

Scope Management Meets Its Schedule

*Accelerate*Success

AFCEA INFOTECH

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Introduction / Objective

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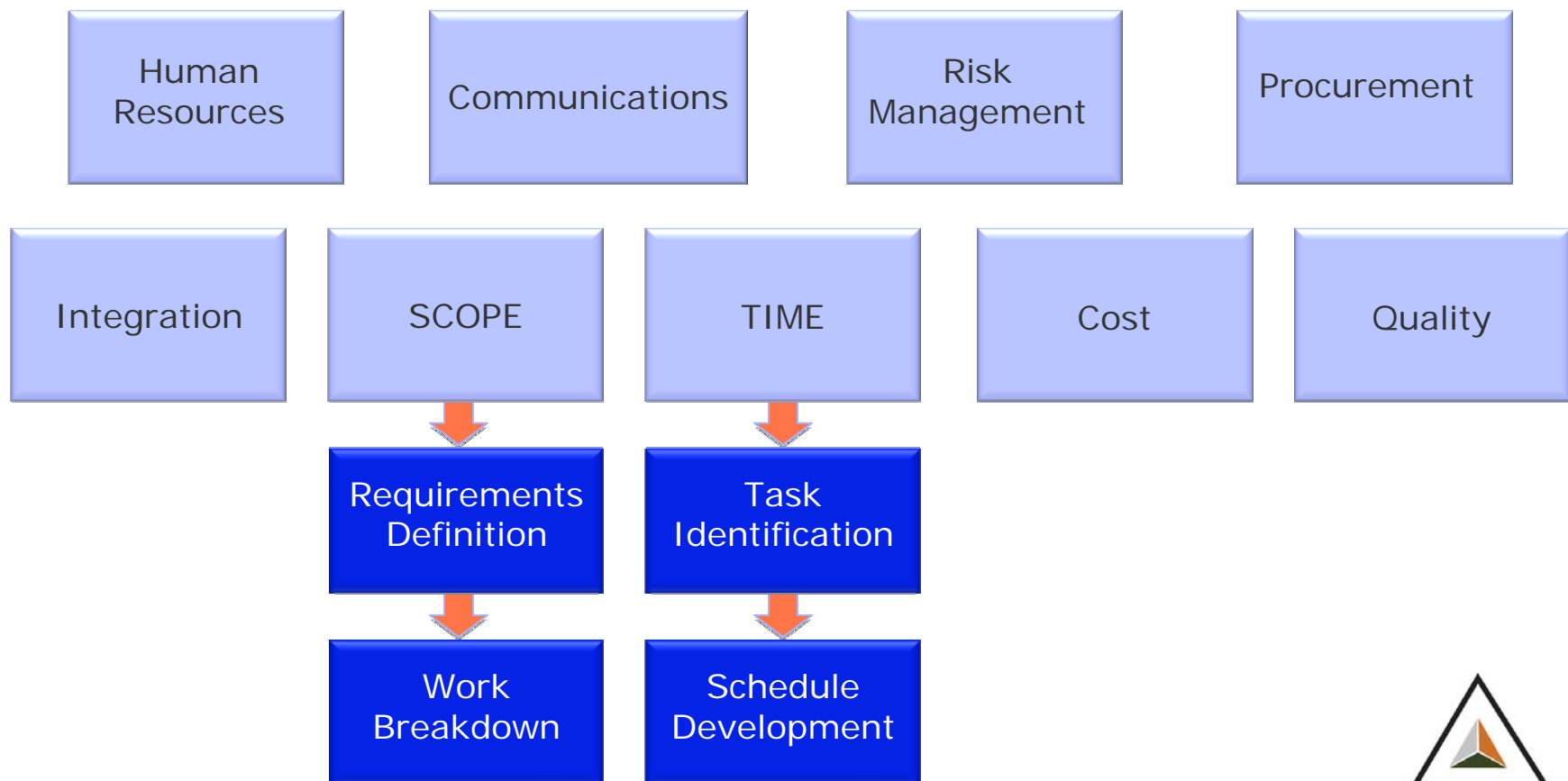
- The objective of this seminar is to expand your knowledge of the process from scope to schedule
- We will not fully cover the topics of scope or scheduling
- We will discuss:
 - Triple Constraint Theory
 - Scope
 - Requirements
 - Work Breakdown Structure (WBS) organization
 - Schedule



