



**SOUTHERN POLYTECHNIC
STATE UNIVERSITY**

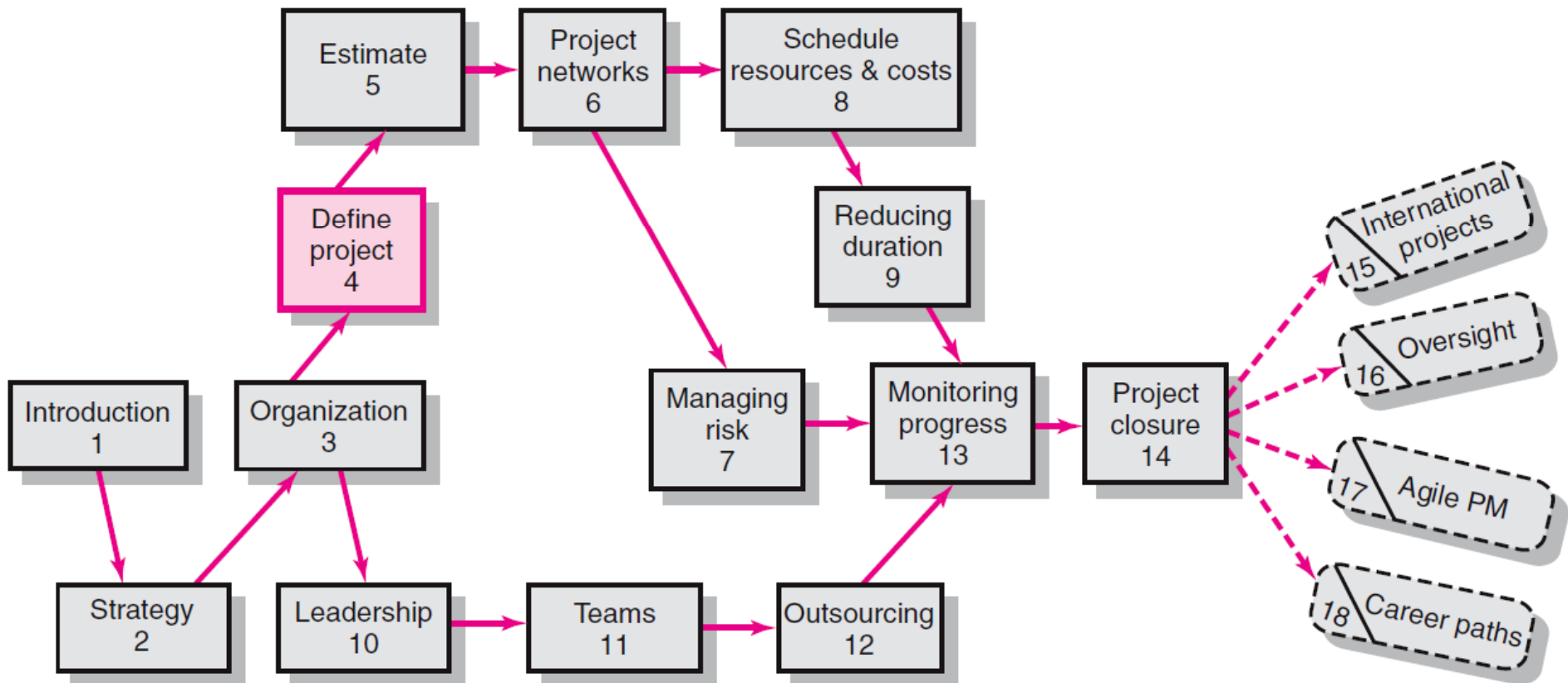
MGMT 4135

Project Management

Chapter-4

Defining the Project

Where We Are Now



Steps for 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 PMIS

Create Responsibility Matrix

Create The Communications plan

Step-1 Defining the Project Scope

- Project scope statement is a details description of the end result of the project. It typically includes project objectives, deliverables, milestones, project specifications, technical specifications, and limits and exclusions.
- Poorly defined scope will surely be the barrier to project success. Research shows that 50% of project planning issues relate back to unclear definition of scope and project goals.
- Scope should be developed under the direction of the project manager and the customer.

