Chapter 2: The Project Management Process Groups and Organization Structure

Information Technology Project Management, Ninth Edition

Note: See the text itself for full citations

Agenda

- Understanding organizations
- Project life cycles
- Project management process groups
- Project management knowledge areas
- Agile project management

A Systems View of Project Management

- Projects must operate in a broad organizational environment
- Project managers need to use systems thinking:
  - Taking a holistic view of carrying out projects within the context of the organization

Understanding Organizations

- Systems approach requires that project managers **always view their projects** in the **context of the larger organization**
- Organizational issues are often the most difficult part of working on and managing projects
- Important for project managers to develop a better understanding of people as well as organizations
  - To improve the success rate of IT projects

Organizational Culture

- Organizational culture is a set of shared assumptions, values, and behaviors that characterize the functioning of an organization
- Many experts believe the underlying causes of many companies' problems are not the structure or staff, but the culture

The Importance of Top Management Commitment (1 of 2)

- People in top management positions are key stakeholders in projects
- A very important factor in helping project managers successfully lead projects is the level of commitment and support they receive from top management
- Without top management commitment, many projects will fail.
- Some projects have a senior manager called a champion who acts as a key proponent for a project.

The Importance of Top Management Commitment (2 of 2)

- How top management can help project managers
  - Providing adequate resources
  - Approving unique project needs in a timely manner
  - Getting cooperation from other parts of the organization
  - Mentoring and coaching on leadership issues

Organizational Structures (1 of 2)

- Organizations are set up in specific ways to accomplish different goals, and the structure of an organization can help or hinder its progress toward accomplishing these goals.
- Three basic organizational structures
  - Functional: functional managers report to the CEO
  - Project: program managers report to the CEO
  - Matrix: middle ground between functional and project structures; personnel often report to two or more bosses; structure can be weak, balanced, or strong matrix

Organizational Structures (2 of 2)

