

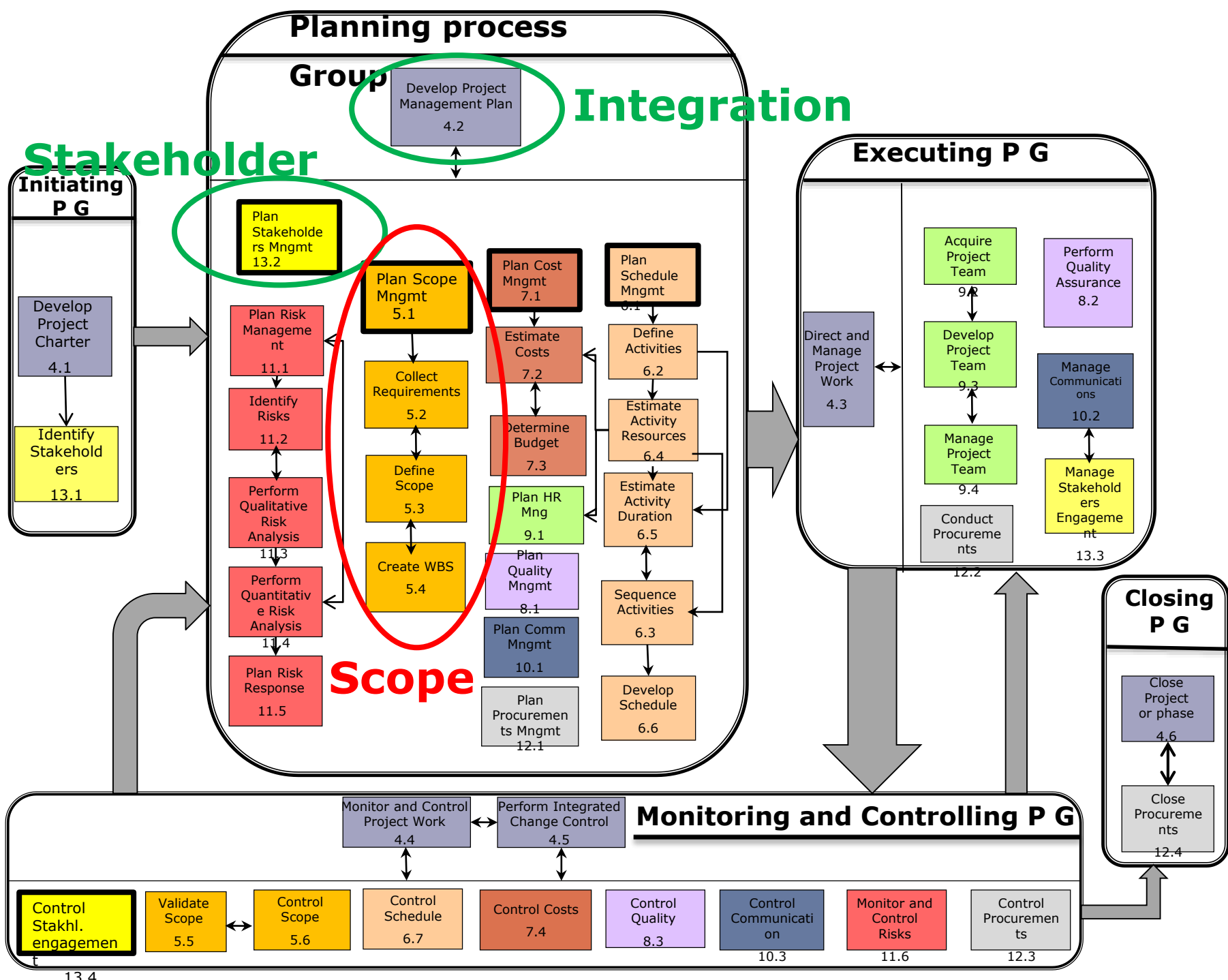
Lec.5 29/10/2015

PLANNING PROCESS GROUP



Part 2

- **Scope Management (4 processes)**
-



Scope Planning



The Term Scope

Project Scope

- The work that needs to be done to deliver a product, service, or result with the specified features and functions
- Completion of the project scope is measured against the schedule, cost, and quality, baselines

PMI Important concept:

- Preventing extra work **NO gold plating.**
- You should give the customer what they asked for, **no more and no less.**
- Giving any extras is a waste of time and adds no benefit to the project.