Focus Knowledge Areas: Scope and Time

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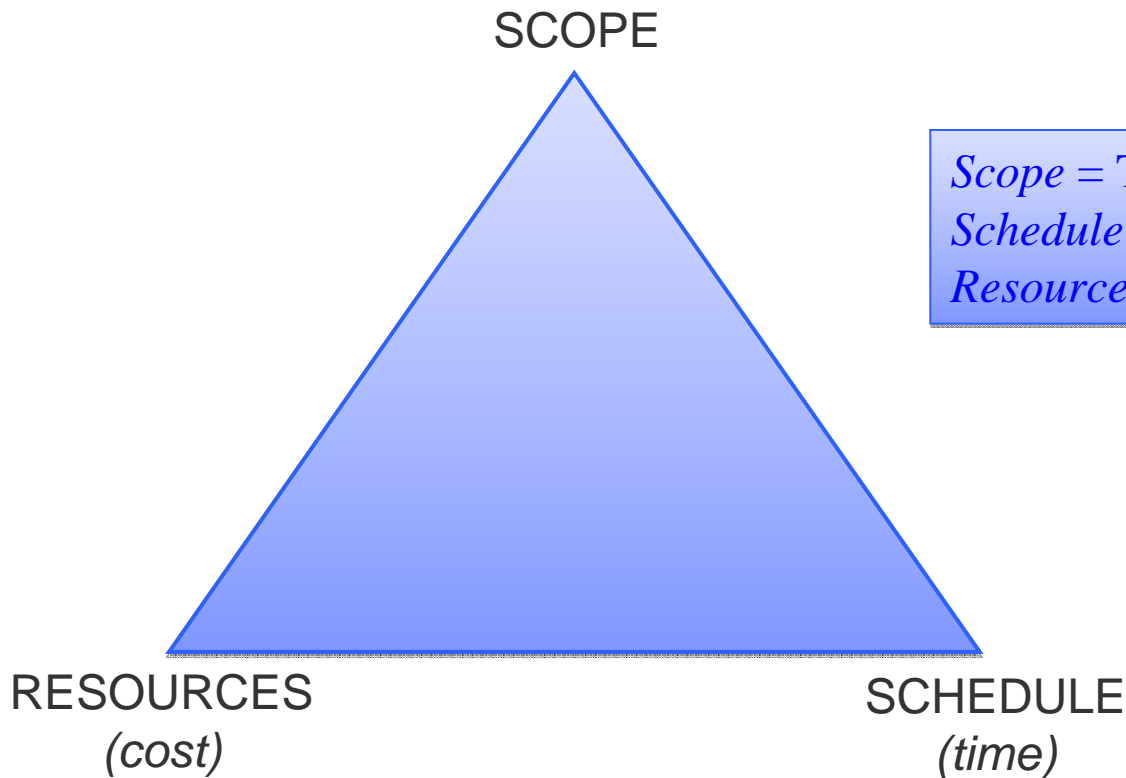
- PMI Identifies nine knowledge areas of Project Management



PMI Triple Constraint Theory

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SCOPE - Define the requirements, objectives, and goals
SCHEDULE (time) – Time-Phased Plan to achieve the scope
RESOURCES (cost) – Funding, people, and materials required



Scope = The What
Schedule = The How & When
Resources = The Who & How Much \$

- Additional PMBOK constraints
- *Customer Satisfaction*
 - *Quality*
 - *Risk*



SCOPE

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Scope Definition: The *sum* of the products, services and results to be provided as a project

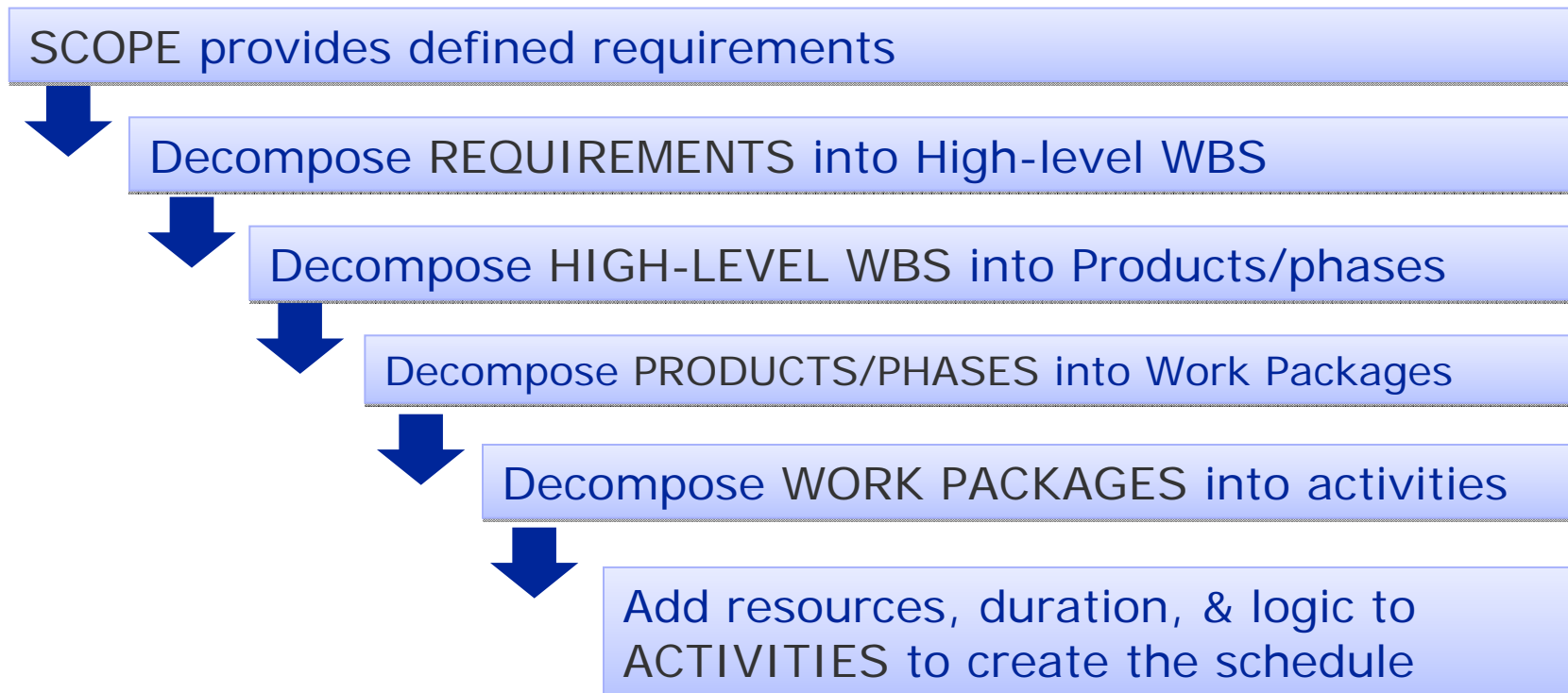
- All requirements are identified, documented, and signed
- A change management process must be enforced
- Without documented requirements and change management, it is easy to keep adding to the requirements list – “scope creep”



