Scope and Schedule Management in Multiple Projects

Learning Objectives

- Familiarize upon processes involved in Project
 Scope and Schedule Management
- Understand the inputs necessary to determine the Project Context and Schedule
- Familiarize upon the tools and technique to monitor and control Project Scope and Project Schedule

Scope Management

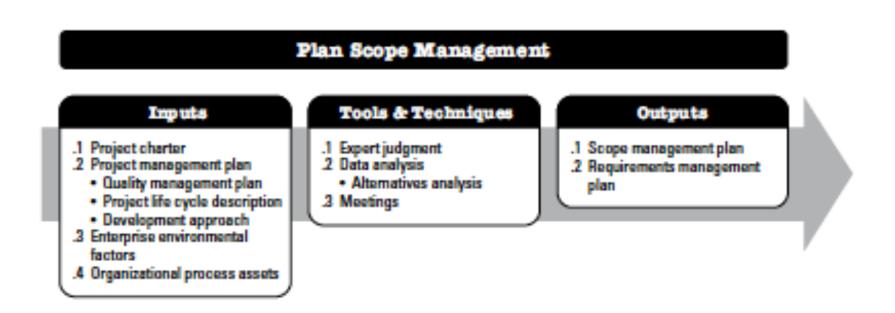
- It is the process of defining what work is required and then ensuring that all of that work is done
- The processes involved in scope management;
 - Plan Scope Management --- Done in Planning
 - Collect Requirements --- Done in Planning
 - Define Scope --- Done in Planning
 - Create WBS --- Done in Planning
 - Validate scope --- Done in M & C
 - Control Scope --- Done in M & C

Product and Project Scope

- Product scope are the product deliverables with their associated features and functions
 - Or these can also be defined as the requirements that relate to the product, service or result of the project
- Project scope is the work project team will do to deliver the product of the project; it encompasses the product scope and also includes meetings, reports etc
 - To determine the project scope has been successfully completed, the work accomplished is measured against the scope baseline

Plan Scope Management

 It provides guidance and direction on how scope will be managed throughout the project



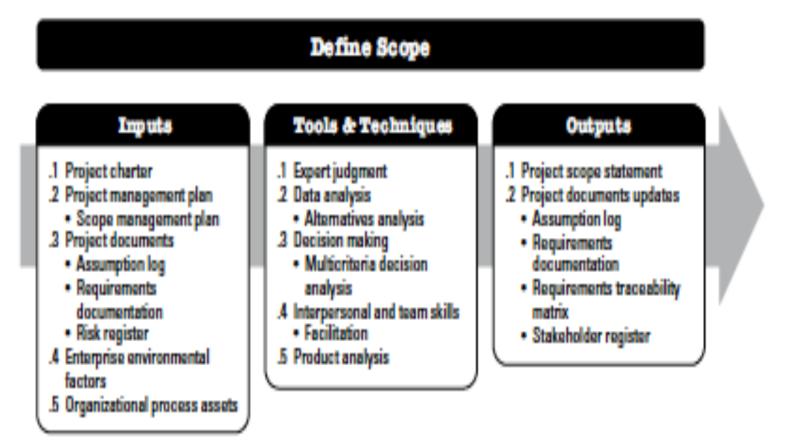
Collect Requirements

 It provides guidance the basis for defining the product scope and project scope

Collect Requirements Tools & Techniques Inputs Outputs .1 Project charter Expert judgment Requirements documentation .2 Requirements traceability .2 Project management plan .2 Data gathering Scope management plan Brainstorming matrix Requirements management Interviews Focus groups Stakeholder engagement Questionnaires and .3 Project documents Benchmarking Assumption log .3 Data analysis Lessons learned register Document analysis Stakeholder register .4 Decision making 4 Business documents Voting Business case Multicriteria decision .5 Agreements analysis .6 Enterprise environmental .5 Data representation factors Affinity diagrams .7 Organizational process assets Mind mapping .6 Interpersonal and team skills Nominal group technique Observation/conversation Facilitation .7 Context diagram .8 Prototypes

