

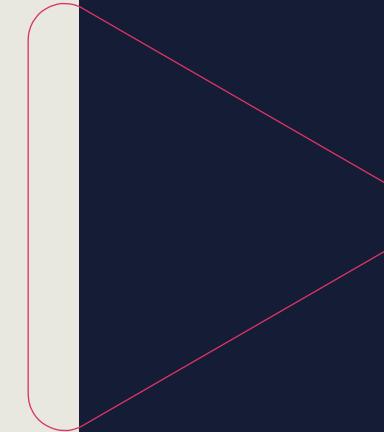


# **PMP® EXAM PREP**

## PMI Authorized Training Partner

### **BOOTCAMP**

### **Session 2**



Instructor: Priscilla Bakx-Kabai, MCE,  
PMP®, ACP®, DASSM, LSSGB

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**Attendance Alert**

**Please make sure you log into Zoom with your correct first name and last name and enter the same information for every session.**

### **PMP® Exam Prep**

This course will assist learners in preparing for PMI's PMP Exam (2021 Update)

# HOUSEKEEPING

## Resources & Materials



This class will be recorded for quality assurance purposes.

For any issues regarding accessing resources via Percipio, please ask for support via Q&A.



Library ▾

What would you like to learn today?



English (US) ▾

My Profile ^

Home

Need help? We're here.

What do you need help with?



Assignments

Compliance

Activity

Digital Badges

Playlist

Skills

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Help

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Get started



Knowledge Base



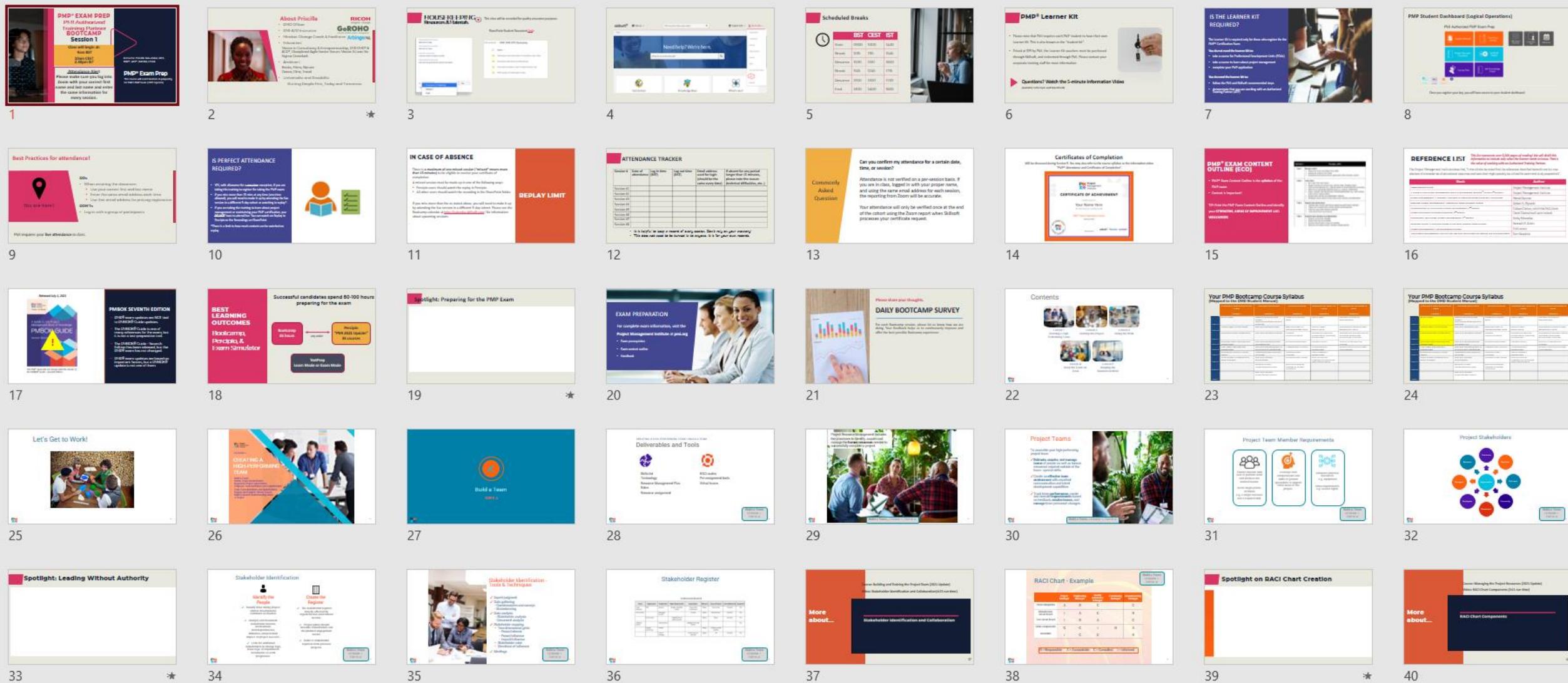
What's new?

# Your PMP Bootcamp Course Syllabus

## (Mapped to the PMP Student Manual)

Creating a High-Performing Team		Starting the Project	Doing the Work	Keeping the Team on Track	Keeping the Business in Mind
	Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5
Topic A	Build a Team	Determine Appropriate Project Methodology/Methods and Practices	Assess and Manage Risks	Lead a Team	Manage Compliance Requirements
Topic B	Define Team Ground Rules	Plan and Manage Scope	Execute Project to Deliver Business Value	Support Team Performance	Evaluate and Deliver Project Benefits and Value
Topic C	Negotiate Project Agreements	Plan and Manage Schedule	Manage Communications	Address and Remove Impediments, Obstacles, and Blockers	Evaluate and Address Internal and External Business Environment Changes
Topic D	Empower Team Members and Stakeholders	Plan and Manage Budget and Resources	Engage Stakeholders	Manage Conflict	Support Organizational Change
Topic E	Train Team Members and Stakeholders	Plan and Manage Quality of Products and Deliverables	Create Project Artifacts	Collaborate with Stakeholders	Employ Continuous Process Improvement
Topic F	Engage and Support Virtual Teams	Integrate Project Planning Activities	Manage Project Changes	Mentor Relevant Stakeholders	
Topic G	Build Shared Understanding about a Project	Plan and Manage Procurement	Manage Project Issues	Apply Emotional Intelligence to Promote Team Performance	
Topic H		Establish Project Governance Structure	Ensure Knowledge Transfer for Project Continuity		
Topic I		Plan and Manage Project/Phase Closure			

# Recap Session 1





## Train Team Members and Stakeholders

TOPIC E

# Deliverables and Tools



- Training and mentoring plan
- Training cost estimates
- Training calendar
- Training assessment
- Certifications



- Training gap analysis
- Training
- Pairing and mentoring

Train Team  
Members and  
Stakeholders  
LESSON 1  
TOPIC E

# Training and Coaching Plan



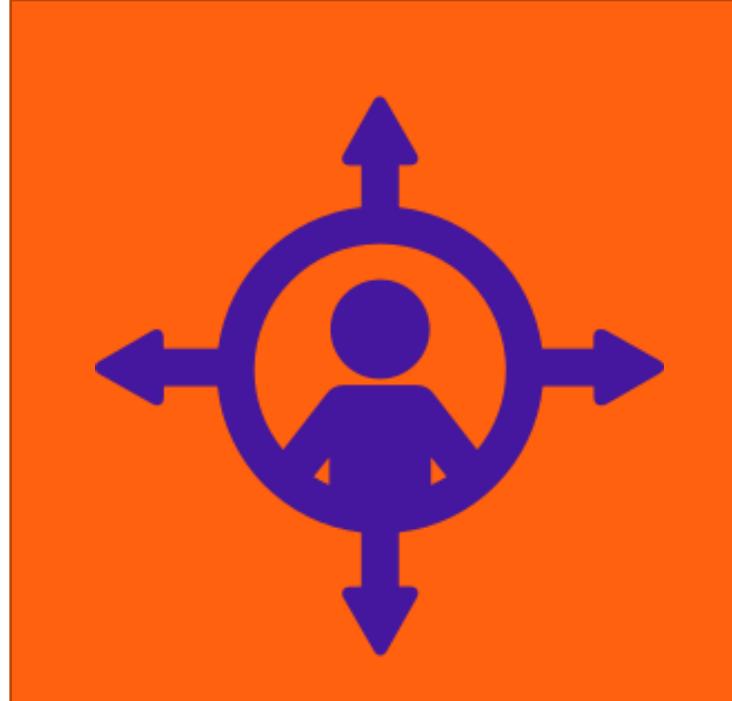
# Training and Coaching

**Training** focuses on building individual skills for use in the present.

**Coaching** helps develop well-rounded individuals through long-term professional relationships between novice and experienced employees.



Train Team  
Members and  
Stakeholders  
LESSON 1  
TOPIC E



# Training and Coaching Plan



Schedule training close to the time of solution implementation. This is critical to avoid delaying the overall solution deployment.



Perform a gap analysis to identify required knowledge, skills, or attributes.



Consider upskilling or certification for team members. This ultimately benefits the project.



Plan for a suitable diversity of training and coaching offerings.



## Required Competencies

- ✓ Identify required competencies prior to developing and executing a training plan.
- ✓ Competencies include knowledge, skills, and other attributes.
- ✓ Stakeholders have unique training needs.
- ✓ Train team members on the customer's business, culture, desired outcomes, and project context.

# Elements of Training

Provided to teams, small groups, and individuals

Covers management, technical, or administrative topics

Delivery models:

- ✓ Instructor-led classroom
- ✓ Virtual classroom
- ✓ Self-paced e-learning
- ✓ Document reviews
- ✓ Interactive simulations
- ✓ On-the-job training



# Training Options

Options	Description
Virtual Instructor-led training	<ul style="list-style-type: none"><li>• Live, online, instructor-led training through a virtual meeting or virtual training environment.</li><li>• Simulated hands-on labs are possible.</li></ul>
Self-paced eLearning	<ul style="list-style-type: none"><li>• Content available to students online. This can include rich-media video, simulated lab exercises, etc.</li><li>• This solution is scalable to a large number of students.</li></ul>
Document reviews	<ul style="list-style-type: none"><li>• For simple knowledge transfer, sharing relevant documents may be sufficient.</li></ul>



# Training Cost and Schedule

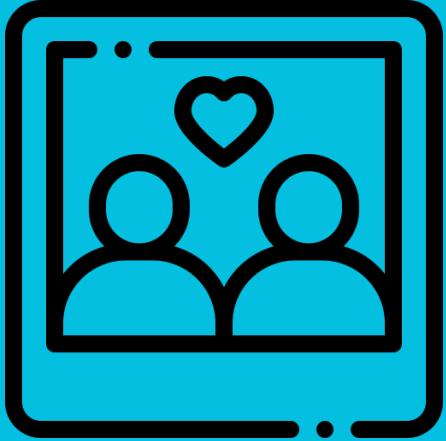
Consider the costs of training the project team and customer stakeholders as **part of the project budget**.

Use a training calendar to:

- ✓ Publish and support a specific calendar of training dates and locations.
- ✓ Publish schedule to customer stakeholders.
- ✓ Create a mechanism for registration and sending confirmation messages.
- ✓ Provide class rosters and a way to capture signatures of attendees.
- ✓ Manage the training schedule to avoid delaying the project delivery timeline.

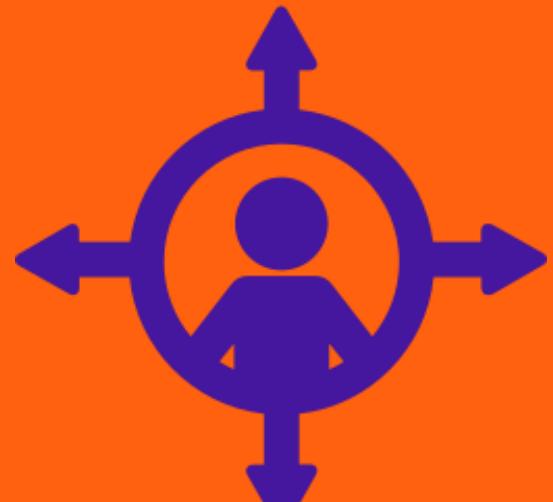


# Pairing and Coaching



Pairing customer stakeholders together reinforces the learning through collaboration.

Coaching enables an experienced team member to coach a less-experienced team member:



- ✓ Fosters team building and a collaborative environment.
- ✓ Relationships can be informal or ad-hoc, created by the individuals themselves or formally established by the organization.

# Certifications

Demonstrate that knowledge and skills have been gained during training.

Industry credentials are portable and valuable to individuals and future employers.



PMP

CAPM

PgMP

PMI-ACP

# Baseline and Post-Training Assessments

Baselining is a technique for measuring the efficacy of training.

- ✓ Attendees complete a pre-assessment **before** training.
- ✓ **After** training, use an assessment to demonstrate the newly acquired levels of competence.



## GUIDELINES

# Ensure Training Occurs

- Create awareness among stakeholders about available training.
- Invite people to attend training.
- Engage with customer to ensure commitment to employee training programs on the solution.
- Include confirmation of registration, a notification, and reminder before the training.
- Use rosters and capture signatures to confirm attendance and participation.

Train Team  
Members and  
Stakeholders  
LESSON 1  
TOPIC E





# Engage and Support Virtual Teams

TOPIC F

# Deliverables and Tools



Collaboration technology  
Engagement assessments  
Project or Resource Calendar



Communication  
Communication plan  
Variance analysis  
PM Powers

Engage and  
Support  
Virtual Teams  
LESSON 1  
TOPIC F

# Collaboration Technology

Enables teams to **plan, collaborate, and communicate.**

Not a substitute for team planning activities.

Consider **transparency requirements** when selecting collaboration technology.

Collaboration tools might include:

- ✓ Shared task boards - To promote visibility
- ✓ Messaging and chat boards - To enable communication
- ✓ Knowledge repositories - To store shared documents
- ✓ Video-conferencing tools - For face-to-face communication





# Virtual Team Member Needs

Facilitate and ensure collaboration as a priority.

