Chapter 3: The Project Management Process Groups: A Case Study

Information Technology Project Management, Seventh Edition

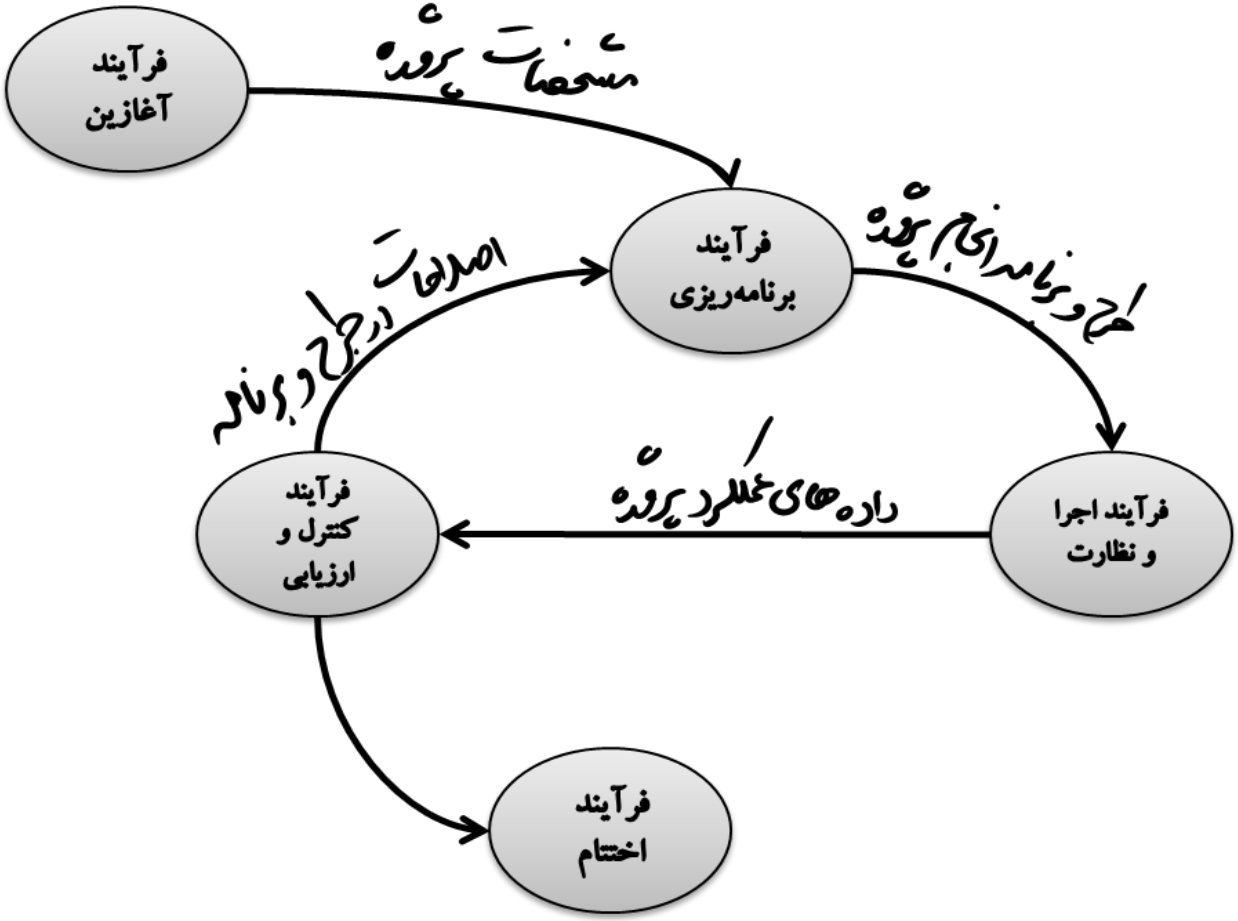
Note: See the text itself for full citations.

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 interlinked processes
- The project management process groups include
  - initiating processes
  - planning processes
  - executing processes
  - monitoring and controlling processes
  - closing processes

