



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

Note: See the text itself for full citations. Text website is <http://intropm.com>.

Learning Objectives

- ▶ Describe the importance of creating plans to guide project execution
- ▶ List several planning processes and outputs for project integration and scope management when using a predictive approach to project management
- ▶ Discuss the project integration management planning process and explain the purpose and contents of a project management plan
- ▶ Describe the 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, create a scope statement to define project scope, and develop a work breakdown structure (WBS) and a WBS dictionary to clearly describe all the work required for a project
- ▶ Discuss integration management planning for an agile/hybrid project
- ▶ Describe scope planning for an agile/hybrid project, understand the concepts of themes and epics, and be able to create story cards.



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



What Went Wrong?

- ▶ Top managers often require a plan, but then no one tracks whether the plan was followed
- ▶ One project manager said he would meet with each project team leader within two months to review their project plans. Two months later, the project manager had still not met with over half of the project team leaders
- ▶ Why should project team members feel obligated to follow their own plans when the project manager obviously does not follow his?



Figure 4-1. Planning Processes and Outputs for Project Integration and Scope 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 Requirements management plan
	Collect requirements	Requirements documentation Requirements traceability matrix
	Define scope	Project scope statement Project documents updates
	Create WBS	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 output is a project management plan



Project Management Plans

- ▶ A **project management plan** is a document used to integrate and coordinate all project planning documents and to help guide a project's execution, monitoring and control, and closure
- ▶ 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



Figure 4-2. Project Management Plan and Project Documents

Project Management Plan	Project Documents	
1. Scope management plan	1. Activity attributes	1. Quality report
2. Requirements management plan	2. Activity list	2. Requirements documentation
3. Schedule management plan	3. Assumption log	3. Requirements traceability matrix
4. Cost management plan	4. Basis of estimates	4. Resource assignments
5. Quality management plan	5. Change log	5. Resource breakdown structure
6. Resource management plan	6. Cost estimates	6. Resource calendars
7. Communications management plan	7. Cost forecasts	7. Resource requirements
8. Risk management plan	8. Duration estimates	8. Risk register
9. Procurement management plan	9. Issue log	9. Risk report
10. Stakeholder engagement plan	10. Lessons learned register	10. Schedule data
11. Change management plan	11. Milestone list	11. Schedule forecasts
12. Configuration management plan	12. Physical resource assignments	12. Stakeholder register
13. Scope baseline	13. Project calendars	13. Team charter
14. Schedule baseline	14. Project communications	14. Team resource assignments
15. Cost baseline	15. Project schedule	15. Test and evaluation documents
16. Performance measurement baseline	16. Project schedule network diagram	
17. Project life cycle description	17. Project scope statement	
18. Development approach	18. Quality control measurements	
	19. Quality metrics	

Source: Project Management Institute, Inc., *A Guide to the Project Management Body of Knowledge (PMBOK® Guide) – Sixth Edition* (2017).



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

- ▶ Introduction/overview of the project
- ▶ Project organization
- ▶ Management and technical processes (including project lifecycle description and development approach, as applicable)
- ▶ Work to be performed (scope)
- ▶ Schedule information
- ▶ Budget information
- ▶ References to other project planning documents



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

Management Processes

- Management Review Process: The project steering committee will meet at least monthly to provide inputs and review progress on this project.
- 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 software. Post project progress will also be measured to see if the project met its goals. These goals include reducing the training cost per employee by \$100/person/year and receiving positive results from survey participants on the effectiveness of the training.
- Change Approval Process: See Attachment 1 based on corporate standards.
- Supplier Management Process: See Attachment 2 based on corporate standards.

Technical Processes

- Enterprise Project Management Software: All tasks, costs, resources, issues, and risks will be tracked for this project using our enterprise project management software. Data must be entered on a weekly basis, at a minimum, to provide timely information.
- Supplier Evaluation: The project team will coordinate with the purchasing department to follow our standard procedures for selecting and working with suppliers. See Attachment 2 for corporate standards.
- Productivity Improvement: The project team will work with the finance and quality assurance departments to develop and implement a system to measure improvements in employee productivity that result from this new training program. The finance department will report on this information annually beginning one year after the first new training course is offered.



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 requirements documents, a requirements management plan, 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.
 - **Validation** means formal acceptance of deliverables by the customer and other identified stakeholders
 - In contrast, **verification** (done as part of controlling quality) means the deliverable complies with a regulation, requirement, specification, or imposed condition
- ▶ Project teams usually have several meetings with key stakeholders and experts to help them develop a scope management plan and requirements management plan.



Processes Described in a Scope Management Plan

- ▶ Preparing a detailed project scope statement
- ▶ Creating, maintaining, and approving the WBS
- ▶ Obtaining acceptance of the completed project deliverables
- ▶ Controlling how requests for changes to the project scope statement will be processed



Collecting Requirements

- ▶ The *PMBOK® Guide – Seventh Edition*, defines a **requirement** as “a condition or capability that is necessary to be present in a product, service, or result to satisfy a business need.”
- ▶ A **requirements management plan** describes how project requirements will be analyzed, documented, and managed.



