PMP® EXAM PREP BOOTCAMP

Session 4

PMI
Authorized Training Partner

ATTENDENCE TRACKING

Percipio Users:
Name is based on your log in information in Percipio
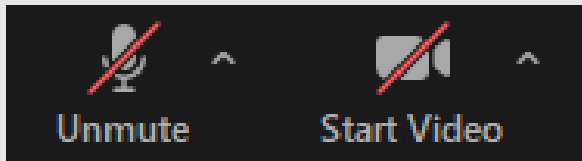
Using Zoom:
Enter your first and last name

BREAKS

Yes! We will have periodic breaks.

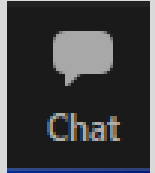**For attendance purposes, please stay logged in during all breaks.**

WAYS TO PARTICIPATE

We are saving everyone's bandwidth usage by disabling cameras and microphones
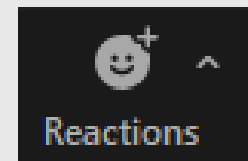
Find the **Chat option** in your Zoom command bar

Change the To: field in the blue box to **Everyone.**

Explore the Reactions option in your Zoom command bar

This is a fun way to provide quick and easy feedback

CHAT vs Q&A

Please use the **Chat** for:

- **Greetings** before the session starts and during breaks

- Once the session starts , the chat may be closed or changed to *Hosts & Panelists Only* to minimize disruptions and focus on important information.

- The instructor may open the chat during the session for student **to respond to the instructor's questions** and create a group dialog.

CHAT vs Q&A

Please use the **Q&A** for:

- **Technical assistance** – Begin with: Percipio or Non-Percipio student

- Guidance on how to **access course material** – Begin with: Percipio or Non-Percipio

- Clarification and **questions on lecture points**, if not answered by instructor

- The Q&A may be open and closed throughout the session to allow us to address questions/issues in a timely manner.

- **Please be very patient, the support team responds to many inquiries per session**

IS LIVE ATTENDANCE REQUIRED?

- **YES,** if you are taking this training to register for the PMP exam

- You are **allowed to miss up to two sessions IF** you make up the sessions by **watching the video replays**.

- A **missed** session **means** you were disconnected for **more than a total of 15 mins** for the duration of the session.

- If you **miss three or more sessions**, you will need to make up the missed time by **attending live in another 8-day cohort**.

- *Please see the Bootcamp Calendar for information about upcoming sessions at: http://calendar.skillsoft.com/

ACCESSING THE VIDEO REPLAYS

1. Go to: https://github.com/Skillsoft-Content/PMPReplay

2. Replays will be available <u>within 2 business days</u> after the session ends.

3. Click on the Excel file for the year you attended the Bootcamp. You won't see a *file open* option, but it is selected.

4. Click the *Download raw file* button on the far left-hand side.

5. Open the downloaded file using this password: pmpB00tcampReplay!

Those are zero's not the letter O. The password is case sensitive.

7. Locate and open the worksheet tab that corresponds with the bootcamp you attended

8. Make a note of the passcode.

9. Paste the provided link into your browser.

10. Complete the required registration steps

11. Input the passcode when prompted
The password to open the Excel file
 is NOT the passcode to access the replay.

Note: Replays will be available for 1 year.
They are not available for download.

No limit to watch replays to study

Recap
Session 2
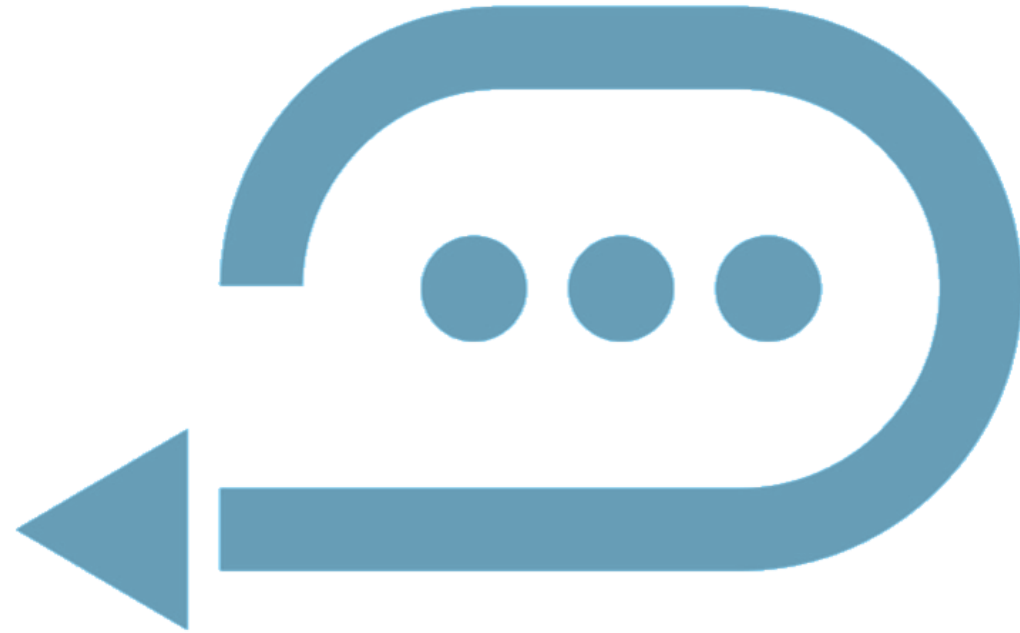
Mapping this course to the Student Workbook

	Business Environment Lesson 1	Start the Project Lesson 2	Plan the Project Lesson 3	Lead the Project Team Lesson 4	Support Project Team Performance Lesson 5	Close the Project/Phase Lesson 6
Topic A	(1A) Foundation	(2A) Identify and Engage Stakeholders	(3A) Planning Projects	(4A) Craft Your Leadership Skills	(5A) Implement Ongoing Improvements	(6A) Project Phase/Closure
Topic B	(1B) Strategic Alignment	(2B) Form the Team	**(3B) Scope**	(4B) Create a Collaborative Project Team Environment	(5B) Support Performance	(6B) Benefits Realization
Topic C	(1C) Project Benefits and Value	(2C) Build Shared Understanding	**(3C) Schedule**	(4C) Empower the Team	(5C) Evaluate Project Progress	(6C) Knowledge Transfer
Topic D	(1D) Organizational Culture and Change Management	(2D) Project Approach	(3D) Resources	(4D) Support Team Member Performance	(5D) Manage Project Issues and Impediments	
Topic E	(1E) Project Governance		(3E) Budget	(4E) Communicate and Collaborate with Stakeholders	(5E) Manage Project Changes	
Topic F	(1F) Project Compliance		(3F) Risks	(4F) Training, Coaching and Mentoring		
Topic G			(3G) Quality	(4G) Manage Conflict		
Topic H			(3H) Integrate Plans			

LESSON 3

PLAN THE PROJECT

- Planning Projects
- Scope
- Schedule
- Resources
- Budget
- Risks
- Quality
- Integrate Plans

Learning Objectives

- Explain the importance of a project management plan.

- **Provide an overview of scope planning in both predictive and adaptive projects.**

- **Provide an overview of schedule planning in both predictive and adaptive projects.**

- Discuss resource planning for a project, including human and physical resources and the role of procurement.

- Determine the budgeting structure/method for a project

- Explain the importance of tailoring a budget.

- Identify strategies for dealing with risks and risk planning.

- Assemble a toolkit of possible responses to risks.

- Define quality and how it relates to the outcomes and deliveries for a project.

- Discuss the importance of integrating project management plans and tailoring a change management process.

Scope

TOPIC B

Scope Management Plan*

- Review of the scope activities for the project and how that work will be done

- 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

Project Scope Statement

Includes –

- Scope description - project and product

- Acceptance criteria

- Any required deliverables

- Any out-of-scope items needed for clarification
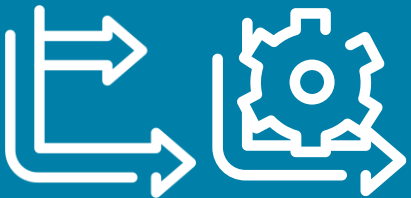
- Constraints and assumptions

Once it has been approved and baselined, changes are only permitted in accordance with the change management plan.

Scope Planning

Tools and Techniques for Analysis

Match the requirements analysis tool/technique with the correct description.

Document analysis

Alternatives analysis

Product analysis

Expert judgment

Used to consider possible potential options or approaches to execute and perform project work

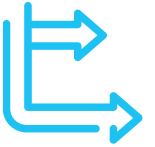Analyze the information needed to develop the project scope statement or any technical detail

Derive new project requirements from existing documents

Ask questions about a product and form answers to describe use, characteristics, and other relevant aspects

Product Analysis Methods

PRODUCT BREAKDOWN

Splits a product and its requirements into components to achieve a clear understanding of work

SYSTEMS ENGINEERING

Approaches design, integration, and management, and the life cycle of complex systems in a multi-disciplinary way

SYSTEMS ANALYSIS

Studies a product /service to identify its goals and purposes and create systems/ procedures to achieve them efficiently

