What is a Project ?

- A project is a **single**, **non-repetitive** enterprise, undertaken to achieve a **planned result** within the **time, cost** and **specifications**.

- *Scope, unfamiliarity, uniqueness, constraints, complexity, risks, stake.*

Murphy's Law in PM

- Projects progress **quickly** till they are **90% complete**, then *crawl to 98%* and **remain there forever**.
- A **carelessly planned** project take **3 times** resources
- A **carefully planned** project will take **twice** the resources
- Every **solution breeds new problems** for a project manager
- **No major project** is completed in time, within the budget and with the *same staff* that started it.

Learning objectives of this session

- **Relevance** of PM to public sector
    - Importance
    - Benefits
- PM – **Definition, Terms & Jargon**
- Various **techniques** used in project management
- Various **facets** (risk) of project management
- Acquire some **hard skills** in PM

Why some projects succeed and others fail ?!!

Importance in public sector

- Huge investment in projects- **physical infrastructure**, **mission mode programs** in social infrastructure
- **Most important reason** for delayed/ non completion of public sector projects
- **Budget/staff** decided in advance and changes take **long time**
- **Very little flexibility** to project manager
- **Political promises** on projects
- Performance of public servants now based on the **outcomes** not on the expenditure.
- **Low hanging fruits-** not practiced frequently
- All of us will be **Project Managers** of the public sector projects.

Why project management in public sector - Benefits

- **Optimal use of resources** – Monetary & others e.g., Hybrid organizational structure
- Decomposition of **complex projects**
- **Discipline** in the workforce and managers
- **Structured framework** for working in **constant change**
- *Efficiency, Effectiveness , Quality and Profits-* DMRC
- *Set an example- Konkan Railways*

Project management

- PM is the set of skills, tools and processes required to undertake a project successfully:

- **Set of skills** – *hard skills & soft skills*

- **A suite of tools** – *PERT, CPM, Gantt Chart, Primavera, MS Project*

- **A series of processes** – *Project Cycle, PDCA (plan/do/check/act), feedback, review, mid-course corrections.*

The Project Cycle

- Formulation: *initiation and definition*
- Planning: *feasibility,* ***DPR/ risks/ finances/ resources***
- ***Implementation: PERT/CPM/Gantt chart/MS Project/Prima Vera***
- Monitoring & evaluation : *quality/variance*
- Project operationalization/completion

Project planning: *Plan for the work*

- Putting *team together and roles allocation*
- *Work breakdown structure (WBS)* and task definition
- **Resource plan-** labour, finance (K/L)
- **Commitment matrix-** task network, milestones, sequencing
- Project **network techniques**

Project Implementation: *Work for the plan*

- Planning
- **Motivation**
- **Communication :** *within and without*
- Monitoring
- Identifying problems and dealing with them
- **Leadership**

Components of project management

- Scope
- Integration – Convergence, dovetailing, coordination
- Time - Crashing
- Cost – Back-loading purchase of equipments
- Quality – Better is the enemy of good !!
- HR – How many permanent hands?
- Procurement – cost, time & quality
- Communication – within and with other stakeholders
- Risk – Plan B

Leadership with integrity

Your role in implementation of projects

- Project *roles and responsibilities*
- Scope, **constraints and deliverables**
- *Risk analysis* and *contingency planning*
- Formation of **teams and their roles**
- *Work breakdown structure* and task definition
- Resource plan and **commitment matrix**
- ***Project network techniques***
- Project progress and review
- Dealing with **implementation problems**
- Project completion and handing over

Tools used in project implementation

- Project scheduling: major events, milestones, points of critical action/decision
    - **Gantt chart**
    - **Networks**
    - **CPM/PERT diagrams**
    - **MS Project**
    - **Primavera**

Risk management

- Project risk management is the **art and science** of **identifying, analyzing, and responding** to risk throughout the life of a project and in the best interests of meeting project objectives.

- Main processes include:
  - Risk management planning
  - Risk identification
  - Qualitative risk analysis
  - Quantitative risk analysis
  - Risk response planning
  - Risk monitoring and control

Risk Probability/Impact Matrix

	Impact		
Probability	Low	Medium	High
High	risk 6	risk 9	risk 1 risk 4
Medium	risk 3 risk 7	risk 2 risk 5 risk 11	
Low		risk 8 risk 10	risk 12

Risk Response Planning

- After identifying and quantifying risks, you must decide how to respond to them.