Project Scope Management

The Project Scope Management processes need to be
well integrated
with the other Knowledge Area processes,
so that the work of the project will result in delivery of
the specified product scope

Project Scope Management

5.1

- Plan Scope Management

5.2

- Collect Requirements

5.3

- Define Scope

5.4

- Create WBS

5.5

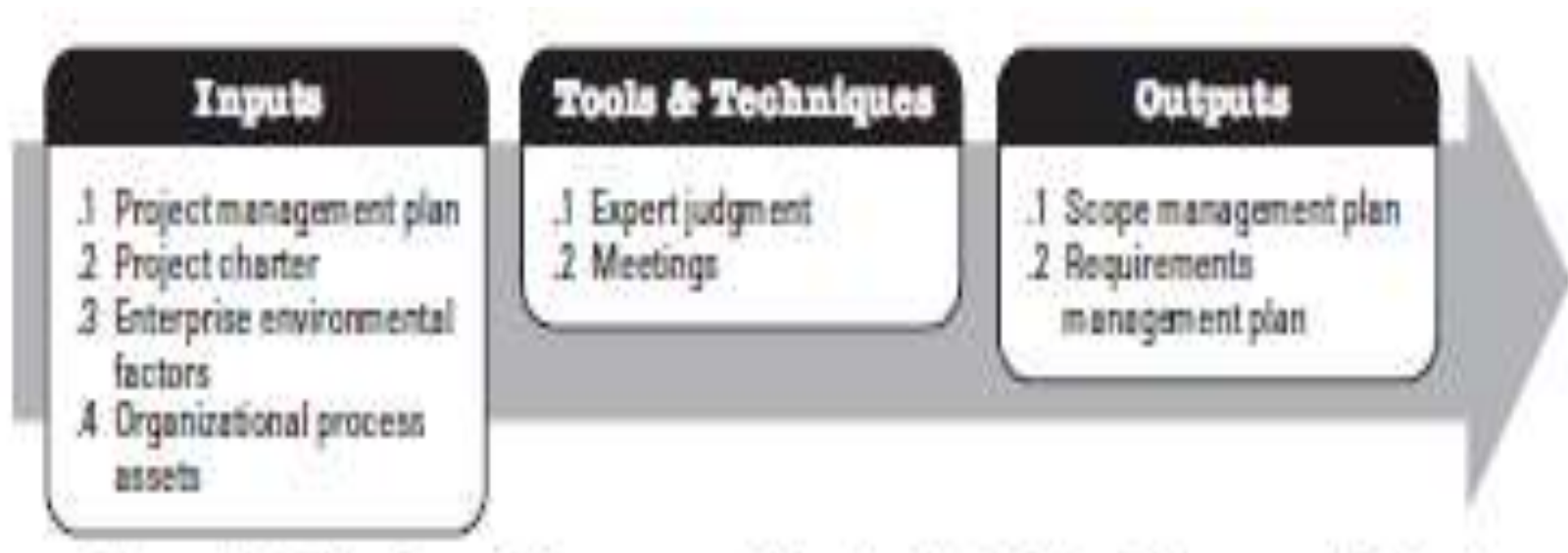
- Validate Scope [Controlling Process Group]

5.6

- Control Scope [Controlling Process Group]

Plan Scope Management

It is the process of creating a scope management plan that documents “**how**” the project scope will be defined, developed, validated, and controlled.



Plan Scope Management - Inputs

- ❑ **Project Management Plan**

Maintains and ensures consistency

- ❑ **Project Charter**

Contains the high-level project description and product characteristics

- ❑ **Enterprise Environmental Factors**

Includes the outer-factors that surrounds the project such as Organization's culture, infrastructure, marketplace conditions

- ❑ **Organizational Process Assets**

Includes inter-organization process assets knowledge base such as policies, procedures, historical information and lessons learned

Plan Scope Management – Tools & Techniques

□ Expert Judgment

It is based on how corresponding projects have managed scope, using that as an aid to develop the project scope management plan.

