

Project Planning & Control

Lesson 4

Summary of Key Topics, Types of Networks

Koshy Varghese, Ph.D.

Professor

Building Technology & Construction Management

Department of Civil Engineering

I.I.T. Madras

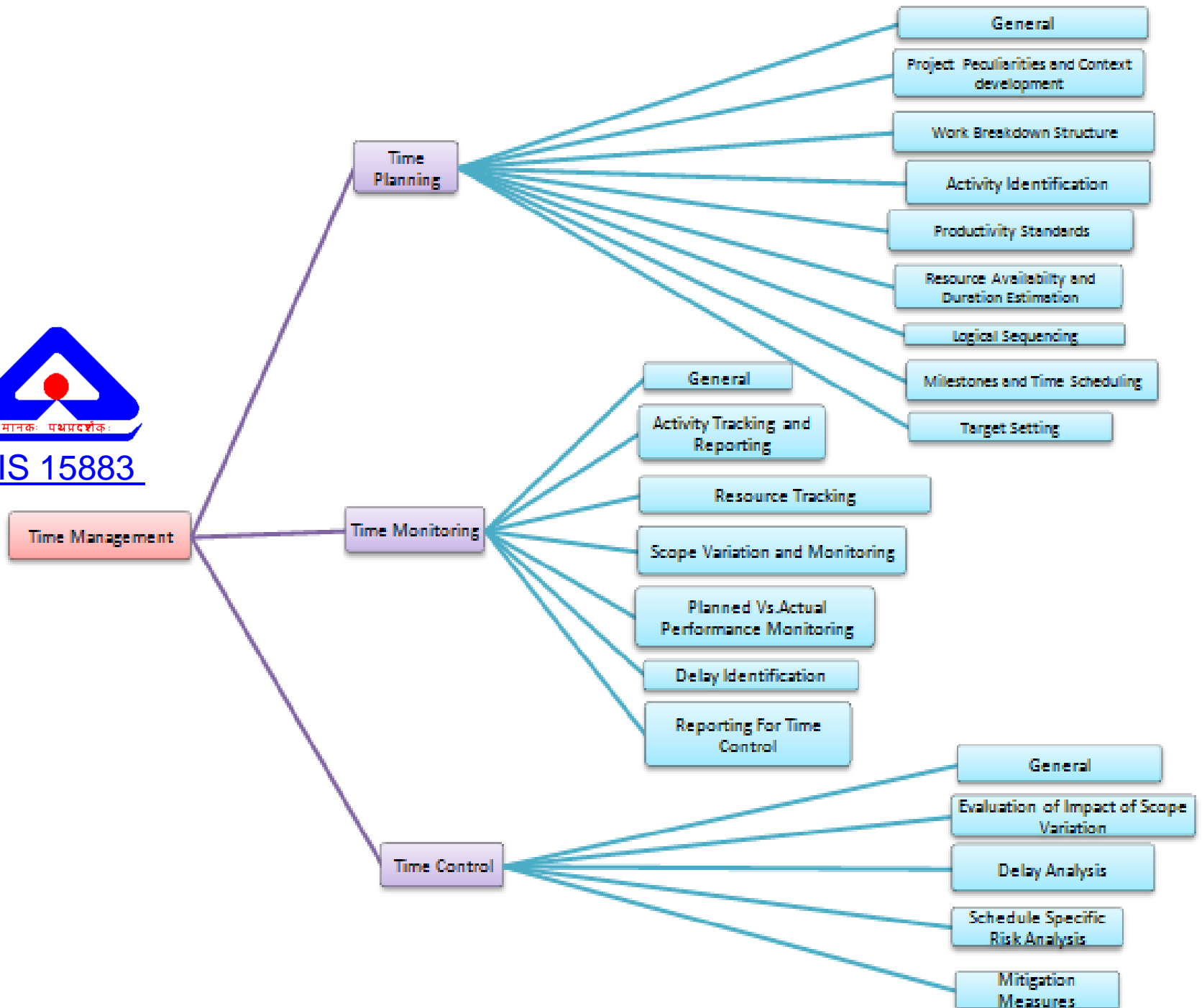


Learning Objectives

1. Summary of key topics
2. Network representation
 - Types of Networks & Comparison
3. Network Analysis - examples
 - Forward Pass
 - Backward Pass
 - Results in Gantt chart
 - Results for Project Planning



