



## **Chapter 1**

# **Towards User-Oriented Control of End-User Computing in Large Organizations**

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*Control is a major issue in end-user computing. The migration of responsibility, resources and authority from IT departments to user departments is frequently seen as a loss of power by the IT departments and an erosion of cost control by senior management. Reactions to this situation tend to focus on technology and formal control mechanisms. This paper contrasts such an IT-oriented view with a proposed, alternative user-oriented view. An IT-oriented view of EUC focuses on the problems it causes, the technology it requires, the methods that should be used and the means of limiting, controlling and standardizing. An user-oriented view of EUC focuses on the problems it solves, the user's task and the organizational environment. The paper advocates a shift in EUC research away from the technology and the IT issues towards the political, social and cultural issues associated with the users. EUC problems are, in the main, organizational problems requiring a research approach which addresses dynamic issues emerging over a period of time. As a basis for such research, the paper proposes a dynamic model for EUC in which the progression of EUC within an organization is visualized as a series of inference loops.*

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## INTRODUCTION

The advent of end-user computing (EUC) catalyzed by increasingly simple technology and increasingly sophisticated users has brought with it both solutions to problems within the information technology (IT) departments and new problems. While providing one solution to the so-called applications backlog, it has created new problems of control for the IT department, which, in some cases, has led IT departments to avoid supporting EUC, and consider outsourcing end-user training, the support of PCs and networks and the help desk. EUC has led to an increase in the workload of the IT department, a growing application backlog as EUC systems require repair and support from the IT department, and increasing conflict between users and the IT department as the IT department seeks to rein in the uncontrollable proliferation of EUC.

At the heart of these problems lies the issue of control of EUC. Robson (1997, p. 382) refers to EUC as user-controlled computing. Responsibility, resources and authority over IS move away from IT departments into user departments. EUC within the organization is affected by politics, culture and power within the organization. Reasons for the proliferation of EUC may include the wish to wrest control of IT from the IT department and to concentrate power within particular departments. The shift of control over IT resources to user departments has been associated with the duplication of computer applications, incompatibility and lack of integration, and low quality systems (Taylor et al., 1998). However, over-control of EUC by the IT department leads to alienation of end-users and conflict (Beheshtian & Van Wert, 1987). Many organizations consider the solution to the lack of control of EUC to be the exertion of more control from the center. This IT-centered view of EUC sees EUC as a problem to be solved through standards, auditing, and financial control mechanisms which seek to make end users behave like IT professionals. Literature within the EUC field emphasizes the need for management of EUC by the IT department through the use of restrictions on users (Alavi, Nelson and Weiss, 1988; Behseshtian and Van Wert, 1987; Ngwenyama, 1993; Taylor et al., 1998).

This paper firstly defines the IT-oriented approach to EUC control based on published research (Taylor et al., 1998). This is then contrasted with a user-oriented approach to EUC. A research agenda for studying EUC development from a user-oriented point of view is developed and supported by a model. It is concluded that research in EUC needs to address user motivations and the dynamics of end-user development within an organization.

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