Chapter 4
Evolution of End User Participation in IT Projects

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ABSTRACT

This chapter is aimed at presenting a review of evolutionary design paradigms, which determine the end user's role in IT (Information Technology) projects across recent decades. This review covers different perspectives starting from technology-oriented sequential software development lifecycles, through user-centred approaches, ending finally in contemporary service design approaches supported by e-business and social media. Finally, the chapter discusses the need for "soft skills" required from the designers who wish to apply the service-relevant perspective to their IT projects. Conclusions cover novelty aspects of the designer-user interaction in service-relevant design paradigms and the impact of new design paradigms on human creativity and innovation.

INTRODUCTION

The impact of the "human factor" in IT development has been an important focus of interest since the 1980s. In particular, the contribution of end-users to design activities affecting system quality has been studied as IT projects have become increasingly complex.

For nearly three decades IT projects have struggled to deliver the quality and benefits expected by the users. At the same time completing an IT project within time and budget constrains has become incidental, while project stakeholders often keep complaining about the delivered system usability and business value lower than expected.

The search for the best ways to improve IT project efficiency and IT system quality has become an important stream in contemporary research on information system development (McLeod et al., 2007). Ongoing developments in software technology, combined with growing expectations of users and customers, historically resulted in gradual refinements in IT project management practices, thus leading to various forms of user participation in designing interactive systems. Empirical studies (for instance Wastell and Sewards, 1995) have shown that projects in which end-users and staff are held jointly accountable for system quality appeared to have more highly perceived project success rates than the average.

Approaches attempting at enhancing the role of end-users in IT project management argue that this direction is a cost-effective one: users usually know about the intended use of the system and

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about the conditions in which actual tasks will be performed. Despite this invaluable knowledge being available free of charge, it is often under-utilised. Since a big part of reported IT system deficiencies is related to the *perceived* aspects of quality, the discipline of Human-Computer Interaction (HCI) has been gradually covering not only interaction design issues, but also methods helpful in involving users in the design process (Jacko 2012).

This chapter will discuss these issues taking into account following aspects:

1. Historical development perspective.
2. The changing role of the end-user in IT projects.
3. Evolving relationships between designers and the end-user.

BACKGROUND: THE NATURE OF USER PARTICIPATION IN IT PROJECTS

The challenge of delivering such IT systems, which would be sufficiently easy to use, has been present in design practice since the early computing years. However, in the era of mainframe computing end-users did not have direct access to hardware or to the programming interface, and relevant operational tasks had been performed by adequately skilled personnel.

The notion of "usability," both as one of the key quality characteristics of IT systems, and also as a research concept, did not emerge until PC computers became popular as office workstations in the 1980s. At the same time the efficiency of personnel training and the costs of human errors and IT-related organisational development became important human factor in both research and design practice. As in many cases the users were sceptical about learning and operating their new IT systems and reluctant to do so, the problem of changing the users' attitude by motivating them to take part in system development activities was a vital topic at that time. This approach has been later formalized as the Human-Centred Systems Design concept.

Until the 1990s the disciplines of software ergonomics and (newly emerged) usability engineering were busy developing guidelines for designing human-computer interaction and for developing ergonomic user interfaces. Since those times, the full integration of software engineering and interaction design practices has still faced difficulties and has not yet been fully successful.

Recently, when traditional desktop computing has been replaced by Internet and mobile networking, guidelines for building usable Websites and Web-based user interfaces as well as for providing excellent user experience (UX) have still been very important not only in the contexts of e-commerce development. Undoubtedly, assuring Web usability and self-service for the user/customer is nowadays crucial for building competitive advantage of e-business and e-services. Consumer research techniques have also been increasingly applied to analysing human shopping behaviour on the Internet, a fact which has resulted in the creation of a new discipline of Internet marketing. User/consumer preferences, expectations and requirements now form an important part of the business analysis IT projects, in e-business in particular.

Carrying out a successful IT project without involving its users seems virtually impossible these days. IT project managers are increasingly conscious that too many IT projects failed in the past because of the insufficient participation of users.

The issue of user participation in IT projects has been already present in the literature of the subject for about two decades. This topic has been studied from various viewpoints, as new experience has been gained from unsuccessful IT projects.

One of the first comprehensive studies of the subject was presented by Damoradan (1996), who has discussed various roles the users may take in IT projects, viewing them from the standpoints