Lesson 3: Web Project Management Fundamentals

Objectives

By the end of this lesson, you will be able to:

✍ 1.1.11: Determine site project implementation factors (includes stakeholder input, time frame, scope, desired functionality, required technologies).

✍ 1.1.12: Create a Web project plan, including development timetable, site rollout plan.

✍ 1.2.2: Document customer expectations and feedback.

✍ 1.2.3: Communicate plans and progress regularly to ensure that completed project meets stakeholder/customer expectations.

✍ 1.2.4: Identify and manage changes in project scope (includes scope creep).

✍ 1.2.5: Document changes in development plan.

✍ 1.2.6: Create a project tracking report.

✍ 1.2.7: Conduct a project evaluation, including acceptance documentation, summary of technologies used, project style guidelines.

Pre-Assessment Questions

1. Which document defines the ways that project success will be measured?

    a. Project plan
    b. Needs analysis
    c. Statement of Work
    d. Project schedule

2. How does the site rollout plan differ from the Web project development plan?

    _____

    _____

    _____

    _____

3. Why should you create a project tracking report?

    _____

    _____

    _____

Web Project Management Phases

As you saw in the previous lesson, a process (i.e., methodology) can increase the success rate of any project, including Web development projects. In this lesson, you will learn about project management fundamentals and the ways in which they relate to the process of developing a Web site.

The phases through which a project progresses on its way to completion are collectively called the project life cycle. The Project Management Institute (PMI), a non-profit membership organization that sets ethical and professional project management standards, has defined a project management life cycle with the following five phases:

- Initiating phase
- Planning phase
- Executing phase
- Controlling phase
- Closing phase

Each phase is marked by the completion of one or more deliverables. The conclusion of each project phase usually includes a review of performance to date and a decision about whether to proceed to the next phase.

Project management phases (and the Web development phases that you will see later in this lesson) often overlap. Typically, the executing and controlling phases of a project occur simultaneously. It is also important to note that some phases may occur more than once throughout a project's life cycle.

Initiating a Web development project

The initiating phase sets the foundation for a Web development project. This phase starts when a customer expresses a need for a Web site. A customer can be another company, an individual, another department within the same company, or even the Web team itself (in the case of internal Web site projects such as intranets or repositories).

OBJECTIVE
1.2.2: Customer expectations and feedback

The initiating phase of a Web project consists of the following tasks:

- Conducting a needs analysis
- Determining project objectives, assumptions and constraints
- Developing a Statement Of Work (SOW)

scope
The goals and tasks of a project, and the work required to complete them.

Once the need for a Web site is determined, the next job is to document the **scope** of the project. In other words, you need to determine the goals of the Web site and the tasks that need to be performed to achieve those goals.

Needs analysis

A **needs analysis** identifies the problems, challenges or needs that the project must resolve or address.

In order to conduct a thorough needs analysis for a Web site development project, you must understand the customer's desires as well as the customer's business.

As a Web project manager, when you meet with a customer for the first time about the customer's need for a Web site, your job is to elicit needs information, such as what the customer wants or the problem the customer is experiencing, the customer's time frame, and the budget. You must get as much information as possible from the customer, and from all systems and individuals that will be affected by the project. Many Web teams develop a standard customer survey or questionnaire for this purpose. A questionnaire will help you ensure that all important information is gathered prior to moving forward with the project.

NOTE:
A needs analysis is very important in determining the customer's needs to ensure that the project plan meets those needs.

A company's Web site can have a major impact on the way that company does business and the way it is perceived by the world. A Web designer or development team has a responsibility to research the customer's industry and the customer in particular to gather as much detail as possible. After an initial meeting, the project manager should work with the customer to create the needs analysis document.

Once a Web project manager understands the customer's needs, he or she can create a plan of action, which will be stated as a list of goals and objectives.

Project goals, assumptions and constraints

OBJECTIVE
1.1.11: Site project implementation factors

The needs analysis determines a customer's requirements and desires. The project goals, or objectives, specify the steps you and your Web development team will perform to satisfy the customer's needs.