Step-1 Defining the Project Scope

- Project Scope is the most important document of the project plan. Use this checklist to ensure that scope definition is complete:
 1. **Project objectives:** define the overall objective of the project in order to meet your customer's need(s). Objectives answer the questions of what, when, and how much.
 2. **Deliverables:** define the major deliverables or outputs over the life cycle of the project
 3. **Milestones:** a significant project event that occurs at a point in time; A milestone schedule shows only major segments of work; built using the project deliverables.

Step-1 Defining the Project Scope

- Project Scope is the most important document of the project plan. Use this checklist to ensure that scope definition is complete:
 4. **Technical requirements:** Ensures proper performance of the end product, service, or result. These are the technical specifications of the end product that must be built into the plan. E.g. speed and capacity of a database or speed and accessibility of a wireless network.
 5. **Limits and exclusions:** These statements call out those items that are not in scope of the project. Without these statements, stakeholders can make false assumptions and put unrealistic expectations on the project team.

Step-1 Defining the Project Scope

- Project Scope is the most important document of the project plan. Use this checklist to ensure that scope definition is complete:
 6. **Review with the customer:** Completed scope statement and checklist should be reviewed with your customer. The project manager seeks understanding and an agreement with the customer that the scope is correctly stated. The project manager also seeks the customer's confirmation that the timing/schedule, budget, and key accomplishments are also defined accurately.

Step-1 Defining the Project Scope

- **Statements of Work (or SOW)** is a project scope supplied by a vendor who will be performing project work for the performing organization. It is similar to an internal Scope Statement but is geared more towards what the vendor will be doing to achieve the goals of the project.
- **Project Charters** officially declares the project and authorizes the project manager to initiate and take charge of the project. It is a brief scope statement that may include such items as known risks, customer needs, spending limits, general dates of milestones and delivery of the end product, result, or solution, and may even name some specific resources to be part of the project team.

Step-1 Defining the Project Scope

- **Scope Creep** is a term that describes the tendency for the project scope to expand over time. Changing requirements, specifications, and priorities are the main culprits.
- **Scope Creep** can be prevented by carefully writing the scope statement with as much detail as possible. Scope statements that are written too broadly open the door for scope expansion.
- **Scope Creep** adds risk, cost, and schedule delays in most instances.
- **Scope Creep** should be avoided and watched-for by the project manager.

Step-1 Defining the Project Scope

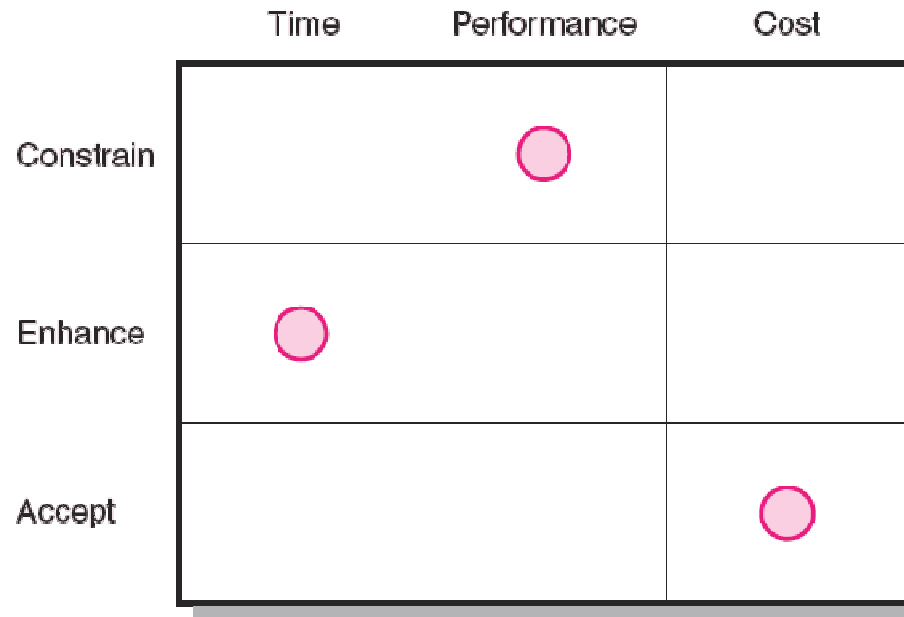
- **Change Control:** if the project scope needs to change, a change control process should be in place that logs all project changes. These logs should include the impact of the change and those responsible for approving or rejecting the change.
- **Project changes** are one of the most complex and frustrating issues that project managers must often deal with.

