



SMART SUMMIT COACHING

Essentials of Project Management

IEEE Computer Society

Adam Schmidt, PCC, PMP

March 2021

Proprietary - Smart Summit Coaching, LLC

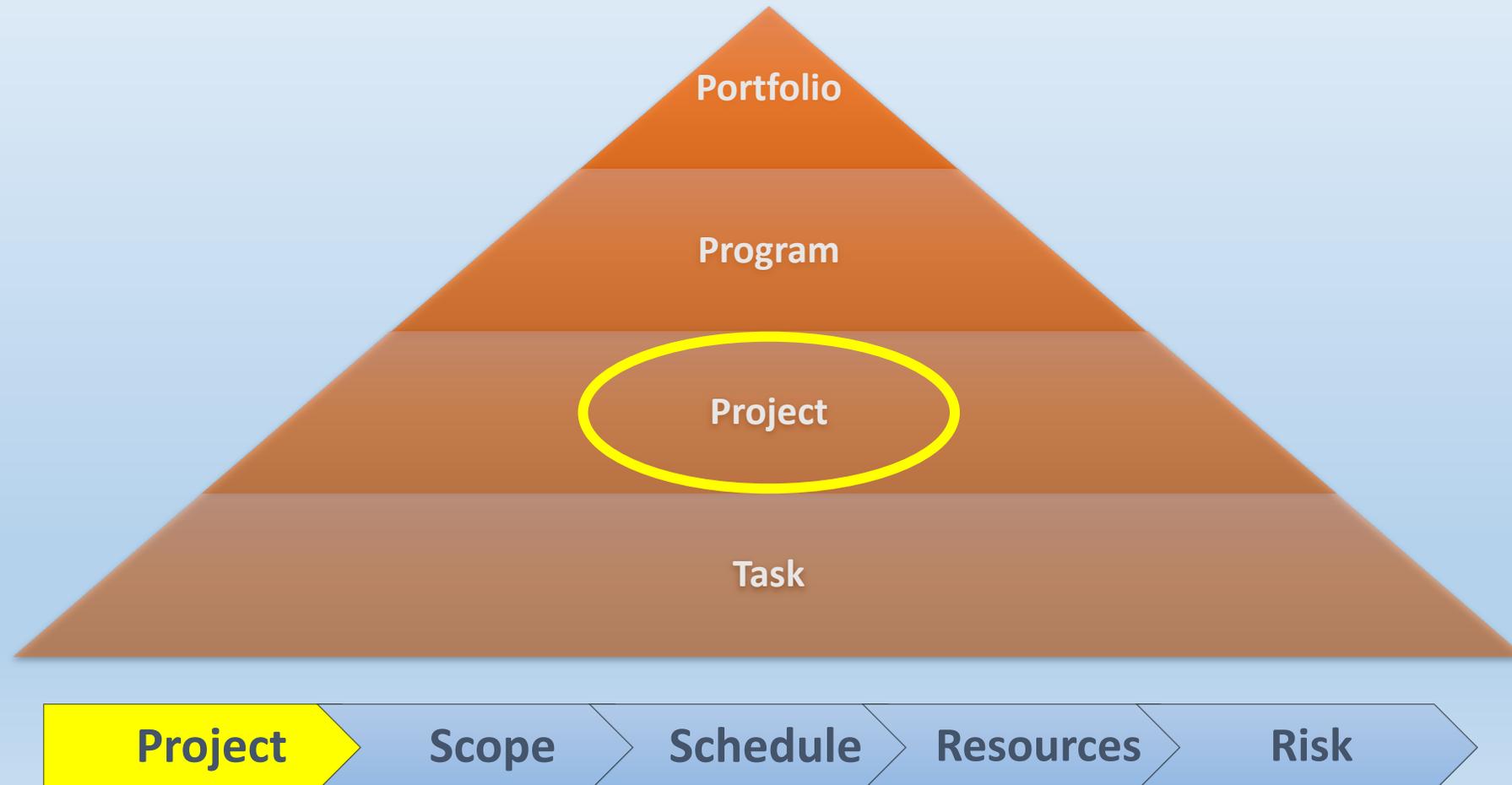
Webinar Outline

- “Project”
- Scope
- Schedule
- Resources
- Risk



Project

A unique process consisting of a set of coordinated and **controlled tasks** with clear **start and finish** dates, undertaken to **achieve an objective** conforming to specific **requirements** including constraints of time, cost, and resources (ISO 9000:2000, definition 3.4.3).



