



**Healthcare Project
Management**

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Chapter 4: Planning Projects, Part 1 (Project Integration and Scope Management)

Note: See the text itself for full citations.

Learning Objectives

- ▶ Describe the importance of creating plans to guide project execution, and list several planning processes and outputs for project integration and scope management
- ▶ Discuss the project integration management planning process
- ▶ Explain the purpose and contents of a team contract and a project management plan

Learning Objectives (continued)

- ▶ Describe the four project scope management planning processes
- ▶ Explain the purpose and contents of a scope management plan and requirements management plan
- ▶ Discuss different ways to collect project requirements, and prepare requirements documentation and a requirements traceability matrix
- ▶ Create a scope statement and project documents updates to define project scope
- ▶ Create a work breakdown structure (WBS) and a WBS dictionary to clearly describe all of the work required for a project

Introduction

- ▶ Many people have heard the following sayings:
 - If you fail to plan, you plan to fail.
 - If you don't know where you're going, any road will take you there.
 - What gets measured gets managed.
- ▶ Successful project managers know how important it is to develop, refine, and follow plans to meet project goals
- ▶ People are more likely to perform well if they know what they are supposed to do and when

Project Planning Should Guide Project Execution

- ▶ Planning is often the most difficult and unappreciated process in project management
- ▶ Often, people do not want to take the time to plan well, but theory and practice show that good planning is crucial to good execution
- ▶ *The main purpose of project planning is to guide project execution,* so project plans must be realistic and useful

Figure 4-1. Planning Processes and Outputs for Project Integration, Scope, Time, and Cost Management

Knowledge Area	Planning Process	Outputs
Project integration management	Develop project management plan	Project management plan
Project scope management	Plan scope management	Scope management plan
	Collect requirements	Requirements management plan
	Define scope	Requirements documentation
		Requirements traceability matrix
	Create WBS	Project scope statement
		Project documents updates
		Scope baseline
	Project documents updates	

Project Integration Management

- ▶ **Project integration management** involves coordinating all the project management knowledge areas throughout a project's life span.
- ▶ The main planning tasks include:
 - Creating a team contract (not in the PMBOK® Guide)
 - Developing the project management plan

Team Contracts

- ▶ **Team contracts** help to promote teamwork, ensure all team members understand the commitment required of them, and to clarify team communications
- ▶ The process normally includes the core project team members reviewing a template and then working in small groups to prepare inputs for their team contract
- ▶ The project manager should act as a coach or facilitator, observing the different personalities of team members and seeing how well they work together
- ▶ Everyone involved in creating the team contract should sign it, and as new project team members are added, the project manager should review ground rules with them and have them read and sign the contract as well

Topics Covered in a Team Contract

- ▶ Code of conduct
- ▶ Participation
- ▶ Communication
- ▶ Problem solving
- ▶ Meeting guidelines

Figure 4-2. Sample Team Contract (Partial)

Code of Conduct: As a project team, we will:

- Work proactively, anticipating potential problems and preventing their occurrence.
- Keep other team members informed of information related to the project.
- Focus on what is best for the entire project team.

Participation: We will:

- Be honest and open during all project activities – never varnish the truth.
- Provide the opportunity for equal participation by all members, all disciplines.
- Be open to new approaches and consider new ideas.
- Let the project manager know well in advance if a team member has to miss a meeting or may have trouble meeting a deadline for a given activity.

Communication: We will:

- Keep discussions on track and have one discussion at a time.
- Use the telephone, e-mail, a project Web site, instant messaging, texts, and other technology to assist in communicating.
- Work together to create the project schedule and related information and enter actuals, issues, risks, and other information into our enterprise project management system by 4 p.m. every Friday.

Problem Solving: We will:

- Only use constructive criticism and focus on solving problems, not blaming people.
- Strive to build on each other's ideas.
- Bring in outside experts when necessary.

Meeting Guidelines: We will:

- Avoid the use of mobile devices during meetings, unless required for meeting discussion.
- Respect the skills, experience, and schedules of the diverse disciplines on the project.
- Plan to have a face-to-face meeting of the entire project team every Tuesday morning.

Project Management Plans

- ▶ A **project management plan** is a document used to coordinate all project planning documents and to help guide a project's execution and control
- ▶ Plans created in the other knowledge areas are subsidiary parts of the overall project management plan and provide more detailed information about that knowledge area
- ▶ Project management plans facilitate communication among stakeholders and provide a baseline for progress measurement and project control
 - A **baseline** is a starting point, a measurement, or an observation that is documented so that it can be used for future comparison

Attributes of Project Management Plans

- ▶ Project management plans should be dynamic, flexible, and receptive to change when the environment or project changes
- ▶ Just as projects are unique, so are project plans.
 - For a small project involving a few people over a couple of months, a project charter, team contract, scope statement, and Gantt chart might be the only project planning documents needed; *there would not be a need for a separate project management plan*
 - A large project involving 100 people over three years would benefit from having a detailed project management plan and separate plans for each knowledge area
- ▶ It is important to tailor *all* planning documentation to fit the needs of specific projects

Common Elements in Project Management Plans

- ▶ Project Title
- ▶ Project Purpose
- ▶ Project Organization
- ▶ Project Governance
- ▶ Scope Management
- ▶ Budget Management
- ▶ Schedule Management
- ▶ Approach
- ▶ References to other project planning documents, as needed

