



# Project Scope Management

Waleed El-Naggar, MBA, PMP

# Agenda

- Introduction to Project Scope
- Collect Requirements
- Define Scope
- Create WBS
- Control Scope
- Verify Scope

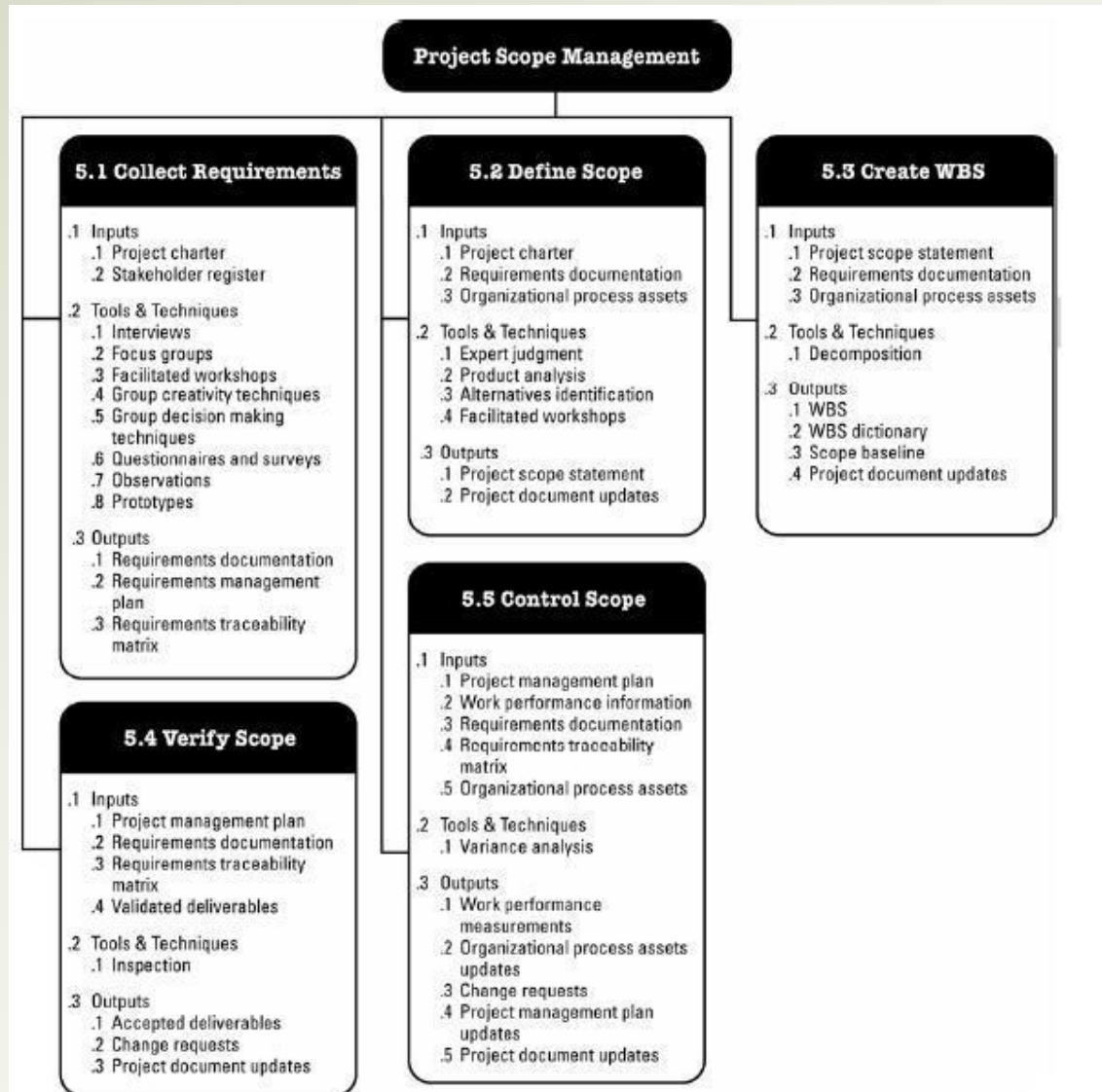
# What is Project Scope?

- Scope refers to all the work involved in creating the products of the project and the processes used to create them.
- Project scope management includes the processes required to ensure that the project includes all the work required, and only the work required, to complete the project successfully.

# Product Scope vs. Project Scope

- Product scope: The features & functions that characterize the product, service, or result.
- Project Scope: The work that needs to be accomplished to deliver a product, service, or result with the specified features and functions.

