CSEB344/CSEB4213 (Software Project Management)

Chapter 2:
Software Project Management Process

Learning Objectives

- ❖ Describe the five project management (PM) process groups, the typical level of activity for each, and the interactions among them
- ❖ Understand how the PM process groups relate to the PM knowledge areas
- ❖ Discuss how organizations develop information technology PM methodologies to meet their needs

Learning Objectives (continued)

Review a case study of an organization applying the project management process groups to manage an information technology project; describe outputs of each process group; and understand the contribution that effective project initiating, planning, executing, monitoring and controlling, and closing make to project success

Project Management Process Groups

The project management process groups include:

1. **Initiating processes**

   ❖ *Defining and authorizing a project or project phase.*

2. **Planning processes**

   ❖ *Devising and maintaining a workable scheme to ensure that project addresses the organization's need*s.

3. **Executing processes**

   ❖ *Coordinating people and other resources to carry out the various plans and produce the products, services, or results of the project or phase.*
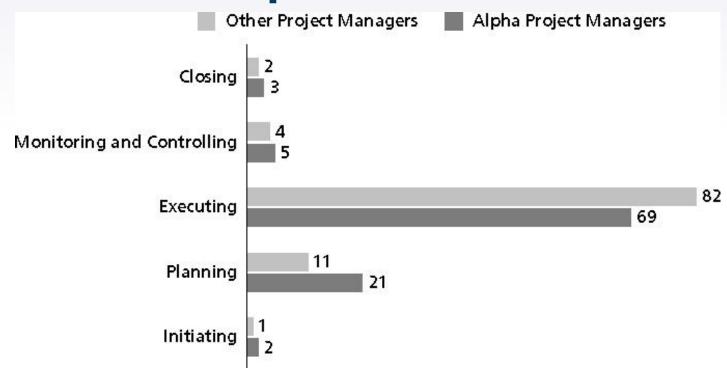
4. **Monitoring and controlling processes**

   ❖ *Regularly measuring and monitoring progress to ensure that the project team meets the project objectives.*

5. **Closing processes**

   ❖ *Formalizing acceptance of the project or project phase and ending it efficiently*

PROCESS GROUPS

Project Initiation 1
Project Planning 2
Project Executing 3
Project Monitoring & Controlling 4
Project Closing 5

© 2019 vCare Project Management

Percentage of Time Spent on Each Process Group

Project Management Process Groups and Knowledge Area Mapping*

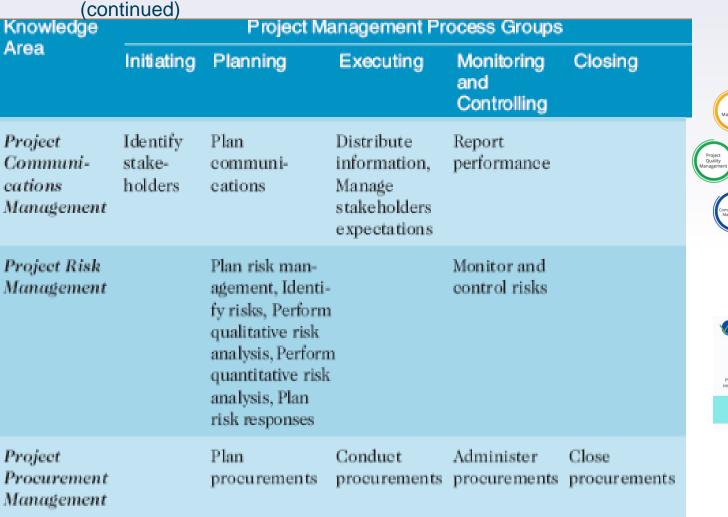| Knowledge Area	Project Management Process Groups				
	Initiating	Planning	Executing	Monitoring and Controlling	Closing
Project Integration Management	Develop project charter	Develop project management plan	Direct and manage project execution	Monitor and control project work, Perform integrated change control	Close project or phase
Project Scope Management		Collect requirements, Define scope, Create WBS		Verify scope, Control scope	
Project Time Management		Define activities, Sequence activities,		Control schedule	

Source: PMBOK® Guide, Sixth Edition, 2017

Knowledge Area	Project Management Process Groups				
	Initiating	Planning	Executing	Monitoring and Controlling	Closing
Project Time Management (continued)		Estimate activity resources, Estimate activity durations, Develop schedule			
Project Cost Management		Estimate costs, Determine budget		Control costs	
Project Quality Management		Plan quality	Perform quality assurance	Perform quality control	
Project Human Resource Management		Develop human resource plan	Acquire project team, Develop project team, Manage project team		