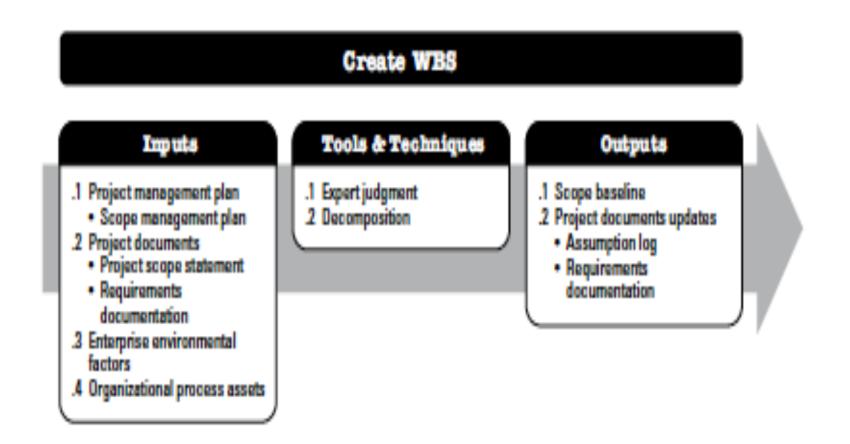
Define Scope

- It is process of developing a detailed description
- It describes the product, service, or result boundaries and acceptance criteria



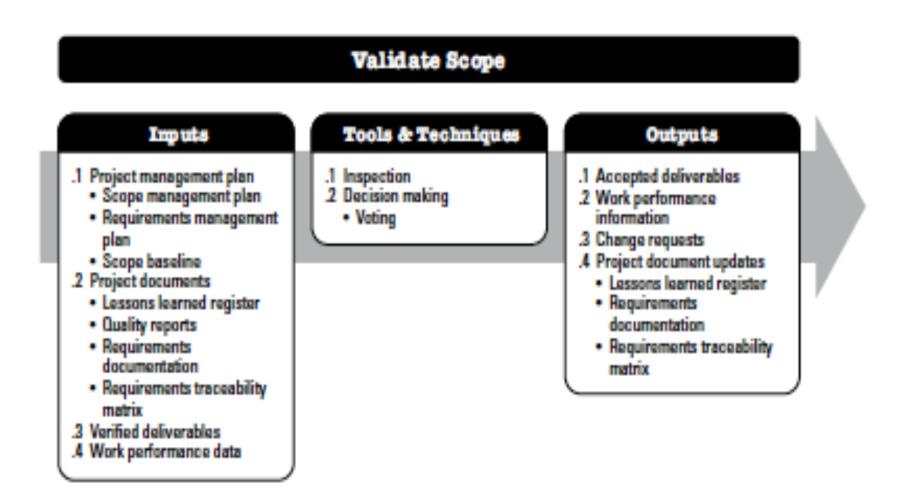
Create WBS

- A process of subdividing deliverables and work into smaller, more manageable components
- Provides a framework of what has to be delivered



Validate Scope

- Process of formalizing acceptance of deliverables
- It brings objectivity to the acceptance process



Project Schedule Management

- It includes following processes required to manage the timely completion of the Project
 - Plan Schedule Management : Policies, procedures and documentation for planning, developing, managing and controlling the project schedule
 - Define Activities: Process of identifying and documenting relationships among the project activities
 - Sequence activities
 - Estimate activity duration
 - Develop Schedule
 - Control Schedule

Project Schedule Management Overview

6.1 Plan Schedule Man agement

- .1 Inputs
 - .1 Project charter
 - 2 Project management plan
 - 3 Enterprise environmental factors
 - A Organizational process assets
- 2 Tools & Techniques
 - .1 Expert judgment
 - 2 Data analysis
 - 3 Meetings
- 3 Outputs
 - .1 Schedule management plan