Step-2 Establishing Project Priorities

- Developing a decision priority matrix before the project begins is useful in that it provides clear priorities with the customer(s) and top management. It creates shared expectations and avoid misunderstandings,
- It is essential to the planning process where adjustments are often made to scope, schedule, and budget.
- Priority Matrix Figure 4.2:
 1. **Constrain:** In this case, performance is fixed which means that the project must ensure that the performance of the solution meets performance parameters, without variance
 2. **Enhance:** Time should be enhanced to shorten the time to market for the product. In doing so,
 3. **Accept:**...going over budget is acceptable although is never desirable.

Step-2 Establishing Project Priorities

- **Priorities change over the life cycle of the project.** Going back to 4.2, it shows that cost overruns are in an “accepted” state. However, 4 months into the project, top management could easily emphasize cost containment, thus changing this criteria to a “constraint,” which is now disallowing overruns.



Step-3 Creating a WBS

- **Work Breakdown Structure (WBS)** is a map of the project. This is the process of subdividing project deliverables and work into smaller packages. This is a hierarchical decomposition of the work to be executed by the project team.
- Each descending level of the WBS represents a more detailed definition of the project deliverable.
- The actual planned work is found at the lowest level of nodes in the WBS – these are called **work packages**. Organization units and/or individuals are assigned responsibility for executing all work packages.