Knowledge Area	Project Management Process Groups				
	Initiating	Planning	Executing	Monitoring and Controlling	Closing
Project Communications Management	Identify stake-holders	Plan communi-cations	Distribute information, Manage stakeholders expectations	Report performance	
Project Risk Management		Plan risk man-agement, Identi-fy risks, Perform qualitative risk analysis, Perform quantitative risk analysis, Plan risk responses		Monitor and control risks	
Project Procurement Management		Plan procurements	Conduct procurements	Administer procurements	Close procurements

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 (Rational Unified Process), and Six Sigma provide different project management methodologies

Case Study: JWD Consulting's Project Management Intranet Site

This case study provides an example of what's involved in initiating, planning, executing, controlling, and closing an IT project

OPENING CASE

Erica Bell was in charge of the Project Management Office (PMO) for her consulting firm. The firm, JWD—for Job Well Done—Consulting, had grown to include more than 200 full-time consultants and even more part-time consultants. JWD Consulting provides a variety of consulting services to assist organizations in selecting and managing information technology projects. The firm focuses on finding and managing high-payoff projects and developing strong metrics to measure project performance and benefits to the organization after the project is implemented. The firm's emphasis on metrics and working collaboratively with its customers gives it an edge over many competitors.

Joe Fleming, the CEO, wanted his company to continue to grow and become a world-class consulting organization. Since the core of the business was helping other organizations with project management, he felt it was crucial for JWD Consulting to have an exemplary process for managing its own projects. He asked Erica to work with her team and other consultants in the firm to develop several intranet site applications that would allow them to share their project management knowledge. He also thought it would make sense to make some of the information available to the firm's clients. For example, the firm could provide project management templates, tools, articles, links to other sites, and an "Ask the Expert" feature to help build relationships with current and future clients. Since JWD Consulting emphasizes the importance of high-payoff projects, Joe also wanted to see a business case for this project before proceeding.

Information Technology Project Management, Revised 6e
Kathy Schwalbe

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 Appx03 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

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   Project initiation knowledge areas, processes, and outputs

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

Stakeholder Register

A document that includes details related to the identified project stakeholders.

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

Stakeholder Register

A stakeholder management strategy is an approach to help increase the support of stakeholders throughout the project.

It includes basic information such as stakeholder names, level of interest in the project, level of influence on the project, and potential management strategies for gaining support or reducing obstacles from that particular stakeholder.

Since much of this information can be sensitive, it should be considered confidential.

Stakeholder Management Strategy

An approach to help increase the stakeholder's support throughout the project.

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.

Project Charters and Kick-off Meetings

See [Appx01](#) for an example of a charter kick-off meeting.

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

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:

Figure 3-2. Kick-off Meeting Agenda

Project Planning

The main purpose of project planning is to *guide execution*

Every knowledge area includes planning information (see Appx02)

Project Planning

Key outputs included in the JWD project include:

- A team contract (Appx04)
  - *to help promote teamwork and clarify team communications*
- A project scope statement (Appx05)
  - *lists the product characteristics and requirements, summarizes the deliverables, and describes project success criteria in detail.*
- A work breakdown structure (WBS) (Appx06)
  - *provides the basis for:*
    - *deciding how to do the work.*
    - *creating the project schedule*
    - *performing earned value management for measuring & forecasting project performance.*

Project Planning

Key outputs included in the JWD project include:

A project schedule, in the form of a Gantt chart with *all the tasks, duration estimates, dependencies, cost information and resources entered* (refer to below Figure 3.4))
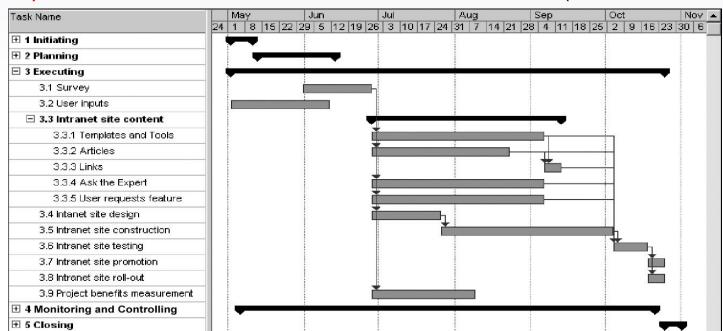

Figure 3.4
(pg 106, Kelly)

Project Planning

Key outputs included in the JWD project include:
- A list of prioritized risks (part of a risk register) (Table 3-10)
  - ❖ *information on root causes of the risks*
  - ❖ *warning signs that potential risks might occur*
  - ❖ *response strategies for the 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

Table 3-10
(pg 107, Kelly)

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.

Project Executing (*Continued*)

Table 3-11 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.