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

Requirements Management Plan Version 1.0
September 30

Project Name: Just-In-Time Training Project

Planning, tracking, and reporting requirements

Information from the Phase I project, the business case, and the project charter will provide valuable information in determining requirements for this project, as will many existing corporate standards and processes. A survey will also be used to gather requirements. All requirements will be documented where appropriate. For example, requirements related to course prerequisites will be documented in course descriptions. Requirements related to facilities, class size, etc. will be documented in the scope statement. Requirements will be tracked by the person in charge of each related deliverable and reported as part of our normal reporting processes (i.e., weekly status reports, monthly review meetings, etc.)

Performing configuration management activities

Requirements can be introduced by several means, such as existing written requirements, suggestions provided from our survey, or direct suggestions from stakeholders. 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 or schedule significantly must be approved by the project steering committee.

Prioritizing requirements

All requirements will be designated as 1, 2 or 3, for mandatory, desirable, or nice-to-have, respectively. Emphasis will be placed on meeting all mandatory requirements, followed by desirable and then nice-to-have requirements.

Using product metrics

Tracing requirements



What Went Right?

- ▶ Emerging Health started using a tool by IBM called Rational DOORS to help manage requirements. As a result, they saw a 69 percent reduction in the cost of test preparation, testing, and rework in the software development process and a 25 percent reduction in the time it took to customize their Clinical Looking Glass application for unique client requirements.
- ▶ According to McCroskey, “Time to market is always a critical benchmark, but especially so in the fast-paced healthcare industry. Because our industry is so competitive, being able to deliver the product faster enhances our reputation and the confidence our customers have in us. Faster time to market is vital to our success, and we’ve now achieved that with the more responsive environment Rational DOORS has allowed us to establish.”



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

Requirement no.	Name	Category	Source	Status
R26	Survey questions	Survey	Project steering committee minutes	Complete. The survey questions were reviewed and approved by the steering committee.
R31	Course evaluations	Assessment	Corporate training standards	In process. The course evaluations have not been created yet.



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
- ▶ A project **scope statement** describes product characteristics and requirements, user acceptance criteria, and deliverables.
- ▶ Work that is not included in the scope statement should not be done, and you can explicitly state what is out of scope for the project under a section called project exclusions.



Figure 4-6. Sample Scope Statement

Scope Statement, Version 1.0

August 1

Project Title: Just-In-Time Training Project

Product Characteristics and Requirements

This project will produce three levels of courses, executive, introductory, and advanced, in the following subject areas: supplier management, negotiating skills, project management, and software applications (spreadsheets and Web development). Details on each course are provided below:

1. Supplier management training: The Supplier Management Director estimates the need to train at least 200 employees each year. There should be three levels of courses: an executive course, an introductory course, and an advanced course. Course materials should be developed as a joint effort with internal experts, outside training experts, if needed, and key suppliers.

A partnership might be developed to maximize the effectiveness of the training and minimize development costs. Different delivery methods should be explored, including instructor-led, DVD, and Web-based training. About half of employees would prefer an instructor-led approach, and about half would prefer a self-paced course they could take at their convenience.

Product User Acceptance Criteria

The courses produced as part of this project will be considered successful if they are all available within one year and the average course evaluations for each course are at least 3.0 on a 5.0 scale.

Project Exclusions

Training related to Six Sigma is not part of this project.

Providing new facilities is not part of this project.



Figure 4-6. Sample Scope Statement (continued)

Deliverables

Project Management-Related Deliverables

Project charter, project management plan, scope statement, WBS, etc.

Product-Related Deliverables:

1. Supplier management training:

1.1. Needs assessment: A survey will be conducted to determine the learning objectives for the executive, introductory, and advanced courses. The corporate online survey software will be used and coordinated with IT and HR. Results will be documented in a detailed report (8-10 pages) and presentation (15-20 minutes long).

1.2 Research of existing training: A study will be done to identify current training courses and materials available. Results will be documented in a detailed report and presentation.

1.3. Partnerships: Partnership agreements will be explored to get outside training organizations and suppliers to work on developing and providing training.

1.4. Course development: Appropriate materials will be developed for each course. Materials could take various formats, including written, video, DVD, or Web-based. Materials should include interactivity to keep learners engaged.

1.5. Pilot course: A pilot course will be provided for the introductory supplier management course. Feedback from the pilot course will be incorporated into following courses.



