Project Integration Management

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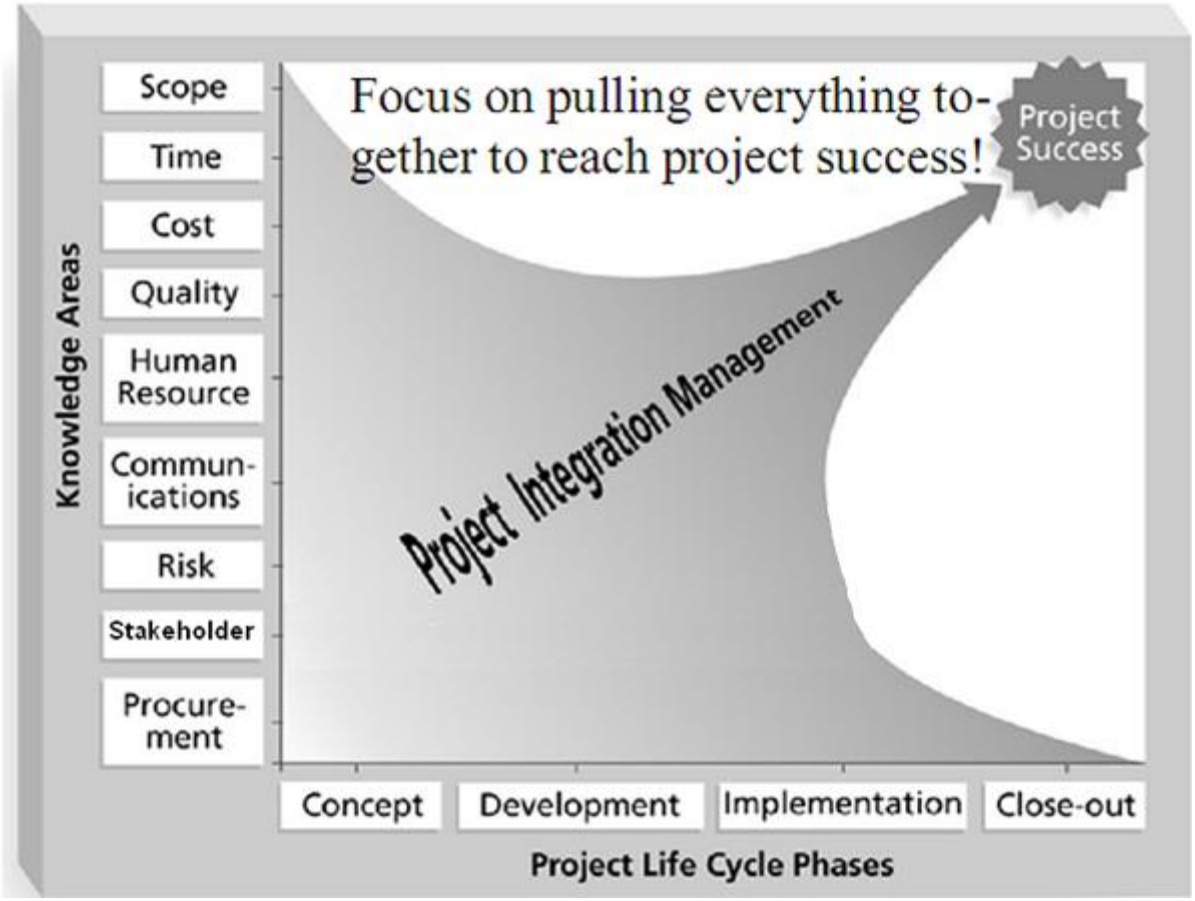
Framework for Project Integration Management



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Project Integration Management

Definition

Processes and activities needed to identify, define, combine, unify, and coordinate the various processes and project management activities within the Project Management Process Groups

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Project Integration Management

1. Develop Project Charter [INITIATING]
2. Develop Project Management Plan [PLANNING]
3. Direct and Manage Project Execution [EXECUTING]
4. Monitor and Control Project Work [M&C]
5. Perform Integrated Change Control [M&C]
6. Close Project or Phase [CLOSING]

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1. Develop Project Charter

Definition

Developing the project charter that formally authorizes a project or a project phase.

