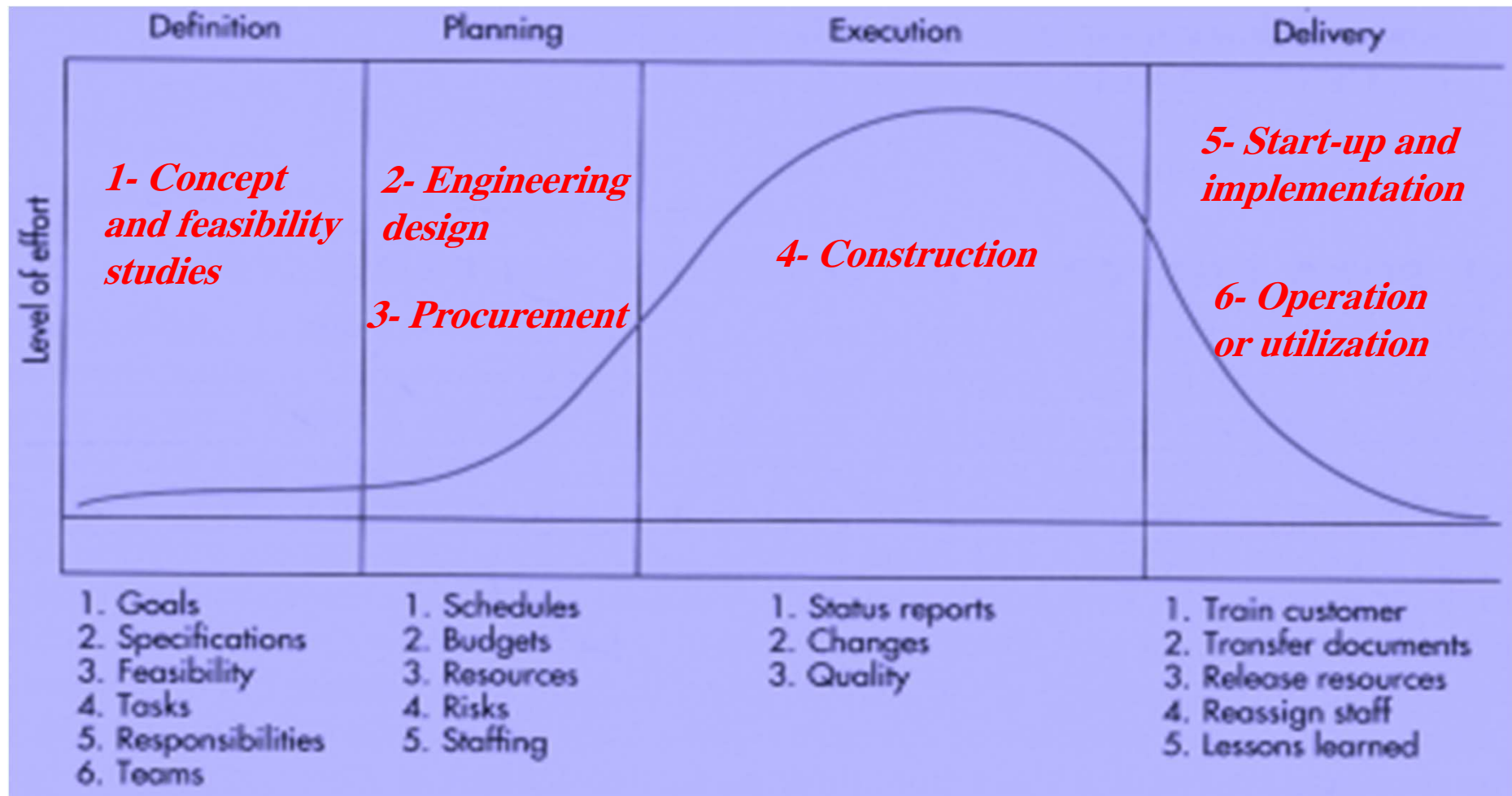


Topic1b: Project Life Cycle

Phases of Project Life Cycle



Concept and feasibility studies

(Owner and Consultant)

- Initiate the project idea through recognizing a need for the project which could be:
 - Satisfying a future demand (e.g. electricity)
 - Improving productivity (new machine)
 - Increasing income (real estate), or
 - Alleviating existing deficiencies, e.g.:
 - long waiting time at a road intersection,
 - limited office space,
 - small warehouse,
 - no competition edge-high competition-(manual vs. computerized word processing)

Concept and feasibility studies (*Owner and Consultant*)

- Identify the possible alternatives and check their feasibility. Feasibility criteria are:
 - ***Technical***: approve the alternative that satisfies the technical restrictions,
 - ***Economical***: identify the most economical alternative,
 - ***Financial***: identify the source and availability of money to finance the alternative.

