



Planning a Web Site Redesign in Six Steps

BY MARCIA BRINK
Des Moines Chapter
AND MICHELE REGENOLD

When Web site owners hear the term “redesign,” they often think about the look and feel of a site. But a redesign project should involve much more than that: A redesign should be a rethinking of the Web site from the ground up to make sure it’s communicating as effectively as possible.

Web sites have many different elements that must work together for the site to be effective. An excellent model for thinking about these elements, and one we used to guide a redesign project for a large academic department at a research university, is Jesse James Garrett’s *The Elements of User Experience: User-Centered Design for the Web* (New Riders, 2002). Garrett’s model likens the process of redesigning (or developing) a Web site to the construction of a multistory building, with each level supported by the one(s) below. (See Figure 1.) At the foundation is the strategy, which includes identifying user needs and the site owners’ objectives/purposes for the site. The next level is scope, which includes identifying content and functional requirements. After scope is structure—the site’s information architecture. Following structure is the skeleton, the level where information design and navigation design are created. The top level is the visual design.

Garrett’s figure suggests that focusing solely on the visual design during a redesign will result in merely cosmetic changes. Our client’s site had undergone such “redesigns” every year or two. Generally, the redesigned site boasted an attractive new appearance, with sharp new graphics, colors, and typography. The client was initially impressed with each redesign, but soon grew frustrated with navigational difficulties, inability to locate specific information, and other user-related problems. It was in this context that our communications group was asked to evaluate the Web site and provide some advice. This article discusses our efforts and offers advice on planning a redesign that focuses on effective communication.

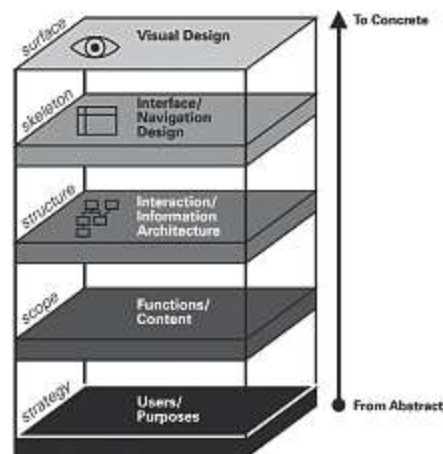
Step 1: Review the Existing Site

Before approving a redesign project, the site owner will probably want a proposal from you describing the work you plan to do. Before you can write that proposal, you have to see what you’re letting yourself in for.

Do a thorough review of the site’s content, functions, visual design, information design, site architecture, and coding. This review will help you identify problem areas, many of which the site owner may be oblivious to. Try to answer the following questions:

- Is the content up-to-date, correct, and interesting? Does it meet the audience’s needs and the site owner’s purposes? What forms does the content take—static text, photos, or animations?
- What functions does the site allow users to perform? Are these functions easy to use?
- Does the visual design look professional? Is it based on a liquid design that expands and contracts to various window sizes? Are cascading style sheets used to implement the design?
- Does the layout of the page help users find information? Are navigation bars intuitive? Does the navigation help users understand the site’s organization?

Figure 1. The structure of Web sites resembles that of multistory buildings. Reprinted with permission from *The Elements of User Experience* by Jesse James Garrett.



Reviewing the site architecture without seeing the underlying file tree structure can be tricky, but you should be able to tell something from the file paths in the URLs. During our redesign project, we discovered that the same information was presented to current students and prospective students on separate pages. The only way we could distinguish between these otherwise identical pages was by the path. Having two static pages with the same content in two locations is a maintenance headache.

Using your browser’s “view source” function, take a look at the code. Are the pages written to a W3C standard, such as XHTML Transitional 1.0? Do the pages use presentation code, such as font tags? Is the page layout based on nested tables and transparent images?

Once you have a good idea of the problems that need correcting in the existing site, you can make a proposal that addresses those problems and your recommendations for correcting them.

Step 2: Identify/Develop the Web Site’s Strategy

This step is the bedrock for all subsequent decisions. Even if your site’s audience(s) and purposes are clearly defined, be aware that they may have evolved since the site was originally planned and launched. Take time to clearly identify the audiences’ informational or functional needs and the site owner’s purpose(s) for the Web site.

Getting feedback from stakeholders can be very helpful in understanding audience and purpose. For our project, we interviewed half a dozen faculty members about their perceptions of audience and purpose. Then we recruited faculty, staff, and students to form a temporary Web advisory group (about ten people total). We needed the group’s input to ensure that the site we were developing met their department’s needs.