*Table 3-11
(pg 108, Kelly)*

Knowledge Area	Executing Process	Outputs
Project Integration Management	Direct and manage project execution	Deliverables Work performance information Change requests Project management plan updates Project document updates
Project Quality Management	Perform quality assurance	Organizational process asset updates Change requests Project management plan updates Project document updates
Project Human Resource Management	Acquire project team Develop project team Manage project team	Project staff assignments Resource calendars Project management plan updates Team performance assessment Enterprise environmental factor updates Enterprise environmental factors updates Organizational process assets updates Project management plan updates Change requests
Project Communications Management	Distribute information Manage stake-holders expectations	Organizational process assets updates Organizational process assets updates Change requests Project management plan updates Project document updates
Project Procurement Management	Conduct procurements	Selected sellers Procurement contract award Resource calendars Change requests Project management plan updates Project documents updates

Project Executing (*Continued*)

A milestone report (example in Table 3-12) can help focus on completing major milestones.

Table 3-12 (pg 109, Kelly)

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!
Intranet site design completed	July 26		Kevin	

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

Project Monitoring and Controlling – *con't*

Table 3-13 (pg 111, Kelly)

Knowledge Area	Monitoring and Controlling Process	Outputs
Project Integration Management	Monitor and control project work Perform integrated change control	Change requests Project management plan updates Project document updates Change request status updates Project management plan updates Project document updates
Project Scope Management	Verify scope	Accepted deliverables Change requests Project document updates
	Control scope	Work performance measurements Organizational process assets updates Change requests Project management plan updates Project document updates
Project Time Management	Control schedule	Work performance measurements Organizational process assets updates Change requests Project management plan updates Project document updates
Project Cost Management	Control cost	Work performance measurements Budget forecasts Organizational process assets updates Change requests Project management plan updates Project document updates

Project Quality Management	Perform quality control	Quality control measurements Validated deliverables Organizational process assets updates Change requests Project management plan updates Project document updates
Project Communications Management	Report performance	Performance reports Organizational process assets updates Change requests
Project Risk Management	Monitor and control risks	Risk register updates Organizational process assets updates Change requests Project management plan updates Project document updates
Project Procurement Management	Administer procurements	Procurement documentation Organizational process assets updates Change requests Project management plan updates

WEEKLY PROGRESS REPORT:

Reflect on the project's progress and identify areas in need of improvement.

Table 3-14 shows a sample of weekly progress report

Table 3-14
(pg 113, Kelly)

Project Name: Project Management Intranet Project
Team Member Name: Cindy Dawson, cindy_dawson@jwdconsulting.com
Date: August 5

Work completed this week:
–Worked with Kevin to start the intranet site construction
–Organized all the content files
–Started developing a file naming scheme for content files
–Continued work on "Ask the Expert" and User Requests features
–Met with preferred supplier
–Verified that their software would meet our needs
–Discovered the need for some customization

Work to complete next week:
–Continue work on intranet site construction
–Prepare draft contract for preferred supplier
–Develop new cost estimate for outsourced work

What's going well and why:
The intranet site construction started well. The design was very clear and easy to follow. Kevin really knows what he's doing.

What's not going well and why:
It is difficult to decide how to organize the templates and examples. Need more input from senior consultants and clients.

Suggestions/Issues:
–Hold a special meeting to decide how to organize the templates and examples on the intranet site.
–Get some sample contracts and help in negotiating with the preferred supplier.

Project changes:
I think we can stay on schedule, but it looks like we'll need about $10,000 more for outsourcing. That's doubling our budget in that area.

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 project

Team members must deliver the final product, service, or result of the project, and update organizational process assets, such as project files and a lessons-learned report

Knowledge Area	Closing Process	Outputs
Project Integration Management	Close project or phase	Final product, service, or result transition Organizational process assets updates
Project Procurement Management	Close procurements	Closed procurements Organizational process assets updates

Project Closing (con't)

Prepared a final report, final presentation, contract files, and lessons-learned report.

Lesson-learned report (abbreviated)

Project Name:	JWD Consulting Project Management Intranet Site Project
Project Sponsor:	Joe Fleming
Project Manager:	Erica Bell
Project Dates:	May 2 – November 4
Final Budget:	$150,000

1. Did the project meet scope, time, and cost goals?

   We did meet scope and time goals, but we had to request an additional $10,000, which the sponsor did approve.

2. What were the success criteria listed in the project scope statement?

   Below is what we put in our project scope statement under project success criteria:

   "Our goal is to complete this project within six months for no more than $140,000. The project sponsor, Joe Fleming, has emphasized the importance of the project paying for itself within one year after the intranet site is complete. To meet this financial goal, the intranet site must have strong user input. We must also develop a method for capturing the benefits while the intranet site is being developed and tested, and after it is rolled out. If the project takes a little longer to complete or costs a little more than planned, the firm will still view it as a success if it has a good payback and helps promote the firm's image as an excellent consulting organization."

