

## Why Usability Is Important

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The business case for usability can be summarized by saying that good usability leads to satisfied, purchasing, and returning customers. The Gartner group found in 1992 that a user-centered approach raised customer satisfaction by 40%. Bad usability on the other hand, leads to angry customers and loss in sales. AT Kearney in 2001 reported that 82% of users they surveyed attempted to purchase something but gave up because of poor design and usability. A useful metric of your web site's success is not *traffic* but *conversion rate*: the number of visitors who are 'converted' into buyers.

B2B studies show that between 30-40 percent of web purchase attempts fail due to poor web site usability. Enterprises need to establish, institutionalize and fund user experience as a core competency (Gartner group, 2001).

### ***The business case for usability***

The benefits of usability engineering extend beyond improving the user interface and end user productivity: its beneficiaries include not only end users but also developers and their companies. User centered design can reduce software and e-commerce costs (including development, support, training, documentation and maintenance costs), shorten development time and improve marketability.

### **Good usability leads to satisfied, purchasing and returning customers**

- A user-centered approach raised customer satisfaction with 40% (Gartner, 1992). End users/customers are more satisfied when a system offers relevant services that match their needs and expectations.
- Online customers spend most of the time on sites with high usability (Nielsen, 1998). A majority of customers are loyal only to a few brands (1-3) and buy repeatedly on these sites (A.T. Kearney, 2000). Satisfied customers lead to increased sales for both e-commerce shopping sites as well as for software products. Satisfied customers stay longer on sites and consume more.
- Almost 50 % of users do not come back if they found it hard to find relevant information on the web site (Forrester research, 1999). Satisfied customers are also more likely to become returning customers.

### **Bad usability leads to angry customers and loss in sales**

- 82% of users attempted to purchase but gave up as a result of poor design and usability (A.T. Kearney, 2001). That's one fifth of every customer trying to purchase. Imagine your local shopping mall: only 20% of the customers can find the checkout and the rest give up and drive home.
- 43% of purchase attempts failed (Creative Good, 2000) and 35% in another similar study (User Interface Engineering, 2000).
- 62% of people shopping on the Internet gave up their efforts on finding the merchandise they are looking for (Zona Research, 1999)

- Research across all sites showed that visitors couldn't find what they are looking for as often as 60% of the time (Forrester and Jupiter, 2000)
- 50% of potential sales were lost on the Internet because of the users not finding the information they needed (Forrester Research, 1998)

The results for e-commerce sites are devastating, and lost sales due to bad design and poor usability represented a \$3.8 billion loss in year 2000 sales only (A.T. Kearney, 2001).

### **Conversion rate: measure purchases, not traffic**

The best measure of a site's effectiveness is the site's "conversion rate". This metric refers to a site's ability to "convert" visitors to buyers. For example, a site with three purchases for every hundred visits will have a conversion rate of 3%.

Consider a site with a conversion rate of 1.8% and annual revenues of \$100 million. Assume that the sites customer base is growing 25% annually as more customers come online. With a constant conversion rate of 1.8%, revenues will be \$100 million this year, \$125 million next year and \$156 million in two years.

By raising the conversion rate to 2.7% (a modest increase, far below the industry leaders) through a user-centered redesign the revenues will increase \$50 million this year, \$62.5 million next year and \$78 million in two years (Creative Good, 2000)!

It is not unusual that a user-centered approach doubles the conversion rate and revenues (Nielsen 1999).

### **Better brand**

10% of Fortune 1000 sites should be torn down because their usability is so poor they are hurting the company's brand (Forrester research, 1998). Bad usability causes a bad user experience. A bad user experience influences the experience of the brand.

If a site is frustrating and annoying, that's how visitors see the brand. Also, people who have had a bad experience with a site typically tell 10 others. An investment in user experience is certainly an investment in the brand.

### **Reduced costs for development and maintenance**

- If the cost of making design changes is 1x during the user-centered design phase the same thing would cost 10x as much during the development phase and 100x as much after product release (Mayhew & Bias, 1994)
- American Airlines reduced development costs by 60-90% by making corrections in design phase (Mayhew & Bias, 1994).
- Usability techniques allowed a high tech company to reduce the time spent on tedious development tasks by 40%; at another company, usability techniques helped cut development time by 33-50% (Forrester, 1998).
- 80% of all software lifecycle costs occur during the maintenance phase (Mayhew & Bias, 1994).

- Most maintenance costs are associated with "unmet or unforeseen" user requirements and other usability problems (Pressman, 1992)

### **Improved productivity**

- A major computer company spent \$68,000 on usability work to improve a system that was used by over 100,000 people. The resulting productivity improvement saved the company \$6,800,000, which is a cost-benefit ratio of \$1: \$100 (Mayhew & Bias, 1994).
- Poor usability on corporate intranets can lead to poor employee productivity; investments in making intranets easier to use can pay off by a factor of 10 or more, especially at large companies (CIO Business Web Magazine, 1999).
- Other productivity gains may be that less people can do the same job as many. One company saw its data-entry staff decrease by a third after usability improvements of an internal system (Mayhew & Bias, 1994).

