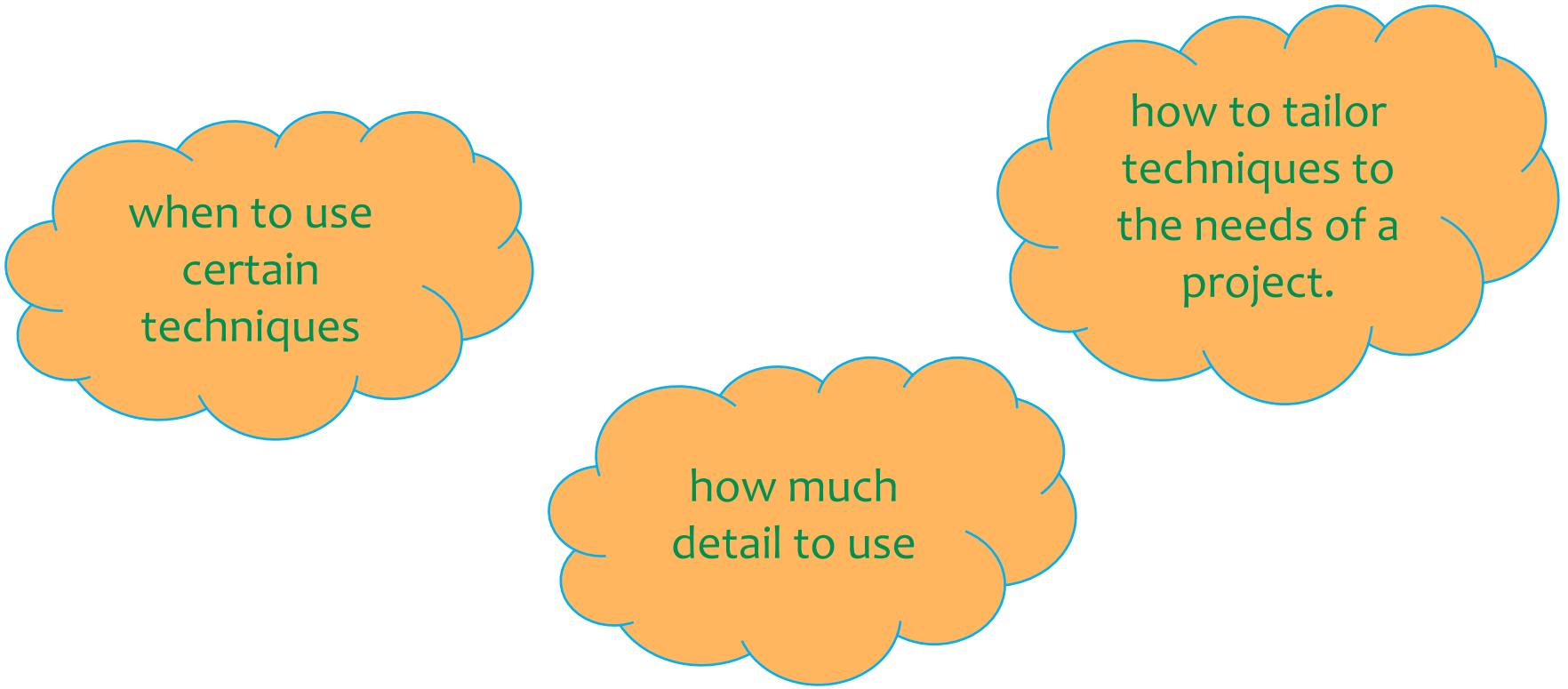


Classifying by Timing of Project Scope Clarity



Classification by Application

- All projects require planning and control
- The art of project management:



Scalability of Project Tools

- All projects require
  - Project specifications
  - Understanding of work involved
  - Budget and schedule determinations
  - Assignment of available workers to tasks
  - Project management
- Projects are scaled up or down to meet the complexity of the task

Traditional Project Roles

- Project Executive-Level Roles
- Project Management-Level Roles
- Project Associate-Level Roles

EXHIBIT 1.7

PROJECT ROLES		
EXECUTIVE ROLES	MANAGERIAL ROLES	ASSOCIATE ROLES
Steering team	Project manager	Core team member
Chief projects officer	Functional manager	Subject matter expert
Sponsor	Facilitator	
	Senior customer representative	

Project Executive-Level Roles

- The steering team
  - The top leader (CEO) and his/her direct reports
  - Select, prioritize, and resource projects
  - Ensure that accurate progress is reported

Project Executive-Level Roles

- Sponsor Active role:
  - Charter the project
  - Review progress reports
- Sponsor Behind-the-scenes role:
  - Mentor the project manager
  - Assist the project manager

Sponsor – "the person or group that provides resources and support for the project and is accountable for enabling success." **PMBOK® Guide**

Project Executive-Level Roles

- The chief projects officer or PMO
  - Supports project managers
  - Require compliance to project directives

Project Management Office (PMO) – "an organizational structure that standardizes the project related governance processes and facilitates the sharing of resources, methodologies, tools and techniques." **PMBOK® Guide**

Project Management-Level Roles

- Project manager
  - Directly accountable for project results, schedule, and budget
  - The main communicator
  - Responsible for project planning and execution, from start to finish
  - Limited formal power

Project manager – "the person assigned by the performing organization to lead the team that is responsible for achieving the project objectives." **PMBOK® Guide**

Project Management-Level Roles

- Functional manager
  - Department heads
  - Determine the “how” of project work
  - Supervise the work
  - Negotiate with the project manager

Project Management-Level Roles

- Facilitator
  - Helps the project manager with the process of running meetings and making decisions

Project Associate-Level Roles

- Project management team
  - Core team members—part of team throughout
  - Subject matter experts (SMEs)—only involved in part of project; not involved in most planning and decision making

Project management team – "members who are directly involved in project management activities." **PMBOK® Guide**

Agile Project Roles

Project Executive-Level Roles

- The senior customer representative
  - Identifies and prioritizes constituents requirements
  - Ensures project progress support customer desires
  - Continuous and active role

Project Management-Level Roles

- Scrum Master
- Project manager who serves and leads as:
  - Collaborator
  - Facilitator

Break-out Session!