Building on information culled from the early interviews, the advisory group came up with a list of seventeen separate audiences, such as prospective graduate students, current faculty, parents, alumni, and so on. We then prioritized

that list using a forced choice chart—a graphic that facilitates comparisons of each item in a list with every other item.

Figure 2 shows an example of a forced choice chart. This chart helped us prioritize the objectives of our client’s Web site. Underneath the list of objectives is a series of number pairs, with each number corresponding to one of the objectives. The number pairs helped us determine which of the site’s purposes was most important. For example, the pairing in the upper left corner “forced” us to decide whether recruiting students through the Web site was more important than keeping the university pipeline full of undergraduate and graduate students. For each of the twenty-seven number pairs, we circled the number of the item we deemed to be more important. We determined the site’s prime objective by counting how many times each number was circled.

Step 3: Define the Scope of Content and Functions

Your content and function review in Step 1 will be helpful here. For even more detail, you may want to do a page-by-page content inventory. Once you’ve

All content and structure should serve the users’ needs as well as the organization’s purposes.

identified the existing content, you need to decide if it’s still relevant and who will be responsible for updating it. Can a system be developed to facilitate maintenance? Failure to keep content current, a drawback of some information-rich Web sites, can make an organization seem less credible.

Also take a look at any online functions, such as processing purchases, updating employee information, or downloading forms. How can these functions be improved? Are they logical and easy to use? Are additional functions desirable?

On the basis of the strategy that was developed in Step 2, consider what additional content or functions the Web site

should provide and who will be responsible for maintaining them.

One content area in our redesign project that needed more substance was information about faculty research projects. How could we gather and maintain project information from twenty-five faculty members working on a dozen or more projects each year? Part of the solution was a database. Storing the data in one location makes it easy to maintain and serve up to any number of dynamic pages. Getting the information from busy faculty, however, was and continues to be challenging. One way we’re addressing this problem is by adding a new function to the site—an online form that allows faculty to upload information about their research projects.

Step 4: Make the Structure Serve Users

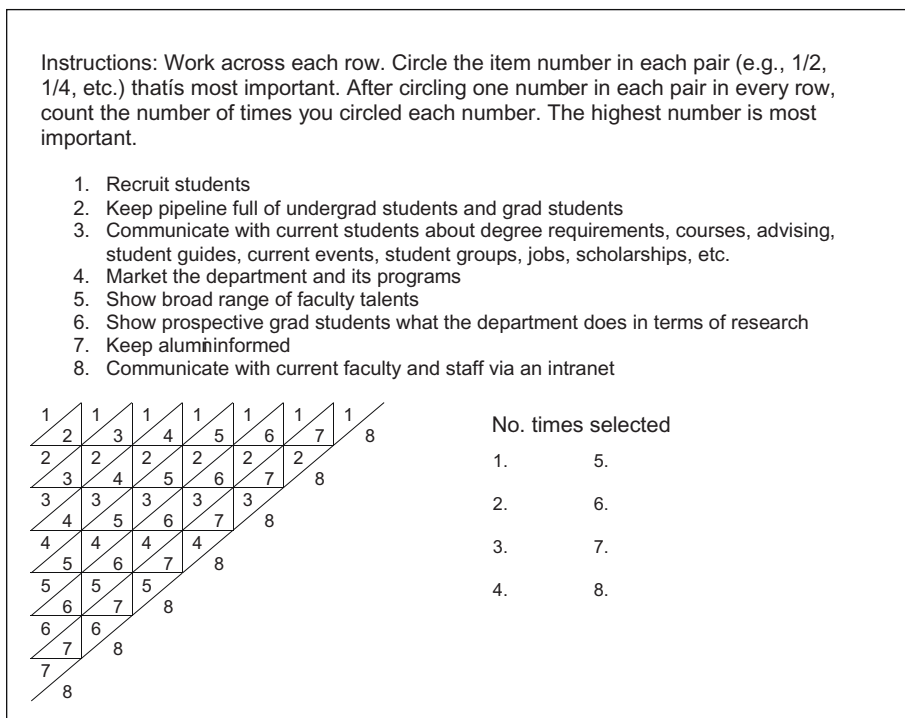
If you have difficulty finding the information you need on a Web site, the information may not be organized with you, the end user, in mind. Many site owners make the mistake of organizing their Web sites around their own internal structure, which may make little sense to users.

Significant changes or additions to content will almost certainly shake up your site’s structure or information architecture. Even if you make no radical changes to your content, your site’s structure may need to be redesigned to increase usability. All content and structure should serve the users’ needs as well as the organization’s purposes.