6.4 Estimate **Activity Durations**

- .1 Inputs
- .1 Project management plan
- .2 Project documents
- .3 Enterprise environmental factors
- A Organizational process assets
- .2 Tools & Techniques
 - .1 Expert judgment
 - .2 Analogous estimating
 - .3 Parametric estimating
 - A Three-point estimating .5 Bottom-up estimating
 - .6 Data analysis
 - .7 Decision making
 - .8 Meetings
- 3 Outputs
- .1 Duration estimates
- 2 Basis of estimates
- 3 Project documents updates

6.2 Define Activities

- .1 Inputs
 - .1 Project management plan
 - 2 Enterprise environmental factors
 - 3 Organizational process assets
- 2 Tools & Techniques
 - .1 Expert judgment
 - 2 Decomposition
 - 3 Rolling wave planning
 - A Meetings
- 3 Outputs
 - .1 Activity list
 - .2 Activity attributes
 - .3 Milestone list
 - .4 Change requests
 - .5 Project management plan updates

6.5 Develop Schedule

- .1 Inputs
 - .1 Project management plan .2 Project documents
 - .3 Agreements
- A Enterprise environmental
- .5 Organizational process assets
- .2 Tools & Techniques
 - .1 Schedule network analysis
 - .2 Critical path method
 - .3 Resource optimization
 - A Data analysis
 - .5 Leads and lags
 - .6 Schedule compression
 - 7 Project management information system
 - 8 Agile release planning
- .3 Outputs
 - .1 Schedule baseline
 - 2 Project schedule
 - 3 Schedule data
 - A Project calendars
 - 5 Change requests
 - .s Project management plan undates
- .7 Project documents updates

6.5 Sequence Activities

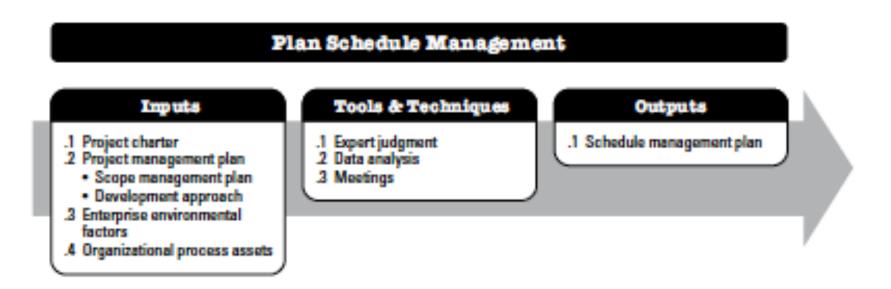
- .1 Inputs
 - .1 Project management plan
 - 2 Project documents
 - 3 Enterprise environmental factors
 - A Organizational process assets
- 2 Tools & Techniques
 - .1 Precedence diagramming
 - 2 Dependency determination and integration
 - .3 Leads and lags
- A Project management information system
- 3 Outputs
 - .1 Project schedule network diagrams
 - .2 Project documents updates

6.6 Control Schedule

- .1 Inputs
 - .1 Project management plan
 - 2 Project documents 3 Work performance data
- A Organizational process assets
- .2 Tools & Techniques
 - .1 Data analysis
 - 2 Critical path method
- 3 Project management information system
- A Resource optimization
- .5 Leads and lags
- .6 Schedule compression
- 3 Outputs
 - .1 Work performance information
- 2 Schedule forecasts
- .3 Change requests
- A Project management plan updates
- .5 Project documents updates