BIS 15883



PMBOK- TIME Management



6.1
Define
Activities

6.2
Sequence
Activities

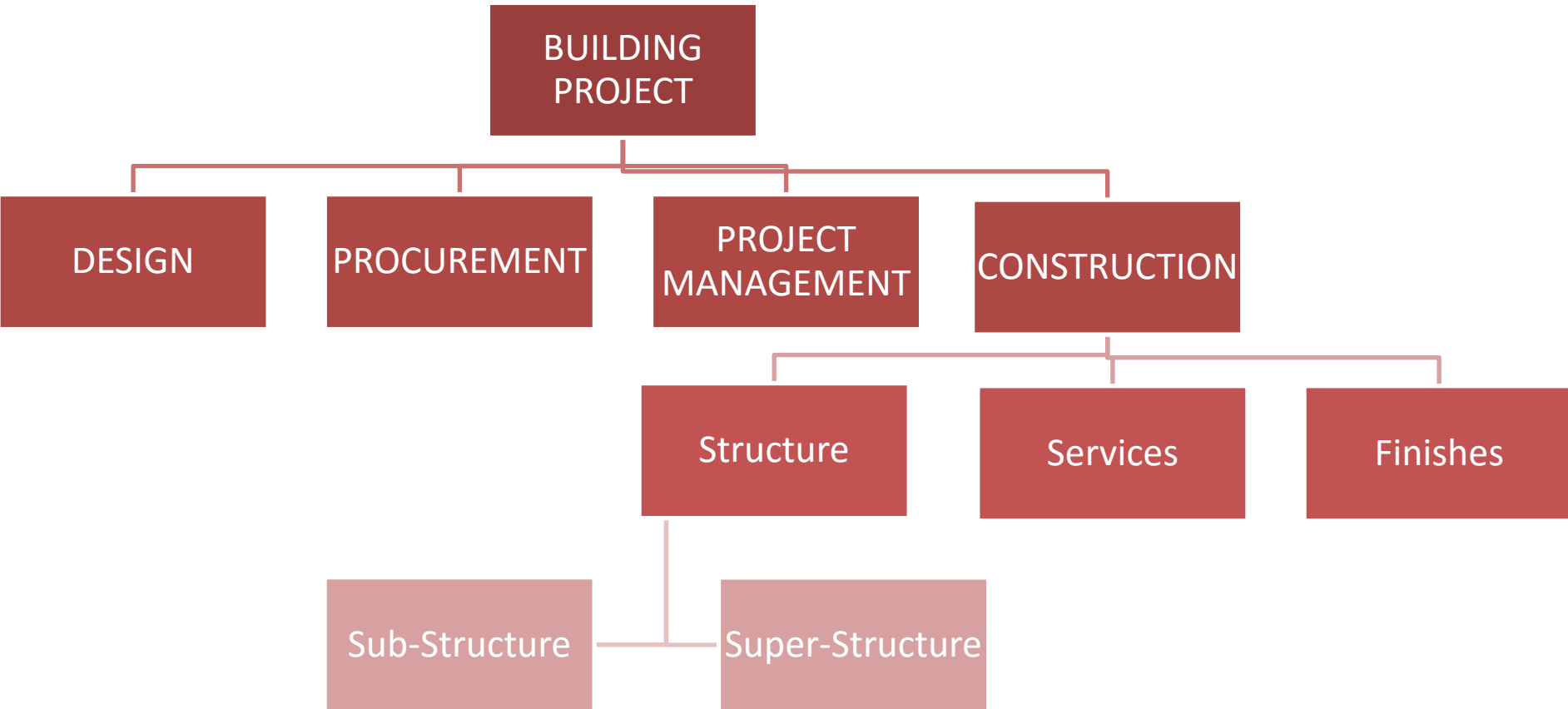
6.3
Estimate
Activity
Resources

6.4
Estimate
Activity
Duration

6.5
Develop
Schedule

6.6
Control
Schedule

Work Breakdown Structure



Identify Activities

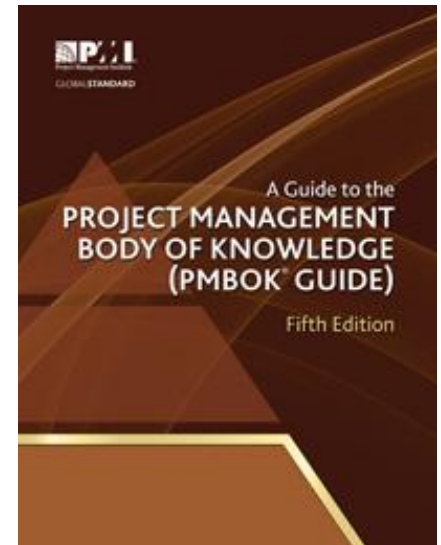
Activity Duration Estimating

6.4.2 Tools & Techniques

- Expert Judgment (Heuristic)
- Analogous Estimating (Data + Heuristic)