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 deliverable-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 deliverables, and groups them into a logical hierarchy
- ▶ Often shown in two different forms:
 - Graphical or chart form
 - Tabular or list form



Work Packages

- ▶ A **work package** is a deliverable at the lowest level of the WBS, where it can be appropriately assigned to and managed by a single accountable person
- ▶ Each work package should be defined in enough detail to estimate what it would cost and how long it would take to create
- ▶ Each work package is part of a **control account**, a management control point for performance measurement where scope, budget, and schedule are integrated and compared to the earned value (see Chapter 8 for detailed on earned value)



Importance of a Good WBS

- ▶ Foundation document in project management because it provides the basis for planning and managing project schedules, costs, resources, and changes
- ▶ The WBS contains 100% of the deliverables (often called “work”) of the project—not 95%, not 102%, but 100%
- ▶ Often depicted in a graphical format, similar to an organizational chart; can also be shown in tabular form as an indented list of elements



Figure 4-8. WBS for a Birthday Cake

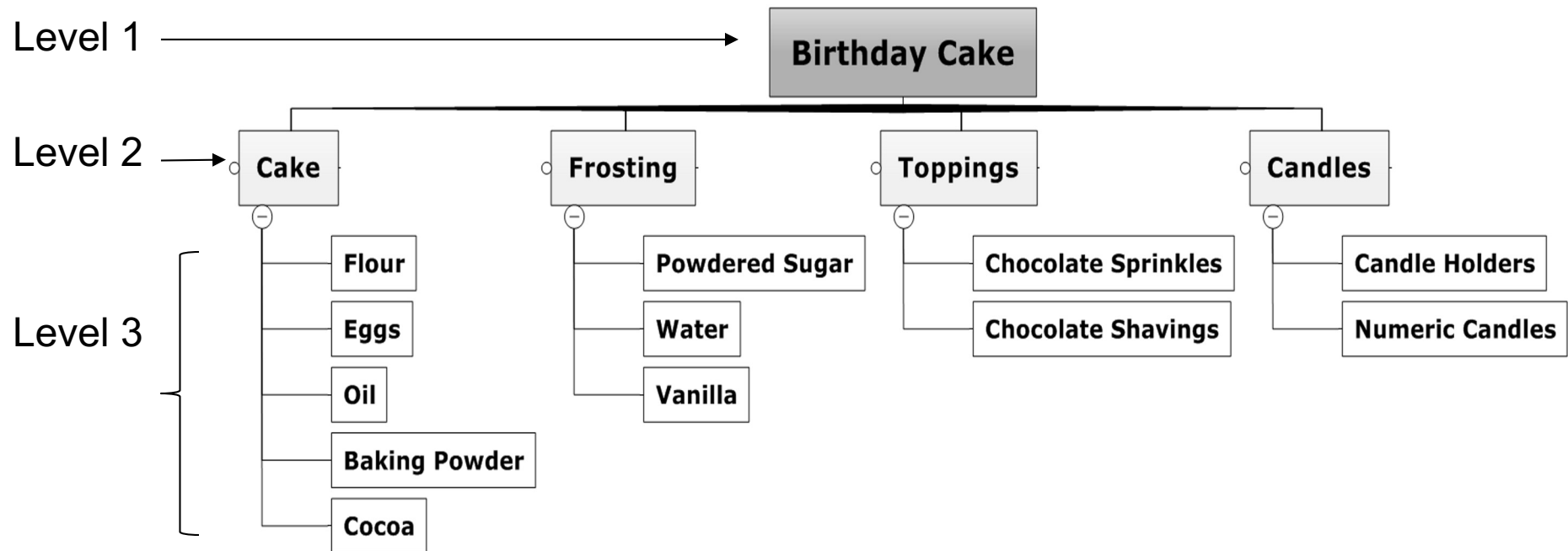


Figure 4-9. WBS for a House Showing 6 Main Deliverables (www.matchware.com)