Copyright 2014

Project Management Process Groups

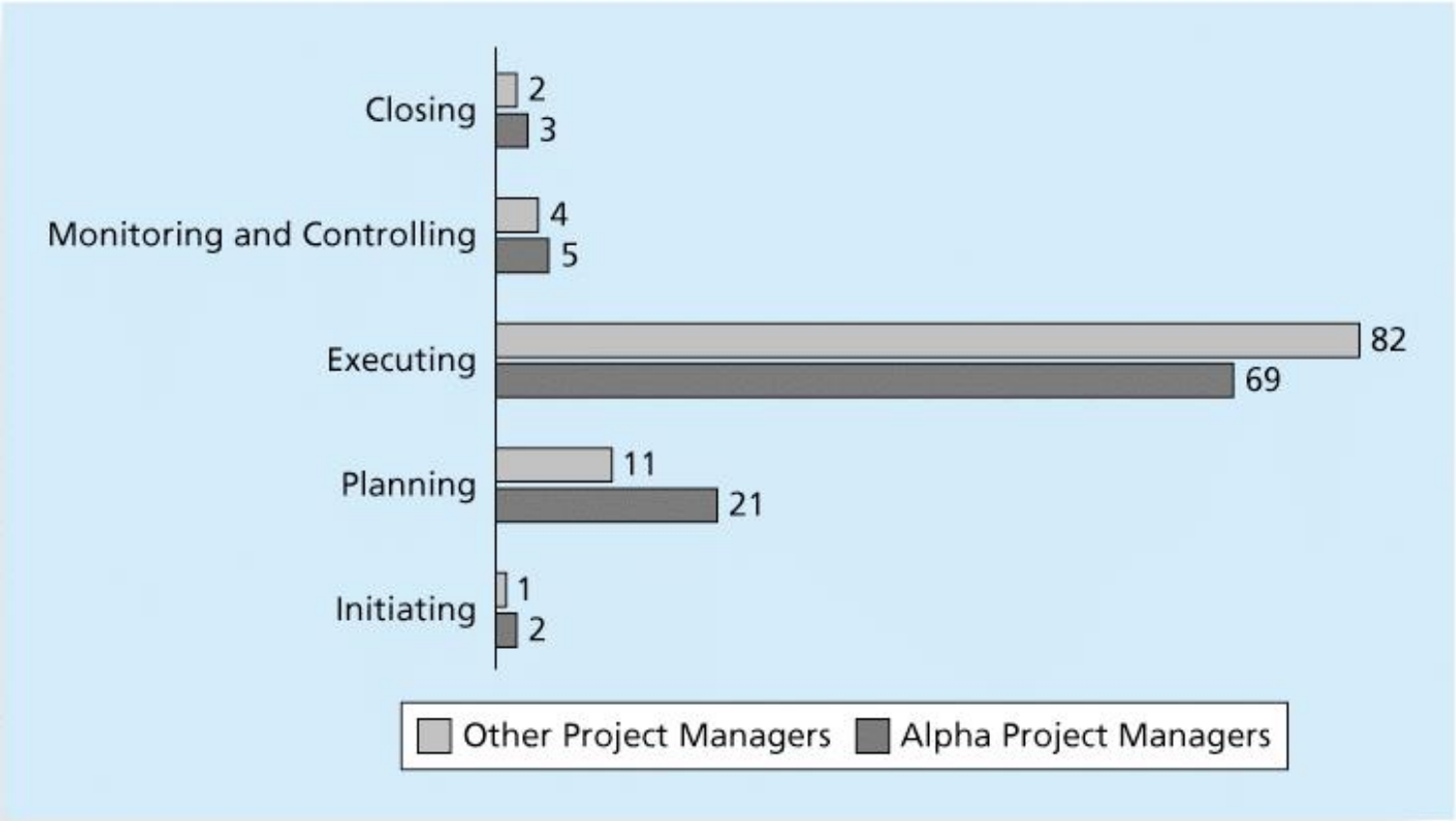


اهداف در مدیریت پروژه :

- رعایت مدت زمان انجام
- رعایت هزینه انجام
- رعایت کیفیت محصول

Copyright 2014

Figure 3-1. Percentage of Time Spent on Each Process Group



Copyright 2014

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, Fifth Edition, 2012
- Note that there are activities from each knowledge area under the planning process groups

Copyright 2014

Table 3-1. Project Management Process Groups and Knowledge Area Mapping*

Knowledge Areas	Project Management Process Groups				
	Initiating Process Group	Planning Process Group	Executing Process Group	Monitoring and Controlling Process Group	Closing Process Group
4. Project Integration Management	4.1 Develop Project Charter	4.2 Develop Project Management Plan	4.3 Direct and Manage Project Work	4.4 Monitor and Control Project Work 4.5 Perform Integrated Change Control	4.6 Close Project or Phase
5. Project Scope Management		5.1 Plan Scope Management 5.2 Collect Requirements 5.3 Define Scope 5.4 Create WBS		5.5 Validate Scope 5.6 Control Scope	
6. Project Time Management		6.1 Plan Schedule Management 6.2 Define Activities 6.3 Sequence Activities 6.4 Estimate Activity Resources 6.5 Estimate Activity Durations 6.6 Develop Schedule		6.7 Control Schedule	

*Source: PMBOK® Guide, Fifth Edition, 2012.