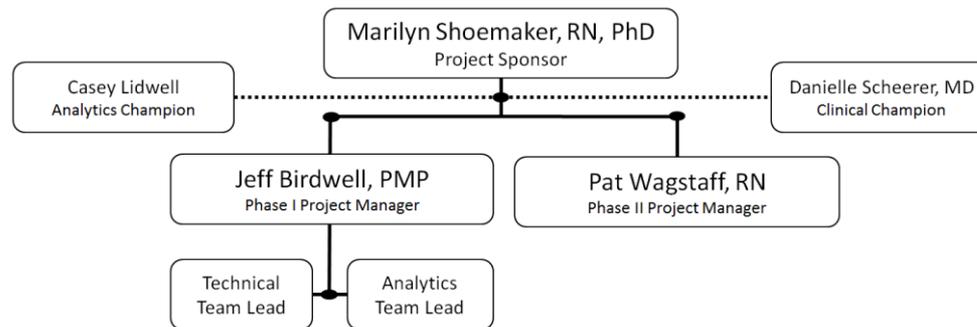
Figure 4-3. Sample Project Management Plan (Partial)

PURPOSE

VAP costs AHS over \$3.6M per year in costs, and puts our patients at risk for severe and sometimes fatal consequences. VAP is considered preventable by CMS and has worked with the Institutes for Healthcare Improvement (IHI) to develop a set of best practices that, if followed, has demonstrated a reduction of VAP by 50% in other healthcare facilities. AHS will implement a system to collect and report compliance with the best practices to better manage VAP.

PROJECT ORGANIZATION

The basic organization of the project is provided in Figure 1. The project sponsor, Marilyn Shoemaker, RN, PhD, will have the final say on major decisions, with consultation from the project steering committee and project champions, Casey Lidwell and Dr. Danielle Scheerer. The project sponsor should have time to thoroughly review important project information and provide timely feedback to the project manager.



PROJECT GOVERNANCE

1. Management Review Process: The project steering committee will meet at least monthly to provide inputs and review progress on this project.
 2. Progress Measurement Process: The project steering committee will review project progress during project review meetings, and they can also review information as needed by viewing reports on the enterprise project management system.
 3. Change Approval Process: See Attachment 1 based on AHS standards.
- VAPR has been broken down into two phases. The first phase is a proof of concept and the data collection/reporting system and will be managed by Jeff Birdwell, PMP from the PMO's office. The second phase will be managed by Pat Wager, RN from analytics.

Project Scope Management

- ▶ Project scope management involves defining and controlling what work is or is not included in a project
- ▶ The main planning tasks include planning scope management, collecting requirements, defining scope, and creating the WBS
- ▶ The main documents produced are a scope management plan, a requirements management plan, requirements documentation, a requirements traceability matrix, and a **scope baseline**, which is composed of an approved scope statement, a WBS, and a WBS dictionary

Planning Scope Management

- ▶ The purpose of the process of planning scope management is to determine how the project scope will be defined, validated, and controlled.
- ▶ Project teams usually have several meetings with key stakeholders and experts to help them develop a scope management plan and requirements management plan.

Figure 4-4. Sample Requirements Management Plan (partial)

Requirements Management Plan

Version 1.0 May 29, 20xx

PROJECT TITLE: VENTILATOR ASSOCIATED PNEUMONIA (VAP) REDUCTION – “VAPR”

Planning, tracking, and reporting requirements

Information provided in the business case and project charter will provide valuable information in determining requirements for this project, as will the IHI Ventilator Bundle itself. All requirements will be documented within the project management system and will be reviewed for progress weekly as part of the regular project meetings. Each requirement will be assigned a customer owner, designated initially as the provider of the requirement, but in some cases as the staff member who is considered the expert on the requirement itself.

Performing configuration management activities

Requirements can be identified through a variety of methods. Executive clinical leadership will be interviewed individually, committees such as the Med Exec and Clinical Quality Improvement Council will be asked for requirements through our sponsor, and our champions will conduct focus groups with their peers and customers to gather input. Requirements will also be extracted from the IHI Ventilator Bundle, and both CMS and Joint Commission measures will be reviewed for additional requirements. Appropriate project stakeholders will analyze, authorize, track, and report changes to requirements. The project manager must be informed in advance of potential changes to requirements and be involved in the decision process to approve those changes. Any change that will impact the project’s cost by more than 2% or extend the schedule past the identified go live date must be approved by the project steering committee.

Collecting Requirements

- ▶ A project's size, complexity, importance, as well as other factors affect how much effort is spent on collecting requirements
- ▶ The *PMBOK® Guide, Fifth Edition*, defines **requirements** as “conditions or capabilities that must be met by the project or present in the product, service, or result to satisfy an agreement or other formally imposed specification”
- ▶ Requirements must be documented in enough detail so that they can be measured during project execution

Outputs of Collecting Requirements

- ▶ Requirements documents, which can range from a single-page checklist to a room full of notebooks with text, diagrams, images, etc.
- ▶ A **requirements traceability matrix (RTM)**, which is a table that lists requirements, various attributes of each requirement, and the status of the requirements to ensure that all of them are addressed

Figure 4-5. Sample Requirements Traceability Matrix

Req ID	Name	Category	Source	Status	Comments
R26	Identify source systems that document compliance with the IHI vent bundle	Technical	Chief Medical Information Officer	Complete	Three sources were identified: ClinDoc, Pharmacy Administration, and RT Documentation.
R91	Online report to indicate compliance, by patient, with IHI bundle	Analytics	Chief Quality Officer	Not started	Data must be no more than 6 hours old.
R123	Design new ventilator protocol for nursing	Clinical Workflow	Chief Nursing Officer	Not started	Must be reviewed and approved by the nursing oversight committee.