3. Reflect on whether or not you met the project success criteria.

   As stated above, the sponsor was not too concerned about going over budget as long as the system would have a good payback period and help promote our firm's image. We have already documented some financial and image benefits of the new intranet site. For example, we have decided that we can staff the PMO with one less person, resulting in substantial cost savings. We have also received excellent feedback from several of our clients about the new intranet site.

4. In terms of managing the project, what were the main lessons your team learned from this project?

   The main lessons we learned include the following:

   - *Having a good project sponsor was instrumental to project success. We ran into a couple of difficult situations, and Joe was very creative in helping us solve problems.*
   - *Teamwork was essential. It really helped to take time for everyone to get to know each other at the kick-off meeting. It was also helpful to develop and follow a team contract.*
   - *Good planning paid off in execution. We spent a fair amount of time developing a good project charter, scope statement, WBS, schedules, and so on. Everyone worked together to develop these planning documents, and there was strong buy-in.*
   - *Project management software was very helpful throughout the project.*

5. Describe one example of what went right on this project.

6. Describe one example of what went wrong on this project.

7. What will you do differently on the next project based on your experience working on this project?

Table 3-16 pg 115, Kelly)

Project Closing (con't)

Most projects also include a final report and presentation to the sponsor/senior management

Final project report table of content →

Table 3-17
(pg 117, Kelly)

1. Project Objectives
2. Summary of Project Results
3. Original and Actual Start and End Dates
4. Original and Actual Budget
5. Project Assessment (Why did you do this project? What did you produce? Was the project a success? What went right and wrong on the project?)
6. Transition Plan
7. Annual Project Benefits Measurement Approach

Attachments:

A. Project Management Documentation
   - Business case
   - Project charter
   - Team contract
   - Scope statement
   - WBS and WBS dictionary
   - Baseline and actual Gantt chart
   - List of prioritized risks
   - Milestone reports
   - Progress reports
   - Contract files
   - Lessons-learned reports
   - Final presentation
   - Client acceptance form

B. Product-Related Documentation
   - Survey and results
   - Summary of user inputs
   - Intranet site content
   - Intranet site design documents
   - Test plans and reports
   - Intranet site promotion information
   - Intranet site roll-out information
   - Project benefits measurement information

Project Closing (con't)

Get user to sign a client acceptance form.

Client Acceptance/Project Completion Form

Project Name: _____
Project Manager: _____

I (We), the undersigned, acknowledge and accept delivery of the work completed for this project on behalf of our organization. My (Our) signature(s) attest to my (our) agreement that this project has been completed. No further work should be done on this project.

Name	Title	Signature	Date

1. Was this project completed to your satisfaction?   Yes   No

2. Please provide the main reasons for your satisfaction or dissatisfaction with this project.

3. Please provide suggestions on how our organization could improve its project delivery capability in the future.

Thank you for your inputs.

CASE WRAP-UP

Erica Bell and her team finished the Project Management Intranet Site Project on November 4, as planned in their project charter. They did go over budget, however, but Joe had approved Erica's request for additional funds, primarily for purchasing external software and customization. Like any project, they had a few challenges, but they worked together as a team and used good project management to meet their sponsor's and users' needs. They received positive initial feedback from internal consultants and some of their clients on the new intranet site. People were asking for templates, examples, and expert advice even before the system was ready. About a year after the project was completed, Erica worked with a member of the Finance department to review the benefits of the new system. The Project Management Office did lose one of its staff members, but it did not request a replacement since the new system helped reduce the PMO's workload. This saved the firm about $70,000 a year for the salary and benefits of that staff position. They also had data to show that the firm saved more than $180,000 on contracts with clients due to the new system, while they had projected just $160,000. The firm was breaking even with the "Ask the Expert" feature the first year, and Erica estimated that the system provided $30,000 in additional profits the first year by generating new business, not the $40,000 they had projected. However, savings from the PMO staff position salary and the extra savings on contracts more than made up for the $10,000 difference. Joe was proud of the project team and the system they produced to help make JWD Consulting a world-class organization.

Appendices
&
Additional documents

Appx01: Project Charter: Table 3-6 (pg94-95 Kelly)

Project Title: Project Management Intranet Site Project

Project Start Date: May 2   **Projected Finish Date:** November 4

Budget Information: The firm has allocated $140,000 for this project. The majority of costs for this project will be internal labor. An initial estimate provides a total of 80 hours per week.