Project Management Plan

Project Management Institute (PMBOK) – North America

“...a formal, approved document used to guide both project execution and project control. The primary uses of the project plan are to document planning assumptions and decisions, facilitate communication among project stakeholders, and document approved scope, cost, and schedule baselines. A project plan may be summarized or detailed.”

PRINCE2 – Europe, Asia

“...a statement of how and when a project's objectives are to be achieved, by showing the major products, milestones, activities and resources required on the project.”

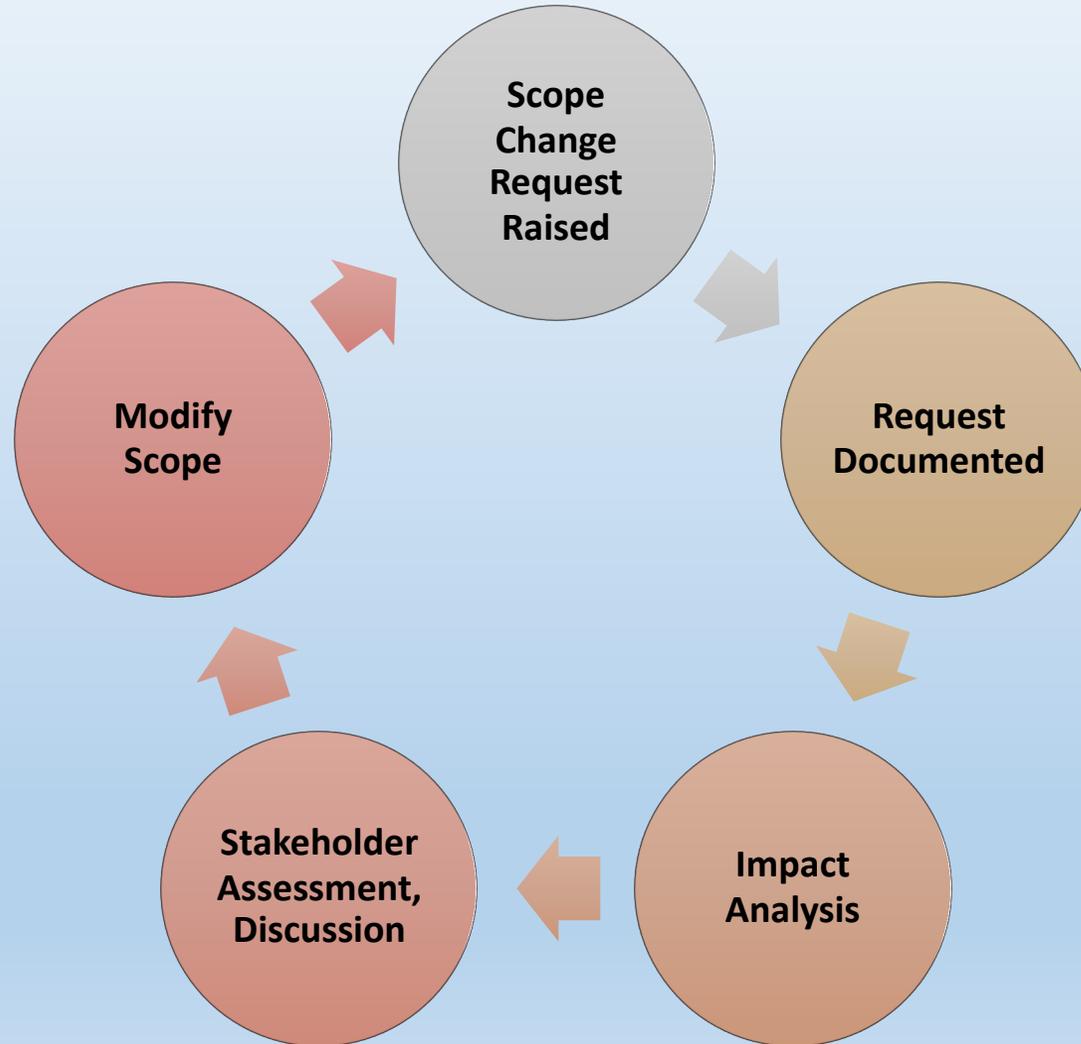


Scope

- **Definition:** The boundaries of a project, which determines the deliverables, work required, constraints, and risks associated with it. These elements are captured in the project's scope statement.
- **Scope Statement:** A concise summary that includes the who, what, when, where, and why of the project. It also might include constraints, assumptions, and key success factors associated with the project's deliverables and objectives.
- Traditionally, the scope statement is the **first thing** that is drafted by a Project Leader.