Basic needs of a virtual team:

- ✓ Shared goals
- ✓ Clear purpose
- ✓ Clarity on roles and expectations

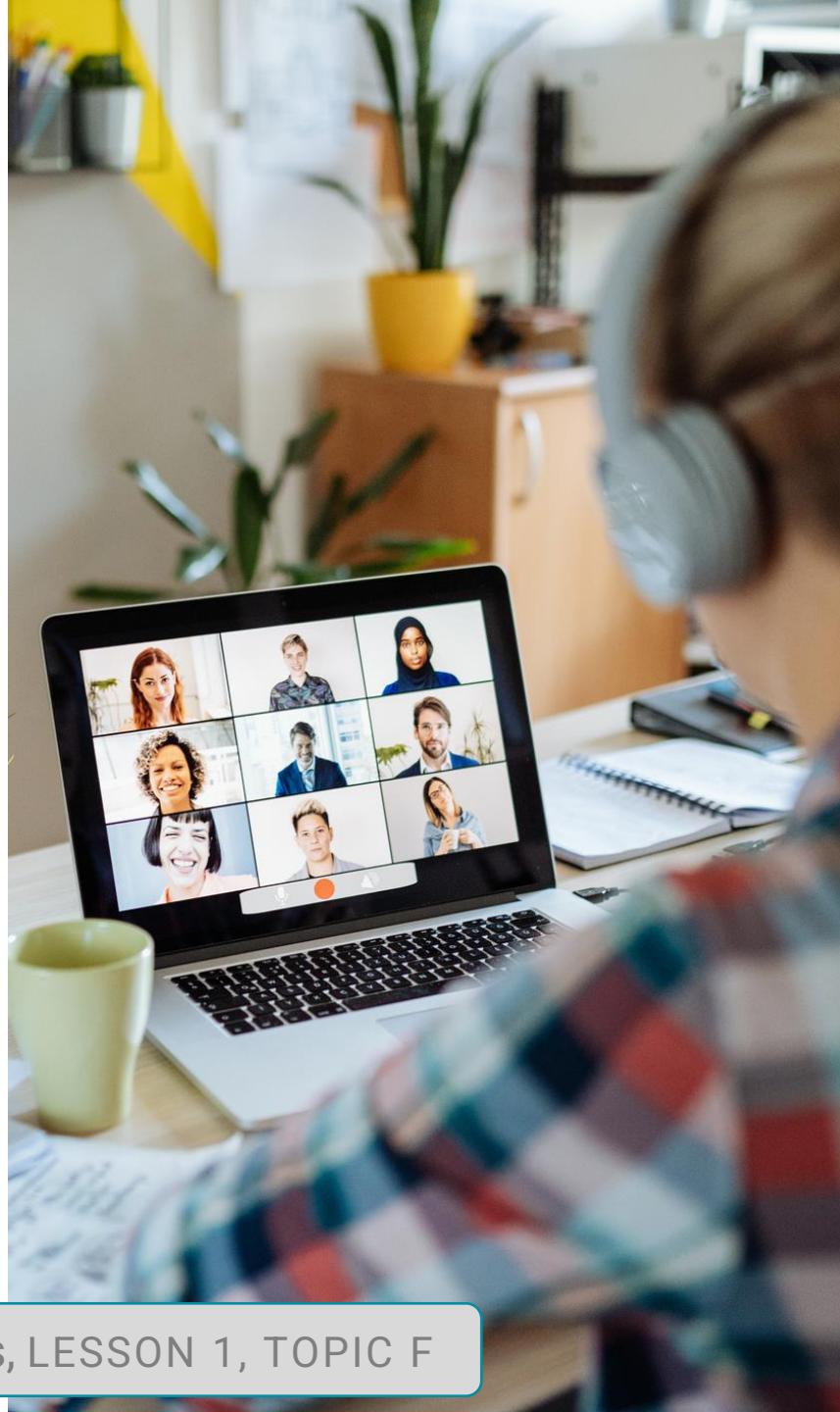
# Virtual Team Member Engagement

Manage engagement by focusing on:

- ✓ Team dynamics
- ✓ Transparency
- ✓ Accountability
- ✓ Attention to effective communication

Use videoconferencing tools to facilitate active participation and the ability to assess body language and tone.

Enable visibility of work and work status with tools e.g., Kanban-style boards.

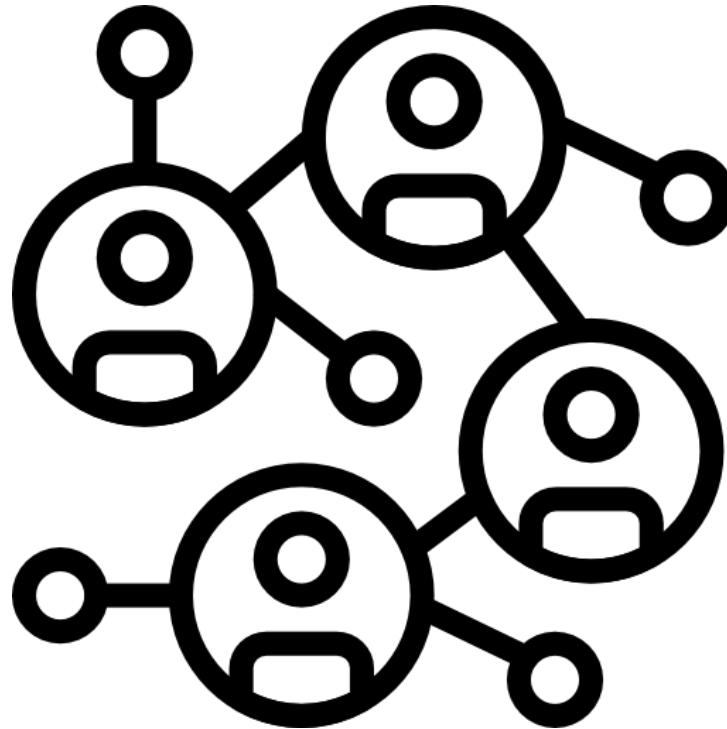


# Communication

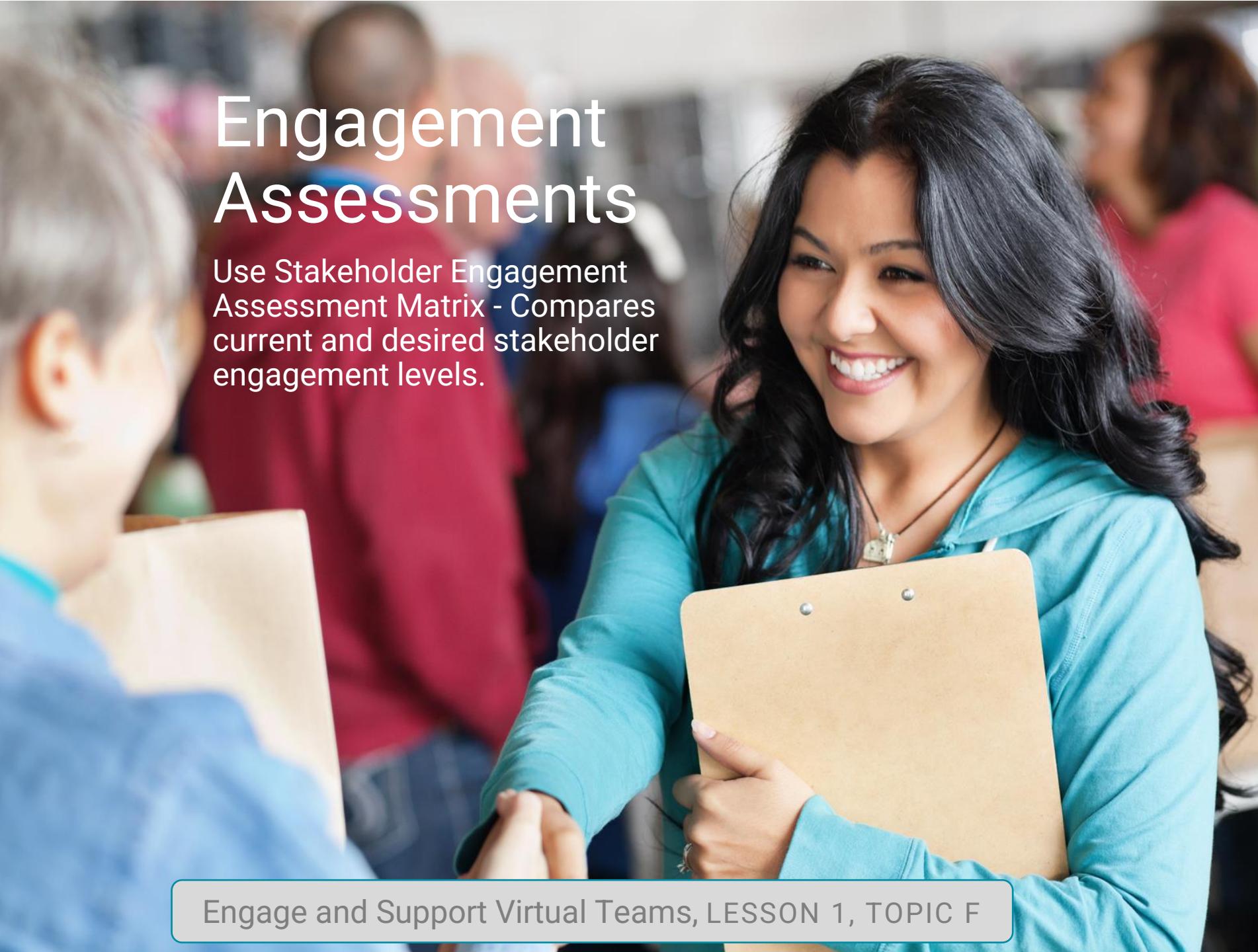
**Effective communication** is the key to successful teams.

Include communication expectations and details in the **team charter**.

Use **retrospectives** to learn ways of improving communication, collaboration, and use of visibility tools.



Engage and  
Support  
Virtual Teams  
LESSON 1  
TOPIC F

A photograph showing a woman with long dark hair, wearing a teal hoodie, smiling and holding a clipboard. She is part of a group of people, some of whom are visible in the background.

# Engagement Assessments

Use Stakeholder Engagement Assessment Matrix - Compares current and desired stakeholder engagement levels.



# Communications Plan

Create the initial team communications plan.

Components include:

- ✓ Team meeting times
- ✓ Tools to track work status
- ✓ Frequency of work status updates
- ✓ Shared team hours
- ✓ Preferred communication approaches

Encourage the team to adopt its own practices and drive iterative improvements to communication approaches.

Aim for effective collaboration and broad, accurate visibility across stakeholders.

## GUIDELINES

# Implement Options for Virtual Team Member Engagement

- Focus on collaboration and team norms before focusing on tools.
- Recognize that team formation in a virtual environment is difficult, so reinforce the teams' mutual commitments, achievements, and opportunities.
- Virtual teams require a significant amount of feedback and reinforcement of team goals and objectives.
- Provide opportunities for members of a virtual team to meet in person to build relationships that nurture their shared commitment to project goals.

Engage and  
Support  
Virtual Teams  
LESSON 1  
TOPIC F

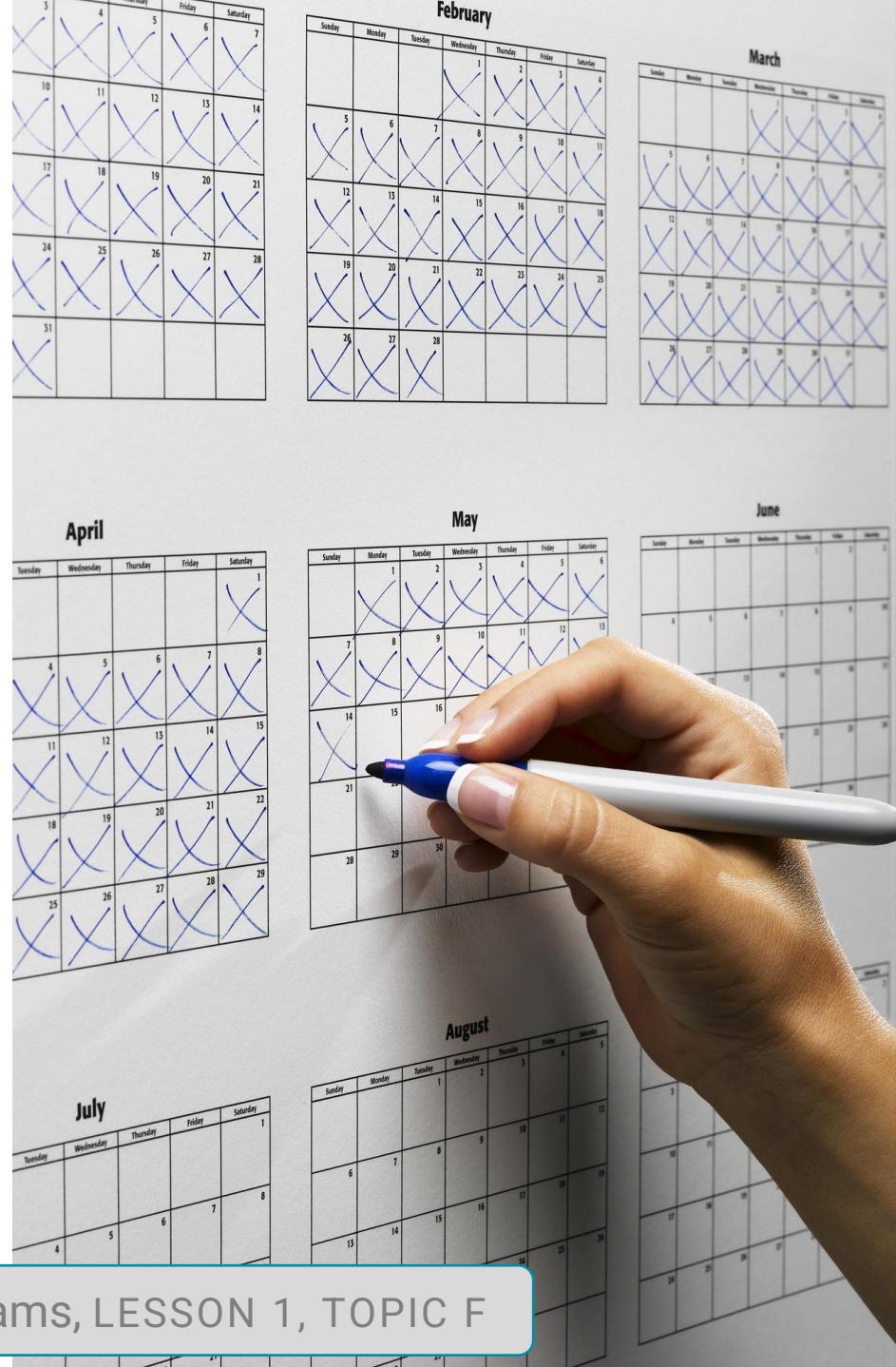


# Calendar Tools

Shared calendars help virtual teams plan meetings, coordinate feedback, and improve visibility to goals and activity status.