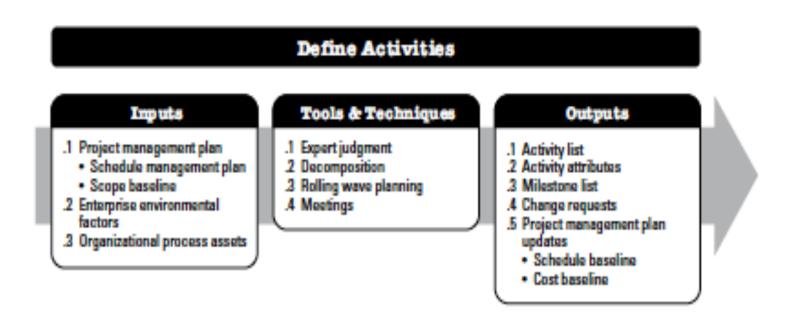
Plan Schedule Management

 It provides guidance and direction on how the project schedule will be managed throughout the project



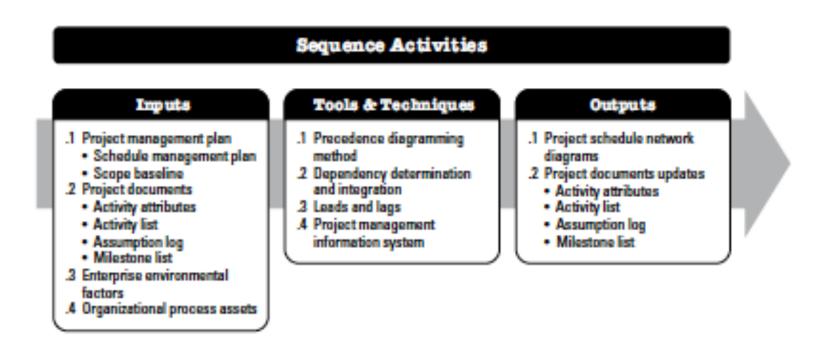
Define Activities

 It decomposes work packages into schedule activities that provide a basis for estimating, scheduling, executing, monitoring and controlling the project work

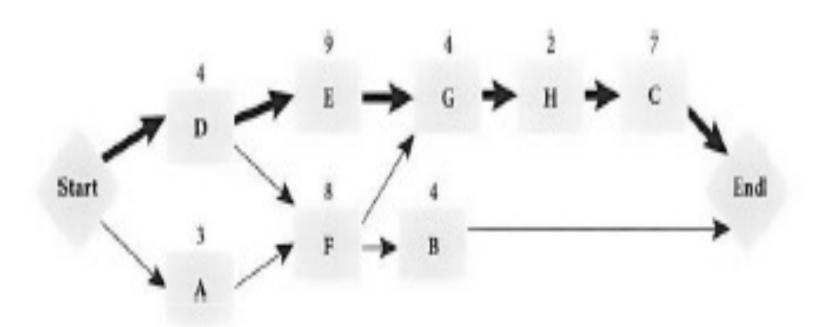


Sequence Activities

 It defines the logical sequence of work to obtain the greatest efficiency given all project constraints



Project Network Diagram



Forward Pass

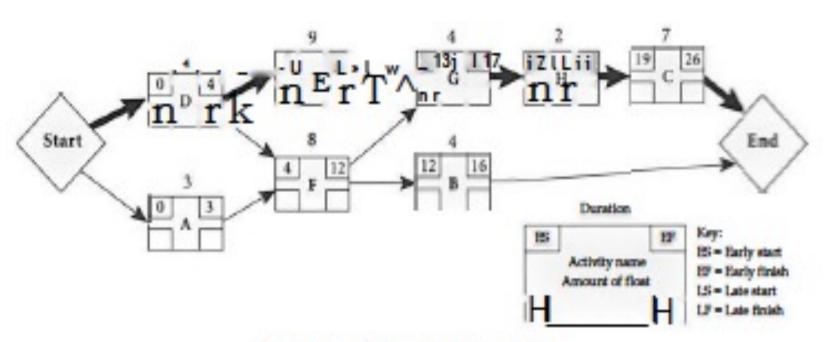
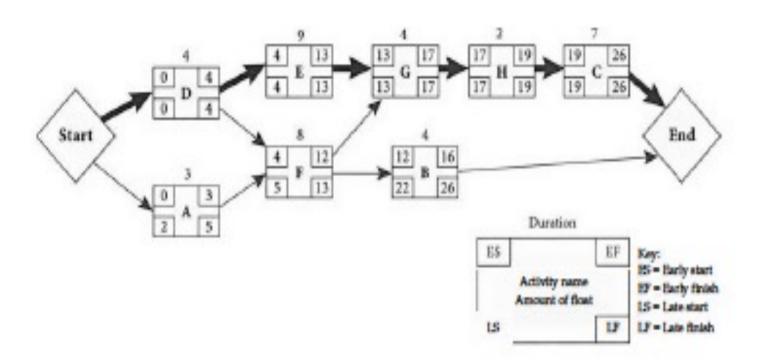