REQUIREMENTS ANALYSIS

Identifies, validates and documents specifications for projects
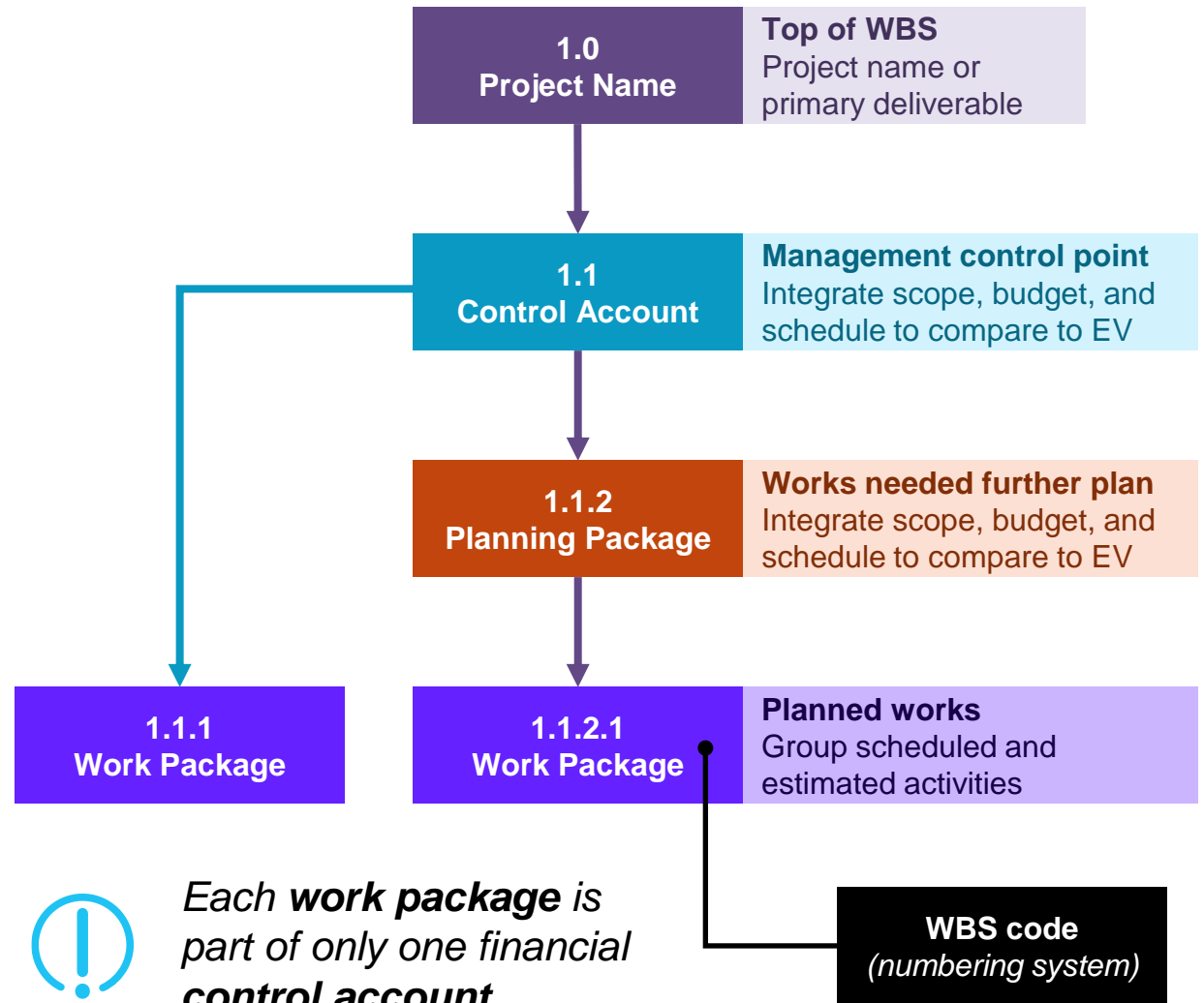
VALUE ENGINEERING

Optimizes value in a structured way

VALUE ANALYSIS

Examines factors affecting product/service cost in a systematic, interdisciplinary way towards success with the lowest cost and required quality and reliability standards

Create the Work Breakdown Structure (WBS)*

- Follow the 100% rule!
  - Include every aspect – nothing extra, nothing missing
- Include project and product components
- Use hierarchical structure
  - Highest – project
  - Next – deliverables
  - Lowest – work package

1.0 Project Name
Top of WBS
Project name or primary deliverable

1.1 Control Account
Management control point
Integrate scope, budget, and schedule to compare to EV

1.1.2 Planning Package
Works needed further plan
Integrate scope, budget, and schedule to compare to EV

1.1.1 Work Package

1.1.2.1 Work Package
Planned works
Group scheduled and estimated activities

WBS code
(numbering system)

*Each **work package** is part of only one financial **control account**.*

Decompose Work in the WBS

Divide and subdivide the project scope and deliverables into smaller, more manageable parts

Steps:

1. Identify deliverables and the work/tasks needed to accomplish them

2. Structure and organize the WBS

3. Decompose high-level WBS scope components into low-level components

4. Develop and assign a unique identification code to each component from the **code of accounts**

5. Review the decomposition of work packages and verify that they align with the project requirements

Tailor the level of decomposition to specific project needs and the level of granularity needed to manage the project effectively.

WBS Dictionary

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

Decompose work and include:

- WBS code 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

Scope Baseline

- Approved version of a scope statement, WBS and its associated WBS dictionary, that can be changed only using formal change control procedures

- Used as a basis for comparison to actual results

Components include:

- Project scope statement

- WBS

- Work packages

- Planning package

- WBS dictionary

Don't Forget to Plan for Transitions / Handovers!

Include activities to fulfill transition/implementation in the scope of work

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

- Identify deliverables/outputs

These can be delivered throughout the project, not just at the end!

Questions to consider:

- Will the work be new, or an update in the business environment?
- How best to transition the product into a live environment?
- What about decommissioning or removing old systems, processes or materials?
- Did you ensure training and knowledge transfer are complete/satisfactory?

How do adaptive or hybrid teams "plan" for handovers or transitions?

Scope Planning in Adaptive Environments

- Incremental or iterative development
- User stories propose an alternative way of viewing the requirements process
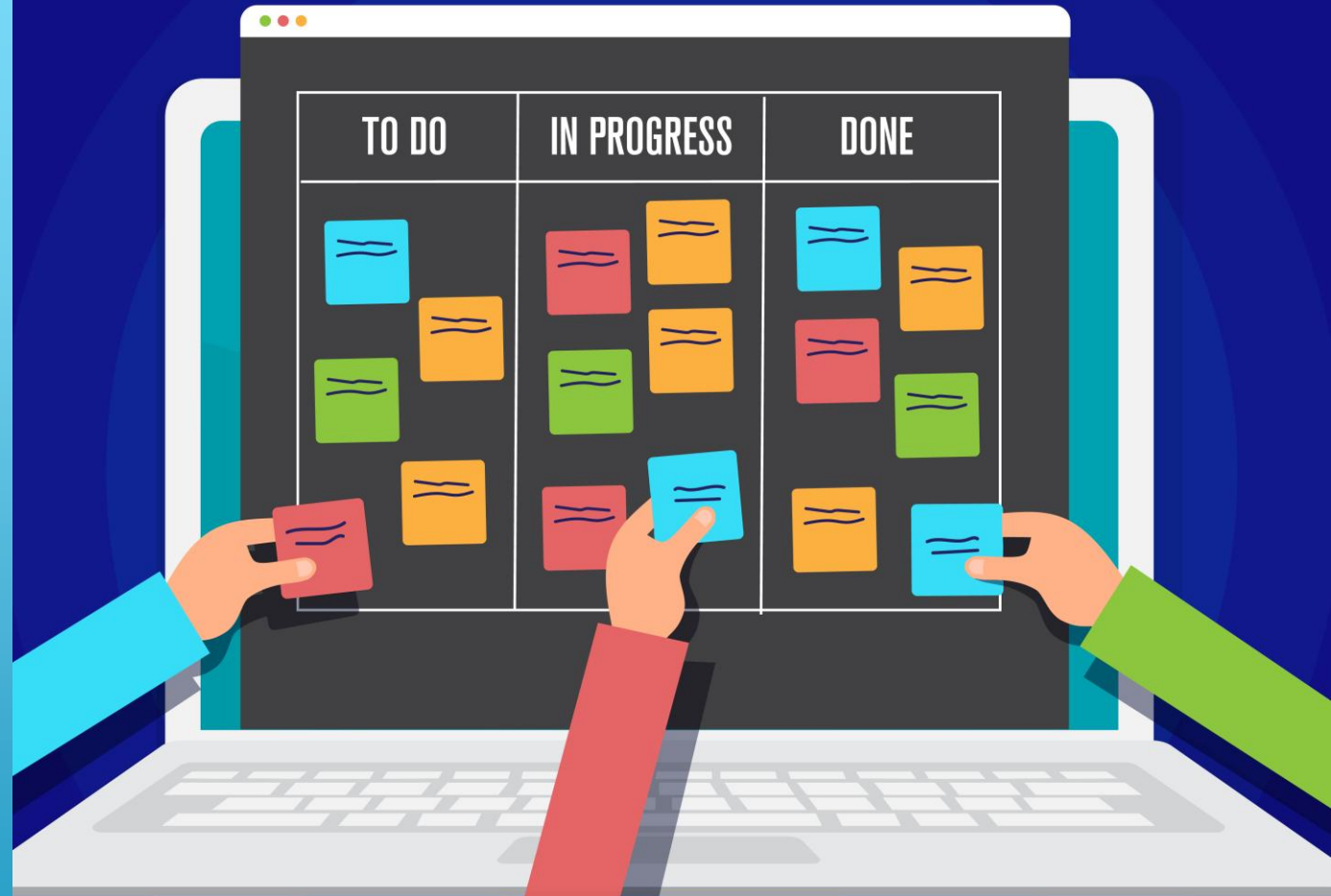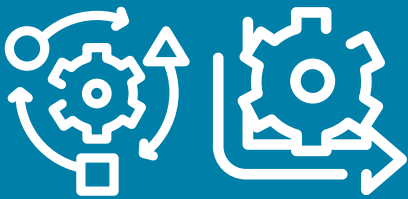
Release and Iteration Planning

Planning also takes place at the standup meeting when teams discuss details of work in progress.

Collaborative planning meetings that break scope into larger releases and then iterations/sprints

At **release planning** (or Agile release planning), decide:

- Number of iterations or sprints needed to complete each release
- Features contained in the release
- Goal dates of each release

At **iteration planning** (or sprint planning):

- Review the highest prioritized user stories or key outcomes
- Ask questions
- Agree on effort required to complete the user story in the current iteration
- Determine the activities required to deliver iteration objectives

Backlogs

- Prioritized list of **the known scope of work**
- Information presented in **story form**
- Continually updated by the **product owner in collaboration with teams**

Example:

A **product owner** creates a **product backlog** and identifies and adds stories in collaboration with the team and stakeholders. Work items describe desired product functionality through user stories.
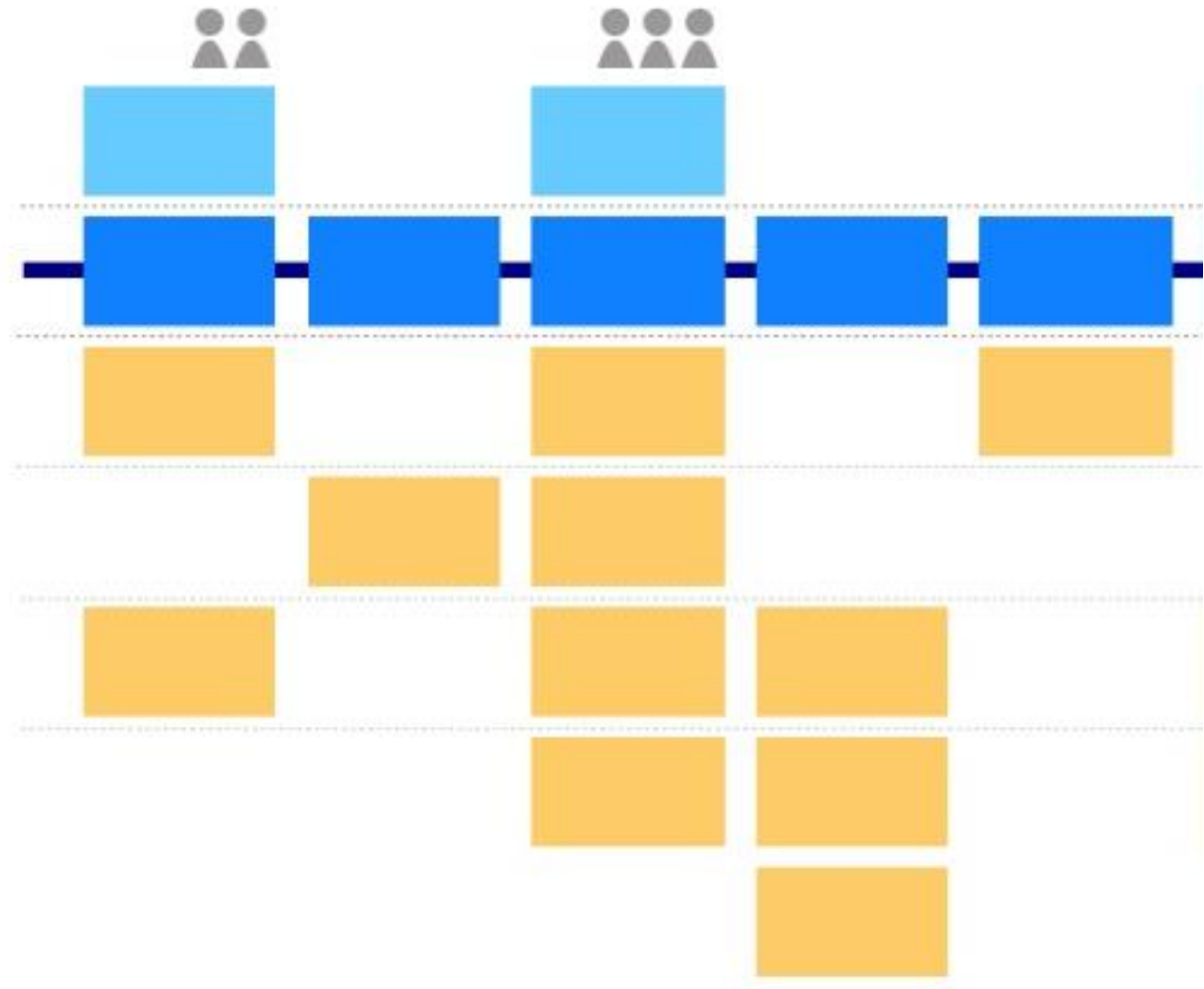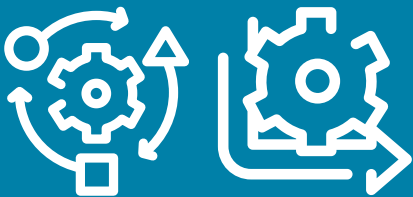
- The product owner is responsible for prioritizing work according to value.
- The product owner and team collaborate to move work items to the **iteration/sprint backlog**.

Backlogs may be known by slightly different names on your team or project, but the names are generally descriptive — e.g., requirements backlog, sprint backlog, lean backlog.

User Stories, Story Maps, Roadmaps

- A **story map** organizes **user stories** into functional groups and within a narrative flow ("the big picture") of the **product roadmap**.

- Helpful for discovering, envisioning and prioritizing the product and a way ahead!

- *Story map technique developed by Jeff Patton*

Epics > Features > User Stories

JANUARY →→→→→→→→→→→→→→→→→→→→ DECEMBER

EPIC
a major deliverable

EPIC

FEATURE

Delivers a capability that can be estimated, tracked and managed as a set

FEATURE

Groups related functionality together to deliver value

USER STORY

FEATURE

Includes activities and efforts such as documentation, bug fixes, testing and quality/defect repairs
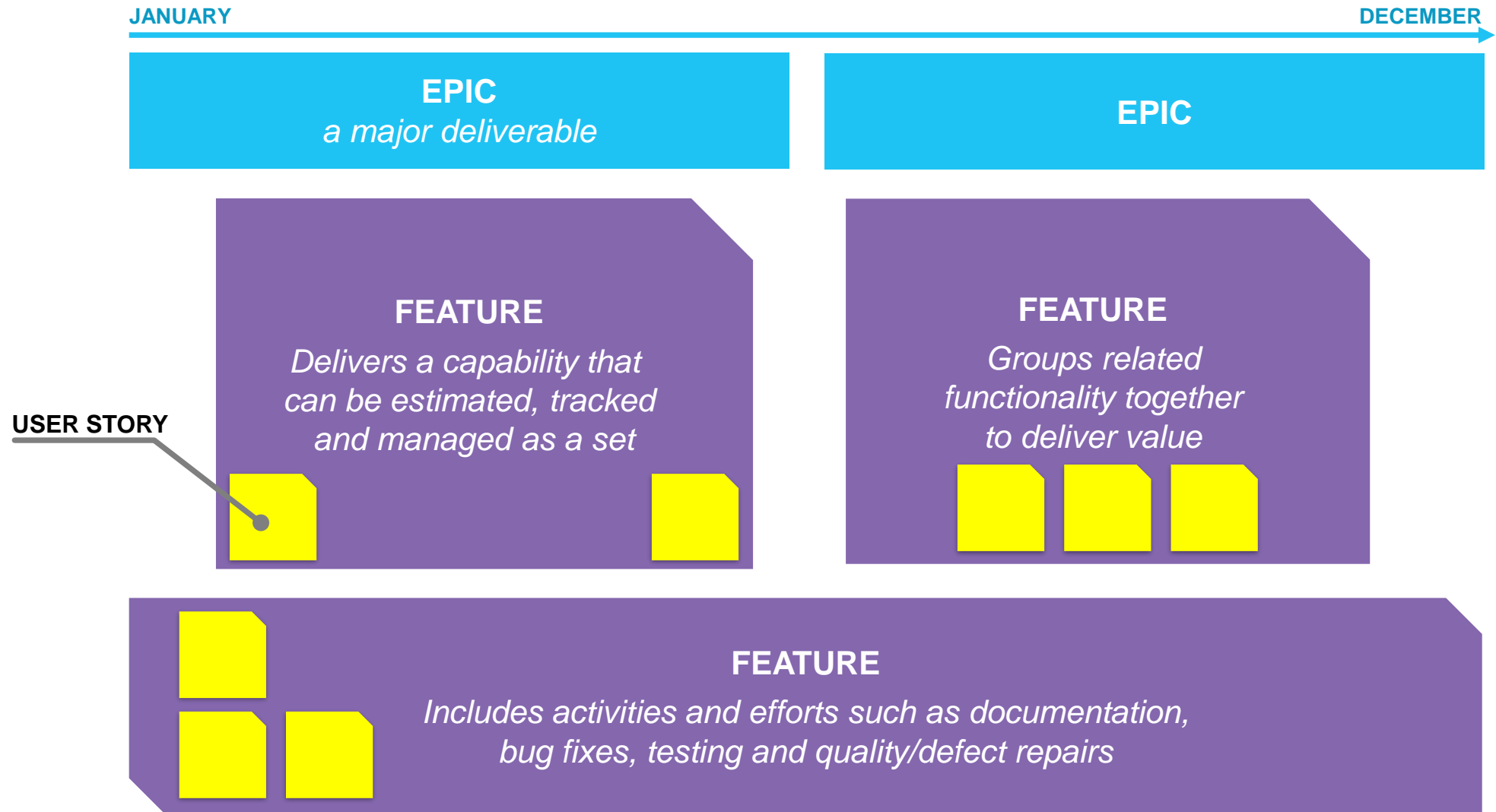
Prioritize and Refine the Backlog
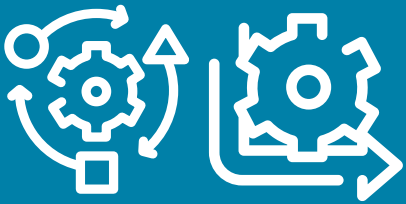
- Continual refinement done by product owner/customer prior to iteration planning

- Additional refinement can be done jointly by the team and product owner during the sprint/iteration

- Allows reorganization and reprioritization of work to complete higher-priority items that deliver value first

- Split epics into user stories

Plan Scope: Quiz

Which two stakeholders perform project scope planning? *(Choose two)*

a. Ang Fen, project manager
b. Helen Grey, product owner
c. Eugene Lowe, project sponsor
d. Project team

Ang Fen wants to give the executive team an overview of the work ahead at the next strategy meeting. Which artifact should he show them?

a. Scope management plan
b. Product roadmap
c. Scope statement
d. Work breakdown structure

ECO Coverage

2.1 Execute project with the urgency required to deliver business value

- Support the team to subdivide Project tasks as necessary to find the minimum viable product (2.1.3)

2.8 Plan and manage scope

- Predictive vs Adaptive approach for scope
- Determine and prioritize requirements (2.8.1)
- Break down scope (e.g., WBS, backlog) (2.8.2)

2.17 Plan and manage project/phase closure or transitions

- Determine criteria to successfully close the project or phase (2.17.1)
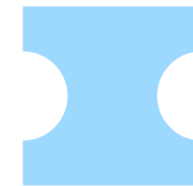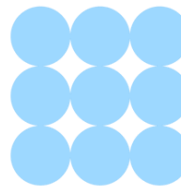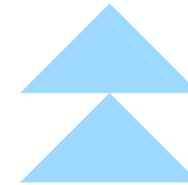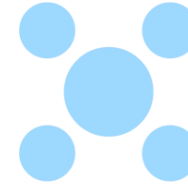
Schedule

TOPIC C

Get from "A" to "B"

Overview of Schedule Planning Processes
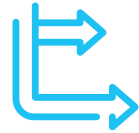
The project manager ensures that:

- Work package is broken down into required activities

- Dependencies and precedence relationships are determined

- Activity durations are estimated based on average resources

- Critical path is determined

- Resource overallocations are resolved

- Schedule is compressed to meet any constraints

The project team:

- Uses either a time boxed (cadences) or continuous flow method

- Adopts release time frames

- Plans each iteration with work

- Prioritizes, estimates and decomposes user stories into tasks and determines iteration velocity

- *Works with product owner* to refine the backlog after each iteration and plan the next

Schedule Management Plan*

- Describes how activities will be defined and progressively elaborated

- Identifies scheduling method and scheduling tool used

- Determines schedule format

- Establishes criteria for developing and controlling the schedule

- May be tailored for use in any type of project

- Defines the maintenance process for updating status and records project progress in the schedule model during execution

In hybrid approaches, a schedule management plan can help by placing management controls on the project time line.

Schedule Management Plan Components

Discuss how the schedule management plan can be a beneficial tool in hybrid projects. Who would it benefit?