□ Meetings

An interactive tool that helps team to develop the scope management plan.

Plan Scope Management – Outputs

□ Scope Management Plan

- The scope management plan is a component of the project management plan that describes how the project scope will be defined, developed, monitored, controlled, and validated.
- It includes the needed processes;
 - to prepare a detailed project scope statement,
 - to create the WBS and how the WBS will be maintained and approved,
 - to specify how the formal acceptance of the deliverable will be acquired,
 - to state how requests for scope changes will be processed and controlled.

Plan Scope Management – Outputs

□ Requirements Management Plan

- The Requirements management plan is a component of the program or the project management plan that describes how the project requirements will be **analyzed, documented, and managed**.
- Includes but is not limited to :
 - How requirements activities will be **planned, tracked, and reported**
 - Configuration management activities (how changes to the product will be initiated)
 - Requirements **prioritization process and traceability structure**
 - Product Metrics

Collect Requirements process

Defining, documenting and managing the stakeholders' **expectations and requirements** influence the project's overall success.

It must be **analyzed and quantified** in *enough detail* that can be measured once the work of the project begins.



Collect Requirements process

Requirements Classification

□ Requirements are classified into :

- **Business requirements:**

Organization business issues and opportunities

- **Stakeholder requirements:**

Descriptions of stakeholders needs

- **Solution requirements:**

Features, functions, and characteristics of product, service or result (functional and non-functional)

□ Requirements are also classified into :

- **Transition requirements:**

Training requirements needed to transition

- **Project requirements:**

Actions, processes, or conditions to meet

- **Quality requirements:**

Conditions, criteria needed to validate and accept deliverables

Collect Requirements – Techniques -1

□ Interviews

Interviewing experienced project participants, stakeholders, and subject matter experts (**one on one conversation**) can aid in identifying and determining the features and functions of the desired project deliverables.

□ Focus groups

Bring together **prequalified stakeholders and subject matter experts** to learn about their expectations and attitudes about a proposed product, service, or result. Usually conducted by a trained moderator

□ Facilitated Workshops

- Are considered a primary technique to quickly define cross-functional **requirements that affect more than one department** and to reconcile stakeholders' differences.
- Well facilitated sessions can build trust, foster relationships, and improve communication among the participants which can lead to increased stakeholder consensus.

Collect Requirements – Techniques -2

□ Group Creativity Techniques

- Brainstorming
- Nominal group technique
- Delphi Technique
- Idea/mind mapping
- Affinity diagram
- Multicriteria decision analysis

□ Group Decision Making Techniques

- Is an assessment process of multiple alternatives with an expected outcome in the form of future actions resolution.
- These techniques can be used to generate, classify, and prioritize product requirements.

Collect Requirements – Techniques -3

❑ Questionnaires and Surveys

Are written sets of questions designed to quickly accumulate information from a wide number of respondents.

❑ Observations

It is particularly helpful for detailed processes when the people that use the product have difficulty or are reluctant to articulate their requirements.

❑ Prototypes

Is a method of obtaining early feedback on requirements by providing a working model of the expected product before actually building it.

Collect Requirements – Techniques -4

❑ Benchmarking

Comparing project's planned or actual processes and operations against other external or internal projects to identify best practices, create ideas for improvement, and provide a basis for measuring performance.

❑ Context Diagram

It is a diagram that represents the outside “actors” (people and systems) which may interact with and influence the scope.

❑ Document Analysis

Evaluate documentations in hand to identify related information to the requirements: business plans, request for proposal....

Collect Requirements - Outputs

□ Requirements Documentation

- Identified requirements must be *measureable, testable, traceable, complete, consistent, and acceptable* to become a part of the scope baseline.
- *Assumptions and constraints, and the acceptance criteria* of each requirement are included in the requirements documentation.
- *The format of the document* may range from a simple document listing all the requirements categorized by stakeholder and priority, to more elaborate forms containing executive summary, detailed descriptions, and attachments.