## Timeboxed meetings:

- ✓ Improve focus
- ✓ Encourage team to set clear agendas and objectives
- ✓ Help keep the work on track



# Variance Analysis

As the team works, produce variance analyses, such as:

- ✓ Accuracy of team estimates
- ✓ Delivery in a sprint or by an established milestone
- ✓ Team performance against targets

Results of a variance analysis may be shared as part of a retrospective to serve as:

- ✓ A basis for problem solving
- ✓ Identification of lessons learned
- ✓ Proposed improvement experiments for subsequent iterations



# Virtual Team Best Practices

Manage inherent risk of individual team members becoming isolated.

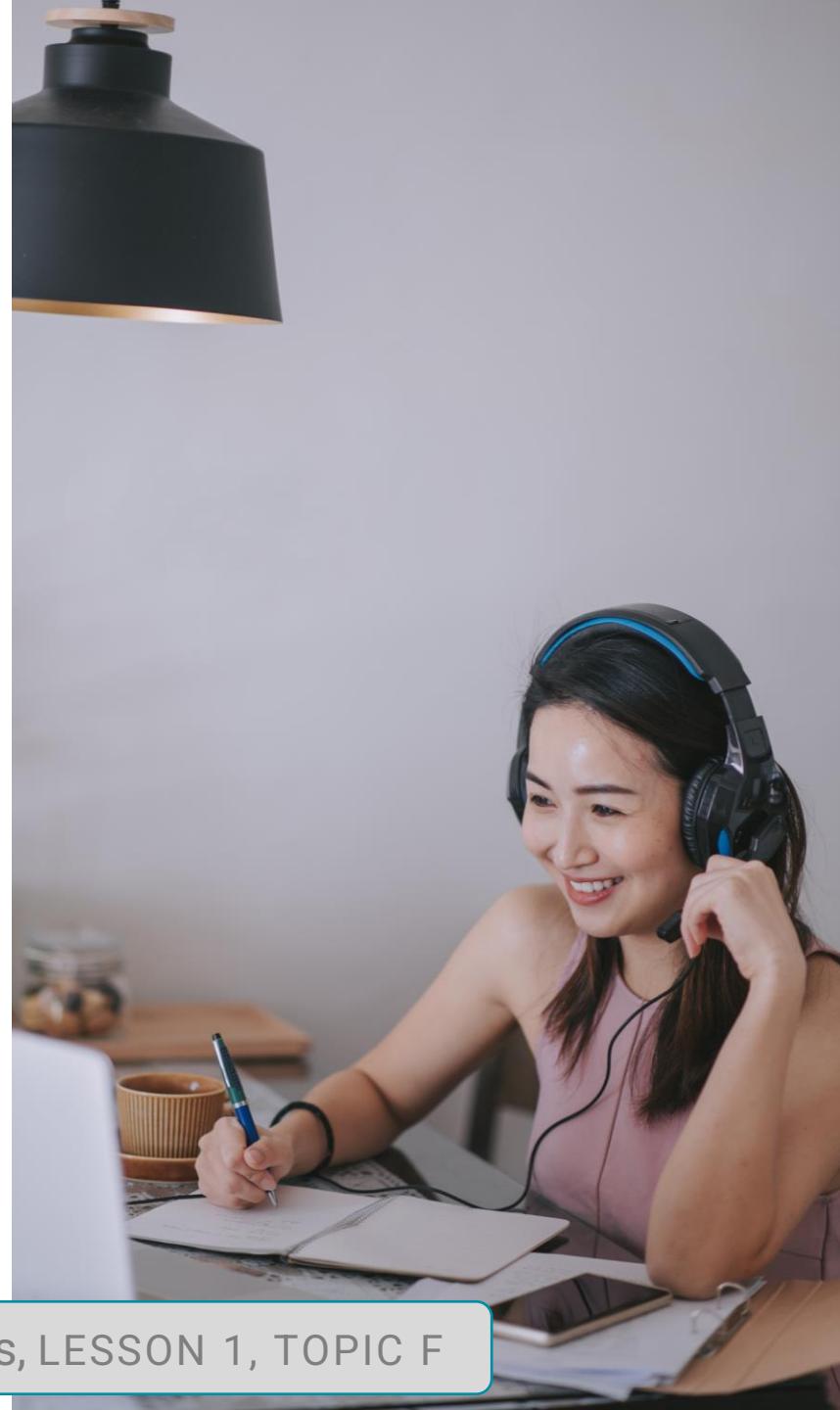
Focus on shared commitments vs. individual accomplishments for tasks.

Instill a sense of shared commitments in the team:

- ✓ Start with the team charter
- ✓ Then adopt behaviors to reinforce collaboration and promote visibility

Prioritize team goals over individual performance.

Enable teams to self-organize and be accountable for deliverables.



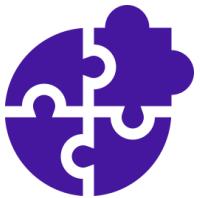


## Build a Shared Understanding About a Project

TOPIC G

CREATING A HIGH-PERFORMING TEAM > BUILD A SHARED UNDERSTANDING  
ABOUT A PROJECT

# Deliverables and Tools



Vision  
XP Metaphor  
Product box exercise



Charter  
Project Plan  
Kick-off meeting  
Brainstorming  
T-Shaped Skills

Build a Shared  
Understanding  
About a  
Project  
LESSON 1  
TOPIC G

# Project Vision

At the start of a project, you need a **clear vision of the desired objectives**. You also need to understand and appreciate how **the project vision aligns with the organization's strategic goals**.

You are the steward of this vision, and it's up to you as the project manager to ensure the project delivers.

A vision statement might include:

- ✓ Product or solution description
- ✓ Intended users or consumers of the solution
- ✓ Key desired objectives
- ✓ Differentiators from competitive approaches
- ✓ Key features and benefits





# Project Charter Contents

- ✓ **Assigned project manager and responsibility / authority level**
- ✓ **Name and authority of project sponsor**
- ✓ **Other optional content:**
  - Measurable project objectives and related success criteria
  - High-level requirements
  - High-level project description, boundaries, and key deliverables
  - Overall project risk
  - Summary of milestone schedules
  - Pre-approved financial resources
  - Key stakeholders register
  - Project approval requirements
  - Project exit criteria

# Project Overview Statement

Communicates enterprise-wide the **intent and vision** of the project.

Written with **brevity and clarity**.

Captures the project's **objective, problem or opportunity**, and **criteria for success**.

Authorization via the project charter or **approved project overview statement** enables **kickoff activities** of project planning.



# How to Run the Project

After you have captured the project vision and understand the types and conditions around the deliverables, **you need to decide** how you will run the project.

Choose from **traditional, agile, and hybrid** approaches and methods.





# Kickoff Meeting

Meeting goals:

- ✓ Establish project context
- ✓ Assist in team formation
- ✓ Ensure team alignment to the overall project vision

Activities during kickoff may include:

- ✓ Defining a vision statement
- ✓ Defining a team charter
- ✓ Assisting the customer/Product Owner with:
  - User story writing
  - Estimation of effort
  - Prioritization planning
  - Initial product backlog

# Iteration Planning

Iteration planning is a collaborative agile ceremony, sometimes called **Sprint planning**, for the team and the customer representative (or Product Owner) to do the following:

- ✓ Review the highest prioritized user stories, or key outcomes.
- ✓ Ask questions.
- ✓ Agree on forecasts for story completion in the current iteration.

After agreement, the team determines the activities required to deliver iteration objectives.



# Reach Consensus

Method	Best for	How It Works
Fist of Five	Expression of range of agreement	Closed fist = complete disagreement Fist of 5 – complete agreement
Roman Voting	Simple yes or no	Thumbs up or down (sometimes sideways for neutral)
Polling	Consider independent points of view	Hear opinions and then vote
Dot Voting	Select several options from a list	Distribute dots equally, then each person allocates dots according to highest preference

## GUIDELINES

# Reach Consensus and Support the Outcome of the Parties' Agreement

- Team charter can specify how team chooses to handle certain scenarios and disagreements when they arise:  
e.g. if team members disagree about the number of story points to estimate for a user story, the team charter may designate use of the higher estimate or that majority vote rules.
- Seek consensus among the team where possible and recognize that sometimes it will not be possible.

Build a Shared Understanding About a Project  
LESSON 1  
TOPIC G



## LESSON 2

# STARTING THE PROJECT

- Determine Appropriate Project Methodology/ Methods and Practices
- Plan and Manage Scope
- Plan and Manage Schedule
- Plan and Manage Budget and Resources
- Plan and Manage Quality of Products and Deliverables
- Integrate Project Planning Activities
- Plan and Manage Procurement
- Establish Project Governance Structure
- Plan and Manage Project/Phase Closure





# Determine Appropriate Project Methodology/Methods and Practices

TOPIC A

# Deliverables and Tools



- |                                      |  |
|--------------------------------------|--|
| Surveys                              | Expert judgement                           |
| Project business case/needs document | Meetings                                   |
| Project Overview Statement           | Focus groups                               |
| Project Implementation Plan          | Workshops                                  |
| Agile practice guidelines            | SMART objectives                           |
|                                      | Knowledge of classic PM and agile practice |
|                                      | Project Integration                        |

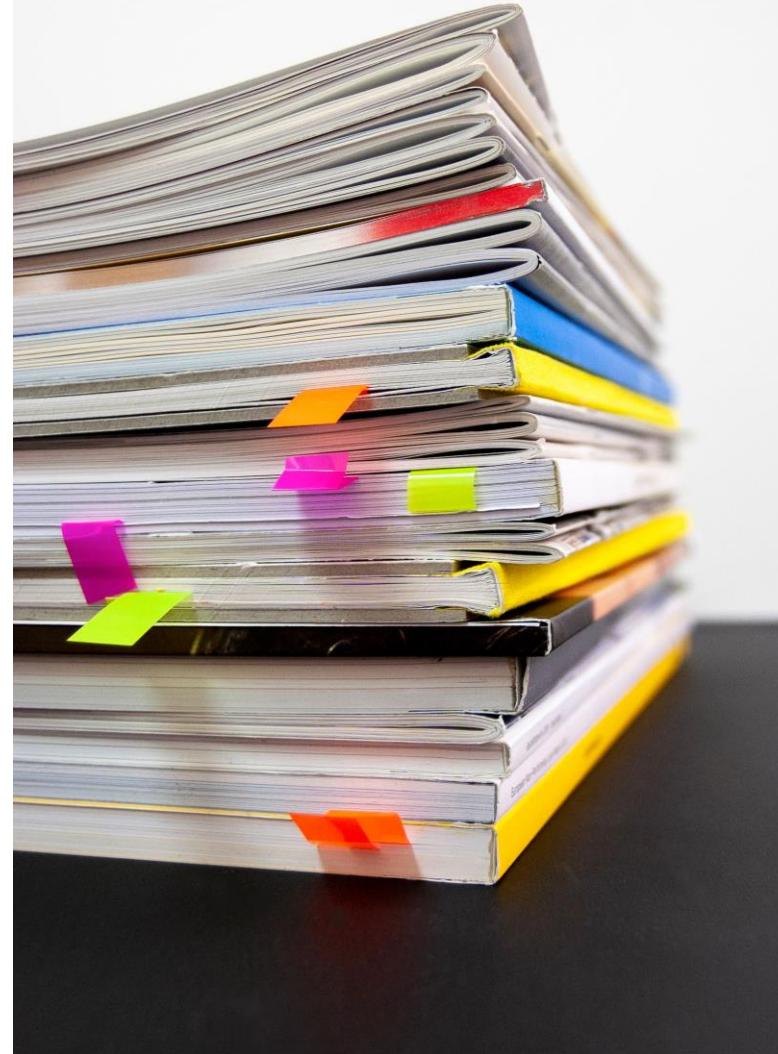
# Business Case and Business Needs Documents

## Business case:

- ✓ Documented economic feasibility study
- ✓ Establishes benefits of project components
- ✓ Provides a basis for authorization of further project activities

## Business needs documents:

- ✓ Provide high-level deliverables
- ✓ Prerequisite of formal business case
- ✓ Describe requirements - what needs creating and / or performing



Determine Appropriate Project Methodology/Methods and Practices, LESSON 2, TOPIC A



# Project Implementation Plan

Consider all stakeholders, schedules, risks, budgets, and quality standards.

Identify deliverables - due at the end of the project.

Identify project outputs - delivered throughout the project.

When delivering outputs, are we:

- ✓ Implementing them in a new or existing business environment?
- ✓ Transitioning them into a live environment?
- ✓ Decommissioning or removing old systems, processes, or materials?
- ✓ Ensuring training and knowledge transfer is complete / satisfactory?

# Rolling Wave Planning

- ✓ Used in agile or predictive approaches
- ✓ A form of progressive elaboration applied to work packages, planning packages, and release planning
- ✓ Decompose work down to the known level of detail during strategic planning
- ✓ Decompose work packages into activities as work progresses



Determine Appropriate Project Methodology/Methods and Practices, LESSON 2, TOPIC A

# Overview: Project Management Methodologies, Methods, and Practices

## Agile

- Team works collaboratively with the customer to determine the project needs.
- The coordination of the customer and the team drives the project forward.

