# Making a Business Case for Usability – Four Real Life Stories

**By Deborah J. Mayhew, PhD**

**Summary:** In my experience, one of the best ways to "sell" (i.e., win funding for) usability engineering services in software and web development organizations is by laying out a structured and detailed proposal for our services, and then preparing an objective cost justification of our proposal. This is true regardless of whether we are an internal usability engineer or an external usability consultant. In this brief article, I offer four real life cost-justification case studies.

### Why Cost-Justify Usability Engineering Services?

Usability Engineers are still not as common, as well understood, or as valued as other software/web professionals (e.g., developers). Because of this, most of us constantly need to "sell" our services. This is true whether we are internal employees or external consultants.

Sometimes we need to sell our services to a particular development project; sometimes we are trying to sell the establishment of a new usability position in a company; sometimes we are trying to win a higher level of funding in order to be able to do high quality work that makes the best use of our skill set. In all these cases, the typical approach to persuading management to fund our work is to describe in vague, subjective terms, what the payoff might be: "we will sell more products"; "users will be more productive and more satisfied"; "more site visitors will make purchases".

A much more effective approach is to quantify both the predicted benefits and the anticipated costs of the usability services we are proposing, and then compare predicted benefits to anticipated costs. This allows us to make a clear business case for our proposal. In many if not most cases, the audience we are selling to is management, and the language of management is "the bottom line". We need to convince them that our proposed services will contribute to their bottom line by providing a positive return on investment (ROI).

When we adapt a traditional cost-justification analysis technique to making a business case for investing in usability services, it is in many cases surprisingly easy to make a very compelling case which shows a remarkable ROI on the cost of our services.

88 Panhandle Road
Post Office Box 248
West Tisbury, MA 02575
PH: 508-693-7149
FX: 508-693-9726
Email: drdeb@vineyard.net
Website: http://djmassoc.com

A cost-justification analysis is typically used to predict the return that will be realized if the proposed investment is made. That is, it is used to decide whether or not to make a particular investment, in this case in usability engineering services.

Sometimes however, usability professionals have the opportunity to measure actually realized benefits after their work is done, rather than just predict them in advance based on assumptions. It's always helpful to be able to refer to actual success stories (in which a particular predicted ROI was actually realized) when trying to make a business case for future investment in usability services. Below I offer three such success stories, followed by another case study illustrating the costs of not investing in usability.

**Cost-Justification Case Studies**

**IBM Gains $2 (or More) of Productivity for Every $1 Spent on Testing**

Clare-Marie Karat (1989) reported on the results of an investment in usability testing. She and her team ran three iterations of usability testing and user interface redesign on a small piece of functionality within an internal business application at IBM.

The cost of running the three iterations of testing totaled $20,700. The value of the increased user productivity on the final design as compared to the original design of this functionality was measured after implementation as $41,700. This resulted in a net benefit of $21,000, a clear payoff.

A cost-benefit ratio is another of a variety of ways of expressing an ROI, and is calculated by dividing the overall benefits by the overall costs. In this case $41,700 divided by $20,700 equals just under 2, and the cost-benefit ratio is expressed as "1:2".

In addition, it is important to know that in this case, very conservative measurements of benefits were made. For example, savings were calculated on only the first three times each user used the functionality, when in fact they would be using it every work day each year. Thus, the net benefit reported is actually much less than the actual net benefit over the course of a year.

**e-Commerce Site Earns Back More than Double the Money Spent on Testing . . . in One Month**

In another real case, Todd Follansbee of Web Marketing Resources (personal communication) provided usability and web marketing consulting to an e-commerce site in 2007. After his redesign recommendations were implemented, conversion rates (the percent of site visitors who took actions that contributed to the business goals of the site) went from a monthly average of 1.8% (a typical conversion rate for e-commerce sites) across the 4 months prior to launch, to a monthly average of 4.96% across the 7 months after launch. This represents an additional 3.16% in the conversion rate.

Given that the average number of visitors per month was roughly 8,500 on this site, this potentially translates into an additional 268 conversions per month (3.16% of 8,500). The average dollar value of each conversion in this case was estimated to be approximately $40, so the increased revenue being generated was on average somewhere around $10,720 per month (268 times $40).

Since Follansbee's services were a one-time cost to the client of $5,000 (in fact all he provided was a very brief heuristic evaluation resulting in some specific redesign suggestions), there is potentially a very large ROI for his services of $123,640 in the first year alone ($10,720 in increased income per month times 12 months minus the cost of services of $5,000.)

**UI Redesign Cuts Call Center Costs by $1.35 Million per Year**

In my own experience, in a project conducted in 2006, the increase in user productivity in the first year after a new call center application for customer services representatives replaced an old one was calculated at about $1,500,000.

The primary difference between the old application and the new one was an improved user interface design, which was achieved in part through iterative usability evaluation and redesign. The cost of usability services (some internal, some external) on this project was roughly $150,000. Thus, there was a net benefit of $1,350,000 in the first year alone.

**Vendor Company Loses $90/Unit on Unusable Product**

Finally, not only can there be a clear bottom line benefit to applying usability services to a development project which we can predict in advance and measure after implementation, it's also true that there can be a real *cost* to *not* applying usability during software development. Nielsen (1993, p. 84) provides an anonymous example of a company which put out a shrink wrapped software product that actually lost money due to poor usability. The profit margin on the product was $70 per unit, but customer support for the product ended up costing $160 on average per customer (due primarily to usability problems), resulting in a net loss of $90 per unit.

**Summary**

When you are trying to win funding to support usability engineering services, cost-justification can be an effective tool to apply.

To learn all you need to know to conduct your own cost-justification analysis to either predict the benefits your services would likely provide, or measure the ROI you did in fact achieve, please refer to two books on Cost-Justifying Usability edited by Randolph Bias and myself (Bias and Mayhew, 1994), Bias and Mayhew, 2005).

In addition, I offer a free Excel spreadsheet tool to assist you in conducting your own cost-benefit analyses as a download from the Publications pages page of my website.

Finally, to cost-justify your services, you must have a clear and detailed plan in mind for how you will conduct those services. To learn more about planning, estimating and executing usability services, please see my book The Usability Engineering Lifecycle (Mayhew 1999).

**References**

Bias and Mayhew, 1994, Cost-Justifying Usability, Academic Press

Bias and Mayhew, 2005, Cost-Justifying Usability: An Update for the Internet Age , Morgan Kaufmann Publishers, San Francisco, CA

Karat, 1989, "Iterative Usability of a Security Application", Proceedings of the Human Factors Society, 273-277

Mayhew, 1999, The Usability Engineering Lifecycle , Morgan Kaufmann Publishers, San Francisco, CA

Nielsen, Jakob, 1993, Usability Engineering, Academic Press, Cambridge, MA, p. 84