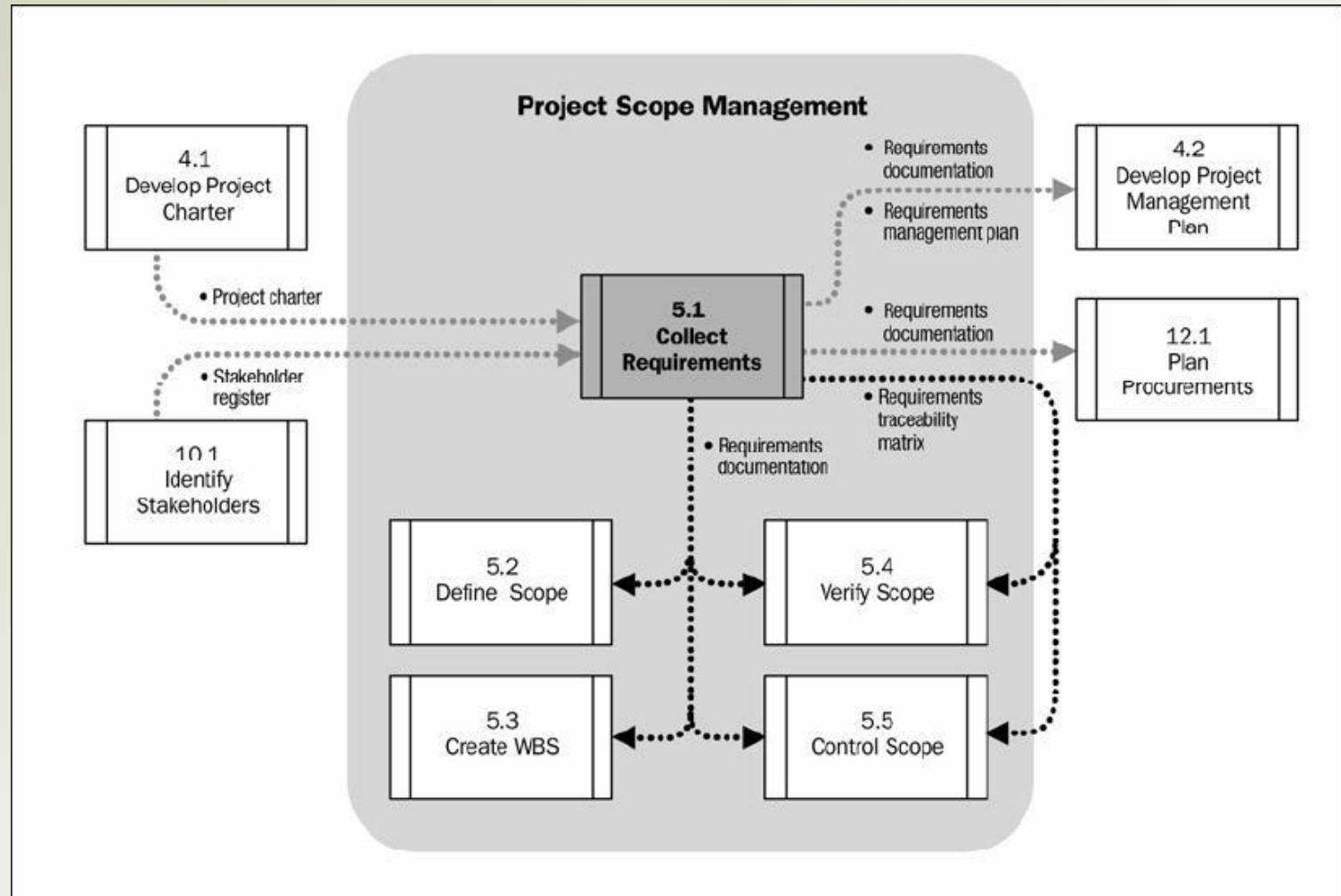
# Project Scope Management Processes



# 5.1 Collect requirements

- The process of defining and documenting stakeholders' needs to meet the project objectives.
- Requirements includes the quantified and documented needs and expectations of the sponsor, customer, and other stakeholders.
- Requirement must be analyzed and recorded in a clear and detailed way to be measured.

# Collect Requirements Data Flow



# Collect Requirements: Inputs

1. **Project Charter:** a document issued by the project initiator or sponsor that formally authorizes the existence of the project, and provides the project manager with authority to apply organizational resources to project activities. (Output of process 4.1)
2. **Stakeholder Register:** a document used to identify stakeholders with a particular interest in, or impact on, the project.

