Scope Planning
1. Defining the scope
2. Project requirements
3. Scope Inputs
4. Requirements traceability matrix
5. Work Breakdown Structure (WBS)
6. Scope statement

Project Scope
1. One of the main activities in the Project Planning phase is determining and documenting the project scope.
2. Project scope is the definition of all the work needed to successfully meet the project objectives.

Deliverables
Must be described in a sufficiently low level of details

Scope
1. Be as specific as you can
2. Where possible, the scope statements should include how the results will be measured so you and your sponsor will know with certainty whether that part of the scope has been achieved
3. Requirements should tie to things like the organization's strategic plan and business objectives
4. Mention things that are explicitly NOT included: is this limited to certain locations? If in an international context, is it in only one language?

Scope

Not measurable	Measurable
A new registration system	With the new system, students will be able to register for classes using a browser or a smartphone.
The system will be fast	Response time will be under 1 second
The system will support the required volumes	75 students must be able to add an average of 3 classes each 15-minute period.
Happy users	User satisfaction will be measured by a standardized set of questions and will measure 5 or higher on a 7-point scale.

Types of requirements
1. Functional
2. Non-functional
   a. Performance
   b. Development
3. Technical
4. Business
5. User
6. Regulatory

Software requirements fundamentals
1. Unique challenges
2. Must be verifiable

Measuring requirements
Each type of requirement may require a different type of measure:

Property	Measure
Size	MB/GB throughput
Ease of Use	User acceptance test Help system
Reliability	Rate of failure occurance Availability Mean time to failure Number of occurances
Robustness	Time to restart after failure Number of events that cause failure
Scalability	Number of users on the system

Scope inputs-techniques
1. Interviews
2. Focus groups
3. Facilitated groups– JAD, QFD
4. Group creativity techniques such as brainstorming
5. Prototyping
6. Observation
7. Questionnaires and surveys

Scope Inputs-sources
1. Project sponsor
2. Management
3. Strategic Plan
4. Users
5. Customers
6. Competitors
7. Suppliers
8. Regulations
9. and others

Requirements Traceability Matrix
1. Links requirements to their origin
2. Traces them throughout the project process
3. May link requirements to business needs, opportunities, goals, and objectives
4. Project objectives
5. Project scope/WBS deliverables
6. Product design
7. Product development
8. Test strategy and test scenarios
9. or may link High-level requirements to more detailed requirements.

Requirements Traceability Matrix fields
1. Unique identifier
2. Requirement statement
3. Source
4. Design specification reference
5. Test specification
6. Test case numbers
7. Remarks
8. and more depending on the particular situation

WBS Creation
1. List all the project outputs (deliverables and other direct results)
2. Identify all the activities required to deliver the outputs
3. Subdivide the activities into sub-activities and tasks
4. Identify the deliverable and milestone(s) of each task

Creating the WBS
1. A list of all activities required to create all the deliverables in the scope
2. Activities may be broken down into smaller tasks, in a hierarchical pattern
3. Do not focus on sequence or dependencies at this point

Creating the WBS
1. Follow a numbering plan
2. Can also be shown in outline format
3. May be very complex for a large project
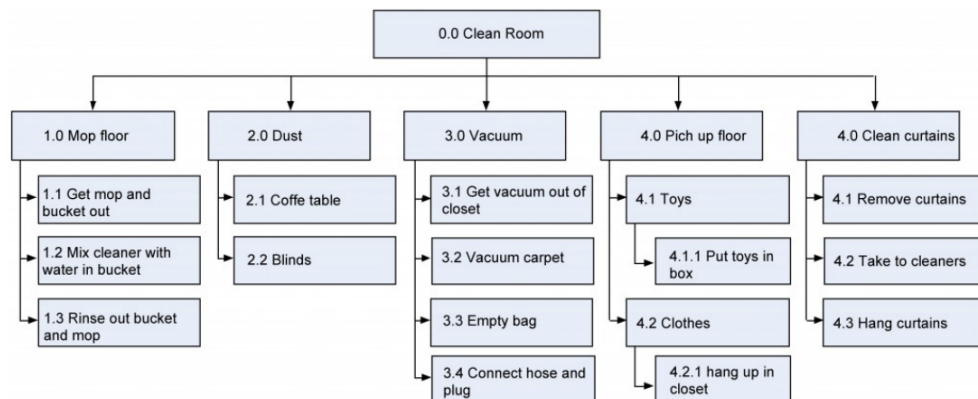
WBS Creation
Remember the 100% Rule:
The combination of the boxes on each level represents 100% of the parent box.

WBS Creation
1. At the lowest level, the WBS consists of Work Packages
2. It is important that each work package is clearly defined and can be easily assigned
3. The work package level is where time estimates, cost estimates and resource estimates are determined.

Scope Statement
1. Purpose:
    a. Project deliverables
    b. Major objectives
    c. Measurable success criteria
2. Create and use a template suitable to your organization

Scope Statement Typical Contents
1. Project Name
2. Project charter
3. Owner, sponsor, project manager, stakeholders
4. Problem statement
5. Project Goals and Objectives
6. Project Requirements
7. Project Deliverables
8. Exclusions
9. Milestones
10. Cost estimates

Summary
1. Scope planning is an essential activity during the planning phase of the project
2. Provide relevant details and measurable deliverables in your scope
3. Use a Requirement Traceability Matrix to relate the deliverables to their sources and keep track of the status
4. Create a WBS as a hierarchy
5. Remember the 100% rule
6. The scope statement includes:
    a. Project Name
    b. Project charter
    c. Owner, sponsor, project manager, stakeholders
    d. Problem statement
    e. Project Goals and Objectives
    f. Project Requirements
    g. Project Deliverables
    h. Exclusions
    i. Milestones
    j. Cost estimates