

BMFP 4542

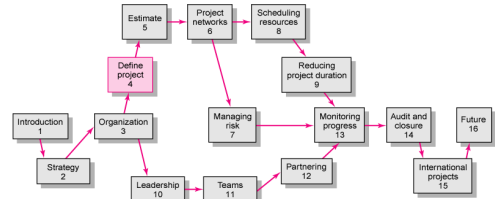
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Project Management

DEFINING PROJECT



Defining the Project

- Step 1: Defining the Project Scope
- Step 2: Establishing Project Priorities
- Step 3: Creating the Work Breakdown Structure
- Step 4: Integrating the WBS with the Organization
- Step 5: Coding the WBS for the Information System

Step 1: Defining the Project Scope

- **Project Scope**
 - A definition of the end result or mission of the project—a product or service for the client/customer—in specific, tangible, and measurable terms.
- **Purpose of the Scope Statement**
 - To clearly define the deliverable(s) for the end user.
 - To focus the project on successful completion of its goals.
 - To be used by the project owner and participants as a planning tool and for measuring project success.

Project Scope Checklist

1. Project objective
2. Deliverables
3. Milestones
4. Technical requirements
5. Limits and exclusions
6. Reviews with customer



Project Scope: Terms and Definitions

- **Scope Statements**
 - Also called statements of work (SOW)
- **Project Charter**
 - Can contain an expanded version of scope statement
 - A document authorizing the project manager to initiate and lead the project.
- **Project Creep**
 - The tendency for the project scope to expand over time due to changing requirements, specifications, and priorities.

Step 2: Establishing Project Priorities

- **Causes of Project Trade-offs**
 - Shifts in the relative importance of criterions related to cost, time, and performance parameters
 - Budget–Cost
 - Schedule–Time
 - Performance–Scope
- **Managing the Priorities of Project Trade-offs**
 - Constrain: a parameter is a fixed requirement.
 - Enhance: optimizing a parameter over others.
 - Accept: reducing (or not meeting) a parameter requirement.

Project Management Trade-offs

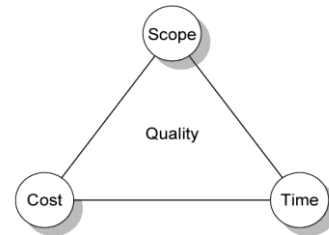


FIGURE 4.1

Project Priority Matrix

	Time	Performance	Cost
Constrain		●	
Enhance	●		
Accept			●

FIGURE 4.2

Step 3: Creating the Work Breakdown Structure

- **Work Breakdown Structure (WBS)**
 - An hierarchical outline (map) that identifies the products and work elements involved in a project.
 - Defines the relationship of the final deliverable (the project) to its subdeliverables, and in turn, their relationships to work packages.
 - Best suited for design and build projects that have tangible outcomes rather than process-oriented projects.

Level	Hierarchical breakdown	Description
1	Project	Complete project
2	Deliverable	Major deliverables
3	Subdeliverable	Supporting deliverables
4	Lowest subdeliverable	Lowest management responsibility level
5	Cost account*	Grouping of work packages for monitoring progress and responsibility
	Work package	Identifiable work activities

Hierarchical Breakdown of the WBS

FIGURE 4.3

How WBS Helps the Project Manager

- **WBS**
 - Facilitates evaluation of cost, time, and technical performance of the organization on a project.
 - Provides management with information appropriate to each organizational level.
 - Helps in the development of the organization breakdown structure (OBS), which assigns project responsibilities to organizational units and individuals.
 - Helps manage plan, schedule, and budget.
 - Defines communication channels and assists in coordinating the various project elements.

Work Breakdown Structure

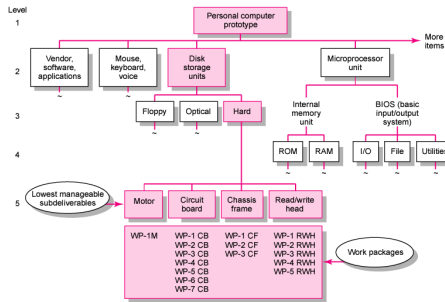


FIGURE 4.4

Work Packages

- A work package is the lowest level of the WBS.

–It is output-oriented in that it:

- Defines work (what).
- Identifies time to complete a work package (how long)
- Identifies a time-phased budget to complete a work package (cost)
- Identifies resources needed to complete a work package (how much)
- Identifies a single person responsible for units of work (who)
- Identifies monitoring points (milestones) for measuring success.