Scope Management

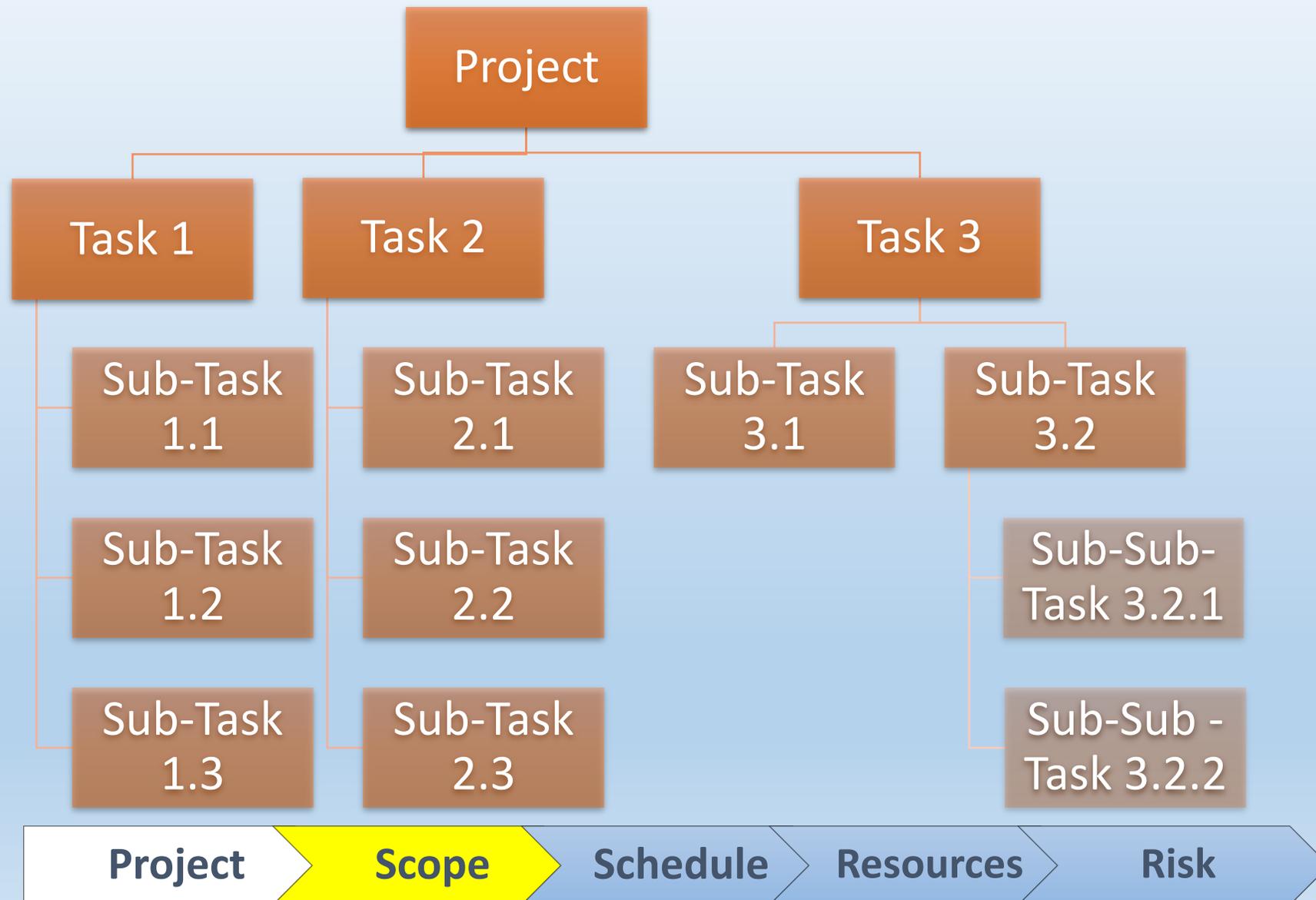


Work Breakdown Structure (WBS)

- 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 (PMBOK).
- WBS Dictionary: A document that provides detailed information about each element in the WBS. It may include a brief definition of the scope of work, defined deliverables, associated activities, and milestones for each WBS element.
- Both are needed: The WBS dictionary captures what the WBS graphic cannot.



Work Breakdown Structure (WBS)