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Develop Project Charter

1. **Project Statement of work**
2. **Business case**
3. **Agreements**
4. Enterprise Environmental Factors
5. Organization Process Assets

1. Expert Judgement
2. Facilitation Techniques

1. **Project Charter**

Project Integration Management

Project Initiating

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Project Charter Template

1. Project purpose or justification
2. Measurable project objectives and related success criteria
3. High – Level Requirements
4. High – Level Project description
5. High – Level Risks
6. Summary milestone schedule
7. Summary Budget
8. Project approval requirements
9. Assigned project manager, responsibility, and authority level
10. Name and authority of the sponsor or other person(s) authorizing the project charter

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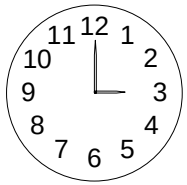
Exercise-1



15 Minutes

- Prepare Project Charter for your Project

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2. Develop Project Management Plan

Definition

Documenting the actions necessary to define, prepare, integrate, and coordinate all subsidiary plans into a project management plan.

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Develop Project Management Plan

1. **Project Charter**
2. **Output from Other Processes**
3. Enterprise Environmental Factors
4. Organization Process Assets

1. Expert Judgement
2. Facilitation Techniques

1. **Project Management Plan**

Project Integration Management

Project Planning

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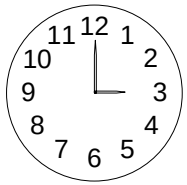
Exercise-2



5 Minutes

- **Write name of all type of subsidiary plans for your Project**

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3. Direct & Manage Project Work

Definition

Performing the work defined in the project Management plan to achieve the project's objectives.

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Direct and Manage Project Work

1. **Project Management Plan**
2. **Approved Change Requests**
3. Enterprise Environmental Factors
4. Organization Process Assets

1. Expert Judgement
2. Project Management Information System
3. Meetings

1. **Deliverables**
2. **Work Performance Data**
3. **Change Requests**
4. Project Management Plan Updates
5. Project Documents Updates

Project Integration Management

Project Executive

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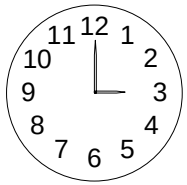
Exercise-3



5 Minutes

- **Write name of Deliverables & Name of work performance information for your Project**

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4. Monitor & Control Project Work

Definition

Tracking, reviewing and regulating the progress to meet the performance objectives defined in the project management plan.

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Monitor and Control Project Work

1. Project Management Plan
2. Schedule forecasts
3. Cost forecasts
4. Validated Changes
5. Work Performance Information
6. Enterprise Environmental Factors
7. Organization Process Assets

1. Expert Judgement
2. Analytical techniques
3. Project Management Information Systems
4. Meetings

1. Change Requests
2. Work performance reports
3. Project Management Plan Updates
4. Project Documents Updates

Project Integration Management

Project Monitoring & Controlling

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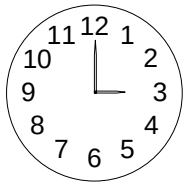
Exercise-4



5 Minutes

- **Write type & name of a few change requests for your Project**

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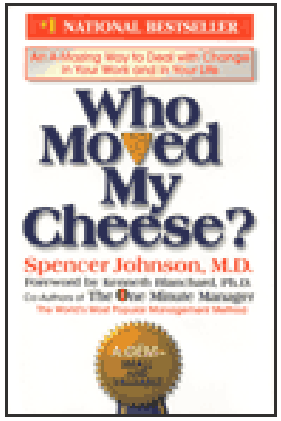
5. Perform Integrated Change Control

Definition

Reviewing all change requests, approving changes and managing changes to the deliverables, organizational process assets, project documents and the project management plan.



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Perform Integrated Change Control

1. Project Management Plan
2. Work Performance Report
3. Change Requests
4. Enterprise Environmental Factors
5. Organization Process Assets

1. Expert Judgement
2. Meetings
3. Change Control Meetings

1. Approved Change Requests
2. Change log
3. Project Management Plan Updates
4. Project Documents Updates

Project Integration Management

Project Monitoring & Controlling

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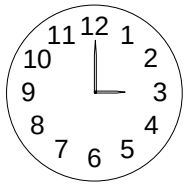
Exercise-5



5 Minutes

a. **Write change management process for your Project OR**

b. **Prepare a format of change request report for your project**

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6. Close Project or Phase

Definition

Finalizing all activities across all of the project Management Process Groups to formally close the project or a project phase

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Close Project or Phase

1. Project Management Plan
2. Accepted Deliverables
3. Organization Process Assets

1. Expert Judgement
2. Analytical techniques
3. Meetings

1. Final product, service or result transition
2. Organization Process Assets Updates

Project Integration Management

Project Closing

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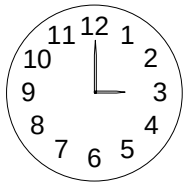
Exercise-6



5 Minutes

- **Write name of documents submitted to organization deliveries made to customer for your Project at the end of your project or project phase.**

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Discussions !