- Four main response strategies for negative risks:
  - Risk **avoidance**
  - Risk **acceptance**
  - Risk **transference**
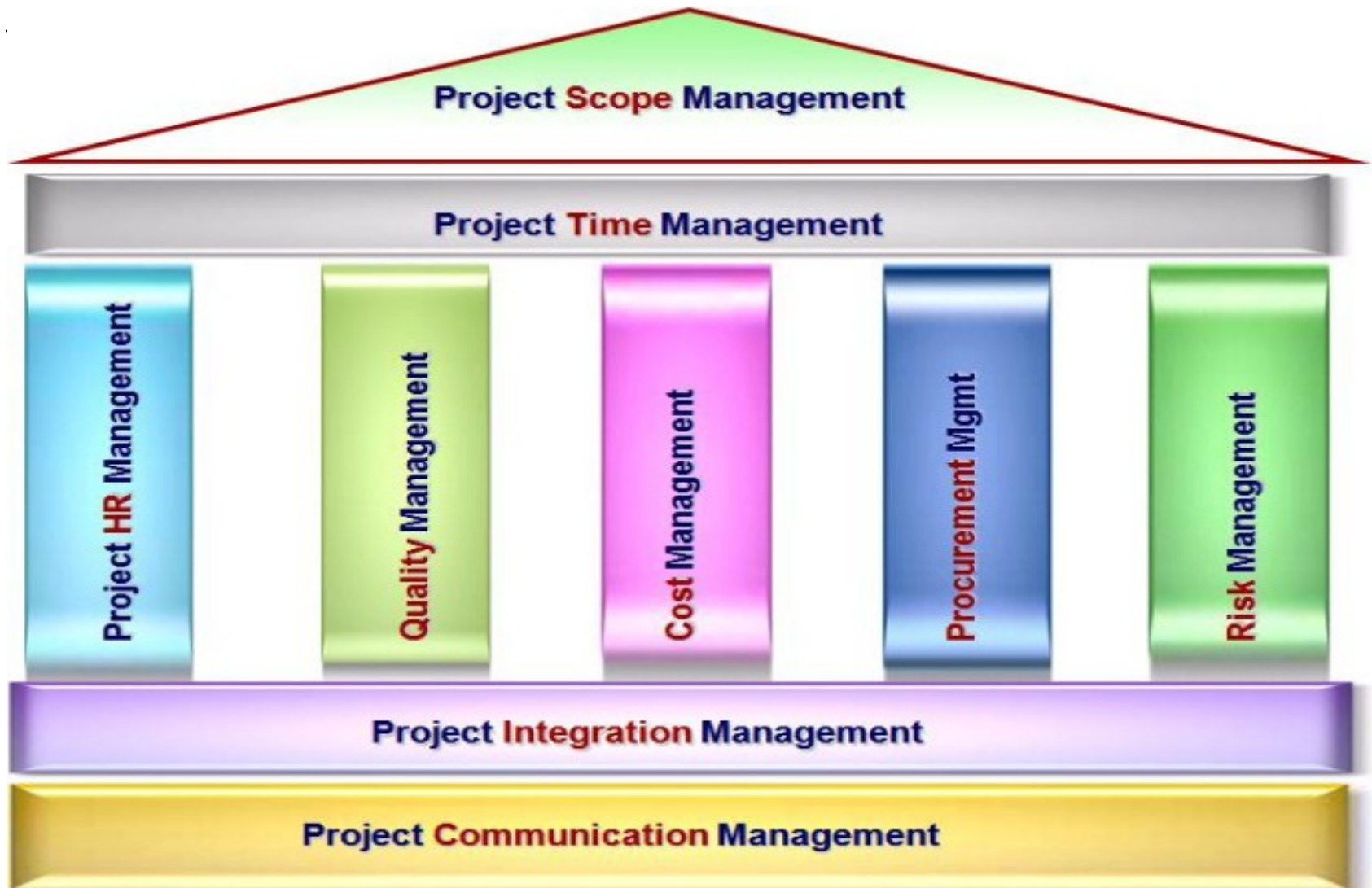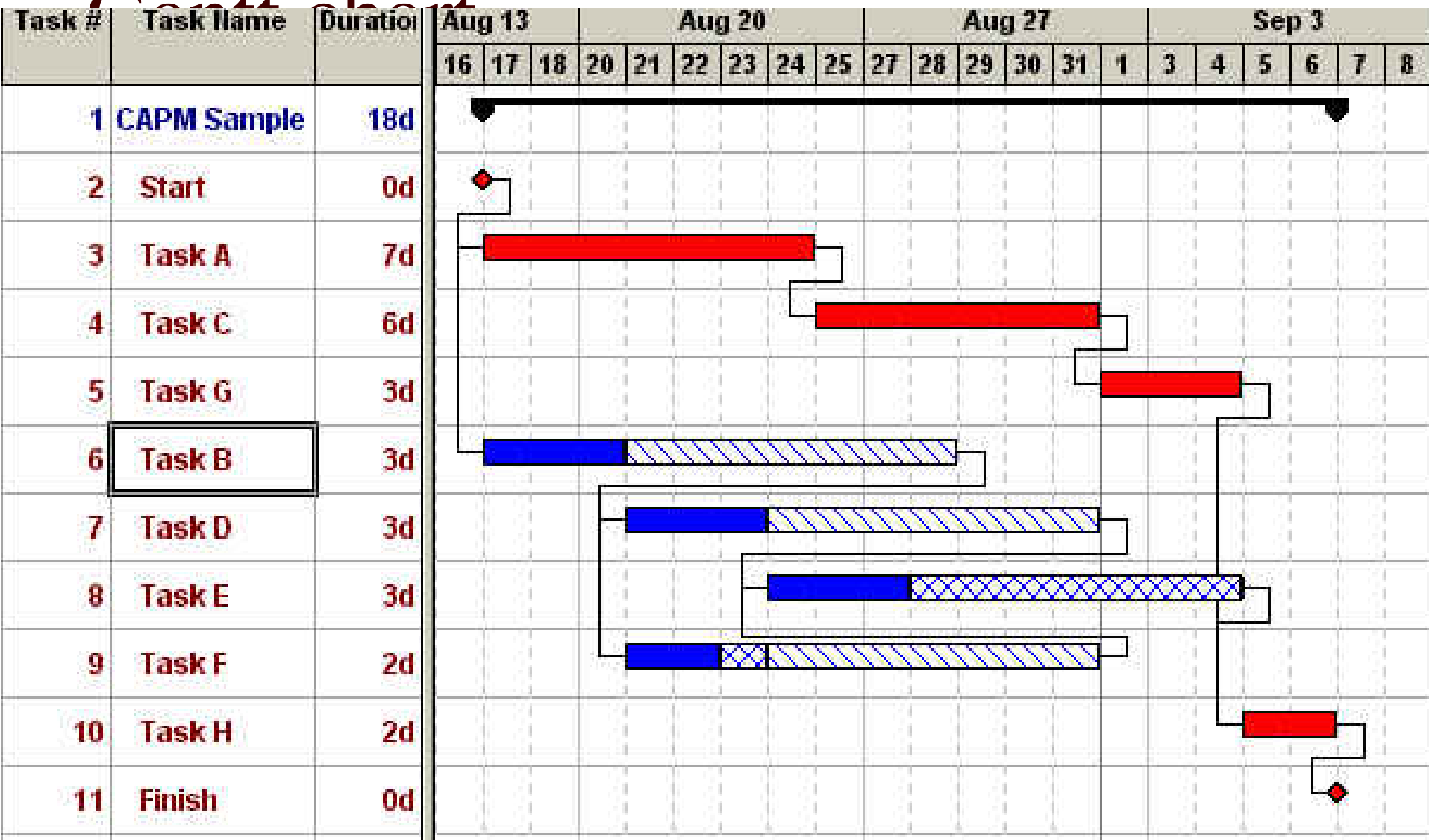 - Risk **mitigation**