## Predictive / Plan-Driven

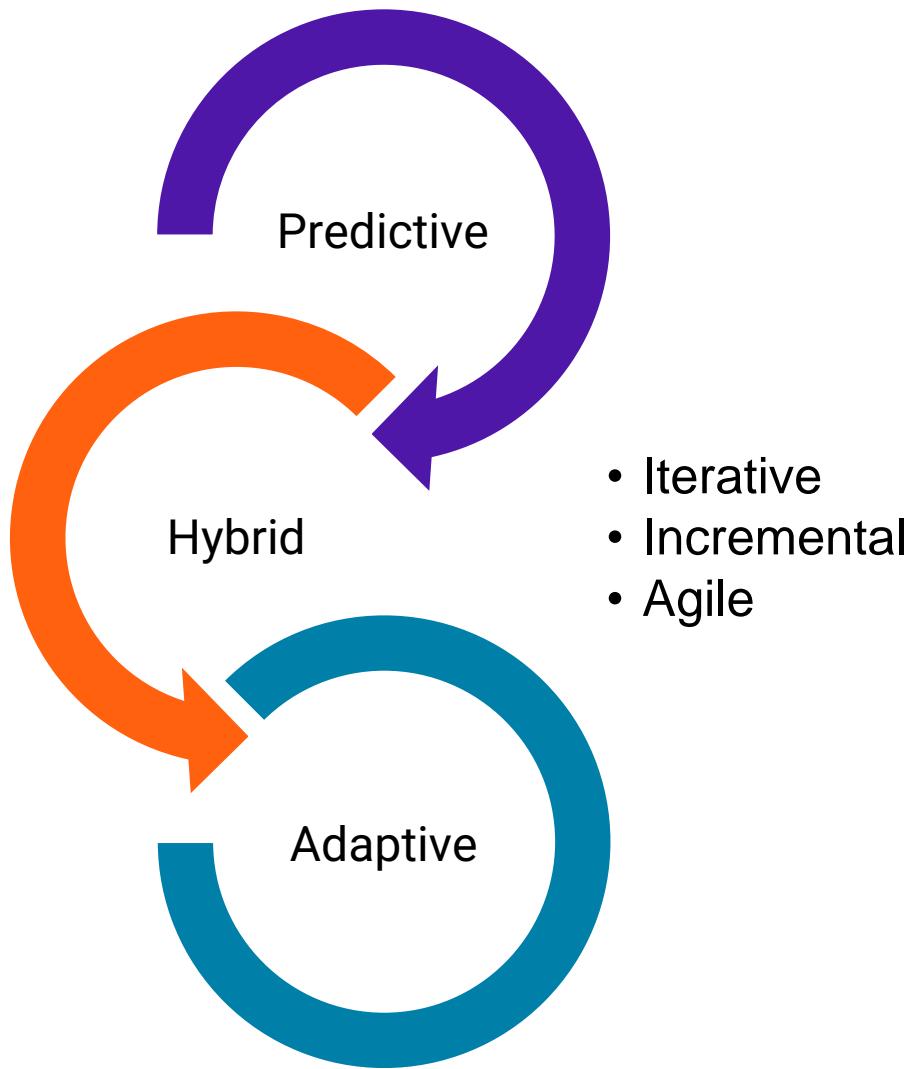
- Project needs, requirements, and constraints are understood, and plans are developed accordingly.
- Plans drive the project forward.

## Hybrid

- Combines strategies from agile or predictive as required.
- Can switch approaches based on need, changing work requirements, or circumstances.

Determine Appropriate Project Methodology/Methods and Practices, LESSON 2, TOPIC A

# Types of Life Cycles

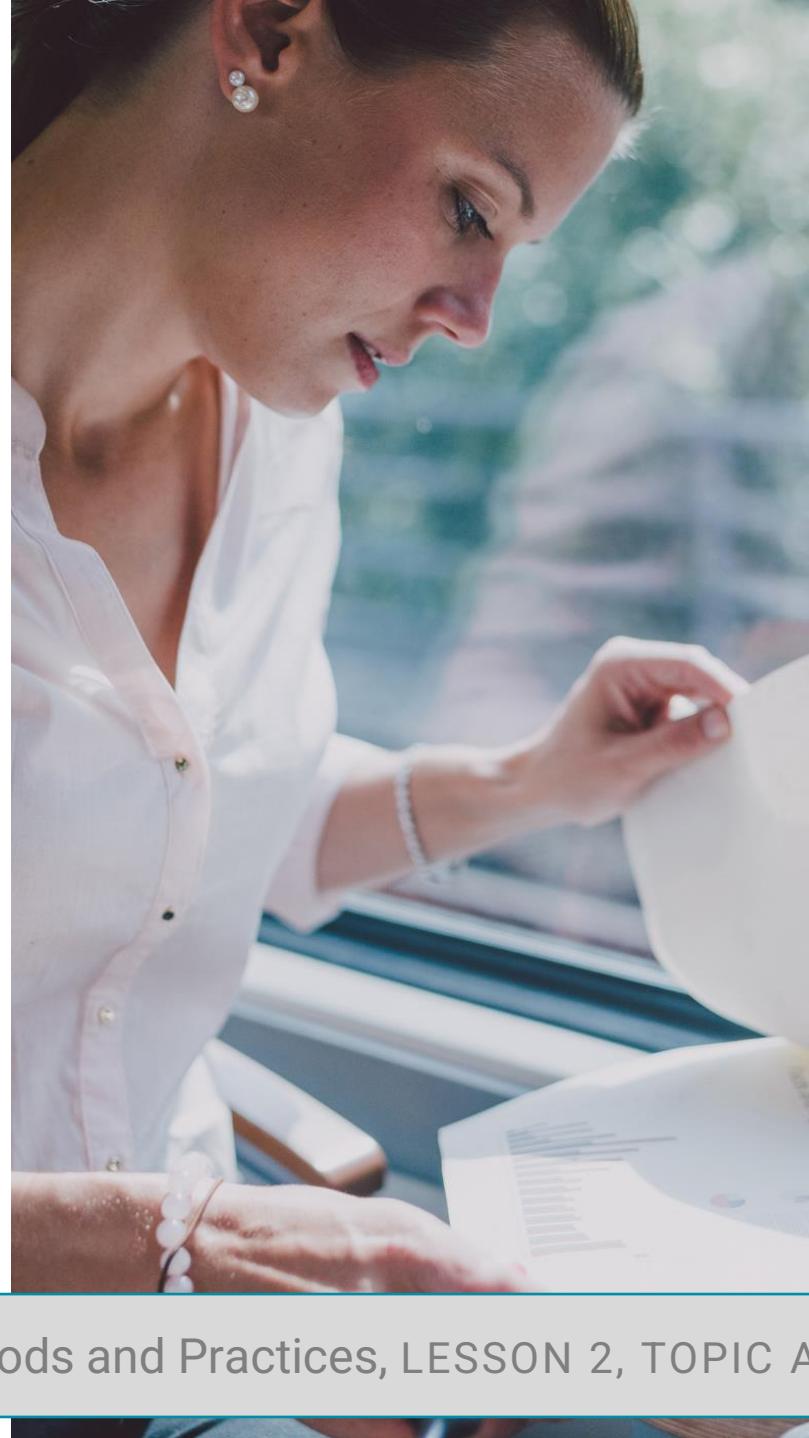


Determine Appropriate Project Methodology/Methods and Practices, LESSON 2, TOPIC A

# Predictive Life Cycle

Also known as **Traditional or Waterfall** approach:

- ✓ Requirements are typically fixed, but can be changed using the change control process
- ✓ Activities and work culminate in final output, always a deliverable



Determine Appropriate Project Methodology/Methods and Practices, LESSON 2, TOPIC A



## Adaptive and Hybrid Life Cycles

Use these methods in dynamic and complex environments, where change is a constant.

Let's learn more about these methods next.

# Hybrid Methods

Combine predictive and adaptive approaches to offer flexibility to teams.

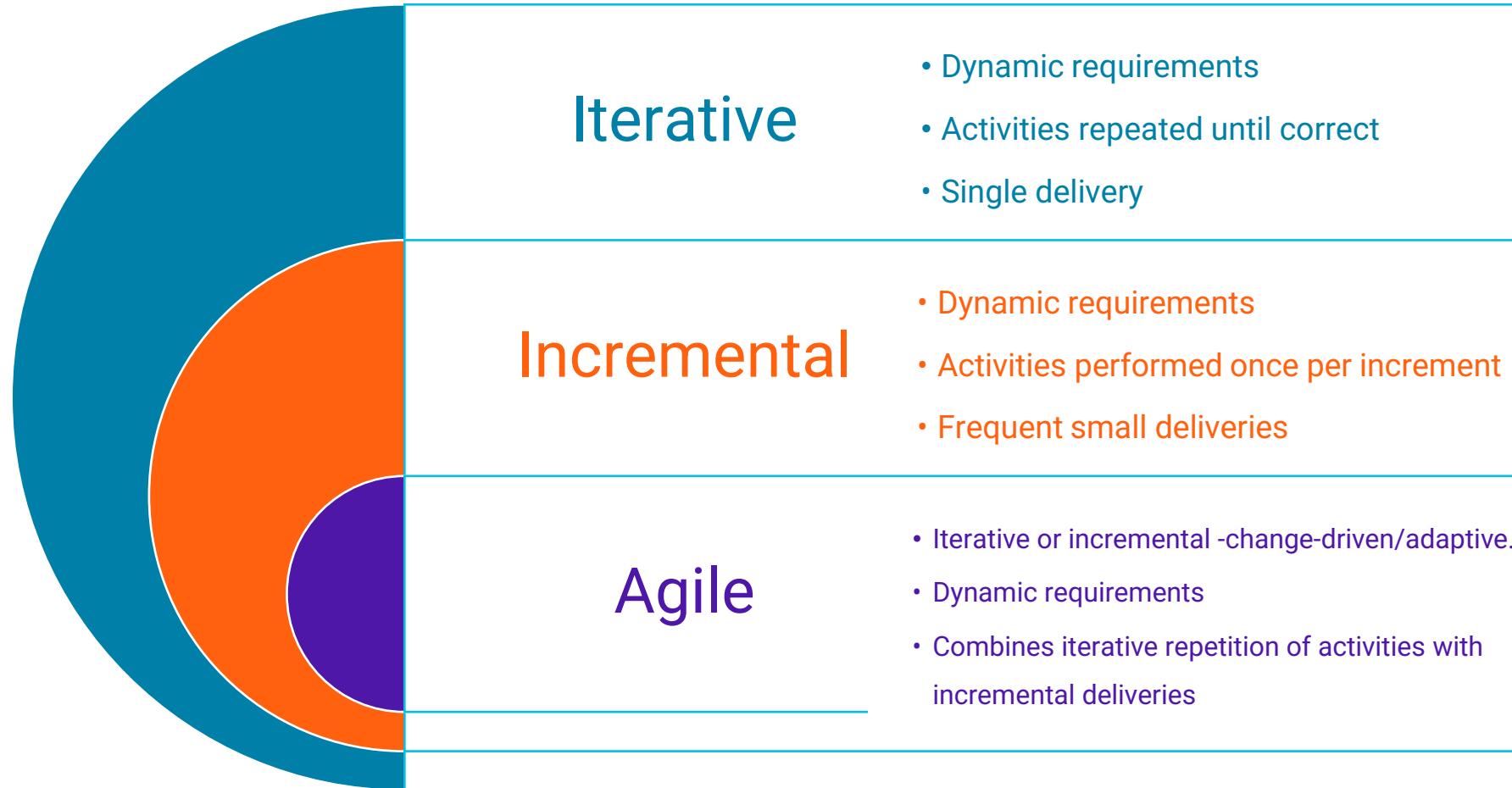
Great for projects:

- ✓ Seeking or willing to learn new methods or techniques.
- ✓ With a mix of resources and experience levels
- ✓ With shorter, iterative time frames.
- ✓ With high stakeholder involvement
- ✓ With in-depth requirements



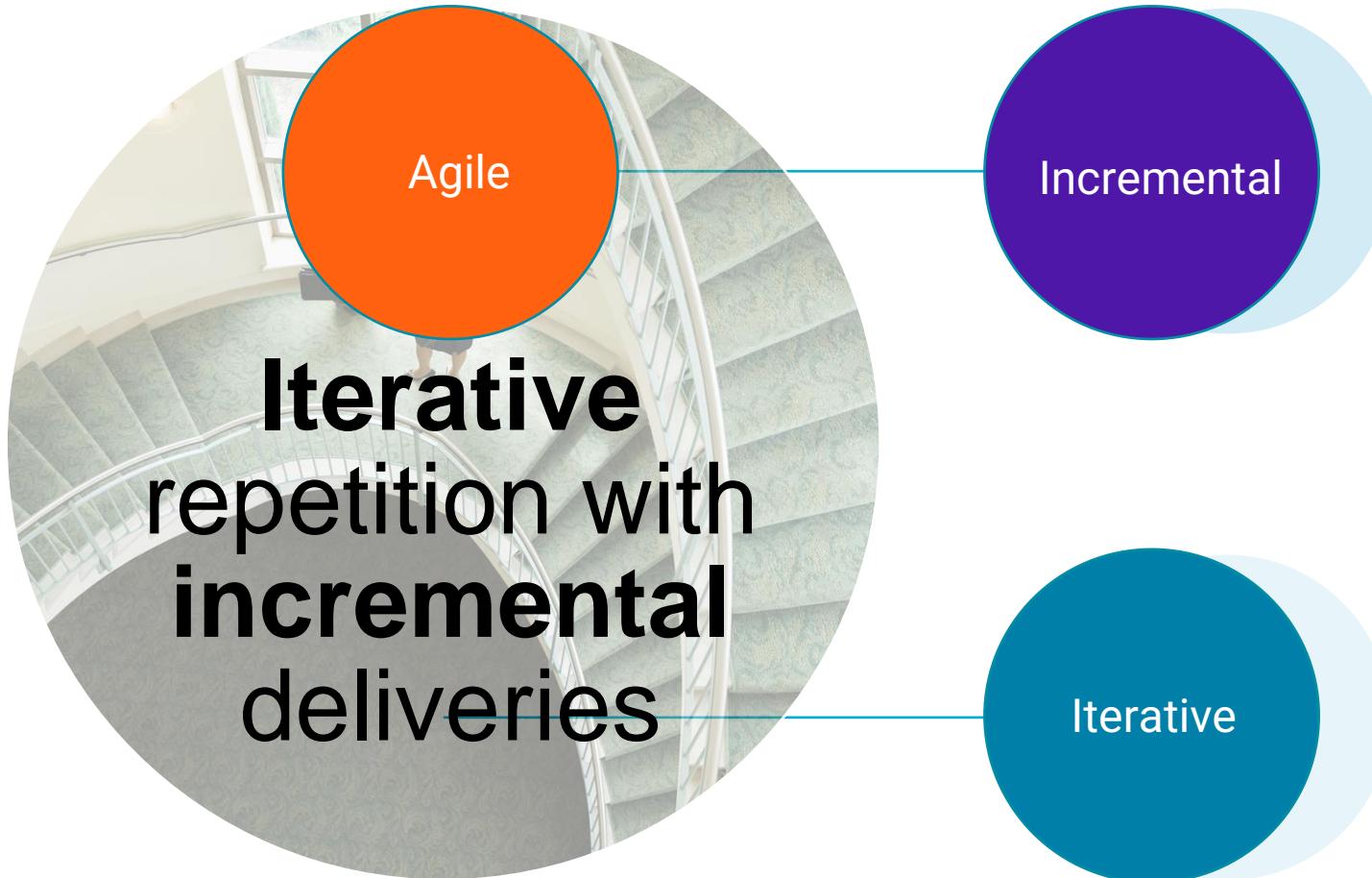
Determine Appropriate Project Methodology/Methods and Practices, LESSON 2, TOPIC A

# Adaptive Life Cycles



Determine Appropriate Project Methodology/Methods and Practices, LESSON 2, TOPIC A

# Adaptive Life Cycles



Determine Appropriate Project Methodology/Methods and Practices, LESSON 2, TOPIC A

# Typical Use Cases

Methodology	Typical Use Cases
Agile	<ul style="list-style-type: none"><li>• Software projects</li><li>• Intellectual property projects</li><li>• Research projects</li></ul>
Predictive / Plan Driven	<ul style="list-style-type: none"><li>• Construction projects</li><li>• Projects with many physical assets</li><li>• “Repeats” of similar, completed projects</li></ul>
Iterative	Projects where learning and correction is expected to eventually reach the ideal solution.
Incremental	Customers or business wants or expects to see outputs or partial outputs early and often.
Hybrid	<ul style="list-style-type: none"><li>• Mix of resources and experience levels</li><li>• Those seeking or willing to learn new methods or techniques.</li></ul>

Determine Appropriate Project Methodology/Methods and Practices, LESSON 2, TOPIC A

Course: Exploring Project Management, Then and Now (2021 Update)  
Video: Comparison of Project Life Cycles (1:51 run time)

More  
about...