You can test different information architectures by writing the name of each main content area on a separate sticky note and placing them across the top of a piece of poster board. These are your top-level pages. Then write your second-level pages on sticky notes and place them in their most logical columns. Rearrange the notes until the structure makes sense.

You can do some quick usability tests by showing potential users your top row and asking them where they would look for information on a particular topic. Keep in mind that even though a second-level page may fall primarily

Figure 2. This forced choice chart helped the authors prioritize eight objectives of their client’s Web sites.



under one top-level topic, you can still cross-reference it under other top-level pages.

Step 5: Design the Skeleton

Designing the skeleton means designing the page layout(s) and navigation system(s). At this level of design, you make decisions about page elements such as headers, footers, and number of columns, but not about colors, backgrounds, graphics, or typography. Pencil-and-paper sketches are helpful.

Now is also the time to decide how to facilitate navigation. Will you separate global navigation links—that is, links to the main parts of the site—from local navigation? For example, we always want links available to areas such as research, academics, and student resources. These links make up a global navigation bar. Local navigation can be defined in many ways; it may take the form of links to pages of related interest. For example, on a page describing a specific graduate program within the department, the local navigation bar could include links to this program's faculty and their research as well as to other degrees offered in the department.

If you create separate global and local navigation systems, you need to determine whether they will be differentiated by position, size, or placement. Visual cues such as these will help your users find their way more easily.

Redesigning the navigation system for our project was a vital step for improving usability. The old site used two columns for navigation bars, one on each side of the page, with the main content in the wider center column. The two navigation bars were confusing because they did not represent, as users might expect, a global navigation and a local navigation. Instead, one navigation bar was organized by audience and the other by the department's internal divisions.

As we have seen, organizing information according to a site owner's internal structure isn't helpful to outsiders, and many of this project's users were outside the department. We considered organizing the site by type of audience, such as prospective undergraduate stu-

dents, prospective graduate students, current students, and so on, but this presented a thornier problem. Many colleges and universities design navigation systems for their Web sites according to audience, but what if a user doesn't find the desired information in his or her audience category? What if a user's audience isn't represented in the list? Navigation should be unobtrusive—it shouldn't require users to think or ask questions.

We opted to organize navigation around information areas such as research, academics, and contact information. We developed a global navigation bar to be placed horizontally beneath the page header and a local navigation bar to be positioned in a left-hand column above department contact information. The bulk of the page was left for main content, with room for an optional sidebar along the right side of the page.

Step 6: Design the Look

The final step is to create the visual design of the site. If you hire a graphic designer, hand over your skeleton diagrams so the designer has clear parameters for layout. You can also describe other parameters, such as a liquid design, use of cascading style sheets, minimal use of tables for layout, minimal use of graphic headers, an easy-to-maintain design, and a specific color palette.

It's a good idea to get at least three different design options. We chose one and then asked the designer to mock it up with three different color schemes. We showed these final mock-ups to our advisory group. Site owners enjoy this part of the project because they get to see something that resembles a Web page instead of a flowchart or a diagram.

The faculty members in our advisory group were struck by the fact that the names of their departmental divisions were no longer listed prominently on the page. We gently reminded them how we'd reorganized the information to benefit users and compromised where we could without violating the new structure and navigation system.

Communication: The Goal of Web Site Design

Good visual design is essential to effective Web sites. But too often, as in our client's case, great-looking Web pages have intriguing bells and whistles but inadequate substance; eye appeal but confusing navigation schemes; or dynamic visual personality but static, outdated content.

The Web is, first and foremost, a communication medium. Effective Web site design or redesign requires expertise in the following areas:

- communication and information design, to focus on users' needs and owners' objectives, identify and improve the site's content and functionality, and establish a logical, workable global information architecture
- graphic design, to create an attractive user interface
- Web coding, to develop clean, error-free code

One person may be able to perform all three functions, but rarely is a graphic designer or computer programmer also a professional expert in communication (not to say that such designers and programmers don't exist). Yet graphic designers and computer programmers are setting up shop as Web designers.

As the profession of Web design matures and clients demand more effective second- and third-generation Web sites, technical communicators have a unique opportunity to promote the value of communication expertise to this field. And clients like ours are ready to listen. **1**

SUGGESTED READING

Garrett, Jesse James. *The Elements of User Experience: User-Centered Design for the Web*. Indianapolis: New Riders, 2002.

Marcia Brink is the communications manager at Iowa State University's Center for Transportation Research and Education (CTRE), where she has worked since 1994.

Michele Regenold has worked as CTRE's webmaster since 1997 and has designed or redesigned more than twenty Web sites.