Project Manager: Erica Bell, (310) 555-5896, erica_bell@jwdconsulting.com

Project Objectives: Develop a new capability accessible on JWD Consulting's intranet site to help internal consultants and external customers manage projects more effectively. The intranet site will include several templates and tools that users can download, examples of completed templates and related project management documents used on real projects, important articles related to recent project management topics, an article retrieval service, links to other sites with useful information, and an "Ask the Expert" feature, where users can post questions they have about their projects and receive advice from experts in the field. Some parts of the intranet site will be accessible free to the public, other parts will only be accessible to current customers and/or internal consultants, and other parts of the intranet site will be accessible for a fee.

Main Project Success Criteria: The project should pay for itself within one year of completion.

Approach:

- Develop a survey to determine critical features of the new intranet site and solicit input from consultants and customers.
- Review internal and external templates and examples of project management documents.
- Research software to provide security, manage user inputs, and facilitate the article retrieval and "Ask the Expert" features.
- Develop the intranet site using an iterative approach, soliciting a great deal of user feedback.
- Determine a way to measure the value of the intranet site in terms of reduced costs and new revenues, both during the project and one year after project completion.

ROLES AND RESPONSIBILITIES

Name	Role	Position	Contact Information
Joe Fleming	Sponsor	JWD Consulting, CEO	joe_fleming@jwdconsulting.com
Erica Bell	Project Manager	JWD Consulting, manager	erica_bell@jwdconsulting.com
Michael Chen	Team Member	JWD Consulting, senior consultant	michael_chen@jwdconsulting.com
Jessie Faue	Team Member	JWD Consulting, consultant	jessie_faue@jwdconsulting.com
Kevin Dodge	Team Member	JWD Consulting, IT department	kevin_dodge@jwdconsulting.com
Cindy Dawson	Team Member	JWD Consulting, IT department	cindy_dawson@jwdconsulting.com
Kim Phuong	Advisor	Client representative	kim_phuong@client1.com
Page Miller	Advisor	Client representative	page_miller@client2.com

Sign-Off: (Signatures of all the above stakeholders)

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

"I will support this project as time allows, but I believe my client projects take priority. I will have one of my assistants support the project as needed." —Michael Chen

"We need to be extremely careful testing this new system, especially the security in giving access to parts of the intranet site to the public and clients." —Kevin Dodge and Cindy Dawson

Appx02: Planning Processes and output : Table 3-7 (pg 97-98 Kelly)

Knowledge Area	Planning Process	Outputs
Project Integration Management	Develop project management plan	Project management plan
Project Scope Management	Collect requirements	Requirements documents Requirements management plan Requirements traceability matrix
	Define scope	Project scope statement Project document updates
	Create WBS	WBS WBS dictionary Scope baseline Project document updates
Project Time Management	Define activities	Activity list Activity attributes Milestone list
	Sequence activities	Project schedule network diagrams Project document updates
	Estimate activity resources	Activity resource requirements Resource breakdown structure Project document updates
	Estimate activity durations	Activity duration estimates Project document updates
	Develop schedule	Project schedule Schedule baseline

Knowledge Area	Planning Process	Outputs
		Schedule data Project document updates
Project Cost Management	Estimate costs	Activity cost estimates Basis of estimates Project document updates
	Determine budget	Cost performance baseline Project funding requirements Project document updates
Project Quality Management	Plan quality	Quality management plan Quality metrics Quality checklists Process improvement plan Project document updates
Project Human Resource Management	Develop human resource plan	Human resource plan
Project Communications Management	Plan communications	Communications management plan Project document updates
Project Risk Management	Plan risk management	Risk management plan
	Identify risks	Risk register
	Perform qualitative risk analysis	Risk register updates
	Perform quantitative risk analysis	Risk register updates
	Plan risk responses	Risk register updates Project management plan updates Risk related contract decisions Project document updates
Project Procurement Management	Plan procurements	Procurement management plan Procurement statement of work Make-or-buy decisions Procurement documents Source selection criteria Change requests

1.0 Introduction/Background

JWD Consulting's core business goal is to provide world-class project management consulting services to various organizations. The CEO, Joe Fleming, believes the firm can streamline operations and increase business by providing information related to project management on its intranet site, making some information and services accessible to current and potential clients.

2.0 Business Objective

JWD Consulting's strategic goals include continuing growth and profitability. The Project Management Intranet Site Project will support these goals by increasing visibility of the firm's expertise to current and potential clients by allowing client and public access to some sections of the intranet. It will also improve profitability by reducing internal costs by providing standard tools, techniques, templates, and project management knowledge to all internal consultants. Since JWD Consulting focuses on identifying profitable projects and measuring their value after completion, this project must meet those criteria.

