Chapter 11

Planning

MOST MANAGERS DO NOT LIKE PLANNING DUE TO THE FOLLOWING:

- It takes time.
- You have to think.
- It involves paper work.
- You are bound to systematic procedures.
- You are committed to achieve a specific result within a specified time period.

Effective Planning

An effective plan will be:-

* ***Explicit*** **- stated in detail, leaving nothing merely implied.**
* ***Intelligible*** **- it must be understood and be comprehensible.**
* ***Flexible*** **- capable of accepting change.**
* ***Controllable*** **- capable of being monitored for control purposes.**

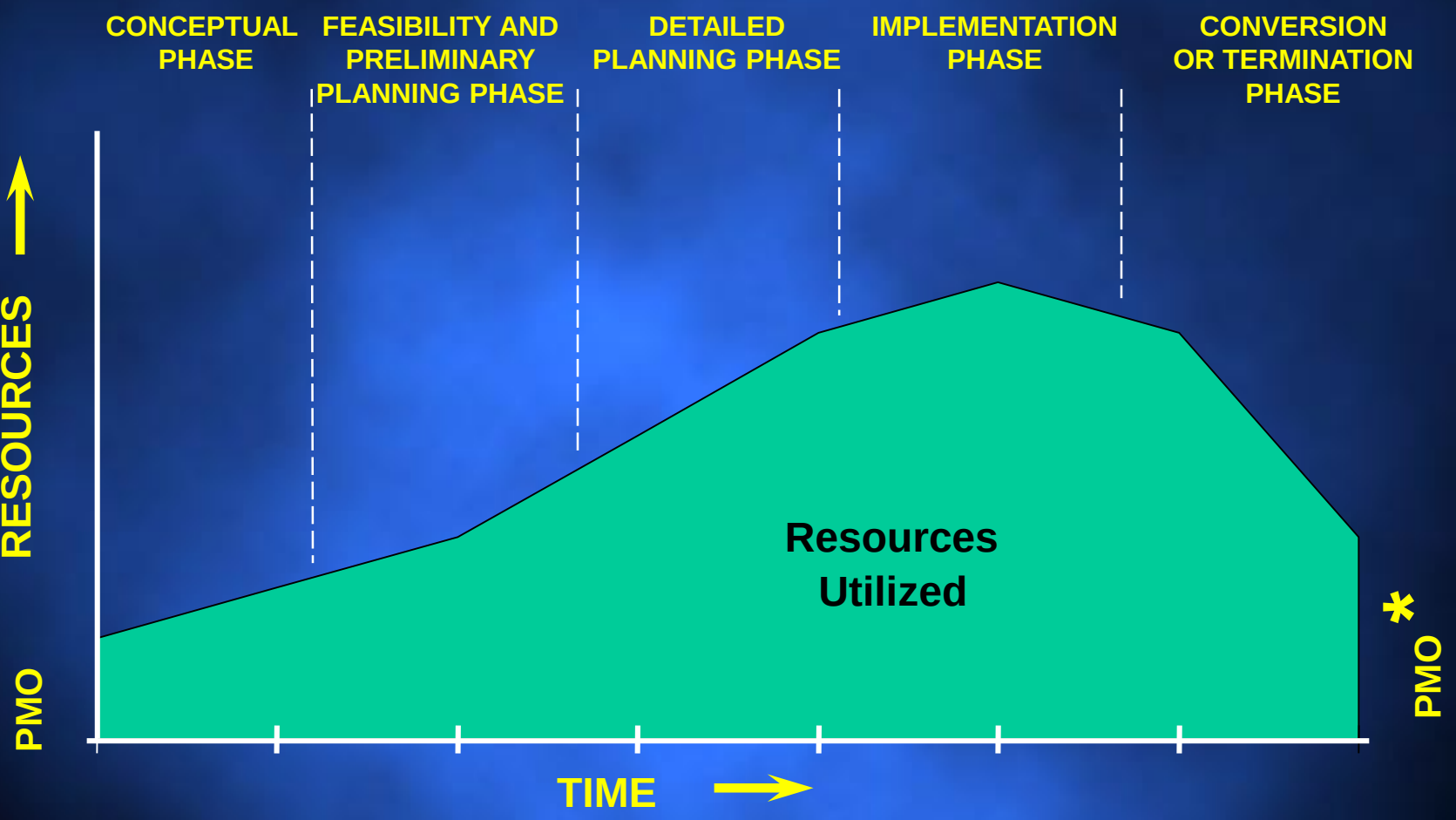
Planning Fundamentals

- If the task is well understood prior to being performed, much of the work can be preplanned.
- If the task is not understood, then during the actual task execution more knowledge is gained that, in turn, leads to changes in resource allocations, schedules, and priorities.
- The more uncertain the task, the greater the amount of information that must be processed in order to ensure effective performance.