Copyright 2014

Table 3-1. continued

Knowledge Areas	Project Management Process Groups				
	Initiating Process Group	Planning Process Group	Executing Process Group	Monitoring and Controlling Process Group	Closing Process Group
7. Project Cost Management		7.1 Plan Cost Management 7.2 Estimate Costs 7.3 Determine Budget		7.4 Control Costs	
8. Project Quality Management		8.1 Plan Quality Management	8.2 Perform Quality Assurance	8.3 Control Quality	
9. Project Human Resource Management		9.1 Plan Human Resource Management	9.2 Acquire Project Team 9.3 Develop Project Team 9.4 Manage Project Team		
10. Project Communications Management		10.1 Plan Communications Management	10.2 Manage Communications	10.3 Control Communications	
11. Project Risk Management		11.1 Plan Risk Management 11.2 Identify Risks 11.3 Perform Qualitative Risk Analysis 11.4 Perform Quantitative Risk Analysis 11.5 Plan Risk Responses		11.6 Control Risks	
12. Project Procurement Management		12.1 Plan Procurement Management	12.2 Conduct Procurements	12.3 Control Procurements	12.4 Close Procurements
13. Project Stakeholder Management	13.1 Identify Stakeholders	13.2 Plan Stakeholder Management	13.3 Manage Stakeholder Engagement	13.4 Control Stakeholder Engagement	

Copyright 2014

Developing an IT Project Management Methodology

- Just as projects are unique, so are approaches to project management
- Many organizations develop their own project management methodologies, especially for IT projects
- A **methodology** describes *how* things should be done; a **standard** describes *what* should be done
- PRINCE2, Agile, RUP, and Six Sigma provide different project management methodologies

Copyright 2014

Project Pre-initiation

- It is good practice to lay the groundwork for a project before it officially starts
- Senior managers often perform several pre-initiation tasks, including the following:
  - 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 (see Table 3-2 for an example)
  - 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

Copyright 2014

Project Initiation

- Initiating a project includes recognizing and starting a new project or project phase
- The main goal is to formally select and start off projects
- Table 3-3 shows the project initiation knowledge areas, processes, and outputs

Knowledge Area	Initiating Process	Outputs
Project Integration Management	Develop project charter	Project charter
Project Stakeholder Management	Identify stakeholders	Stakeholder register

Copyright 2014

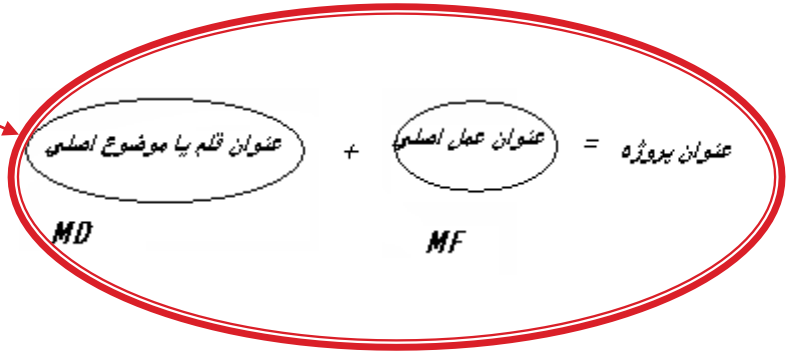
Project Charter

Project Title:
Project Start Date: **Projected Finish Date:**
Budget Information:

Project Manager: Name, phone, e-mail
Project Objectives:

Main Project Success Criteria:

Approach:



Roles and Responsibilities

Role	Name	Organization/ Position	Contact Information

Sign-off: (Signatures of all above stakeholders. Can sign by their names in table above.)

Comments: (Handwritten or typed comments from above stakeholders, if applicable)

Copyright 2014

Table 3-4. Stakeholder Register

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	Team member	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

Copyright 2014

Table 3-4. Stakeholder Management Strategy

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.

Contents are often sensitive, so do not publish this document.

Copyright 2014

Project Charters and Kick-off Meetings

- See Table 3-6 for an example of a charter
- Charters are normally short and include key project information and stakeholder signatures
- 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

Copyright 2014

Figure 3-2. Kick-off Meeting Agenda

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 (i.e., business case, 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:

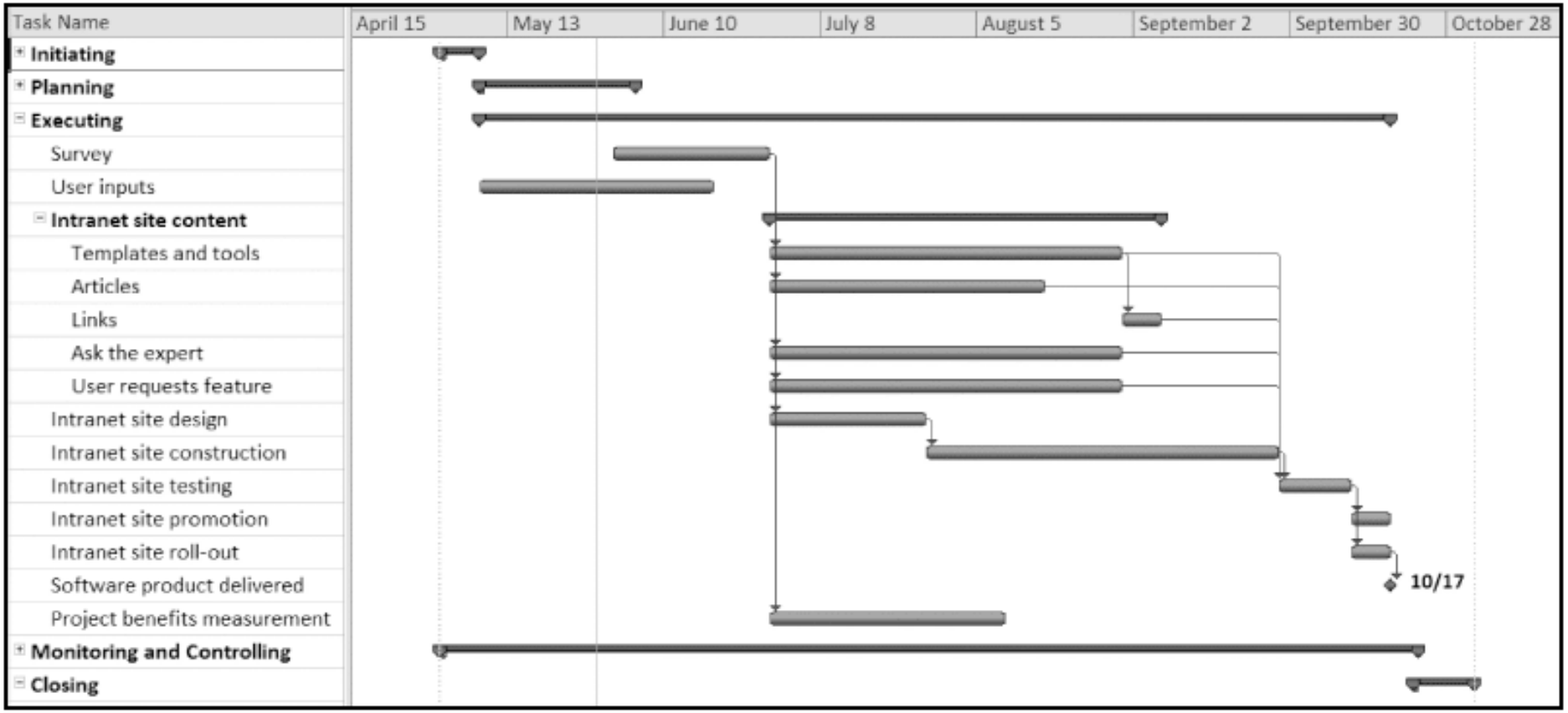
Copyright 2014

Project Planning

- The main purpose of project planning is to *guide execution*
- Every knowledge area includes planning information (see Table 3-7 on pages 101-102)
- Key outputs included in the JWD project include:
  - A team contract
  - A project scope statement
  - A work breakdown structure (WBS)
  - A project schedule, in the form of a Gantt chart with all dependencies and resources entered
  - A list of prioritized risks (part of a risk register)
- See sample documents starting on p. 104

Copyright 2014

Figure 3-4. JWD Consulting Intranet Site Project Baseline Gantt Chart



Copyright 2014

Table. 3-10. List of Prioritized Risks

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

Copyright 2014

Project Executing

- Usually takes the most time and resources to perform project execution
- Project managers must use their leadership skills to handle the many challenges that occur during project execution
- Table 3-11 on p. 111 lists the executing processes and outputs.
- Many project sponsors and customers focus on deliverables related to providing the products, services, or results desired from the project
- A milestone report (example on pp. 112-113) can help focus on completing major milestones

Copyright 2014

Part of Milestone Report (Table 3-11, partial)

Milestone	Date	Status	Responsible	Issues/ Comments
Initiating Stakeholders identified	May 2	Completed	Erica and Joe	
Project charter signed	May 10	Completed	Erica	
Project kick-off meeting held	May 13	Completed	Erica	Went very well
Planning Team contract signed	May 13	Completed	Erica	
Scope statement completed	May 27	Completed	Erica	
WBS completed	May 31	Completed	Erica	
List of prioritized risks completed	June 3	Completed	Erica	Reviewed with sponsor and team
Schedule and cost baseline completed	June 13	Completed	Erica	
Executing Survey completed	June 28		Erica	Poor response so far!

Copyright 2014

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
- See Table 3-13

Copyright 2014

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 include project files and lessons-learned reports, part of organizational process assets
- Most projects also include a final report and presentation to the sponsor/senior management

Copyright 2014

Case Study 2: JWD Consulting's Project Management Intranet Site (Agile Approach)

- This section demonstrates a more agile approach to managing the same project
- Differences in using an agile approach are highlighted
- An agile project team typically uses several iterations or deliveries of software instead of waiting until the end of the project to provide one product.