3.0 Current Situation and Problem/Opportunity Statement

JWD Consulting has a corporate Web site as well as an intranet. The firm currently uses the Web site for marketing information. The primary use of the intranet is for human resource information, such as where consultants enter their hours on various projects, change and view their benefits information, access an online directory and Web-based e-mail system, and so on. The firm also uses an enterprise-wide project management system to track all project information, focusing on the status of deliverables and meeting scope, time, and cost goals. There is an opportunity to provide a new section on the intranet dedicated to sharing consultants' project management knowledge across the organization. JWD Consulting only hires experienced consultants and gives them freedom to manage projects as they see fit. However, as the business grows and projects become more complex, even experienced project managers are looking for suggestions on how to work more effectively.

4.0 Critical Assumption and Constraints

The proposed intranet site must be a valuable asset for JWD Consulting. Current consultants and clients must actively support the project, and it must pay for itself within one year by reducing internal operating costs and generating new business. The Project Management Office manager must lead the effort, and the project team must include participants from several parts of the company, as well as current client organizations. The new system must run on existing hardware and software, and it should require minimal technical support. It must be easily accessible by consultants and clients and be secure from unauthorized users.

5.0 Analysis of Options and Recommendation

There are three options for addressing this opportunity:

1. Do nothing. The business is doing well, and we can continue to operate without this new project.
2. Purchase access to specialized software to support this new capability with little in-house development.

3. Design and implement the new intranet capabilities in-house using mostly existing hardware and software.

Based on discussions with stakeholders, we believe that option 3 is the best option.

6.0 Preliminary Project Requirements

The main features of the project management intranet site include the following:

1. Access to several project management templates and tools. Users must be able to search for templates and tools, read instructions on using these templates and tools, and see examples of how to apply them to real projects. Users must also be able to submit new templates and tools, which should be first screened or edited by the Project Management Office.
2. Access to relevant project management articles. Many consultants and clients feel as though there is an information overload when they research project management information. They often waste time they should be spending with their clients. The new intranet should include access to several important articles on various project management topics, which are searchable by topic, and allow users to request the Project Management Office staff to find additional articles to meet their needs.
3. Links to other, up-to-date Web sites, with brief descriptions of the main features of the external site.
4. An "Ask the Expert" feature to help build relationships with current and future clients and share knowledge with internal consultants.
5. Appropriate security to make the entire intranet site accessible to internal consultants and certain sections accessible to others.
6. The ability to charge money for access to some information. Some of the information and features of the intranet site should prompt external users to pay for the information or service. Payment options should include a credit card option or similar online payment transactions. After the system verifies payment, the user should be able to access or download the desired information.
7. Other features suggested by users, if they add value to the business.

7.0 Budget Estimate and Financial Analysis

A preliminary estimate of costs for the entire project is $140,000. This estimate is based on the project manager working about 20 hours per week for six months and other internal staff working a total of about 60 hours per week for six months. The customer representatives would not be paid for their assistance. A staff project manager would earn $50 per hour. The hourly rate for the other project team members would be $70 per hour, since some hours normally billed to clients may be needed for this project. The initial cost estimate also includes $10,000 for purchasing software and services from suppliers. After the project is completed, maintenance costs of $40,000 are included for each year, primarily to update the information and coordinate the "Ask the Expert" feature and online articles.

Projected benefits are based on a reduction in hours consultants spend researching project management information, appropriate tools and templates, and so on. Projected benefits are also based on a small increase in profits due to new business generated by this project. If each of more than 400 consultants saved just 40 hours each year (less than one hour per week) and could bill that time to other projects that generate a conservative estimate of $10 per hour in *profits*, then the projected benefit would be $160,000 per year. If the new intranet increased business by just 1 percent, using past profit information,

increased profits due to new business would be at least $40,000 each year. Total projected benefits, therefore, are about $200,000 per year.

Exhibit A summarizes the projected costs and benefits and shows the estimated net present value (NPV), return on investment (ROI), and year in which payback occurs. It also lists assumptions made in performing this preliminary financial analysis. All of the financial estimates are very encouraging. The estimated payback is within one year, as requested by the sponsor. The NPV is $272,800, and the discounted ROI based on a three-year system life is excellent at 112 percent.

8.0 Schedule Estimate

The sponsor would like to see the project completed within six months, but there is some flexibility in the schedule. We also assume that the new system will have a useful life of at least three years.

9.0 Potential Risks

There are several risks involved with this project. The foremost risk is a lack of interest in the new system by our internal consultants and external clients. User inputs are crucial for populating information into this system and realizing the potential benefits from using the system. There are some technical risks in choosing the type of software used to search the system, check security, process payments, and so on, but the features of this system all use proven technologies. The main business risk is investing the time and money into this project and not realizing the projected benefits.

