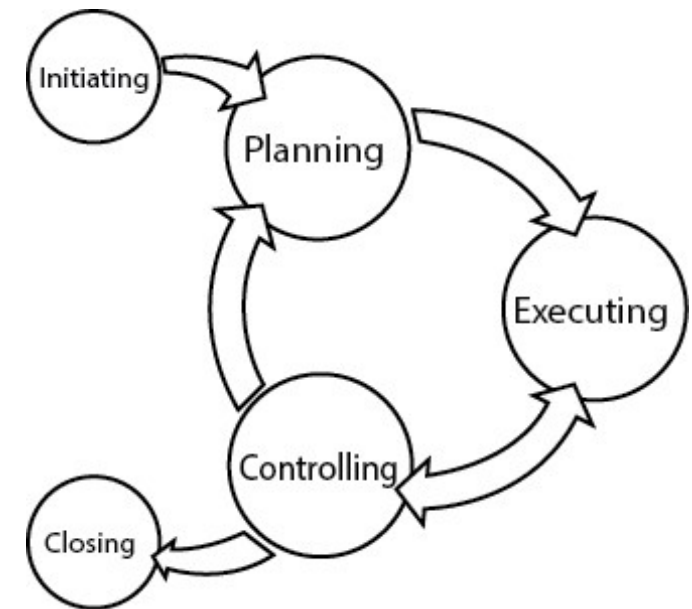# Project Planning

Outline

- Plan a project
- Develop work breakdown structure
- Develop project schedule

Plan a Project

Key Project Planning Principles

- Purpose
  - To develop a plan that enables the project to be executed and controlled
- Multiple passes required
  - Generally takes several iterations: inputs must be integrated; stakeholders need to agree on the plan.
  - Plans will need to be adjusted and details ironed out as the project moves along.
- Give me one
  - Senior management must leave to the planning team control over at least one of the success factors (scope, time, cost, or performance).
- Proactive project management
  - Ask the questions and determine the approaches to take to manage the project and stakeholder expectations before project execution.
- Stay down from the mountain
  - Time for questions, facilitation, interaction, and feedback.

Important Questions to Answer

Ask detailed project planning questions, such as:

• How exactly will the deliverables be produced?

• What work tasks must be performed to produce the deliverables?

• Who will do the work?

• What other resources (facilities, tools) will the team need to do the work?

• How long will it take to do the work?

• How much will this project cost?

• What skills, skill levels, and experience are needed for each role? When do I need them?

• How will changes be controlled?

• How do I ensure acceptable quality in deliverables and in the process?

• How will I track issues? How will critical issues be escalated?

• What risks exist? What are our response strategies?

• How will I manage the project team? What training needs exist? How will their performance be evaluated? How will I orient any new team member?

Building a Project Plan

A project plan consists of following sections based on answers to the detailed questions asked:

- Validate project definition: Key task is to revalidate the business case for the project.
- Determine what needs to be done: This section normally refers to a list of deliverables and to the work breakdown structure (WBS).
- Determine acceptance criteria: Can be part of other components, such as the deliverables list and WBS.
- Determine resource needs: Resources include people (roles), facilities, and tools.
- Estimate the work: Estimate the effort and duration for each activity.
- Develop the schedule: Identify the relationships between tasks and build a schedule to complete the work.
- Determine project costs and budget

Building a Project Plan

More content for a project plan:

- Update roles and responsibilities
- Update project organization
- Determine project control system
- Plan for change
- Plan for project information
- Plan for issues
- Plan for quality
- Plan for communications
- Plan for team management
- Plan for procurements

Project Plan Checklist

A quick checklist to help determine whether your project is planned properly and whether you are ready to proceed to execute the project:

- Have you answered all the important detailed questions?
- Have you reviewed your WBS, work effort estimates, project schedule, and project budget against their respective checklists?
- Has the project plan been reviewed and approved?
- Was the project plan signed off in a review meeting? In person?