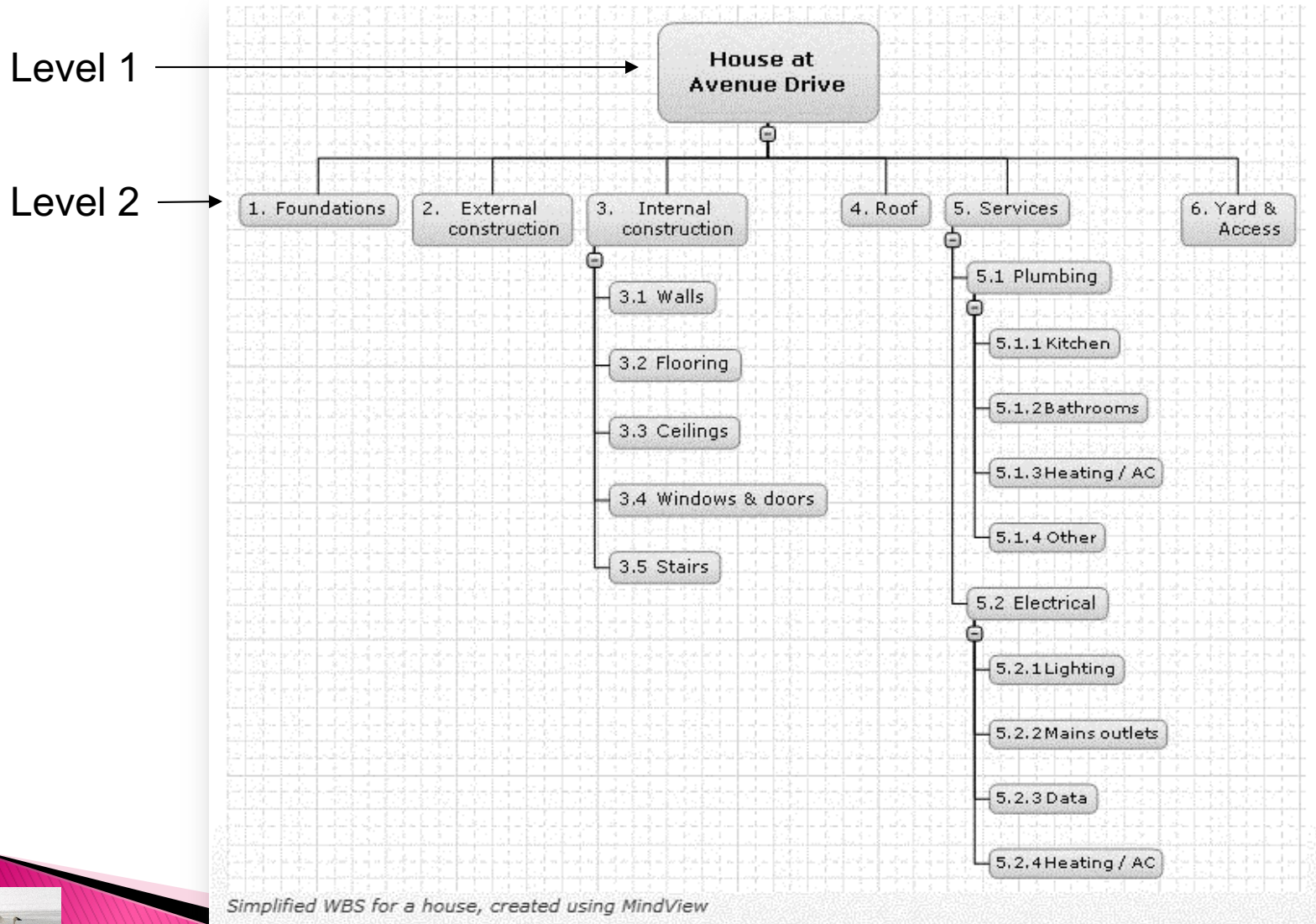


Figure 4-10. WBS for a House Showing 10 Main Deliverables (Microsoft Project)