Project schedule model	• Methodology/tool for schedule development • Includes maintenance planning, including status updates and progress during execution
Accuracy	• Acceptable range used to determine realistic activity duration estimates • May include risk contingency
Units of measure	Defined for each resource – e.g., staff hours, days and weeks
Organizational procedural links	Use of WBS to ensure consistency with estimates and schedules
Control thresholds	• For monitoring schedule performance before taking action – e.g., escalation/reviews • Expressed as percentage deviations from the baseline — e.g., percent ahead or behind schedule
Rules	Performance measurement — e.g., earned value management (EVM) rules
Reporting	Frequency and formats for schedule-related reports
Process descriptions	Describes how schedule management processes are documented

Start with Benchmarks and Historical Data

Benchmarking

- Compares current project schedule with a similar product/service schedule

- Provides a good "starting point" for estimation before detailed analysis

- Assesses feasibility in the initial stage of scheduling

Historical data

Learn lessons from completed projects in the organization

Hybrid Schedules

Example Characteristics and Benefits

- Tailored plans to combine consistency and management oversight with flexible scheduling of work

- Better product/deliverable quality with incremental or short-term value delivery and change (improvements, fixes) incorporated at intervals

- Product delivery can be divided into subsets according to a plan (milestone or cadence)

Predictive Schedule Planning

The project manager:

- Breaks down a **work package** into the required activities

- Determines **dependencies** and **precedence relationships**

- Estimates the duration of activities based on average resources

- Determines the **critical path**

- Resolves resource overallocations

- Compresses the schedule, if needed, to meet constraints

Break Down Project Activities*

- Break down project work packages into activities (noun)

- Enter activities into the **activity list** using a verb statement

- Use the **activity list** to develop the project schedule

- Include duration (start and end day) for every activity

1.0 Project Name	**Top of WBS** Project name or primary deliverable
1.1 Control Account	**Management control point** Integrate scope, budget, and schedule to compare to EV
1.1.2 Planning Package	**Works needed further plan** Integrate scope, budget, and schedule to compare to EV
1.1.1 Work Package	
1.1.2.1 Work Package	**Planned works** Group scheduled and estimated activities

Code of accounts *(numbering system)*

Tailor the amount of detail in activities to the project context to enable meaningful estimation and planning.
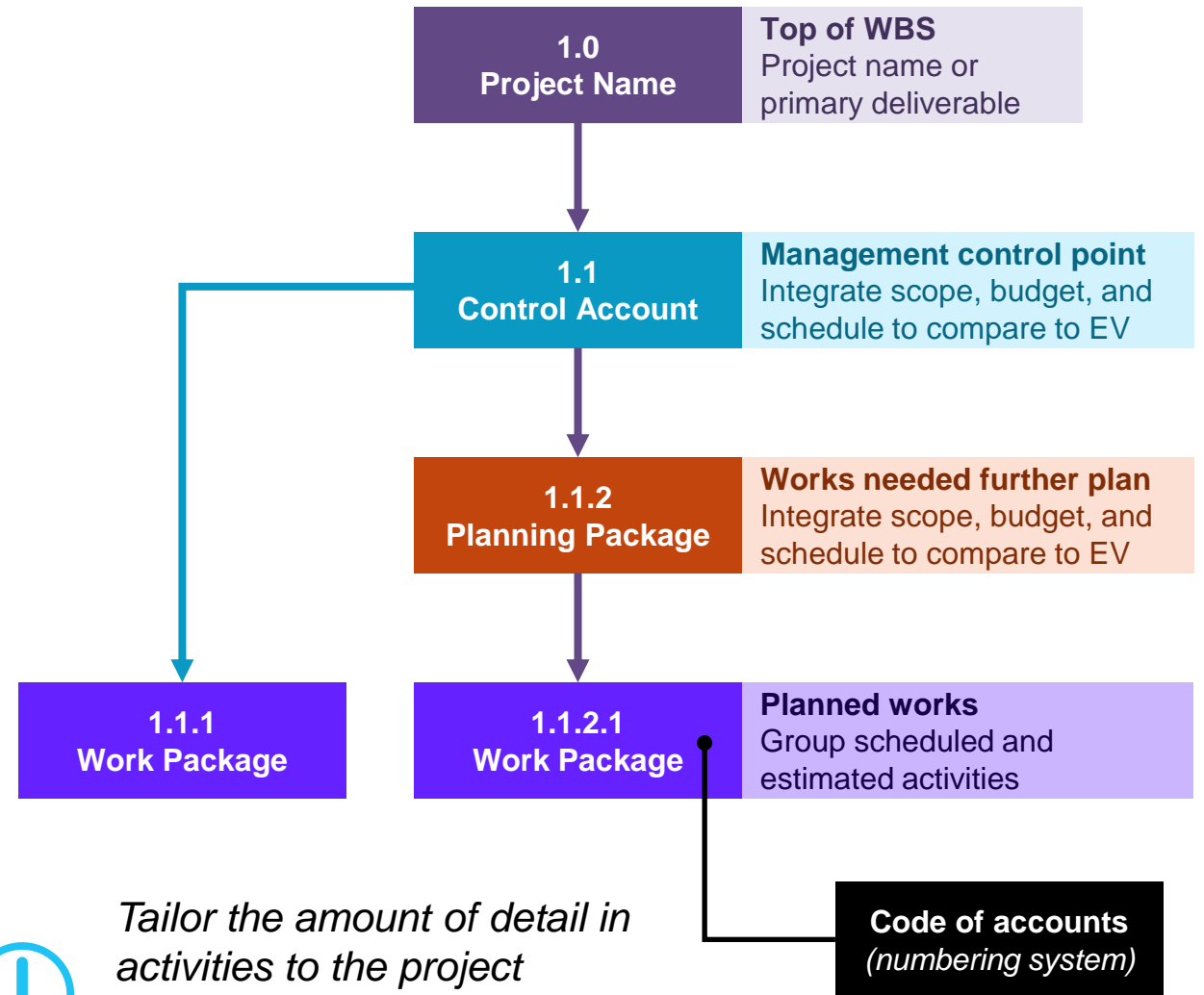
Activity Dependency Types

DEPENDENCY TYPES

	Meaning	Action by Project Manager
Mandatory	Contractually required or inherent in the nature of the work	Must schedule it — No way around this sequence
Discretionary	Established because of best practices or a specific sequence is desired	Can be modified as needed, if replaceable with a better sequence, or if schedule compression is required
External	Activities performed outside the project team's work	Limited or no control
Internal	In project work, contingent on inputs	Has control

Precedence Relationships

- Activity dependencies determine precedence relationships (aka logical relationships) and the order in which activities are performed
- Show these using the **precedence diagramming method** (PDM)

ARROW INDICATES WHICH DRIVES THE OTHER

CONFIRM KEY STAKEHOLDER AND CUSTOMER ATTENDANCE

Start	Finish

Predecessor (Driver)

ERECT SIGNAGE WITH CUSTOMER BRANDING

Start	Finish
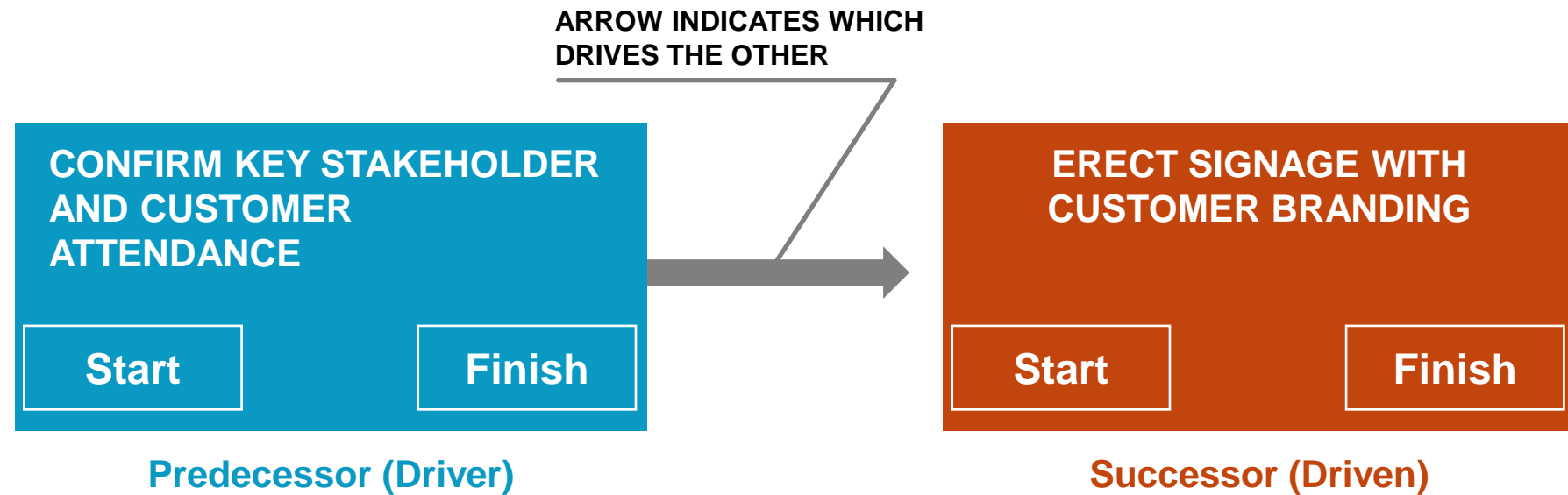
Successor (Driven)

- Precedence indicates which activity drives the relationship
- Predecessor usually occurs earlier in time than successor

Types of Precedence Relationships

A. Obtain occupancy permit from Oasestown building department

B. Confirm tour guide

C. Confirm key stakeholder and customer attendance

D. Complete landscaping and decoration

E. Identify finished spaces for the tour

F. Erect signage with customer branding

1 **Finish to Start (FS)**

ACTIVITY A → ACTIVITY E

3 **Start to Start (SS)**

ACTIVITY C
ACTIVITY F

2 **Finish to Finish (FF)**

ACTIVITY D
ACTIVITY E

4 **Start to Finish (SF)**

ACTIVITY D
ACTIVITY F

Lags and Leads in Precedence Relationships

Add **lead** and **lag** times of up to 2 weeks to activities

Document activities and related assumptions

Leads and lags do not have a value, so do not include them in duration estimates.

1 — **Finish to Start (FS)**

ACTIVITY A → ACTIVITY E
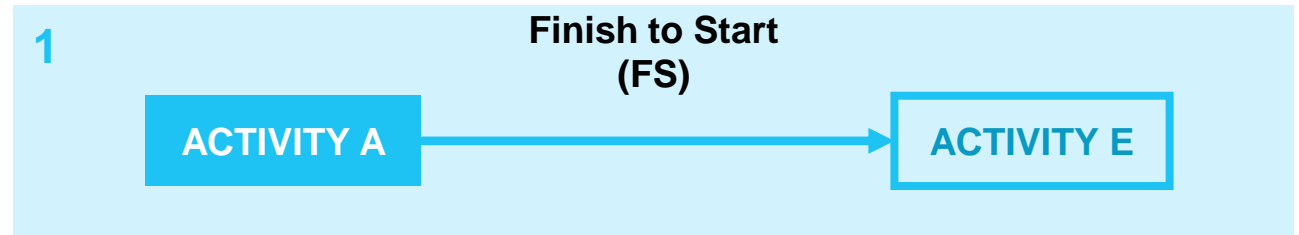
3 — **Start to Start (SS)**

ACTIVITY C
ACTIVITY F

A. Obtain occupancy permit from Oasestown building department

B. Confirm tour guide

C. Confirm key stakeholder and customer attendance

D. Complete landscaping and decoration

E. Identify finished spaces for the tour

F. Erect signage with customer branding

Activity Duration Estimate Terminology

Activity Duration Estimate

- The quantitative assessment of the likely number of time periods required to complete an activity

Elapsed time

- The actual calendar time required for an activity from start to finish

Effort

- The number of labor units required to complete a scheduled activity or WBS component, often expressed in hours, days, or weeks; contrast with duration