# Sample Project Charter

**Project Title:** Information Technology (IT) Upgrade Project

**Project Start Date:** March 4, 2007 **Projected Finish Date:** December 4, 2007

**Project Manager:** Kim Nguyen, 691-2784, *knguyen@course.com*

**Project Objectives:** Upgrade hardware and software for all employees (approximately 2,000) within nine months based on new corporate standards. See attached sheet describing the new standards. Upgrades may affect servers, as well as associated network hardware and software. Budgeted \$1,000,000 for hardware and software costs and \$500,000 for labor costs.

## Approach:

- Update the information technology inventory database to determine upgrade needs
- Develop detailed cost estimate for project and report to CIO
- Issue a request for quote to obtain hardware and software
- Use internal staff as much as possible for planning, analysis, and installation

## ROLES AND RESPONSIBILITIES:

<i>NAME</i>	<i>ROLE</i>	<i>RESPONSIBILITY</i>
Walter Schmidt	CEO	Project sponsor, monitor project
Mike Zwack	CIO	Monitor project, provide staff
Kim Nguyen	Project Manager	Plan and execute project
Jeff Johnson	Director of Information, Technology Operations	Mentor Kim
Nancy Reynolds	VP, Human Resources	Provide staff, issue memo to all employees about project
Steve McCann	Director of Purchasing	Assist in purchasing hardware and software

# Collect Requirements: T & T (1)

1. Interviews: meeting the stakeholders to ask prepared and spontaneous question & recording the responses.
2. Focus groups: bring together stakeholders and subject matter experts to learn about their expectations and attitudes about a proposed product, service or result.

# Collect Requirements: T & T (2)

3. Facilitated Workshops: Focused session with key cross-functional stakeholders to define product requirements.
4. Group Creativity Techniques:
  - ▣ Brainstorming
  - ▣ Nominal Group
  - ▣ Delphi Technique
  - ▣ Idea/Mind Mapping
  - ▣ Affinity Diagram

# Collect Requirements: T & T (3)

## 5. Group Decision Making Techniques

- ▣ Unanimity
- ▣ Majority
- ▣ Plurality
- ▣ Dictatorship

## 6. Questionnaire and Surveys

## 7. Observations

## 8. Prototypes

# Collect Requirements: Outputs

1. Requirements Document
2. Requirements Management Plan
3. Requirements Traceability

# Quiz

The best tool in collecting requirements for a cross-functional project is:

- A. Facilitated Workshops
- B. Interviews
- C. Surveys
- D. Brainstorming

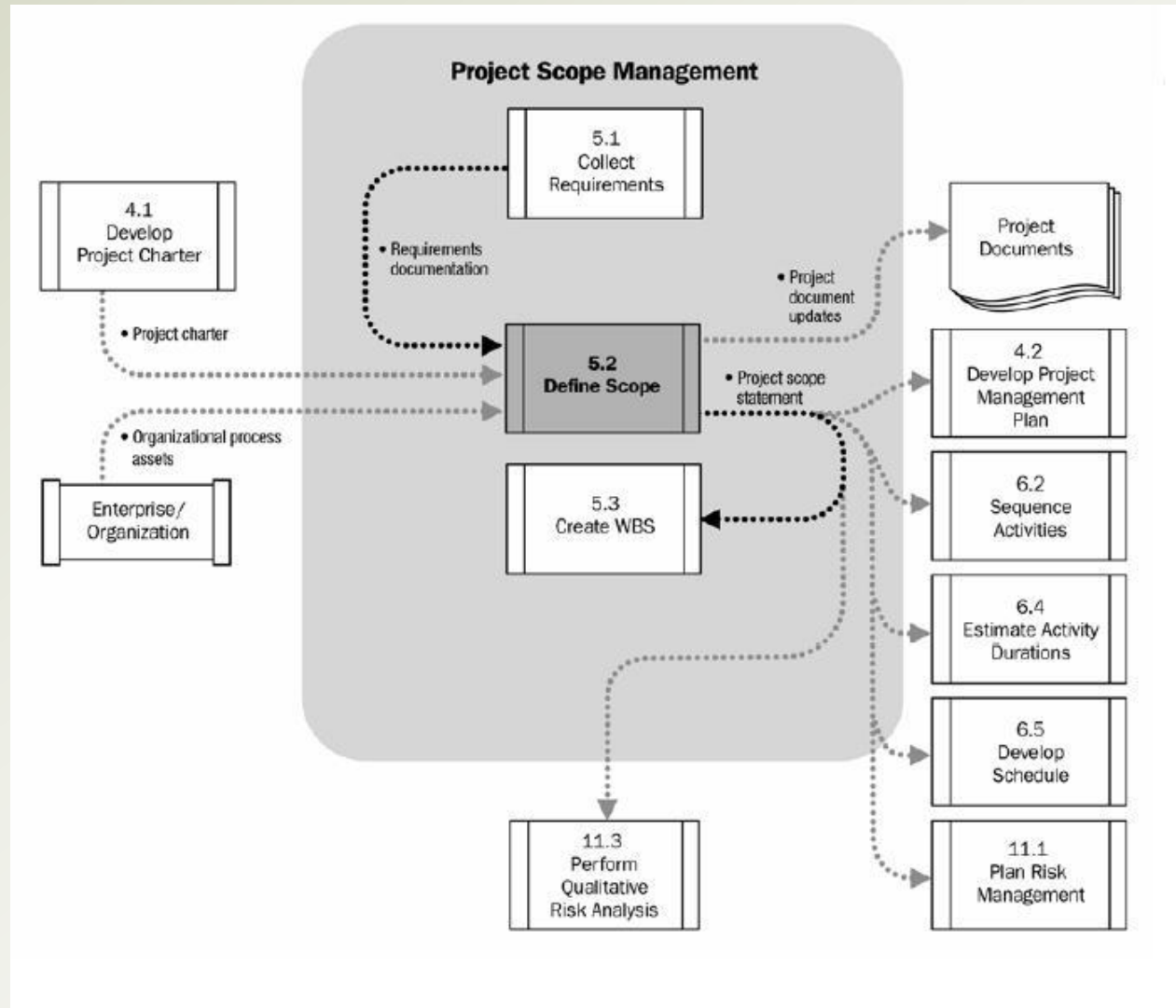
The answer is: A

## 5.2 Define Scope

The process of developing a detailed description of the project and product.



# Define Scope Data Flow



# Define Scope: Inputs

1. Project charter
2. Requirements Document
3. Organizational Process Assets
  - ▣ Procedures & Templates
  - ▣ Lessons learned from old Projects

# Define Scope: T & T

1. Expert Judgment
2. Product Analysis
3. Alternatives Identification
4. Facilitated workshops

# Define Scope: Outputs (1)

1. **Scope Statement:** describes project's deliverables and the work required to create those deliverables. It includes
  - ❑ Product scope description
  - ❑ Product acceptance criteria
  - ❑ Project Deliverables
  - ❑ Project Exclusion
  - ❑ Project Assumptions



Movie Mania Scope Statement

# Define Scope: Outputs (2)

2. Project Documents Updates: may include, but not limited to:

- ▣ Stakeholder register
- ▣ Requirements Documents
- ▣ Requirements Traceability Matrix

# Quiz

Why would you consider the scope statement so important in your project management methodology?

