
**Information
Architecture
for the Web**

Module 2:

**Create a
User-Focused
Foundation**



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Module 2: Create a User-Focused Foundation

Good writing and design happen only when [we] understand what users are trying to accomplish; only when [we] know the users' goals and tasks.

JoAnn Hackos and Ginny Redish, *User and Task Analysis for Interface Design*, 1998

Objectives:

- 2.1** → **Envision your process as a system**
- 2.2** → **Define the scope of your site**
- 2.3** → **Chart a course for building your architecture**


Introduction

Planning prevents problems of preference and politics that undermine much of Web development. Planning ensures that our communication products meet the needs of others. Planning creates a user-focused foundation.

As developers of websites, we are challenged to craft a product that people can use effectively. To meet this goal, we've got to build a sturdy foundation—one that captures the needs of our different audiences.

This section looks at a systematic way to build the foundation. It explains why systems approaches work, presents us with a question-based process for learning more about our organizations, and gives us specific planning steps we can follow to craft a sturdy foundation.

Why plan? Planning helps us say where we are going and how we will get there. Planning prevents problems of preference and politics that undermine much of Web development. Planning ensures that our communication products meet the needs of others. Planning creates a user-focused foundation.

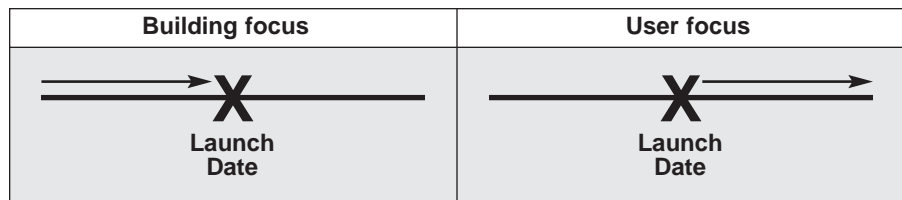
2.1 

Envision your process as a system

A system is a set of interrelated parts that work together toward a defined goal. In building websites, you can think of the system as a methodical, structured means for helping people find and use information. The entire system is performance-based.

What goal do you set for building your communication product? Many organizations set the goal of getting a site built on schedule. All of their planning and focus is pointed toward one date: the launch date. They then ask questions about the launch date—“How will we get everything assembled by the launch date?” “How can we manage our resources to ensure we launch?”

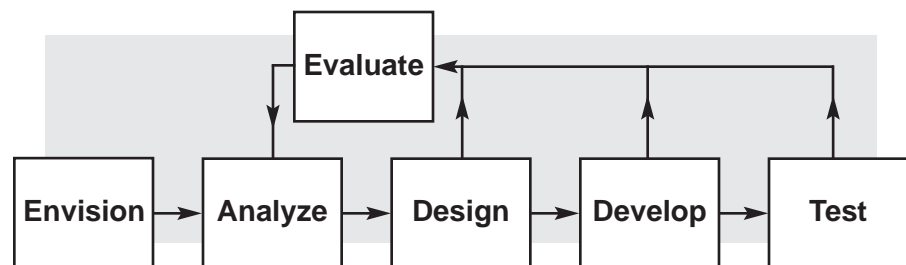
Certainly, you want to be sure you launch. But if you adopt a user-focused foundation, you must add a new question—“What is required to meet users’ needs?” This prompts you to look beyond launch, and into the period when users are maneuvering the website to accomplish the tasks they set out to accomplish.



To build a user-focused foundation, plan for how the user interacts with the site—after launch.

Overview of process

Information architects can follow an **analysis-based model** (based on an Instructional Systems Design/ISD model) as a structure for identifying the site goal and building the site architecture based on that goal.



During the analysis phase, we gather information about the tasks people will perform when they visit a website. We ask users, “What would you want to DO on this site?” We balance the content against task information. Both questions—“What information should there be?” and “What do you want to do?”—enable us to build the site’s foundation.

The information architect contributes to site development (and revision) because all the information gathered via analysis can be used in the **design, development, implementation** (testing) and **evaluation** of the site.

Development of systems models

Systems models grew out of basic research in three areas: management sciences, communication sciences, and behavioral sciences.

