Chapter I

A User Perspective of Information Requirements Determination Quality

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ABSTRACT

A study was performed to identify factors that affect the process quality of the information requirements determination (IRD) process from a user perspective. A nominal group process was used with three groups of users that have had experience with the IRD process. The results indicate there is a set of factors that users agree impact the quality of the IRD process. A total of 33 factors were identified as critical to IRD process quality. These factors are then classified into five logical categories: management, organization, process, technical, and human resource. The users consider management commitment the most important individual factor for IRD quality. However, the groups ranked the process category of factors highest. By using this set of factors as a checklist during the project planning stage, a manager may identify potentially problematic projects or projects with a higher likelihood of success. This study should benefit information technology (IT) users, IT professionals, project managers, and IT researchers. The identification of factors that impact IRD process quality may give managers guidance in assessing the risk associated with
specific development projects. By determining the value of these factors prior to the commitment of resources, managers may increase the likelihood of recognizing problematic projects or projects with potentially high returns, allowing them to take prescriptive action. By identifying the concerns of users, it may be possible to control and manage the antecedents to the IRD process that have the most effect on users' perceptions and expectations. Lastly, the factors identified may be used to develop metrics to monitor the IRD process or measure its success or quality. For IT researchers, this study offers two primary contributions: (1) identification of the critical factors suggests that there are many variables that have not received attention, and (2) an example of an approach to generate potential variables for further study.

INTRODUCTION

Cost overruns, missed deadlines, inaccurate features, and out-and-out failure still plague the software development industry despite advances in the development process (Adolph, 2000; Bergey, Smith, Tilley, Weiderman, & Woods, 1999; Johnson, 1995; Schmidt, Lyytinen, Keil, & Cule, 2001). One of the primary reasons for these problems is the lack of clear identification and validation of requirements (Bergey et al., 1999). However, a model of the factors that impact information requirements determination (IRD) does not exist to help managers improve information requirements determination process quality. In fact, there is a lack of understanding about what constructs most significantly impact systems development process quality and specifically the IRD process quality. The objective of this study was to identify these constructs and propose a model of these factors that may provide guidance for managers involved with the IRD process and researchers investigating the IRD process.

The primary question addressed by this study is: What are the factors that affect the quality of the IRD process? Several additional aspects of this question are explored, including: How do these factors affect IRD process quality? Which of these factors can be manipulated or controlled prior to the IRD process to improve quality?

In addition, a secondary question is addressed to test the validity of the results: Do users agree which factors affect the quality of the IRD process? If users from different organizations and with different backgrounds agree on a set of factors, this would provide evidence that these factors are applicable to a