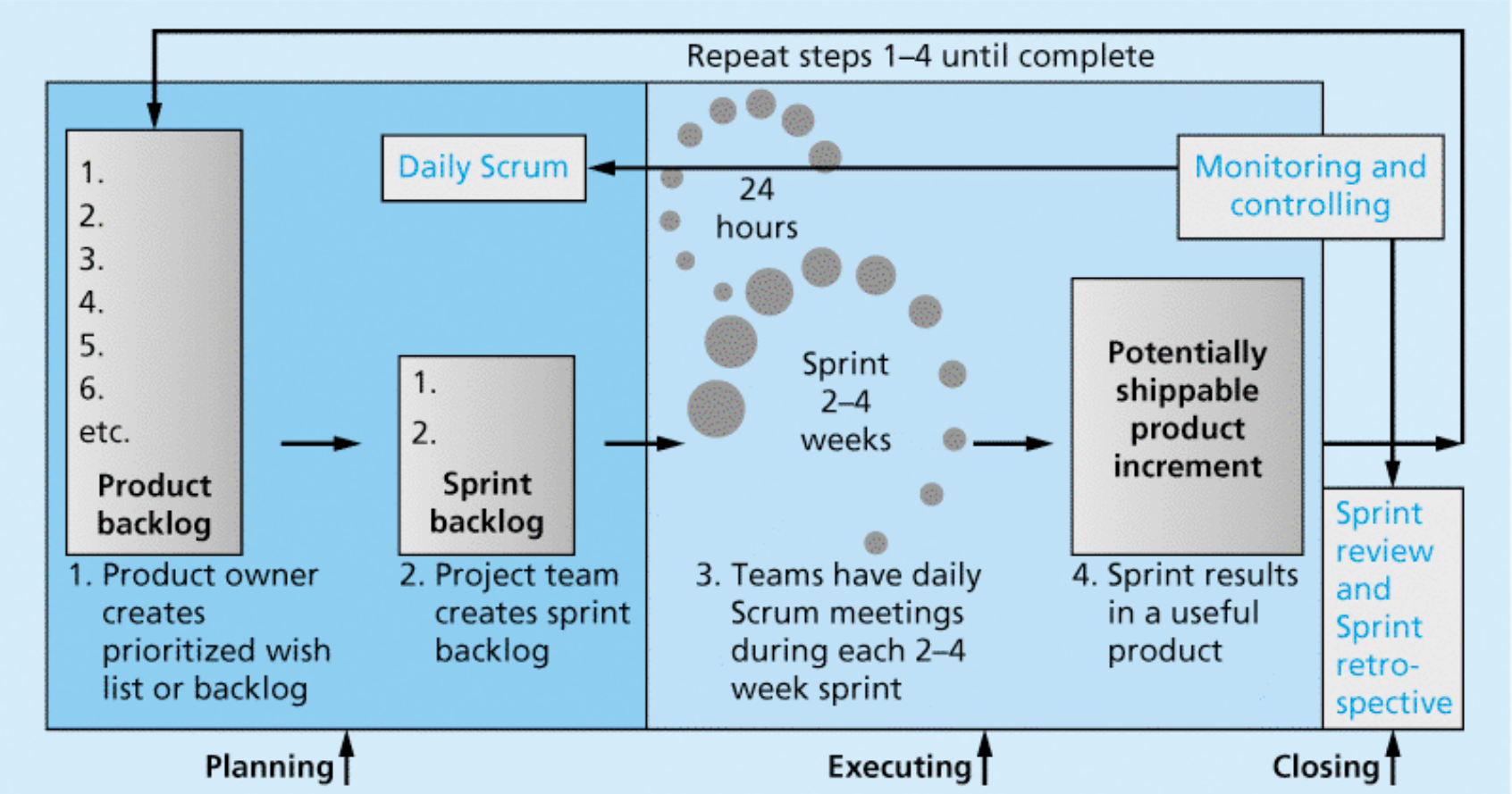
Copyright 2014

An Informed Decision

- It is not a snap decision whether to use an agile approach or not, just like flying or driving somewhere on a trip
  - Projects with less **rigid constraints**, **experienced** and preferably **co-located teams**, **smaller risks**, **unclear requirements**, and **more flexible scheduling** would be **more compatible with an agile approach**
- The following example uses Scrum roles, artifacts, and ceremonies

Copyright 2014

Figure 3-5. Scrum Framework and the Process Groups



Copyright 2014

Scrum Roles

- **Product owner**:
  - The 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.
- **ScrumMaste**r:
  - The 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**:
  - A 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 2-4 weeks.