- **Management science** looks at questions such as job analysis, occupational survey techniques, decision theory, cost effectiveness models, and computer technology.
- **Communication science** looks at questions related to interpersonal behavior and the application of various techniques for using different media.
- **Behavioral science** research includes learning research and studies on measurement and evaluation of behavior. Behavioral research focuses on observable events.

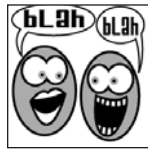
Systems models are not founded on exact technology or science. They combine science, technology, craft, art, and intuitive leaps. The models don't require practitioners to lock into specific strategies—but, instead, invite an open dialog among learners/users and the developers of these communication products.

Practitioners of the emerging discipline of software design are attempting to develop practical systems models that articulate and explain common usability phenomena seen in existing software products.

Why systems approaches work

Systems approaches work because they focus an organization—at the outset—on how the system can support people in doing what they want to do. Without this precise statement, subsequent planning and implementation steps can become unclear and sites can fail. Systems approaches also work because they link different elements in the site development process. All evaluation is based on the goals you set in the beginning. In this way, the success of your site is measurable, thorough, and repeatable.

Organizations have used systematic approaches in developing communication products for more than 30 years. Systems models are based not only upon theory and research, but also on a considerable amount of practical experience.



Group Discussion

What does this mean to your organization?

Does your organization follow a systematic approach to building sites and structuring content?

2.2

Define the scope of your site

One of the virtues of a plan is that it is cheaper to build than the real solution would be. Therefore, architects start with blueprints rather than concrete. As an inexpensive representation of your solution, a plan lets you test and discard ideas as you work. So a good plan needs to be detailed enough to test, but cheap enough to throw away.

Linda Flower, Problem-Solving Strategies for Writing, 1993

Discuss types of planning documents

Types of planning documents

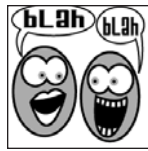
Planning documents are as varied as the organizations that use them. Types of documents include:

- Requirements documents (often with a technical bent)
- Strategy documents (often with a PR twist)
- Site maps
- Structure maps
- Timelines
- BOFSATT notes: results from a “bunch of folks sitting around the table talking”



Question

What types of planning documents do you use in your organization?



Group Discussion

Discussion: Describe the type of document you currently use to define the scope of a site.

What does this document do?

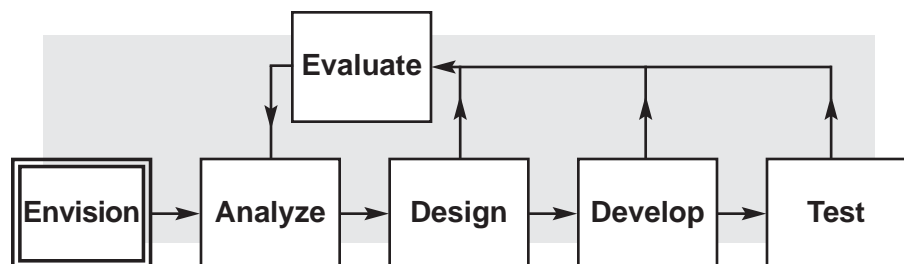
Is it similar to the Scope Definition Document™?

Create a user-focused planning document

Have you ever been in a situation where you’ve been asked to take content and put it on the Web, but you question the rationale behind the decision? Or do you find that each item you consider putting on the Web requires new decisions, approvals, and political battles?

It’s possible to prevent these discussions by building a comprehensive, high-level document that communicates the “big vision,” manages expectations, and serves as the basis for evaluating progress as you work on the project.

We suggest you follow a systematic framework similar to the Information Architecture process illustrated in the following figure. Systematic processes help us plan a structure for a site, and then design and develop a document to support that structure.



Your goal is to define the scope of your site. By following a focused process, you can create a clear, shared vision of the final product, a vision you will put into a Scope Definition Document,™ and rely on throughout site development.

Understand how to build your Scope Definition Document™

A Scope Definition Document™ is a comprehensive high-level document that:

- Communicates the big vision
- Identifies possibilities
- Manages expectations
- Serves as the basis for evaluating progress as you work on the project

Consider these questions

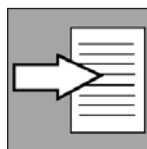
To define the parameters and focus of the project, keep these questions in mind:

- What are your organizational goals?
- Who are the current users of the site?
- What do they want to accomplish?
- What resources are available for the project?
- What are potential pitfalls?
- How can you measure the success of the project?