- **Parametric estimating**
- Three Point Estimate (Uncertainty)
- Reserve analysis (Buffer)

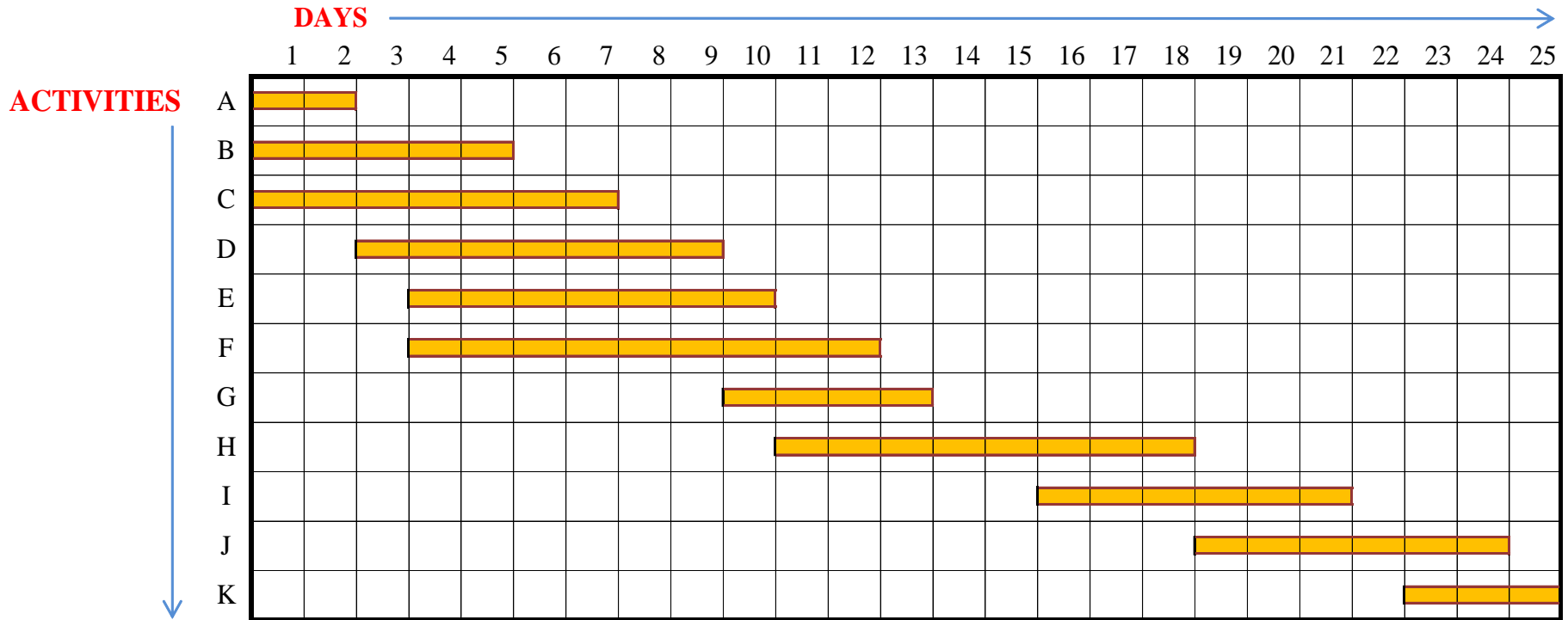
6.4.3 Outputs

- Activity duration estimates
- Activity attributes



BAR / GANTT Charts

- History
- Variations & Usage
- Advantages & Limitations



Project Planning Tools

- **Bar/ Gantt Charts**
- **Critical Path Method**
- **Program Evaluation and Review Technique**
- **Monte-Carlo Simulation**
- **Dependency Structure Matrix**