Scope to WBS to Schedule

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- Start with Scope to begin the breakdown into a schedule: the detailed plan to achieve the goal



Work Breakdown Structure (WBS)

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- **Work Breakdown Structure (WBS):** A *deliverable-oriented hierarchical decomposition of the work to be executed* by the *project team* to accomplish the project objectives and create the required deliverables
 - It organizes and defines the total scope of the project.
 - Each descending level represents an increasingly detailed definition of the project work.
 - The WBS is decomposed into work packages
 - The deliverable orientation of the hierarchy includes both internal and external deliverables
 - Includes Government deliverables as well as the Contractors
 - The WBS does NOT contain durations, dates, costs, or resources



A Good WBS Assures

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- Project objectives are fully supported by lower level objectives
- Project structure is fully integrated. Each part is consistent with, and relates to the whole
- Useful summaries of project information can be made
- There is a framework to identify the project
- Project scope is understood and can be managed, communicated and controlled.



Developing Work Packages

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- **Work Package:** A deliverable or project work component at the lowest level of each branch of the WBS.
 - The work package includes the schedule activities and schedule milestones required to complete the work package deliverable or project work component.

WBS Element

Test &
Evaluation
1.3

Work Packages

Prepare
Test Plan

Set Up Test

Conduct
Test

Build
Test Model

Obtain
Equipment



WBS with Product/Phases and Work Packages

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S/W Example

WBS	Task Name
1	Software Development
1.1	Acquisition Phase
1.1.1	Request for Quote
1.1.2	Source Selection
1.1.3	Contract Award
1.2	Development Phase
1.2.1	Confirm Requirements
1.2.2	Write Code
1.2.3	Unit Testing
1.2.4	Test Readiness Review
1.3	Test & Evaluation Phase
1.3.1	Prepare Test Plan
1.3.2	Build Test Model
1.3.3	Obtain Equipment
1.3.4	Set Up Test
1.3.5	Conduct Test
1.3.6	Production Readiness Review
1.4	Implementation Phase
1.4.1	Implement at Site 1
1.4.2	Implement at Site 2
1.4.3	Customer Acceptance Review

Trade Show Example

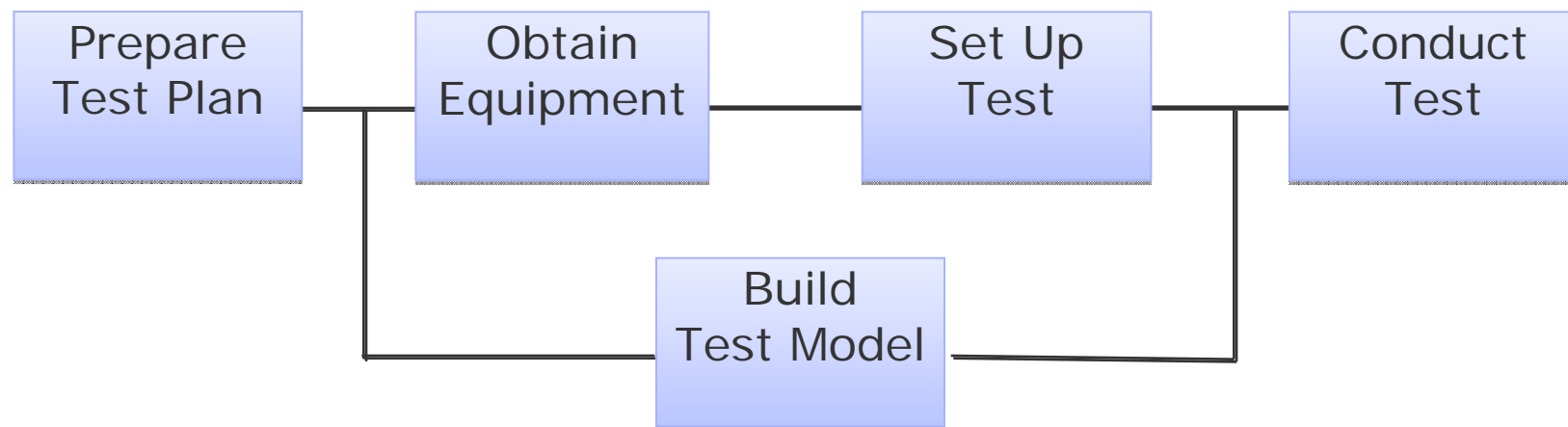
WBS	Task Name
2	Trade Show
2.1	Administrative Tasks
2.1.1	Send in Registration w /Fee
2.1.2	Make Flight Arrangements
2.1.3	Ship Products to Trade Show
2.2	Marketing Material
2.2.1	Design Material
2.2.2	Obtain Material Approval
2.2.3	Print Material
2.3	Booth
2.3.1	Design Booth
2.3.2	Produce Booth
2.3.3	Final Approval of Booth
2.4	Trade Show
2.4.1	Set up Booth
2.4.2	Present at Trade Show
2.4.3	Organize New Business Leads