Defining Scope

- ▶ Good scope definition is crucial to project success because it
 - Helps improve the accuracy of time, cost, and resource estimates
 - Defines a baseline for performance measurement and project control
 - Aids in communicating clear work responsibilities
- ▶ The project charter, requirements documentation, and **organizational process assets** (i.e. policies and procedures related to project management, past project files, and lessons-learned reports from previous, similar projects) are all inputs for creating the initial scope statement
- ▶ Contents of a scope statement vary, but it should include a product scope description, product user acceptance criteria, and detailed information on all project deliverables

Figure 4-6. Sample Scope Statement

Product Characteristics and Requirements

This project will introduce the IHI Ventilator Bundle (best practices) into our AHS clinical protocols and workflows. We must identify which, if any, AHS system currently collects data that would indicate compliance with the five elements in the bundle. If the data is not currently collected electronically at AHS, a data collection point must be identified. All data must be integrated into a single online report so that they may correct the patient's care during the required time period. To minimize the amount of corrective actions required, the nursing and respiratory therapy workflows will be modified to include the best practices, and the ventilator protocols will be modified to automatically include orders for the bundle elements. The following best practices are included in the IHI Ventilator Bundle:

- Patient Head of Bed (HOB) elevation, 30 to 45 degrees
- Sedation vacation every 24 hours
- Daily oral/mouth care with Chlorhexidine
- Venous Thrombosis Embolism (VTE) prophylaxis
- Peptic ulcer prophylaxis

Out of Scope

This project will not consider any other patient care, best practices, evidenced based medicine, or other patient care improvements discovered during the project work. Any additional potential patient care improvement projects will be submitted to the project request system and reviewed, approved, and managed separately based on their own merits.

Figure 4-6. Sample Scope Statement (continued)

Product User Acceptance Criteria

This project will be considered successful if the following measures are met:

- Project completed by the end of the next fiscal year (June 30)
- Project completed for \$980,000 or less
- VAP incidence is reduced by 25% within 90 days of go live
- VAP incidence rate is reduced by 35% within 180 days of go live
- VAP incidence rate is reduced by 50% within 270 days of go live

Product-Oriented Deliverables

1. Data Interfaces from source systems, including registration, bed management, clinical documentation, and respiratory therapy documentation systems.
2. Database to store IHI bundle data elements collected on AHS patients.
3. Online report to present IHI bundle compliance to caregivers using standard AHS reporting tools.

Keep Scope Information Current

- ▶ The project team should update the project scope statement as new information becomes available
- ▶ Name different iterations of the scope statement Version 1.0, Version 2.0, etc.
- ▶ A good, up-to-date scope statement helps prevent **scope creep**, which is the tendency for project scope to continually increase

Figure 4-7. Scope Creep During Surgery (www.xkcd.com)



OCTOBER 8TH, 2004:

A CHILD SWALLOWS AN 'OPERATION'
BUZZER, LEADING TO THE SINGLE MOST
DIFFICULT SURGERY EVER PERFORMED.

Creating the Work Breakdown Structure

- ▶ A **work breakdown structure (WBS)** is a deliverables-oriented grouping of the work involved in a project that defines the total scope of the project
- ▶ The WBS is a document that breaks all the work required for the project into discrete tasks, and groups those tasks into a logical hierarchy
- ▶ Often shown in two different forms:
 - Graphical or chart form
 - Tabular or list form

Work Packages

- ▶ A **work package** is at the lowest level of the WBS
- ▶ It represents the level of work that the project manager monitors and controls
- ▶ You can think of work packages in terms of accountability and reporting
 - If a project has a relatively short time frame and requires weekly progress reports, a work package might represent work completed in one week or less
 - If a project has a very long time frame and requires quarterly progress reports, a work package might represent work completed in one month or more
 - A work package might also be the procurement of a specific product or products, such as an item purchased from an outside source