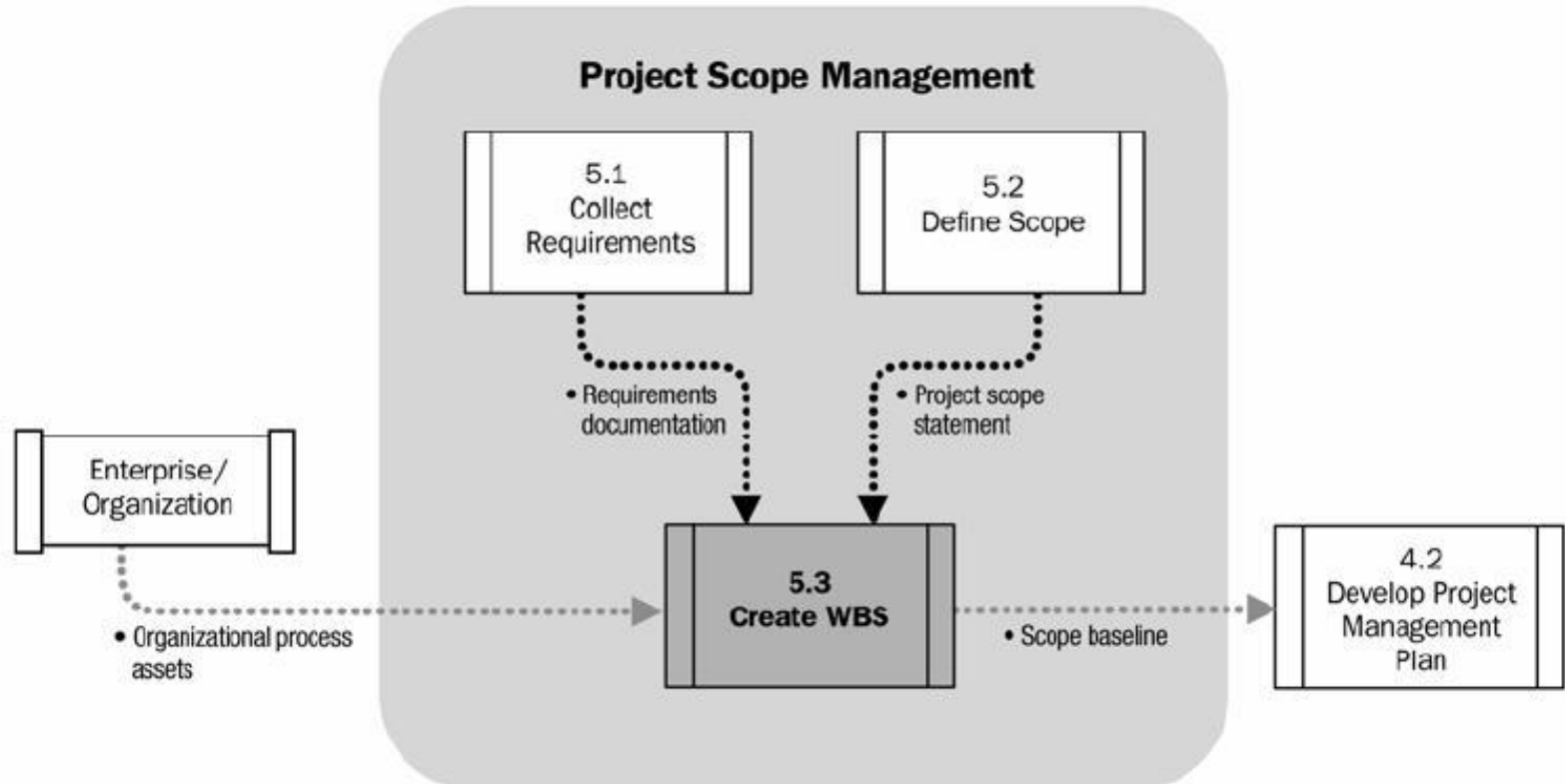
- A. Mandatory to consult the plan before accepting change.
- B. Project managers must document any changes before approving or declining them.
- C. The project scope serves as a reference for all future project decisions.
- D. The project plan and EVM work together to assess the risk involved with proposed changes