Schedule Development

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- **Schedule Development:** The process of analyzing schedule activity sequences and durations, resource requirements, and schedule constraints to create the project schedule

Determine Logic



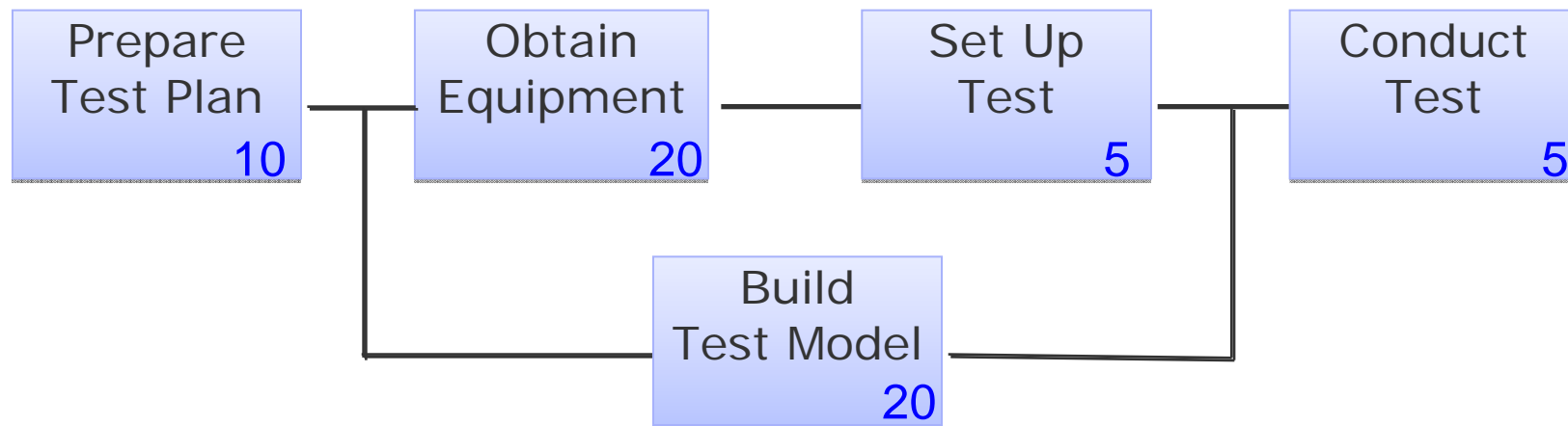
- **Predecessor Activity Definition:** The schedule activity that determines when the logical successor activity can begin or end
- **Successor Activity Definition:** The schedule activity that follows a predecessor activity, as determined by their logical relationship