An exercise

Recap

- What is *Project and project management*
- **Project cycle** and **Facets** of project management
- *PERT/ CPM/ Gantt Chart/ Crashing/ Back-loading/ Variance/ Slack/ ES-EF-LS-LF/ PESTLE analysis/ Six Hats/ 5 Ps*
- *Project Risk Management*
- **Special features/ challenges** of public sector project management

Back up slides

Your take home !!!!!!!

Project Scope Management

Project Time Management

Project HR Management

Quality Management

Cost Management

Procurement Mgmt

Risk Management

Project Integration Management

Project Communication Management

Gantt chart

| Task #	Task Name	Duration
1	CAPM Sample	18d
2	Start	0d
3	Task A	7d
4	Task C	6d
5	Task G	3d
6	Task B	3d
7	Task D	3d
8	Task E	3d
9	Task F	2d
10	Task H	2d
11	Finish	0d

5 Ps Model: Pryor, White & Toombs

- Purpose
- Principles
- Processes
- People
- Performance

PERT/CPM Chart - PC Card
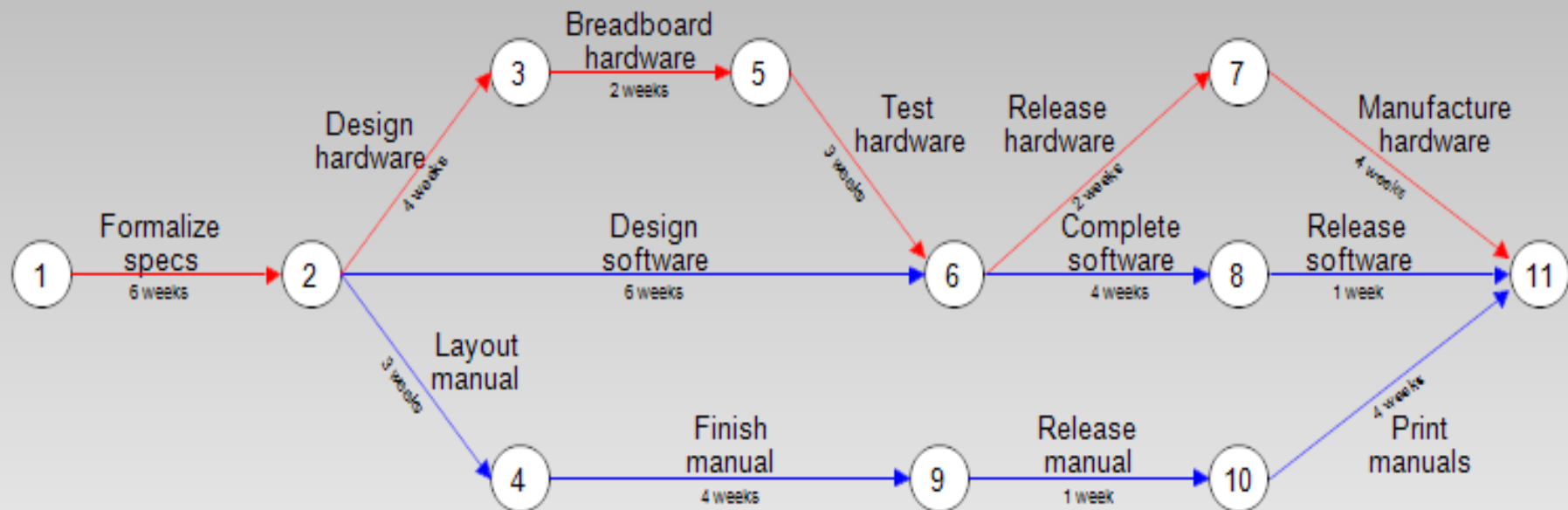