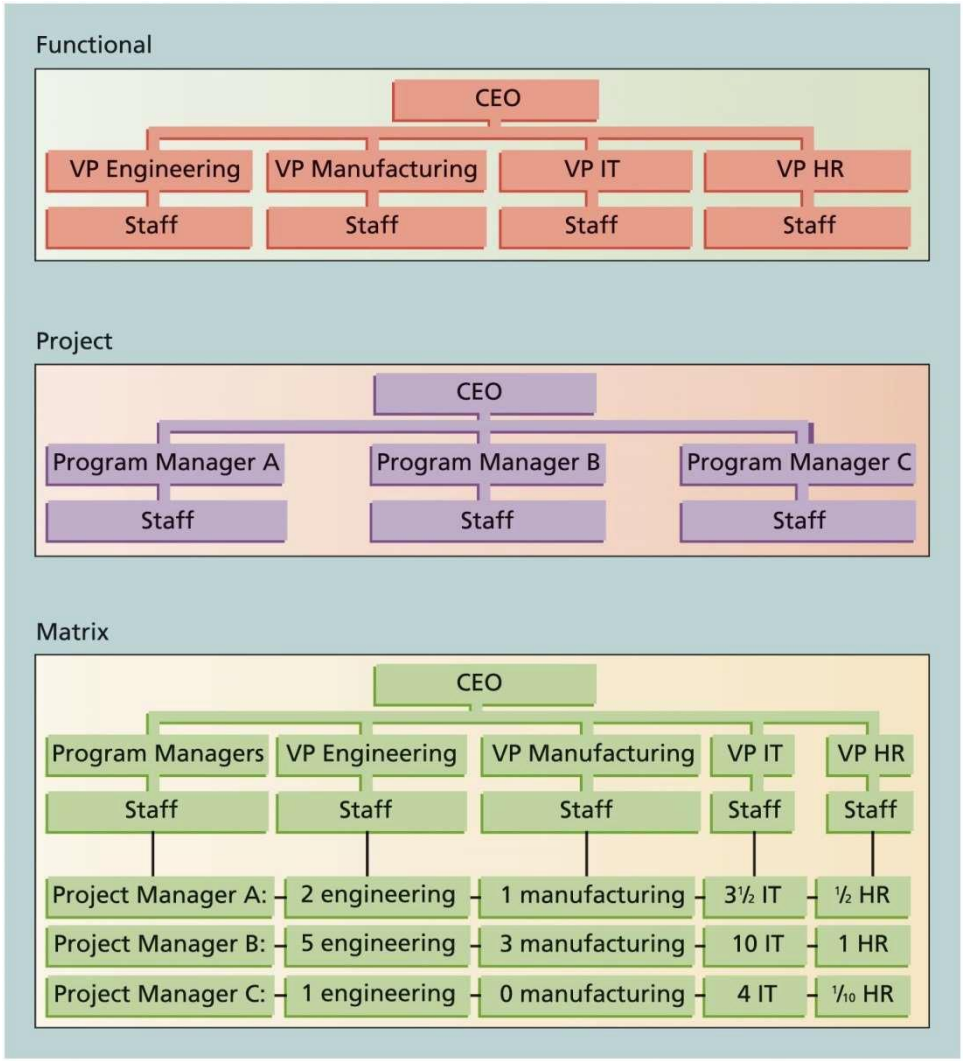


FIGURE 2-3 Functional, project, and matrix organizational structures

Focusing on Stakeholder Needs

- Project managers must take time to identify, understand, and manage relationships with all project stakeholders
- Using the four frames of organizations can help meet stakeholder needs and expectations
- Senior executives/top management are very important stakeholders
- See Chapter 13, Project Stakeholder Management, for more information

The Need for Organizational Standards

- Standards and guidelines help project managers be more effective
- Senior management can encourage
  - the use of standard forms and software for project management
  - the development and use of guidelines for writing project plans or providing status information
  - the creation of a project management office or center of excellence

Developing an IT Project Management Methodology

- Many organizations develop their own internal IT project management methodologies
  - A methodology describes how things should be done
  - A standard describes what should be done

Project Life Cycles (1 of 2)

- The project life cycle includes the steps required for project managers to successfully manage a project from start to finish. There are 5 phases to the project life cycle (also called the 5 process groups)—initiating, planning, executing, monitoring/controlling, and closing. Each of these project phases represents a group of interrelated processes that must take place.

Project Life Cycles (2 of 2)

Knowledge Areas

- Project management consists of 10 knowledge areas
  - Integration, scope, schedule, cost, quality, resource, communications, risk, procurement, and stakeholder management
- Projects involve five project management process groups
  - Initiating, planning, executing, monitoring and controlling, and closing
    - Tailoring these process groups to meet individual project needs increases the chance of success in managing projects