Reasons for Planning

- To eliminate or reduce uncertainty
- To improve efficiency of the operation
- To obtain a better understanding of the objectives
- To provide a basis for monitoring and controlling work

DEFINITION OF A PROJECT LIFE CYCLE



PLANNING QUESTIONS OFTEN ASKED

* **Who plans the project?**
* **Who executes the project?**
* **Who is responsible for monitoring work and controlling work?**
* **Who is responsible for providing feedback regarding the planning and execution phases of a project?**

The Line Manager(s) ?
The Project Manager ?
Both Parties ?

Project Manager's Responsibility

- **Project Manager will define:**
  - **Goals and objectives**
  - **Major milestones**
  - **Requirements**
  - **Ground rules and assumptions**
  - **Time, cost, and performance constraints**
  - **Operating procedures**
  - **Administrative policy**
  - **Reporting requirements**

Line Manager's Responsibility

- Line manager will define:
  - Detailed task descriptions to implement objectives, requirements, and milestones
  - Detailed schedules and manpower allocations to support budget and schedule
  - Identification of areas of risk, uncertainty, and conflict

Senior Management's Responsibility

- Senior management (project sponsor) will:
  - Act as the negotiator for disagreements between project and line management
  - Provide clarification of critical issues
  - Provide communication link with customer's senior management

THE SEVEN PHASES OF A PROJECT

1. Wild enthusiasm
2. Disillusionment
3. Chaos
4. Search for the guilty
5. Punishment of the innocent
6. Promotion of the non-participants
7. Define the requirements

Planning/Scheduling Tools

Defining Requirements

- The statement of work (SOW)
- The project specifications
- The milestone schedule
- The work breakdown structure (WBS)

STATEMENT-OF-WORK (SOW)

COMPLEXITY IS DETERMINED BY TOP MANAGEMENT, CUSTOMER AND/OR USER GROUP(S)

FOR INTERNAL PROJECTS:

SOW IS PREPARED BY THE PROJECT OFFICE AND/OR USER GROUP(S)

POINTS TO ADDRESS WHEN DEVELOPING A STATEMENT-OF-WORK

- Purpose - objectives
- Exclusions - what should *not* be done
- Quantities - how many
- Schedule - when the work will be started/completed
- Deliverables (i.e... work done)
- Acceptance criteria - what method will be used to accept deliverables
- Responsibility - department, office or person responsible

WHO PREPARES THE STATEMENT-OF-WORK (SOW)

Preparation of internal SOWs

- Project office and/or user groups

Preparation of external SOWs

- Dependent on situation, & complexity
- Project manager/ line managers and project sponsor
- Client who may have the capabilities
- Client may decide to contract out to an independent body
- Client may contract your services

PREPARATION OF A STATEMENT OF WORK REQUIRES TRAINING RATHER THAN LUCK.

STATEMENT-OF-WORK RISKS

IF A STATEMENT OF WORK IS MISINTERPRETED, IS IT NORMALLY IN FAVOR OF THE CLIENT OR CONTRACTOR ?

Statement of Work Elements

- General scope of the work
- Objectives and related background
- Contractor's tasks
- Contractor end-item performance requirements
- Reference to related studies, documentation, and specifications
- Data items (documentation)
- Support equipment for contract end-item

Statement of Work Elements
(Continued)

- Customer-furnished property, facilities, equipment, and services
- Customer-furnished documentation
- Schedule of performance
- Exhibits, attachments, and appendices

The Cost Of Paperwork

Problem Areas

- Project objectives/goals are not agreeable to all parties.
- Project objectives are too rigid to accommodate changing priorities
- Insufficient time exists to define objectives well.
- Objectives are not adequately quantified.
- Objectives are not documented well enough.
- Efforts of client and project personnel are not coordinated.
- Personnel turnover is high.

