

Introduction to Project Management

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Key concepts, phases, and tools for successfully delivering projects

1. What Is Project Management?

Aspect	Description
Definition	The discipline of planning, executing, monitoring, controlling, and closing work to achieve specific goals within defined constraints (time, cost, scope, quality).
Purpose	Align project outcomes with organizational strategy, deliver value to stakeholders, and manage risk.
Typical Deliverables	Products, services, results, or any unique outcome that satisfies a set of requirements.
Key Roles	• Project Sponsor – champions the project, provides resources. • Project Manager – leads planning & execution. • Team Members – perform the work. • Stakeholders – anyone affected by the project (customers, regulators, etc.).

2. Core Project Management Concepts

Concept	Meaning	Why It Matters
Scope	What is included (and excluded) in the project.	Prevents “scope creep” and keeps the team focused.
Time	Schedule of activities, milestones, and deadlines.	Controls delivery dates and resource allocation.
Cost	Budgeted financial resources.	Ensures the project stays financially viable.
Quality	Degree to which deliverables meet requirements.	Guarantees stakeholder satisfaction.
Risk	Uncertain events that could affect objectives.	Enables proactive mitigation and contingency planning.
Stakeholder Management	Identifying, analyzing, and engaging those impacted.	Builds support and reduces resistance.

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Concept	Meaning	Why It Matters
Communication	Information flow among project participants.	Keeps everyone aligned and informed.

These six elements form the classic **Triple Constraint** (Scope?Time?Cost) with quality, risk, and stakeholder engagement as additional dimensions.

3. Project Life Cycle Phases

Phase	Primary Objectives	Typical Outputs
1. Initiation	Define the project's purpose and obtain approval.	• Project Charter • Business Case • Stakeholder Register • Project Management Plan (integrated) • Scope Statement & WBS
2. Planning	Develop a roadmap for how the project will be executed, monitored, and closed.	• Schedule (Gantt/Network diagram) • Budget & Cost Baseline • Risk Management Plan • Communication Plan • Deliverables
3. Execution	Perform the work defined in the plan; coordinate people and resources.	• Performance Reports • Updated Issue & Risk logs • Earned Value Metrics (CPI, SPI)
4. Monitoring & Controlling	Track progress, compare against plan, and make adjustments.	• Change Requests • Updated Baselines • Final Deliverables
5. Closing	Formalize acceptance, capture lessons learned, release resources.	- Acceptance • Project Closure Report • Lessons Learned Register

Note: Phases often overlap; monitoring & controlling runs concurrently with execution.

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4. Essential Project Management Tools & Techniques

Tool / Technique	When to Use	What It Produces
Work Breakdown Structure (WBS)	Early planning	Hierarchical decomposition of scope into manageable work packages.
Gantt Chart	Scheduling & tracking	Visual timeline with tasks, durations, dependencies.
Critical Path Method (CPM)	Complex schedules	Identifies longest