Estimating Techniques

		👍	👎
Analogous	• Uses **historical data** from a similar activity or project to estimate duration (or cost) • aka "top-down estimating."	• Less costly and time consuming • Used when project information is limited	• May be inaccurate, depending on quality of historical information
Parametric	• Uses an **algorithm** to calculate duration (or cost) based on historical data and project parameters. • Durations can be **quantitatively determined** — multiply quantity of work to be performed by the number of labor hours per unit of work	• Can produce higher levels of accuracy depending on sophistication of data from model • Scalable and linear	• Does not account for a learning curve — i.e., work gets easier as team becomes more expert • Uniform units of work are not typical in projects
Three-Point	• Defines an **approximate range** of an activity's duration, using **most likely**, **optimistic**, and **pessimistic** estimates • Used when historical data is insufficient, or subjective	• May improve accuracy of single-point estimations by including risk and uncertainty factors	• Requires detailed resource information • Requires expert knowledge to estimate tasks
Bottom-up	• Uses **aggregates** of the estimates of the **lower level components of the WBS**	• Very accurate and gives lower-level managers more responsibility	• May be very time consuming • Can be used only after the WBS has been well defined

Three-Point Estimation
Examples

PERT is based on a probability distribution; therefore, we can calculate a standard deviation:

(P - O) / 6 = PERT Standard Deviation

Triangular Distribution (average)

FORMULA

$E = (O + M + P) / 3$

- Optimistic = 3 weeks
- Most Likely = 5 weeks
- Pessimistic = 10 weeks

EQUATION

$(3 + 5 + 10) / 3 = 6$ weeks

Beta Distribution (PERT average)

FORMULA

$E = (O + 4M + P) / 6$

- Optimistic estimate = 3 weeks
- **Weighted** most likely estimate = 5 weeks
- Pessimistic estimate = 10 weeks

EQUATION

$[3 + 4 (5) + 10] / 6 = 5.5$ weeks

Critical Path* Method

Sequence mandatory **critical path activities** to find the longest path through a project and to determine the **shortest possible project duration** and the amount of **flexibility** in the schedule
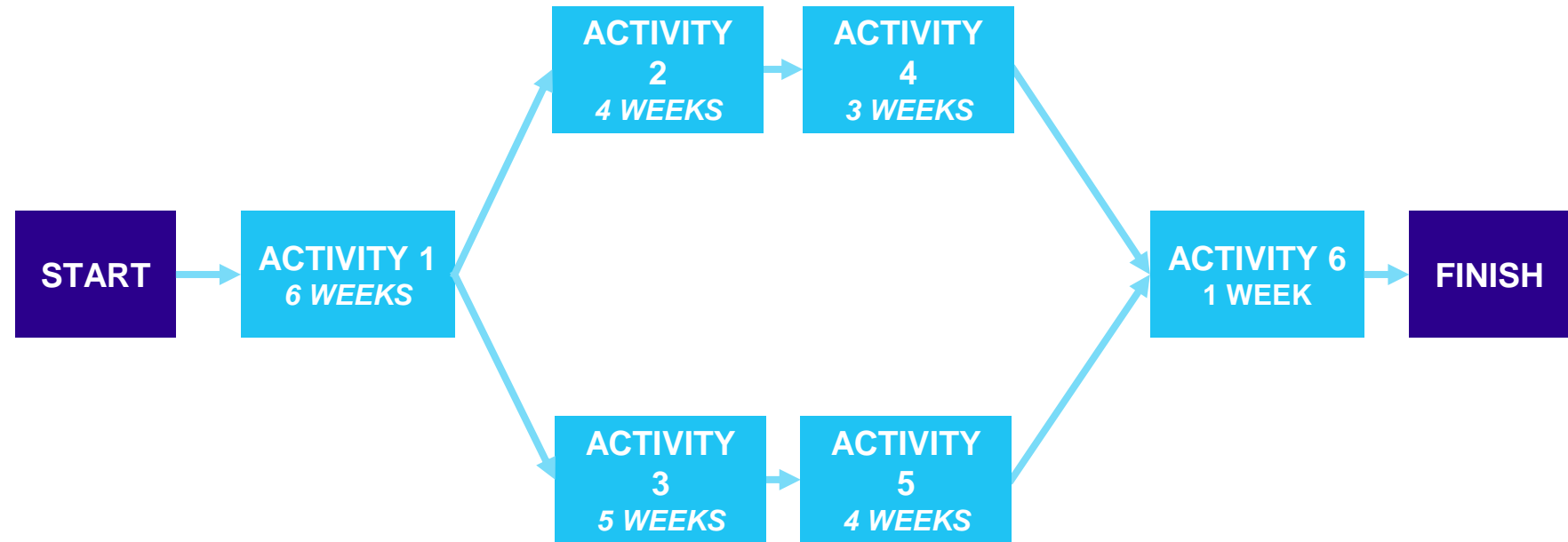
1[6w] + 2[4w] + 4[3w] + 6[1w] = 14-weeks

1[6w] + 3[5w] + 5[4w] + 6[1w] = 16-week critical path

Network Diagram with Date and Dependencies

Calculate:
- Critical path
- Forward pass
- Backward pass
- Float
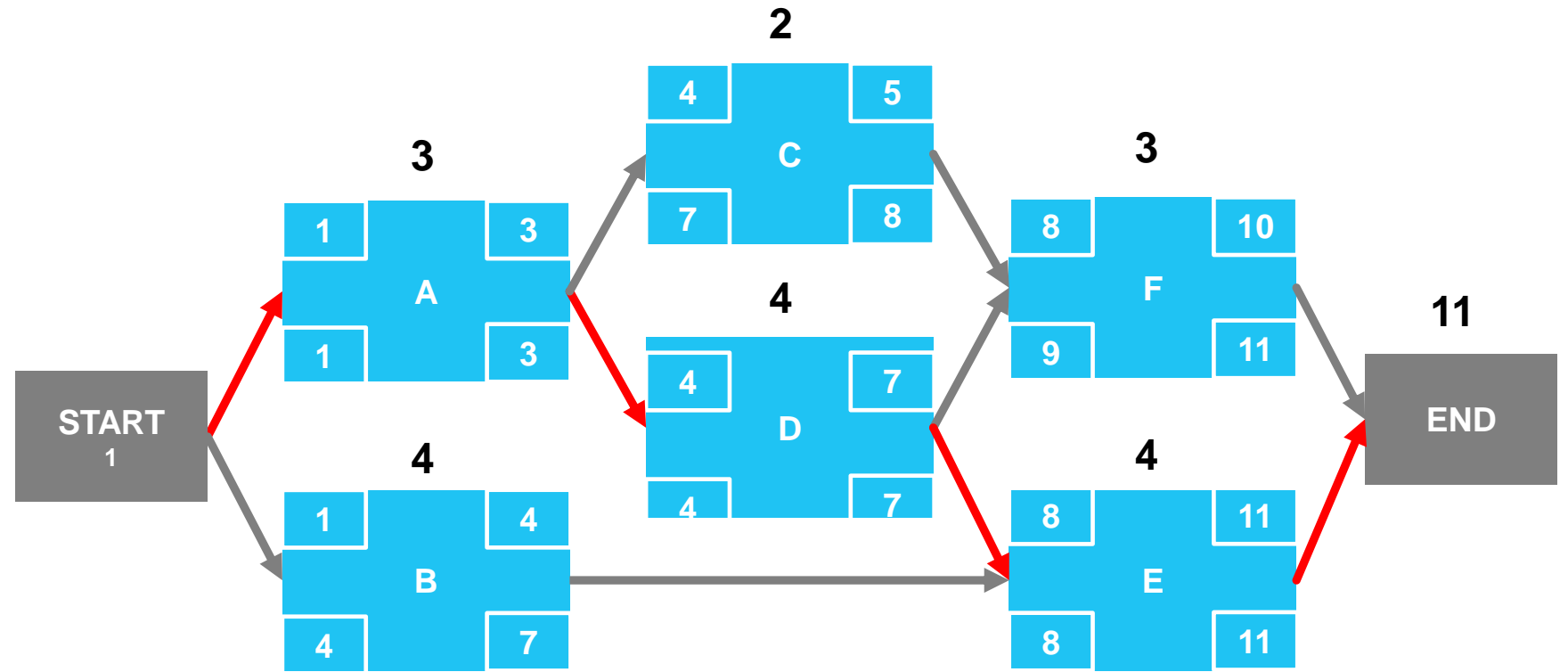
KEY

ES	DUR	EF
	ACTIVITY	
LS	FLT	LF

The Project Schedule
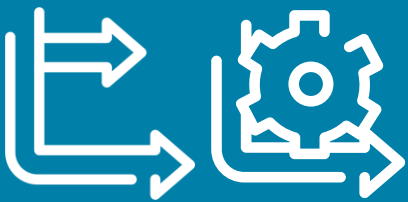
- Includes start and finish activities

- Uses specific dates and in a certain sequence

- Sets dates for project milestones

- Coordinates activities to ensure on-time project completion

- Tracks project progress based on schedule performance and provides visibility of project status to upper management and project stakeholders

Schedule Presentation Formats

Select the type of schedule to suit your project!

- Roadmap

- Gantt Chart

- Milestone Chart

- Project Schedule Network Diagram

Do you remember the name of the tool we used for scheduling activities in a project plan?

Hint: *The output is a project schedule network diagram.*

Gantt Chart
Visualize and Track the Project Over a Time Line

	Est. Hours	Assigned	Progress
June	0 hrs		0%
▼ Conduct Phase 1 Site Visit	0 hrs		0%
- Obtain occupancy permit from Oasestown building department	0	Oases Architects	0%
- Confirm tour guide	0	Kareena Ayoung	0%
- Confirm key stakeholder and customer attendance	0	Luis DeSouza	0%
- Complete landscaping and decoration	0	Kareena Ayoung	☐
- Identify finished spaces for the tour	0	Kareen Ayoung	0%