Step-3 Creating a WBS

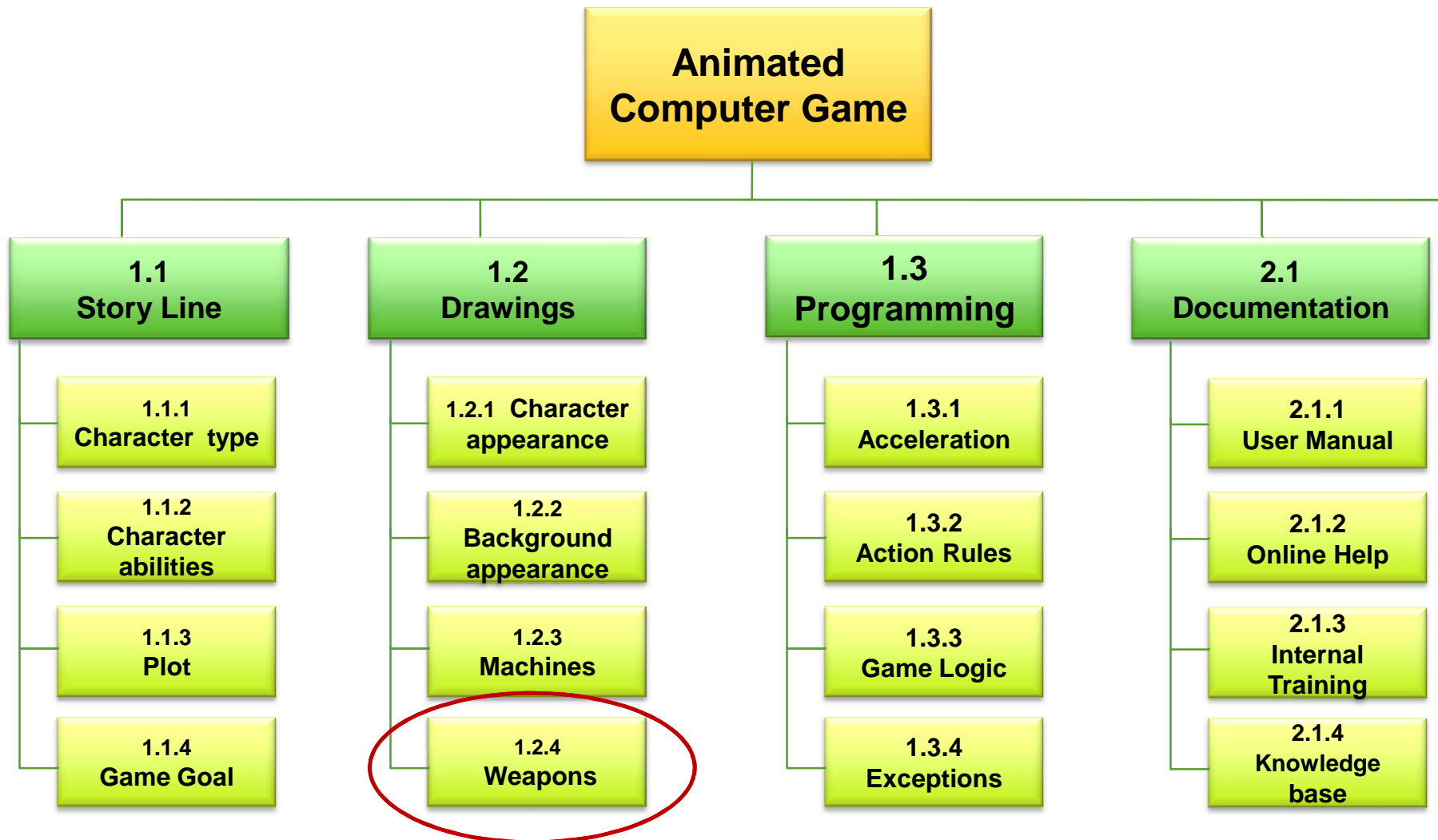
- **The importance of the WBS is that it:**
 - Is a Primary tool for controlling scope
 - Is always based on deliverables rather than the tasks that produce the deliverables.
 - It defines WHAT will be delivered, NOT HOW.
 - Assists in coordinating many parts of the project.
 - Problems are quickly addressed because the structure integrates work and responsibility.

