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DELIVERING COMPETITIVE EDGE

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ABSTRACT: Usability can give competitive edge to products, services and companies. Close collaboration between Human Factors and Marketing practitioners is needed to build and sustain a market advantage. In this case study, we present some of the benefits and issues that arose in the design of a new telecommunications service.

1   INTRODUCTION

Convergence of technologies and markets, rapid technological advance, intense global competition and raised user expectations call for streamlined methods of defining and delivering innovative products. Effective teamwork is critical to meeting the challenge. Nearly two decades ago, the alliance between Human Factors and Marketing was characterised as 'neglected' (Cannon & Hasty, 1976) and there has been little debate since about how to bring the disciplines closer together. However, in BT, Human Factors and Marketing collaborate to improve the quality of products and services. Here we present a case study to illustrate our approach.

2   USABILITY AND SUSTAINABLE ADVANTAGE

Differentiating products by performance or cost becomes increasingly difficult as technology becomes more widely available and costs are already reduced to the minimum. Companies must look elsewhere for *sustainable* market advantage to survive. The ability to provide innovative yet highly usable products repeatedly and profitably, ahead of the competition, can make an important contribution. Usability is a key business driver and *user-centred* techniques are emerging to deliver this competitive edge (Atyeo & Green, 1994). It is essential to move away from simple product design, beyond the integrated service design of product, packaging, documentation and after-sales service, to the comprehensive design of the customer experience.

3   THE CASE STUDY

The rapid growth of telecommunications services and the diversity of their user interfaces present a problem for customers who would benefit if only they could cope with the complexity of using them. A service that allows users to access a portfolio of network-based services tailored to their requirements, accessible at any time from any place, is the ideal. At present, users have to remember the telephone numbers, account number and Personal Identification Number (PIN) for each of the services that they use. With the new service, customers enter a single access number, account number and PIN to hear a customised menu of network services. They select a service, use it and return to the main menu. In this way they only have to remember one access number, account number and PIN to use any number of services.

Qualitative market research was commissioned to test and develop the concept of the service to determine:

• Customer needs

• Customers' understanding of the concept

• How best to communicate the concept

• Packaging, branding and pricing issues

• Pros and cons of different access mechanisms.

The research was carried out as a series of focus groups, each involving individuals from a selected market segment, ranging from young adults to business users. The aim was to find out how well the service would meet the needs of each type of customer and their requirements. These studies showed that the concept appealed most to people, such as business users working from home or on the move, who needed to be contactable at all times. The results highlighted ease of use as a critical success factor and suggested usability targets that would have to be met if the service was to succeed.

Market research is traditionally carried out using descriptions of potential services. But it is hard for people to accurately predict their responses to future services without being able to try them out—especially if the service is complex or intangible. We use sketches and early prototypes as the basis for market research, well before any development has started. These visualisations also help the product team share, understand, communicate and 'sell' their ideas. The two-way flow of information between usability studies and market research is crucial. Understanding usability issues can guide market research; marketing studies can show priorities in system design and form the basis for setting usability targets.

With the growing importance of usability, the role of Human Factors experts in defining market requirements has grown from having no involvement at all, through reviewing requirements defined by Marketing, to full co-production. This trend reflects the recognition that investigation of both customer and end user needs must be concurrent.

We evaluated the usability of prototypes of the new service using the following techniques:

• Human Factors 'expert walk-through' of the initial prototype

• Evaluation of the second generation prototype by focus groups

• Field trial of the third generation prototype.

Close collaboration with Marketing allowed us to deal simultaneously with usage and market issues throughout. Focus groups concerned primarily with usability also covered wider issues such as billing and customer opinions about competing products. The work confirmed the value of early prototypes in eliciting customers' responses, on both marketing and usability issues. The success of this work has led to increased use of prototypes in market research. The usability targets that were agreed early in the project were used to direct and prioritise work and provided benchmarks against which we evaluated the prototypes.

4 DISCUSSION

The most obvious short-term benefits are the cost savings and reduction of time-to-market by merging early activities aimed at understanding and expressing market and customer needs. In addition:-

* Teamwork has improved by working on focused customer, user, and product issues. We have found that there is no single 'voice of the customer', and that it is necessary to understand customers and users from many points of view.

* We have gained a better understanding of customers' needs for usability, both as expressed in market research, and as evidenced by buying behaviour—and the reasons for the differences between the two (Atyeo & Green, 1994).

* Marketing have strengthened their position through a greater involvement in the design process. Prototypes have allowed marketing to investigate customer requirements more fully, and allow market data to drive design decisions.

* Good usability not only boosts sales and loyalty, but increases usage revenue.

5 CONCLUSIONS

In response to rapid technological change and increased global competition, service industries have undergone radical change. These were initially focused on reducing cost and time to market, but more recently have concentrated on ways of understanding and anticipating customer needs. We have adopted an approach we call 'designing the customer experience'. At its heart is a programme of research into human needs. By bringing together Marketing and Human Factors with more radical perspectives, such as semiotics and anthropology, creative and visualisation skills, and rapid technological advances, we have generated an environment for *user-centred innovation*.

We express users' abilities, needs, and preferences from psychological and ergonomic perspectives, matched to demographic, lifestyle, economic and other marketing factors. Our approach takes a multi-perspective view of customers and users and provides clear roles for multiple disciplines to work together to deliver the competitive edge of usability.

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