The answer is: C

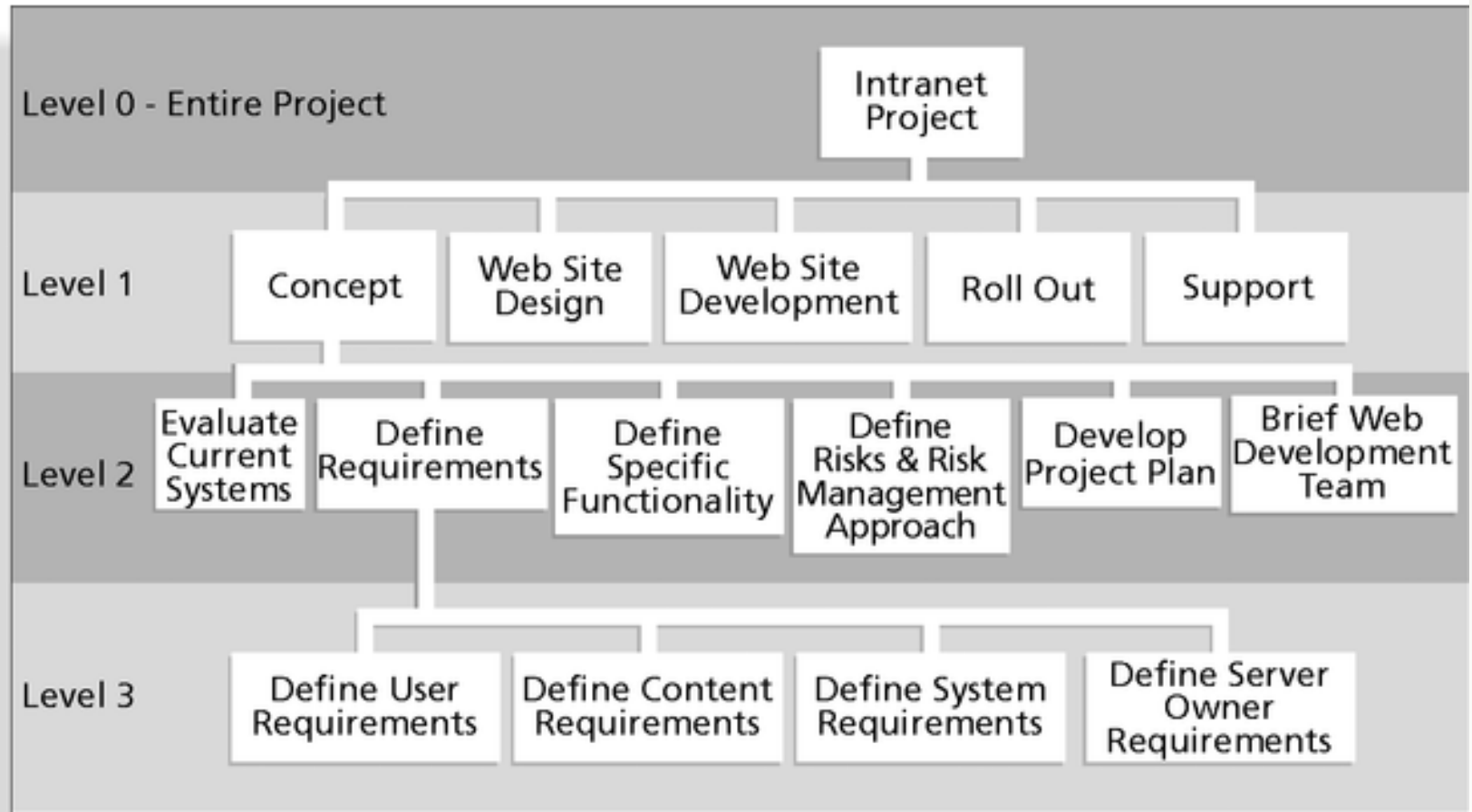
## 5.3 Create WBS

- Subdividing the project deliverables and project work into smaller and more manageable components.
- The work breakdown structure is a deliverable-oriented hierarchical decomposition of project work.