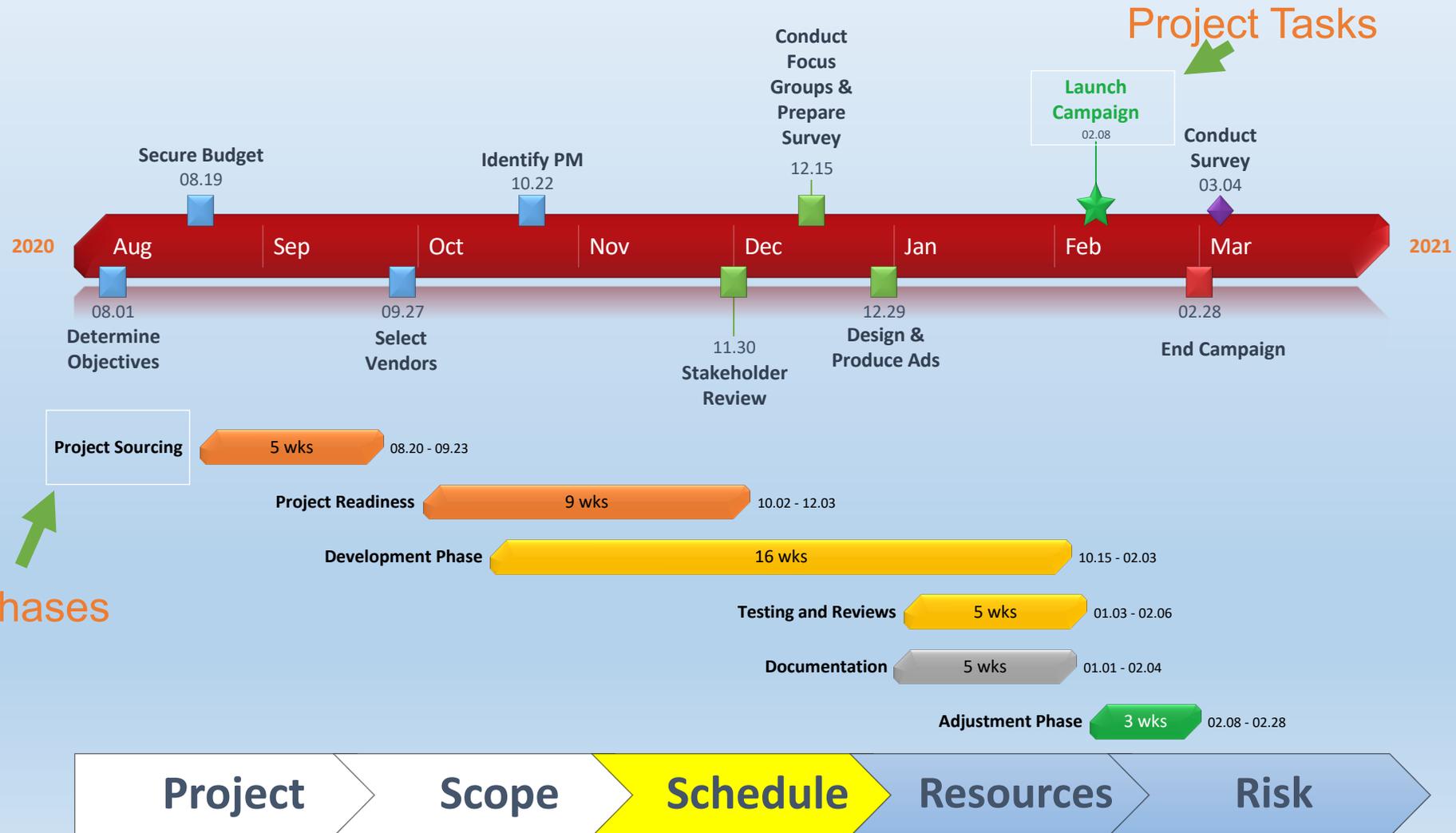
Schedule

- **Definition:** A plan that details when work will be accomplished, provides a common understanding of the progression of work, and indicates when things are off track.
- There are several types of inputs necessary to create a project schedule:
 - Interdependencies
 - Personal and project calendars
 - Scope statement
 - Project risks
 - Resource requirements



Gantt Chart

A Gantt chart is a horizontal, time-driven bar chart that provides a graphical illustration of a schedule that helps to plan, coordinate, and track specific tasks.