Copyright 2014

Scrum Artifacts

- An **artifact** is a useful object created by people
- Scrum artifacts include:
  - **Product backlog**:
    - A list of features prioritized by business value
  - **Sprint backlog**:
    - The highest-priority items from the product backlog to be completed within a sprint
    - a **sprint** is a set period of time during which specific work has to be completed and made ready for review.
  - **Burndown chart**:
    - Shows the cumulative work remaining in a sprint on a day-by-day basis

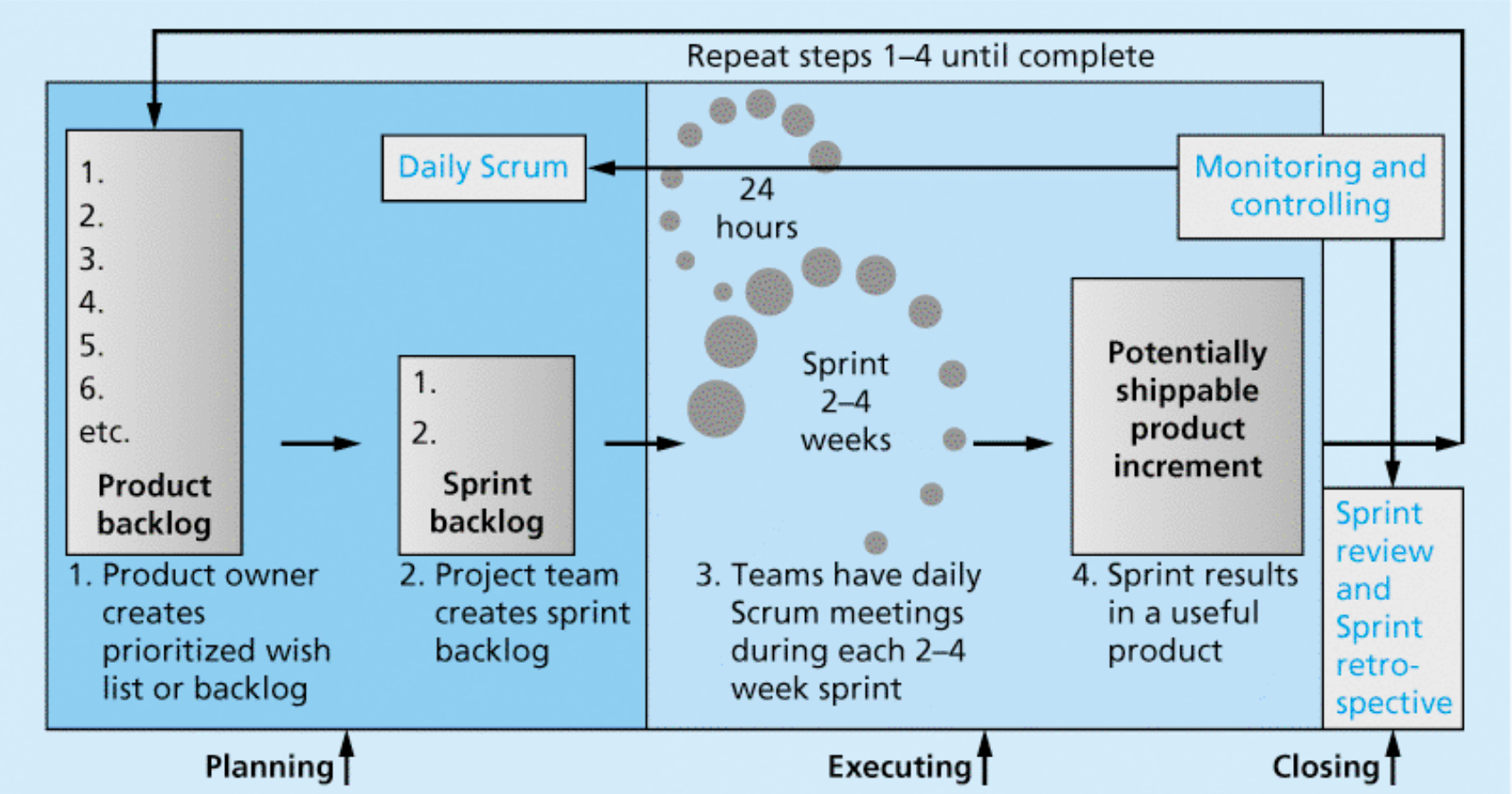
Copyright 2014

Scrum Ceremonies

- **Sprint planning session:**
  - A meeting with the team to select a set of work from the product backlog to deliver during a sprint.
- **Daily Scrum**:
  - A short meeting for the development team to share progress and challenges and plan work for the day.
- **Sprint reviews:**
  - A meeting in which the team demonstrates to the product owner what it has completed during the sprint.
- **Sprint retrospectives:**
  - A 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.