- In your own words, what are the main differences between adaptive (Agile) and predictive (Waterfall) approaches to Project Management?
- What are some pros and cons of each approach?

Overview of the Book

- Project management is integrative, iterative, and collaborative
- This book has four major parts
  - Organizing and Initiating Projects
  - Leading Projects
  - Planning Projects
  - Performing Projects

Part I - Organizing and Initiating Projects

- Intro to Project Management (Chapter 1)
- Project Selection and Prioritization (Chapter 2)
- Chartering Projects (Chapter 3)

Project charter – "a document issued by the project initiator or sponsor that formally authorizes the existence of a project, and provides the project manager with the authority to apply organizational resources to project activities." **PMBOK® Guide**

Part II – Leading Projects

- Organizational structure & culture, project life cycle, and project management roles of the parent organization (Chapter 4)
- Project team (Chapter 5)
- Project stakeholders (Chapter 6)

Part II – Planning Projects

- Scheduling projects (Chapter 7)
- Scheduling resources on projects (Chapter 8)
- Project budgeting (Chapter 9)
- Risk planning (Chapter 10)
- Project Quality (Chapter 11)

Project schedule – "presents linked activities with planned dates, durations, milestones and resources." **PMBOK® Guide**

Budget – "the approved estimate for the project or any work breakdown structure component or any schedule activity." **PMBOK® Guide**

Part III – Planning Projects

- Scope Planning (Chapter 7)
- Scheduling Projects (Chapter 8)
- Resourcing Projects (Chapter 9)
- Budgeting Projects (Chapter 10)
- Project Risk Planning (Chapter 11)
- Project Quality Planning and Kick-off (Chapter 12)

Part IV—Performing Projects

- Project Supply Chain Management (Chapter 13)
- Determining Project Progress and Results (Chapter 14)
- Finishing Projects and Realizing the Benefits (Chapter 15)

Summary

- A project is an organized set of work efforts
- Tradeoffs must be made between the scope, quality, cost, and schedule
- Projects need to be planned and managed.
- PMI® is a large professional organization devoted to promoting and standardizing project management understanding and methods
- Project management requires an understanding of the various executive, managerial, and associate roles in project management

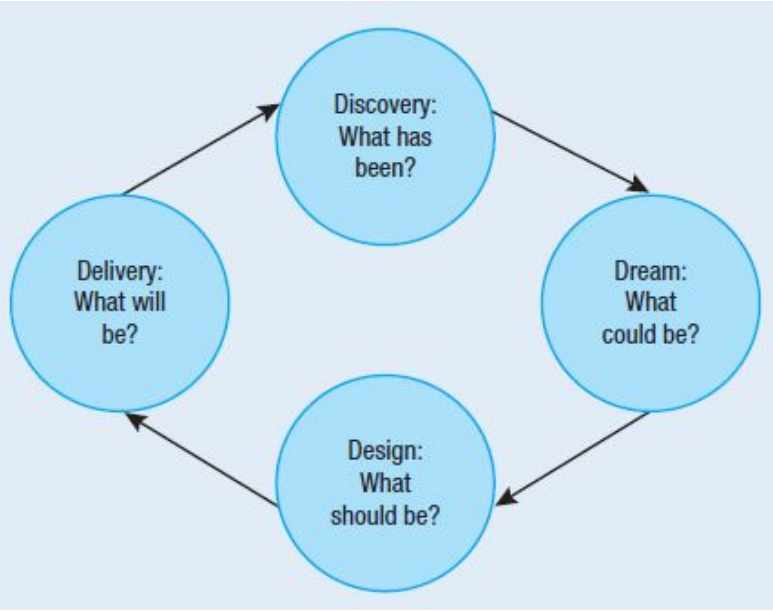
Summary

- PMBOK® Guide
  - Five process groups: initiating, planning, executing, monitoring and controlling, and closing
  - Ten knowledge areas: cost, schedule, scope, quality, risk, communications, resource, stakeholder, procurement, and integration.
- Projects require an understanding of what project success is
- Projects require an understanding of the causes of project failure

What is Appreciative Inquiry?

PM *IN ACTION*

- Tool for engaging project stakeholders
- Recognizes the power of the whole and builds on conversational learning
- Change is based on inquiry
  - What has worked in the past?



Implications of AI on Defining Project Scope

- Tool for navigating through inquiries via positive conversations
- *Discovery* – storytelling to collectively discover process selection and prioritization
- *Dreaming* – dream a perfect, desirable state for the stakeholders
- *Designing* – what would the project look like if there were no resource constraints
- *Delivery* – "sustain the design from the dream that is discovered"

PM IN ACTION

Key Outcome

- AI is an effective way to address ambiguity and uncertainty in PM
  - Elicit and articulate expectations
  - Better understanding of desirable future state
  - Commitment is clearly articulated

PM IN ACTION

PMBOK Exams

- Everything in this textbook is consistent with PMBOK's most recent, 6th edition
- PMP (Project Management Professional) certification—200 questions
- CAPM (Certified Associate of Project Management) certification—150 questions
- More info at www.pmi.org/certifications/types