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Project Scope Management

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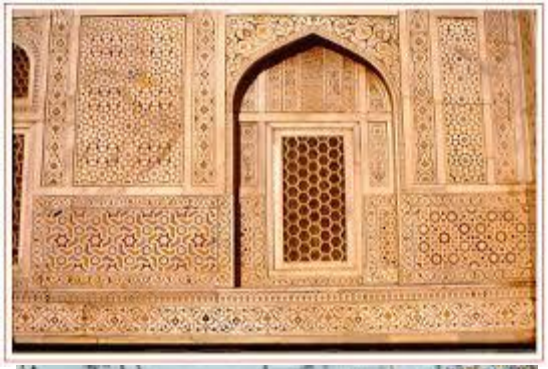
Level of Detailing in Scope



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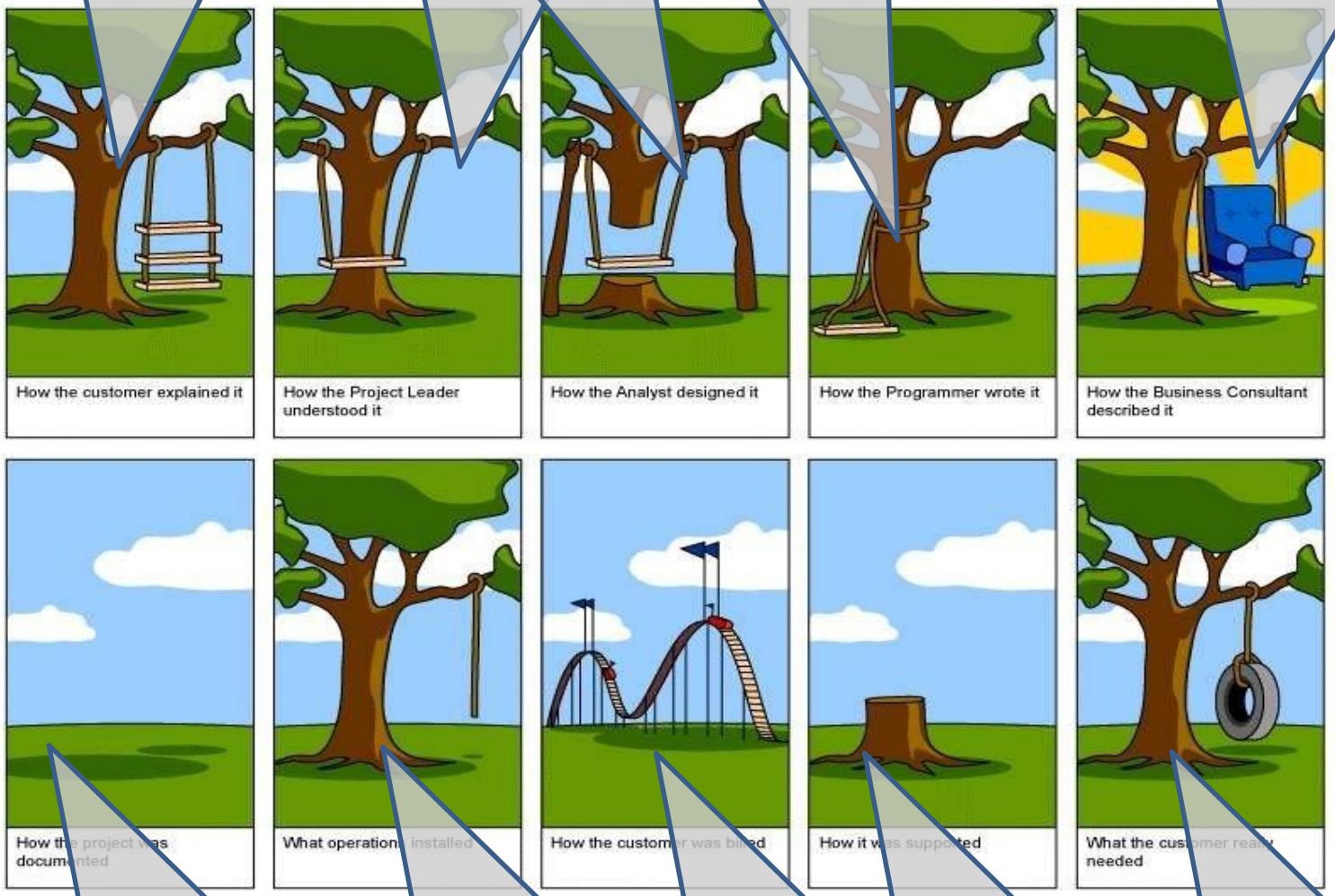
How the customer explained it
How the Project Leader understood it
How the Analyst designed it
How the Programmer wrote it
How the Business Consultant described it
How the project was documented
What operations installed
How the customer was billed
How it was supported
What the customer really needed