Misinterpretation Areas

- Mixing tasks, specifications, approvals, and special instructions
- Using imprecise language (“nearly,” “optimum,” “approximately,” etc.)
- No pattern, structure, or chronological order
- Wide variation in size of tasks
- Wide variation in how to describe details of the work
- Failing to get third-party review

IF A STATEMENT OF WORK IS MISINTERPRETED, IS IT IN FAVOR OF THE CONTRACTOR OR CUSTOMER?

PURPOSE OF WBS

IT IS TO STRUCTURE AN ASSIGNED PROJECT INTO VARIOUS ACTIVITIES IN ORDER THAT:

- Detailed planning can be performed
- Costs and budgets can be established
- Objectives can be linked to available resources in a logical manner
- Specific authority and responsibility can be assigned

WORK BREAKDOWN STRUCTURE

- Can be developed using a top-down or bottom-up approach
- Can be hardware-related, function-related, or a combination
- Depth of WBS must balance out management effort against planning accuracy (influences technical and cost control)
- For accuracy purposes the WBS should be taken down several levels
- The WBS must be structured for objective control & evaluation

Work Breakdown Structure (WBS)

- The total program can be described as a summation of subdivided elements.
- Planning can be performed.
- Costs and budgets can be established.
- Time, cost, and performance can be tracked.
- Objectives can be linked to company resources in a logical manner.
- Schedules and status-reporting procedures can be established.

Work Breakdown Structure (WBS) (Continued)

- **Network construction and control planning can be initiated.**
- **The responsibility assignments for each element can be established.**

IN SETTING UP A WORK BREAKDOWN STRUCTURE THE ACTIVITIES MUST:

- Have clearly defined start dates
- Have clearly defined end dates
- Must be able to be used as a communicative tool in which you can communicate the expected results
- Be estimated on a “total time duration” not when the individual activities start or end
- Be structured so that a minimum of project office control and documentation (i.e. forms) are necessary

WORK BREAKDOWN STRUCTURE (WBS)

LEVEL	DESCRIPTION
1	Total Program
2	Project(s)
3	Task(s)
4	Subtask(s)
5	Work Package(s)
6	Level of Effort

Most common type: Six-Level Indentured Structure

THE WBS BREAKS WORK DOWN INTO SMALLER ACTIVITIES THUS REDUCING THE RISK THAT ANY MAJOR OR MINOR ITEM WILL BE OMITTED

WBS: SIX-LEVEL STRUCTURE

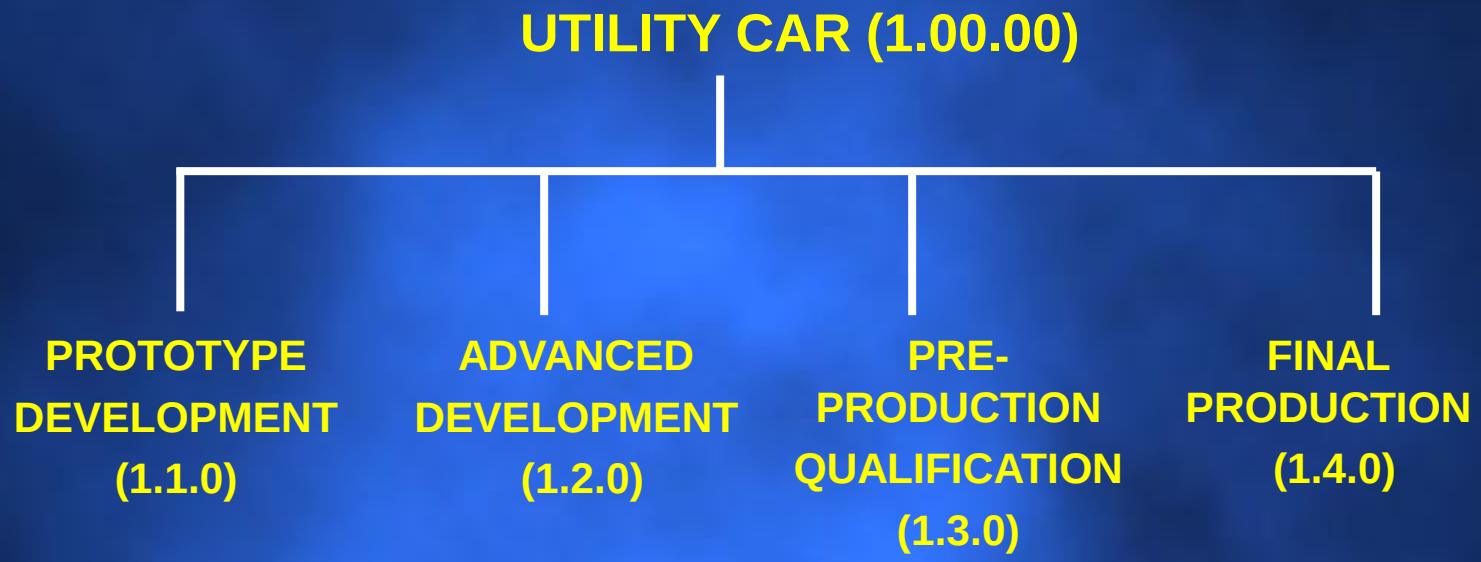
LEVELS	RESPONSIBILITY
1 2 3	Usually specified by the client and managed the project manager.
4 5 6	Generated by contractor for in-house control and managed by the functional manager(s).