Planning a project

Key principles
- Sets foundation for executing and controlling project
- Iterative process
- Must be able to determine at least 1 success factor
- Proactive management
- Ask questions, facilitate, involve stakeholders
- Team approach
- Answer important questions

Purpose
- Defines how work will be done
- Defines how project will be managed

Checklist
- Answer important planning questions
- Review key planning deliverables against their respective checklists
- Reviewed and approved by key stakeholders
- Signed-off by key stakeholders

Supplemental project plans
- Change control plan
- Communications plan
- Configuration mgmt plan
- Procurement mgmt plan
- Quality mgmt plan
- Responsibility matrix
- Resource mgmt plan
- Risk mgmt plan
- Risk response plan
- Variance mgmt

Building a project plan
- Validates project definition
- Determine what needs to be done
- Determine acceptance criteria
- Determine resource needs
- Acquire resources
- Estimate work
- Develop schedule
- Update roles and responsibilities
- Update project organization
- Determine costs and budget
- Determine project control system
- Plan for changes
- Plan for information/deliverable mgmt
- Plan for issues
- Access and plan for risks
- Plan for quality
- Plan for communications
- Plan for team management
- Plan for procurement activity

9

Develop Work Breakdown Structure

What is a WBS

- A WBS is a logical breakdown (decomposition) and representation (hierarchical structure) of the work required by the project.

- Two forms:
  - Graphical: best for communicating the top three to five levels of work activity to senior management or customer stakeholders.
  - Outline: best for capturing the details needed for cost and schedule development.

Graphical
Form of WBS
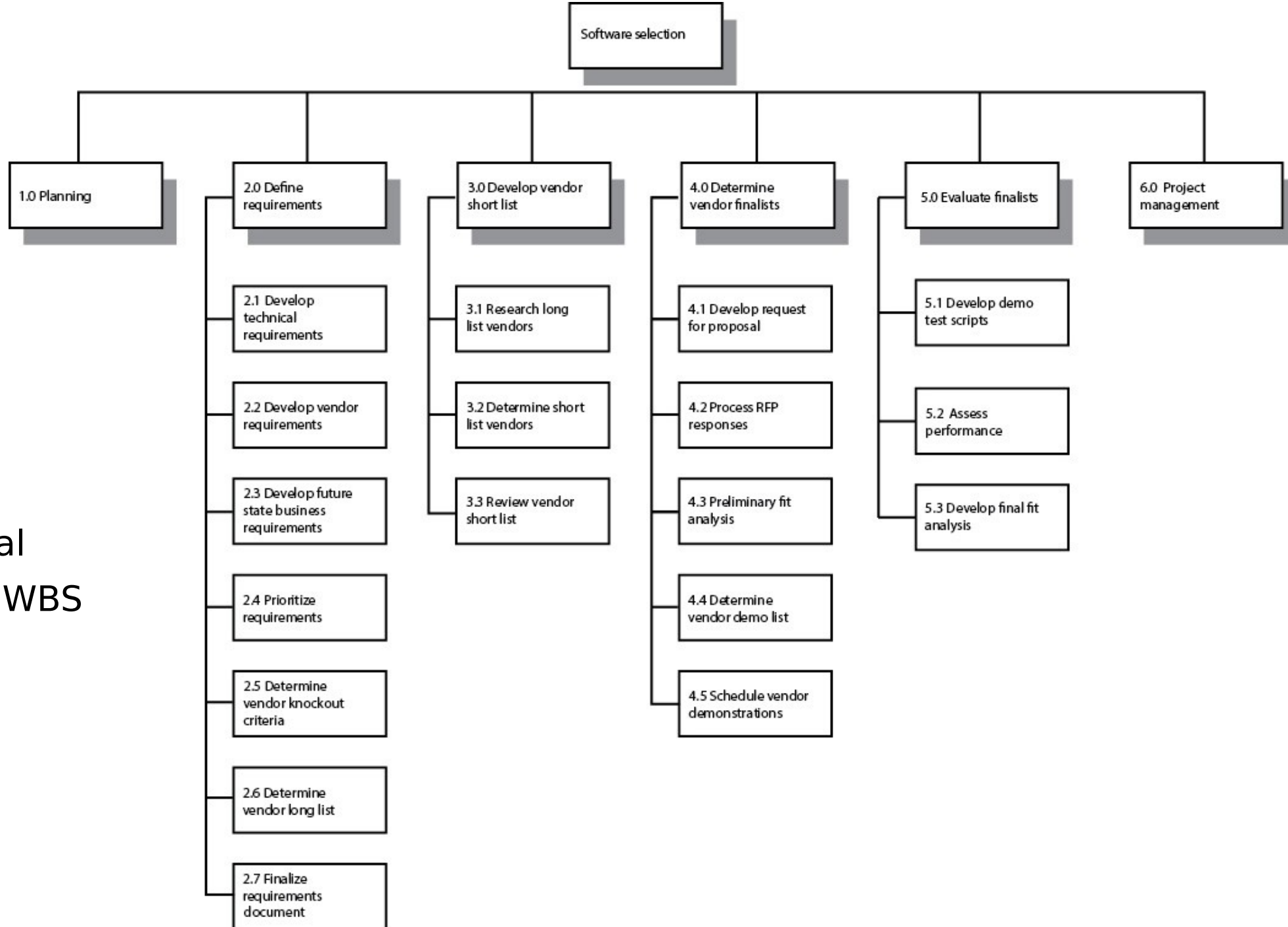
Outline
Form of WBS