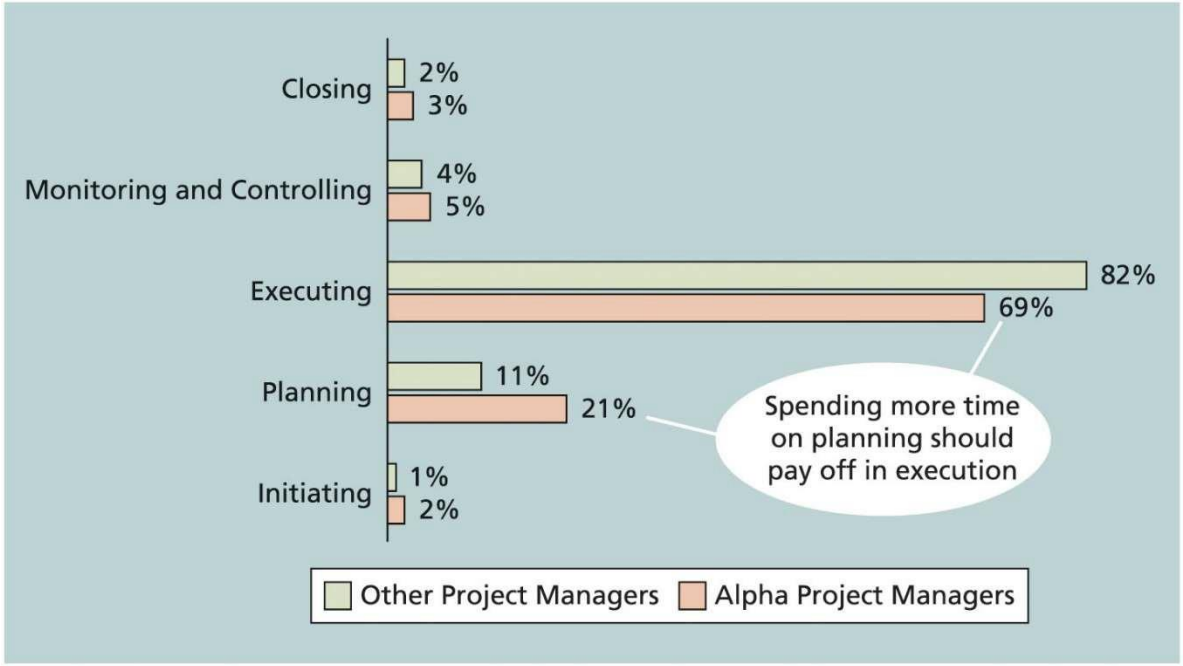
Project Management Process Groups

- A process is a series of actions directed toward a particular result
  - Project management can be viewed as a number of related processes
- Project management process groups
  - Initiating processes
  - Planning processes
  - Executing processes
  - Monitoring and controlling processes
  - Closing processes

PMBOK – Project Management Body Of Knowledge outlines 5 groups

Initiation: These processes help you define a new piece of work – either a complete new project or the phase you are about to begin. They ensure you have authority to proceed.
Planning : These processes help you define objectives and scope out the work to be done. They also encompass all the work around planning and scheduling tasks. Again, they can cover a complete project or just the phase you are working on right now. Or you might be closing one phase and planning the next in parallel.
Executing: You do these processes as you carry out your project tasks. This is the 'delivery' part of project management, where the main activity happens and you create the products.
Monitor and Control: These processes let you track the work that is being done, review and report on it. They also cover what happens when you find out the project isn't following the agreed plan, so change management falls into this Process Group. You'll run these processes alongside those in the Executing Group (mainly, but alongside the other Groups too) so you monitor as you go.
Closing: Finally, these processes let you finalize all the tasks in the other Groups when you get to the point to close the project or phase.

Project Management Process Groups



Source: Andy Crowe

FIGURE 3-1 Percentage of time spent on each process group

Mapping the Process Groups to the Knowledge Areas

- You can map the main activities of each PM process group into the ten knowledge areas using the *PMBOK® Guide, Sixth Edition*

Breakout Session

- Research the mapping of the process groups to knowledge Area Matrix
- List two process under each process group and identify which knowledge area it corresponds to.

Project Pre-Initiation and Initiation

- Initiating includes recognizing and starting a new project
  - Right kinds of projects for the right reasons
- Strategic planning should serve as the foundation for deciding which projects to pursue
  - Expresses the vision, mission, goals, objectives, and strategies of the organization
  - Provides the basis for IT project planning

Pre-initiation Tasks

- It is good practice to lay the groundwork for a project before it officially starts
- Senior managers often perform several pre-initiation tasks
  - Determine the scope, time, and cost constraints for the project
  - Identify the project sponsor
  - Select the project manager
  - Develop a business case for a project
  - Meet with the project manager to review the process and expectations for managing the project
  - Determine if the project should be divided into two or more smaller projects

Initiating (1 of 5)

Knowledge Area	Initiating Process	Initiating Process
Project Integration Management	Develop project charter	Project charter Assumption log
Project Stakeholder Management	Identify stakeholders	Stakeholder register Change requests Project management plan updates Project documents updates

Source: PMBOK® Guide – Sixth Edition, 2017

Initiating (2 of 5)