10.0 Exhibits

Exhibit A: Financial Analysis for Project Management Intranet Site Project

Discount rate	8%				
Assume the project is done in about 6 months		Year			
	0	1	2	3	Total
Costs	140,000	40,000	40,000	40,000	
Discount factor	1	0.93	0.86	0.79	
Discounted costs	140,000	37,037	34,294	31,753	243,084
Benefits	0	200,000	200,000	200,000	
Discount factor	1	0.93	0.86	0.79	
Discounted benefits	0	186,185	171,468	158,766	515,419
Discounted benefits - costs	(140,000)	148,148	137,174	127,013	
Cumulative benefits - costs	(140,000)	8,148	145,322	272,336	← NPV
		Payback in Year 1			
Discounted life cycle ROI----------->	112%				
Assumptions					
Costs	# hours				
PM (500 hours, $50/hour)	25,000				
Staff (1500 hours, $70/hour)	105,000				
Outsourced software and services	10,000				
Total project costs (all applied in year 0)	140,000				
Benefits					
# consultants	400				
Hours saved	40				
$/hour profit	10				
Benefits from saving time	160,000				
Benefits from 1% increase in profits	40,000				
Total annual projected benefits	200,000				

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

- Work proactively, anticipating potential problems and working to prevent them.
- 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.
- Encourage diversity in team work.
- Provide the opportunity for equal participation.
- Be open to new approaches and consider new ideas.
- Have one discussion at a time.
- 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 task.

Communication: We will:

- Decide as a team on the best way to communicate. Since a few team members cannot meet often for face-to-face meetings, we will use e-mail, a project Web site, and other technology to assist in communicating.
- Have the project manager facilitate all meetings and arrange for phone and video conferences, as needed.
- Work together to create the project schedule and enter actuals into our enterprise-wide project management system by 4 p.m. every Friday.
- Present ideas clearly and concisely.
- Keep discussions on track.

Problem Solving: We will:

- Encourage everyone to participate in solving problems.
- Only use constructive criticism and focus on solving problems, not blaming people.
- Strive to build on each other's ideas.

Meeting Guidelines: We will:

- Plan to have a face-to-face meeting the first and third Tuesday morning of every month.
- Meet more frequently the first month.
- Arrange for telephone or videoconferencing for participants as needed.
- Hold other meetings as needed.
- Record meeting minutes and send them out via e-mail within 24 hours of all project meetings, focusing on decisions made and action items from each meeting.

Appx04: Team Contract: Table 3-8 (pg 100 Kelly)

Appx05: Scope Statement: Table 3-9 (pg 101-103 Kelly)

Project Title: Project Management Intranet Site Project

Date: May 18 **Prepared by:** Erica Bell, Project Manager, erica_bell@jwdconsulting.com

Project Summary and Justification: Joe Fleming, CEO of JWD Consulting, requested this project to assist the company in meeting its strategic goals. The new intranet site will increase visibility of the company's expertise to current and potential clients. It will also help reduce internal costs and improve profitability by providing standard tools, techniques, templates, and project management knowledge to all internal consultants. The budget for the project is $140,000. An additional $40,000 per year will be required for operational expenses after the project is completed. Estimated benefits are $200,000 each year. It is important to focus on the system paying for itself within one year of its completion.

Product Characteristics and Requirements:

1. Templates and tools: The intranet site will allow authorized users to download files they can use to create project management documents and to help them use project management tools. These files will be in Microsoft Word, Excel, Access, Project, or in HTML or PDF format, as appropriate.

2. User submissions: Users will be encouraged to e-mail files with sample templates and tools to the Webmaster. The Webmaster will forward the files to the appropriate person for review and then post the files to the intranet site, if desired.

3. Articles: Articles posted on the intranet site will have appropriate copyright permission. The preferred format for articles will be PDF. The project manager may approve other formats.

4. Requests for articles: The intranet site will include a section for users to request someone from the Project Management Office (PMO) at JWD Consulting to research appropriate articles for them. The PMO manager must first approve the request and negotiate payments, if appropriate.

5. Links: All links to external sites will be tested on a weekly basis. Broken links will be fixed or removed within five working days of discovery.

6. The "Ask the Expert" feature must be user-friendly and capable of soliciting questions and immediately acknowledging that the question has been received in the proper format. The feature must also be capable of forwarding the question to the appropriate expert (as maintained in the system's expert database) and capable of providing the status of questions that are answered. The system must also allow for payment for advice, if appropriate.

7. Security: The intranet site must provide several levels of security. All internal employees will have access to the entire intranet site when they enter their security information to access the main, corporate intranet. Part of the intranet will be available to the public from the corporate Web site. Other portions of the intranet will be available to current clients based on verification with the current client database. Other portions of the intranet will be available after negotiating a fee or entering a fixed payment using pre-authorized payment methods.