## Comparison of Project Life Cycles





# Plan and Manage Scope

TOPIC B

# Deliverables and Tools



Requirements Documentation  
Work performance reports  
Requirements Traceability Matrix



Agile estimating  
Product backlog  
Change requests  
Product backlog  
Scope management plan and  
Requirements management plan

Plan and  
Manage  
Scope  
LESSON 2  
TOPIC B

# Scope Management Plan

- ✓ Should include processes to prepare a project scope statement
- ✓ Enables the creation of the WBS from the detailed project scope statement
- ✓ Establishes how the scope baseline will be approved and maintained
- ✓ Specifies how formal acceptance of the completed project deliverables will be obtained.
- ✓ Can be formal or informal, broadly framed or highly detailed.

SCOPE MANAGEMENT PLAN	
Project Title:	122 East Main Street
Date:	
<b>Scope Statement Development</b>	
<i>The Scope Statement for this project will be prepared by the project manager, with assistance from other Building with Heart staff who have worked on previous home-building projects.</i>	
<b>WBS Structure</b>	
<i>The Work Breakdown Structure will consist of four levels, with the project at the top level. Phases will be used for major (Level 1) deliverables (e.g., foundation, framing, interior walls, plumbing, etc.). Each phase will be decomposed into appropriately-sized sub-deliverables (e.g., first-floor framing, second-floor framing). Finally, each sub-deliverable will be decomposed into work packages. Schedule and cost estimates will be prepared for each work package, and will be rolled up to the project level.</i>	
<b>WBS Dictionary</b>	
<i>Each element in the WBS will include sufficient information to enable the management of that element. The WBS Dictionary will include, but not be limited to the following: start and finish dates; resource names; durations; constraints, assumptions, and predecessor and successor elements.</i>	
<b>Scope Baseline Maintenance and Scope Changes</b>	
<i>The scope baseline will consist of the Scope Statement, WBS, and WBS dictionary. The initial scope baseline will be approved by the project sponsor. All changes to the scope baseline will follow the procedures outlined in the Integrated Change Control Process, and all changes will be documented and approved accordingly.</i>	
<b>Deliverable Acceptance</b>	
<i>Each Level 1 (Phase) deliverable will be approved by the project sponsor or his/her designee. The final deliverable, the finished home, will be approved by the Greene City Buildings Department inspector and will conform to all applicable building codes and regulations.</i>	
<b>Scope and Requirements Integration</b>	
<i>Before any design or other work has been started, a Requirements Document will be prepared</i>	

# Scope Management Tools and Techniques

## Expert judgment

Internal and external experts

## Alternatives analysis

Used to evaluate identified options in order to select the options or approaches to use to execute and perform the work of the project.

## Meetings

Team members help create the scope management plan

# Project and Product Requirements

- ✓ High-level requirements might be documented in the project charter.
- ✓ Verify that all requirements are determined and documented.
- ✓ Provide the foundation for building the WBS.



# Project and Product Scope

- ✓ **Predictive** - The scope baseline for the project is the approved version of the project scope statement, work breakdown structure (WBS), and associated WBS dictionary.
- ✓ **Agile** - Backlogs (including product requirements and user stories) reflect current project needs.
- ✓ **Measure completion of project scope** against the project management plan.
- ✓ **Measure completion of the product scope** against product requirements.

Plan and  
Manage  
Scope  
LESSON 2  
TOPIC B

# Tolerances

Tolerance levels enable you to effectively manage an issue without needing to escalate it every time.

**Areas of tolerance** might include:

- ✓ Budget
- ✓ Schedule
- ✓ Quality
- ✓ Accepted or baselined requirements, including:
  - Solution – functional/non-functional
  - Business and Stakeholder
  - Quality



# EEFs and OPAs

- ✓ Projects exist and operate in environments that may influence them, favourably or unfavourably.
- ✓ EEFs and OPAs are two major categories of project influences.



# Enterprise Environmental Factors (EEFs)

Internal	External
<ul style="list-style-type: none"><li>✓ Organizational culture, structure, and governance</li><li>✓ Geographic distribution of facilities and resources</li><li>✓ Infrastructure</li><li>✓ Resource availability</li><li>✓ Employee capability</li></ul>	<ul style="list-style-type: none"><li>✓ Marketplace conditions</li><li>✓ Social and cultural influences and issues</li><li>✓ Legal restrictions</li><li>✓ Commercial databases</li><li>✓ Academic research</li><li>✓ Government or industry standards</li><li>✓ Financial considerations</li><li>✓ Physical environmental elements</li></ul>

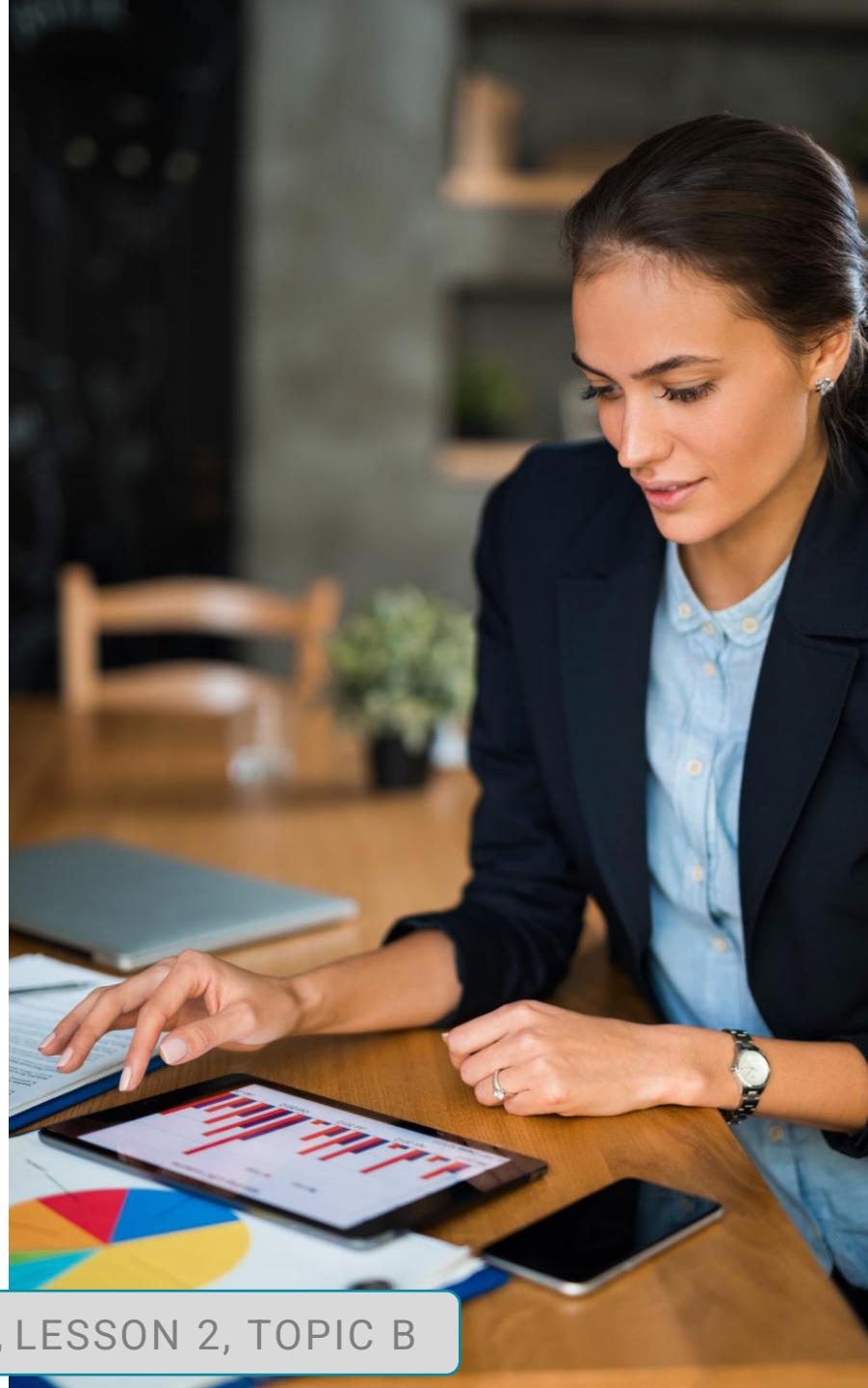
# Organizational Process Assets (OPAs)

**Processes, policies, and procedures** are:

- ✓ Established by the project management office (PMO) or another function outside of the project.
- ✓ Not updated as part of project work
  
- ✓ **Templates, lifecycles, and checklists** can be tailored, but not updated, for a project.

**Organizational knowledge bases** are:

- ✓ Updated throughout the project with project information
- ✓ Updated information such as financial performance, lessons learned, performance metrics and issues, and defects.



**More  
about...**

Course: Selecting a Project Management Approach (2021 Update)  
Video: Environmental Influences and Organizational Assets (2:40 run time)

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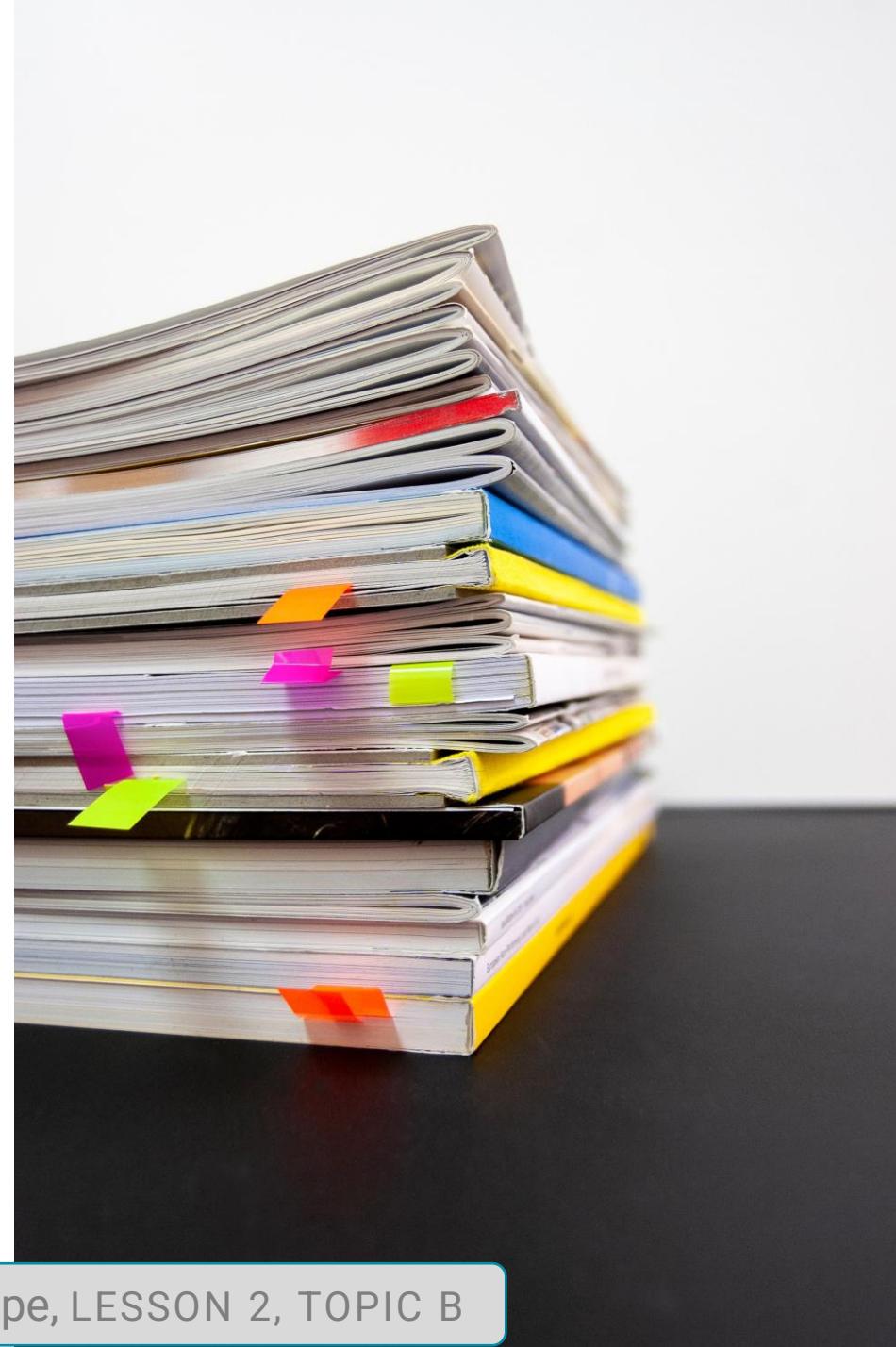
## **Environmental Influences and Organizational Assets**



# Document Analysis

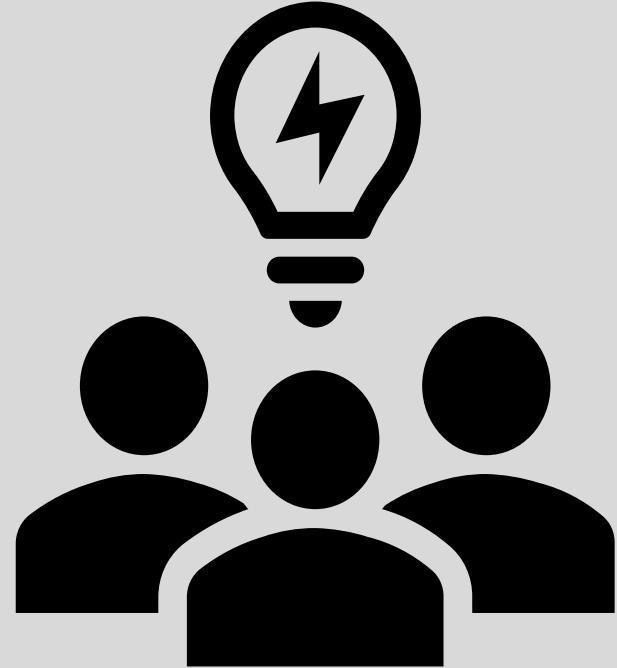
Derive new project requirements from existing documents such as:

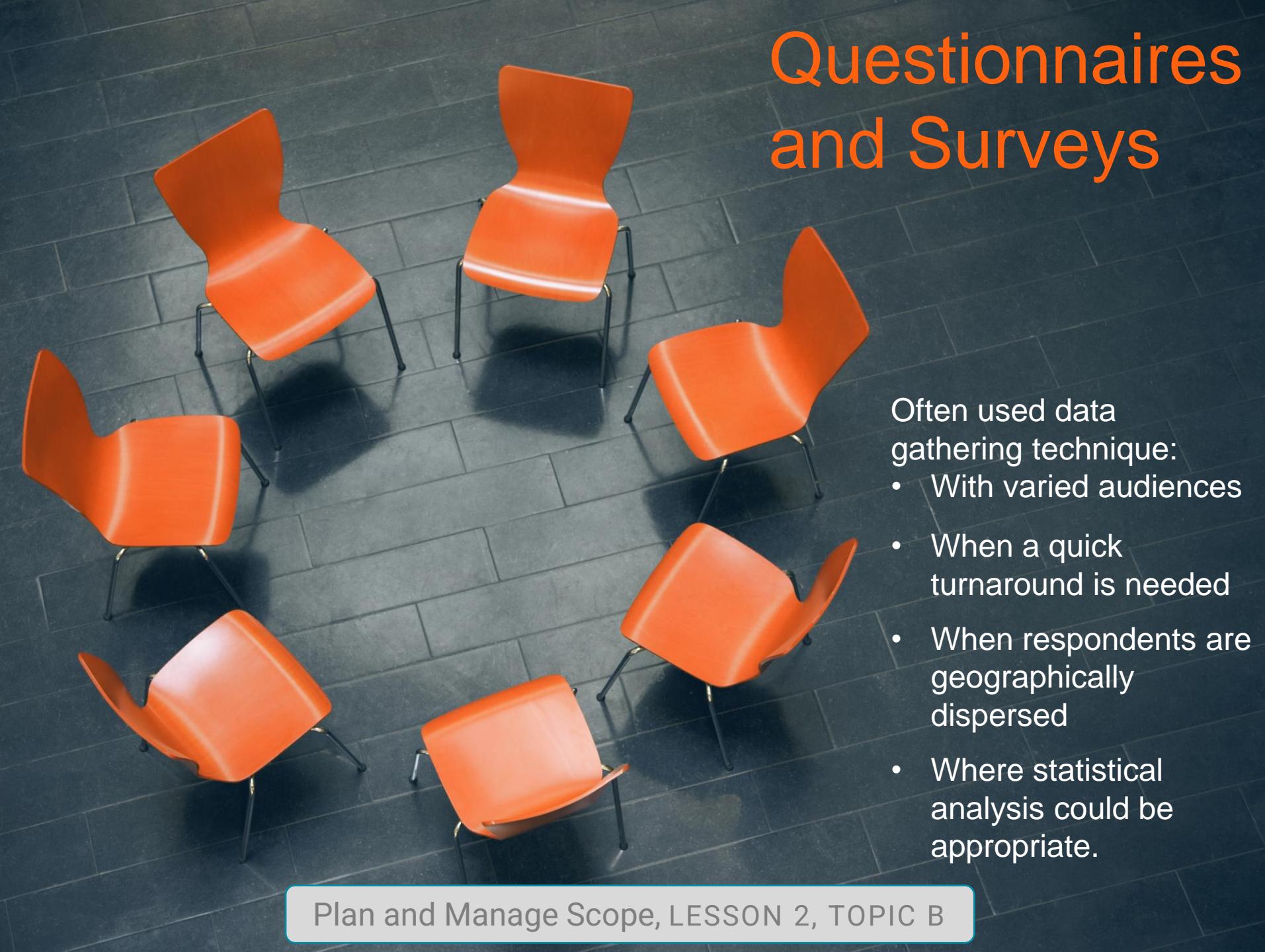
- ✓ Business plans
- ✓ Service agreements
- ✓ Marketing materials
- ✓ Current process diagrams
- ✓ Application software documentation



# Focus Groups

- ✓ Loosely structured, information-sharing sessions
- ✓ Moderator-guided, interactive
- ✓ Includes stakeholders and SMEs
- ✓ Qualitative research





# Questionnaires and Surveys

Often used data gathering technique:

- With varied audiences
- When a quick turnaround is needed
- When respondents are geographically dispersed
- Where statistical analysis could be appropriate.

# Benchmarking

- ✓ **Evaluates and compares a business' or project's practices with others.**
- ✓ **Identifies best practices in order to meet or exceed them.**



# Interviews

- ✓ Helps to identify a stakeholder's requirements, goals, or expectations for a project.
- ✓ Use to identify/define features and functions of desired project's deliverables.



# Group Decision-Making Techniques

## Voting

Collective decision-making and assessment

Determines several alternatives, with future actions as the expected outcome

Use to generate, classify, and prioritize product requirements

## Autocratic decision making

One team member makes the decision for the group.

## Multicriteria decision analysis

Method - Establish criteria in decision matrix e.g. *risk levels, uncertainty, and valuation*

Uses a systematic, analytical approach

Evaluate and rank many ideas

# Types of Voting

## Unanimity

Everyone agrees on a single course of action.

Useful in project teams with great cohesion.

Example: Delphi technique

## Majority

Decision reached with > 50% of group support

Tip: Create groups of an uneven number of participants to ensure decisions are made and tie votes avoided.

## Plurality

Decision reached with largest block in a group deciding, even if majority is not achieved.

Use this method when more than 2 options are nominated.

## Agile Methods

Thumbs up/down/sideways

Fist of Five



# Data Representation

Tailor to project context and decision-making criteria.

- ✓ **Mind Mapping** – Consolidate ideas created through individual brainstorming sessions into a single map to reflect commonality and differences in understanding and to generate new ideas
- ✓ **Affinity Diagram** – Allows large numbers of ideas to be classified into groups for review and analysis



# More about...

Course: Managing the Project Scope (2021 Update)

Video: Collecting Requirements (10:49 run time)

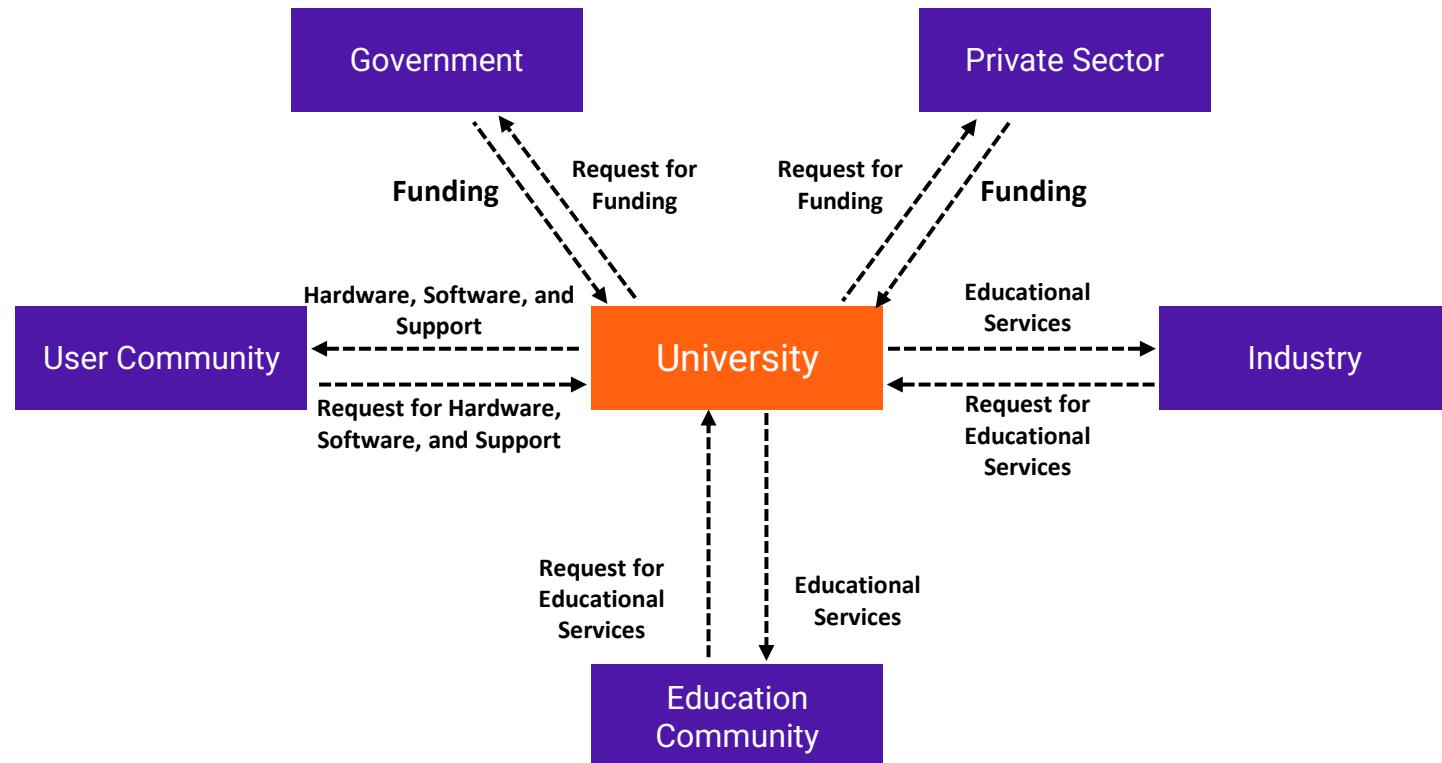
Watch: Start to 2:19 and 3:57 to 6:02

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## Collecting Requirements

# Context Diagrams

Business Context Diagram Sample



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# Requirements Documentation

- ✓ Describes how individual requirements meet project business need.
- ✓ Starts at a high level before providing details.
- ✓ Requirements need to be unambiguous (measurable and testable), traceable, complete, consistent, and acceptable to key stakeholders.
- ✓ Format can be simple (document listing all requirements, categorized by stakeholder and priority) or more elaborate (executive summary, detailed descriptions, attachments).



# Types of Requirements

## Business

Higher-level needs of the organization e.g. business issues or opportunities, and reasons why a project has been undertaken.

## Stakeholder

Stakeholder or stakeholder group needs. Reporting requirements.

## Transition and Readiness

Temporary capabilities e.g. data conversion and training requirements needed to transition from the current as-is state to the desired future state.

## Quality

Condition or criteria needed to validate the successful completion of a project deliverable or fulfilment of other project requirements e.g. tests, certifications, validations.

## Project

Actions, processes, or other conditions the project needs to meet e.g. milestone dates, contractual obligations, constraints.

## Solutions (Functional and Non-functional)

Describe features, functions, and characteristics of the product, service, or result that will meet the business and stakeholder requirements.

**Functional requirements** - Describe the behaviors of the product e.g. actions, processes, data, and interactions that the product should execute.

**Non-functional requirements** - Supplement functional requirements to describe environmental conditions or qualities required for the product to be effective  
e.g. reliability, security, performance, safety, level of service, supportability, retention/purge, etc.

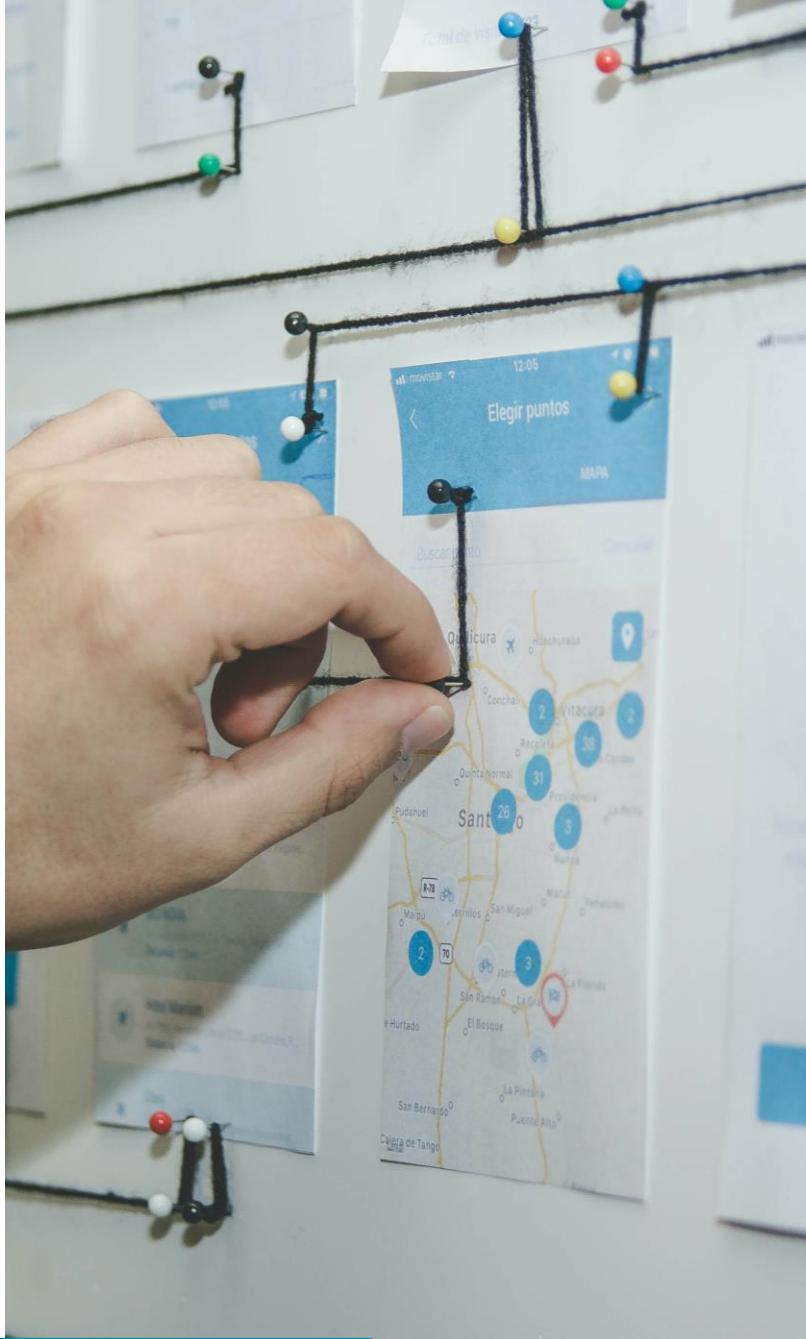
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# Nonfunctional Requirements