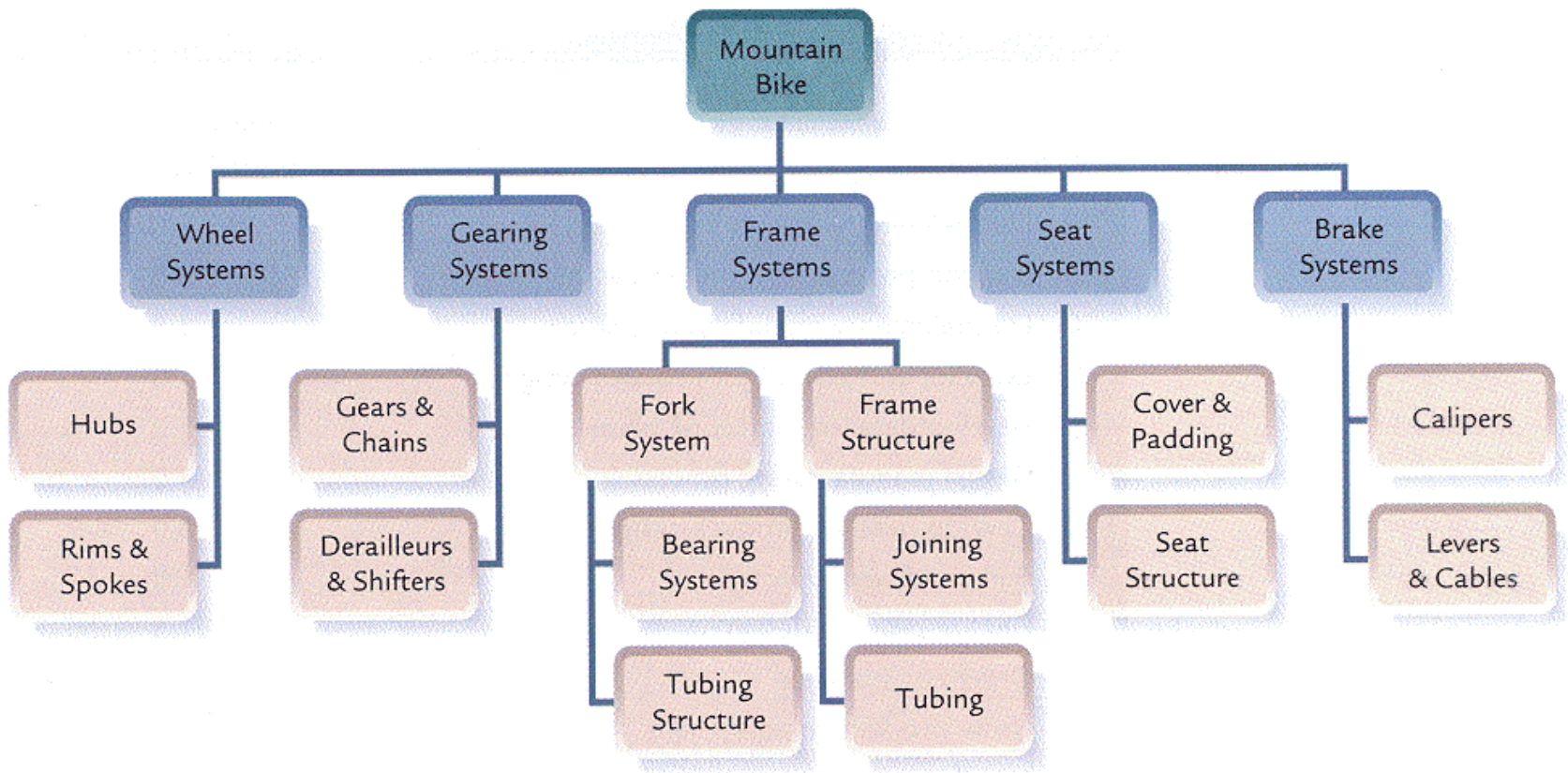
# Create WBS: Data Flow



# Sample WBS (1)



# Sample WBS (2)



# Create WBS: Inputs

1. Project Scope Statement
2. Requirements Document
3. Organizational Process Assets

# Create WBS: T & T

## 1. Decomposition

The subdivision of project deliverables into smaller, more manageable components. The work package level is the lowest level in the WBS, and is the point at which the cost and activity durations can be reliably estimated and managed. The level of detail for work packages will vary with the size and complexity of the project.

# Create WBS: Outputs

## 1. WBS

## 2. WBS Dictionary

- ▣ A number Identifier
- ▣ Who is responsible for what
- ▣ A description of each work package
- ▣ Any related codes

# Create WBS: Outputs

3. Scope baseline
4. Project Documents updates

# Quiz

A work breakdown structure numbering system allows project staff to:

- A. Systematically estimate costs of work breakdown structure elements.
- B. Provide project justification
- C. Identify the level at which individual elements are found
- D. Use it in project management software

The answer is: C

# Quiz

Which of the following documents contain detailed descriptions of work packages?

- A. Work breakdown structure (WBS) dictionary
- B. Activity list
- C. Preliminary project scope statement
- D. Project scope management plan

The answer is: A

# Quiz

The work breakdown structure can best be thought of as an effective aid for \_\_\_\_\_ communication

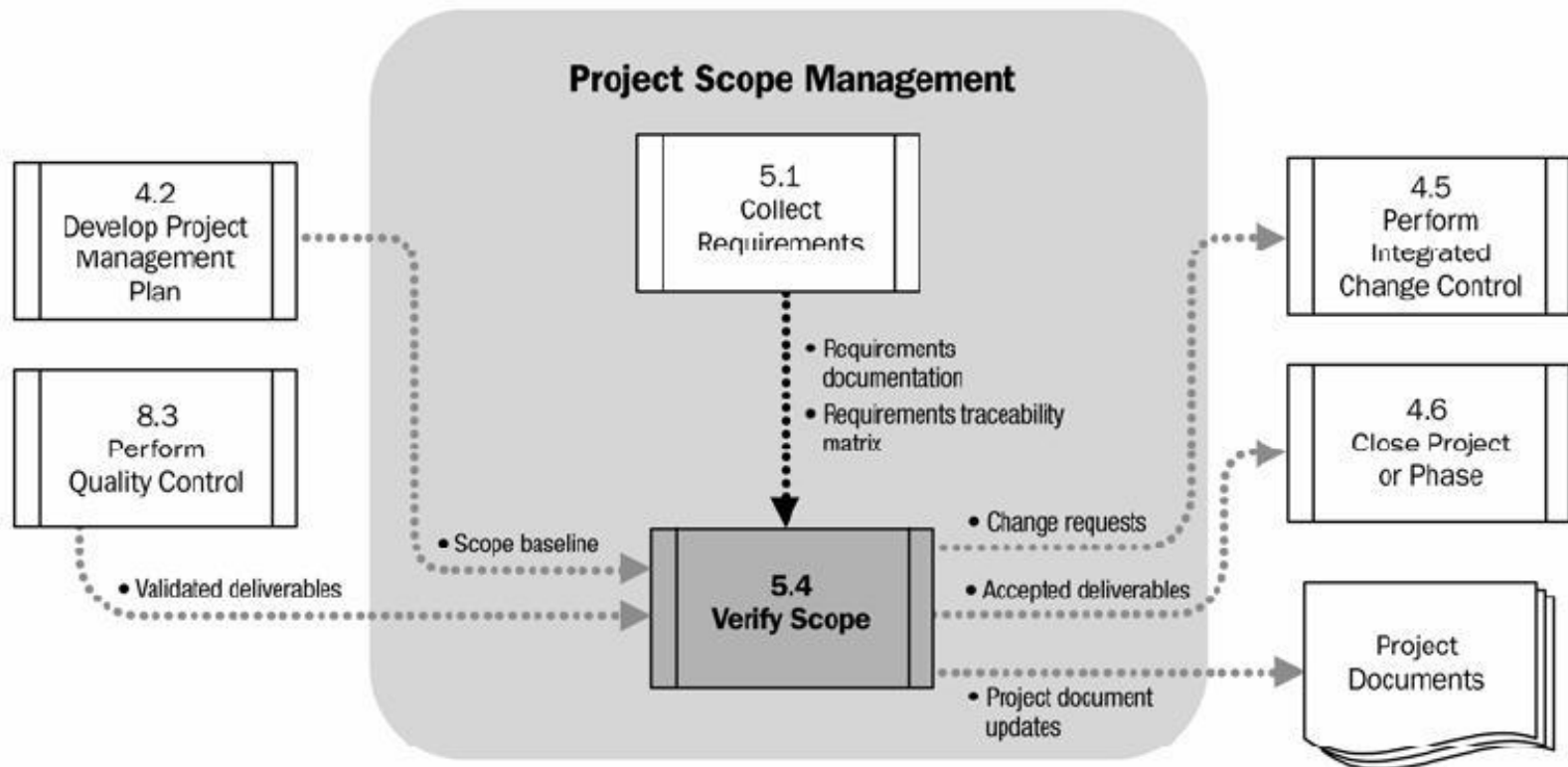
- A. Team
- B. Project manager
- C. Customer
- D. stakeholders