Engineering Design

(Owner and consultant)

- Preparing blue prints (**drawings**) and specs (**specifications**) for the project.

Procurement

It involves contracting with a general contractor and subcontractor and ordering project resources.

Construction

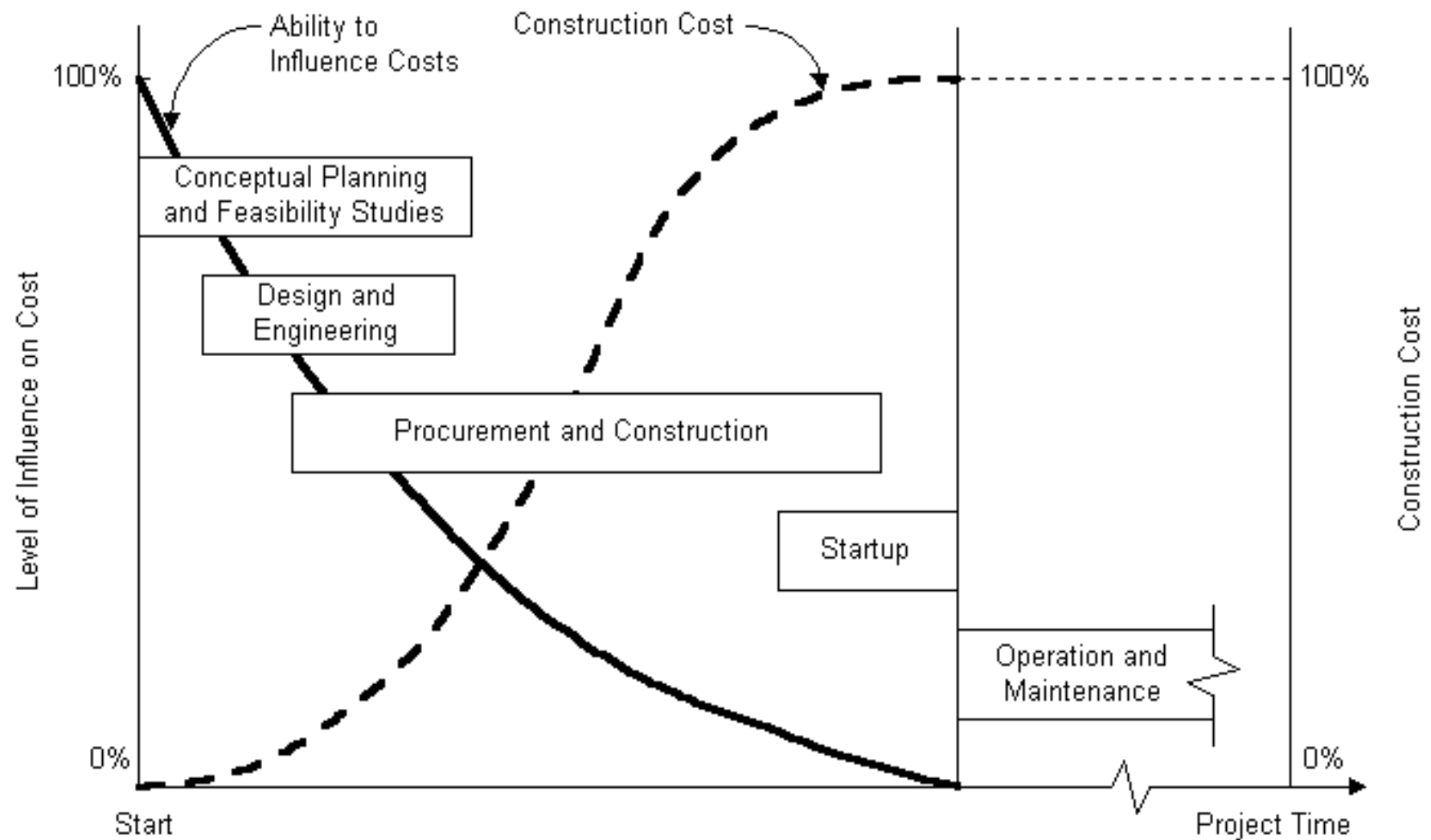
- It converts the blue prints and specs into physical structures.

Start-up and implementation

- It involves testing the functionality of the components and the whole system.
(Special attention in refineries and chemical plant)

Operation and utilization (O&U)

- O&U involves the final phase of the project life cycle that will last up to the life of the project.