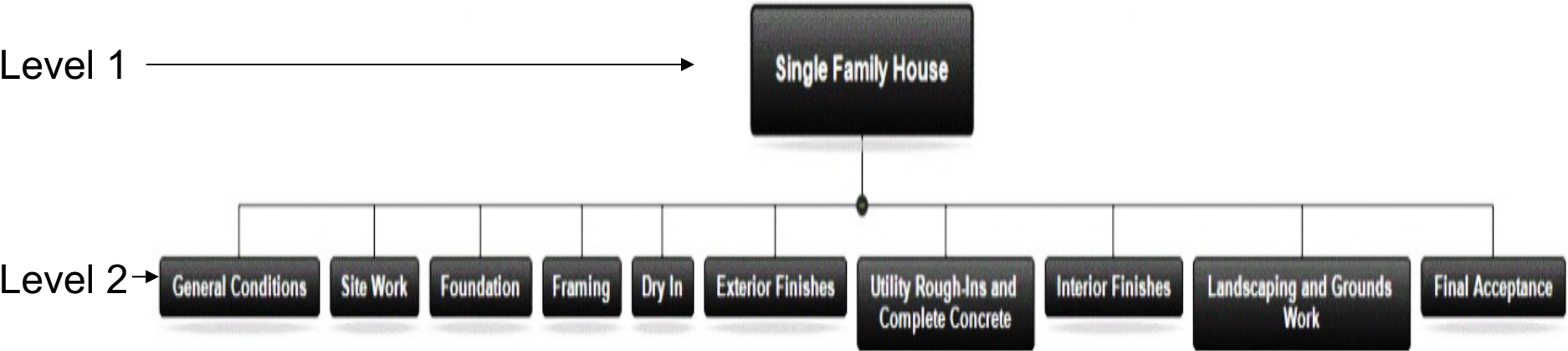
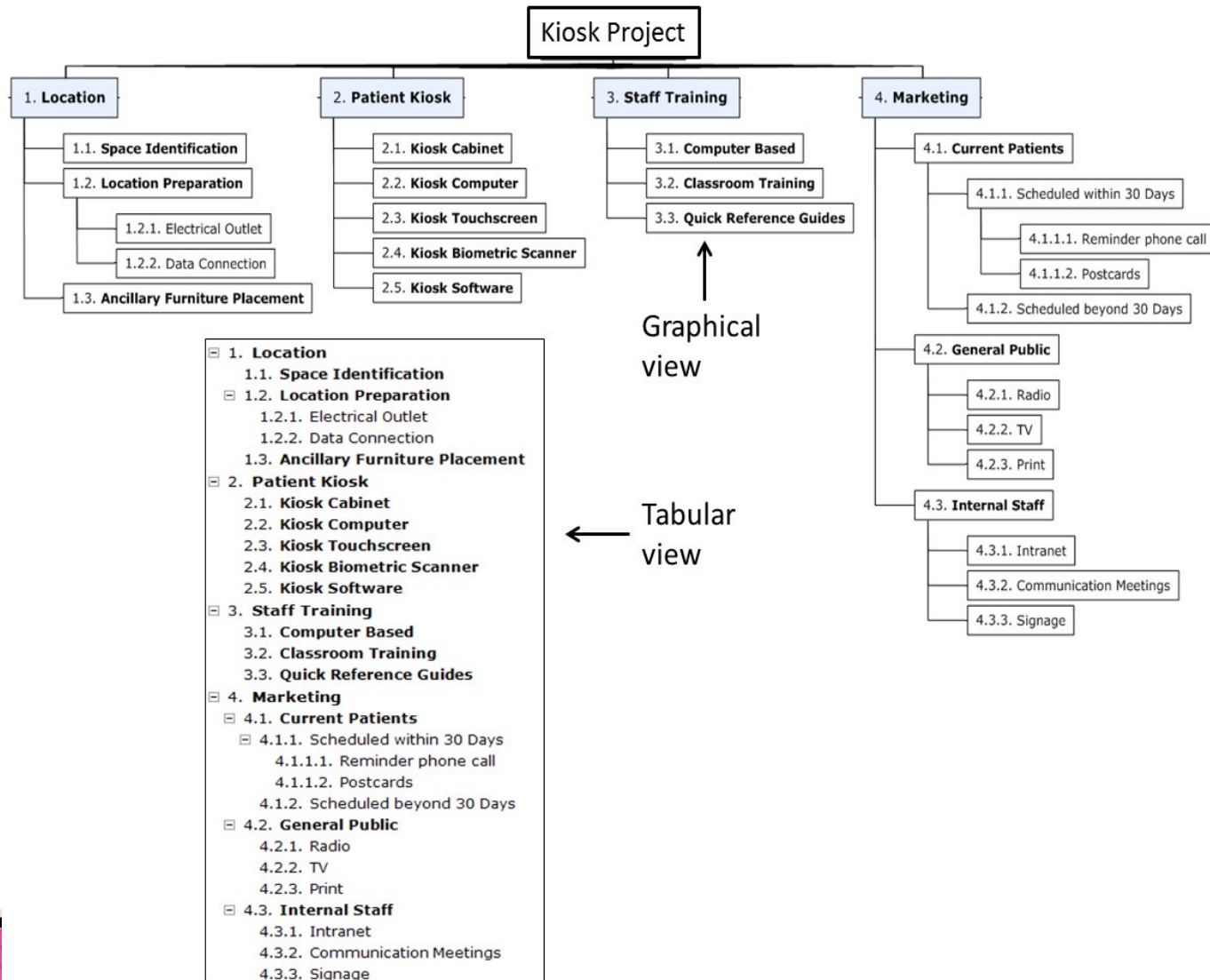


Figure 4-11. WBS for a Kiosk Project Showing Graphical and Tabular Formats



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



Best Practice

- ▶ If you look closely at the WBS examples shown you will notice that there are no verbs, as verbs represent action, and a WBS is not about action, but rather about deliverables. As the definition of a WBS has fluctuated over the decades, sometimes you may still come across a definition that shows activities on the WBS.
- ▶ However, it is incorrect to show activities on the WBS, according to PMI, so try to consistently use deliverables on your WBS. Activities should be shown on the schedule and not on the WBS itself.
- ▶ Several project management software packages use the WBS to create the activities, which may also cause some confusion. Use your judgment to decide the best way to create a WBS and the wording on it.

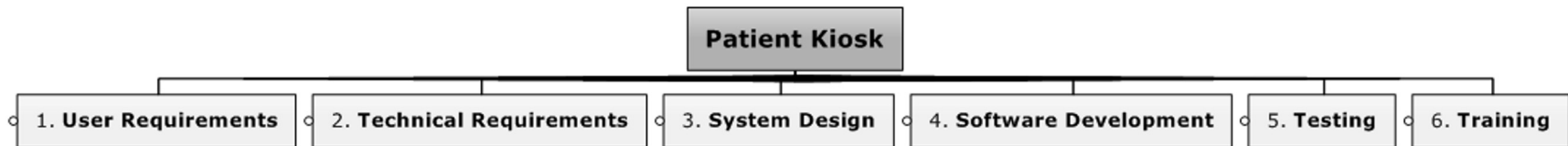


Creating a Good WBS

- ▶ 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
- ▶ You should focus on *what* work needs to be delivered, not *when* or exactly *how* it will be done



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



Creating the WBS Dictionary

- ▶ A **WBS dictionary** is a document that describes the deliverables on the WBS in more detail
- ▶ The format can vary based on project needs
- ▶ It may also include who owns the work package, estimated cost and schedule information, contract information if outsourced, specific quality requirements, technical and performance requirements, etc.



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
- ▶ Four years before the Games began, the SLOC used a Primavera software-based system with a cascading color-coded WBS to integrate planning. 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
- ▶ The 2021 Olympic Games in Tokyo were especially challenging to organize due to the global pandemic, and estimated costs nearly tripled from the original bid to over \$20 billion.