Although efficiency is not always the key issue in the usage of the system it is often important. It is more productive and efficient if a system is designed to support how users prefer to work and is guided by usability principles for efficiency. Productivity improvements have the largest impact on work supporting systems.

### **Reduced costs for training**

- End-user training for a usability-engineered internal system was one hour compared to a full week of training for a similar system that had no usability work. As a result of usability improvements at AT&T, the company saved \$2,500,000 in training expenses (Mayhew & Bias, 1994).

Usable systems are easier more intuitive and require less training. Every hour cut down on training is one hour more of productive work and one hour less to pay an instructor.

### ***What is the value of enhancing your user's experience?***

#### **If your user can't use it, it doesn't work!**

Nowadays, people expect things to simply work - no prior reading and certainly no training. Either they can gain immediate value, or they will move on. So it's win or lose, based on the initial user experience. For many organizations, this user experience is directly mapped to business success.

Users have increasing choice, and can easily evaluate alternatives to satisfy their expectations. They can use the Web to get information, make comparisons and obtain the best offering. At every stage they are influenced by their experience and with a click of the mouse.

It's all about getting the task done with minimum effort and maximum satisfaction, i.e. engineering the solution to exceed the user's expectations.

#### **Ease-of-use is a key differentiator**

Success is likely if you create a product that delights its intended audience. Price and other factors are important, but satisfaction is becoming a dominant consideration.

The only way to achieve delighted users is to create what they want and in a form that they find intuitive. They have to be intimately involved with the design and thus an integral partner in the development process.

Studies and the press continue to confirm that ease-of-use and a resulting positive user experience are among the most sought after attributes:

Forrester data shows that 42% of US Web buying consumers made their most recent online purchase because of a previous good experience with the retailer.

B2B users insist on a site being easy-to-use, concluded PC Magazine, based on the results of a Forrester study of 35 companies that buy commodities online. These e-marketplace commodities buyers ranked usability and neutrality equally, and the two most important criteria.

A Gartner study concluded that usability methods increased user satisfaction for a system by 40%.

A Business Week article stated that PC manufacturers had to make their hardware and software as easy-to-use as toasters in order to differentiate their product from competition.

Business success is founded upon solid customer relationships. Either you directly involve them in creating what they want, or you will fail to gain their full commitment.

Industry experience shows that it is often not practiced:

Research across all sites shows that visitors couldn't find what they are looking for as often as 60% of the time (Forrester and Jupiter, 2001).

Of 150 manufacturers' Web sites, only 45% offered relevant and complete information about their products (Forrester, 2001)

42% of subjects were unable to complete job applications on the Web sites of 6 major corporations (Jakob Nielsen, 2000)

A failed "Internet appliance, designed for use on a kitchen counter, was so heavy that the owners manual recommended that customers use their legs, not their backs, to pick it up.

An automobile dashboard contained so many functions (between 700-800) that not even the automaker knew how many there were. Users were confused.

A failed combination TV and Internet service included a keyboard, remote control, and box resembling a TV set, and was supposed to allow users to watch TV and surf the net at the same time. It cost \$100 for the hardware and \$25/month for the service, but failed in the marketplace since its TV function was so poorly designed that channel surfing was nearly impossible.

Even though consumers, business customers, and site executives underscore the need for a great user experience, most Web efforts don't deliver it (Forrester, 2001).

## ***Cost justifying Usability***

Below are gathered case study summaries from multiple authoritative sources and are based on numerous research projects:

### **The benefits of good web design**

#### **Creative Good**

- To hammer home its point, Creative Good offered the striking revelation that a dollar spent on advertising during the 1998 holiday season produced \$5 in total revenue, while a dollar spent on customer experience improvements yielded more than \$60.

#### **IBM**

- On IBM's website, the most popular feature was the search function, because the site was difficult to navigate. The second most popular feature was the 'help' button, because the search technology was so ineffective. IBM's solution was a 10-week effort to redesign the site, which involved more than 100 employees at a cost estimated 'in the millions.' The result: In the first week after the redesign, use of the 'help' button decreased 84 per cent, while sales increased 400 per cent.

#### **Jakob Nielsen**

- Alert Box, June 2000. It's quite normal for e-commerce sites to increase sales by 100% or more as a result of usability, but configurator-driven sites can probably increase sales by at least 500% by emphasizing usability. More important, they can probably avoid 9 of 10 returns by eliminating most mis-designed items.

### **The cost of bad web design**

#### **Creative Good**

- Poor customer experiences will have a devastating effect on holiday revenues, even with the most conservative estimates. Given an estimated \$9.5 billion in holiday spending despite a 39 per cent failure rate, the industry stands to lose over \$6 billion.
- 39 per cent of test shoppers failed in their buying attempts because sites were too difficult to navigate. Additionally, 56 per cent of search attempts failed.