JUNE 20XX

12 T	13 W	14 T	15 F	18 M	19 T	20 W	21 T	22 F	25 M

People

Number of Tasks Per Day ⌄

Kareena Ayoung	3	4	4	3	4	5	6	5	4	3
Luis DeSouza	6	3	6	5	7	6	7	6	7	6

Other Resources

Oases Architects	1	1	0	0	0	0	1	2	2	2

Milestone Schedule
Present Milestones with Planned Dates

ID	Task Name	3/14	3/21	3/28	4/4	4/11	4/18	4/25	5/2	5/9	5/16	5/23	5/30	6/6	6/13	6/14	6/20	6/27	7/4	7/11	7/18	7/25
					April				**May**					**June**					**July**			
30	Begin Phase 1	◆																				
31	Deliverable A				◆																	
32	Deliverable B								◆													
33	Phase Gate Review									◆												
34	Begin Phase 2										◆											
35	Deliverable C													◆								
36	Deliverable D																				◆	
37	Phase Gate Review																					◆
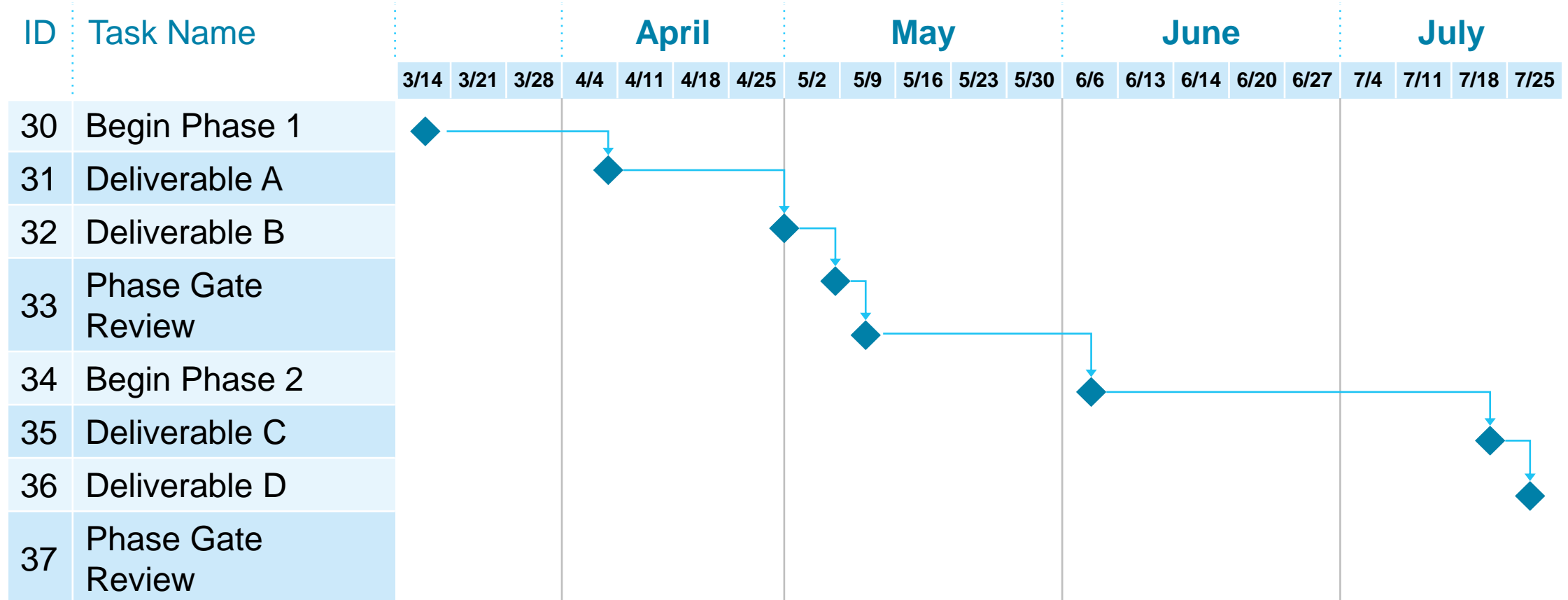
Remember that milestones have zero duration

Project Schedule Network Diagram

Visualize Interrelationships of Activities
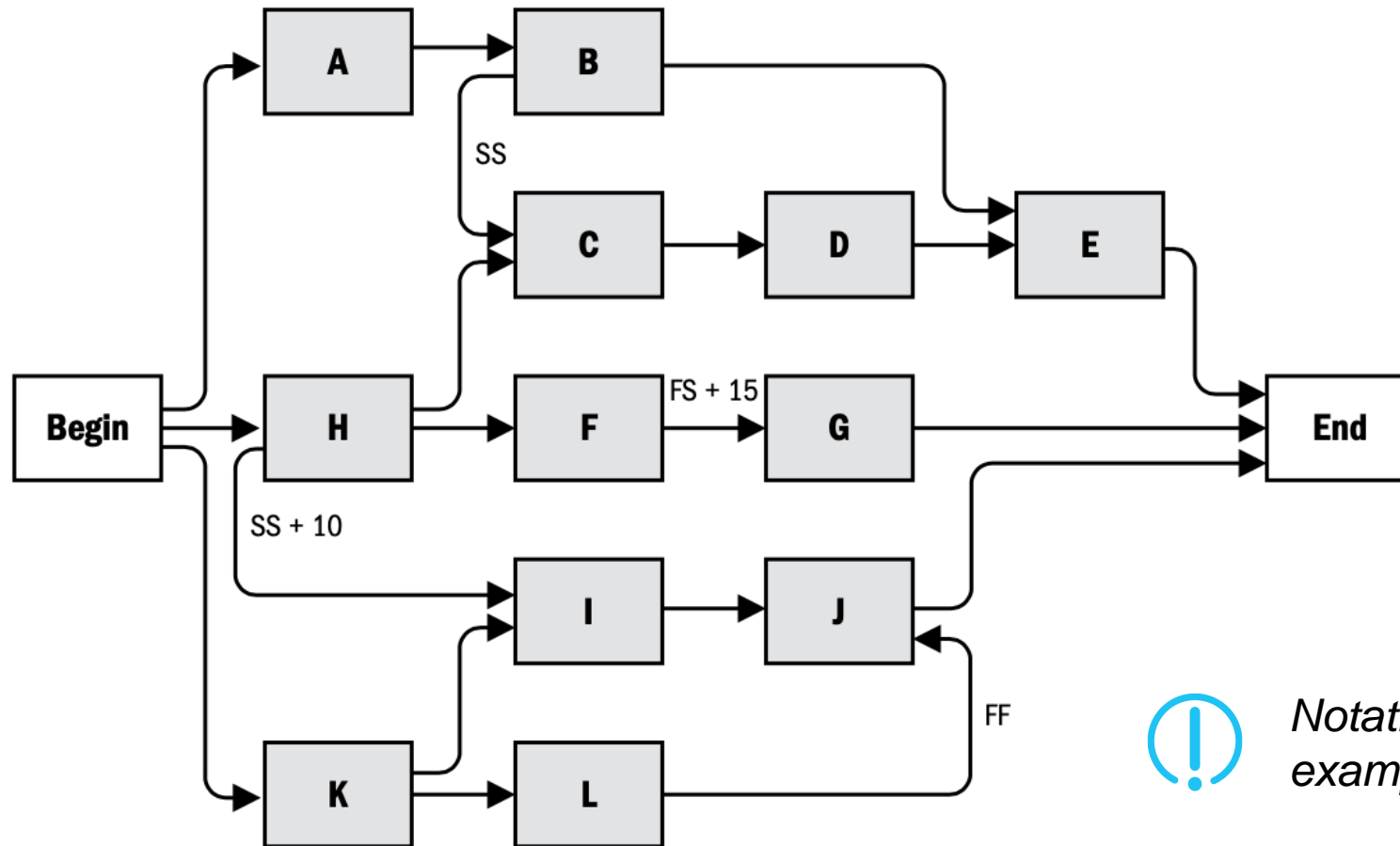
Notations are for graphical example only!

Resource Optimization

Smoothing

- Adjusts the activities within predefined resource limits and within free and total floats

- Does not change the critical path nor delay the completion date

- Method may not be able to optimize all resources

Levelling

- Adjusts start and finish dates based on resource constraints

- Goal is to balance demand for resources with available supply

- Use when shared or critically required resources have limited availability or are over-allocated

- Can change the critical path

Schedule Compression Techniques

Fast tracking

- Perform activities in parallel to reduce time

- May result in rework, increased risk and increased cost

Crashing

- Shortens schedule duration for the least incremental cost by adding resources – e.g., overtime, additional resources

- Works only for activities on the critical path

- Does not always produce a viable alternative and may result in increased risk and/or cost
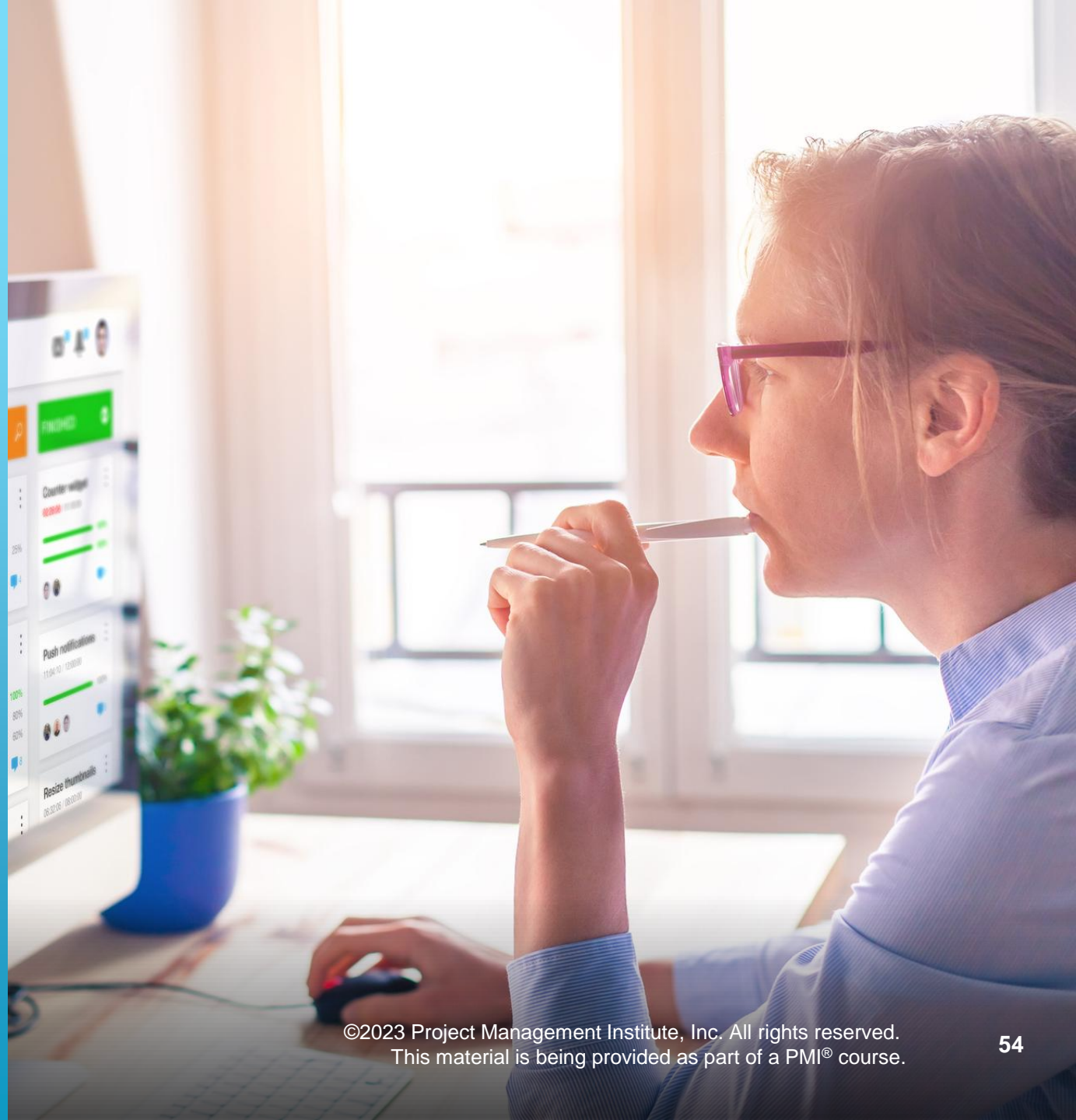
Schedule Baseline*

- Complete schedule planning activities

- Add the schedule baseline to the **project management plan**

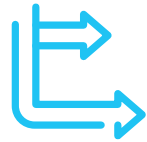   *Ideally, this happens before the project starts.*

- Compare actual progress to the baseline while the team works

- Use the formal change control process to make changes to the baseline

Special Intervals

What are special intervals known as in your projects?