- □ Software Selection Project
  - □ 1 Planning
    - 1.1 Determine selection strategies
    - 1.2 Determine final schedule
  - □ 2 Define Requirements
    - 2.1 Develop Technical Requirements
    - 2.2 Develop Vendor Requirements
    - 2.3 Develop Future State Business Requirements
    - 2.4 Prioritize Requirements
    - 2.5 Identify Vendor Knockout Criteria
    - 2.6 Determine Vendor Long List
    - 2.7 Finalize Requirements Document
  - □ 3 Develop Vendor Short List
    - 3.1 Research Vendors on Long List
    - 3.2 Determine Vendor Short List
    - 3.3 Review Vendor Short List
  - □ 4 Develop Vendor Finalist List
    - ⊞ **4.1 Develop Request for Proposal (RFP)**
    - ⊞ **4.2 Process RFP Responses**
    - 4.3 Develop Preliminary Fit Analysis
    - 4.4 Determine Vendor Demonstration List
    - 4.5 Schedule Demonstrations
  - □ 5 Evaluate Finalists
    - 5.1 Develop Demo Test Scripts
    - □ **5.2 Assess Performance**
      - ⊞ **5.2.1 Assess Package Performance**
      - ⊞ **5.2.2 Assess Vendor Performance**
    - ⊞ **5.3 Develop Final Fit Analysis**
    - 5.4 Review Final Fit Analysis
    - 5.5 Make Final Recommendation
  - ⊞ **6 Project Management**