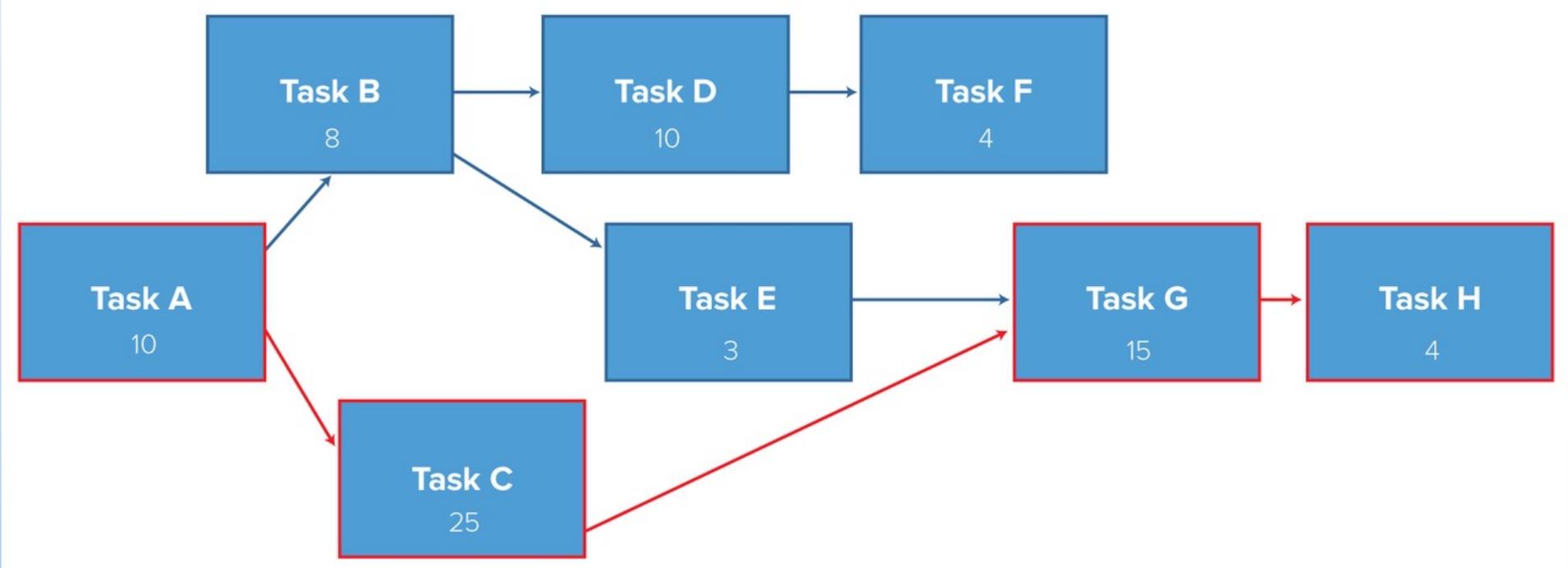


Critical Path Method

- **Definition:** The minimum length of time needed to complete a project.
- **How it works:** Critical path analysis illustrates the relationships between all project activities and uses a diagram to identify the minimum amount of time necessary to complete the project. An activity on the critical path cannot be started until all of its dependent activities are completed.
- **Advantage:** Critical path analysis tests the robustness of the project plan. It identifies what must be completed on time for the whole project to be completed on time.
- **Disadvantage:** Critical path analysis isn't as effective as Gantt Charts at communicating the relation of tasks to time.



Critical Path example



Resources

- **Definition:** The people, equipment, facilities, funding, and everything else required for the completion of a project activity.
- An effective resource plan must:
 - Adjust as the schedule changes
 - Plan for known needs in advance
 - Adapt to meet unknown needs as they arise



Creating a budget

- The WBS is the basis for the project budget
- Sum of WBS tasks = total project budget
- An effective budget:
 - Is built bottom-up as tasks are planned and costs are identified
 - Has consensus on the cost of each WBS task element
 - Is informed by the project schedule and resource plan



Building a team

- Building an effective team is crucial to project management
- There are four stages in the team building process:
 1. **Forming:** Roles, responsibilities, and direction are provided as team members become acquainted
 2. **Norming:** Cohesion and unity are established. The project manager provides supportive feedback and fosters commitment to the project vision.
 3. **Storming:** The team must overcome disagreements, counter-dependencies, conflicts, and group-think. The project manager must foster win/win relationships and recognize achievements.
 4. **Performing:** Meet the need for continuous improvement, innovation, speed, and capitalization on core competencies. The project manager must recognize new ideas and foster performance.