Following are some examples of goals for a customer's Web project:

- Sell our widgets online.

- Create a community of people who are interested in our products.

- Recruit employees.

- Provide support to our customers.

- Increase awareness of our brand.

Ideally, project goals should be measurable as well as specific. For example, rather than stating a goal as "decrease customer support phone calls," a better objective would be stated as "decrease customer support phone calls by 20 percent over the next 6 months."

stakeholder
A person or group with an interest in a project and the power to exert influence (either positive or negative) over the project and affect results.

All **stakeholders** must understand and agree to the project objectives. These objectives are the yardstick by which the success or failure of your Web development project will be measured.

In addition to agreeing on the goals of the project, stakeholders must also discuss and agree on assumptions and constraints. Project assumptions are circumstances and events that are partially or completely outside of the project team's control, but are necessary for the project to succeed. For example, the Web site project plan might assume that adequate staff will be available to develop the site, and that the new server on which the site will be deployed will be installed in time for testing the site. Constraints are factors that limit the project and that are outside of the project team's control. Examples of constraints include deadlines, budgets and available technology.

Statement Of Work (SOW)

Finally, you and all stakeholders should define the ways that project success will be measured. At the end of the initiating phase, the project manager should complete a **Statement Of Work (SOW)** before proceeding to the next phase. The SOW outlines the requirements for each project task to ensure that the objectives are met. The SOW should contain clearly defined goals and an agreed-upon plan to achieve them.

The SOW can be created between individuals, between departments, between individuals and departments, and so forth. If the SOW is completed between your organization and an outside organization or individual, the payment structure can be included in the SOW.

By determining the customer's needs during the initiating phase, you can create a Web site that meets those needs, and you can determine the tasks, time and cost required to complete the Web site.

Planning a Web development project

OBJECTIVE
1.1.12: Web project development and rollout plan

The Web project planning phase addresses project details — the specific ways that you are going to achieve the goals and objectives of your Web development project. Project planning involves identifying all the tasks required to achieve the project goals, the people who will perform those tasks, and the resources that will be required. Planning also involves estimating the time each task will take to complete and determining project tasks that are dependent upon one another.

The project schedule

project schedule
A document that lists the planned dates for performing tasks and meeting goals defined in a project plan.

During the planning phase, you must develop a **project schedule**, or development schedule. A project schedule lists the planned dates for performing tasks and meeting goals identified in the project plan. To develop a project schedule, you should meet with the entire Web development project team to determine the time and money required to complete each task. You should then outline the required tasks and assign resources (money, time and people) to each task.

The development schedule should also include a site rollout plan. A site rollout plan details the implementation steps for launching the site after it is built. In the site rollout plan, it is important to include the time, money and skills that will be required to test and deploy the finished Web site. You will learn more about site rollout later in this lesson and the course.

The Web development project team

As you saw in the previous lesson, project teams can (and often do) consist of individuals from different departments. For example, your Web development project team may consist of Web designers, programmers, HTML coders, a project manager, and representatives from the marketing and accounting departments. By contrast, you may work as part of a very small Web team in which each person serves several roles.

Each person, or each role that a person is serving, offers a different perspective and perhaps a different set of priorities. Consider the following examples:

- The person from the accounting department is primarily concerned with the costs of developing, testing and maintaining the Web site, and the project's budget constraints.

- The person from the marketing department is concerned with the Web site's tone, style and message, its effect on customers' perceptions of the products or company, and its promotional or advertising functions.

- The Web designer is concerned with the way the site looks and its functionality (the ways that end users will interact with it).

- The IT department members are concerned with the site's effect on the company's computer infrastructure, and the amounts of bandwidth and server resources it will require.

- The project manager is responsible for satisfying these disparate priorities as he or she seeks to complete the Web development project on schedule and within the project constraints.

The final goal of the planning phase is to have a development plan that outlines tasks, responsibilities, budgets and deadlines. However, remember that planning is a constantly evolving process that lasts throughout most of the project life cycle.