The answer is: D

## 5.4 Verify Scope

- Formalizing acceptance of the completed project deliverables.
- Includes reviewing deliverables with the client and obtaining formal acceptance of deliverables.
- Scope verification is concerned with acceptance of deliverables while quality control is concerned with correctness of the deliverables and meeting quality requirements.

# Verify Scope: Data Flow Diagram



# Verify Scope: Inputs

## 1. Project Management Plan

- ▣ Scope statement
- ▣ WBS
- ▣ WBS Dictionary.

## 2. Requirements Documentation

## 3. Requirements Traceability Matrix

## 4. Validated Deliverables

# Verify Scope: T & T

1. Inspection: measuring, and verifying to determine whether work and deliverables meet requirements and product acceptance criteria. Inspections are sometimes called reviews, audits, and walkthroughs.

# Verify Scope: Outputs

1. Accepted Deliverables
2. Change Requests
3. Project Document Updates

# Quiz

Which of the following is an output of scope verification?

- A. WBS template
- B. Rework
- C. Formal acceptance
- D. SOW acceptance

The answer is: C

## 5.5 Control Scope

- ❑ Monitoring the status of the project and products scope
- ❑ Managing changes to scope baseline
- ❑ Ensure all requested changes and recommended corrective or preventive actions are processed through the “Perform Integrated Change Control” process (4.5)
- ❑ Uncontrolled changes are often referred to as project scope creep.

# Control Scope: Inputs (1)

## 1. Project Management Plan

- ▣ Scope baseline
- ▣ Scope management plan
- ▣ Change management plan
- ▣ Configuration management plan
- ▣ Requirements management plan

## 2. Work Performance Indicators

# Control Scope: Inputs (2)

3. Requirements Documentation
4. Requirements Traceability Matrix
5. Organizational Process Assets

# Control Scope: T & T

## 1. Variance Analysis

Analyze performance measurements to assess the variation from the baseline scope. Analysis should determine the cause and degree of variance.

# Control Scope: Outputs

1. Work Performance Measurement
2. Organizational Process Asset Updates
3. Change Requests
4. Project Management Plan Updates
5. Project Document Updates

# Quiz

During a project team meeting, a team member suggests an enhancement to the scope that is beyond the scope of the project charter. The project manager points out that the team needs to concentrate on completing all the work and only the work required. This is an example of:

- A. Change management process.
- B. scope management.
- C. quality analysis.
- D. scope decomposition.

The answer is: B

# Quiz

Which of the following is the KEY attribute of scope verification?

- A. More complete project scope management plan
- B. Customer acceptance of project deliverables
- C. Improved schedule estimates
- D. An improved project management information system.

The answer is: B

Thank you

waleed\_k@aucegypt.edu