
**Information
Architecture
for the Web**

Module 8:

Promote Effective Structures



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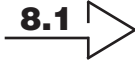
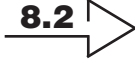
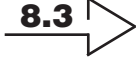
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Module 8: Promote Effective Structures

Information architecture is one of the emerging fields of the 21st century.

Richard Saul Wurman

Objectives:

- 8.1**  **Summarize reasons for information architecture (so you can explain them)**
- 8.2**  **Identify how we can further explore the field**
- 8.3**  **Apply lessons learned**

Introduction

We'll think about ways to articulate the value of structuring information.

As you've explored the seven previous modules, you've had many opportunities to discover ways you can structure and label information with the user in mind. This module asks you to reflect on those discoveries and think about the value of information architecture in your business environment. Why do we follow a structured process? Why does it matter to users? How do we explain this to our colleagues and bosses?

This module offers a glance at ways we can articulate the value of structuring information with a user perspective, and gives us an opportunity to think about how we will apply these lessons when we return to our jobs.

8.1 

Summarize reasons for information architecture (so you can explain them)

Good information architecture can be a 'strategic advantage—a key to the marketplace.'

Adobe Magazine, Spring 1997

As we've learned, people can get "caught-up" in labels and can respond negatively, passionately, or blankly to the label used. Certainly this is true with the label information architect. Some people try to set boundaries ("where does usability engineering end and information architecture begin?"); others draw conclusions ("information architecture is nothing but common sense").

We've found a good way to begin to get our managers to understand "underlying structures of information" is to ask them to describe what happens without information architecture. Try it out.



Question

What happens without information architecture?

Reasons for information architecture

Typically, reasons can be divided into these categories:

- User reasons
- Management reasons
- Organizational mission reasons
- Big picture reasons

User reasons

- People get lost and frustrated
- Potential customers, clients, members, supporters leave your site

Management reasons

- Poorly architected sites are harder to maintain
 - Changes to site take much longer (time = money)
 - Changes feel arbitrary and haphazard
 - Sites often will not be maintained (we sometimes refer to these ignored sites as “Christmas puppies”)
- Sites without solid, expandable information architecture require new decisions, approvals, and political battles

Organizational concerns

- New business thinkers believe organizations that can manage layers of knowledge (processes, procedures, technologies, messages, figures, experience) can maintain a competitive edge
- Our skill is to give meaning to a mass of unrelated needs, words, and pictures and fit it together so it is usable
- Organizations need the skills of information architects

Few organizations have workers who are skilled at framing and structuring knowledge. Organizations need people who can extract knowledge from those who have it, put it in a structured form, and maintain or refine it over time.

Thomas Davenport, *Working Knowledge*, 1998

Big picture reasons for information architects

- The Web and intranet sites are part of people’s lives. By making products on them easier, we improve the quality of people’s lives.
- We bring order to chaos
- We serve as user advocates

Usability and performance improvement statistics

The following statistics and quotes, which support the usability argument for website redesign, are grouped into these benefit categories:

- Meets business goals
- Increases membership
- Improves organizational performance
- Decreases training time
- Saves money
- Improves member/customer satisfaction

Meets business goals

Usability goals are business goals. Websites that are hard to use frustrate customers, forfeit revenue, and erode brands. Executives can:

- Apply a disciplined approach to improve all aspects of ease-of-use
- Start with usability reviews to assess specific flaws and understand their causes
- Fix the right problems through action-driven design practices
- Maintain usability with changes in business processes

Forrester Research, Why Most Websites Fail

Increases membership

In the spring of 1999, Ameritrade ran one of the slowest brokerage sites on the Web. Today, the company consistently ranks among the five fastest websites for executing stock trades. Eighteen months ago Ameritrade made website performance a focal point for its IT department, investing substantial sums in infrastructure and testing tools. As a result,

Ameritrade's user base has soared from 400,000 to 1.4 million.

Ameritrade

Improves organizational performance

Improving the information used by workers raises their measured performance substantially—never less than a 20% improvement, sometimes as high as 600%.

Thomas Gilbert, Engineering Human Performance

Telephone companies regularly report savings in the millions for shaving seconds off usage times.

Karlin and Klemmer, 1989, Wayne D. Gray, et al 1992

Poor user interface design can have a significant effect on user productivity. Consider a simple transaction such as filling in an online data entry form. Suppose an organization has 20 users who perform this transaction approximately 80 times a day (quite typical for data entry clerks or other high frequency users). This adds up to 368,000 transactions per year (20 users working x 230 days a year x performing 80 transactions per day). If a screen could be redesigned to reduce the transaction time per screen by 10 seconds, a company could realize a savings of 1022 hours, or 25.5 person-weeks. If improvement on a single screen of the system could increase productivity by 1/2 of a person-year, clearly improvements across the whole system will have a very dramatic effect on productivity.

