MODULE 3

Planning: Schedules, Budgets, and Resources

Week 3 · 4 lessons · ~4 hrs

Lessons in this module:

LESSON 3.1

Building the project schedule

A project schedule converts the WBS into a timeline. It identifies activities, sequences them, estimates durations, and assigns resources.

Schedule development process:

1. Define activities — list all tasks needed to produce deliverables
2. Sequence activities — identify dependencies (which task must finish before another can start)
3. Estimate durations — how long each task will take
4. Develop the schedule — use tools like Gantt charts or network diagrams

Dependency types:

- Finish-to-Start (FS) — most common; Task B cannot start until Task A finishes
- Start-to-Start (SS) — both tasks start at the same time
- Finish-to-Finish (FF) — both tasks must finish together

> Critical Path Method (CPM): The longest sequence of dependent activities that determines the minimum project duration. Any delay on the critical path delays the whole project.

LESSON 3.2

Cost estimation and budget planning

Every project needs a realistic budget. Cost planning starts with estimating individual activity costs and rolls them up into a total project budget.

Estimation techniques:

- Analogous estimating — based on past similar projects (fast, less accurate)
- Parametric estimating — uses statistical relationships (e.g., cost per square meter)
- Bottom-up estimating — estimates each task individually and sums them (most accurate, most time-consuming)
- Three-point estimating — uses Optimistic (O), Most Likely (M), and Pessimistic (P) to calculate: PERT = (O + 4M + P) / 6

> Always include a contingency reserve (for known risks) and a management reserve (for unknown risks) in the budget. Never promise a budget with zero buffer.

LESSON 3.3

Resource planning and team assignment

Resources include people, equipment, materials, and money. Resource planning ensures the right resources are available at the right time.

Key resource planning tools:

- Resource Breakdown Structure (RBS) — hierarchical list of resource categories
- Responsibility Assignment Matrix (RAM / RACI) — maps who is Responsible, Accountable, Consulted, and Informed for each task
- Resource Calendar — shows when resources are available (accounts for holidays, part-time schedules)
- Resource Histogram — visual of resource demand over time to spot overallocation

RACI EXAMPLE

For a task "Prepare financial report": Finance Manager = Responsible, CFO = Accountable, IT = Consulted, Board = Informed.

LESSON 3.4

The Project Management Plan

The Project Management Plan (PMP) is the master document that integrates all subsidiary plans. It is not just a schedule — it is the complete guide for how the project will be executed, monitored, and closed.

Subsidiary plans included in the PMP:

- Scope Management Plan
- Schedule Management Plan
- Cost Management Plan
- Quality Management Plan
- Risk Management Plan
- Communications Management Plan
- Stakeholder Engagement Plan
- Change Management Plan