Organize your findings

We suggest you think through the four sections in a Scope Definition Document™. This four-part document helps you:

- Identify where you are going
- Identify users, goals, and tasks
- Envision how the site will meet users' goals
- Find out if you've met your measures of success

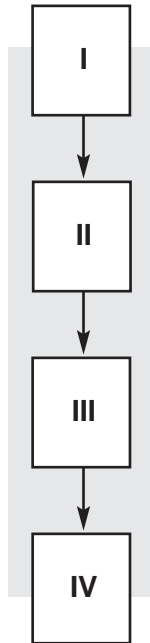


Module
Supplement

Refer to the Module Supplement 2A, page 57, for a sample Scope Definition Document™ you can complete.

Follow 15 steps to define the scope of your site

Go to the class website <http://www.infodotdesign.com/class/ia> and download an electronic version of the Scope Definition Document™. Save a copy of this document using a new name. Complete the document for a project you are currently involved in.



Part I: Identify where you are going

1. State the organization's mission and vision.
2. Identify how the site will support the organization's mission and vision.
3. List the organization's immediate, short-term, and long-term goals for the site.
4. Define success for the site. How will you measure it?

Part II: Identify users, goals, and tasks

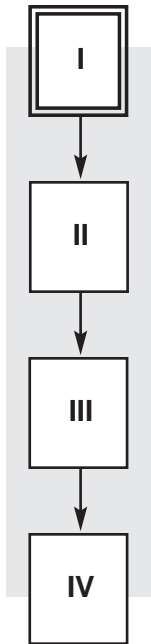
5. List users.
6. List the reasons why users visit the site (purposes and goals).
7. Identify possible disconnects between user goals and business goals.
8. List user tasks (or refer to a separate task list).
9. Map user groups and tasks.

Part III: Identify how you will get there (envision how the site will meet user goals)

10. Identify areas where you predict change and growth.
11. Brainstorm content and functionality possibilities.
12. List potential challenges and limitations.
13. Identify resources.

Part IV. Find out if you've arrived

14. Identify benchmarks and how you've met them.
15. Obtain sign-off on the Scope Definition Document™.



Part I: Identify where you are going

1 State organization's mission and vision

What is the mission of the organization?

Does everyone agree with this mission?

Does the Web force you to reconsider your organization's mission?

Do you face any political compromises? Skirmishes?

2 Identify how the site will support the organization’s mission and vision

How does the website support this mission?

Does the Web force you to reconsider your organization’s mission?

3 List the organization’s immediate, short-term, and long-term goals for the site

What are the immediate goals for the site?

What are the short-term goals for the site?

What are the long-term goals for the site?

Do they differ? If so, how?

How do they impact the user of the site?

Do they differ from user goals?

How do you envision the site one or two years from now?

4 Define success for your site

Identify how you will measure success for your site and determine before-and-after benchmarks for tracking progress. Consider, for example, lower costs (reductions in distributing manuals, press releases, or number of switchboard calls), benefits for business development (increase in number of leads or number of sales), improved customer service, and improved user experience on the site.

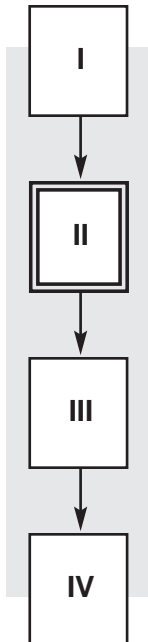
How can you measure success for your site?

What benchmarks can you use to track progress?



Book Reference

For additional measures of success, refer to sample chart on pages 138-139 of Rosenfeld and Morville’s book, *Information Architecture for the World Wide Web*.



Part II: Identify users, goals, and tasks

5 List users

Who are your users?

How would you describe them?

If you were to categorize your users, what labels would you use? Why?

Can you identify users by referring to other documents they are familiar with using?



Tips

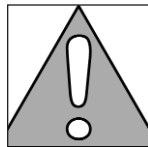
Describe your audience using four levels of description:

- ✓ Level of experience and subject familiarity (novice, intermediate, expert)
- ✓ Function (job classification: executive, manager, staff)
- ✓ Web familiarity (mental models)
- ✓ Additional consideration (learning style, culture, language barriers, disabilities)

6 List the reasons why users visit the site (purposes and goals)

What do you believe are the general goals or reasons that people visit your site? How do you know?