Figure 4-8. WBS for a Birthday Cake

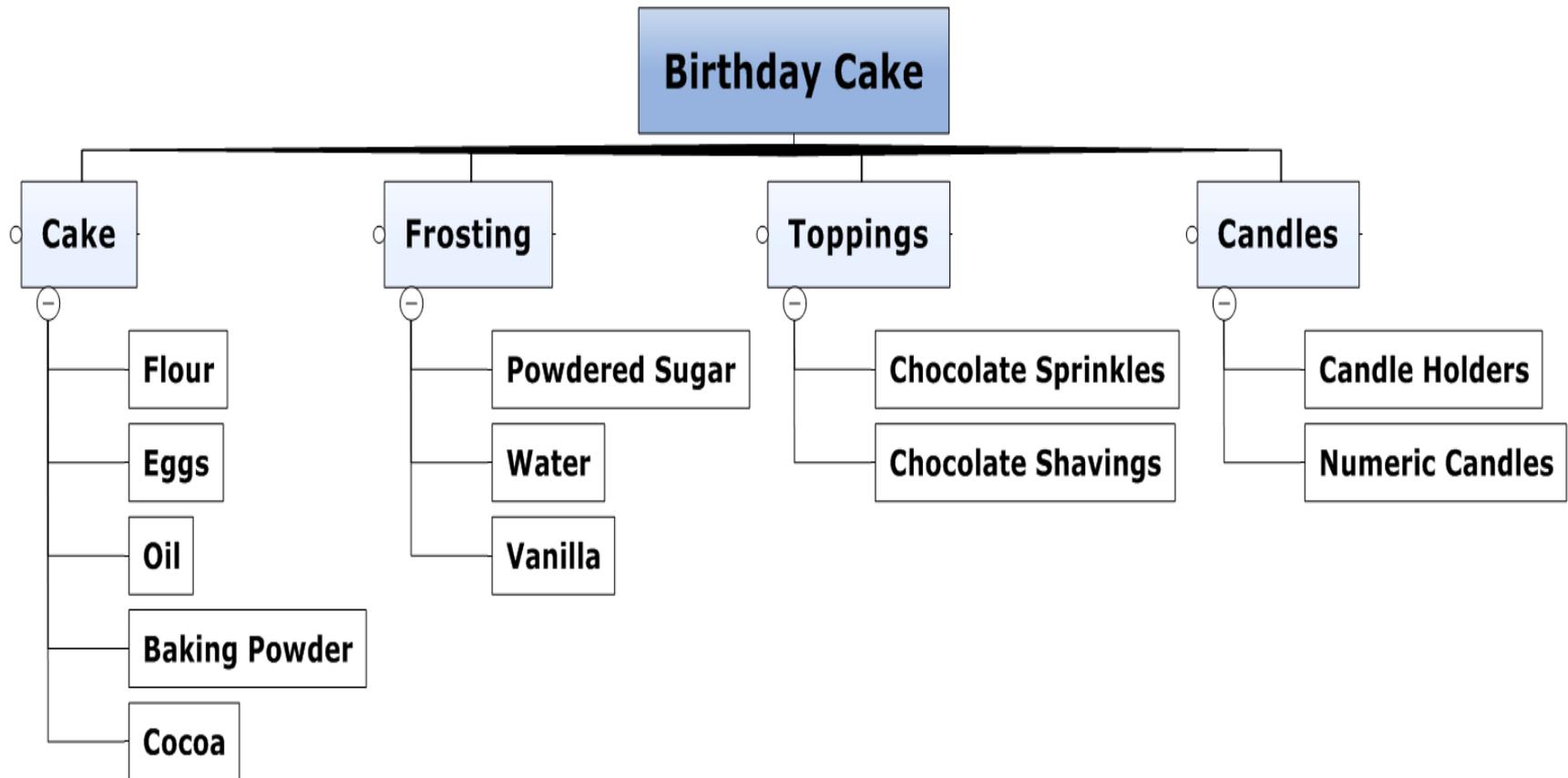


Figure 4-9. WBS for a House Showing 6 Main Deliverables (www.matchware.com)

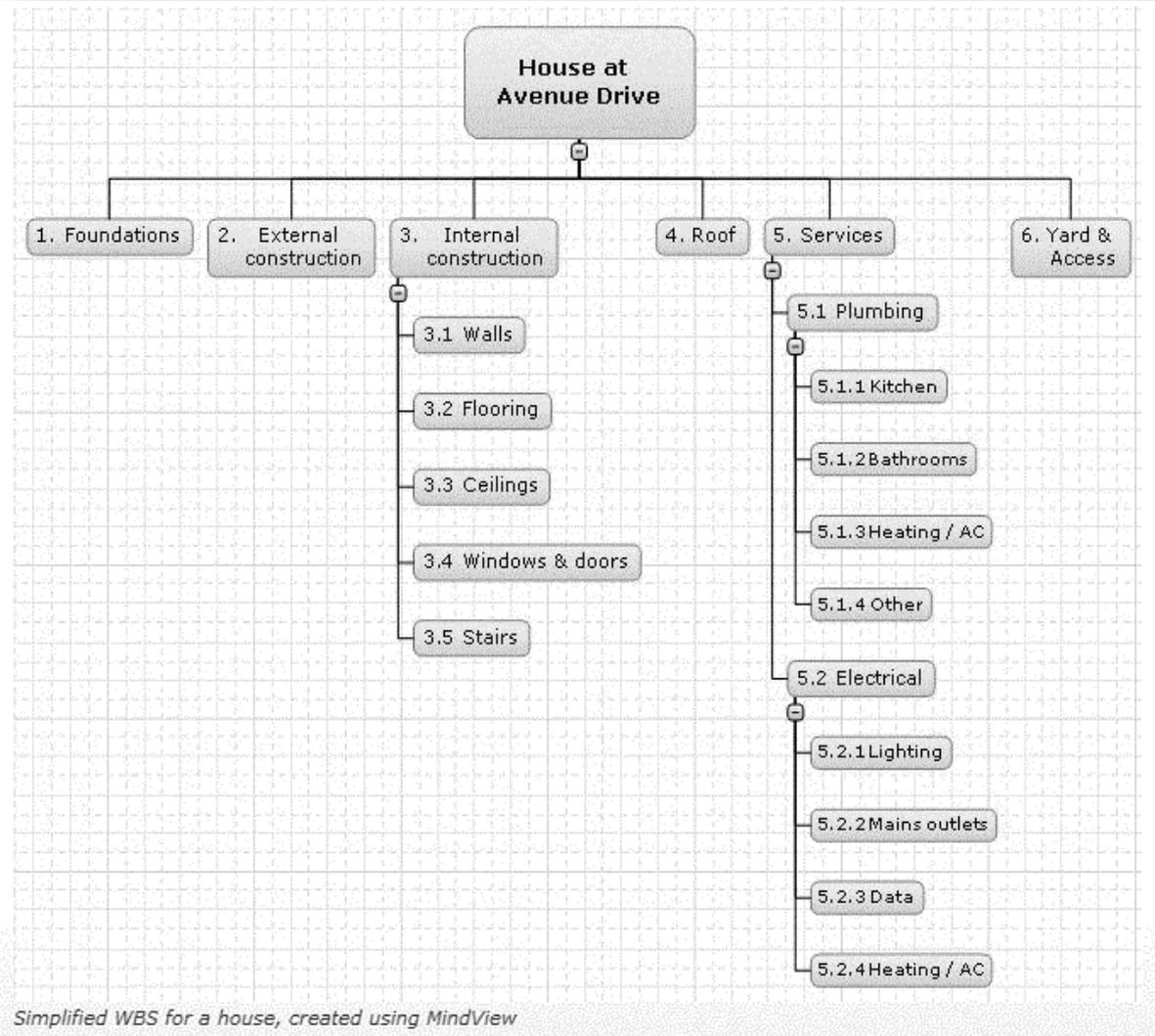


Figure 4-10. WBS for a House Showing 10 Main Deliverables (Microsoft Project 2013)

