Calculating the Cost of a Large-Scale Web Site

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We've been writing the Web Architect column for almost two years. In that time, we've dedicated ourselves to defining information architecture, explaining how it can be done right, and publicly exposing and berating those who do it wrong.

However, we've never seriously tried to explain the value of information architecture. Why should corporations care about doing it right? What is the return on investment? What's the bottom line?

There's a very good reason why we have avoided this topic so assiduously. You never heard this from me, but *we don't know the answers.* We don't have a formula for computing return on information architecture. We think it's important. We believe it's important. But we don't have scientific proof. This places us in the role of quasi-religious missionaries, desperately striving to convince the masses of the righteousness of our vision.

Before I resign myself to the hard life of a missionary, I'd like to take one real shot at defining the value of information architecture.

The Cost of Finding Information

A well-designed information architecture with intuitive organization, labeling, navigation, and indexing systems can significantly reduce the amount of time that users spend blundering through the hierarchies of Web sites and intranets. How much is this time-savings worth? The case is clearest for intranets where the users are your employees.

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At the **Web 97** conference in San Francisco this February, Jakob Nielsen explained how he justified investments in the architecture of the Sun Microsystems intranet. Apparently, the old architecture was disintegrating as department after department ignored style, architecture, and navigation guidelines. He devised the following equation (modified slightly for this article) for estimating the cost to Sun:

> the number of staff at Sun **x**
> the average salary of Sun employees **x**
> the average number of pages and sites visited per day per person **x**
> several seconds of confusion each visit due to differing navigation options
> **=** the cost of not implementing a cohesive information architecture

According to Jakob's calculations, the cost of inconsistency at the page level was costing Sun roughly $1 million per year, and at the site-wide navigation level $10 million per year. While Nielsen admitted these were just ballpark figures, they do show that when we're talking about the cost of finding information on a corporate intranet, we're talking about a pretty big ballpark.

The Cost of Not Finding Information

In the early days of the Internet, I remember hearing the argument that the Net might help us cure the common cold. That perhaps, two scientists in different locations each possessed half the cure, and by helping one to discover the other's research, the Internet might facilitate the big breakthrough.

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Perhaps a breakthrough (on par with the discovery of soap that floats or the combination of chocolate and peanut butter) is waiting to be made within your company. More likely, there are lots of little breakthroughs to be made, as employees in one department discover valuable tools and resources in another. It's impossible to measure the exact cost of not finding information on your intranet, but that doesn't mean it's not significant.

How about the cost to your company when customers can't find information about your products and services on your external Web site? If they were considering a purchase, you might have just lost that business. If they needed support, you'll probably get a phone call that will eat up the valuable time of your staff. Either way, when customers can't find the information they need, it will cost you money.

Site Management Costs

As any parent knows, the hard work of raising a child does not end with birth. The same is true with Web sites and intranets. The first law of site maintenance is that people will want to add content. More and more and more. If you have not designed a *scaleable architecture* that anticipates and supports this content growth, you may be forced to endure a costly redesign of the site.

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The second law of site maintenance is that people and departments will fight over the placement and prominence of their content. Everyone wants to be on the main page. Everyone wants to be at the top of the list. Without a *diplomatic architecture* that dissipates this political posturing by creating additional prime real-estate and presenting logical organization and classification policies, your Web or intranet steering committee is bound to spend endless hours arguing about what goes where. And as the saying goes, time is money.

The Bottom Line

The truth is that it's impossible to completely quantify the value of information architecture. You can measure discrete aspects of a particular information architecture under specific conditions to get a ballpark figure of its value. But there will always be less tangible factors that defy measurement.

It seems that information architecture is destined to remain a mixture of art and science, with a healthy dose of black magic thrown in to keep things interesting. Perhaps that's not such a bad thing. After all, I've never seen anyone show the return on investment of a telephone on every desktop, but most companies make the investment because they *believe* in the value of communication.

If only more people really *believed* in the value of information architecture, we could give up the missionary lifestyle, sit back, and watch the money pour in. Until then, don't be surprised to see us in a park near you, preaching the gospel and handing out free copies of the **good book**.