What do you think users want from your site?



CAUTION!

Watch out! Remember these are *your* assumptions. You need to talk with, listen to, and observe users to confirm these assumptions. Gather additional preliminary information through focus groups and questionnaires. Identify organizational experiences and stories.

7 Identify possible disconnects between user goals and business goals

Do you see differences between user goals and business goals?

Does the website require you to think differently about the business goals?

What would happen if we ignored or downplayed users' goals?

8 List user tasks

What do users want to *do* when visiting the site?

How do you intend to find out more about user tasks?



Tips

Follow these guidelines to determine specifically what users want to do at the site:

- ✓ Gather information in one-on-one conversations or small user groups.
- ✓ Build a task list.
- ✓ Listen for abstract nouns, rephrase these nouns as verbs.
- ✓ Begin each task with a verb.

9 Map user groups and tasks

To determine which user groups want to perform certain tasks, create an audience analysis matrix. Use the matrix to compare and define relationships between users and tasks and show patterns in user thinking.

- List users and tasks in a matrix.
- Place an “x” in each box to indicate that a user would want to complete the corresponding task.
- Have user groups validate and rank the importance of each task.

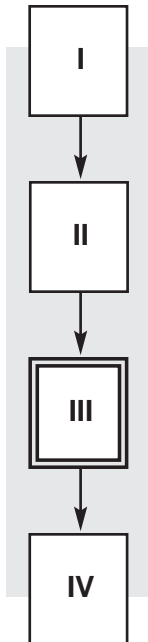
	User 1	User 2	User 3	User 4	User 5
Task 1					
Task 2					
Task 3					
Task 4					
Task 5					



Tips

Use a scale of 0-3 for reviewers to rank the importance of each task. (0 = would never do, 1 = infrequent, 2 = often, 3 = always)

To see a completed example of a user task matrix, see the class website: <http://www.infodotdesign.com/class/ia>.



Part III: Envision how you will meet users' goals

10 Identify areas where you predict change and growth—areas of potential impact on users

Which sections, chunks, or types of content do you predict will change the most?

How frequently will content need to be changed or updated on the site?

What organizational changes might require changes to your site?

Do you have the resources to keep up with the changes (80% of ongoing site costs are for maintenance)?

11 Brainstorm content and functionality possibilities

Your goal in brainstorming is to generate general or specific ideas about users and what they want.

What additional things might users want to do on your site that are not available?

How you can use technology to meet your goals?

12 List potential challenges and limitations

What challenges do you face as you try to create a user-focused foundation?

What objections do you anticipate from your organization? What do you think people might say?

You might hear these comments:

- “Marketing already knows the users.”
- “The product is new. There aren’t any users to observe it.”
- “We don’t have enough time in the schedule.”
- “We don’t have enough money in the budget.”
- “We have some great design ideas already.”
- “We know what we need.”
- “Designers should design, not users.”

13 Identify resources

As a writer, you may be tasked to help your organization plan the site development. Be sure to:

- Gather data on resources, constraints, and possibilities
- Use the information to build a project plan (Scope Definition Document™)
- Think of resources for collecting data
- Anticipate political skirmishes and compromises
- Prepare a management plan with timelines and include questions you need to explore in detail
- Get your project plan approved by management

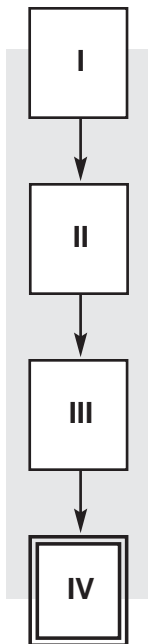
Identify questions you will explore in detail in a management project plan.

What resources will you need (e.g., personnel, hardware, software)?

Where will you find people to help locate and prepare content?

Where will you find money to support site building?

How much time do you think it will take?



Part IV: Find out if you've arrived

14 Identify benchmarks and how you've met them

Identify ways you can measure where you are now and where you want to go.

How will this relate to the measures of success you listed in part one?

Who in your organization believes that changes in structure will make a difference?