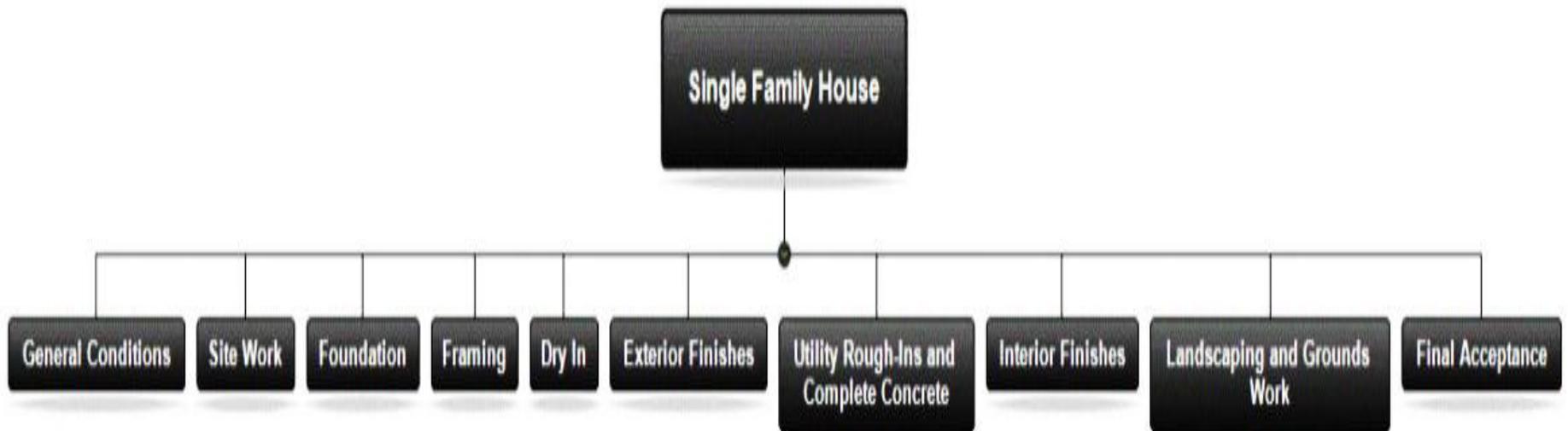
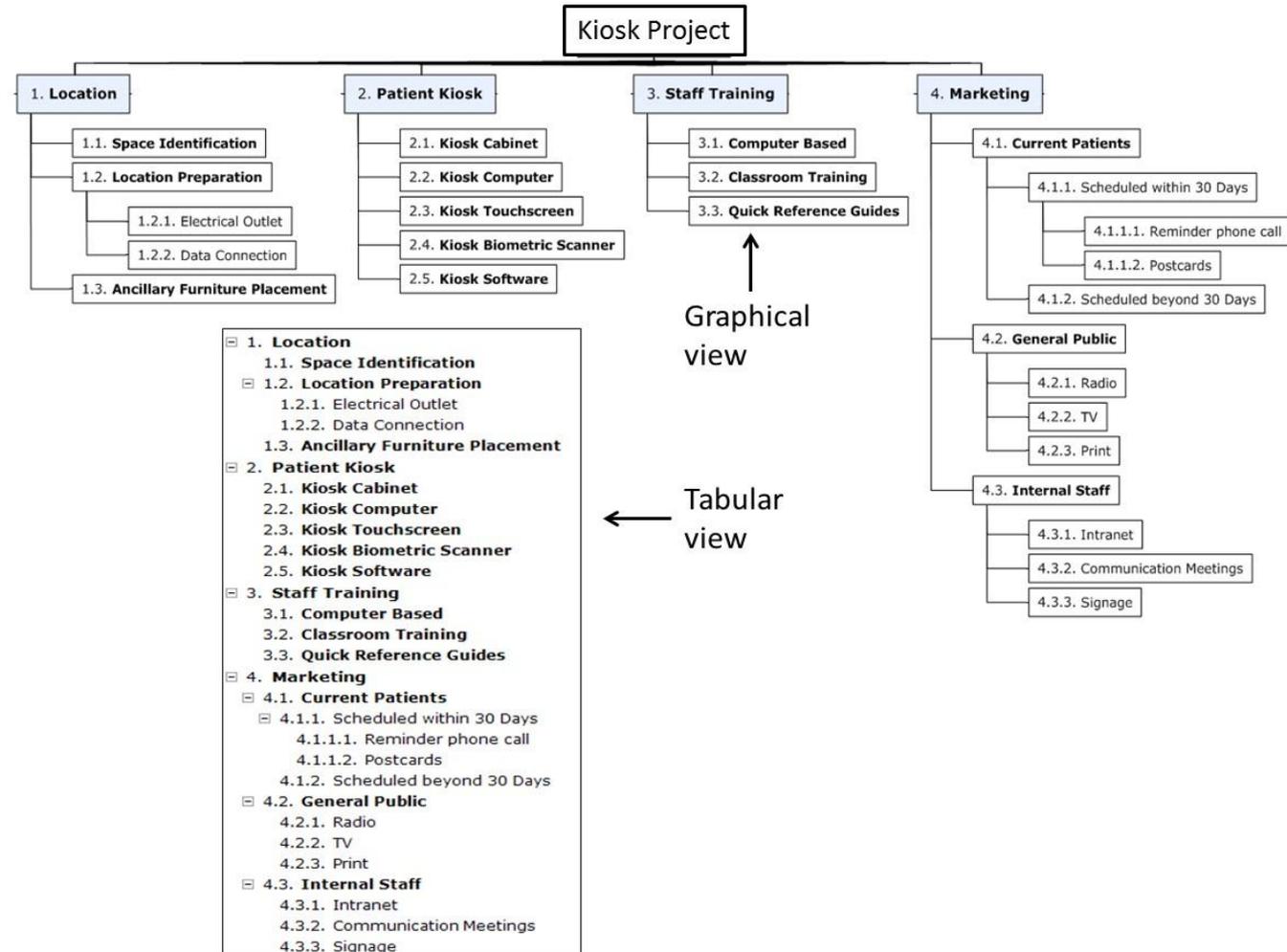