Network Development

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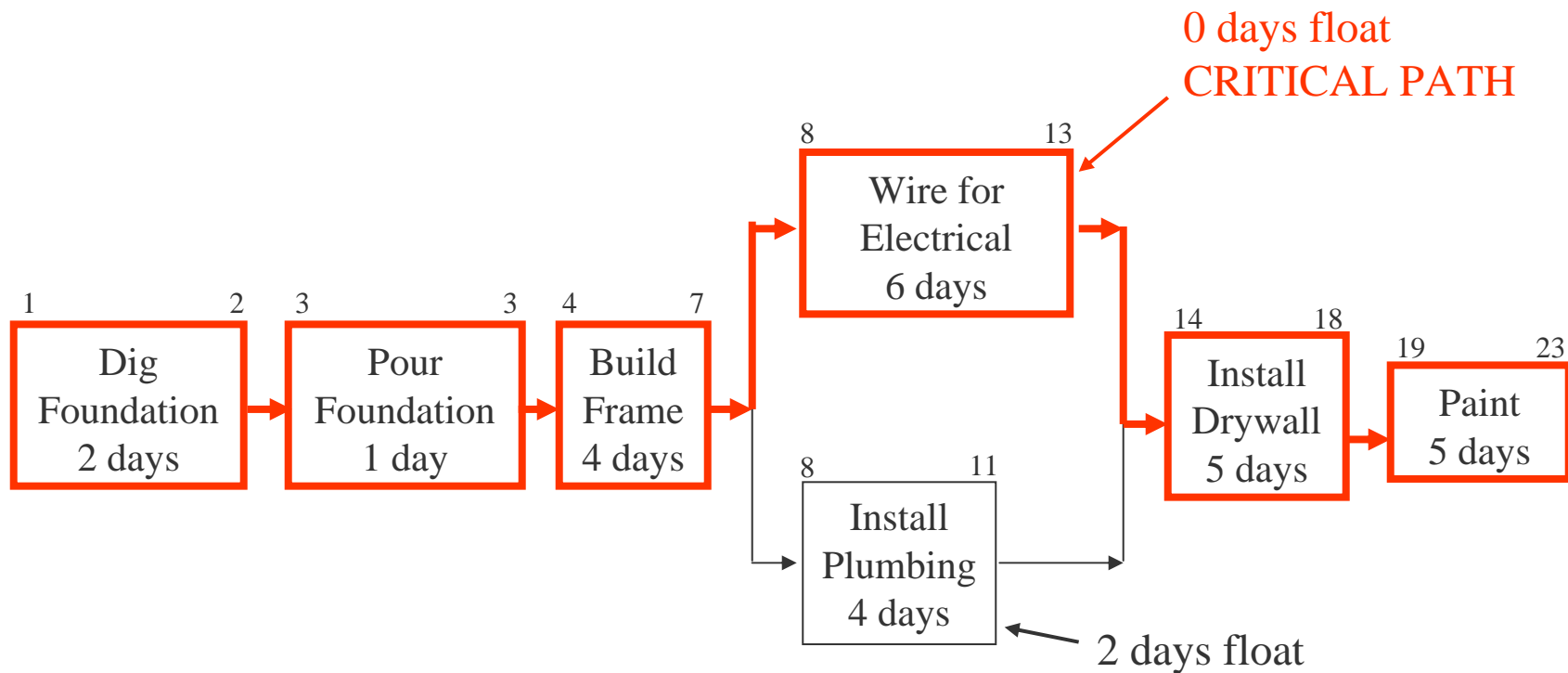
Assign Duration & Resources



The Critical Path & Float/Slack

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Critical Path Definition: The longest path through the project



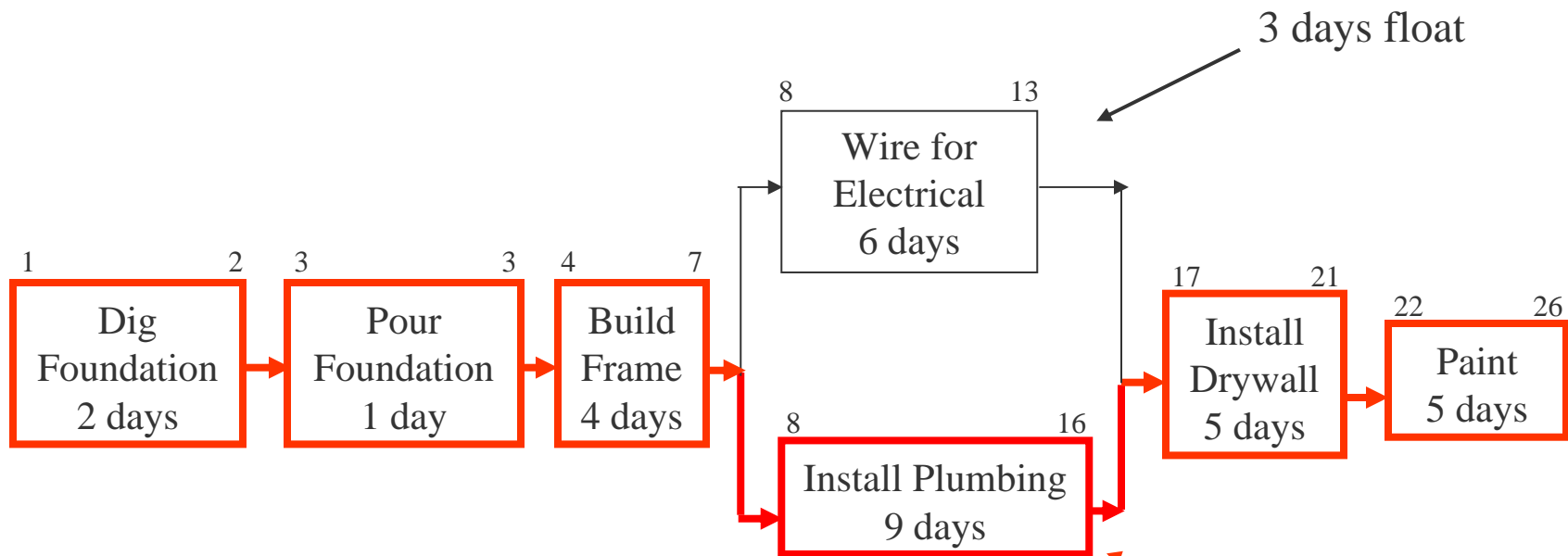
Note: Float and slack are the same thing