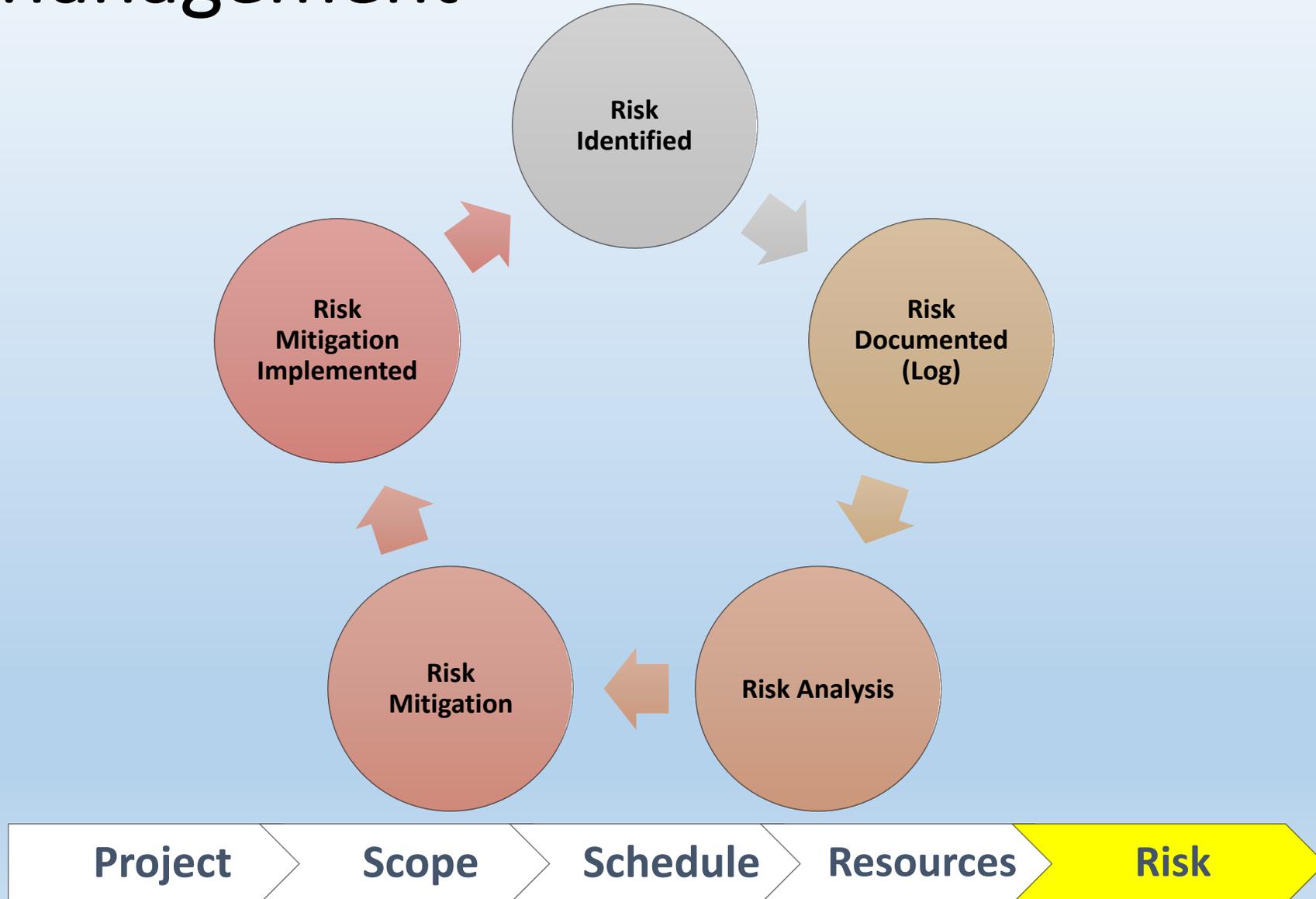


Risk

- **Risk:** An uncertain event or condition that, if it occurs, has a positive or negative effect on a project's objectives (PMBOK).
- **Issue:** An event or condition that has already had a positive or negative effect on a project's objectives.
- The key difference between a risk and an issue is that issues have already happened.
 - Issues should be addressed every day, risks should be reviewed periodically

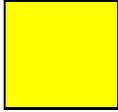


Risk Management



Risk Assessment Matrix

Table TBD- Risk Scores

	Impact					
Probability	Negligible (1)	Minor (2)	Moderate (3)	Serious (4)	Critical (5)	Overall Risk assessment
Very likely to occur (5)	5	10	15	20	25	Critical 
Probably will occur (4)	4	8	12	16	20	
About 50% chance of occurring (3)	3	6	9	12	15	Moderate 
Unlikely (2)	2	4	6	8	10	
Very unlikely to occur (1)	1	2	3	4	5	Negligible 