Figure 4-11. WBS for a Kiosk Project Showing Graphical and Tabular Formats

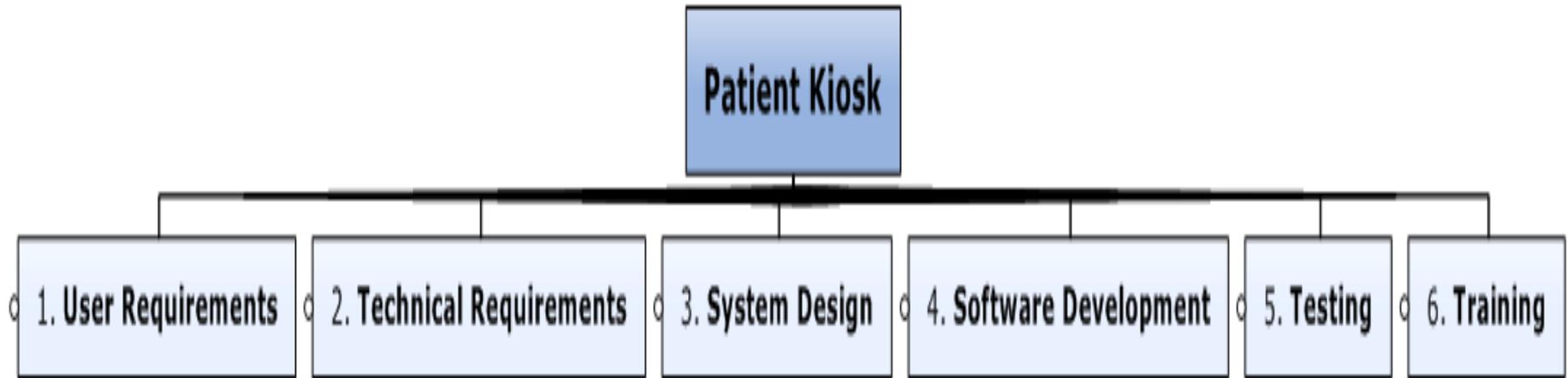


Graphical view

Tabular view

- 1. Location
 - 1.1. Space Identification
 - 1.2. Location Preparation
 - 1.2.1. Electrical Outlet
 - 1.2.2. Data Connection
 - 1.3. Ancillary Furniture Placement
- 2. Patient Kiosk
 - 2.1. Kiosk Cabinet
 - 2.2. Kiosk Computer
 - 2.3. Kiosk Touchscreen
 - 2.4. Kiosk Biometric Scanner
 - 2.5. Kiosk Software
- 3. Staff Training
 - 3.1. Computer Based
 - 3.2. Classroom Training
 - 3.3. Quick Reference Guides
- 4. Marketing
 - 4.1. Current Patients
 - 4.1.1. Scheduled within 30 Days
 - 4.1.1.1. Reminder phone call
 - 4.1.1.2. Postcards
 - 4.1.2. Scheduled beyond 30 Days
 - 4.2. General Public
 - 4.2.1. Radio
 - 4.2.2. TV
 - 4.2.3. Print
 - 4.3. Internal Staff
 - 4.3.1. Intranet
 - 4.3.2. Communication Meetings
 - 4.3.3. Signage

Figure 4-12. WBS Showing Work Flow or Chronological Order (Somewhat)



Media Snapshot

- ▶ The 2002 Olympic Winter Games and Paralympics took five years to plan and cost more than \$1.9 billion. PMI awarded the Salt Lake Organizing Committee (SLOC) the Project of the Year award for delivering world-class games that, according to the International Olympic Committee, “made a profound impact upon the people of the world.”
- ▶ Four years before the Games began, the SLOC used a Primavera software-based system with a cascading color-coded WBS to integrate planning. A year before the Games, they added a Venue Integrated Planning Schedule to help the team integrate resource needs, budgets, and plans. This software helped the team coordinate different areas involved in controlling access into and around a venue, such as roads, pedestrian pathways, seating and safety provisions, and hospitality areas, saving nearly \$10 million.*

*Ross Foti, “The Best Winter Olympics, Period,” *PM Network* (January 2004) p. 23.

Approaches to Developing WBSs

- ▶ Using guidelines: Some organizations, like the DOD, provide guidelines for preparing WBSs
- ▶ The analogy approach: Review WBSs of similar projects and tailor to your project
- ▶ The top-down approach: Start with the largest items of the project and break them down
- ▶ The bottom-up approach: Start with the specific tasks and roll them up
- ▶ Mind-mapping approach: Mind mapping is a technique that uses branches radiating out from a core idea to structure thoughts and ideas