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Scope

- **Project Scope** "The work that needs to be accomplished to deliver a product, service, or result with the specified features and functions."

- **Product Scope** "The features and functions that characterize a product, service, or result."

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Project Scope Management

Definition

Processes required to ensure that the project includes all the work required, and ONLY the work required to complete the project successfully

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Project Scope Management

7. Plan Scope Management [PLANNING]
8. Collect Requirements [PLANNING]
9. Define Scope [PLANNING]
10. Create WBS [PLANNING]
11. Validate Scope [M&C]
12. Control Scope [M&C]

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7. Plan Scope Management

Definition

Documenting how the project scope will be defined, validated and controlled

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Plan Scope Management

1. Project Management Plan
2. Project Charter
3. Enterprise Environmental Factors
4. Organization Process Assets

1. Expert Judgement
2. Meetings

1. Scope Management Plan
2. Requirement Management Plan

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Plan Scope Management IO

- Scope Management Plan includes
  - Process for preparing project scope statement (PSS)
  - Process that enable creation of WBS from PSS
  - Process that specifies how formal acceptance be obtained
  - Process to control changes to details PSS
- Requirement Management Plan includes
  - Process of analyzing, documenting and managing requirements
  - Process of requirement prioritization
  - Product measurement metrics and their rationale
  - RTM structure
  - Configuration management activities related to product

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8. Collect Requirements

Definition

Defining and documenting stakeholders' needs to meet the project objectives.

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Collect Requirements

1. Scope Management Plan
2. Requirement Management Plan
3. Stakeholder Management Plan
4. Project Charter
5. Stakeholder Register

1. Interviews
2. Focus Groups
3. Facilitated Workshops
4. Group Creativity Technique
5. Group Decision Making Techniques
6. Questionnaires and Surveys
7. Observations
8. Prototypes
9. Benchmarking
10. Context diagrams
11. Document Analysis

1. Requirements Documentation
2. Requirement Traceability Matrix

Project Scope Management

Project Planning

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Collect Requirements

Focus groups

Guided by moderator, group's final opinion is taken

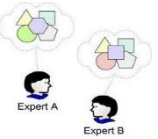
Facilitated workshops

Cross functional stakeholders. Settle their differences like JAD with developers

Group creativity techniques

Brain storming

Nominal group techniques: Brainstorming only on most voted

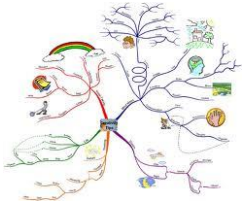


Delphi Techniques: Only selected experts answers. Who answered what is not shared

Idea Mapping techniques: Individuals ideas mapped on single map

Affinity diagrams: Grouping and sorting of ideas for discussion

Group decision making techniques



Majority, Unanimity, Plurality, Dictatorship

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Requirement Traceability Matrix

- Tracing Requirements to
  - Business needs, opportunities, goals & objectives
  - Project objectives
  - Project scope/WBS deliverables
  - Product design
  - product development
  - Test strategy and test scenarios
- Traces high-level requirements to more detailed requirements.

- Attributes in RTM can be
  - Unique identified
  - Textual description of requirement
  - Rationale for inclusion
  - Owner
  - Source
  - Priority
  - Version
  - Current Status (active, cancelled, differed, added, approved)
  - Date completed
  - Stability
  - Complexity
  - Acceptance Criteria

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Requirement vs Scope

Scope and requirement are two different things.

- Requirements are only those, which are in scope!
- Requirements are driven from scope
- Boundaries are defined first (using SOW), requirements are collected next

Requirement must be measurable, testable, traceable, complete, consistent and acceptable to key stakeholders.