Approaches to Developing WBSs

- ▶ Using guidelines or templates: Some organizations, like the DOD, provide guidelines or templates 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

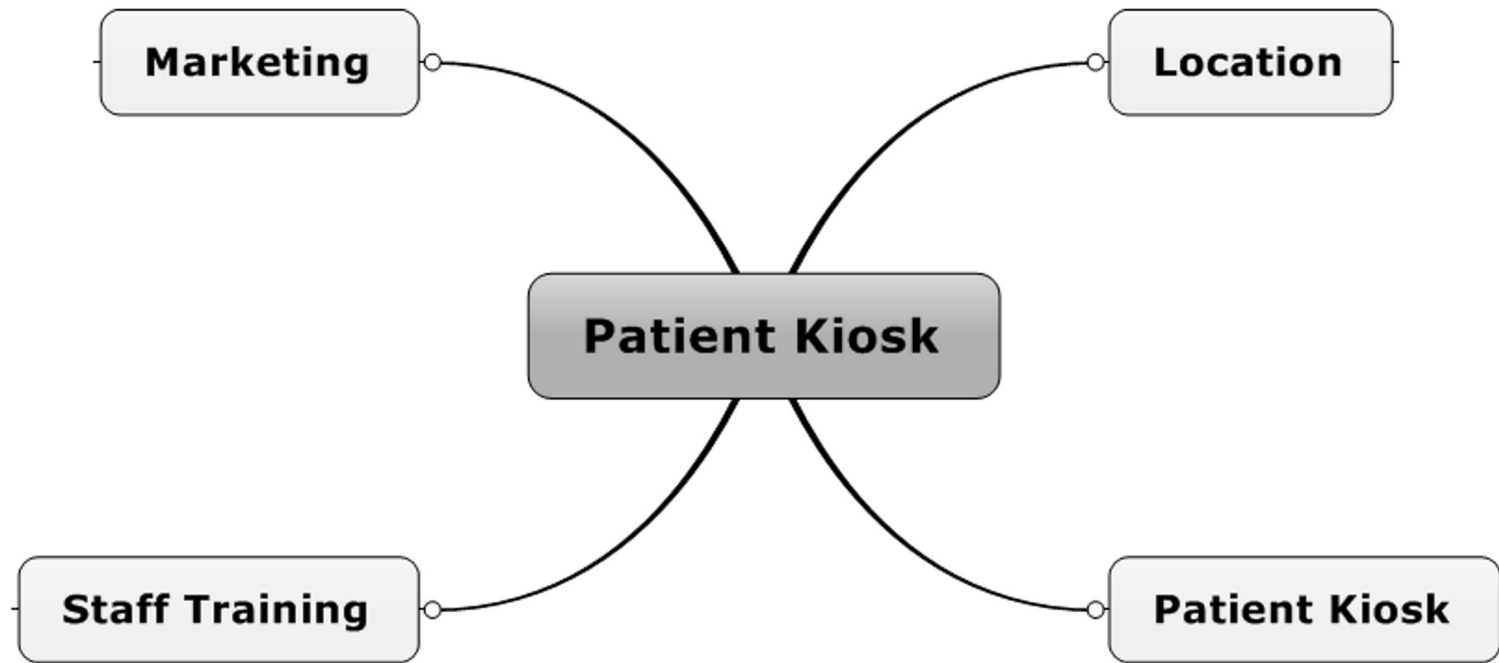
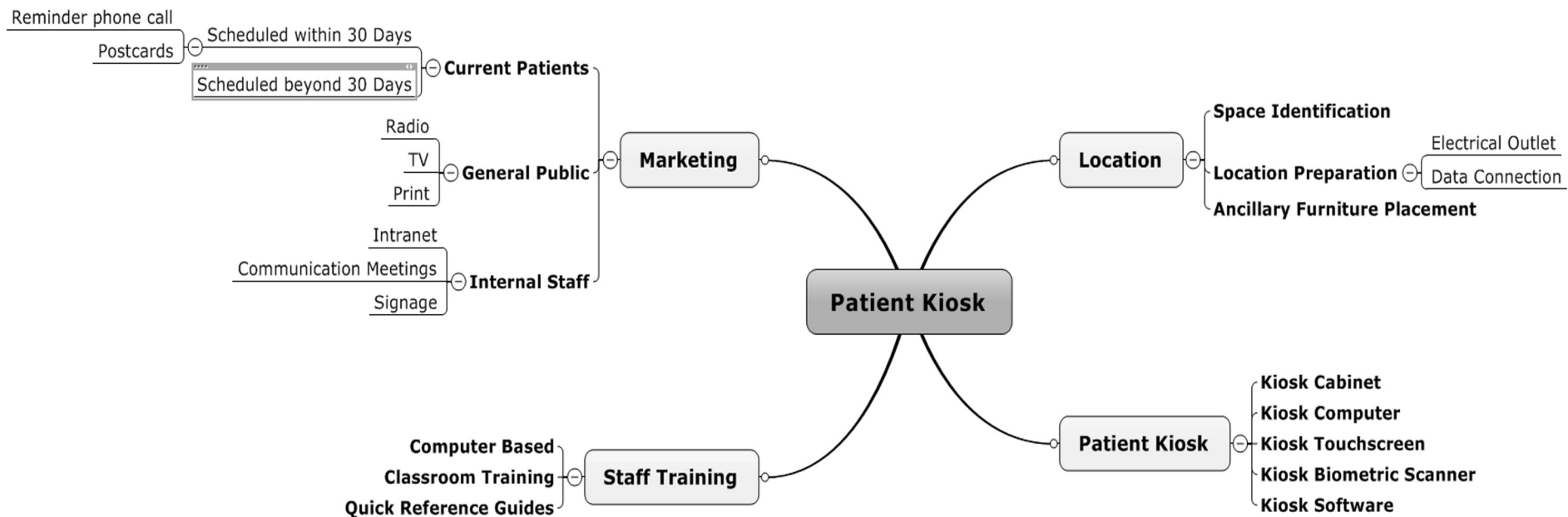