Executing and controlling a Web development project

During the executing and controlling phases of a Web development project, work is performed (executed), progress is monitored, and corrective action is taken as needed (controlled).

It is during the executing and controlling phases the actual work of designing and creating the Web site takes place. For Web development, the executing phase can be divided into five subphases:

- Conceptualization

- Structure

- Design and analysis

- Production and testing

- Evolution

Conceptualization
Conceptualization is the process of developing the vision and strategy for the Web site. The site vision will encapsulate the overall objectives of the site. This vision is similar to a company mission statement that provides the overview for its purpose, creation and existence. You will learn more about conceptualization, vision statements and strategy in the next lesson.

Structure
The structure subphase involves preparing the transactional, navigational and hierarchical construction of the Web site's content.

During this phase, the information architect will create the overall structure of the site. Mindmaps, storyboards and flow charts are used in this phase. You will learn more about methods of planning and structuring a Web site in the next lesson, and about Web site navigation later in the course.

Design and analysis
Once the navigation scheme has been created and all stakeholders have agreed on the information architecture, the designer's work begins. During this subphase, the designer will create the Web site's look and feel.

This process often starts with the designer(s) creating quick design sketches that show a variety of ways that the information architecture could be implemented. These sketches

are called "comps," an abbreviation for composites or comprehensive artwork. The designer will show these to the customer, gather feedback, and revise the comps until the customer is satisfied.

Analysis is the process of testing concepts for achieving the site vision. Analysis allows you to determine whether modifications must be made to the design before the next phase.

Once the customer has signed off on a design comp, the designer's job is to develop completed versions of the comps, and create graphics or Web page templates that can be used by the Web team members who will implement the fully functional site. You will learn about the process of designing Web sites in more detail later in the course.

Production and testing

During this subphase, the completed design is translated into XHTML pages, and any necessary functionality is programmed or implemented. The production team commonly works closely with the designers at the beginning of this phase to decide the best ways to implement the design. By the end of this phase, the different parts of a Web site, including graphics, XHTML, scripts and so forth, all come together to make a complete and functional site. In later lessons, you will learn about the various processes involved in producing a Web site, as well as the technologies involved.

Once the Web site is complete, the customer and the Web development team members must test and debug the site.

Evolution

Evolution is the process of refining and updating the site design. This subphase depends upon the feedback from stakeholders and the results of your testing. Evolution is ongoing in Web development.

Closing and evaluating a project

The final phase of a Web development project is the closing phase. During the closing phase, your team should evaluate the project schedule, budget, scope, resources and assignments to determine the aspects of the project that worked well and the changes that should be implemented in the future. A project is deemed a success when it is completed within the budget and time frame specified, and the finished product meets quality standards.

NOTE:
In many cases, you may also be responsible for ongoing maintenance of a Web site.

At the end of the closing phase, you should receive a formal acceptance of the Web site from the customer, a documented history of the development project, and recommendations for revising the project plan for future Web development projects.

NOTE:
Remember that the Web designer's job does not necessarily end when the completed site is posted to the Web.

You must also establish how or at what point the Web site will be turned over to the customer. This step includes defining the responsibilities and duties of the project team and the customer. In some cases, the Web development team may stay involved with support and maintenance of the site; in other cases, the customer takes on these responsibilities after receiving the finished Web site. You should document the technologies used on the site (such as programming languages and server components) and project style guidelines (such as fonts and colors used in the design) that will be needed by the people who will maintain the site, whether it is your team members or someone else's. The transition may be difficult if you assume that the customer will be ready and able at any time to accept the Web project and associated maintenance.

Project Documentation and Communication

As a Web development project progresses, the project manager is responsible for keeping project participants informed in order to keep the project running smoothly. Regular communication with the customer and all stakeholders helps to keep the project on track and avoid unnecessary work. Understanding the status of a project can also help participants focus on areas that need immediate attention. Documentation of progress is an important part of communication both during and after a project.