Figure 4-13. Patient Kiosk WBS Initial Mind Map

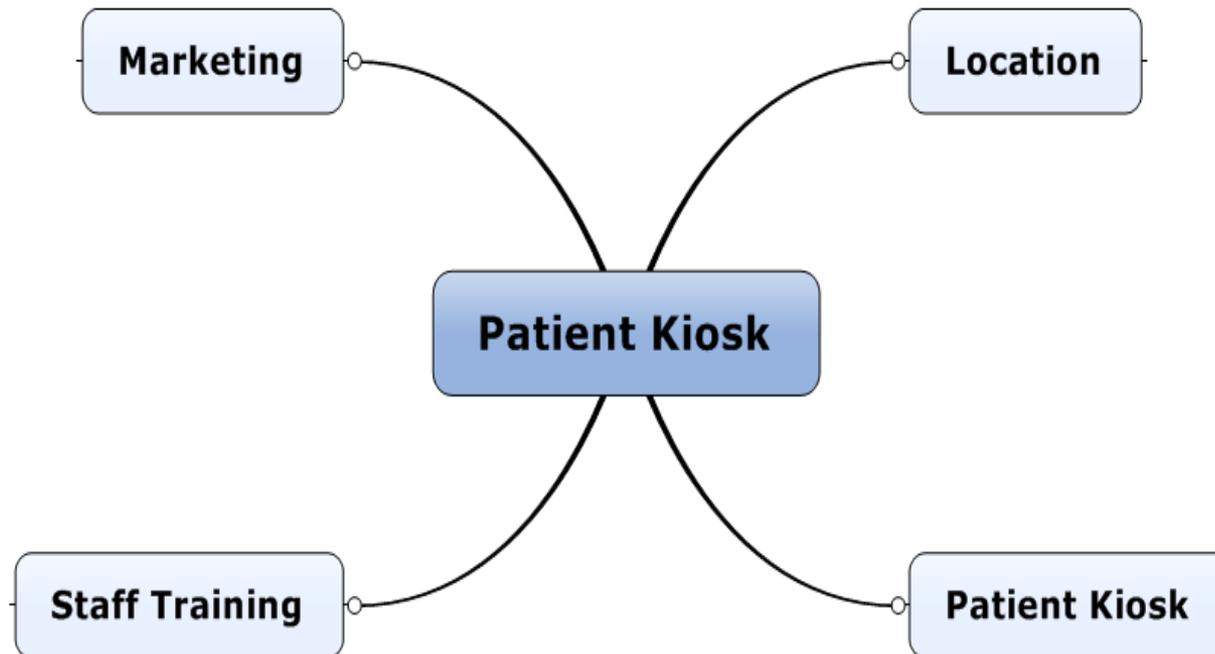
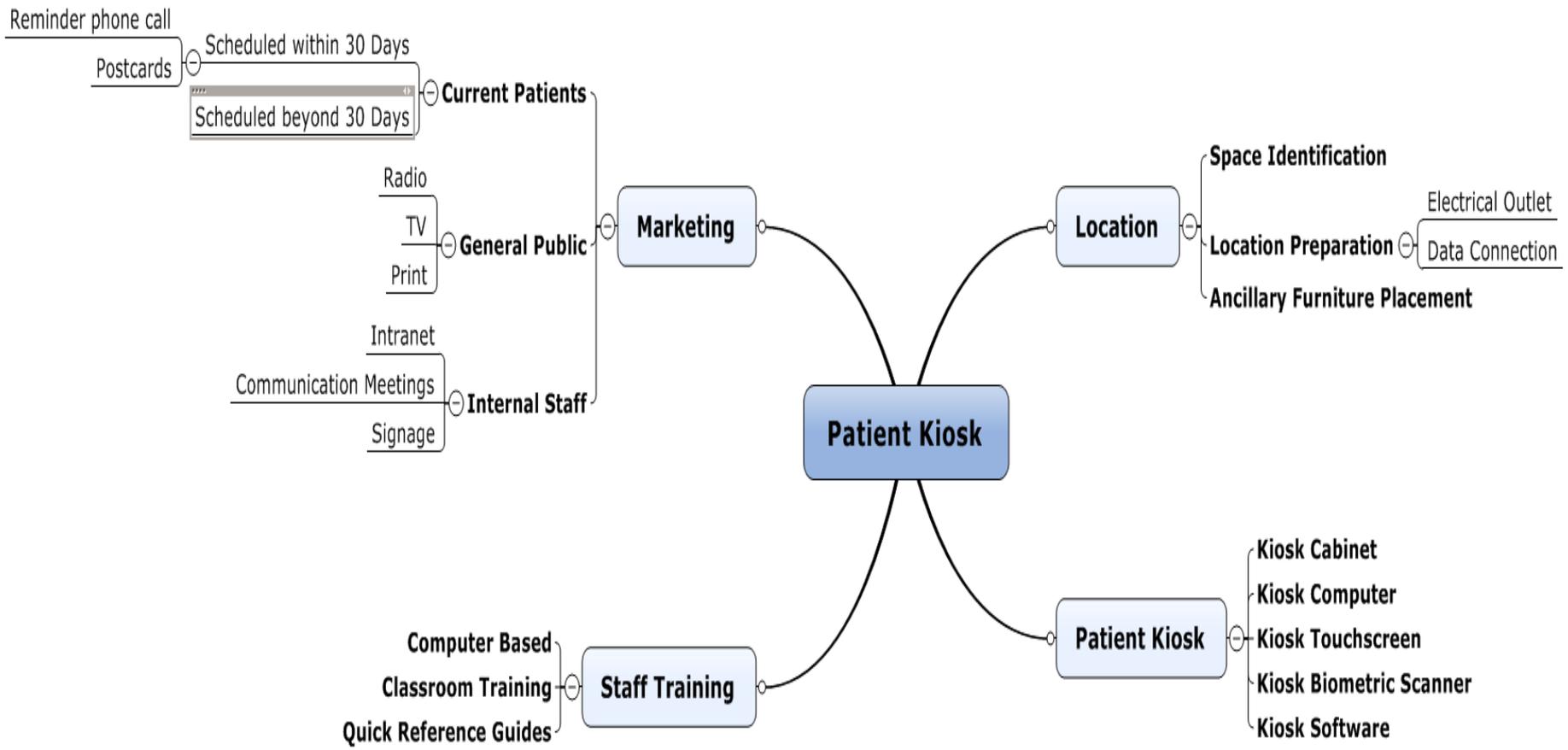


Figure 4-14. Patient Kiosk WBS Detailed Mind Map



Video Highlights

- ▶ MindView Business software allows you to create a WBS with a mind map. You can access a special 60-day trial of their software at www.matchware.com/intropm.