FIGURE 6.7 Forward pass through network diagram

Backward Pass



Estimate Activity Durations

 It is performed throughout the project and provides amount of time each activity will take to complete

Estimate Activity Durations Tools & Techniques I mo mes Outputs Project management plan Expert judgment 1 Duration estimates Schedule management plan 2 Analogous estimating .2 Basis of estimates .3 Parametric estimating Scope baseline .3 Project documents updates .4 Three-point estimating 2 Project documents Activity attributes Activity attributes .5 Bottom-up estimating Assumption log .6 Data analysis Lessons learned register Activity list Alternatives analysis Assumption log Reserve analysis Lessons learned register .7 Decision making Milestone list Project team assignments .8 Meetings Resource breakdown structure Resource calendars Resource requirements

Risk register
 3 Enterprise environmental

4 Organizational process assets

factors

Develop Schedule

 It generates a schedule model with planned dates for completing project activities

Develop Schedule

Imputs

- .1 Project management plan
 - Schedule management plan
 - Scope baseline
- .2 Project documents
 - Activity attributes
 - Activity list
 - Assumption log
 - Basis of estimates
 - Duration estimates
 - Lessons learned register
 - Milestone list
 - Project schedule network diagrams
 - Project team assignments
 - Resource calendars
 - Resource requirements
 - Risk register
- .3 Agreements
- A Enterprise environmental factors
- .5 Organizational process assets

Tools & Techniques

- .1 Schedule network analysis
- 2 Critical path method
- 3 Resource optimization
- .4 Data analysis
 - What-if scenario analysis
 - Simulation
- .5 Leads and lags
- .6 Schedule compression
- Project management information system
- .8 Agile release planning

Outputs

- .1 Schedule baseline
- .2 Project schedule
- .3 Schedule data
- .4 Project calendars
- .5 Change requests
- .6 Project management plan updates
 - Schedule management plan
 - Cost baseline
- .7 Project documents updates
 - Activity attributes
 - Assumption log
 - Duration estimates
 - Lessons learned register
 - Resource requirements
 - Risk register

Control Schedule

 It helps to maintain and control the schedule baseline throughout the project

Control Schedule

Imputs

- .1 Project management plan
 - Schedule management plan
 - Schedule baseline
 - Scope baseline
 - Performance measurement baseline
- .2 Project documents
 - Lessons learned register
 - Project calendars
 - Project schedule
 - Resource calendars
 - Schodule data
- .3 Work performance data
- .4 Organizational process assets

Tools & Techniques

- .1 Data analysis
 - Earned value analysis
 - Iteration burndown chart
 - Performance reviews
 - Trend analysis
 - Variance analysis
 - What-if scenario analysis
- 2 Critical path method
- Project management information system
- A Resource optimization
- .6 Leads and lags
- .7 Schedule compression

Outputs

- Work performance information
- .2 Schedule forecasts
- .3 Change requests
- .4 Project management plan updates
 - Schedule management plan
 - Schedule baseline
 - Cost baseline
 - Performance measurement baseline
- .5 Project documents updates
 - Assumption log
 - Basis of estimates
 - Lessons learned register
 - Project schedule
 - Resource calendars
 - Risk register
 - Schedule data