Planning accuracy is dependent on the WBS level selected. The lower the level the greater is the planning accuracy but the higher the management cost.

WBS Tasks

- Have clearly defined start and end dates
- Be usable as a communications tool in which results can be compared with expectations
- Be estimate on a “total” time duration, not when the task must start or end
- Be structured so that a minimum of project office control and documentation (i.e., forms) is necessary

DEVELOPING A WORK BREAKDOWN STRUCTURE (WBS)



WBS Example

WBS LEVELS

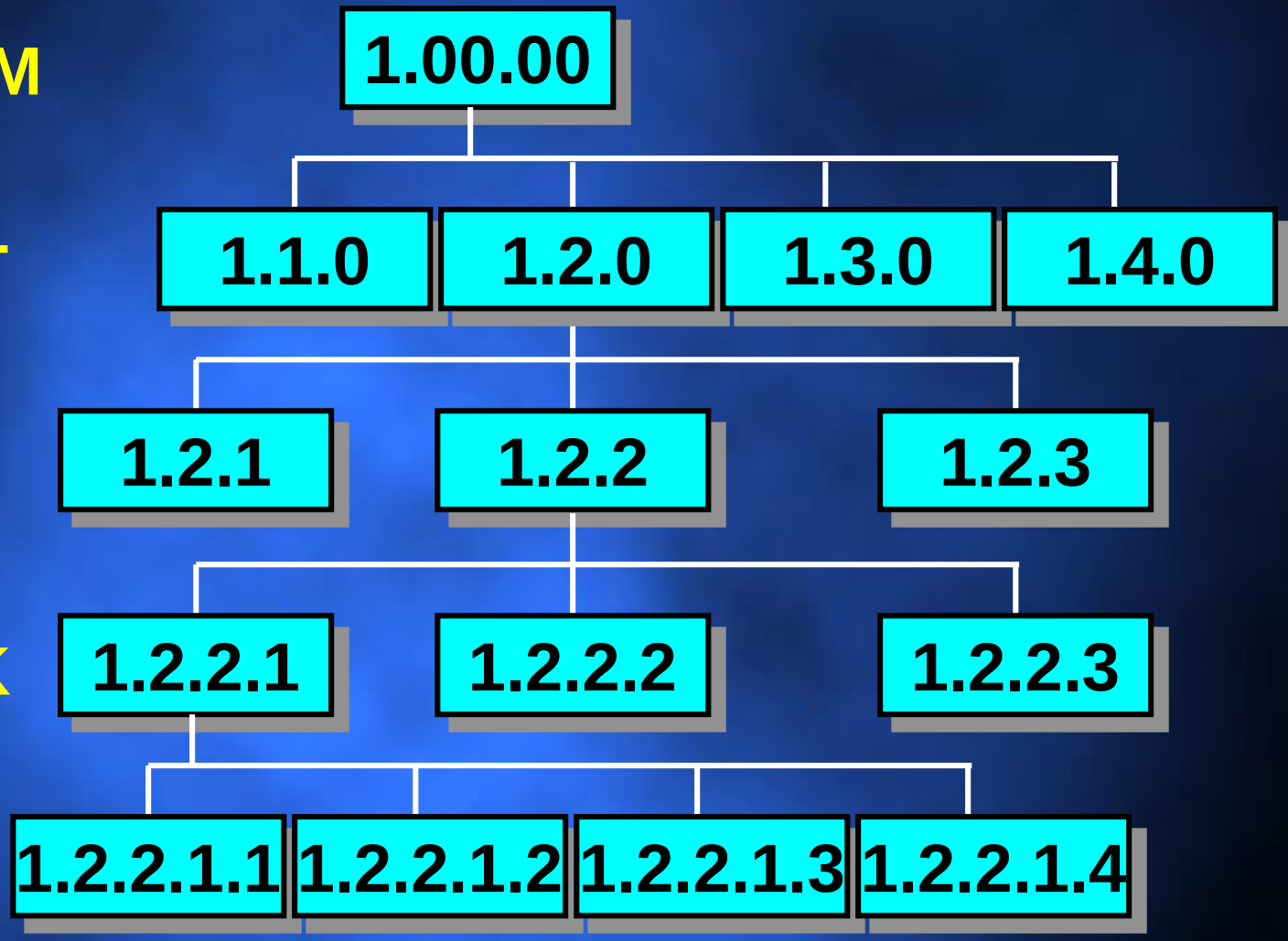
1 PROGRAM

2 PROJECT

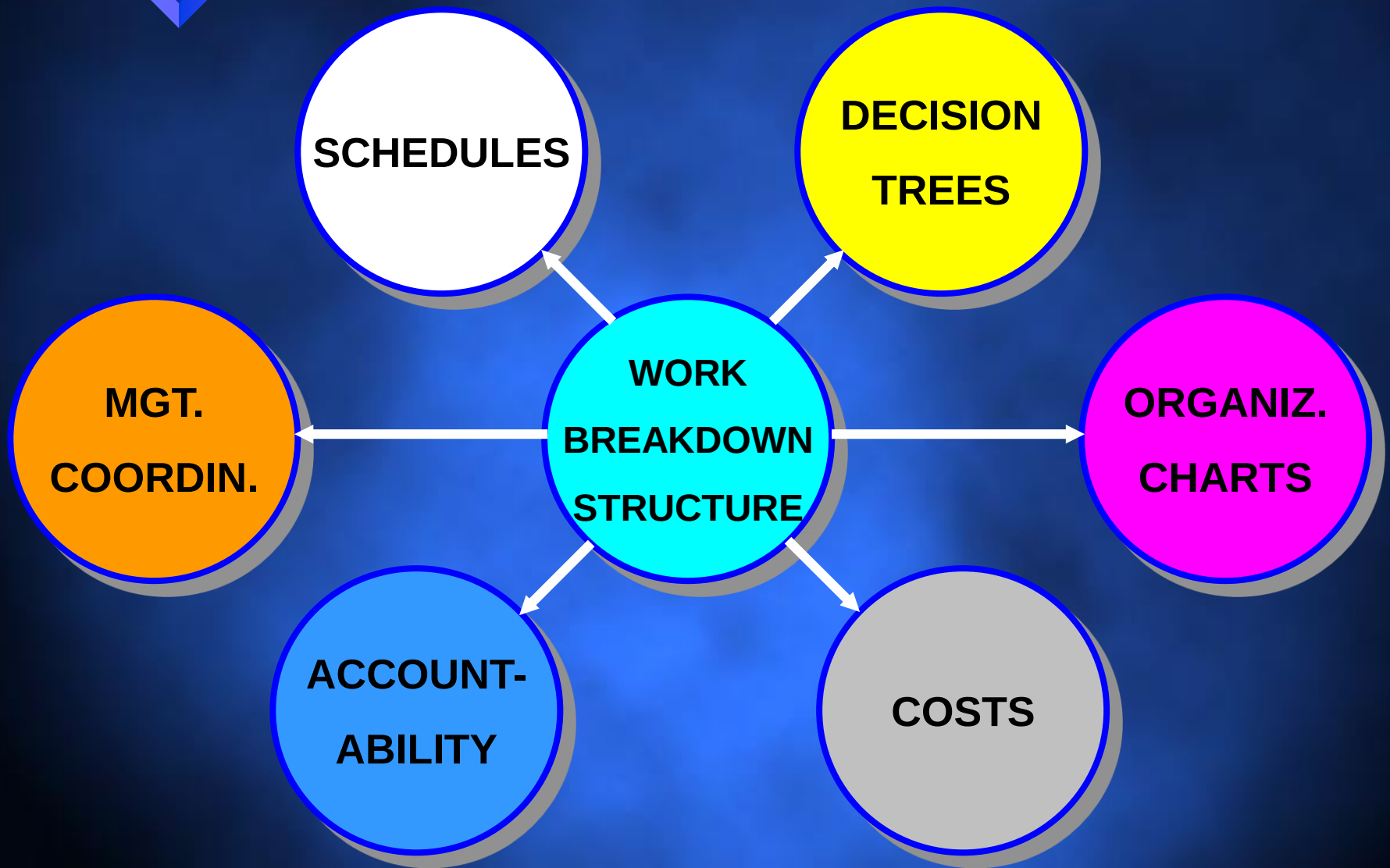
3 TASK

4 SUBTASK

5 WORK PACKAGE



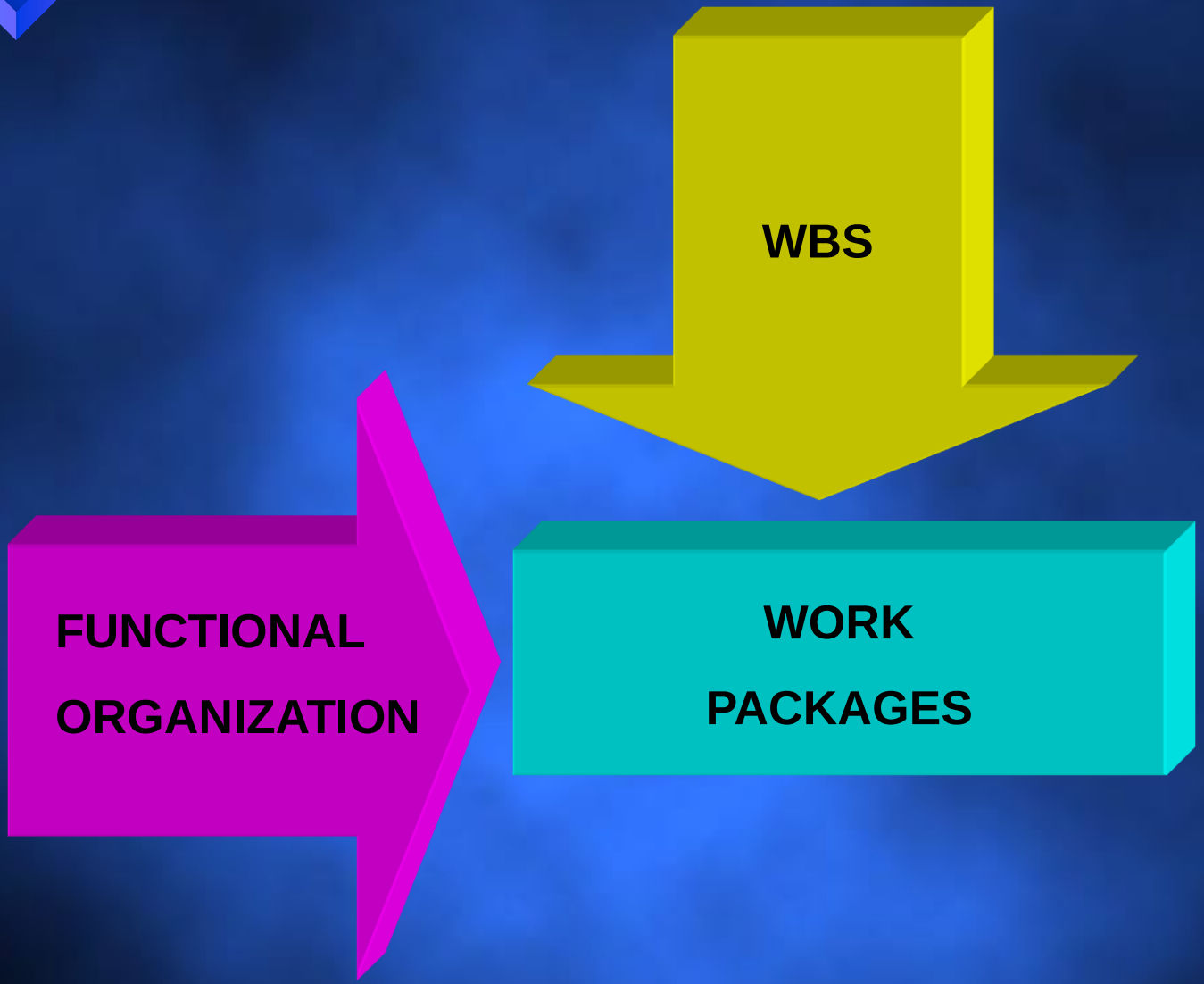
WBS Controls



WBS Interfacing Benefits

- The responsibility assignment matrix
- Network scheduling
- Costing
- Risk analysis
- Organizational structure
- Coordination of objectives
- Control (including contract administration)

Work Package Control Point



WBS Work Packages

- Represents units of work at the level where the work is performed
- Clearly distinguishes one work package from all others assigned to a single functional group