Negotiate how and when required scheduled "down" time intervals will take place

Black-out times - deliverables are handed over for implementation:

- Suspends changes
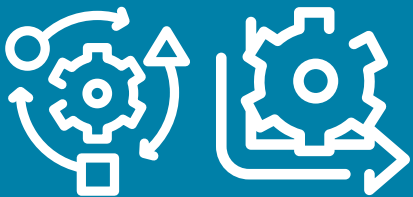- Reduces risks as the solution is released to customers

"Go Live" - at the end of the project timeline
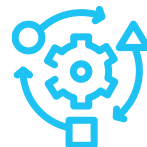
Negotiate black-out times as project approaches release

Iteration H or **hardening sprint** – conducted prior to final release

Schedule Management in Adaptive Environments

Guidelines

- Depends on team composition and life cycle

- Project team works with the product owner to decide

- Develop the roadmap to show release functionality and timeframes

- Choose an approach:

  - Timeboxed scheduling with backlog

  - On-demand, continuous scheduling

- Project team selects activities for delivery within an iteration (or sprint)

- Teams produce increments of value for delivery and feedback

Adaptive Scheduling Approaches
Comparative View

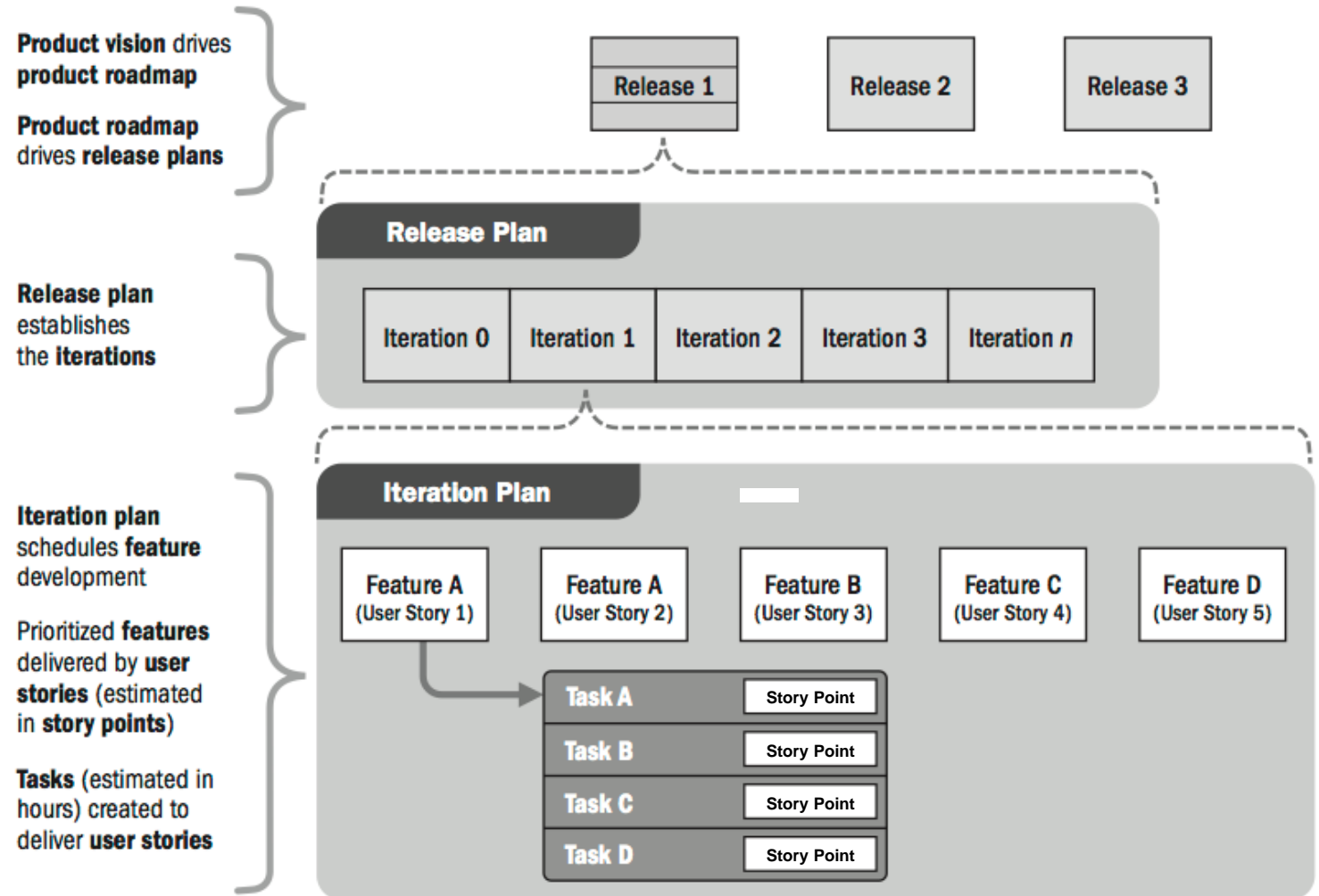| On-Demand (Kanban/Lean-based)	Timeboxed/Iterative
• Allows individual requests to be addressed • Levels out work of team members • Best when activities are divided equally ⚠ *Does not work well in projects with complex dependency relationships*	• Uses progressive elaboration (rolling wave) to schedule activities • Uses a specific work interval — e.g., two weeks • Allows changes at any time during project
Prioritize requests to determine start sequence then sequence stories individually through completion	Define requirements with user stories then prioritize stories
Team pulls work from queue	Select work based on priority and time box; add remaining stories to backlog; reintroduce stories later, based on priority
Provides incremental business value	Delivers business value early and incrementally

Adaptive Planning Overview

A release schedule usually lasts from 3-6 months.

Timeboxed iterations or sprints typically last 1 - 4 weeks.

Assign story points to tasks to determine the amount of work

Velocity – the capacity of the team to complete work

Product vision drives **product roadmap**

Product roadmap drives **release plans**

Release plan establishes the **iterations**

Iteration plan schedules **feature** development

Prioritized **features** delivered by **user stories** (estimated in **story points**)

Tasks (estimated in hours) created to deliver **user stories**

| Release 1 | Release 2 | Release 3 |

Release Plan

| Iteration 0 | Iteration 1 | Iteration 2 | Iteration 3 | Iteration n |

Iteration Plan

| Feature A (User Story 1) | Feature A (User Story 2) | Feature B (User Story 3) | Feature C (User Story 4) | Feature D (User Story 5) |

Task A	Story Point
Task B	Story Point
Task C	Story Point
Task D	Story Point

Working with Features

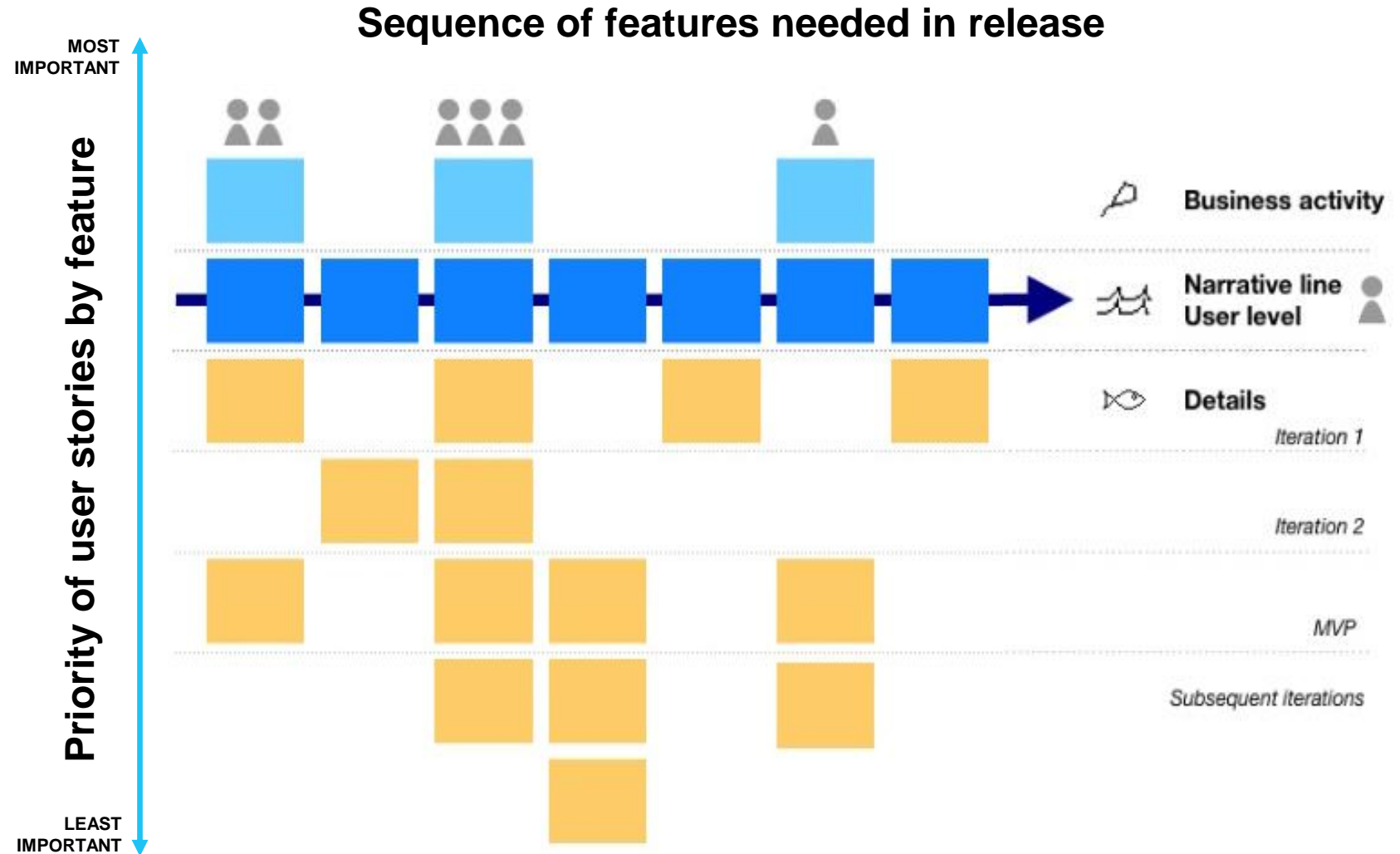Scheduling aligned to features ensures associated work is coordinated.