Scope and scope creep

The end product or ultimate goal of a project (in this case a Web site), along with the tasks required to achieve that goal constitute the project scope.

A common problem associated with project management is the tendency for the project's scope to increase over time. Any changes in the schedule, cost or performance required to complete the project can affect its scope. Issues often arise during the project that were not initially considered. You may be able to contain the scope of the project, but only by introducing subprojects, which also must be managed.

scope creep
Gradual increases in project scope that can undermine the success of a project.

Changes in project scope tend to occur in small increments, and therefore might seem negligible. For example, when a customer sees the Web site design comps, he may have a great idea for another section of the site or for additional functionality. Small increases in scope will add up. These gradual increases are called **scope creep**.

NOTE:
Scope creep is usually second only to insufficient funding as the most common problem in implementing a project. Insufficient funding can often occur because of scope creep. One forgotten step can put a project behind schedule, which can cause project costs to dramatically increase.

Increases in scope should be documented in the same way that the initial goals and objectives were documented. Although it is tempting to accept every additional request made during the project, the project manager needs to know when to accommodate requests, and must advise the customer that increases in scope will require increases in resources and time, or that additional features could be implemented in a separate project as part of a "phase 2."

If you do not adequately manage scope creep, the success of your Web development project may be compromised.

Adjusting the project plan

Certain features are critical in every Web site. In an e-commerce site, the basic e-commerce functionality must be functional before you can launch the site. In order to meet a rollout deadline or stay within budget, however, it may be necessary to delay or scale down some secondary features, such as customer review functionality or recommendation functionality.

After the planning stage, you should be able to identify the tasks that are most important and the tasks that can be delayed without affecting the completion of other tasks or the overall project. Being aware of critical tasks will help you make adjustments to ensure that the project is completed on time.

Paper trail and project tracking report

During the executing and controlling phases of a Web development project, you should document project tasks to provide a paper trail, or record, of the team members who worked on tasks, and the dates they started and completed them. The project tracking report is the document that records this information and provides your paper trail.

Team members should sign and date this document to confirm that they completed the tasks. By documenting who did what and when on the Web site as the project advances, you can track its progress by determining whether tasks are starting and finishing on time, and whether tasks are being completed within the budget. The paper trail does not need to be documented on paper; many team-based Web development applications can help to automate parts of the project documentation processes.

By tracking these factors while the project is still in progress, you can solve problems as they occur and make necessary adjustments. Documenting a project promotes team member accountability and enables stakeholders to monitor various stages of the project. Tracking the progress of a Web site development project from beginning to end is essential for keeping stakeholders informed and for keeping the project on track. Many complex project management software applications exist that can manage every part of the project, including documents, contacts, tasks, schedules, issues logs and more.

Issues log

You should keep an issues log in which you document problems that need to be escalated to managers or executives outside the Web development team for resolution. Issues often arise during the course of a project that require authoritative decisions in order for the team to complete tasks and keep the project on track.

Examples of issues that may arise during the Web development process include design or programming bugs, requested changes to the design or content of the site, and server or browser incompatibilities that need to be addressed.

You can use the issues log as backup documentation to support any time, resource or cost changes that may accrue due to circumstances beyond the project team's control.

In the following lab, you will learn about some software applications available for creating project tracking reports. Suppose you have just been assigned as the project manager for a Web development project. Although you may not have much experience managing projects, you realize immediately that you have many details to organize. Choosing a reporting application with features that are appropriate and helpful for your project can help you manage resources and progress, and will provide records of all you accomplished and learned by the end of the project. You can also budget the cost of this software into your project.

	Lab 3-1: Evaluating project-tracking software

In this lab, you will review descriptions of various project-tracking software to learn about available applications. Then you will consider the reporting features you would use for a Web development project, and determine which applications might be most useful.

1. **Browser:** Open the CNET Download home page at ***www.download.com***.

2. Search for the term "***Project Tracking***."

3. Look through the descriptions of software applications that are categorized under project tracking. Then answer the following questions in the spaces provided.