Name	Position	Internal/External	Project Role	Contact Information
Joe Fleming	CEO	Internal	Sponsor	joe_fleming@jwdconsulting.com
Erica Bell	PMO Director	Internal	Project Manager	erica_bell@jwdconsulting.com
Michael Chen	Senior Consultant	Internal	Team Member	michael_chen@jwdconsulting.com
Kim Phuong	Business Analyst	External	Advisor	kim_phuong@client1.com
Louise Mills	PR Director	Internal	Advisor	louise_mills@jwdconsulting.com

Initiating (3 of 5)

Name	Level of Interest	Level of Influence	Potential Management Strategies
Joe Fleming	High	High	Joe likes to stay on top of key projects and make money. Have a lot of short, face-to-face meetings and focus on achieving the financial benefits of the project.
Louise Mills	Low	High	Louise has a lot of things on her plate, and she does not seem excited about this project. She may be looking at other job opportunities. Show her how this project will help the company and her resume.

Initiating (4 of 5)

- Drafting the project charter
- Holding a project kick-off meeting
  - It's good practice to hold a kick-off meeting at the beginning of a project so that stakeholders can meet each other, review the goals of the project, and discuss future plans

Initiating (5 of 5)

Kick-Off Meeting
[Date of Meeting]

Project Name: Project Management Intranet Site Project

Meeting Objective: Get the project off to an effective start by introducing key stakeholders, reviewing project goals, and discussing future plans

Agenda:

- Introductions of attendees
- Review of the project background
- Review of project-related documents (business case and project charter)
- Discussion of project organizational structure
- Discussion of project scope, time, and cost goals
- Discussion of other important topics
- List of action items from meeting

Action Item	Assigned To	Due Date

Date and time of next meeting:

FIGURE 3-2 Kick-off meeting agenda

Project Planning (1 of 3)

- The main purpose of project planning is to guide execution
  - Every knowledge area includes planning information
- Key outputs included in the JWD project
  - Team contract
  - Project scope statement
  - Work breakdown structure (WBS)
  - Project schedule, in the form of a Gantt chart with all dependencies and resources entered
  - List of prioritized risks (part of a risk register)

Project Planning (2 of 3)