□ Requirements Traceability Matrix

- Provides a *means to track requirements* throughout the project life cycle, helping to ensure that requirements approved in the requirements documentation are delivered at the end of the project.
- Provides a structure for managing changes to help control **Scope Creep**
- Track high-level requirements to more detailed requirements

Activity

Write down reasons of Scope creep.

- 1.
- 2.
- 3.

Requirements Traceability Matrix -sample

Contains attributes such as; a unique identifier, requirement description, the reason for inclusion, owner, source, priority, version, current status (such as active, cancelled, deferred, added, approved), and date completed.

REQUIREMENTS TRACEABILITY MATRIX												
Project Name:												
National Center:												
Project Manager Name:												
Project Description:												
ID	Assoc ID	Technical Assumption(s) and/or Customer Need(s)	Functional Requirement	Status	Architectural/Design Document	Technical Specification	System Component(s)	Test Case Number	Tested In	Implemented In	Verification	Additional Comments
001	1.1.1											
002	2.2.2											
003	3.3.3											
004	4.4.4											
005	5.5.5											
006												
007												
008												
009												
010												

Define Scope Process

- ❑ The process of developing a *detailed, accurate and complete description* of the Project and Product Scope.
- ❑ The preparation of a **detailed project scope statement** is critical to project success, and builds upon the major Deliverables, Assumptions, and Constraints that are documented during Project Initiation.
- ❑ The project **Scope statement** guides the work of the project team during the **Executing** Process and for successful completion of the project all change requests will be evaluated against the Project Scope Statement



Define Scope – Tools & Techniques

□ Expert Judgment

Applied for any technical detail and provided by any group or individual with specialized knowledge

□ Product Analysis: : (value engineering, product breakdown..)

Detailed analysis and description of the product by translating high level descriptions into tangible deliverables helping to get common understanding of the product in the form of requirements aligned with the project objectives

□ Alternative Generation: (lateral thinking, brainstorming...)

Making sure that the team is properly considering all options related to project scope by discovering different methods of accomplishing the work of the project

□ Facilitated Workshops: (intensive working sessions)

Define Scope – Outputs -1

Project Scope Statement

- It describes progressively in details, the projects' deliverables and the work required to create those deliverables.
- It also provides a common understanding of the project scope among stakeholders.
- The degree and level of detail determine how well the project management team can control the overall project scope.
- It is used as a documentation for future project decisions.

Define Scope - Outputs

Project Scope Statement

Detailed Project Scope Statement includes, *either directly or by reference to other documents, the following:*

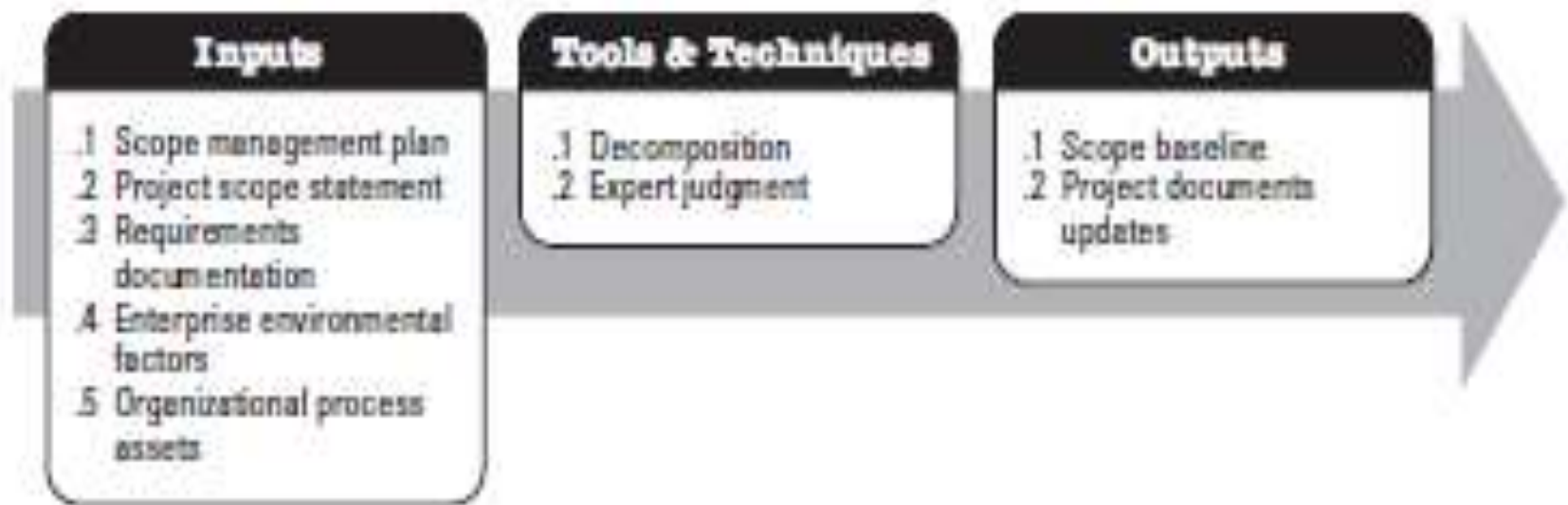
- Project objectives and requirements
- Product scope description
- Product acceptance criteria and Quality requirements
- Project deliverables
- Project exclusions
- Project constraints, assumptions and boundaries