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Requirement Documentation includes

- Business need or **opportunity to be seized**, describing the limitation of the current situation and why the project has been undertaken
- Business and project **objectives** for traceability
- **Functional requirements**, describing business process, information, and interaction with the product, as appropriate which can be documented textually in a requirements list, in models, or both
- **Non-functional requirements** like SLA, performance, safety, security, compliance, supportability, retention/purge
- **Quality requirements**
- **Acceptance criteria**
- **Business rules** stating the guiding principles
- **Impacts to other** organizational areas call centre, technology centre, sales force
- Impacts to other entities inside or outside the performing organization
- **Support and training** requirements
- Requirements **assumptions and constraints**

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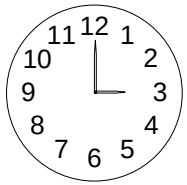
Discussion/Exercise-7



5 Minutes

How to collect, analyze, document, prioritize, manage req; how change should be initiated and impact analysis done; Tracking changes, configuration management activities, RTM structure

Write Requirement Management Plan for your projects

OR

Write Columns of RTM for your project

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9. Define Scope

Definition

Developing a detailed description of the project and product.

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Define Scope

1. Scope Management Plan
2. Project Charter
3. Requirements Documentation
4. Organization Process Assets

1. Expert Judgement
2. Product Analysis
3. Alternatives Identification
4. Facilitated Workshops

1. Project Scope Statement
2. Project Documents Updates

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Define Scope

- Product Analysis
  - Product breakdown
  - System analysis
  - Requirement analysis
  - System engineering: Deals with multiple complex systems
  - Value engineering: Functions, value, cost
    - Retain the function & value and reduce the cost
  - Value analysis: Debate the function and its cost
    - Discuss the value of function vs the cost
- Alternative Identification
  - Alternative way of doing work

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Scope Statement

Scope statement has following sections

- Product Scope Description
- Product Acceptance Criteria
- Project Deliverables
- Project Exclusions
- Project Constraints (budget, imposed date, scheduled milestones, contractual provisions)
- Project Assumptions
- Organizational policies
- Available skilled resources

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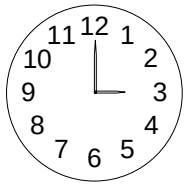
Discussion/Exercise 8



5 Minutes

Product Scope Description, Product Acceptance Criteria, Project Deliverables

Project Exclusions, Project Constraints (budget, imposed date, scheduled milestones, contractual provisions), Project Assumptions, Organizational policies, Available skilled resources

Write Project Scope Statement for your project

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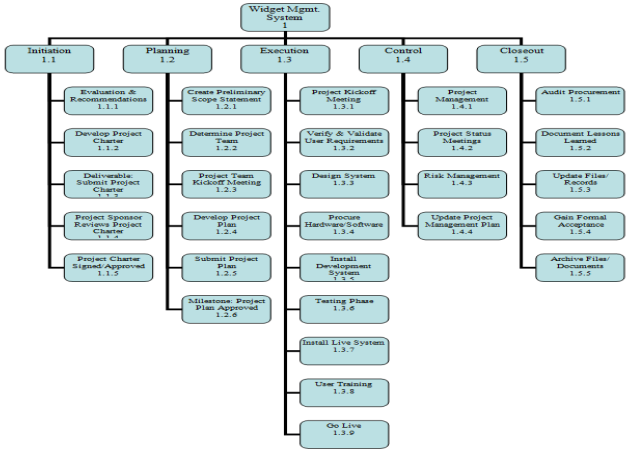
10. Create WBS

Definition

Subdividing project deliverables and project work into smaller, more manageable components.



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Create WBS

1. Scope Management Plan
2. Project Scope Statement
3. Requirements Documentation
4. Enterprise Environmental Factors
5. Organization Process Assets

1. Expert Judgement
2. Decomposition

1. Scope Baseline
2. Project Documents Updates

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Scope baseline

Scope baseline is part of PMP, Scope baseline includes

- Project Scope Statements
- WBS
- WBS Dictionary

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WBS Types

- Phase Driven
- Department Driven
- Milestone Driven
- Component Driven
- Location Driven
- …….