The Critical Path & Float/Slack

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The critical path may change as project progresses

Example: Plumber starts project, but is sick for a week

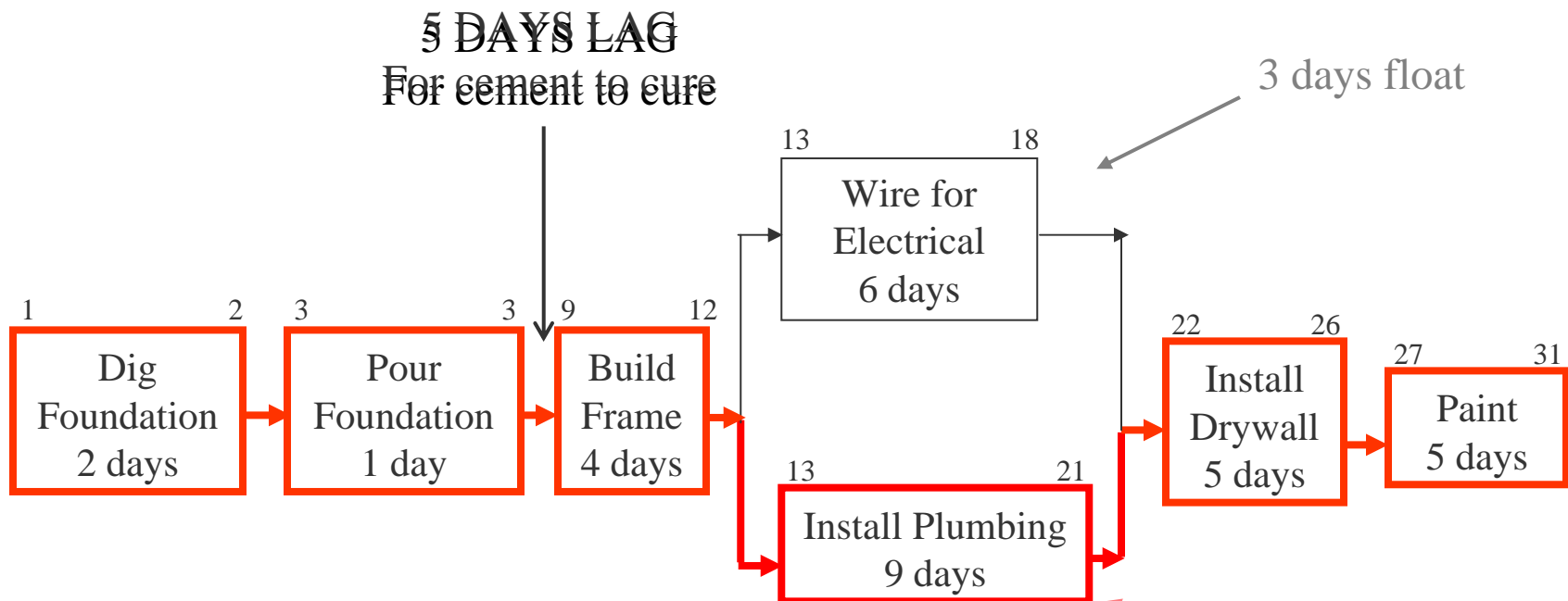


Identify the risks and plan mitigations early in the project

The Critical Path & Float/Slack

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LAG: The amount of mandatory waiting time