Project Documents Updates:

Stakeholder Register, Requirements Documentation, Traceability Matrix.....

Create WBS Process

- Is the process of subdividing project deliverables and work into smaller, more manageable components.
- The WBS is a deliverable-oriented hierarchical decomposition of the work to be executed by the project team, to create the required deliverables.



Create WBS Process

The WBS organizes and defines the total scope of the project.

- Each descending level of the WBS represents an increasingly **detailed definition** of the project work.
- The planned work is contained within the **lowest-level** WBS components, which are called **work packages**.
- **A work package** can be scheduled, cost estimated, monitored, and controlled.

WBS – Creation “rules”

- It is created with the help of the project management team.
- The first level is completed before the project is broken down further.
- Each level of the WBS is a smaller segment of the level above.
- The entire project is included in the highest levels. However, some levels will be broken down further than others.
- Work not in the WBS is not part of the project.
- Used as a communication, staffing and integration tool
- A WBS can become a template for future projects.

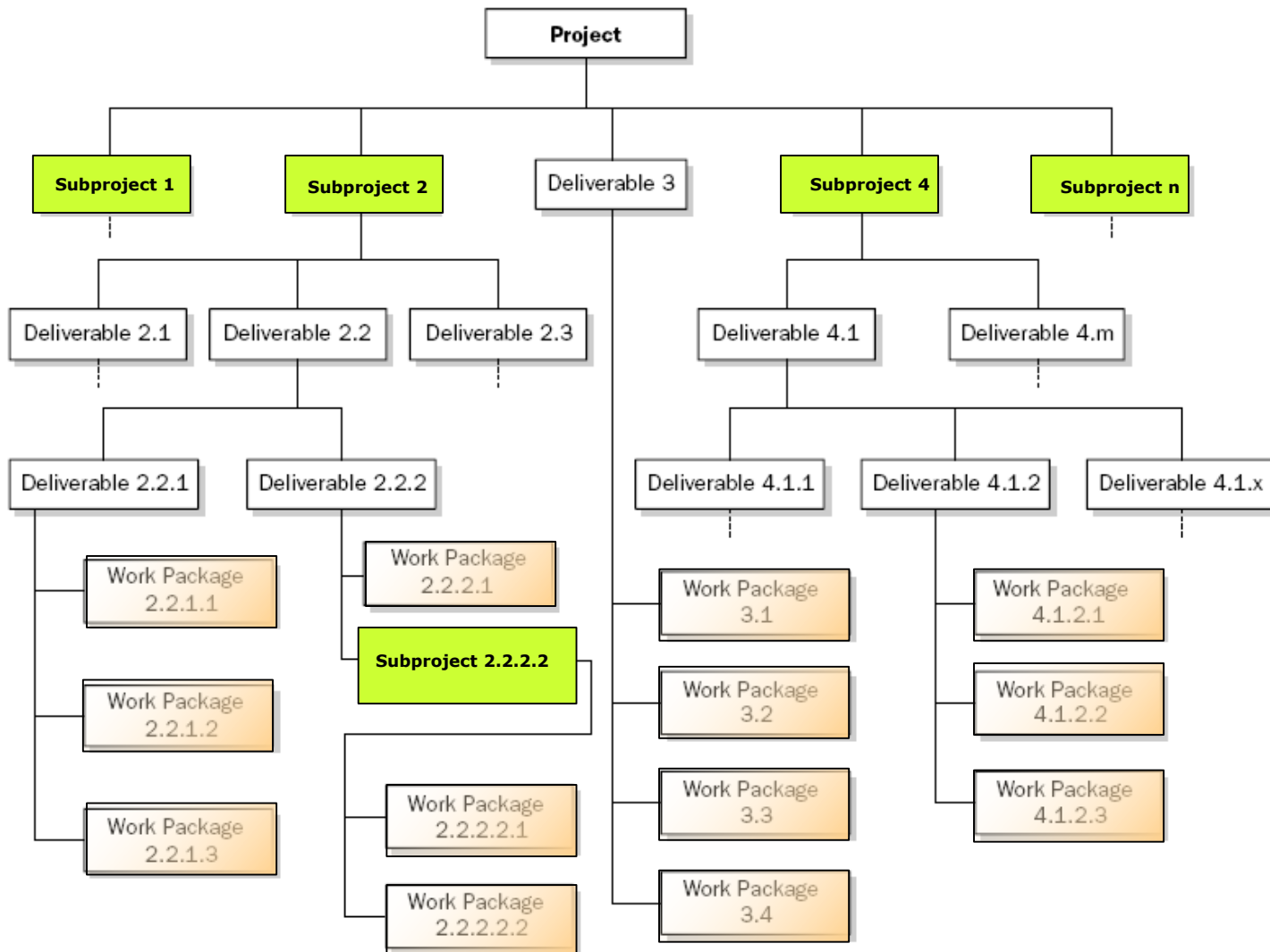
Create WBS Process -Technique

Decomposition is a technique used for dividing and subdividing the project scope and project deliverables into smaller, more manageable parts.

Decomposition of the **total work** into work packages generally involves the following activities:

- Identifying and analyzing the deliverables and related work
- Structuring and organizing the WBS
- Decomposing the upper WBS levels into lower level detailed components
- Developing and assigning identification codes to the WBS components
- Verifying that the degree of decomposition of the work is necessary and sufficient.