Deborah Mayhew, Cost-Justifying Usability

In a three-year survey of UK businesses, the Design Council of Britain collected information on the measures of effectiveness by focusing on information design:

- Improved product/service quality 73%
- Improved image 69%
- Increased profit/turnover 65%

Usability and performance improvement statistics (continued)

- Developed new markets 65%
- Improved customer communication 65%
- Increased market share 56%
- Cut costs 41%
- Improved internal communication 36%

Design Council research by PACEC, June 2000

Decreases training time

Training courses for new systems typically run between 3 days and 2 weeks. Suppose a company has 20 users, and each one must learn to use two new systems a year. If the training time per user could be reduced by 1.5 days through easier-to-learn user interfaces and/or better user documentation, then a company could realize a savings of 60 days, or 12 person weeks.

Deborah Mayhew, Cost-Justifying Usability

Saves money

For each dollar a company invests in developing the usability of a product, the company receives \$10 to \$100 in benefits while winning customer satisfaction and continuing business. Furthermore, industry data shows that for each dollar spent to fix a problem during product design, \$10 are spent to fix the same problem in product development, and \$100 or more are spent to fix the same problem after product release.

Compuware Corporation

A major computer company saved \$41,700 the first day the system was in use by making sign-on attempts faster for a security application.

Karat 1990

IBM recently reported that sales went up 400 percent with an easier to navigate site.

CIO Magazine

Improves member/customer/user satisfaction

Usability methods can raise user satisfaction for a system by 40%. Poorly designed user interfaces carry a cost not only in customer satisfaction, but also in real overhead in customer support. Supporting customers with trouble-shooting and data recovery can be very expensive. Designing a less confusing and less error-prone interface can reduce the need for customer support. Suppose a vendor has 600 customer organizations whose users call in for help and need an average of 15 minutes per call to solve their problems. And, suppose engineering a more usable interface could eliminate 4 calls per customer per year. This represents a savings of 15 weeks per year in customer support time.


Deborah Mayhew, Cost-Justifying Usability

An Australian insurance company had annual savings of A\$536,023 from redesigning its application forms to make customer errors less likely.

Fisher and Sless, 1990

“As part of the redesign, we brought a lot of features to the home page that had been buried three clicks in,” Ruddy says. “Our carrier site was two to three clicks down. Now it's on the home page, and we've seen a 300% increase in its usage.”

FedEx

8.2 

Identify how we can further explore the field

Fields that build information architecture

We generally agree that diverse disciplines converge to create the field and practice of information architecture. These fields incorporate the principles discussed in class:

- Library and Information Science
- Rhetoric and Technical Writing
- Information Design/Graphic Design
- Performance Improvement
- Training/Instructional Design
- Human Performance Improvement
- Human Computer Interaction
- Interface Design and Usability
- Cognitive Science
- Business Narrative/Storytelling
- Knowledge Management
- Business Process Analysis/Reengineering
- Ethnography/Cultural Anthropology
- Organizational Consulting

Ways to keep current

To keep current in the emerging field of information architecture:

- Follow the research that is being done in the field (and in related fields)
- Subscribe to listservs and electronic newsletters
- Attend special seminars and conferences
- Enjoy the depth of good information

8.3 

Apply lessons learned

As information architects, we can offer skills that can benefit organizations:

Corporations increasingly rely on information architects to 'make the complex clear.'

Business Week,
December 17, 1996

- Data gathering, analysis, and chunking
- Interviewing and facilitating
- Writing and editing
- Analyzing organizational and individual performance
- Measurement and benchmarking
- Usability testing
- Designing interfaces
- Designing interaction
- Structuring performance-centered systems
- Hypertext engineering
- Knowledge capture and architecture
- Strategizing



Question

In what ways can we apply our skills?

Enroll others in lessons learned

Enrolling is not about forcing, cajoling, tricking, bargaining, pressuring, or guilt-tripping someone into doing something your way. Enrollment is the art and practice of generating a spark of possibility for others to share.

Rosamund and Benjamin Zander,
The Art of Possibility, 2000

You CAN do it

Most of the time, we can come up with plenty of reasons why we can't and why we won't. Many organizations have moved past politics to build sites that work. You can too. If it is possible, it is possible for you. You have the tools you need. Think in terms of improving human performance. As writers, you have what it takes.

You can achieve great things because you refuse to let your limitations stand in the way of the possibilities of building clear documents. That's your job. You can act. And show results.

Act

New media will fundamentally change the way workers communicate to a degree not experienced since the telephone.

We have a task to do!

Show results

Measure your performance results. Thomas Gilbert (*Human Competence: Engineering Worthy Performance*, 1996) placed increased user performance between 20 and 600 percent. If redoing a site, take comparative measures before you commence work. Remember you can benchmark where you are now and monitor measures of success.