0 days float
CRITICAL PATH

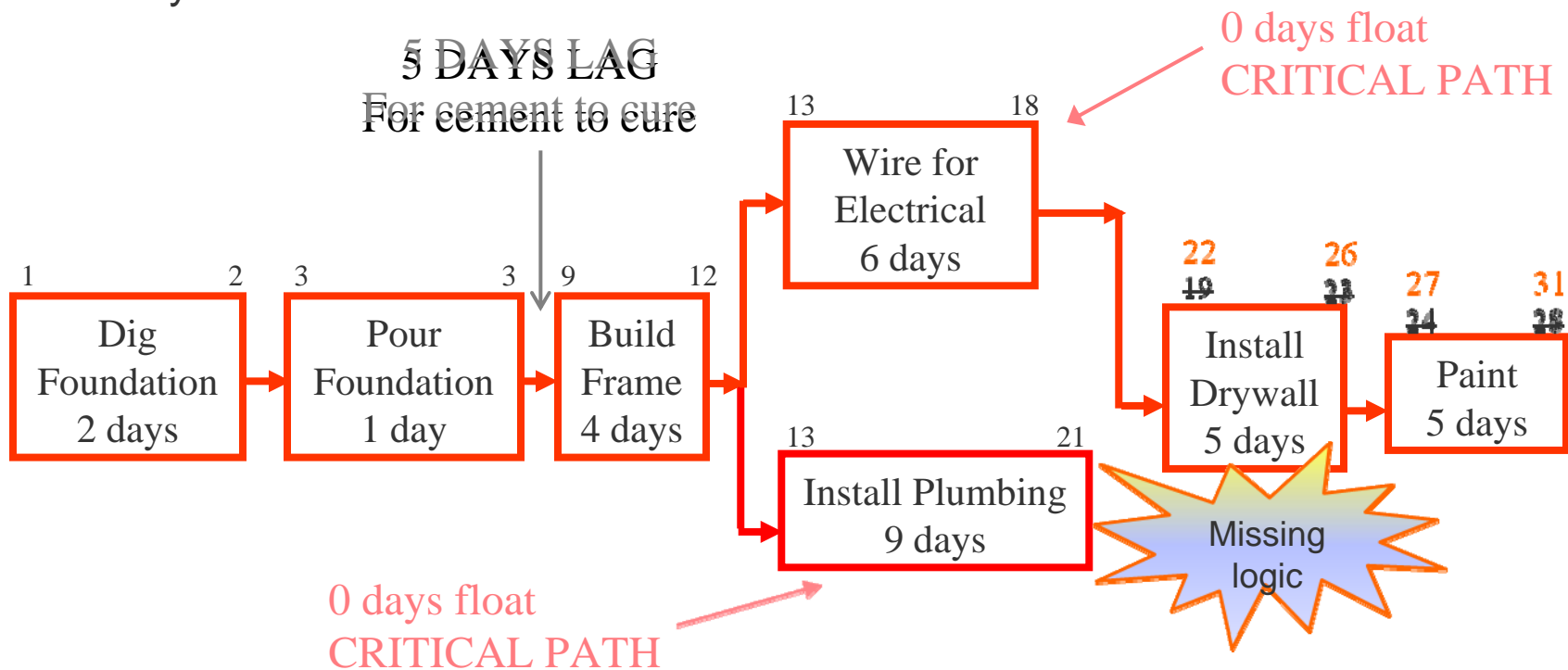
Identify the risks and plan mitigations early in the project

The Critical Path & Float/Slack

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LOGIC: The links between the tasks

Every task must have a successor



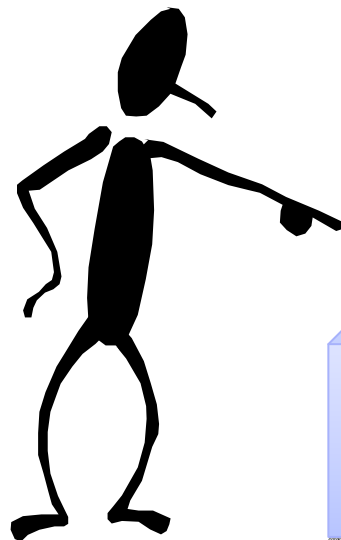
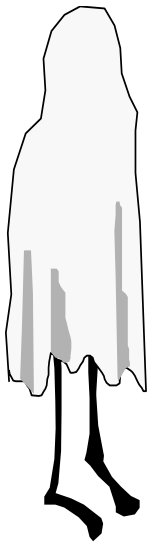
Without *ALL* the logic identified in the schedule, project delays can go undetected



Monitoring Performance

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Don't be in the
dark about your project!