Example of a Project Management Process

- **Planning Phase**
 - Listing of Activities
 - Gross Resource Requirements
 - Cost Estimates
 - Activity Durations

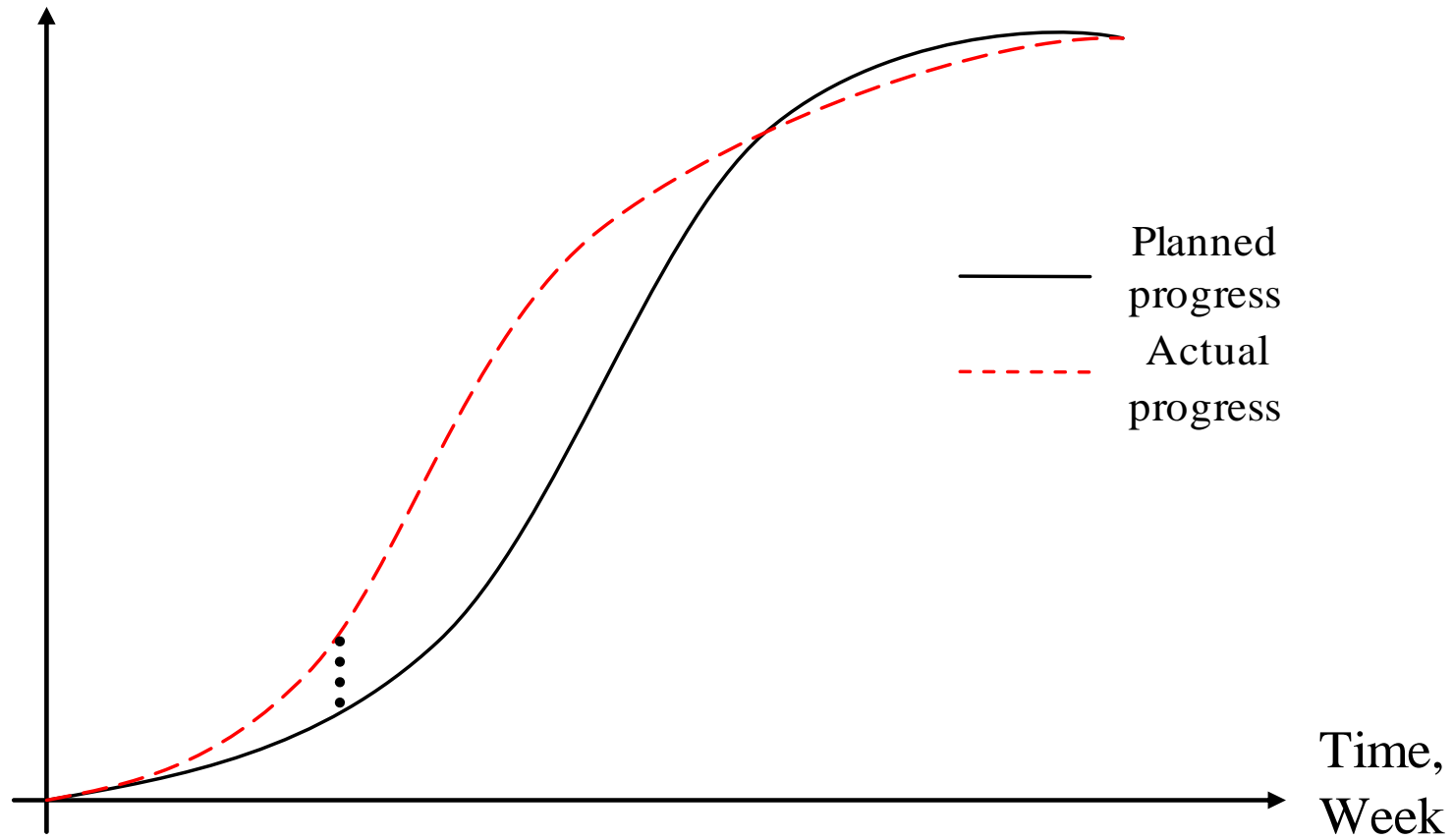
Example of a Project Management Process

- **Scheduling**
 - Time ordering of Activities
 - Resource Requirement at each stage
 - Expected completion time of each task

Example of a Project Management Process

- **Monitoring & Control**
 - Reviewing the difference between the schedule & actual performance
 - Analysis of the difference
 - Correction Measures

Progress \$, MH



Principles

1. Don't exceed resource Capabilities
2. Provide for continuity of operation
3. Start Critical Activities early