- Contains clearly defined start and end dates that are representative of physical accomplishment
- Target is 80 hours and about two weeks, but depends on size/nature of the project.

WBS Packages (Continued)

- Specifies a budget in terms of dollars, man-hours, or other measurable units
- Limits the work to be performed to relatively short periods of time to minimize the work-in-process effort

The Project Kickoff Meeting

Knowing When To Pull The Plug

REASONS WHY PLANS FAIL

- Corporate goals not understood lower down in the organization/company
- Plans encompass too much in too little time
- Poor financial estimates
- Plans based upon insufficient data
- Poor staff requirements
- Insufficient time allocated for project estimating

OTHER REASONS WHY PLANS FAIL

- No attempt made to systemize the planning process
- Planning was performed by a planning group
- No one knows the ultimate objectives
- No one knows the major milestone dates
- Project estimates are best guesses and are not based on any standards, or history
- No one bothered to see if there would be personnel available with the necessary skills
- People not working towards the same specs
- Constant shuffle of personnel in and out of the project with little regard for the schedule
- Change of management and their objectives.
- Change(s) in the macro environment

Stopping Projects

- Final achievement of the objectives
- Poor initial planning and market prognosis
- A better alternative is found
- A change in the company interest and strategy
- Allocated time is exceeded
- Key people leave the organization
- Personal whims of management
- Problem too complex for the resources available

Behavioral Stoppages

- Poor morale
- Poor human relations
- Poor labor productivity
- No commitment by those involved in the project

Ways to Terminate

- Orderly planned termination
- The “hatchet” (withdrawal of funds and removal of personnel)
- Reassignment of people to higher priority efforts
- Redirection of efforts toward different objectives
- Burying it or letting it die on the vine (i.e., not taking any official action)

Termination Problem Areas

- Worker morale
- Reassignment of personnel
- Adequate documentation and wrap-up

Planning For Project Completion

Planned Closure

- Transferring responsibility
- Completion of project records
  - Historic reports
  - Post project analysis
- Documenting results to reflect “as built” product or installation
- Acceptance by sponsor/user
- Satisfying contractual requirements

Planned Closure (Continued)

- Releasing resources
  - Reassignment of project office team members
  - Disposition of functional personnel
  - Disposition of materials
- Closing out work orders (financial closeout)
- Preparing for financial payments

Updating The Project Diary

Managing Scope Changes

Change Management

- YOU CANNOT MANAGE YOUR CUSTOMER WITHOUT MANAGEMENT OF YOUR PROJECT MANAGEMENT PROCESS.

- WHEN YOUR CUSTOMER INITIATES A CHANGE REQUEST, YOU MUST BE ABLE TO PREDICT IMMEDIATELY THE IMPACT ON SCHEDULE , COST AND TECHNICAL PERFORMANCE.

Unmanaged vs. Managed Changes

	Where **TIME** is invested	How **ENERGY** is invested	Which **RESOURCES** are used
Unmanaged Change	• Back-end	• Rework • Enforcement • Compliance • Supervision	• Senior Management and key players only
Managed Change	• Front-end	• Education • Communication • Planning • Improvements • Value-Added	• Stakeholders (internal) • Suppliers • Customers

Cost of Corrections

Integrated Processes for The 21st Century