Copyright 2014

Figure 3-5. Scrum Framework and the Process Groups



Copyright 2014

Table 3-18. unique Scrum Activities by Process Group

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

Monitoring and Controlling:

- Resolve issues and blockers
- Create and update burndown chart
- Demonstrate the completed product during the sprint review meeting

Closing:

- Reflect on how to improve the product and process during the sprint reflection meeting

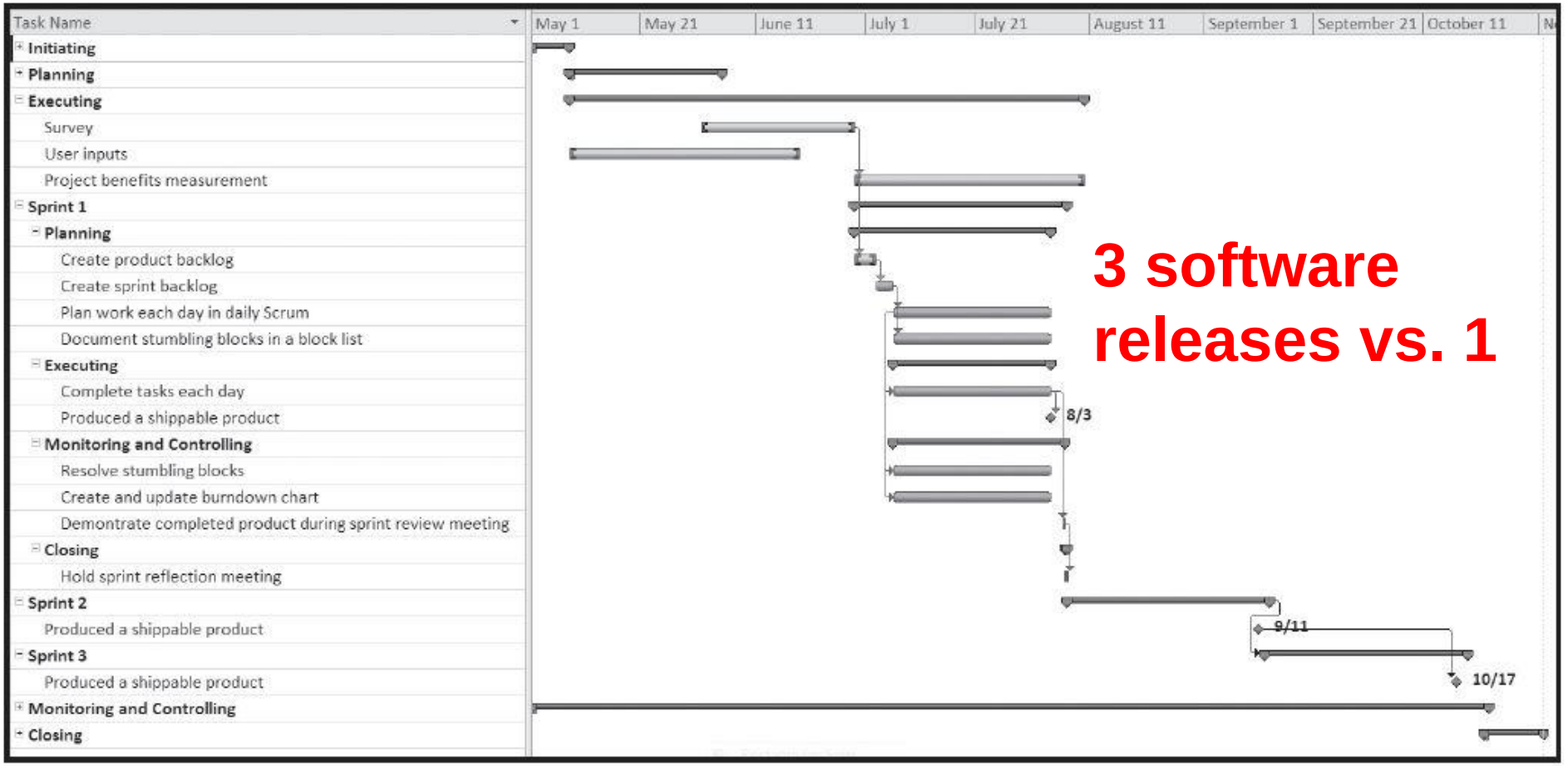
Copyright 2014

Planning

- Not different from PMBOK® Guide
  - Still **create a scope statement** and can **use a Gantt chart** for the **entire project schedule**; other planning similar (risk, etc.)
- Different:
  - **Descriptions of work** are identified in the product and sprint backlogs, **more detailed work** documented in technical stories, **estimate a velocity or capacity** for each sprint; **release roadmap** often used for schedule

Copyright 2014

Figure 3-6. Intranet Site Project Baseline Gantt Chart Using Scrum



© Cengage Learning 2014

Table 3-19. Product and Sprint Backlogs

Product Backlog

1. User story templates, samples, and point person
2. WBS templates, samples, and point person
3. Project schedule templates, samples, and point person
4. Ability to charge customers for some intranet products and services
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.