#### **Cyber Dialogue**

- The absolute number of online bankers grew 100,000 to a total of 6.3 million in the past 12 months, but 3.1 million U.S. adults have discontinued their use of online banking according to Cybercitizen Finance from Cyber Dialogue. The study also found that only 35 per cent of online bankers that discontinued their service were inclined to try it again.
- "Although Cybercitizens begin banking online to save time, more than 50 per cent have discontinued use because they find the service too complicated or were dissatisfied with

the level of customer service," said Michael Weiksner, Manager of Finance Strategies at Cyber Dialogue.

### **Forrester Research**

- Of 20 major sites audited, 51 per cent were compliant with simple web usability principles such as "is the site organized by user goals?" and "does a search list retrievals in order of relevance?" (in other words, the average site violated half of these simple design principles).
- Most sites will waste between \$1.5M and \$2.1M on redesigns next year (1999). Why? Designers are engaged in an endless cycle of overhauls that don't fix their problems. Their goals of achieving fast performance and consistent look and feel are directionally correct but miss out on at least 20 other more specific usability objectives. And since ease of use is not measured, flaws go undetected.

### **Jared Spool**

- In a study of 15 large commercial sites users could only find information 42 per cent of the time even though they were taken to the correct home page before they were given the test tasks.

### **JS Online**

- While internet sales continue to soar, recent surveys indicate that between 27-66% of user abandoned their shopping carts.

### **Jupiter Research**

- Loss of approximately 50 per cent of the potential sales from the site as people can't find stuff.
- Losing repeat visits from 40 per cent of the users who do not return to a site when their first visit resulted in a negative experience.

### **Zona Research**

- 62 per cent of web shoppers gave up looking for the item they wanted to buy online (and 20 per cent had given up more than three times during a two-month period).
- Even the most loyal internet users are having a hard time shopping online, with 28 per cent of the 239 internet savvy users reporting difficulties in finding products and services. (and 20 per cent had given up at least three different times while shopping on the web, with 39 per cent reporting they have decided either not to buy online or to do their shopping elsewhere - with catalogues and bricks and mortar stores the big winners

### ***Calculate the benefits of Usability - for your business***

To calculate the cost-benefits of usability and user centered design:

- estimate the potential savings during development, sales, use and support
- estimate the costs that would be incurred through user centered activities.

Financial benefits will depend on how completely user centered design can be implemented. A balance needs to be obtained so that the benefits that are substantially larger than the costs of additional user centered activities.

Applying a user-centric approach to the design of any product can radically improve the performance of individual projects and your business as a whole.

### **For Businesses**

- **Cheaper** — decreases costs of design/development
- **Faster** — shortens development timelines
- **Safer** — decreases risk of project slippage, and radically improved chances of success in the marketplace
- **Increases sales** — products look better, demo better and sell better, as they are more intuitive to use, faster and more effective
- **Increased competitive edge** — customers expect products to be easy to use.

### **For Project management**

- **Improves risk management** — lets you test designs and decide which should proceed, long before coding begins
- **Simplifies planning** — allows you to calculate required build times and eliminates the need for rework due to incorrect design and miscommunication
- **Provides evidence of success early on** — detailed reports, ratings, recordings and video confirm the validity of the design at the earliest stages of the project

### **For Design teams**

- **More accurate designs** — you get a more accurate picture of what needs building with every aspect of the interaction modeled and documented.
- **Proof that your designs work** — you know designs will work as actual users validate them long before they are built
- **Provides accurate picture of how users work** — don't guessing how users might use the interface: you know before you start coding
- **No more 'last minute' changes** — designs are tested and completed before coding begins, so no more last minute panic changes
- **Less stress at user acceptance testing (UAT)** — since designs are tested before they are built, acceptance testing becomes a much smoother process with far fewer, if any, changes

### **For Documentation teams**

- **Start documenting much sooner** — documented designs at the start of the project give you more time to produce documentation, help and training
- **Less to document** — decreases the need for user manuals, as the interface is far more intuitive

### **For User groups**

- **Reduces task time** — reduced time on task leads to improved user performance and increased productivity

- **Reduces user errors** — these errors will have to be corrected later affecting productivity and will impact negatively on quality of service
- **Reduced training time for users** — Every hour cut down on training is one hour more of productive work and one hour less to pay an instructor
- **Reduced staff turnover** — higher staff satisfaction and motivation increases loyalty to the organization.

### **For Support teams**

- **Fewer training materials** — As fewer materials are needed, the costs of producing training materials is reduced.
- **Reduces training time for support team** — Every hour cut down on training is one hour more of productive work and one hour less to pay an instructor
- **Better office efficiency** — Reduced time spent by experienced staff providing assistance when new users encounter difficulties
- **More effective help line support** — many enquiries to help-line support are about usability issues. Increased usability will reduce the number of calls to support.

For organizations already committed to user-centered design, a cost-benefit analysis is not essential but it can provide a valuable input when formulating a usability plan.

The process can also be used to compare different usability methods and so aid selection of the most cost effective method.