Figure 4-14. Patient Kiosk WBS Detailed Mind Map



Video Highlights

- ▶ MindView software allows you to create a WBS with a mind map. You can access a 30-day trial of their software at www.matchware.com. You can also watch several videos about creating a WBS using a mind map from Matchware's site or others. For example, [Jim Franklin](#) shows how to use MindView to create a WBS for a solar panel project. Jim has also created a site called pmmapping.com with more information on using mind maps in project management.
- ▶ [Andy Kaufman](#), host of PeopleAndProjectsPodcast.com, demonstrates how to engage people in creating a WBS for a vacation by using sticky notes.
- ▶ [Jennifer Bridges](#) of projectmanager.com explains how to plan projects with your team and provides tips to perfect the project planning process by using a simple white board.



Figure 4-15. Sample WBS

Work Breakdown Structure (WBS) for the Just-In-Time Training Project, August 1

1. Initiating
 - 1.1. Stakeholder register
 - 1.2. Project charter
 - 1.3. Assumption log
 - 1.4. Project kickoff meeting
2. Planning
 - 2.1. Project integration management
 - 2.1.1. Project management plan
 - 2.2. Project scope management
 - 2.2.1. Scope management plan
 - 2.2.2. Requirements management plan
 - 2.2.3. Requirements documentation
 - 2.2.4. Requirements traceability matrix
 - 2.2.5. Project scope statement
 - 2.2.6. Scope baseline
 - 2.3. Project schedule management
 - 2.4. Project cost management
 - 2.5. Project quality management
 - 2.6. Project resource management
 - 2.7. Project communications management
 - 2.8. Project risk management
 - 2.9. Project procurement management
 - 2.10. Project stakeholder management



Figure 4-15. Sample WBS (continued)

- 3. Executing
 - 3.1. Course design and development
 - 3.1.1. Supplier management training
 - 3.1.1.1. Needs assessment
 - 3.1.1.1.1. Survey development
 - 3.1.1.1.2. Survey administration
 - 3.1.1.1.3. Survey results analysis
 - 3.1.1.2. Research of existing training
 - 3.1.1.3. Partnerships
 - 3.1.1.3.1. Research on potential partners for providing training
 - 3.1.1.3.2. Meetings with potential partners
 - 3.1.1.3.3. Partnership agreements
 - 3.1.1.4. Course development
 - 3.1.1.4.1. Executive course
 - 3.1.1.4.2. Introductory course
 - 3.1.1.4.3. Advanced course
 - 3.1.1.5. Pilot course evaluation
 - 3.1.1.5.1. Plans for pilot course
 - 3.1.1.5.2. Pilot course
 - 3.1.1.5.3. Report on pilot course
 - 3.1.1.5.4. Presentation on pilot course
 - 3.1.2. Negotiating skills training
 - 3.1.3. Project management training
 - 3.1.4. Software applications training
 - 3.2. Course administration
 - 3.3. Course evaluation
 - 3.4. Stakeholder communications
 - 3.4.1. Communications regarding project and changes to training
 - 3.4.1.1. Documents (Emails, posters, memos, etc.)
 - 3.4.1.2. Meetings
 - 3.4.1.3. Information for the corporate intranet
 - 3.4.2. Communications regarding productivity improvements
- 4. Monitoring and controlling
- 5. Closing



Figure 4-16. Sample WBS Dictionary Entry

WBS Item Number: 3.1.1.1.2

WBS Item Name: Survey administration

Requirement Trace: R12 – Follow corporate policies on surveys

Responsible person: TBD

Estimated Cost: TBD

Estimated duration: TBD

Resource requirements: Mike Sundby, department heads, survey expert

Description: The purpose of the survey for the supplier management training is to determine the learning objectives for the executive, introductory, and advanced supplier management courses (see WBS item 3.1.1.1.1 for additional information on the survey itself). The survey will be administered online using the standard corporate survey software. After the project steering committee approves the survey, the IT department will send it to all employees of grade level 52 or higher in the purchasing, accounting, engineering, information technology, sales, marketing, manufacturing, and human resource departments. The project champion, Mike Sundby, VP of Human Resources, will write an introductory paragraph for the survey. Department heads will mention the importance of responding to this survey in their department meetings and will send an e-mail to all affected employees to encourage their inputs. If the response rate is less than 30% one week after the survey is sent out, additional work may be required.