WBS - Example



Create WBS Process -Outputs

The Scope Baseline is the *approved version* of a scope statement, work breakdown structure (WBS), and its associated WBS dictionary, that can be changed only through formal change control procedures and is used as a basis for comparison.

Components of the scope baseline include:

- Project Scope Statement.
- WBS.
- WBS Dictionary.

Create WBS Process -Outputs

The WBS dictionary

is a document that provides detailed deliverable, activity, and scheduling information about each component in the WBS as a supporting document.

The WBS Dictionary includes:

Code of account identifier, Description of work, Assumptions & constraints, Responsible organization, List of schedule milestones, Associated schedule activities, Resources required, Cost estimates, Quality requirements, Acceptance criteria, Technical references, and Agreement information.

WBS Dictionary Example

Project: Online Ordering Application	
Work Package ID: 1.1.3	
Work Package Name: Configure New Hardware	
Work Package Description: All new hardware should be configured, including any hardware settings and preparation such as formatting of storage. The correct operating system should be loaded and the appropriate patches should be applied. Any security settings, including virus scanning software, should be applied. The hardware should be added to the company domain and should be compliant with all company policy regarding hardware and security.	
Assigned to: Lee Abbott	Department: I.T.
Date Assigned: 2/24/05	Date Due: 2/20/06
Estimated Cost: \$3,800.00	Accounting Code: HMIT-0229

Project Scope Management

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- Validate Scope [Controlling Process Group]

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What You Learned In The Session

1)

2)

3)

4)

5)

Thank You!
Thank You!