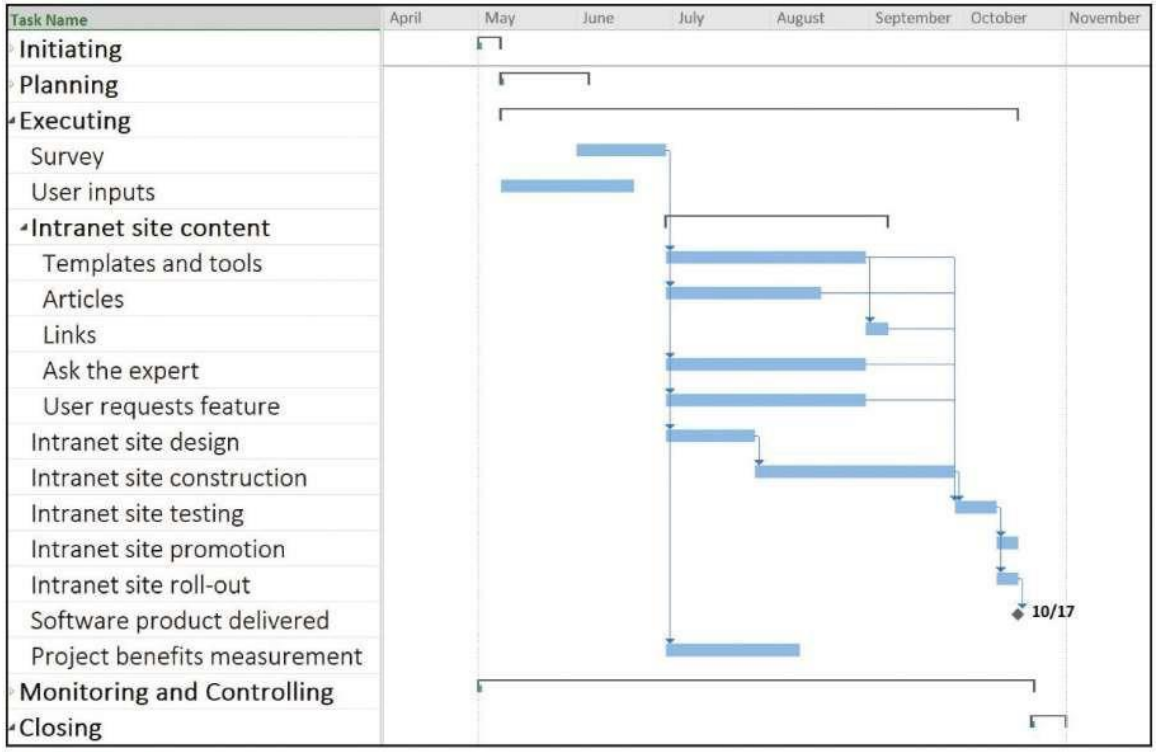


FIGURE 3-4 JWD Consulting intranet site project baseline Gantt chart

Project Planning (3 of 3)

Ranking	Potential Risk
1	Lack of inputs from internal consultants
2	Lack of inputs from client representatives
3	Security of new system
4	Outsourcing/purchasing for the article retrieval and Ask the Expert features
5	Outsourcing/purchasing for processing online payment transactions
6	Organizing the templates and examples in a useful fashion
7	Providing an efficient search feature
8	Getting good feedback from Michael Chen and other senior consultants
9	Effectively promoting the new system
10	Realizing the benefits of the new system within one year

Table 3-10 List of Prioritized Risks

Project Execution

- Usually takes the most resources to perform
  - Project managers must use their leadership skills to handle the many challenges that occur during project execution
- The list the knowledge areas, executing processes, and outputs of project execution can be found in the PMBOK
  - Many project sponsors and customers focus on deliverables related to providing the products, services, or results desired from the project
  - It is equally important to document change requests and update planning documents
- A milestone report can help focus on completing major milestones

Project Monitoring and Controlling

- Involves measuring progress toward project objectives, monitoring deviation from the plan, and taking correction actions
  - Affects all other process groups and occurs during all phases of the project life cycle
- Outputs include performance reports, change requests, and updates to various plans

Project Closing

- Involves gaining stakeholder and customer acceptance of the final products and services
  - Even if projects are not completed, they should be closed out to learn from the past
- Outputs may include project files and lessons-learned reports
  - Also may include a final report and presentation

Agile Project Management

- Agile Project Management is an iterative approach to planning and guiding project processes that breaks them down into smaller cycles called sprints, or iterations.

- Agile project is completed in small sections. In Agile software development, for instance, an iteration refers to a single development cycle.

- The main benefit of getting started with Agile Project Management is its ability to respond to issues that arise throughout the course of the project. Making a necessary change to a project at the right time can save resources and help to deliver a successful project on time and within budget.

Agile Methodologies

- **Scrum**
- Kanban
- Extreme Programming
- Lean Development
- Crystal

Scrum

- Scrum is a process framework used to manage product development and other knowledge work. Scrum is empirical in that it provides a means for teams to establish a hypothesis of how they think something works, try it out, reflect on the experience, and make the appropriate adjustments.

Scrum Roles, Artifacts, and Ceremonies (1 of 5)

- Product owner: person responsible for the business value of the project and for deciding what work to do and in what order, as documented in the product backlog. They create the product backlog
- ScrumMaster: person who ensures that the team is productive, facilitates the daily Scrum, enables close cooperation across all roles and functions, and removes barriers that prevent the team from being effective
- Scrum team or development team: cross-functional team of five to nine people who organize themselves and the work to produce the desired results for each sprint, which normally lasts two to four weeks

Scrum Roles, Artifacts, and Ceremonies (2 of 5)

- An artifact is a useful object created by people
- Scrum artifacts
  - Product backlog: list of features prioritized by business value
  - Sprint backlog: highest-priority items from the product backlog to be completed within a sprint
  - Burndown chart: shows the cumulative work remaining in a sprint on a day-by-day basis

