

Chapter One

Usability gains for companies, developers and managers

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Usability is not the same as good design or trustworthy programming. Usability arises in the meeting between a user and the web site. The outcome of their meeting is fruitful if the user does not meet obstacles or barriers when performing her tasks.

If a web manager, the sender, was able to teach or personally guide all the users of that web site on how to use the web site to perform their tasks, success would be assured. Users, however, come to the web site pursuing their own goals on their own terms and without the benefit of a personal tutorial from the web manager.

The web manager faces the choice of either adjusting his web site to the users' preferences, preconditions and requirements, or not getting the most out of his investment.

Characteristics of a usable system

A widely accepted and applied definition of usability comes from Jakob Nielsen's book: "Usability Engineering" (published by Morgan Kaufmann, 1994). Originating before the World Wide Web became popular, this definition covers more than just the user interfaces found on the internet, and the definition consequently applies to IT systems in a broader sense.

According to that definition, a usable system should be:

- Easy to learn – the user should not need to pay much attention, use specific abilities or spend much time getting started;
- Easy to remember – the user should quickly and easily be able to access the system, whenever she wants to use it;

- Efficient – the user is able to perform relevant tasks;
- Reliable – the user can rely safely on the system and its solutions; and
- Satisfactory – the user likes the process and enjoys the experience.

The definition above describes usability as one of many qualities of a successful system, *e.g.* that the system is socially acceptable as well as accessible. The user must be able to deposit and receive information from the system whenever and wherever the user wants to and in a form acceptable to her.

The importance of each of the criteria varies from system to system – in a nuclear power plant control system Reliability means more than Satisfactory, and vice versa in a computer game.

According to the International Standard Organisation, ISO, usability is the "effectiveness, efficiency and satisfaction with which a specified set of users can achieve a specified set of tasks in a particular environment." (See also the paragraph on ISO 9241-11).

Characteristics of a user experience

A variety of elements contribute to the user's experience including offline elements (*e.g.* media and marketing, shops and sales, support and delivery) and online elements like usability.

This book focuses on the user experience on the web including the following:

- The web site is easy to find on the internet;
- The web site is quick to enter;
- The web site meets the user's requirements;
- The user can easily and quickly use the web site to solve her tasks in a satisfactory way; and
- The user wants to use the web site. And possibly re-use it again and again.

This definition focuses on the user's ability and desire to perform her tasks by using a given web site. **Can and will the user in fact perform her tasks on this web site? This is the question which decides the value and nature of the experience of the web site – to the user and consequently to the sender.**

Today's internet is rich in information and each individual web site will only be able to succeed if it grabs and maintains user attention. This aspect of engaging the user is not always included in the concept of usability. Often times the definition of usability is restricted to the users' abilities to use the web site when in fact, a broader concept is needed. A qualitative assessment of the user experience should include a web sites ability to present and communicate information, create know-how, and give meaning to the user.

Several criteria are decisive for a user to choose to enter the internet and use a specific web site to perform her tasks. The concepts of usability and user experience both apply, making it hard to distinguish between the two. In this book the general concept is usability but in many cases the term 'user experience' can be applied as well. Prominent aspects in both cases are:

- The user's perception of being able to manage her communications;
- The content quality (including its relevance, actuality and trustworthiness) to the user; and
- The functional and visual appeal of the web site.

The content may be ever so relevant and interesting to a user, but if she cannot find it on the web site, then in practise the content does not exist in the world of that user. If users find it hard to operate the web site, or cannot manage the web site functions, they will blame the web site – even though the content or functionality that they seek exists.

Why spend money and use resources on usability in a web project?

A person responsible for a web site can save resources by focusing on the usability of his web site. Usability engineering brings further possibilities of earning money by ensuring that only the amount absolutely necessary is spent on developing and operating a web site. The more usable a web site, the better the investment. There are countless examples of failed concepts, poor design or over-complicated functionality that have caused web projects to become both expensive and unusable. Such projects are, however, not often discussed in public, not even by the organisations that would otherwise be doing us all a favour by discussing the shortcomings: The non-successful and very often hard-earned or dearly bought experiences.

Proceeding to develop a web site without the benefits of usability testing will most likely result in a:

- Waste of time for users, the web project;
- Cost of correcting things which do not function or which function only partly; and
- Cost of bad public relations, including lowered trustworthiness and decreased brand loyalty. And poor reputation on the web may also rub of on the reputation on other media.