Step-3 Creating a WBS

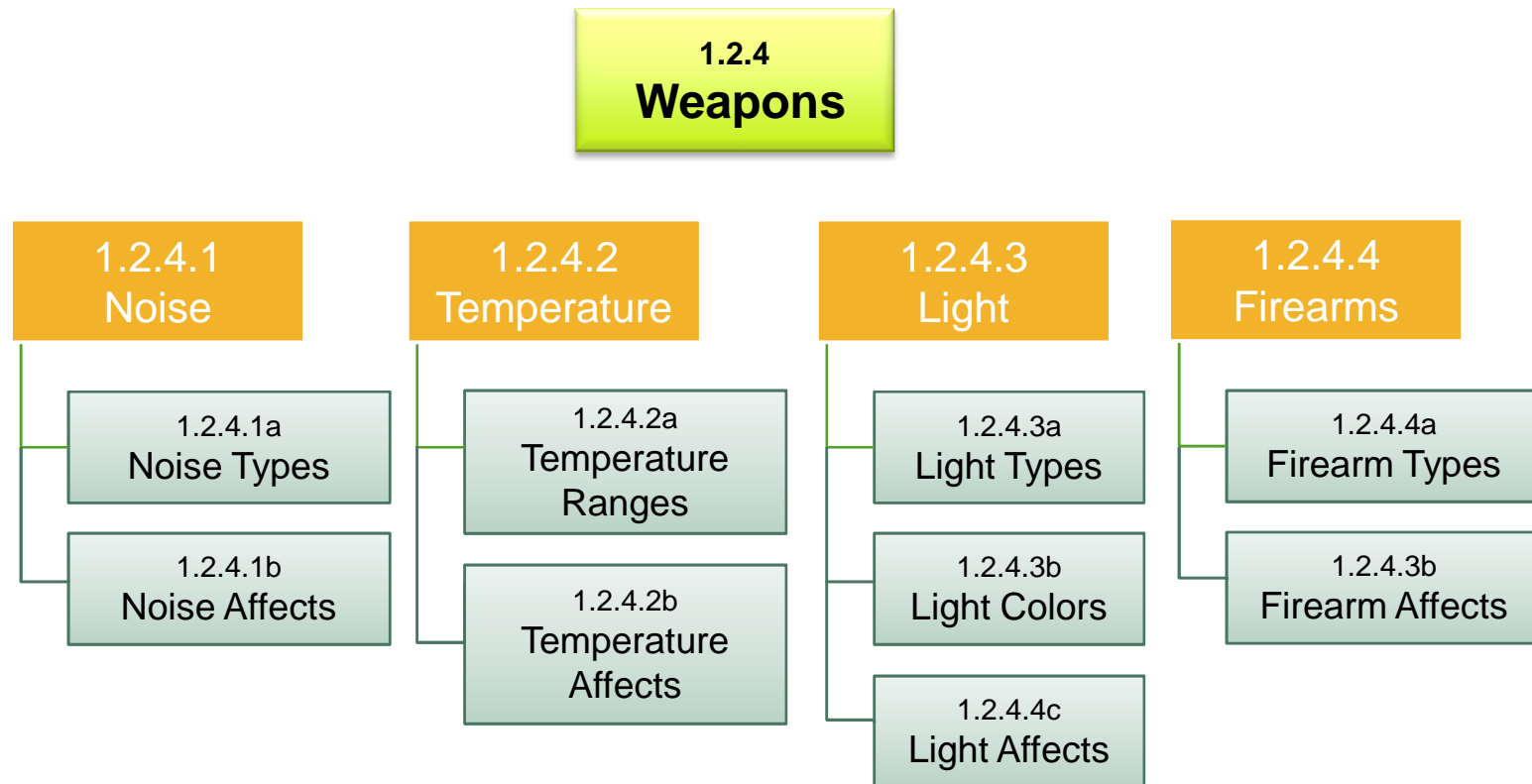
- **How WBS Helps the Project Manager**

- Is a Primary tool for controlling scope
- Each WBS node requires a time and cost estimate which is helpful in creating the schedule and a budget
- It is used to aggregate the estimated costs of the work packages into the upper parts of the WBS.
- And because work packages are assigned to a unit or individual, the project manager is aware of the resources that will be utilized for project work.