Scrum Roles, Artifacts, and Ceremonies (3 of 5)

- Scrum ceremonies
  - Sprint planning session: meeting with the team to select a set of work from the product backlog to deliver during a sprint
  - Daily Scrum: short meeting for the development team to share progress and challenges and plan work for the day
  - Sprint reviews: meeting in which the team demonstrates to the product owner what it has completed during the sprint
  - Sprint retrospectives: meeting in which the team looks for ways to improve the product and the process based on a review of the actual performance of the development team

Scrum Roles, Artifacts, and Ceremonies (4 of 5)

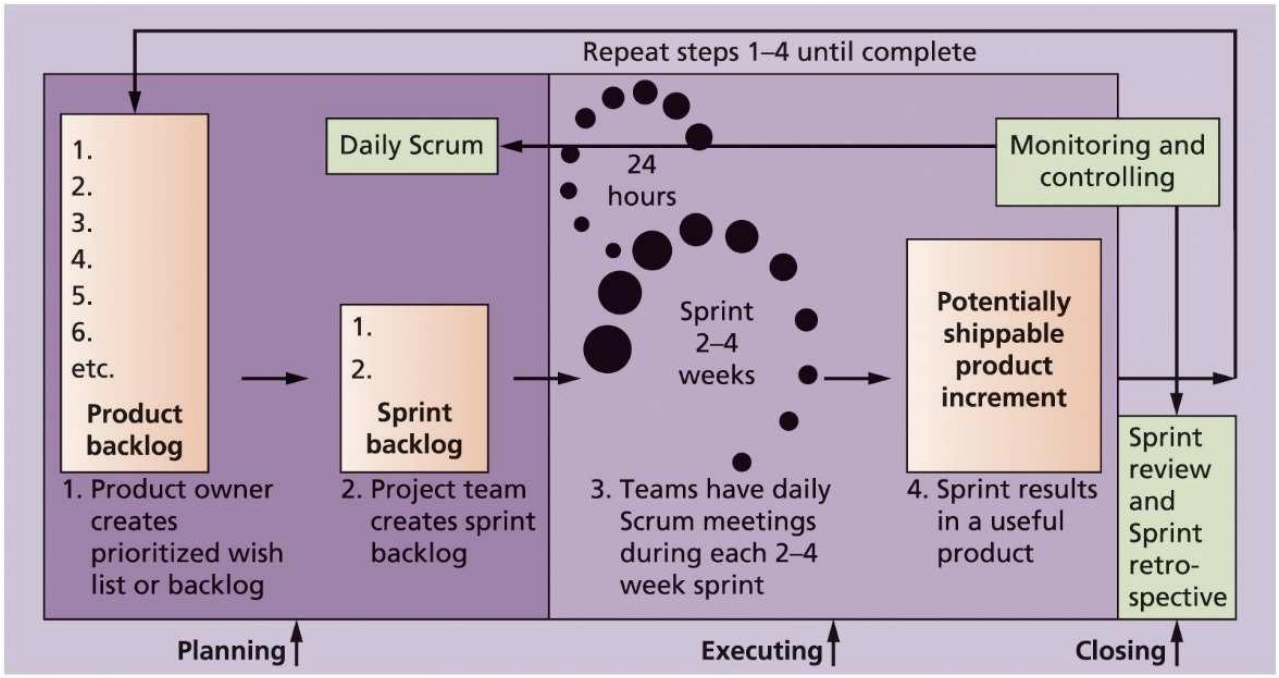


FIGURE 3-5 Scrum framework and the process groups

Scrum Roles, Artifacts, and Ceremonies (5 of 5)

Process Group	Scrum Activity
Initiating	
	Determine roles
	Decide how many sprints will compose each release and the scope of software to deliver
Planning	
	Create product backlog
	Create sprint backlog
	Create release backlog
	Plan work each day in the daily Scrum
	Document stumbling blocks in a list
Executing	
	Complete tasks each day during sprints
	Produce a shippable product at the end of each sprint