Type	Considerations
Availability	<ul style="list-style-type: none"><li>• How and when is the service available?</li><li>• If the service were to become unavailable, how quickly can it be restored to working?</li></ul>
Capacity	<ul style="list-style-type: none"><li>• What level of service performance, speed, and throughput is required?</li><li>• Given the number of stakeholders using the service, is there enough supply to meet demand?</li></ul>
Continuity	<ul style="list-style-type: none"><li>• If there were a disaster of some kind, how quickly could the service be recovered to support operations.</li></ul>
Security	<ul style="list-style-type: none"><li>• How well is the service and its information protected from security risks and threats?</li><li>• How do you guarantee the confidentiality, integrity, and availability of the information?</li></ul>

# Requirements Management Plan

- ✓ Planning, tracking, and reporting information for requirements activities.
- ✓ Configuration management activities:
  - Version control rules
  - Impact analysis
  - Tracing, tracking, and reporting
- ✓ Required authorization levels for change approval
- ✓ Prioritization criteria / process
- ✓ Product metrics and accompanying rationale
- ✓ Traceability structure, including requirement attributes



# Requirements Traceability Matrix

Requirements Traceability Matrix								
Project Name:								
Cost Center:								
Project Description:								
ID	Associate ID	Requirements Description	Business Needs, Opportunities, Goals, Objectives	Project Objectives	WBS Deliverables	Product Design	Product Development	Test Cases
001	1.0							
	1.1							
	1.2							
	1.2.1							
002	2.0							
	2.1							
	2.1.1							
003	3.0							
	3.1							
	3.2							
004	4.0							
005	5.0							

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## GUIDELINES

# Collecting Project Requirements

- Review:
  - Scope management plan
  - Requirements management plan
  - Stakeholder engagement plan
  - Project charter
  - Stakeholder register
- Use tools and techniques such as interviews, focus groups, facilitated workshops, group creativity techniques.

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# Project Scope Statement

Project Scope Statement			
Project Name:			Date: _____
Project Manager:			
Prepared By			
Document Owner(s)	Project/Organization Role		
<Name>	Project Manager		
Version History			
Version	Date	Author	Change Description
1.0	<Today's Date>	<Name>	Created document
<b>Project Description:</b>			
A building project conducted by <i>My Organization</i> that will construct a single-family home for the Andrews family. The building site is located at 234 West Adams Street. The project manager will provide consistent project status reports to senior management as well as the project sponsor.			
<b>Acceptance Criteria:</b> <hr/>			

# Scope Tools and Techniques

## Expert Judgment

Judgment provided by a group or person, based upon expertise in an application area, Knowledge Area, discipline, industry, etc.

## Facilitation

Effective guidance of a group to a successful decision, solution, or conclusion.

## Product Analysis

Defines products and services. Includes asking questions about a product/service, forming answers to describe the use, characteristics, and other relevant aspects of what is going to be delivered

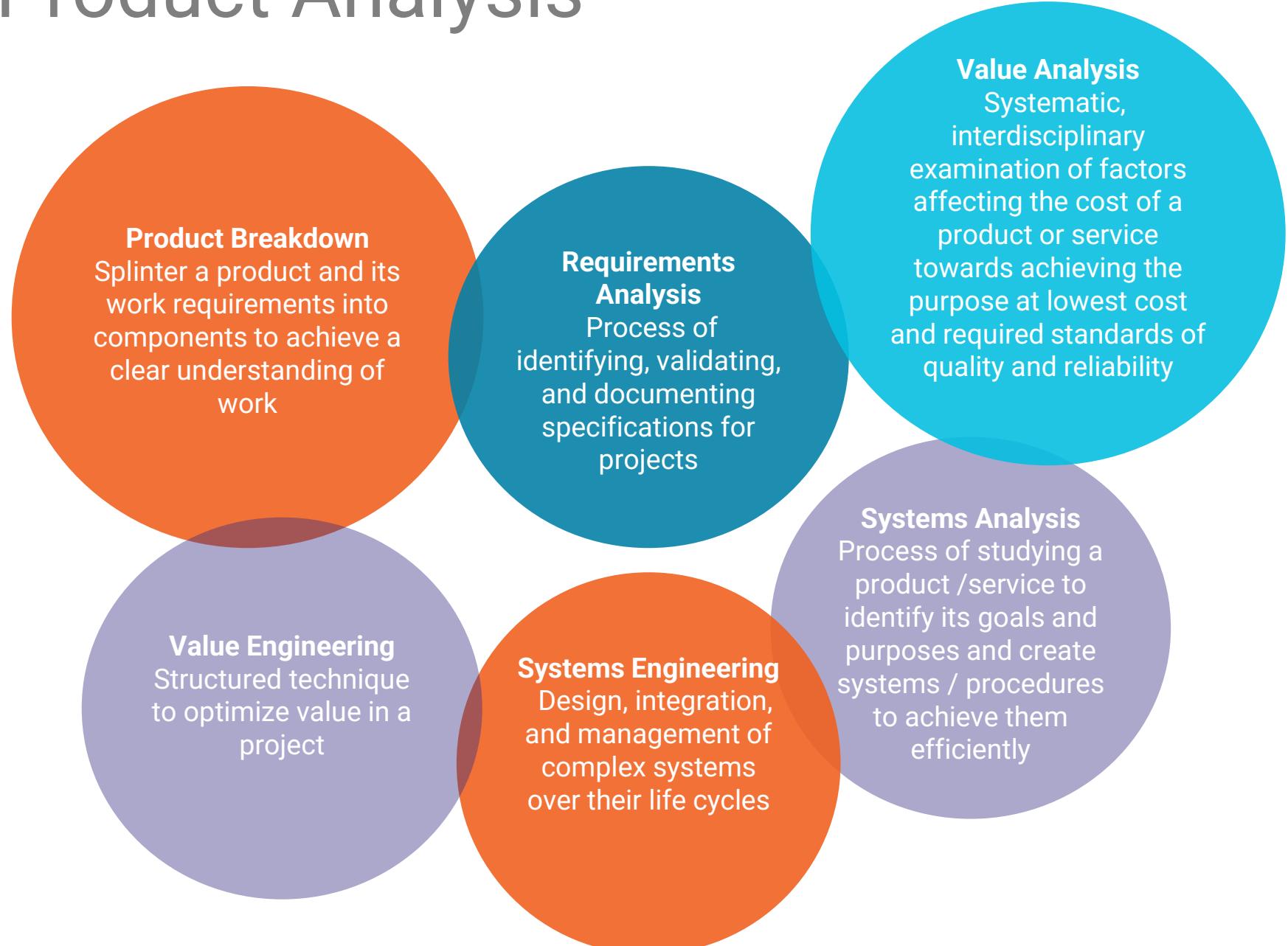
## Multi-criteria decision analysis

Technique of organizing decision factors in a matrix to evaluate options

## Alternatives analysis

Evaluation of choices available to reach an objective.

# Product Analysis



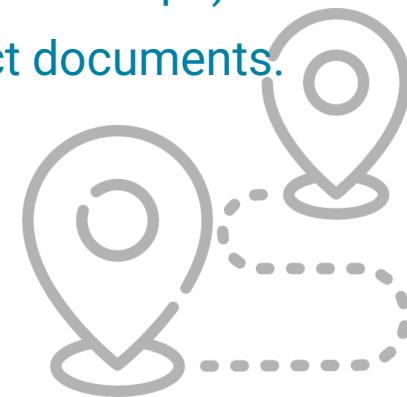
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## GUIDELINES

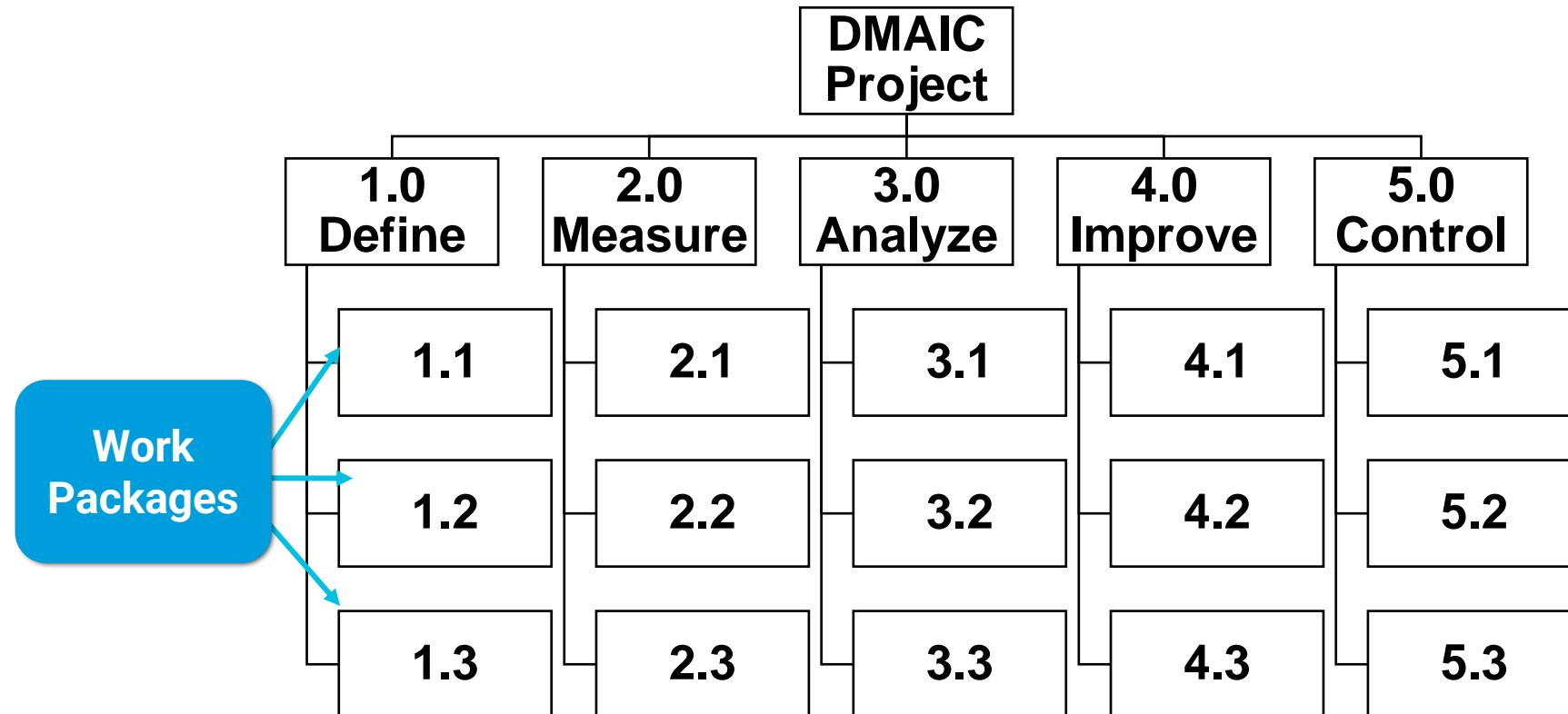
# Develop a Project Scope Statement

- Review:
  - Scope management plan (developing, monitoring, and controlling project scope activities)
  - Project charter (high-level project description and product characteristic and project approval requirements)
- Requirements documentation
- OPAs – templates, processes, and procedures
- Use tools and techniques to define the project scope (expert judgment, product analysis, alternatives generation, and facilitated workshops).
- Document the project scope statement and update project documents.

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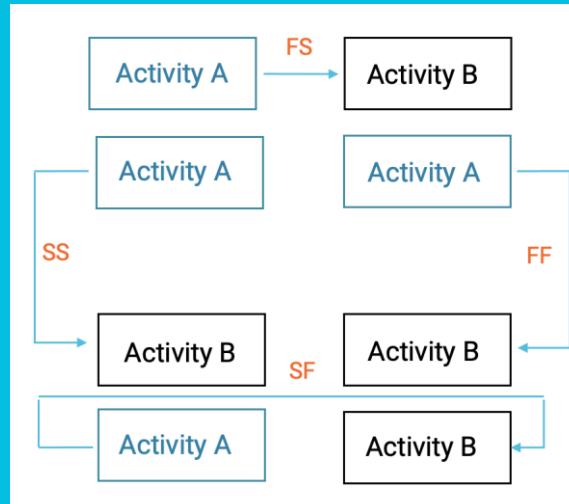
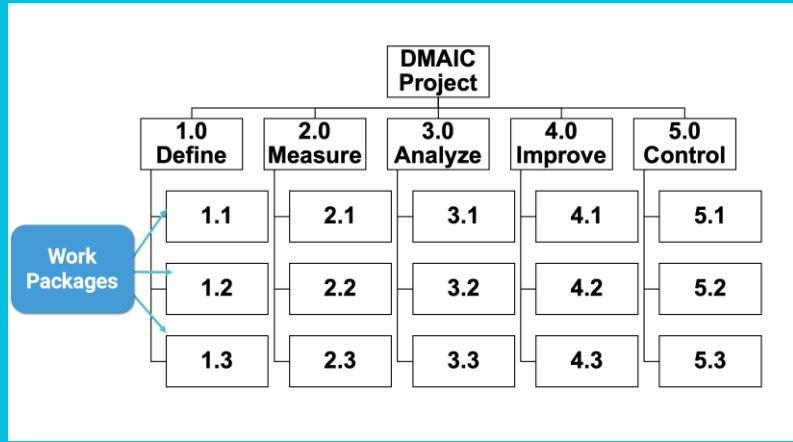
# Work Breakdown Structure



# WBS Dictionary

Can include:

- ✓ Code of account identifier
- ✓ Description of work
- ✓ Assumptions and constraints
- ✓ Responsible organization
- ✓ Schedule milestones
- ✓ Associated schedule activities
- ✓ Resources required to complete the work
- ✓ Cost estimations
- ✓ Quality requirements
- ✓ Acceptance criteria
- ✓ Technical references
- ✓ Agreement information