Step-3 Creating a WBS



Step-3 Creating a WBS



Step-3 Creating a WBS

- **Work Packages**

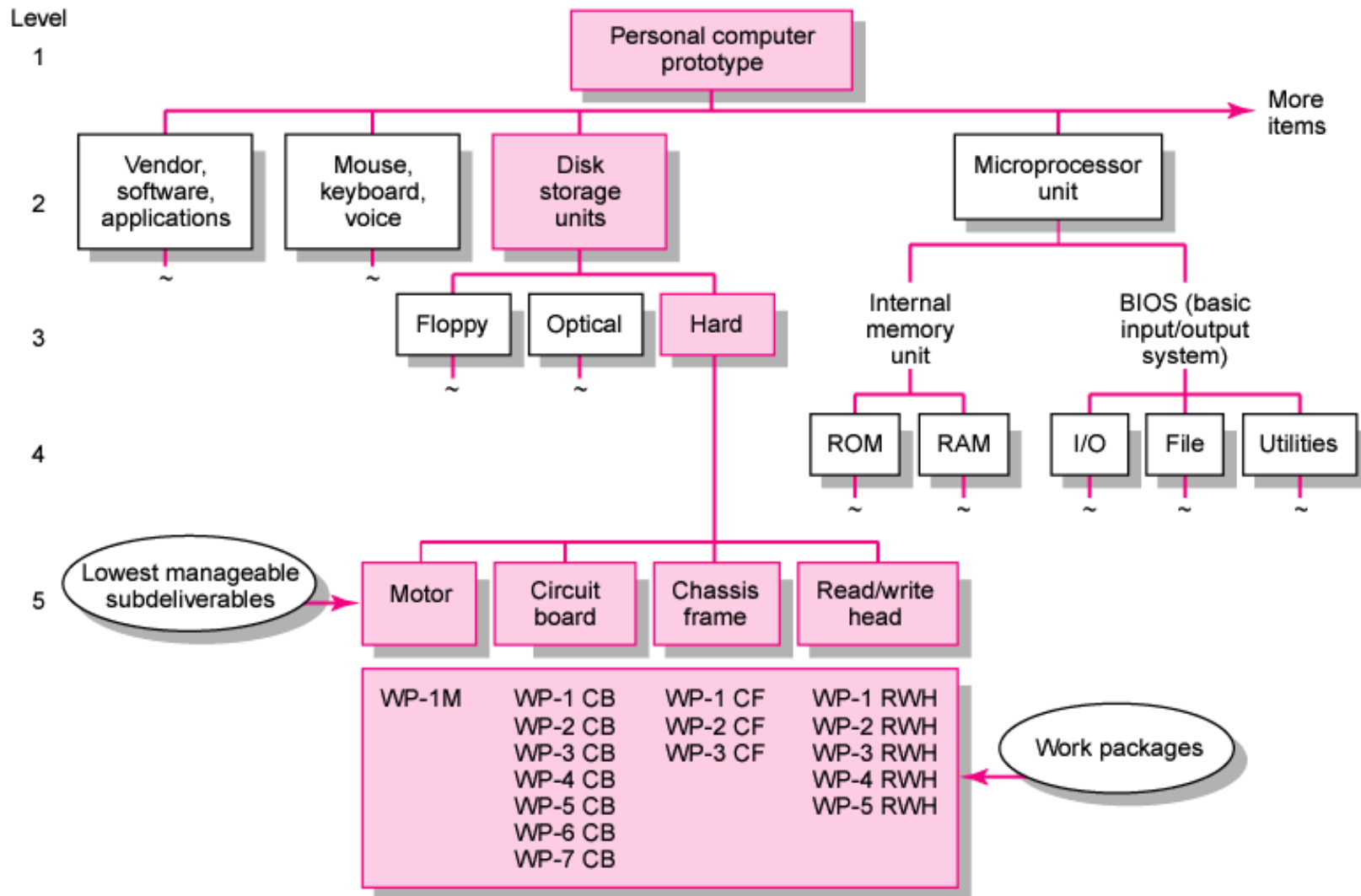
- When the WBS cannot be decomposed any further, the last node is considered a **work package**. This is where the activities of the project are derived.
- Most work packages should have a duration of approximately 80 hours (or 10 business days).
- Each package has a completion date, a cost, a resource, and usually technical specifications.
- Each work package should be independent of other work packages.
- **No work package is described in more than one sub-deliverable of the WBS.**

Step-3 Creating a WBS

- **Work Packages**

- Figure 4.4 on pg. 112 shows several work packages below the lowest level of the WBS under the sub-deliverable of the **Hard Disk** storage unit.
- **Each work package:**
 1. Defines work to be done
 2. Identifies how long to complete the work package
 3. Identifies the time-phased budget to complete the work
 4. Identifies the resources need to complete the work
 5. Identifies a single person responsible for the units of work
 6. Identifies monitoring points for measuring progress

Step-3 Creating a WBS



Step-3 Creating a WBS

- WBS development should take advantage of previous similar projects.
- WBS development is a group effort under the direction of the project manager and other organizational management.
- WBS structures should not follow the organization structure as it will focus more on the organizational function rather than on the project output of deliverables.
- WBS should be output oriented with concentration on concrete deliverables.