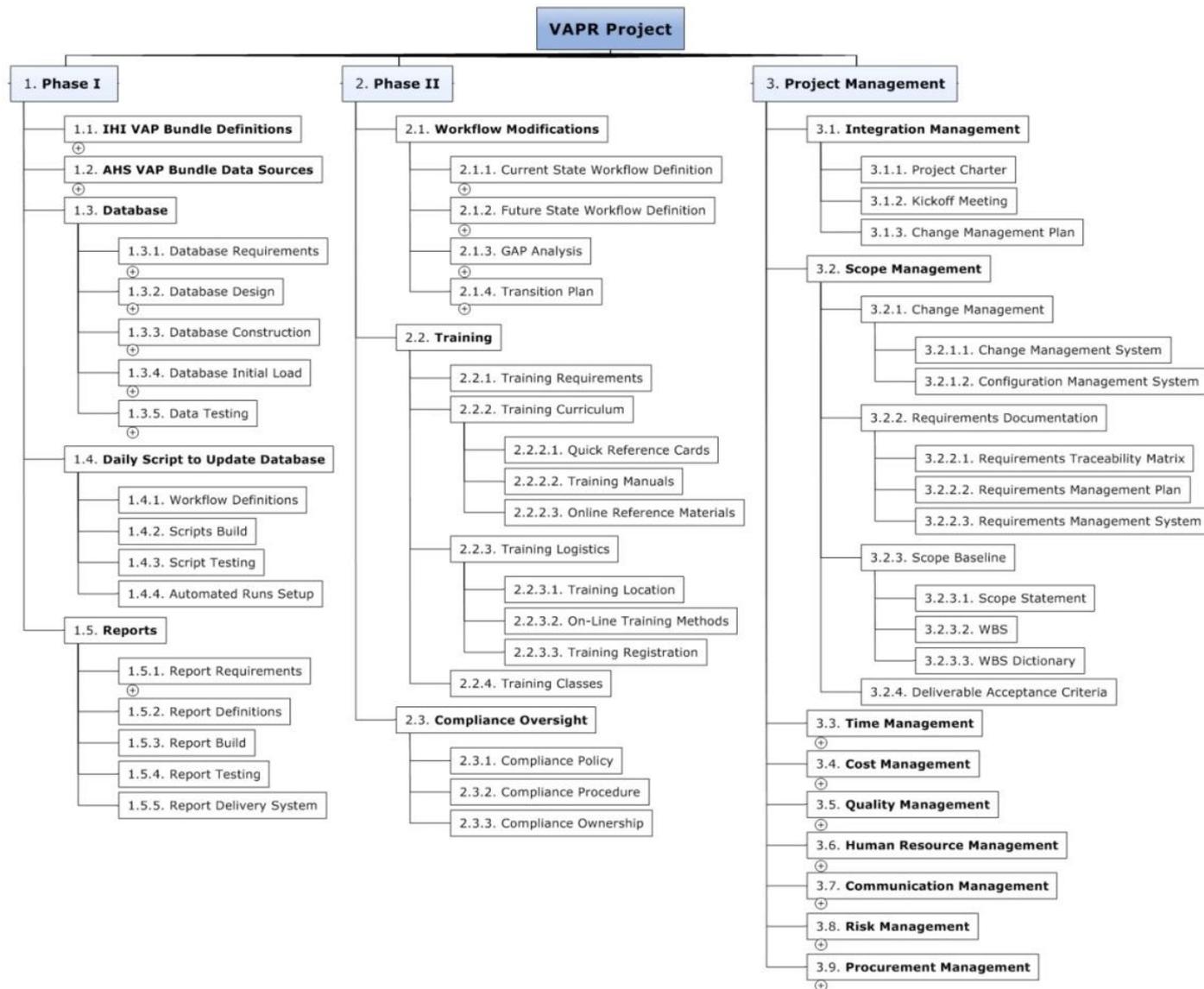
You can also watch several videos about creating a WBS using a mind map.

For example, the 14-minute “Quickstart” video gives you a great overview of what you can do with MindView Business software.

There is also a 12-minute “Work Breakdown Structure” video.

See the companion site for this text at www.healthcarepm.com for links to these and other video highlights.

Figure 4-15. VAPR Project WBS



Creating a Good WBS

- ▶ It is difficult to create a good WBS
- ▶ The project manager and the project team must decide as a group how to organize the work and how many levels to include in the WBS
- ▶ It is often better to focus on getting the top levels of the WBS done well to avoid being distracted by too much detail
- ▶ Many people confuse tasks on a WBS with specifications or think it must reflect a sequential list of steps

Creating the WBS Dictionary

- ▶ A **WBS dictionary** is a document that describes each WBS task in detail
- ▶ The format can vary based on project needs.
 - It might be appropriate to have just a short paragraph describing each work package
 - For a more complex project, an entire page or more might be needed for the work-package descriptions
 - It might require describing the responsible person or organization, resource requirements, estimated costs, and other information

Figure 4-16. Sample WBS Dictionary Entry

WBS Item Number: 2.3.1

WBS Item Name: Compliance Policy

Requirement Trace: R12 – Enforce VAP Best Practices

Responsible Person: Danielle Scheerer, MD, Chief Quality Officer

Estimated Cost: \$0, executive leadership costs not charged to the project

Estimated Duration: 3 months, due to committee schedules and approvals required

Resource Requirements: Executive Quality Oversight Committee (CQO, CNO, CMO, CMIO, CNIO), Compliance Officer

Description: Caregivers treat patients based on their own experiences, education, and research. However, there are many best-practices that have been proven to be superior to those based on individual judgment as they take into account large numbers of patients studied over extended periods of time. Although these best practices are proven, the organizations who publish these practices are not sitting in front of the patient and therefore do not understand the patient as a whole. A policy must be created that encourages and holds accountable physicians and nurses for complying with the IHI Ventilator Bundle that has been designed and proven to reduce the incidence of VAP. The policy must include the ability to deviate from the best practices if the caregiver believes it is in the best interest of the patient's health, but the policy should also require that the caregiver documents the deviation and reasoning so that AHS may study the patient outcomes of these patients compared to those who follow the best practices. The policy must be co-issued by the highest level clinicians (Chief Medical Officer and Chief Nursing Officer) and communicated, supported, and enforced by clinical leadership.