Sprint Backlog

1. User story templates, samples, and point person
2. WBS templates, samples, and point person
3. Project schedule templates, samples, and point person
4. Ability to charge customers for some intranet products and services
5. Ability to collect user suggestions

Copyright 2014

Executing

- Not different from PMBOK® Guide
  - Still **produce products**, **lead people**, etc.
- Different:
  - Produce several releases of software - users of the new software might be confused by getting several iterations of the product instead of just one
  - Communications different because the project team meets every morning, physically or virtually

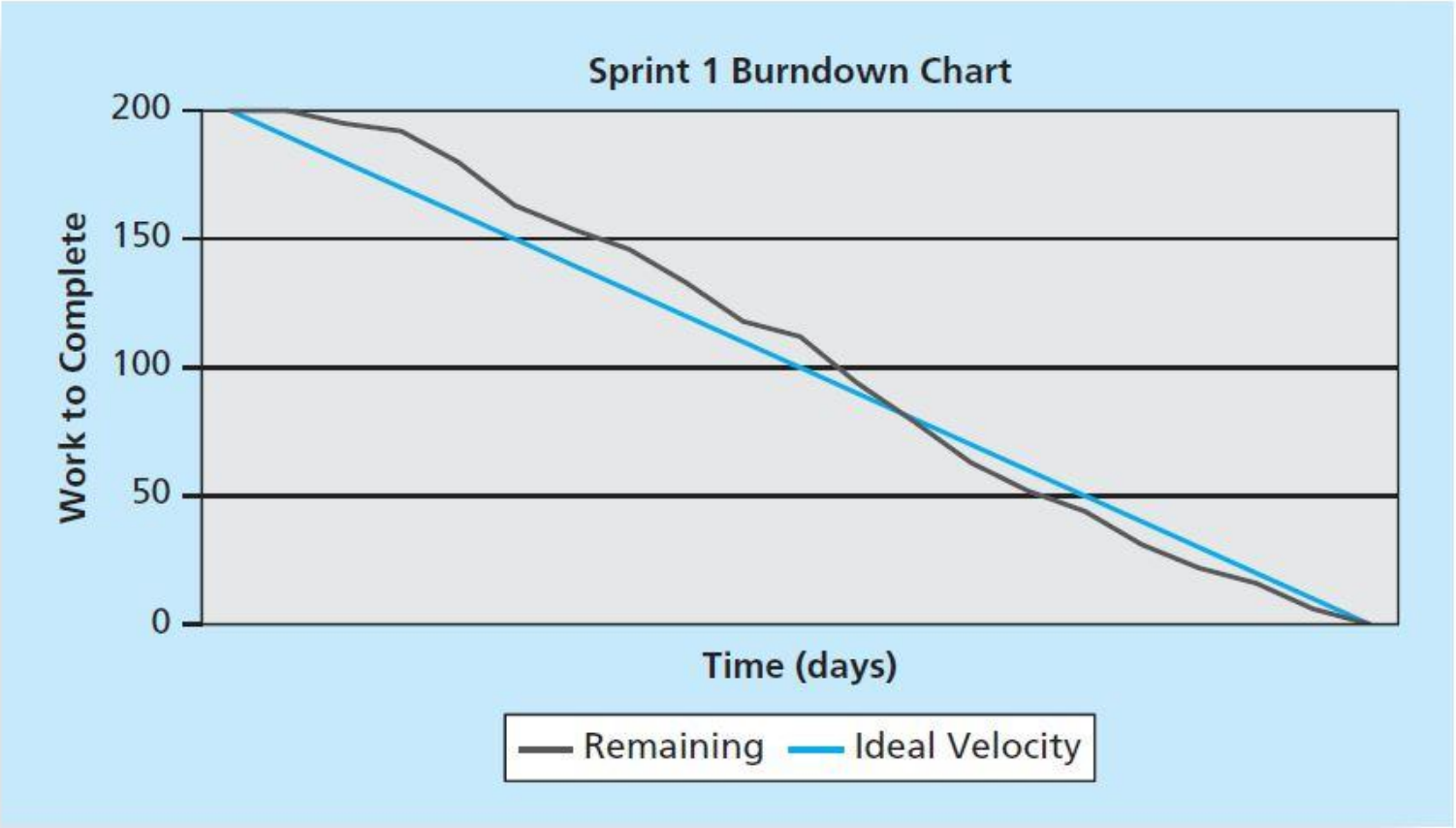
Copyright 2014

Monitoring and Controlling

- Not different from PMBOK® Guide
  - Still **check actual work vs. planned work**
- Different
  - Names of key reviews are the daily Scrum and the sprint review
  - A sprint board is used instead of a tracking Gantt chart or other tools
  - Use a burndown chart vs. earned value chart

Copyright 2014

Figure 3-7. Burndown Chart



© Cengage Learning 2014

Closing

- Not different from PMBOK® Guide
  - Focus is still on **acceptance of deliverables and reflection**
- Different:
  - The retrospective is similar to a **lessons-learned report**, but it focuses on a shorter period of time. It 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?

Copyright 2014

Templates

- Table 3-20 on pp. 130-131 lists the templates available on the companion Web site and the author's site (www.kathyschwalbe.com)

Copyright 2014

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 nine 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 differences using agile (Scrum). The biggest difference is providing three releases of useable software versus just one

Copyright 2014