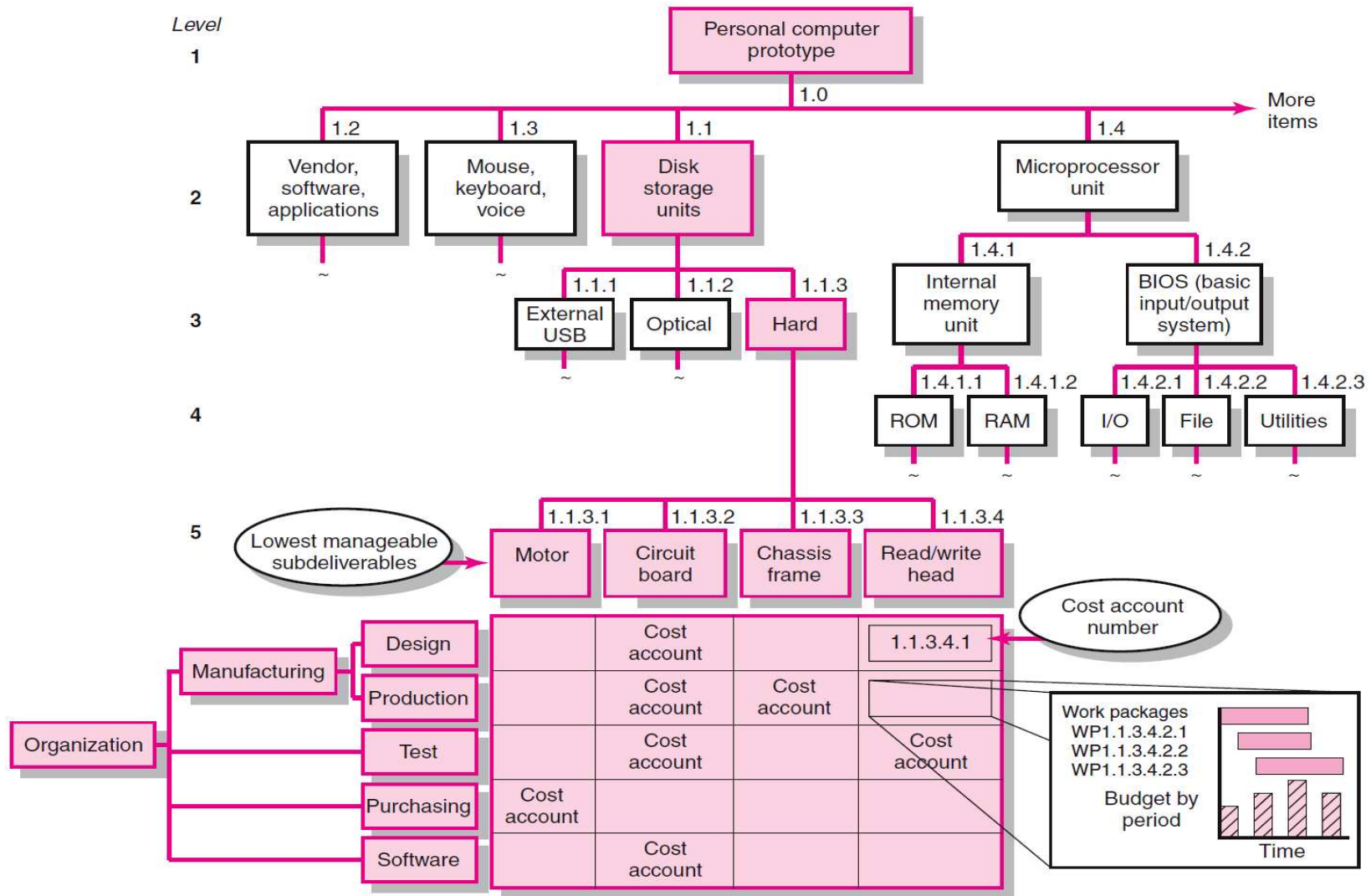
Step-4 Integrating WBS with Organization