15 Obtain sign-off on the Scope Definition Document™

Make sure to get management or client approval on your Scope Definition Document™ before continuing with site development. The completed document is a valuable planning tool and project record that:

- Shows the results of your initial analysis
- Shows the value of planning and further analysis
- Enables dialogue and sharing (if you write it down, people can respond and change it)
- Keeps everyone on the same page
- Covers your butt

And remember, honor your Scope Definition Document™ and revise it as necessary.

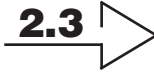
2.3

Chart a course for building your architecture

You can use a systems model in charting the course for building your architecture.

Using the common industry format for planning

Products should be designed with the target user population in mind. Unfortunately, product design often focuses on a market segment or a set of technical features with only a passing concern for the actual people who will be using the product. Target users are often poorly understood, as program schedules are based on time-to-market and technical feasibility factors rather than user-centered design.

To respond to this challenge and to support organizations building communication products, the National Institute of Standards and Technology (NIST) has developed a Common Industry Format (CIF) to facilitate communication among communication professionals and to serve as a user-centered roadmap.

The CIF indicates that required user information includes such factors as the intended user population, groups with special needs, and the product's usage environment. User demographics such as professional experience, specific training, and differences between various user groups are also included.

The CIF incorporates these techniques for developing an understanding of user profiles and demographics:

- **Establish user contacts.** Develop buy-in with people who come into contact with customers (for example: marketing, sales, customer support, training personnel) so that existing or potential customers can be identified and visited.
- **Participate in sales and marketing calls.** Establish customer contacts and explain your need to observe potential product users performing their daily activities.
- **Observe users in their natural environment.** Watch users work, paying attention to their surroundings and their

Using the common industry format for planning (continued)

interactions with products, tools, and people. Use contextual design and ethnographic techniques to develop a better understanding of users' needs and goals, along with the breakdowns that their current tools and systems create.

- **Develop and publish user profiles.** As your understanding of users grows, publish information to the product team about who your users are, possibly developing personas for representative target users. Identify characteristics that uniquely identify users from non-users, and include quotes, illustrations, and stories about what's important to your users.
- **Experience the user's environment with product team members.** Develop buy-in with product team members by inviting them to participate in user testing. Encourage them to take an observer role and teach them about the biasing influence of leading questions. Explain that their observations represent a part of a larger whole and that the things they see may not be indicative of all users.
- **Find user "allies" for each user profile.** Maintain contact with users who represent target user profiles. Include them in usability tests and product beta trials. A list of user contacts can prove especially helpful when tackling specific questions that have not been sufficiently researched.

NIST offers a template for reporting usability test information. You can access a recent version of this template at the Industry Usability Reporting website, <http://zing.ncsl.nist.gov/iusr/> or <http://www.nist.gov/iusr>.

Module Supplement 2A: Scope Definition Document™

Part I: Identify where you are going

1 Your organization's mission and vision

[text goes here]

2 How this site will support your organization's mission and vision

[text goes here]

3 Goals of this site

Immediate

[text goes here]

Short-term

[text goes here]

Long-term

[text goes here]

4 Measures of success

[text goes here]

Module Supplement 2A: Scope Definition Document™

Part II: Identify users, goals, and tasks

5 Users

[text goes here]

6 User purposes and goals

[text goes here]

7 Possible disconnects between business goals and user goals

[text goes here]

8 User tasks

[text goes here] [begin each task with a verb; refer to verb list, Module Supplement 1B on page 31]

9 Map user groups and tasks

	User A	User B	User C	User D	User E
Task 1					
Task 2					
Task 3					
Task 4					
Task 5					
Task 6					
Task 7					
Task 8					

Module Supplement 2A: Scope Definition Document™

Part III: Envision how you will meet user goals

10 Areas where you predict change and growth

Changes

Kinds of content that will NOT change frequently

Kinds of content that will change frequently

Estimated frequency of changes / updates

Kinds of content that will NOT change frequently	Kinds of content that will change frequently	Estimated frequency of changes / updates

11 Content and functionality possibilities

[text goes here]

12 Potential challenges and limitations

[text goes here]

13 Resources

[text goes here]

Module Supplement 2A: Scope Definition Document™

PART IV: Find out if you've arrived

14 Benchmarks

Criteria	Before	After

15 Signoff

Part I: Approved by _____

Date _____

Part II: Approved by _____

Date _____

Part III: Approved by _____

Date _____

Part IV: Approved by _____

Date _____