1	Start project	5	Breadboard running	9	Manual finalized
2	All specs finalized	6	Hardware fully functional	10	Manual ready for printer
3	Hardware design completed	7	PC Board released	11	Project complete
4	Manual layout completed	8	Software finished	→	Critical path
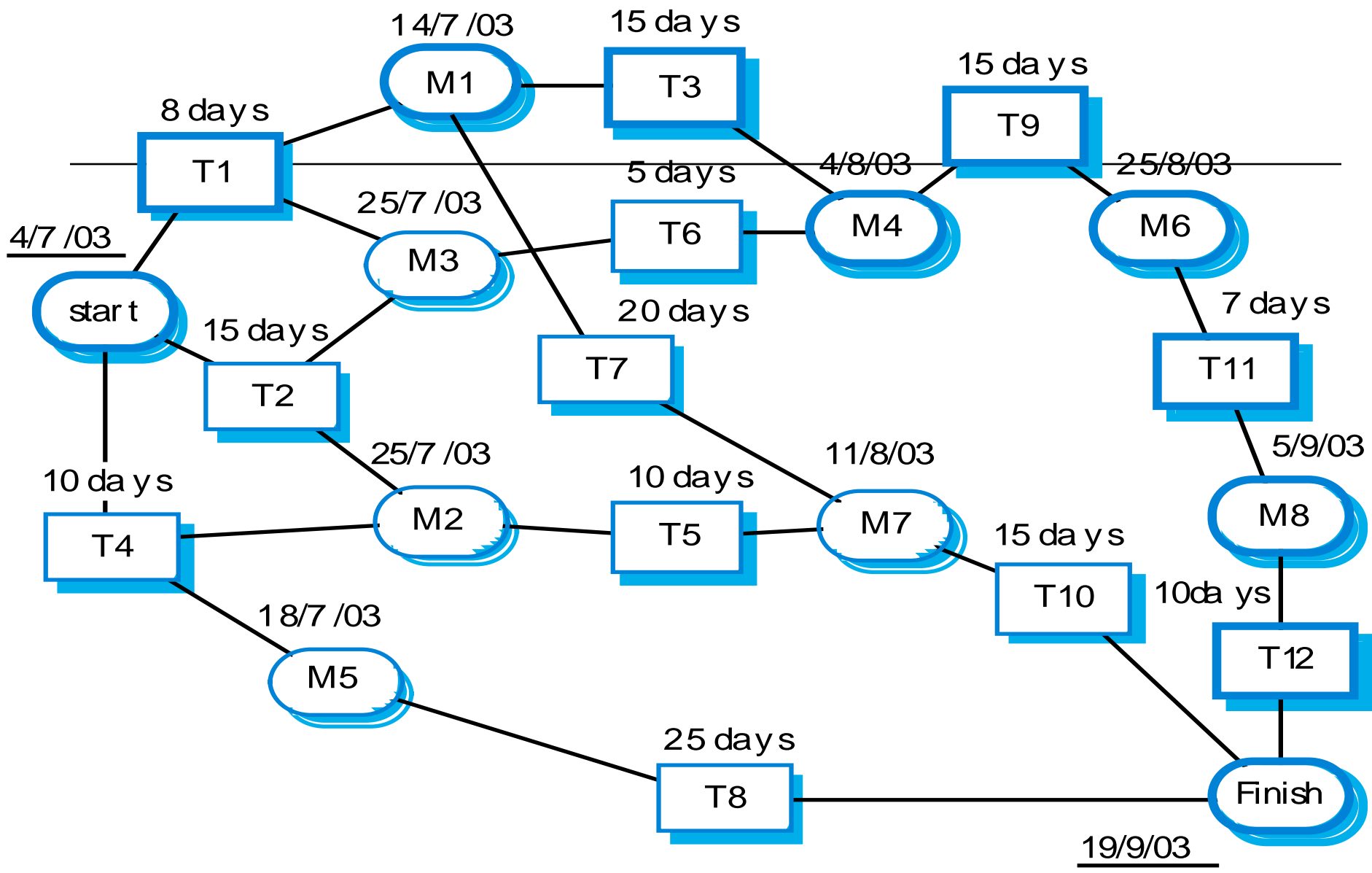
Activity	Duration (days)	Dependencies
T1	8	
T2	15	
T3	15	T1 (M1)
T4	10	
T5	10	T2, T4 (M2)
T6	5	T1, T2 (M3)
T7	20	T1 (M1)
T8	25	T4 (M5)
T9	15	T3, T6 (M4)
T10	15	T5, T7 (M7)
T11	7	T9 (M6)
T12	10	T11 (M8)

- Technique of risk management that involves (1) taking steps to remove a hazard, (2) engage in alternative activity, or (3) otherwise end a specific exposure.

- Systematic reduction in the extent of exposure to a risk and/or the likelihood of its occurrence. Also called risk reduction.

- Risk acceptance is used in risk management to describe an informed decision to accept the consequences and likelihood of a particular risk.