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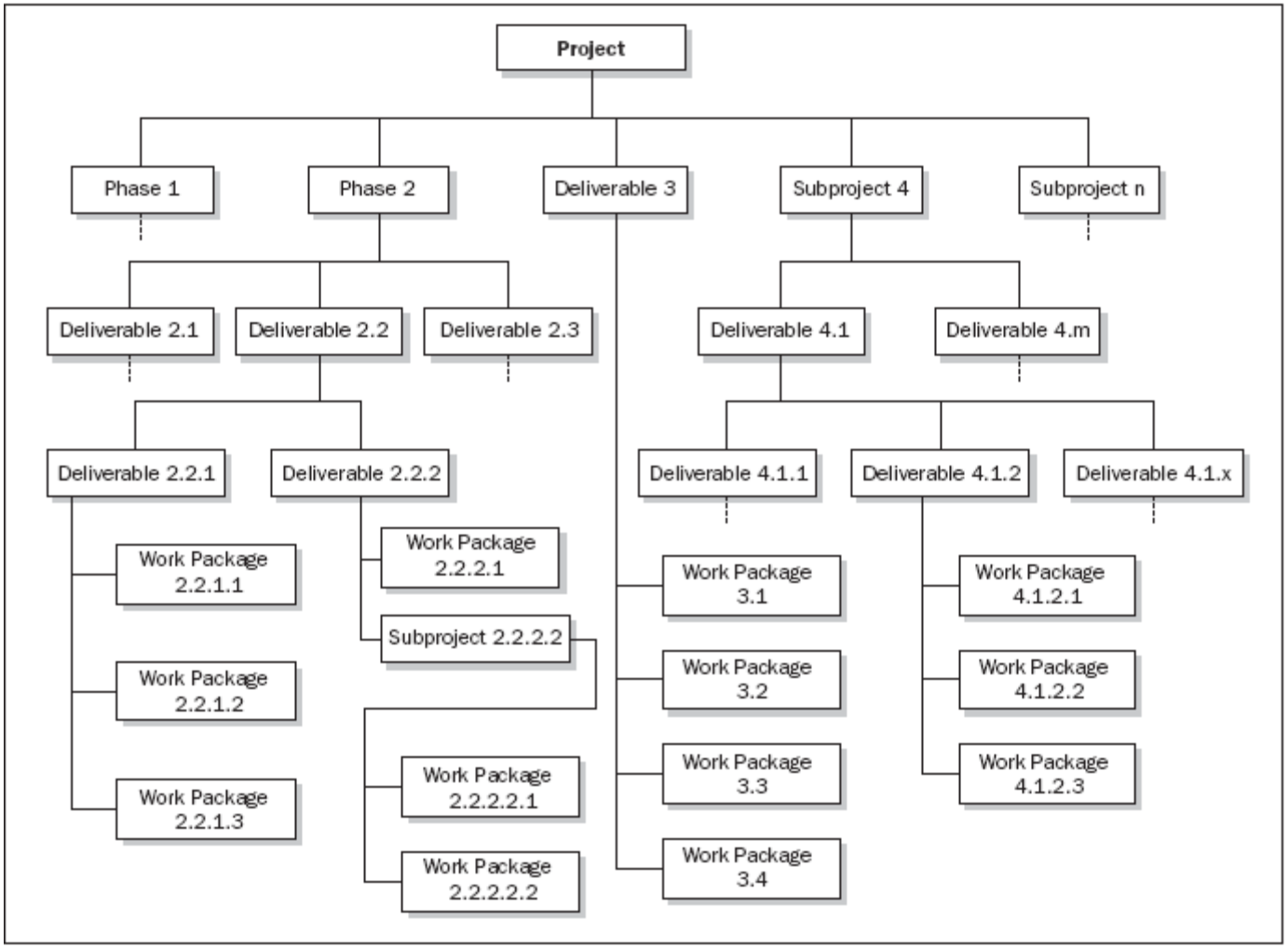
Phase oriented WBS