Step 4: Integrating the WBS with the Organization

- Organizational Breakdown Structure (OBS)

–Depicts how the firm is organized to discharge its work responsibility for a project.

- Provides a framework to summarize organization work unit performance.
- Identifies organization units responsible for work packages.
- Ties the organizational units to cost control accounts.

Integration of WBS and OBS

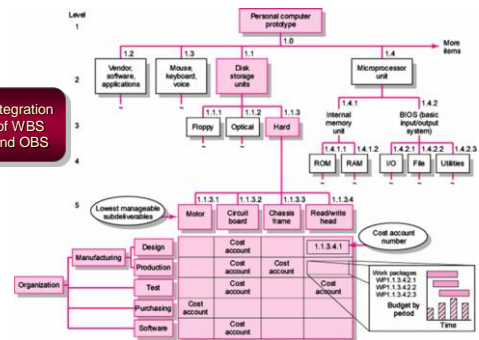


FIGURE 4.5

Direct Labor Budget Sorted By WBS

Direct Labor Budget		
1.1.3	Hard drive	1,660
1.1.3.1	Motor	10
	Purchasing	10
1.1.3.2	Circuit board	1,000
	Design	300
	Production	400
	Testing	120
	Software	180
1.1.3.3	Chassis frame	50
	Production	50
1.1.3.4	Read/write head	600
	Design	300
	Production	200
	Testing	100

TABLE 4.1A

Direct Labor Budget Sorted by OBS

Direct Labor Budget		
Design		600
1.1.3.2	Circuit board	300
1.1.3.4	Read/write head	300
Production		650
1.1.3.2	Circuit board	400
1.1.3.3	Chassis frame	50
1.1.3.4	Read/write head	200
Testing		220
1.1.3.2	Circuit board	120
1.1.3.4	Read/write head	100
Purchasing		10
1.1.3.1	Motor	10
Software		180
1.1.3.2	Circuit board	180
Total		1,660

TABLE 4.1B

PBS for Software Project Development

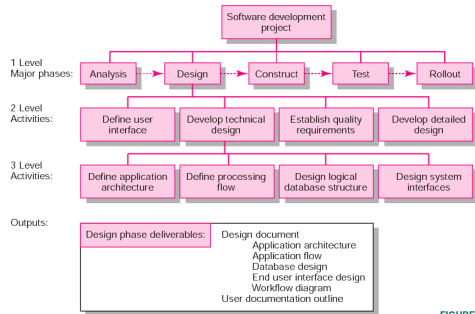


FIGURE 4.8

Responsibility Matrices

Responsibility Matrix (RM)

- Also called a linear responsibility chart.
- Summarizes the tasks to be accomplished and who is responsible for what on the project.

- Lists project activities and participants.
- Clarifies critical interfaces between units and individuals that need coordination.
- Provide an means for all participants to view their responsibilities and agree on their assignments.
- Clarifies the extent or type of authority that can be exercised by each participant.

Responsibility Matrix for a Market Research Project

Project Team					
Task	Richard	Dan	Dave	Linda	Elizabeth
Identify target customers	R	S		S	
Develop draft questionnaire	R	S	S		
Pilot-test questionnaire			R		S
Finalize questionnaire	R	S	S	S	
Print questionnaire					R
Prepare mailing labels					R
Mail questionnaires					R
Receive and monitor returned questionnaires				R	S
Input response data			R		
Analyze results		R	S	S	
Prepare draft of report	S	R	S	S	
Prepare final report	R		S		

R - Responsible
S - Supports/assists

FIGURE 4.9

Responsibility Matrix for the Conveyor Belt Project

Organization								
Deliverables	Design	Development	Documentation	Assembly	Testing	Purchasing	Quality Assmt.	Manufacturing
Architectural design	1	2			2		3	3
Hardware specifications	2	1				2	3	3
Format specifications	1	3						3
Utilities specifications	2	1			3			3
Hardware design	1			3		3		
Disk drivers	3	1	2					
Memory management	1	3			3			
Operating system documentation	2	2	1					3
Prototypes	5	4	4	1	3	3	3	4
Integrated acceptance test	5	2	2		1			5

1. Responsible
2. Support
3. Control
4. Notification
5. Approval

FIGURE 4.10

Key Terms

- Cost account
- Milestone
- Organization breakdown structure (OBS)
- Scope creep
- Priority matrix
- Responsibility matrix
- Scope statement
- Process breakdown structure (PBS)
- Work breakdown structure (WBS)
- Work package