- WBS links the organizational units who will be performing the work. The outcome of this process is the **organization breakdown structure (OBS)**. The **OBS**:
 - Provides a framework to summarize organization work unit performance.
 - Identifies organization units responsible for work packages.
 - Ties the organizational units to cost control accounts

Step-4 Integrating WBS with Organization

- The OBS assigns the work packages to an organization unit that will be responsible for the work packages that fall within the same **cost account**.
- A **Cost Account** governs the cost for all types of work. When work packages are categorized by type of work, all the costs for those types of work packages are aggregated up to a cost account. E.g.: Software development, Hardware build, Testing – each of these could contain one or several work packages. A cost account will be assigned to each of these work types.
- A **Cost Account** is a control point of one or more work packages that are used to plan, schedule, and control the project.
- **The sum of all project cost accounts represents the total cost of the project.**

Step-4 Integrating WBS with Organization



Step-5 Coding the WBS for the PMIS

- **PMIS** is the project management information system. The text suggests that coding the WBS and the account systems are found in the information system.
- **Codes** define each level of the WBS; subsequent layers of the WBS use the parent code followed by a “dot” code. In the example on the previous slide, 1.4 represents the “Microprocessor unit.” 1.4.1 and 1.4.2 further defines the deliverables for the unit. 1.4.11 is yet a further decomposition of the unit.
- **Coding the WBS** is uniquely structured by the performing organization. If the organization does not have a specific WBS coding process, the project team will typically follow its own format.

Step-5 Coding the WBS for the PMIS

- **Coding the WBS work packages** is also a personal preference. There are no industry standards, per se, regarding best practices on how to code WBS nodes and work packages.

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- ✓ **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 PMIS

Create Responsibility Matrix

Create The Communications plan

Create the Responsibility Matrix

- A **Responsibility Matrix** summarizes tasks to be worked and who is responsible for that project work.
- Typically used for smaller less complex projects.
- The Matrix defines the **responsibility** of each resource or resource group defined.
 - Figure 4.6 assigns each resource a code R (responsible) or S (supports/assists).
 - R=responsible for coordinating the efforts of making sure that the task is completed either by that resource or by others who may be assigned
 - S=support/assist those marked as responsible.

Create the Responsibility Matrix

- **Richard is responsible** for identifying target customers. Dan and Linda will support and assist Richard for this task.
- **The Responsibility Matrix** provides a means for all project members to view and agree/disagree the assignment of responsibilities.
- **Figure 4.7** takes a different approach on developing a Responsibility Matrix. This Matrix uses number 1 thru 5 and includes a legend of what each code designates.

Design organization is responsible for the Architectural design of the project, as indicated by the **1** in the Matrix. The Development and Testing organizations will support the Design unit with the Architectural design, as indicated by the **2** in the Matrix. QA and Manufacturing units will act as consultants.

Create the Communication Plan

- **The Communication Plan** is created very early in the project. It is especially important that the communications plan be in place once the project deliverables and work have been clearly defined.
- A well defined **Communication Plan** ensures the customer, team members, and other stakeholders will be provided with the information they need (and when they need it) in order to do their jobs.
- **The communication plan** is a key component in coordinating and tracking project schedules, issues, risks, and action items. It maps out the flow of information to specific recipients and at specified frequencies.

Create the Communication Plan

- The Communication Plan includes a **Stakeholder Analysis**. This identifies different groups or people who need information to either make decisions or contribute to the project.
- Another element of the communications plan is the **information needs**. Certain people at various levels in the organization need summary information while others require full details. The communication plan maps out who gets what.
- **Sources of information** are critical in identifying what types of information is available for dissemination.
- **Disseminating modes** describes the vehicle in which the information will be sent.
- **Responsibility and timing** describes who is responsible for disseminations and the frequency in which the communication will occur.

Chapter-4 Key terms:

Cost account, 113

Project charter, 105

Scope statement, 105

Milestone, 103

Responsibility matrix, 116

Work breakdown structure
(WBS), 108

Organization breakdown
structure (OBS), 113

Scope creep, 105

Work package, 110

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