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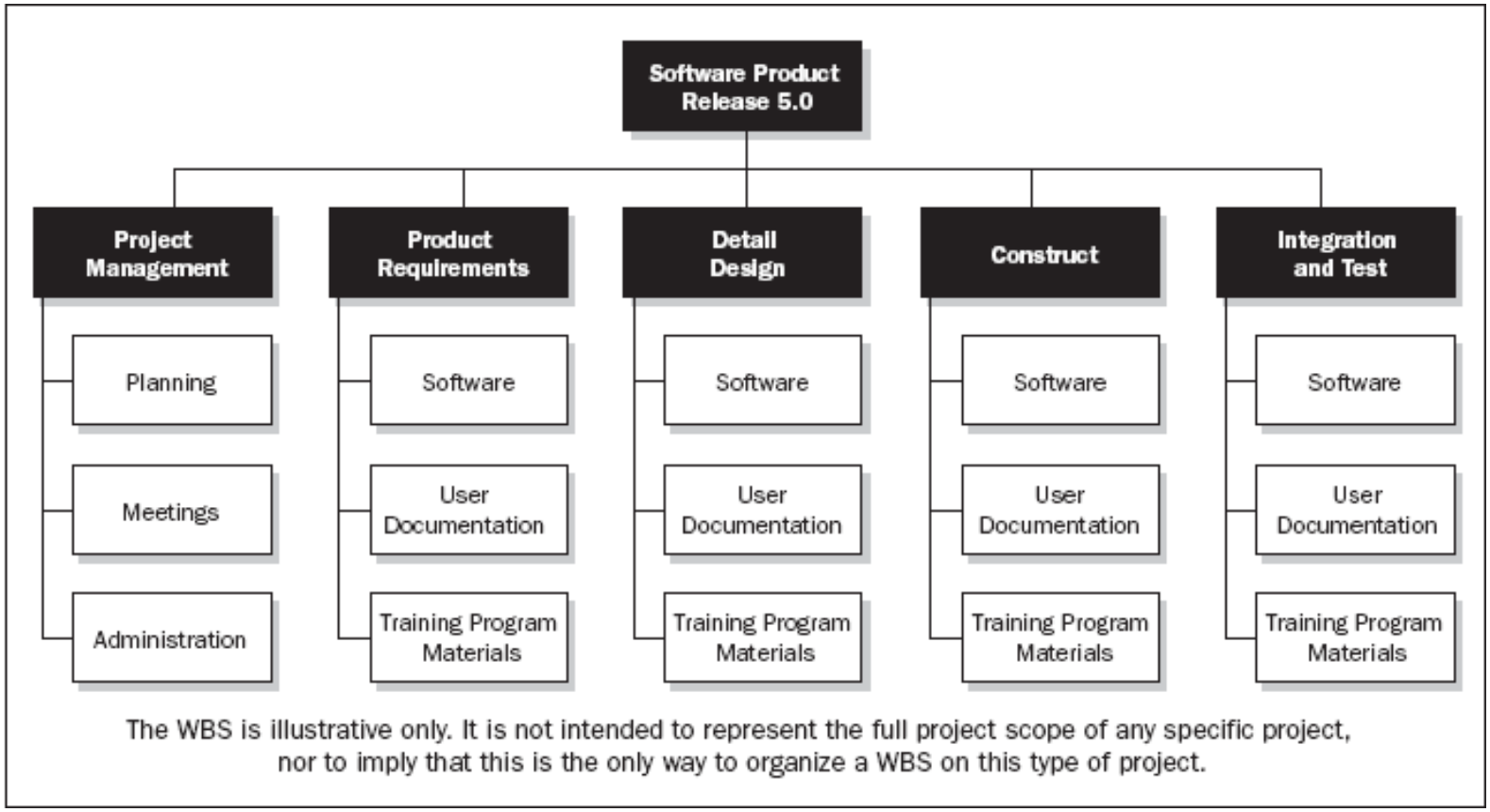
Department oriented WBS