Including usability in developing a web site makes a better product because;

- The product will be easier to use;
- It is designed for the tasks users have, and for the tasks users expect to perform on this web site;
- Users make fewer errors; and

- Users are more satisfied.

Having a better web site will reduce costs of maintaining it for support employees and customer service as well as content and functionality providers.

What usability can do for you clearly depends on who you are

If you produce web sites, usability can provide:

A better understanding and control of user behaviour through

- An increase in most wanted responses (most wanted click streams, most wanted conversion rates).

Cheaper production of better web sites through:

- Reduced production costs and production time (the development process builds upon the requirements of the users from start to finish);
- Faster establishment of viable and enduring design principles; and
- Earlier identification of errors and cheaper error correction.

Better client relations and repeat business through:

- Shared experiences of end user reactions and demands, and thus shared values and visions between you and your client;
- An increase in client satisfaction (so fewer resources are used on customer support).

If you manage web sites, usability can provide:

Higher return on investment through:

- Reduced costs of support and hotline;
- Reduced costs of staff or end-user training (the website works better for your customers);
- Reduced costs of administration; and
- An increase in end user satisfaction.

If you are a web project manager, usability can provide:

A foundation for more efficient management of the project process by:

- Addressing problems earlier in the product cycle when it's cheaper to solve them.
- A method for including ease of use in a product, ensuring a higher quality.
- A process for finding out and adapting to the website end users' needs and demands from the beginning of the development process thereby ensuring end user satisfaction.

What is the return on investment of usability?

First things first: assessing the value of a given present web site is not as simple as it may sound. Also, once the value is determined, it is still challenging to decide how to move on – to determine which initiatives will actually increase the value of the web site.

Focusing on the return of investment of each potential initiative will help to make the decisions on how to develop the web site. Let's look at an example;

Consider the Intranet in a company. Imagine that it has 1,000 users and that they each need to access some important document from time to time (e.g. an employee's manual, the company strategy, or some security procedure). When considered in the context of the company's productivity taking an average of ten minutes to find the document versus an average of one minute makes a dramatic difference.

If each employee needs to find this document, it means spending 10,000 minutes (at ten minutes each) rather than a relatively shorter 1,000 minutes.

Then calculate the frequency of this task and the salary of these users.

Let's say that they need the document twice a year and that they earn an average of 30,000 euros a year (or 2,500 a month or 16 euro an hour or 0.27 euro a minute given a 37 hour work week).

If the document is harder to find, taking the ten minutes to locate it, the access to that very document costs the company $10,000 \text{ minutes} \times 2 \text{ per year} \times 0.27 \text{ euro} = 5,462.50 \text{ euro/year}$.

If it is easier to find, taking one minute to locate it, the cost is ten times lower: $1,000 \text{ minutes} \times 2 \text{ per year} \times 0.27 \text{ euro} = 546.25 \text{ euro/year}$.

The company would save roughly 5,000 euro/year if usability work could reduce the retrieval time for that document alone from ten minutes to one minute. For about that price, a usability specialist could perform studies that would reveal the scenario in the example (the retrieval time of one document) plus a very long list of other time-consuming content or functionality problems to be found on that intranet plus covering the cost of implementing the necessary changes in the user interface.

Compare this scenario – the retrieval of one document on an intranet - to a web site selling products or services on the internet. The considerations are the same:

1. What is it worth if users find a product ten times as fast, or go through some procedure ten times as quickly?
2. What is it worth if you could reduce by 10% or by 50% the number of confused customers calling the help desk?

3. What is it worth if you could reduce by 1%, by 10% or by 50% the number of users leaving a shopping cart full of products on the web site because they found the check out procedure too complicated or time consuming?
4. What is it worth if by improving navigation you could increase by 10% the number of products bought? Or by 50%?

Seen from this perspective usability has a very large role to play in helping companies reduce waste and increase profits.

Usability work could reveal if the web site produces user experiences that are costly to the company. Usability work could help reduce the company's costs and stop the company from losing commercial opportunities because e.g. users couldn't find the products, or they did not understand the information, or the web site did not provide the information users needed and hence they left the web site frustrated.

Refer to "Cost-justifying Usability" by Randolph G. Bias and Deborah J. Mayhew for more on how usability relates to costs and gains of a project.