Risk Log

A **risk log** is a master document which tracks issues and addresses problems as they arise.

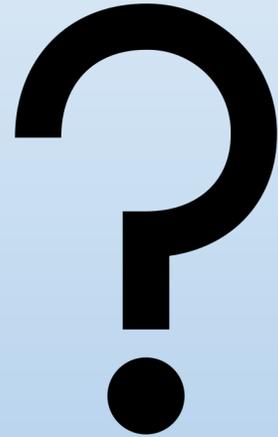
Risk	Probability	Impact	Assessment (P x I)	Actions	Risk Ownership
Budget Shortage	Low (2)	Low (1)	Negligible (2)	Ensure adherence to budget, allocate hours in advance, and have a cushion.	Jack
Production Delay	High (5)	Severe (5)	Critical (25)	Ensure that production is sufficiently resourced and directed in advance.	Jill
Personnel Changes	Medium (3)	Medium (5)	Moderate (15)	Encourage staff to provide significant notice, recruit with intention.	Mary



Summary

- Project management success is due to an understanding of:
 - “Project”
 - Scope
 - Scheduling
 - Resource
 - Risk

Welcome your questions!





SMART SUMMIT COACHING

Adam Schmidt, PCC, PMP

Adam@SmartSummitCoaching.com

(973) 908-1389

www.SmartSummitCoaching.com

