

## Cost-Justifying Your Usability Activities

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**ABSTRACT** Good product usability doesn't happen by accident. Good usability of human computer interfaces is not a luxury. Nor is it free. Usability engineering IS, however, typically well worth the time and money spent on it. Is it worth it in YOUR case? This is exactly the question a product development manager is likely to ask. This tutorial arms participants with the tools needed to be able to answer that question meaningfully, and using a unit of measure (dollars) that everyone in the business community understands. The tutorial includes lecture on cost-justification methods, brainstorming about quantifiable costs and benefits, modeling of a formal cost-benefit analysis approach, an on-line usability engineering optimising tool, and a hands-on exercise involving implementing these concepts in the participant's own arena.

**KEYWORDS** usability, cost-benefit analysis, cost justification, discount usability methods

### 1. INTRODUCTION/JUSTIFICATION

Good product (or system, or process) usability doesn't happen by accident. Good usability of human computer interfaces is not a luxury. Especially in these competitive and economically constrained times, all contributors to any development effort must be able to justify their contributions or be prepared to suffer the budgeting axe. This is particularly true for human factors professionals, whose ultimate product, usability, has a history of being considered a luxury.

Good usability of human computer interfaces is not a luxury; customers are unequivocal in their call for more usable products. Nor is it free. Usability engineering IS, however, typically well worth the time and money spent on it. Is it worth it in YOUR case?

This tutorial will arm participants with the tools to be able to answer this question meaningfully, and to employ a unit of measure with which all product development managers are very familiar: dollars.

### 2. TARGET AUDIENCE

Our primary audience will be usability (or human factors) practitioners who have responsibility for driving usability into their products. This audience includes members of human factors/usability departments, lone practitioners integrated into software development teams, or independent human factors consultants (from within the company or from without). Others who will find this tutorial of value are software designers and developers, technical writers, software development managers, human factors researchers, and human factors educators.

### 3. GENERAL NOTES

**Session I** explicates the importance of the tutorial, and of a cost-benefit approach to usability engineering in general. It contrasts a cost-benefit approach with the

“old” approach, whereby the enthusiasm of the usability engineer, and the product manager’s inherent interest in usability, were the key variables in determining whether product development resources were earmarked for usability. Class discussion follows, on experiences with the old approach, any experiences with a cost-benefit approach, and successes and failures.

**Session II** focuses on the new business environment, and general pressures that usability customers face, which drive us toward this cost-justification approach. These business pressures include: Low profit margins; downsizing; shorter development cycles; the move toward smaller and ubiquitous computers; the move toward more powerful, and multi-media, interfaces; the fact of more casual computer users (encompassing web users); and the desire for quick delivery to market of technological innovation. A group discussion follows, to collect examples of quantifiable usability benefits and costs.

**Session III** begins with a lecture on formal versus informal cost-benefit analysis approaches. Tradeoffs are considered (e.g., formal approaches have a high cost in the usability practitioner’s time, but are more likely to predict accurately the net present value of money spent on usability engineering support) and then an example of a formal analysis is presented as a model.

**Session IV** is a demonstration of an on-line tool, the Usability Decision Optimiser™. This tool takes as input project data (such as development schedule) plus data on usability engineering techniques, and makes recommendations regarding which usability engineering methods to employ.

**Session V** affords the tutorial participants with some hands-on experience with cost-benefit analysis planning. It is an exercise designed to start the participants thinking about how to cost-justify their own usability activities. First, participants in small groups complete their (individual) forms. The forms will steer participants toward identifying particular costs and benefits, and toward thinking about the appropriate time span over which to spread those costs and benefits. We will reconvene as a large group, and some individuals will be asked to share their skeleton cost-benefit analyses.

**Session VI** is a short summary of the day, with explicit attention to specific actions participants might take right away, by way of implementing the concepts learned in the tutorial.

#### 4. SUMMARY

Usability – “The next competitive frontier” (Norman, 1990) -- is not just a “nice to have,” it does not happen by accident, and it is not, typically, free. Usability engineering is, however, typically well worth the time and money spent on it. Is it worth it in YOUR case? Armed with the tools – conceptual, textual (Bias and Mayhew, 1994), and on-line tool (Kieboom, 1996) – presented in this tutorial, the participant will be able to answer that question meaningfully, and using a unit of measure (dollars) that everyone in the business community understands.

#### 5. REFERENCES

- Bias, R. G., and Mayhew, D. J. (1994) *Cost-justifying usability*. Academic Press, Boston.
- Kieboom, H. M. (1996) *Usability Decision Optimiser: A Product to Support Usability Practitioners Select the Most Cost-Effective Usability Engineering Technique for a Given Development Environment*. Unpublished manuscript, Swinburne University of Technology, Melbourne.
- Norman, D. A. (1990) *The design of everyday things*. Doubleday-Currency, New York.