Planning (1 of 3)

- Because Scrum implies that team members work as a self-directed group, coached by the ScrumMaster, a team charter should not be necessary
- Descriptions of work are identified in the product and sprint backlogs
- More detailed work is documented in technical stories
- Team must estimate a velocity or capacity for each sprint

Planning (2 of 3)

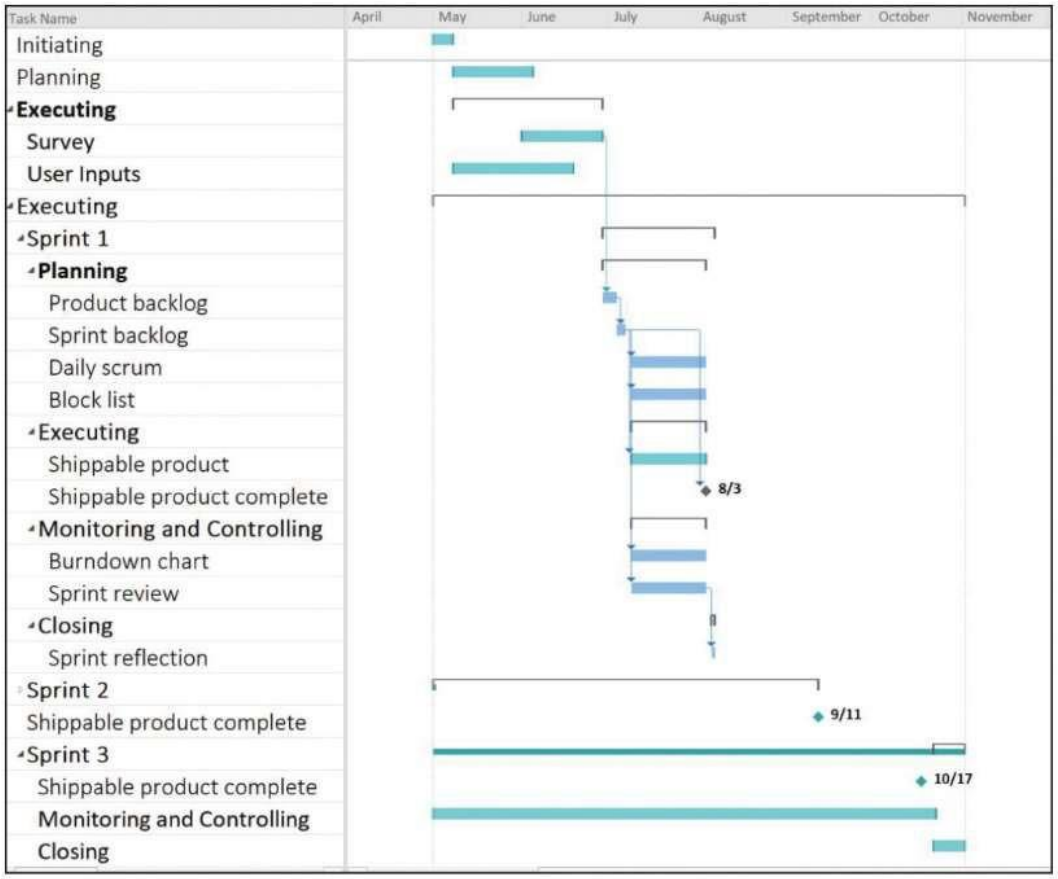


FIGURE 3-6 Intranet site project baseline Gantt chart using Scrum approach

Planning (3 of 3)

Product Backlog	Sprint Backlog
1.User story templates, samples, and point person	1.User story templates, samples, and point person
2. WBS templates, samples, and point person	2. WBS templates, samples, and point person
3.Project schedule templates, samples, and point person	3.Project schedule templates, samples, and point person
4. Ability to charge customers for some intranet products and services	4. Ability to charge customers for some intranet products and services
5. Ability to collect user suggestions	5. Ability to collect user suggestions
6.Business case templates, samples, and point person	
7. Ask the Expert feature	
8. Stakeholder management strategy templates, samples, and point person	
9.Risk register templates, samples, and point person	
10. Etc.	