13

WBS vs. Project Schedule

- Key differences between WBS and project schedule:
  - Task dependencies: WBS does not show them; a project schedule does.
  - Scheduled tasks: WBS does not show when tasks occur; a project schedule shows start and end dates for each task.
  - Task assignments: WBS does not show who is assigned to an individual task; a project schedule does.
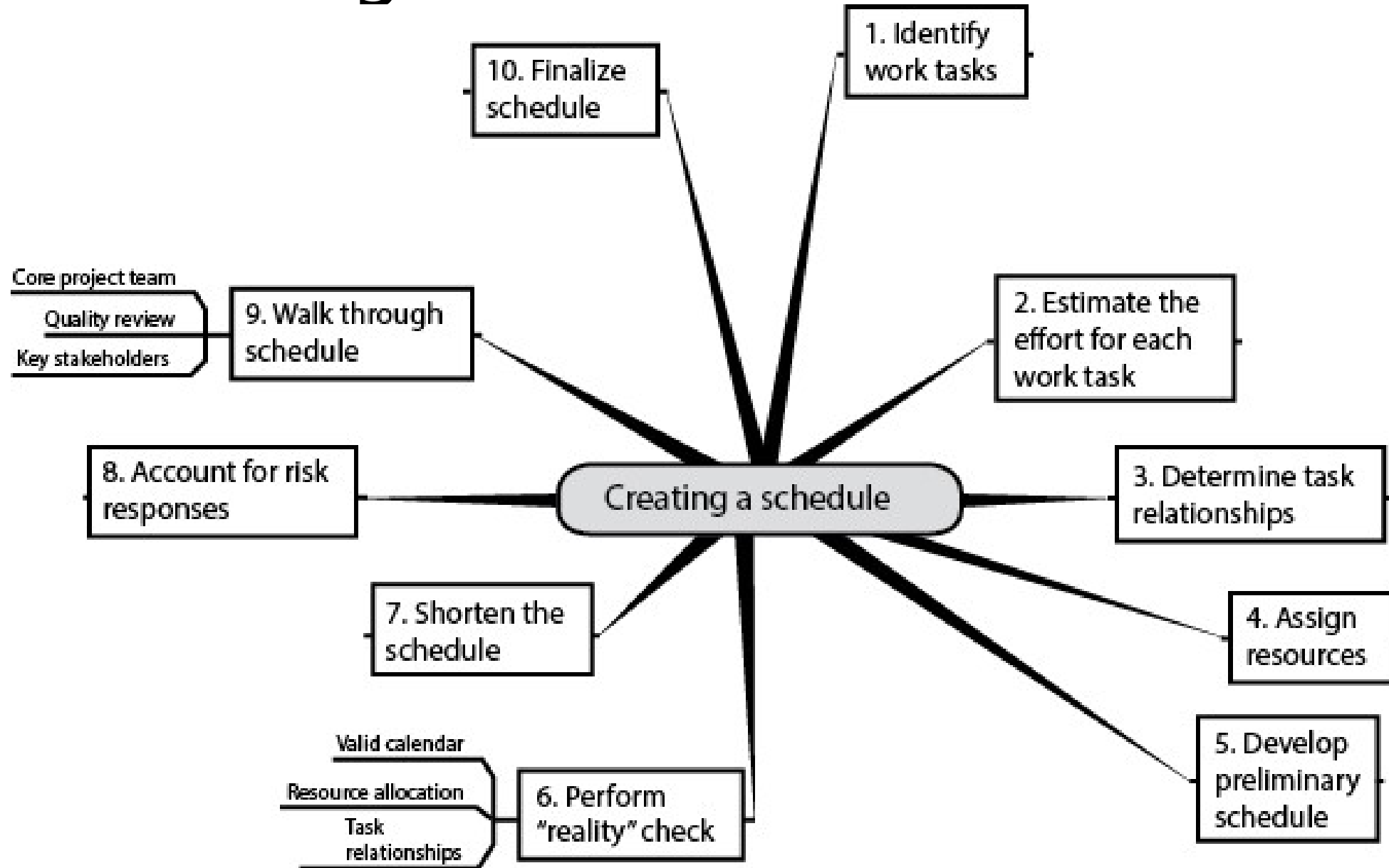
Develop Project Schedule

What is Project Schedule

- A tool that merges all the work tasks to be performed, their relationships, their estimated durations, and their assigned resources to a calendar.
  - Specialized software (e.g., MS Project) may be used to produce a project schedule.
- Goal:
  - Complete: The schedule must represent all the work to be done. This is why the quality and completeness of the WBS is so important.
  - Realistic: The schedule must be realistic with regard to time expectations.
  - Accepted: The schedule must have buy-in from team members and stakeholders.
  - Formal: The schedule must be documented and formalized.

Key Inputs

- WBS: List of organized tasks, the work to be done.
- Effort estimates: Amount of effort and time each task will take.
- Task relationships: The logical dependencies that exist between work tasks.
- Resources: The actual personnel and equipment needed to perform the work between work tasks.
- Risk responses: Measures taken to deal with the uncertainty surrounding effort and resource estimates. Usually in the form of additional time (contingency buffer) added to the schedule.

Creating a Schedule

Presenting Schedule

Method	Key Attributes	Benefits	Notes
Milestone chart	This is a bar chart that shows start and end dates, major deliverables, and key external dependencies.	Highlights key decision and completion points as well as any external dependencies.	Milestone tables are also used (same information, no bar chart).
Gantt chart	This is a bar chart that shows the various levels of the WBS.	Easy to read, incorporates the WBS, and can easily show actual progress against estimates.	Usually does not generally show interdependencies.
Timeline summary	Combines aspects of a milestone chart and a Gantt chart.	Summarizes critical path, key milestones, and relative duration of key activities. Excellent for executive presentations.	Microsoft Project (starting with 2010) offers a new feature called Timeline View that makes this method much easier to generate.
Network diagram	A network diagram uses nodes and arrows. Date information is added to each activity node.	Highlights the critical path and shows project logic (flow).	For presentations, the summary task level of the WBS is generally used; otherwise, a network diagram is best suited for wall display.
Modified WBS	Uses the project WBS organization with status information added to each node.	Shows progress against original work breakdown organization. Easy to read.	Similar to network diagram type representations.

- Need to effectively communicate the project schedule to the various project stakeholders.
- Use of visual summary representations of the schedule is highly recommended.