Control =

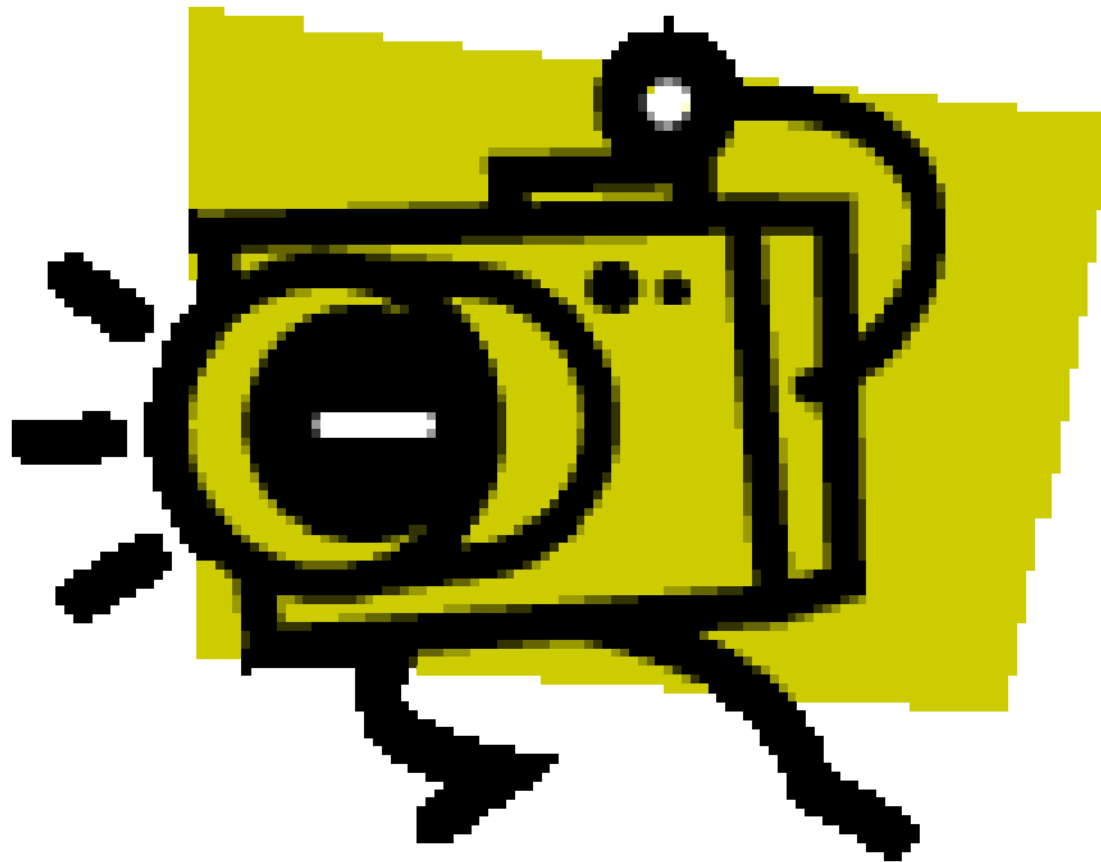
Cost
Schedule
Product Quality



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Baseline the Schedule

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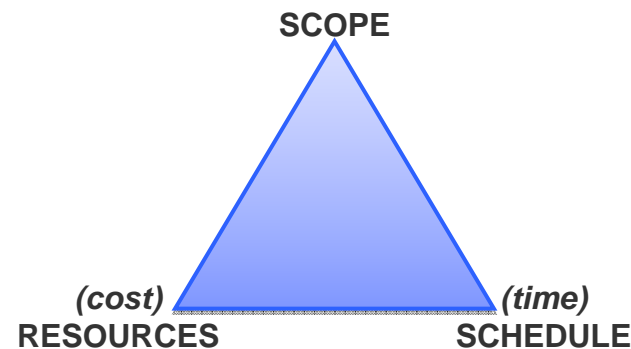
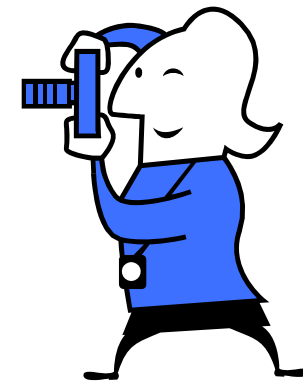


Baseline the Schedule

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Baseline Definition: The Approved Time-Phased Project Plan

- A baseline is a snapshot of the schedule/plan before the project has started
- The baseline usually consists of:
 - Start, finish, duration, work and cost



- Without a baseline, you have nothing to compare the project status against as your project progresses

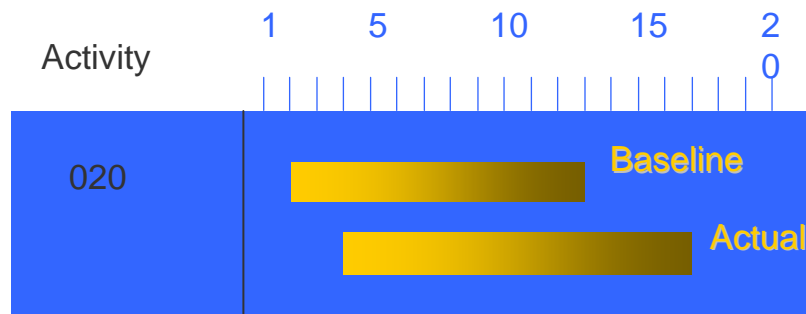


Baselining & Project Control

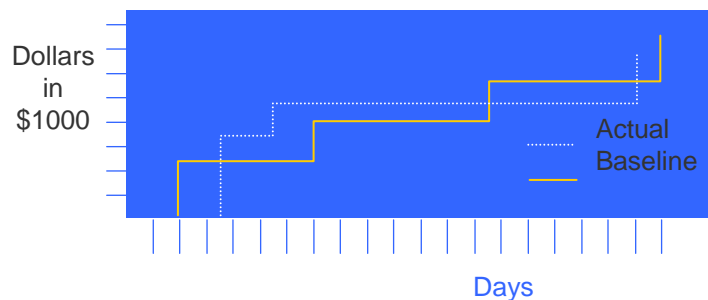
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Baselining a plan enables comparing actual values to planned values.

Schedule Status



Cost Status



Project Control

- Expectations of what should happen
- Measurements of what is happening
- Comparisons between expectations and what is happening
- Timely corrective actions designed to meet the project objectives, schedule, or budget



**“Change is inevitable –
except from a vending machine.”**

Robert C. Gallagher



Questions?

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