Integration Planning for an Agile/Hybrid Project

- ▶ Planning for agile projects remains at a high-level for the long-term, but more detailed plans are created for the short-term. Why? Because change is expected, and requirements can change after every iteration.
- ▶ Instead of putting detailed plans in writing, agile teams write down only what is necessary and have discussions to make sure everyone understands what is happening.



Scope Planning for an Agile/Hybrid Project

- ▶ For agile projects, the scope is not completely known until the end of the project because the customer can add and remove features from the overall scope at the start of every iteration.
- ▶ During **backlog refinement** teams progressively elaborate and reprioritize the work to determine what can be accomplished during that iteration.
- ▶ New features can be added at any time to ensure that projects deliver the most value.



Themes, Initiatives, Epics and Story Cards

- ▶ Themes are large focus areas that span the organization.
- ▶ Initiatives are collections of epics that drive toward a common goal.
- ▶ **Epics** are large bodies of work that can be broken down into a number of smaller tasks (called stories).
- ▶ Stories, also called ‘user stories,’ are short requirements or requests written from the perspective of an end user.



Figure 4-17. MoSCoW prioritization method

M

Must have: Non-negotiable product needs that are mandatory for the team.

S

Should have: Important items that add significant value.

C

Could have: Nice to have items that will have a small impact if not provided.

W

Will not have: Items that are not a priority for this specific time frame.



Story Cards

- ▶ **Story cards** contain information about user stories written on an index card or typed in software to facilitate planning and discussion.
- ▶ Stories should use the INVEST rule and be:
 - Independent: Can be completed on its own
 - Negotiable: One or two sentences long. Details can be worked out through discussion
 - Valuable: Provide value to the customer
 - Estimable: A good approximation
 - Small: Can be completed within one iteration
 - Testable: Know when it is complete



Figure 4-18. Sample epic broken down into user stories

Epic: As a hiring manager, I want to hold a “hiring days” event both face-to-face and virtual, so that I can meet, review, and hire people quickly.

User story 1: As a hiring manager, I want to hold a 2-day face-to-face hiring event at Global Construction Headquarters within the next two months, so that I can meet, review, and hire people quickly for meeting staffing needs at the HQ.

User story 2: As a hiring manager, I want to hold a 2-day virtual hiring days event every month starting in two months, so that I can meet, review, and hire people quickly to meet various staffing needs throughout the company.

User story 3: As a potential employee, I want to filter open positions online by various requirements, so that I can decide which ones to apply for.



Figure 4-19. Sample Story Cards

<p style="text-align: center;">Front of Card User Story 1</p> <p>Title: Physical hiring event</p> <p>Value statement: As a hiring manager, I want to hold a 2-day face-to-face hiring event at Global Construction Headquarters within the next two months, so that I can meet, review, and hire people quickly for meet staffing needs at the HQ.</p> <p>Requirements: Event will be from 8-5 on Friday and Saturday and have capacity for 100 people per hour.</p>	<p style="text-align: center;">Back of Card User Story 1</p> <p>Acceptance Criteria:</p> <p>I know I am done when:</p> <ul style="list-style-type: none">The dates are set.The facilities are booked.Data is communicated to other teams.Hiring managers are scheduled.Refreshments are ordered.Signage is provided onsite. <p>Estimate: L</p>
<p style="text-align: center;">Front of Card for User Story 3</p> <p>Title: Filter positions</p> <p>Value statement: As a potential employee, I want to filter open positions online by various requirements, so that I can decide which ones to apply for.</p> <p>Requirements: Provide several categories such as education requirements, years of experience, specific skills needed, location, etc.</p>	<p style="text-align: center;">Back of Card User Story 3</p> <p>Acceptance Criteria:</p> <p>I know I am done when:</p> <ul style="list-style-type: none">Open positions are posted.Categories for filters are completed.Testing is completed. <p>Estimate: M</p>



Chapter Summary

- ▶ Planning for integration management for predictive projects includes developing a project management plan. Plans in the other knowledge areas are considered to be subsidiary parts of the project management plan.
- ▶ Planning processes for scope management include planning scope management, collecting requirements, defining scope, and creating a WBS
- ▶ Approaches for developing a WBS include using guidelines or templates, an analogy approach, a top-down approach, a bottom-up approach, and mind mapping. A WBS dictionary provides more detail on WBS items
- ▶ When using an agile approach to project management, planning remains at a high-level for the long-term, but more detailed plans are created for the short-term. Teams refine the product backlog during sprint planning for each iteration and often break epics into user stories. Teams can use story cards to document requirements.
- ▶ Samples of several planning documents are provided for the Just-In-Time Training project and the GCHC project.