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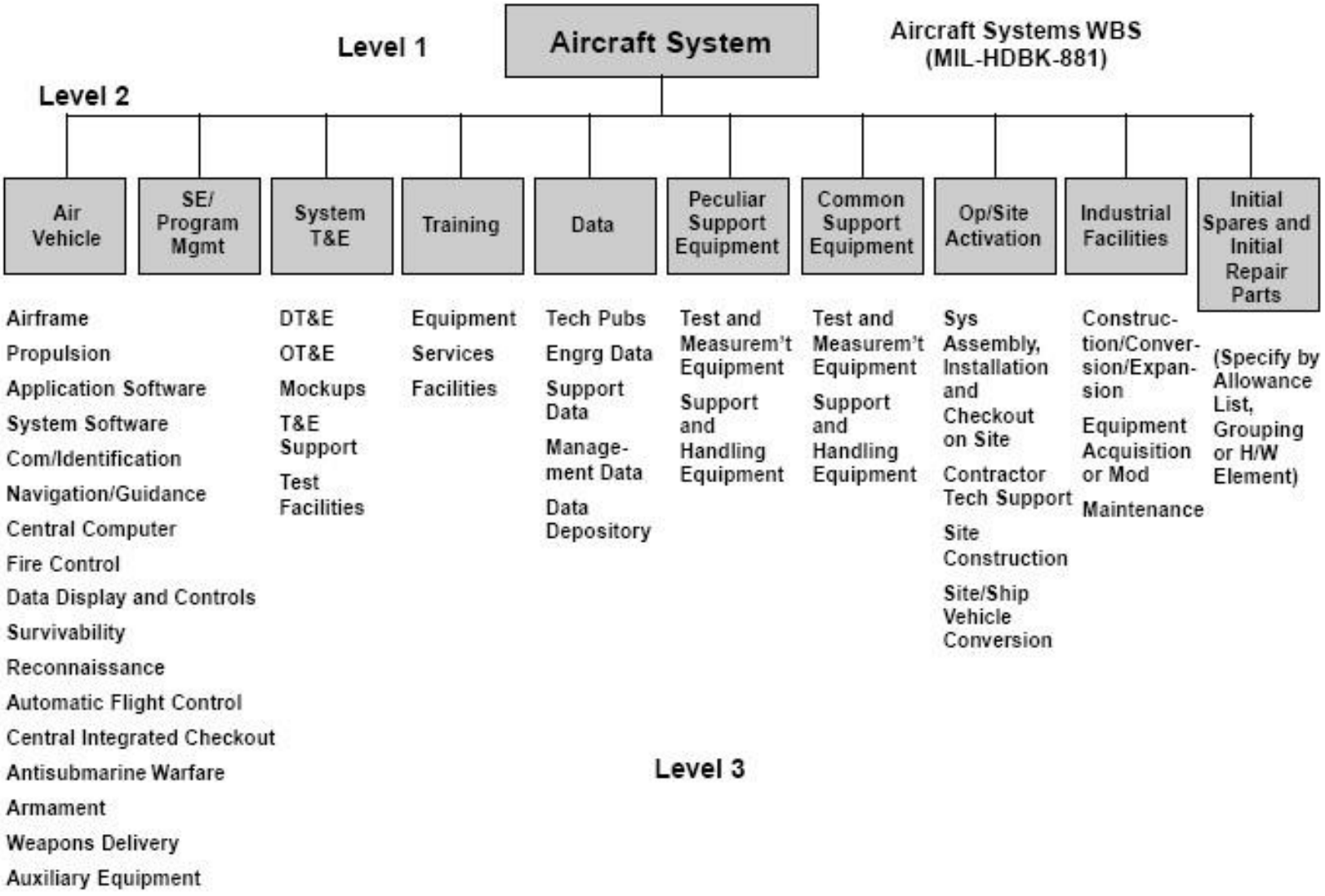
Subproject Oriented WBS



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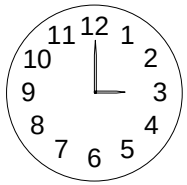
Discussion/Exercise 9



5 Minutes

- **Write 2 Level WBS & WBS Dictionary with min 5 deliverables for your project**

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11. Validate Scope

Definition

Formalizing acceptance of the completed project deliverables.

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Validate Scope

1. Project Management Plan
2. Requirements Documentation
3. Requirement Traceability Matrix
4. Validated deliverables
5. Work Performance Data

1. Inspection
2. Group Decision Making Techniques

1. Accepted Deliverables
2. Change Requests
3. Work Performance Information
4. Project Documents Updates

Project Scope Management

Project Monitoring & Controlling

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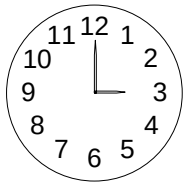
Discussion/Exercise 10



5 Minutes

- **Write verify scope activities for your project; also write the name of deliverables verified.**

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12. Control Scope

Definition

Monitoring the status of the project and product scope and managing changes to the scope baseline.

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Control Scope

1. Project Management Plan
2. Requirements Documentation
3. Requirement Traceability Matrix
4. Work Performance Data
5. Organization Process Assets

1. Variance Analysis

1. Work Performance Information
2. Change Requests
3. Project Management Plan Updates
4. Project Documents Updates
5. Organization Process Assets Updates

Project Scope Management

Project Monitoring & Controlling

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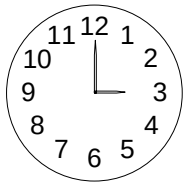
Discussion/Exercise-11



5 Minutes

- **Write work performance measurement metrics and their values for your project**

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Discussions !

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