

6.5 Develop schedule

Combines information into a calendar based Schedule

Develop Schedule

Range of overall P duration

- 1. Sum of all activities on critical path
- 2. Sum up variances of each activity
- 3. Take square root of "Activity Variance" Sum
- 4.  $EAD \pm \sigma$

Determine all roles & responsibilities

Go back - iterations

Finalize the "how to execute & ctrl." part of all mgmt. plans

Develop realistic & final PP & performance measurement baseline

Involves

- working with stakeholders priorities
- looking for alternative ways to complete work
- looking on impacts on other Projects
- negotiating resource availability with FM
- applying leads & lags to schedule
- compressing schedule
  - Crashing
  - Fast tracking
  - Reestimating
- adjusting PP
- Determine optimum schedule (P mgmt. software)
- using Monte-Carlo Analysis
- levelling resources
- gaining stakeholder buy-in / formal mgmt. approval

Tools/Techniques

Schedule Network Analysis

Critical Path Method

Advantages

- longest path in network, shortest possible duration
- Proves how long P will take
- Determines where to focus attention
- Determines if issue needs immediate attention
- Provides vehicle to compress schedule
- Determines float
  - Negative float requires attention
  - Schedule Compression
  - Total Float
  - Project Float
  - Free Float

Near Critical Path

Schedule Compression

Fast Tracking

- Doing activities on critical path in parallel
- Rework
- Increases Risk
- Requires more attention on COMM.

Crashing

- Making cost & schedule trade-offs
- Trades time for money
- Increased Costs

What-if scenario Analysis

Calculated through Monte-Carlo Analysis

Resource levelling

Produces a resource-limited schedule

Critical Chain Method

Network Diagram with **Resource** dependencies

Leads & Lags

Scheduling tool

- Network Diagram
- Milestone Charts
- Bar Charts (Gantt Charts / MS Proj)

Input

- Activity List
- Activity Attributes
- Project Schedule Network Diagram
- Activity Resource Req's
- Resource Calendars
- Activity Duration Estimates
- Project Scope Statement
- EEF
- OPA

Output

- Project Schedule
- Schedule Baseline
  - Difference between schedule baseline & customer required end date = P Float
- Schedule Data
- Updt. P doc's