8. Search feature: The intranet site must include a search feature for users to search by topic, key words, etc.

9. The intranet site must be accessible using a standard Internet browser. Users must have appropriate application software to open several of the templates and tools.

10. The intranet site must be available 24 hours a day, 7 days a week, with one hour per week for system maintenance and other periodic maintenance, as appropriate.

Summary of Project Deliverables

Project management-related deliverables: Business case, charter, team contract, scope statement, WBS, schedule, cost baseline, progress reports, final project presentation, final project report, lessons-learned report, and any other documents required to manage the project.

Product-related deliverables:

1. Survey: Survey current consultants and clients to help determine desired content and features for the intranet site.

2. Files for templates: The intranet site will include templates for at least 20 documents when the system is first implemented, and it will have the capacity to store up to 100 documents. The project team will decide on the initial 20 templates based on survey results.

3. Examples of completed templates: The intranet site will include examples of projects that have used the templates available on the intranet site. For example, if there is a

template for a business case, there will also be an example of a real business case that uses the template.

4. Instructions for using project management tools: The intranet site will include information on how to use several project management tools, including the following as a minimum: work breakdown structures, Gantt charts, network diagrams, cost estimates, and earned value management. Where appropriate, sample files will be provided in the application software appropriate for the tool. For example, Microsoft Project files will be available to show sample work breakdown structures, Gantt charts, network diagrams, cost estimates, and applications of earned value management. Excel files will be available for sample cost estimates and earned value management charts.

5. Example applications of tools: The intranet site will include examples of real projects that have applied the tools listed in number 4 above.

6. Articles: The intranet site will include at least 10 useful articles about relevant topics in project management. The intranet site will have the capacity to store at least 1,000 articles in PDF format with an average length of 10 pages each.

7. Links: The intranet site will include links with brief descriptions for at least 20 useful sites. The links will be categorized into meaningful groups.

8. Expert database: In order to deliver an "Ask the Expert" feature, the system must include and access a database of approved experts and their contact information. Users will be able to search for experts by pre-defined topics.

9. User Requests feature: The intranet site will include an application to solicit and process requests from users.

10. Intranet site design: An initial design of the new intranet site will include a site map, suggested formats, appropriate graphics, etc. The final design will incorporate comments from users on the initial design.

11. Intranet site content: The intranet site will include content for the templates and tools section, articles section, article retrieval section, links section, "Ask the Expert" section, User Requests feature, security, and payment features.

12. Test plan: The test plan will document how the intranet site will be tested, who will do the testing, and how bugs will be reported.

13. Promotion: A plan for promoting the intranet site will describe various approaches for soliciting inputs during design. The promotion plan will also announce the availability of the new intranet site.

14. Project benefit measurement plan: A project benefit plan will measure the financial value of the intranet site.

Project Success Criteria: Our goal is to complete this project within six months for no more than $140,000. The project sponsor, Joe Fleming, has emphasized the importance of the project paying for itself within one year after the intranet site is complete. To meet this financial goal, the intranet site must have strong user inputs. We must also develop a method for capturing the benefits while the intranet site is being developed and tested, and after it is rolled out. If the project takes a little longer to complete or costs a little more than planned, the firm will still view it as a success if it has a good payback and helps promote the firm's image as an excellent consulting organization.

Appx06: Work Breakdown Structure (WBS) – JWD Consulting: Table 3-9 (pg 105 Kelly)

1.0 Initiating
      1.1 Identify key stakeholders
      1.2 Prepare project charter
      1.3 Hold project kick-off meeting
2.0 Planning
      2.1 Hold team planning meeting
      2.2 Prepare team contract
      2.3 Prepare scope statement
      2.4 Prepare WBS
      2.5 Prepare schedule and cost baseline
            2.5.1 Determine task resources
            2.5.2 Determine task durations
            2.5.3 Determine task dependencies
            2.5.4 Create draft Gantt chart
            2.5.5 Review and finalize Gantt chart
      2.6 Identify, discuss, and prioritize risks
3.0 Executing
      3.1 Survey
      3.2 User inputs
      3.3 Intranet site content
             3.3.1 Templates and tools
            3.3.2 Articles
            3.3.3 Links
            3.3.4 Ask the Expert
            3.3.5 User requests feature
      3.4 Intranet site design
      3.5 Intranet site construction
      3.6 Intranet site testing
      3.7 Intranet site promotion
      3.8 Intranet site roll-out
      3.9 Project benefits measurement
4.0 Monitoring and Controlling
      4.1 Progress reports
5.0 Closing
      5.1 Prepare final project report
      5.2 Prepare final project presentation
      5.3 Lessons learned