Associating features with the **product roadmap** offers visibility of when blocks of functionality can be released to the business and end users.

Agile Release Planning

Story Mapping

- Group stories by **sequence** and **priority**
- Sequence **features** and functions for the release
- Prioritize user stories in the **release backlog** and associate them with features and functions

Sequence of features needed in release

Priority of user stories by feature

MOST IMPORTANT

LEAST IMPORTANT

- Business activity
- Narrative line / User level
- Details

Iteration 1

Iteration 2

MVP

Subsequent iterations

Measure Effort, Not Time

Relative sizing

- Compares effort of multiple user stories through assignment of values (XS, S, M, L, XL)
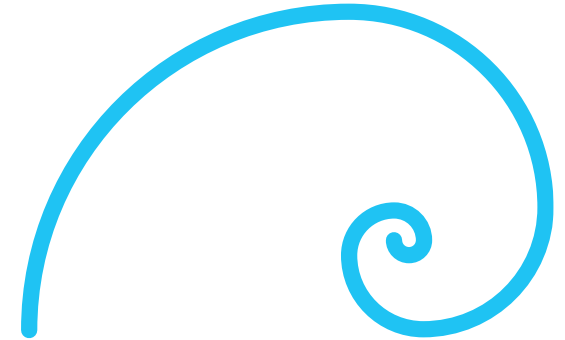
*Use common **t-shirt sizes** to assign values to user stories.*

Story points

- Uses a relative measure – e.g., numbers in the **Fibonacci sequence** – to identify the level of difficulty or complexity of a user story or task

Planning poker

- Estimates effort or relative size of development effort

- Uses a deck of cards with modified Fibonacci numbers to vote on user stories

Definition of Ready (DoR)* and Definition of Done (DoD)*

Agile teams need to know when they can be "ready" to do the work and when that work is "done."

**DoR** - What needs to be in place so the team can begin work?

- Depends on the environment's complexity and lessons learned from past iterations.

- Use DoR checklist to communicate and collaborate with stakeholders about readiness for work or progress.

DoD describes the goal or desired state. It must be informed by the DoR.

*DoD is similar to **acceptance criteria** in predictive projects.*

Reprioritize Sprint / Iteration Backlog*
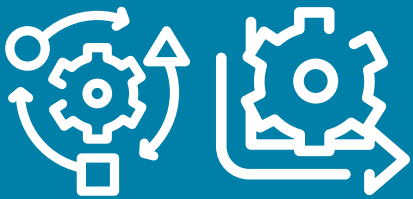
The product owner and team collaborate to move work items from a release backlog to an **iteration/sprint backlog** for the upcoming sprint.

Team holds a sprint planning meeting before each sprint, which typically lasts 2 weeks.

2-week interval

ITERATION 1   ITERATION 2   . . .

Sprint planning

Feedback
Backlog
Prioritization

Sprint planning
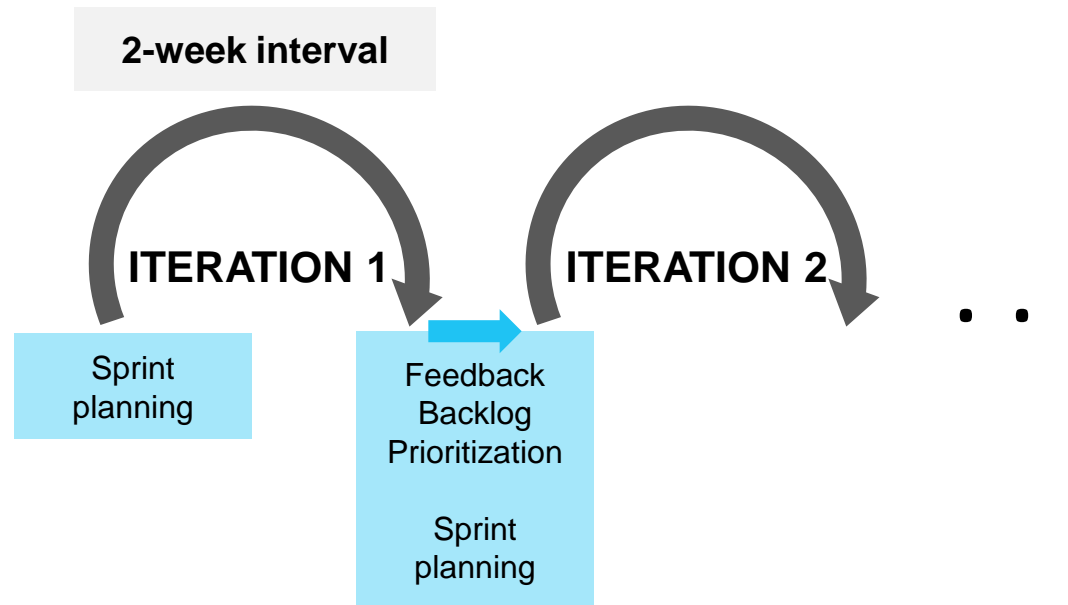
Hybrid Scheduling Models

Example

Can you identify which aspects of this scheduling model are predictive and which are adaptive?
Can you identify who does each of the tasks listed?

Project manager plans high-level project phases and milestones; scrum master runs sprints using agile processes

- Identify project work types and try to break them down

- Create a prioritized work backlog which fulfils project phase or achieves milestone

- Work in iterations/sprints of 2 - 4 weeks (use shorter sprints for less experienced team to facilitate alignment)

- Plan work before every iteration using prioritized backlog items

- Estimate every task to decide how many can fit in a single sprint

- Hold a retrospective at the end of every sprint; capture metrics to adjust timing and task estimate for next sprint

ECO Coverage

2.6 Plan and manage schedule

- Predictive vs adaptive approach for schedule

- Estimate project tasks (milestones, dependencies, story points) (2.6.1)

- Utilize benchmarks and historical data (2.6.2)

- Prepare schedule based on methodology (2.6.3)

DAILY PMP BOOTCAMP SURVEY

Our goal is to provide the best possible Bootcamp experience for a live streaming webinar, with hundreds of participants.

For each Bootcamp session,

- Let us know **what you liked** about the experience – your comments really matter.
  - Please include a thank you **to the mentor(s)** working off camera.

- If you have **recommendations**, share those too!

We sincerely value your opinion!

Survey Scale

On a scale of 0-10, how likely are you to recommend this bootcamp to someone else?

This Scale: 0 not at all likely - 10 extremely likely

0	1	2	3	4	5	6	7	8	9	10
○	○	○	○	○	○	○	○	○	○	○

SCOPE MANAGEMENT PLAN

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

WORK BREAKDOWN STRUCTURE (WBS)

A hierarchical decomposition of the total scope of work to be carried out by the project team to accomplish the project objectives and create the required deliverables.

EPIC

A large body of work that can be broken down into smaller pieces—features and user stories. Epics can take months to complete.

FEATURE

A set of related requirements that allows the user to satisfy a business objective or need.

SCHEDULE MANAGEMENT PLAN

A component of the project or program management plan that establishes the criteria and activities for developing, monitoring, and controlling the schedule.

WORK PACKAGE

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

DEPENDENCY

A relationship between one or more tasks/activities. A dependency may be mandatory or discretionary, internal or external. See also "start-to-start"; "start-to-finish"; "finish-to-start"; and "finish-to-finish".

PRECEDENCE RELATIONSHIP

A logical dependency used in the precedence diagramming methods.

CRITICAL PATH

The sequence of activities that represents the longest path through a project, which determines the shortest possible duration.

PROJECT ACTIVITY

A distinct, scheduled portion of work performed during a project.

ACTIVITY LIST

A documented tabulation of schedule activities that shows the activity description, activity identifier, and a sufficiently detailed scope-of-work description so project team members understand what work is to be performed.

ACTIVITY DEPENDENCY

A logical relationship between two project activities.

PRECEDENCE DIAGRAMMING METHOD

A technique used to create the network diagram. It constructs a schedule model in which activities are represented by nodes and are graphically linked by one or more logical relationships to show the sequence in which the activities are to be performed.

LEAD

The amount of time a successor activity can be advanced with respect to a predecessor activity.

LAG

The amount of time a successor activity will be delayed with respect to a predecessor activity.

CRITICAL PATH METHOD

A technique of schedule analysis in which the schedule activities are evaluated to determine the float or slack for each activity and the overall schedule. To calculate critical path, use the forward and backward pass along with float analysis to identify all network paths, including critical.

FLOAT

The difference between the early and late dates.

TOTAL FLOAT

The amount of time that a schedule activity can be delayed or extended from its early start date without delaying the project finish date or violating a schedule constraint.

FREE FLOAT

The amount of time that a scheduled activity can be delayed without impacting the early start date of any subsequent scheduled activity

EARLY FINISH DATE (EF)

The earliest possible point in time when the uncompleted portions of a schedule activity can finish based on the schedule network logic, the data date, and any schedule constraints.

EARLY START DATE (ES)

The earliest possible point in time when the uncompleted portions of a schedule activity can start based on the schedule network logic, the data date, and any schedule constraints.

LATE FINISH DATE (LF)

The latest possible point in time when the uncompleted portions of a schedule activity can finish based on the schedule network logic, the project completion date, and any schedule constraints.

LATE START DATE (LS)

The latest possible point in time when the uncompleted portions of a schedule activity can start based on the schedule network logic, the project completion date, and any schedule constraints.

RESOURCE SMOOTHING

A resource optimization technique in which free and total float are used without affecting the critical path. See also "Resource Levelling" and "Resource Optimization Technique".

RESOURCE LEVELLING

A resource optimization technique in which adjustments are made to the project schedule to optimize the allocation of resources and which may affect the critical path.

FAST TRACKING

A schedule compression technique in which activities or phases normally done in sequence are performed in parallel for at least a portion of their duration.

CRASHING

CRASHING

Applying additional resources to one or more tasks/activities to complete the work more quickly. Crashing usually increases costs more than risks. In comparison, fast-tracking increases risks.

SCHEDULE BASELINE

The approved version of a schedule model that can be changed using formal change control procedures and is used as the basis of comparison to actual results. It is one of the main project documents that should be created before the project starts.

HARDENING ITERATION / ITERATION H

Specialized increment/ iteration/sprint dedicated to stabilizing the code base so that it is robust enough for release. No new functionality is added. Primarily used for refactoring and/or technical debt.

SPRINT VELOCITY

A descriptive metric used by agile and hybrid teams. It describes the volume of work that a team performs during a sprint. Use this metric to understand the rate of your team's work during an average sprint.

DEFINITION OF READY (DOR)

A team's checklist for a user-centric requirement that has all the information the team needs to be able to begin working on it.

DEFINITION OF DONE (DOD)

A team's checklist of all the criteria required to be met so that a deliverable can be considered ready for customer use.

ITERATION BACKLOG

The work that is committed to be performed during a given iteration and is expected to burn down the duration. The work does not carry over to the next iteration.