4. What types of information about projects can be tracked?

_____

_____

5. Which of the information types you listed in Step 4 would you track for a Web site development project in which you are the project manager, Web designer or HTML coder?

_____

_____

6. Consider that you could budget the cost of this software into your project. Compare the reporting features of applications with their relative costs. Which applications seem to provide the features you need at the most reasonable price? Do you think that a more costly application may be a better investment for this and future projects?

_____

_____

The process you use for tracking a project does not need to be complex. In this lab, you were introduced to some of the project-tracking software available, and you compared the different features, costs and types of information they report.

Case Study

Because When You Assume…

In his three years as project manager for Wow Web Design, Andre had overseen the development of several Web sites for coffee shops. So, when Coffees R Us contacted Wow saying that they sell coffee and need a Web site, Andre was pretty sure he knew what they wanted.

At the initial meeting with the customer, Andre began by describing his ideas for the Coffees R Us site. It would be a "hip place where customers could learn about the coffee drinks and atmosphere at Coffees R Us, and get a schedule of poetry readings and musical acts."

After the first 30 seconds of Andre's presentation, the CEO of Coffees R Us was shaking her head. Andre clearly knew very little about Coffees R Us, which was not a café but a coffee distributor that sells its products wholesale in bulk to grocery stores and restaurants. The CEO waited patiently while Andre finished his presentation, then she thanked Andre and left. The next day, she sent Andre an e-mail message explaining that she was seeking a Web development company that takes the time to understand its customers, and that she was not interested in working with Wow Web Design.

*   *   *

Consider this scenario and answer the following questions.

- Consider the five phases of project management described in this lesson. Which important steps did Andre skip? Which steps did he perform?

- Would project documentation have helped Andre in this scenario? Why or why not? If so, what type of documentation?

- Would project-tracking software have helped Andre in this scenario? Why or why not? If so, in what ways?

Lesson Summary

Application project

In this lesson, you learned about the importance of gathering and documenting the needs of the customer as part of the initiating phase of a Web development project. You learned that the result of this process should be a needs analysis.

In a small group, have one person act as a customer who needs a Web site. The person playing the role of the customer should communicate what he or she wants to the project manager. The project manager should then determine the information that is lacking in order to create a needs analysis, and should ask appropriate questions to determine all the customer's needs and objectives.

After the initial meeting between the project manager and customer, the project manager should create a list of the customer's needs, constraints and assumptions. The project manager and customer should then discuss this list and use it to develop a list of objectives for the project. How did the project manager do? Did the customer agree with everything on the project manager's list?

Skills review

In this lesson, you learned about the basics of Web development project management. You learned that the first step in creating any Web site is to determine and document the needs of the customer. Once you fully understand the customer's needs, as well as the constraints and assumptions of the project, you can begin the process of creating a project plan, then implementing that plan to develop and deploy a Web site or other Web project.

Now that you have completed this lesson, you should be able to:

- ✓ 1.1.11: Determine site project implementation factors (includes stakeholder input, time frame, scope, desired functionality, required technologies).
- ✓ 1.1.12: Create a Web project plan, including development timetable, site rollout plan.
- ✓ 1.2.2: Document customer expectations and feedback.
- ✓ 1.2.3: Communicate plans and progress regularly to ensure that completed project meets stakeholder/customer expectations.
- ✓ 1.2.4: Identify and manage changes in project scope (includes scope creep).
- ✓ 1.2.5: Document changes in development plan.
- ✓ 1.2.6: Create a project tracking report.
- ✓ 1.2.7: Conduct a project evaluation, including acceptance documentation, summary of technologies used, project style guidelines.

Lesson 3 Review

1. What is the Project Management Institute (PMI)?

    _____

    _____

2. What is the purpose of an issues log?

    _____

    _____

    _____

    _____

    _____

3. How can project scope be controlled and scope creep avoided?

    _____

    _____

4. Why must all stakeholders agree to the Web site project objectives?

    _____

    _____

5. Briefly describe a situation in which a stakeholder on a Web development project may require a change to the project plan.

    _____

    _____