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# Decomposition - Example

## 1.0 Value Management System Project

### 1.1 Needs Assessment

#### 1.1.1 Current System Audit

##### 1.1.1.1 Components Identification

##### 1.1.1.2 Components Analysis

#### 1.1.2 Requirements Determination

##### 1.1.2.1 Gap Assessment

##### 1.1.2.2 Requirements Changes Identification

#### 1.1.3 Alternatives Development

##### 1.1.3.1 Alternatives Identification

##### 1.1.3.2 Alternatives Analysis

#### 1.1.4 Systems Requirements Development

### 1.2 Standards Development

### 1.3 Systems Engineering

### 1.4 Project Management

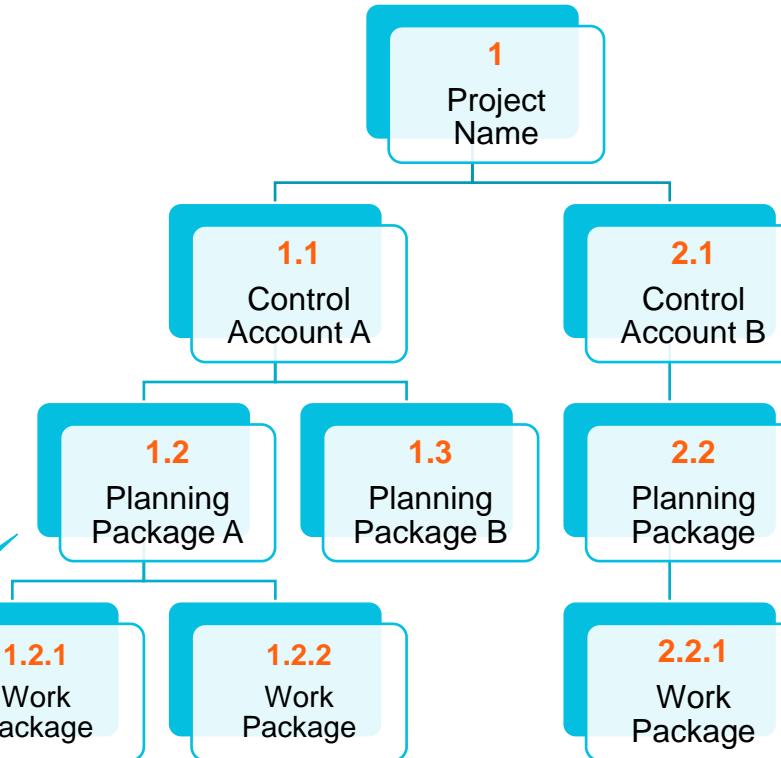
# Control Accounts, Work and Planning Packages

Let's explore the units of work  
in a project WBS.



# Planning Work Using a WBS

- ✓ A control account has two or more work packages.
- ✓ A planning package may or may not be used.
- ✓ Each work package is part of a single control account.
- ✓ **Identifiers** provide a structure for hierarchical summation of costs, schedule, and resource information and form a code of accounts.



Planning package (optional layer) houses work content, but no schedule or details.

Lowest level - a work package with a unique identifier; contains detailed schedule and cost information.

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More  
about...

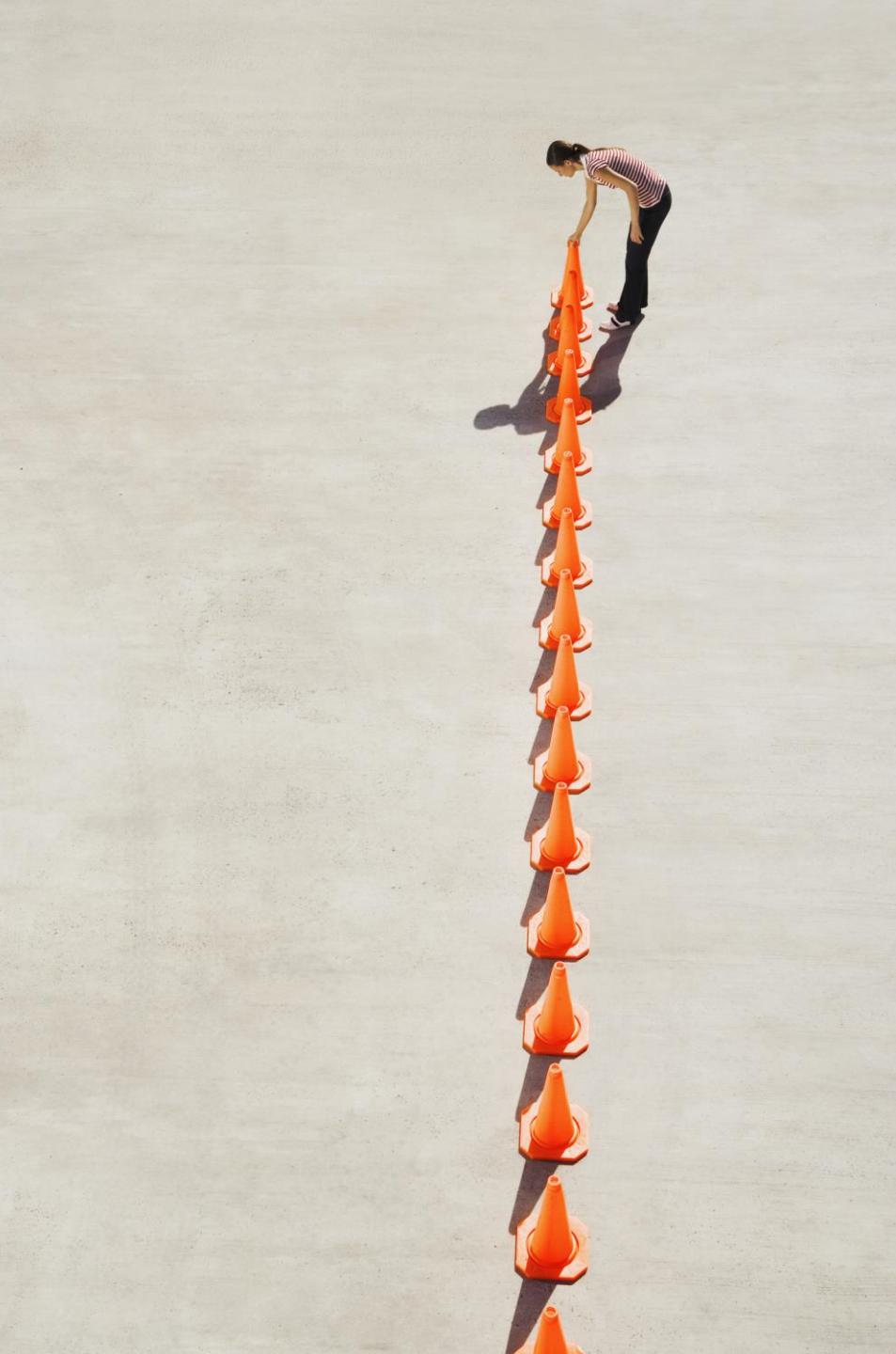
Course: Managing the Project Scope (2021 Update)  
Video: The Work Breakdown Structure (WBS) (5:43 run time)

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## The Work Breakdown Structure (WBS)



# Scope Baseline



Components include:

- ✓ Project scope statement
- ✓ WBS
  - Work packages
  - Planning package
- ✓ WBS dictionary

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## GUIDELINES

# Create a WBS

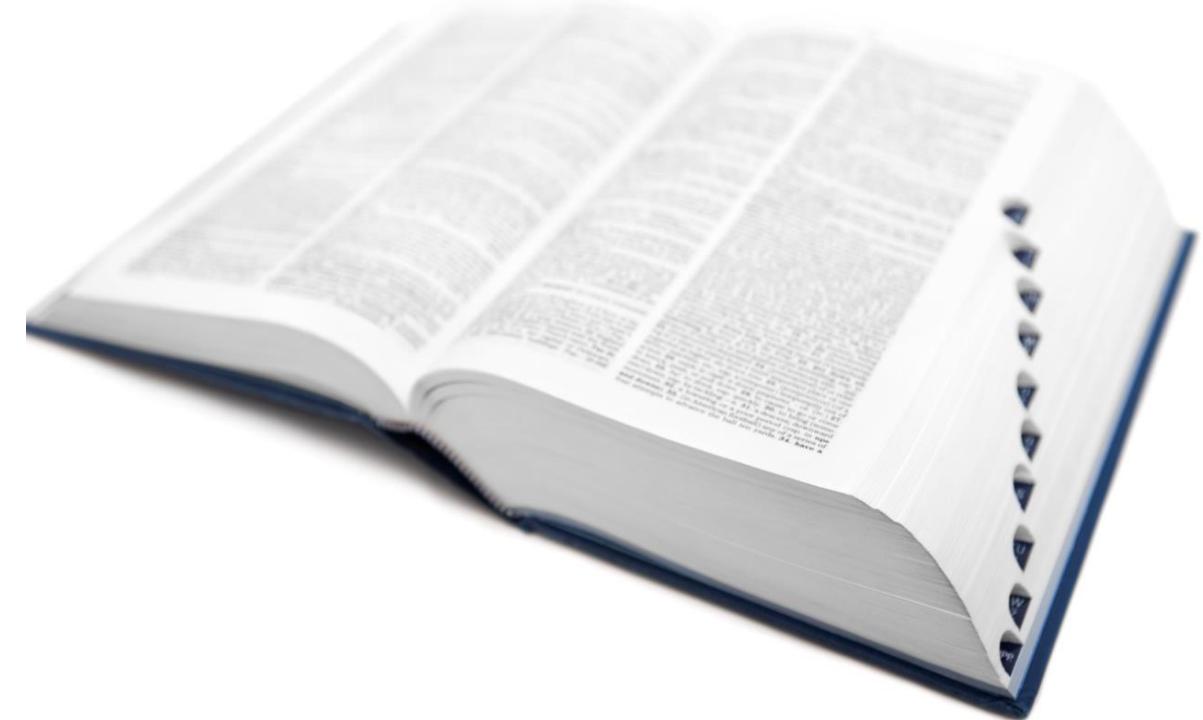
- Review:
  - Scope management plan
  - Project scope statement
  - Requirements documentation
- EEFs and OPAs
- Use tools and techniques e.g. decomposition
- Use expert judgment
- Include notes on work products that might be delivered incrementally
- Document the scope baseline

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# VOCABULARY

## FROM TODAY'S SESSION



# Project Charter



## DEFINITION

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.

# Consensus



DEFINITION

Consensus is a collaborative process to reach a decision that everyone can support.

# Rolling Wave Planning



## DEFINITION

An iterative planning technique in which the work to be accomplished in the near term is planned in detail, while work further in the future is planned at a higher level.

# Progressive Elaboration



## DEFINITION

The iterative process of increasing the level of detail in a project management plan as greater amounts of information and more accurate estimates become available.

# Predictive Life Cycle



## DEFINITION

Determine project scope, time, and cost in the early phases of this life cycle.

# Scope Management Plan



## DEFINITION

A component of the project or program management plan that describes how the scope will be defined, developed, monitored, controlled, and validated.

# Project Requirements



DEFINITION

The actions, processes, or other conditions the project needs to meet e.g. milestone dates, contractual obligations, constraints, etc.

# Product Requirements



DEFINITION

The agreed-upon conditions or capabilities of a product, service, or outcome that the project is designed to satisfy.

# Project Scope



## DEFINITION

The work performed to deliver a product, service, or result with the specified features and functions. “Project scope” may include product scope.

# Product Scope



DEFINITION

The features and functions that characterize a product, service, or result.

# Enterprise Environmental Factors (EEFs)



## DEFINITION

Conditions (internal or external) not under the control of the project team, that influence, constrain, or direct the project at organizational, portfolio, program, or project level.

# Organizational Process Assets (OPAs)



## DEFINITION

Plans, processes, policies, procedures, and knowledge bases specific to and used by the performing organization. These assets influence the management of the project.

# Document Analysis



## DEFINITION

A technique used to gain project requirements from current documentation evaluation.

# Focus Groups



## DEFINITION

An elicitation technique that brings together prequalified stakeholders and subject matter experts to learn about their expectations and attitudes about a proposed product, service, or result.

# Questionnaires and Surveys



DEFINITION

Written format of questions designed to quickly capture information from many respondents.

# Benchmarking



## DEFINITION

The comparison of actual or planned products, processes, and practices to those of comparable organizations to identify best practices, generate ideas for improvement, and provide a basis for measuring performance.

# Interviews



## DEFINITION

A formal or informal approach to elicit information from stakeholders by talking with them directly.

# Observations



## DEFINITION

A technique used to gain knowledge of a specific job role, task, or function in order to understand and determine project requirements.

# Facilitated Workshops



## DEFINITION

Organized working sessions led by qualified facilitators to determine project requirements and to get all stakeholders together to agree on project outcomes.

# Context Diagrams



DEFINITION

Visual depiction of product scope, showing a business system (process, equipment, computer system, etc.) and how people and other systems interact with it.

# Storyboarding



## DEFINITION

A prototyping method using visuals or images to illustrate a process or represent a project outcome.

# Prototyping



## DEFINITION

Assists in the process of obtaining early feedback on requirements by providing a working model of the expected product before building.

# Requirements Management Plan



## DEFINITION

A component of the project or program management plan that describes how requirements will be analyzed, documented, and managed.

# Requirements Traceability Matrix



DEFINITION

Links product requirements from their origin to the deliverables that satisfy them.

# Project Scope Statement



DEFINITION

The description of the project scope, major deliverables, assumptions, and constraints.

# Product Analysis



## DEFINITION

A tool to define scope by asking questions about a product and forming answers to describe the use, characteristics, and other relevant aspects of the product.

# Work Breakdown Structure



## DEFINITION

A hierarchical decomposition of a project's total scope of work to accomplish project objectives and create the required deliverables.

# Code of Accounts



DEFINITION

Numbering system that uniquely identifies each component of the WBS.

# WBS Dictionary



## DEFINITION

Provides detailed deliverable, activity, and scheduling information about each component in the WBS.

# Decomposition



DEFINITION

A technique of dividing and subdividing the project scope and deliverables into smaller, more manageable parts.

# Control Account



## DEFINITION

A management control point where scope, budget, actual cost, and schedule are integrated and compared to earned value for performance measurement.

# Planning Package



## DEFINITION

A WBS component below the control account with known work content but without detailed schedule activities.

# Work package



## DEFINITION

The work defined at the lowest level of the WBS for which cost and duration are estimated and managed.

# Scope Baseline



## DEFINITION

Approved version of a scope statement, WBS, and its associated WBS dictionary, that can be changed using formal change control procedures and is used as a basis for comparison to actual results.

# DAILY BOOTCAMP SURVEY

**Please share your thoughts.**

At the end of each Bootcamp session please let us know how we are doing. Your feedback helps us to offer the best possible Bootcamp experience.

**Thank you for attending Session 2!**