Executing

- The most time and money should be spent on executing
  - Plans are implemented to create the desired product
- Agile approach: team produces several iterations of a potentially shippable product
  - Users can access and make suggestions
- Communications are different
  - Project team meets every morning, physically or virtually

Monitoring and Controlling (1 of 2)

- The two main tools for monitoring and controlling in the Scrum framework
  - Daily Scrum: held each morning to plan and communicate work for the day and discuss any risks, issues, or blockers
  - Sprint review: work progress within a sprint can be represented on a sprint board maintained by the ScrumMaster
    - Burndown chart: an important artifact used to graphically display progress on each sprint

Monitoring and Controlling (2 of 2)

- Burn down chart is a report that shows progress in a sprint on day to day basis

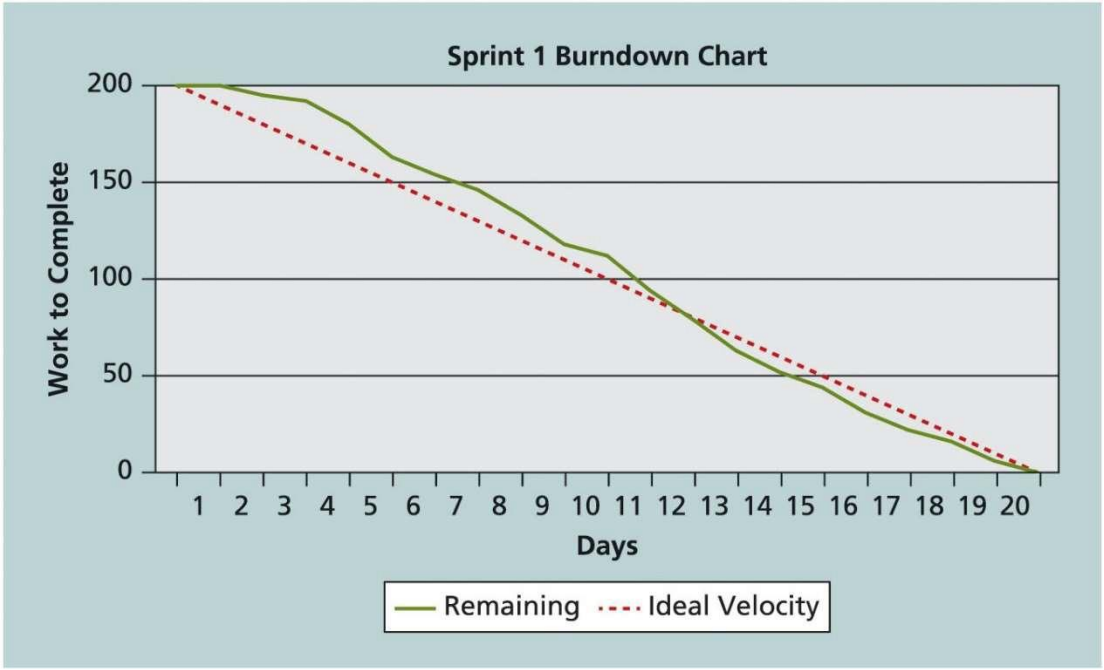


FIGURE 3-7 Burndown chart

Closing

- After the sprint review, the ScrumMaster leads a sprint retrospective
  - Team reflects on what happened during the sprint
- Sprint retrospective is intended to answer two fundamental questions
  - What went well during the last sprint that we should continue doing?
  - What could we do differently to improve the product or process?

Breakout Sessions

- Discuss the application of agile methods to IT projects

Chapter Summary

- The five project management process groups are initiating, planning, executing, monitoring and controlling, and closing
- You can map the main activities of each process group to the ten knowledge areas
- Some organizations develop their own information technology project management methodologies
- The JWD Consulting case study provides an example of using the process groups and shows several important project documents
- The second version of the same case study illustrates how to use Scrum, the leading agile method, to manage the project